



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Approval decision brief (Recommendation Report)

To: Declan O'Connor-Cox – Branch Head, EPBC Regulatory Support Branch

Action required: For Decision

Timing: **17 March 2026**– statutory timeframe

Gas Supply Security Project, Surat and Bowen Basins, Queensland (EPBC 2020 / 8856)

Recommendations	
1) Consider the proposed approval decision brief at <u>Attachment A3</u> , including the recommendation report at <u>Attachment A2</u> .	Considered / Please discuss
2) Consider the responses to the invitation for comment on the proposed decision at <u>Attachments B and C</u> .	Considered / Please discuss
3) Approve, for each controlling provision, the action as summarised in the table below.	Approved / Not approved
4) Agree to attach the conditions of approval as set out in the decision notice at <u>Attachment D</u> .	Agreed / Not agreed
5) Sign the notice of your decision at <u>Attachment D1</u> .	Signed / Not signed
6) If you agree to recommendations 3 to 5, accept the reasoning in the departmental briefing package as the reasons for your decision.	Accepted / Please discuss
7) Sign the letters at <u>Attachment E</u> advising the person proposing to take the action, and other relevant parties, of your decision.	Signed / Not signed
8) Note that in approving Condition 82 of the conditions on approval of the action, you are approving commencement of Stage 1 of the action.	

Noted / Please discuss	
Summary of recommendations on each controlling provision	
Controlling provisions for the proposed Action	Recommendation
Listed threatened species and ecological communities (sections 18 and 18A)	approve
Listed migratory species (sections 20 and 20A)	approve
Water resources, in relation to unconventional gas or large coal mining development (sections 24D and 24E)	approve
Signature of delegate:  Date: 17 March 2026 Comments:	

Key points

- 1) Australia Pacific LNG Pty Ltd (the proponent, represented by joint venture partner and operator, Origin Energy) is proposing to develop the Gas Supply Security Project (EPBC 2020/8856), consisting of gas field infrastructure in existing petroleum tenures within the Surat and Bowen Basins, south central Queensland. The action will extend the commercial production area of the existing, previously approved Australia Pacific LNG (APLNG) Project (EPBC 2009/4979) into adjacent development areas not subject to an existing approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- 2) The department considers that, provided that it is undertaken in accordance with the recommended conditions of approval at Attachment D, the proposed action will not have unacceptable impacts on the controlling provisions for assessment:
 - listed threatened species and communities (sections 18 and 18A)
 - listed migratory species (sections 20 and 20A)
 - water resources, in relation to coal seam gas or large coal mining development (sections 24D and 24E)
- 3) The period for which this approval has effect is from the date of this approval until 22 February 2081.

Background

- 4) The action will involve the construction, operation, decommissioning, and rehabilitation of gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management

facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities).

Greenhouse Gas Emissions

- 5) Greenhouse gas emissions produced by the proposed action will be reportable under the Safeguard Mechanism for reducing Australia's greenhouse gas emissions, as the Gas Supply Security Project is a 'safeguard facility', exceeding the reporting trigger level of 100,000 tonnes of carbon dioxide equivalent (tCO₂-e) scope 1 emissions for a financial year. Letters notifying the relevant parties of the approval of the proposed action is attached to this brief for your consideration ([Attachment E7](#) to [E9](#)).
- 6) Over the life of the proposed action, the Gas Supply Security Project is forecast to produce (not more than) an estimated 5.97 MtCO₂-e of scope 1 emissions (generated primarily coal seam gas production). Note that these should be treated as indicative. They have been taken from the Greenhouse Gas Emissions Inventory supplied by the proponent with the PER in 2026 ([Attachment A6](#)), and the life of the action figure above has been estimated by summing the annual forecasts from 2026 to 2081.

Consultation

- 7) On 26 February 2026, as recommended in the proposed approval decision brief ([Attachment A1](#)) you wrote to the following parties seeking comments on the proposed action:
 - Australia Pacific LNG Pty Ltd
 - Minister for Indigenous Australia
 - Minister for Resources and Northern Australia
 - Minister for Climate Change
 - Minister for Agriculture, Fisheries and Forestry
 - Queensland Minister for the Environment and Tourism and Minister for Science and Innovation
- 8) On 12 March 2026, the proponent provided comments on the proposed conditions of approval ([Attachment B1](#) to [B7](#)).
- 9) Ministerial consultation responses are at [Attachment C](#). Of particular note:
 - A delegate of the Minister for Agriculture, Fisheries and Forestry ([Attachment C3](#)) noted the importance of managing subsidence and drawdown of groundwater resources, and broadly endorsed the approach of the proposed approval decision in managing these impacts.
 - Geoscience Australia ([Attachment C7](#)) broadly endorsed the approach of the proposed approval decision to managing hydrogeological impacts.

Recommended changes

- 10) The department has outlined the recommended key changes for your information below (references to conditions in underlined font are references to previous condition numbers from your proposed approval decision).

Structure of the condition set

- 11) The proponent has suggested that the structure of the conditions be revised to bring the Development Area Environmental Management Plan, the Stage Area Environmental Management Plan and the Stage Offsets Management Plan to above the conditions related Water Resources in closer proximity to the Clearing Limits, Constraints and other management plans. The proponent considers this will improve readability and reduce potential non-compliance. The department notes that each section is a defined separate section and that the placement of paragraphs should not be grounds for non-compliance with any requirements within this notice. The department does not recommend any substantial change to the structure of the condition set.

Eastern Contact Zone buffer (Condition 3)

- 12) The proponent requested that in Condition 3, the restriction on development within and near the Eastern Contact Zone be removed and an option included to allow the development of an Eastern Contact Zone Management Plan. The department considers this proposal contains elements of work that are not logically possible (e.g., collecting of baseline data and establishing early warning triggers for impact management as impacts are already occurring). The proposal also creates an overly complicated system for management and compliance that would not provide better outcomes for protected matters. The department does not recommend any changes to this condition.

Aligning clearing restrictions to Constraints Protocol (Condition 4 and 5)

- 13) The department agrees with the proponent's suggestion on minor amendments to clarify terminology on restrictions to clearing of species habitat or individual plants. These changes ensure that conditions align with commitments undertaken by the proponent in Appendix B of the Constraints Planning and Field Development Protocol submitted as Appendix A of the Public Environment Report (PER) (Attachment A5), in Conditions 4 and 5. The department recommends adding appropriate text to Conditions 4 and 5.

Linking protected matters to Constraints protocol (Condition 77 and 81)

- 14) The department agrees with the proponent's suggestion to link the relevant protected matters to Appendix B of the Constraints Planning and Field Development Protocol submitted as Appendix A of the Public Environment Report (PER) (Attachment A5), in Conditions 71 and 75. The department recommends adding appropriate text to Conditions 77 and 81.

Clearing buffers (Condition 6)

- 15) The department originally included specific spatial buffers for species within the relevant sub-conditions of Condition 5. The department now recommends differentiating the buffers in a separate Condition 6, to provide clarity on the spatial constraint of the condition and improved enforceability.

Extended timeframes (Conditions 7, 68, 73)

16) The proponent sought longer timeframes in Conditions 6, 62 and 67 to better allow for survey, assessment and administrative processes. The department recommends extending timeframes in the following conditions, where they do not change their purpose, intent or effect:

- a) Condition 7 – Notification of newly identified protected matters:
 - i) Reporting requirement: Notify the department
 - ii) Timeframe extended to 10 business days
 - iii) Additional information submission: 60 business days
- b) Condition 68 – Development Area Environmental Management Plan:
 - i) Reporting requirement: Publish on proponent's website
 - ii) Timeframe extended to 20 business days
- c) Condition 73 – Stage Area Environmental Management Plan
 - i) Reporting requirement: Publish on proponent's website
 - ii) Timeframe extended 10 business days

Definition of 'petroleum activities' (definitions, Conditions 9, 10 and 74)

17) The proponent recommends defining the term 'petroleum activities' for clarity, as used in Conditions 8 and 68, in terms of compliance and the inclusion of text to link protected matters to those identified in the Constraints Protocol. The department recommends a new definition of 'petroleum activities' for use in Conditions 9, 10 and 74, to improve enforceability and improve consistency across conditions.

NCA vegetation clearing (Condition 9)

18) The proponent considers that Condition 9, requiring the clearing of vegetation under a *Nature Conservation Act 1992* (Qld) Clearing Permit and Impact Management Plan to be consistent with the decision notice and a Stage Area Environmental Development Plan, is unnecessary and may lead to ambiguity in compliance. The department agrees that the condition is not necessary or convenient for the protection of protected matters, and recommends that it be deleted.

Pre-clearing requirements (Condition 10)

19) The department recommends inserting a new Condition 10, to prescribe pre-clearing activities that are required prior to disturbance within any defined stage. The condition incorporates dot points previously included in the definition of 'ground truthing' surveys.

Chemical risk assessment (Conditions 17 and 19)

20) The proponent requested changes to Conditions 15 and 17 that would:

- a) not require the publication of the chemical risk assessment due to concerns about third-party intellectual property (IP) being published; and

- b) reduce the independent oversight and review of chemical risk assessment for high-risk chemicals which they considered to be duplicative.
- 21) The department recommends that Condition 17 be amended to allow for a redacted version of the chemical risk assessment to be published where third-party IP has been removed. This allows commercially sensitive data that the proponent does not own to be protected while still providing maximum community visibility around chemicals management.
- 22) The department does not recommend any changes to Condition 17 relating to multiple independent reviews as this related to high-risk chemicals where additional assurance that these have been assessed and will be managed adequately is warranted and intended.

Subsidence (Conditions 25 to 29)

- 23) The proponent requested changes to Conditions 23, 24 and 26 that would:
- a) remove the static subsidence investigation trigger for an absolute elevation change and replace it with investigation trigger for change in land surface gradient which would directly relate to altered water flow across the lands surface;
 - b) initially require an investigation after triggers were exceeded to determine cause before requiring the development and implementation of mitigation and management measures;
 - c) remove the minister's ability to require parts of the action to be paused if the minister was not satisfied with the proposed mitigation and management of impacts to protected matters.
- 24) The department recommends amendments to Condition 25, to remove the static total subsidence trigger as suggested by the proponent and to expand the application of the change of slope trigger, which had been applicable to watercourses only, to the entire landscape. The technical information provided by the proponent to support this request indicates that this approach would achieve the intended outcome of the condition.
- 25) The department recommends inserting Condition 26 and redrafting Condition 27 to clarify that initially after a trigger exceedance at Condition 25 an investigation as to the cause should be completed followed by development of a management plan if the action was the cause, or if the minister considered the action to be the cause based on the investigate report provided. This approach is consistent with the intent of the draft conditions but is more clearly explained in the updated conditions.
- 26) The department does not recommend any amendments to Condition 29. The department considers that it is essential that the minister maintain the express ability to direct the approval holder to pause a specified part of the action that is contributing to ongoing impacts that is not being adequately managed.

Springs and watercourse springs (Conditions 49 to 59)

- 27) The proponent requested changes to the following conditions in this subset:
- a) Conditions 45 to 47 to allow for baseline data collected by third parties to be submitted, and for reduced monitoring requirements at watercourse springs. The department does not

agree with the changes as proposed as they would introduce ambiguity and complexity, could affect enforceability, and set a different level of scientific rigour and understanding for protected matters which have the same underlying hydrogeological processes.

The department notes that the request to prevent duplication through the submission of work completed by third parties, where this work covers the geographical location of interest and is done to an appropriate standard, meets the intent of the conditions, and recommends inserting new Condition 51 to clarify this.

- b) Condition 52 to link reporting requirements under conditions 49 and 50 to the commencement of production wells in specific geological strata, e.g. the Walloon Coal Measures and the Bandanna Formation within Spring Gully C. The department does not agree with this proposal as it introduces an unnecessary layer of complexity for compliance and enforcement. The department considers that the distance buffers are a simple approach that will achieve the outcomes intended by the conditions while addressing uncertainty in spring and watercourse spring sources.
- c) Removal of Condition 48. The department does not agree with this proposal as it considers that this condition is key to ensuring the safety net component of the JIF conditions will function optimally through the provision of field-based data to validate the model prediction relied upon by the JIF conditions.
- d) Removal of Conditions 49 to 51. The department does not agree with this proposal, but does recommend some amendments in Conditions 53 to 56. The intent of these conditions is to ensure, should impacts to specified springs and watercourse springs be detected prior to the assignment of a responsible tenure holder, that these protected matters will be appropriately managed. In the proposed decision these conditions required reporting data to OGIA and requiring OGIA to analyse and advise of unexpected trends. This process was requested by the proponent; however, they now advise that this could impact OGIA's processes. In order to prevent a responsibility and burden of analysis being placed on OGIA that may be additional to their current practice, the department has amended these conditions to be consistent with a process previously discussed with the proponent. These conditions will now require the approval holder, once a change threshold is exceeded, to determine the cause of the changes and if due to the action to provide mitigation and management actions for the minister's approval. Should the minister not be satisfied with the proposed mitigation and management the minister will have the ability to ask for additional information, measures or temporary pausing of specified parts of the action. The department notes that it would be possible for the minister to consult OGIA on any proposal, without imposing any research or management obligation on them.
- e) Removal of Conditions 52 to 54 pending removal of Conditions 49 to 51. The department does not agree with the proposal to delete these conditions the related preceding conditions were not deleted. Conditions 57-59 therefore are still required as they are essential to ensuring once a responsible tenure holder assignment is made that the spring or watercourse springs in question will be managed under the standard JIF framework.

Terrestrial and subterranean groundwater-dependent ecosystems

28) The proponent requested changes to the following conditions in this subset:

- a) Condition 55 to shift the survey toward desktop analysis and reduce field work for terrestrial GDEs. The department does not agree with this change because it duplicates work already undertaken by OGIA, contradicts the proponent's own requests to align with OGIA assessments, and risks leaving areas identified by OGIA as being at risk insufficiently surveyed or monitored. Relying mainly on desktop analysis could also enable unsupported claims that groundwater dependence is absent, despite OGIA's findings to the contrary.

To separate the terrestrial GDE and subterranean GDE monitoring requirements.

The department has made amendments to address this concern. Condition 60 now focuses only on terrestrial GDE baseline data collection requirements while Condition 61 was added specifically for subterranean GDE baseline data collection requirement.

- b) Condition 57 to include caveats allowing for deferring of some works. The department does not agree with the proposed amendments as they increase complexity, potentially decrease enforceability and could result in worsened outcomes since they create ambiguity as to when the baseline data collection will be completed by linking baseline data collection to JIF processes. The JIF operates in the post-approval space on the assumption that adequate baseline data has been collected prior to JIF conditions being applied.

DAEMP (Condition 65)

- 29) The department has included a requirement in Condition 65 to tie commitments within a DAEMP to prescribed environmental outcomes for protected matters.

Commencement of a stage (Condition 70, 72, 84 and 87)

- 30) The proponent requested that 'commencement' in Conditions 64, 66, 79 and 82 refer to commencement of the relevant stage, rather than commencement of the action, on the basis that this would eliminate drafting ambiguity and ensure the trigger correctly applies to the commencement of the specific stage. The department agrees that this is more useful and recommends this change in Conditions 70, 72, 84 and 87, along with a new corresponding definition.

Deadline for provision of annual stage report (Condition 75)

- 31) The proponent requested that the requirement to provide the department information under Condition 69 be extended to 60 days after the end of each 12-month period to allow time for data extraction, quality assurance and checks and mandatory internal governance and clearance procedures. The department agrees, and recommends the extension on the grounds that it does not alter the effect of Condition 75.

SMART principle (Condition 78)

- 32) The proponent requested the deletion of Condition 72 as it duplicates reference to the SMART principle and departmental guidance on developing management plans under Condition 60. The department notes that Condition 60 relates to the Development Area Environmental Management Plan, while Condition 72 relates to the Stage Area Environmental Management Plan. As the Development Area Environmental Management Plan does not require ministerial approval and the Stage Area Environmental Management Plan does, the department considers it necessary that it has a specific requirement to meet departmental guidance, and recommends no change to Condition 78.

SAEMP content (Condition 81)

- 33) The proponent requests the deletion of points g) through to i) of Condition 75, on the basis that as the SAEMP remains legally tethered to the operational requirements of the relevant DAEMP. The department does not agree and notes that the DAEMP is not approved by the minister. The SAEMP is approved by the minister and as such should contain all relevant information relating to the project disturbance footprint and the required avoidance, mitigation and management measures for the minister to consider. Timing of implementation, monitoring and performance indicators should also be tied to the SAEMP for each stage. The department does not recommend any changes to Condition 81.

Variation to conditions (Conditions 76 and 77)

- 34) The proponent has requested the removal of Conditions 76 and 77 of the proposed approval as it duplicates minor variation conditions in Part B: Administrative Conditions. The department agrees and has removed the condition and added the SAEMP to the new Condition 90).

Stage 1 Approval (Condition 81)

- 35) The proponent has requested that Stage 1 of the action, as defined in the document 'Stage 1 Assessment Report (Appendix M of the PER)' (Attachment A4), be approved through a condition of this notice. The department agrees with this approach as the conditions of this notice have been drafted after the submission of the Stage 1 Assessment Report and this may have led to unintended technical compliance issues. However, the department notes that any variation to the Stage 1 Assessment Report would need to comply with the conditions in this notice.

Public Register and Transparency (Conditions 89 and 90)

- 36) The proponent requested Condition 109 of the proposed approval notice to be moved up with the SAEMP condition set as it relates to the approval and publication of stages and relevant SAEMPs. The department agrees and recommends new Conditions 88 and 89. The department has also clarified publication timeframes to ensure there are no contradictions in the conditions.

Part C – Definitions

- 37) Additional definitions have been recommended to provide clarity and improve enforceability. Definitions that were not required were removed. Amendments to the definitions were broadly agreed by both parties.

Miscellaneous

- 38) Apart from the changes in paragraphs 11 to 37 above, the department has recommended other amendments to the proposed conditions that are minor in nature (e.g. formatting, updating of definitions, grammatical corrections and clarifications) and are broadly agreed to by both parties.

Environmental history of the person proposing to take the action

- 39) Under subsection 136(4) of the EPBC Act, you may take into account the environmental history of the person proposing to take the action when deciding whether to approve an action.
- 40) The department's Compliance and Enforcement Branch has identified three previous breaches of approval conditions under the EPBC Act that have been substantiated against Origin / APLNG. Two of these breaches were administrative in nature and one of them was self-reported.

The department has recommended changes to proposed approval conditions aimed at making compliance with administrative conditions easier, to hopefully avoid such occurrences in the future.

- 41) The third breach related to a failure to fully implement an environmental constraints and field development protocol, resulting in a warning letter. The department has no reason to expect that this breach is indicative of any systemic failure or pattern of behaviour, but will draw this history to the attention of the Post Approvals Section and Audit Section when handing over the approval decision for ongoing management.
- 42) Further information on the environmental history of the person proposing to take the action was provided in the recommendation report at Attachment A2.

Decision recommendations

- 43) Except as described in this brief, the matters for consideration and factors to be taken into account for your decision remain as set out in the proposed approval decision brief (Attachment A1).
- 44) There have been no updates to statutory documents referenced in the proposed decision and no amendments to the list of threatened species or ecological communities that have come into effect since the proposed decision was made on 26 February 2026.
- 45) For the reasons set out in the proposed approval decision brief (Attachment A1) and recommendation report (Attachment A2), the department recommends that you approve the taking of the proposed action, for the purposes of the controlling provisions in sections 18 and 18A (listed threatened species and communities), 20 and 20A (listed migratory species), and 24D and 24E (Water resources, in relation to unconventional gas or large coal mining development) subject to the recommended conditions of approval.
- 46) This conclusion was reached by having regard to the likely impact of the proposed action on matters protected by the relevant controlling provision and social and economic matters, as required under section 136(1).
- 47) For the reasons set out above, and in the proposed approval decision brief (Attachment A1), the department considers that the recommended conditions are necessary or convenient to protect or to repair or mitigate damage to a matter protected by a provision of Part 3 of the EPBC Act. Accordingly, the department considers that you can be satisfied that the conditions at Attachment D are within the scope of your power in subsections 134(1) and (2) of the EPBC Act.

Approval of Stage 1

- 48) The department has considered the Stage 1 Assessment Report (Attachment A4) provided as Appendix M of the PER. After assessing the document, the department considers that it satisfies the conditions at Attachment D. In particular, the department acknowledges the Stage 1 Assessment Report:
 - meets the definition of a stage by defining the number of wells and geographical area (Conditions 74 to 76)

- meets the objectives of a Stage Area Environmental Management Plan (Conditions 77 and 78)
- undertakes an acceptable assessment of impacts by providing ground-truthed data and avoidance, mitigation and management measures (Condition 81)
- will not require any offsets as the stage will not have any impacts on protected matters (Conditions 83 to 88).

For the reasons set out above, the department recommends that you approve the Stage 1 Assessment Report (Attachment A4) in line with Condition 82 of Attachment D.

s. 22(1)(a)(ii)

Position: Director, Queensland North Assessments
 Branch: Environmental Assessments Queensland Branch
 Phone: s. 22(1)(a)(ii)
 Date: 17 March 2026

Contact officer

Name: s. 22(1)(a)(ii)
 Section: Queensland North Assessments
 Phone: s. 22(1)(a)(ii)

Attachments

A: Recommendation Report

- A1: Attachment A1: Proposed Decision Brief
- A2: Attachment A2: Proposed Decision Recommendation Report
- A3: Attachment A3: Proposed Decision Electronic Briefing Package
- A4: Attachment A4: PER Appendix M – Stage 1 Assessment Report
- A5: Attachment A5: PER Appendix A – Environmental Constraints Planning and Field Development Protocol
- A6: Attachment A6: PER Appendix J – Greenhouse Gas Emissions Inventory

B: Proponent responses to invitation for comment on proposed decision

C: Ministerial responses to invitation for comment on proposed decision

D: Notice of decision **FOR SIGNATURE**

D1: Attachment D1: Notice of decision **FOR SIGNATURE**

D2: Attachment D2: Condition Attachment A

D3: Attachment D3: Condition Attachment B

- D4: Attachment D4: Condition Attachment C
- D5: Attachment D5: Condition Attachment D
- D6: Attachment D6: Condition Attachment E
- D7: Attachment D7: Condition Attachment F
- D8: Attachment D8: Condition Attachment G
- D9: Attachment D9: Condition Attachment H
- D10: Attachment D10: Condition Attachment I
- E: Letters to relevant parties **FOR SIGNATURE**
- E1: Attachment E1: Final Decision Letter to Proponent **FOR SIGNATURE**
- E2: Attachment E2: Final Decision Letter to the Department of the Environment, Tourism, Science and Innovation **FOR SIGNATURE**
- E3: Attachment E3: Final Decision Letter to Minister for Agriculture, Fisheries and Forestry **FOR SIGNATURE**
- E4: Attachment E4: Final Decision Letter to Minister for Climate Change and Energy **FOR SIGNATURE**
- E5: Attachment E5: Final Decision Letter to Minister for Indigenous Australians **FOR SIGNATURE**
- E6: Attachment E6: Final Decision Letter to Minister for Resources and Minister for Northern Australia **FOR SIGNATURE**
- E7: Attachment E7: Final Decision Safeguard Mechanism Letter to Climate Change Authority **FOR SIGNATURE**
- E8: Attachment E8: Final Decision Safeguard Mechanism Letter to Secretary for Climate Change **FOR SIGNATURE**
- F: Environmental history check – Australia Pacific LNG Pty Ltd



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Proposed decision brief (Recommendation Report)

To: Declan O'Connor-Cox, Branch Head, Environment Assessments Queensland

Action required: For Decision

Timing: 24 February 2026 – in order to meet final approval deadline of 17 March 2026

Gas Supply Security Project, Surat and Bowen Basins, Queensland

Recommendations	
Consider the recommendation report at <u>Attachment A</u>	Considered / Please discuss
Consider the public environment report (PER) at <u>Attachments C1</u> to <u>C22</u> .	Considered/Please discuss
Agree that the recommended decision on page 4 of the recommendation report at <u>Attachment A</u> , detailed in the decision notice at <u>Attachment B</u> , and summarised in the table below, reflects your proposed decision.	Agreed / Not agreed
Sign the letters at <u>Attachment H1</u> to <u>H6</u> to consult the proponent and person proposing to take the action and relevant Commonwealth ministers on your proposed decision.	Signed / Not signed
Agree to not publish the proposed decision at <u>Attachment B</u> on the internet for public comment.	Agreed/Not agreed
Summary of recommendations on each controlling provision	
Controlling provisions for the proposed action	Recommendation
Listed threatened species and ecological communities (sections 18 and 18A)	Approve
Listed migratory species (sections 20 and 20A)	Approve
Water resources, in relation to unconventional gas or large coal mining development (sections 24D and 24E)	Approve
Signature of delegate: 	

Date: 26 February 2026

Comments:

Key points

- 1) Australian Pacific LNG Pty Ltd (the proponent, represented by joint venture partner and operator, Origin Energy) is proposing to develop the Gas Supply Security Project (EPBC 2020/8856), consisting of gas field infrastructure in existing petroleum tenures within the Surat and Bowen Basins, south central Queensland. The action will extend the commercial production area of the existing, previously approved Australia Pacific LNG (APLNG) Project (EPBC 2009/4979) into adjacent development areas not subject to an existing approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- 2) The action will involve the construction, operation, decommissioning, and rehabilitation of gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities).
- 3) The department considers that provided that it is undertaken in accordance with the recommended conditions of approval at Attachment B, the proposed action will not have unacceptable impacts on the controlling provisions for assessment:
 - listed threatened species and communities (sections 18 and 18A)
 - listed migratory species (sections 20 and 20A)
 - water resources, in relation to coal seam gas or large coal mining development (sections 24D and 24E)

Background

Referral

- 4) On 17 February 2021, a delegate of the minister determined the proposed action is a controlled action due to likely significant impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A), and water resources related to coal seam gas or large coal mining development (sections 24D and 24E). On the same date, the delegate decided the action would be assessed by public environment report (PER).

Assessment

- 5) The proponent submitted the first PER draft on 26 October 2021, followed by updated drafts on 25 October 2022, 21 December 2023, 25 October 2024, 14 March 2025, 7 April 2025, and 23 April 2025. On 30 April 2025, the department deemed the draft PER suitable for publication.

- 6) The proponent provided a draft final PER with Appendices A, B5, C, D, and E on 21 August 2025, which was superseded on 21 November 2025 after addressing remaining departmental and public comments. The department accepted the finalised PER on 13 January 2026, and it was published on 16 January 2026.
- 7) Under section 131AB, the minister must seek advice from the Independent Expert Scientific Committee (IESC) for coal seam gas developments likely to significantly impact water resources. On 21 December 2021, the department requested IESC advice for the Gas Supply Security Project (EPBC 2020/8856), then involving more than 7,000 coal seam gas wells. The IESC provided their advice on 8 February 2022, highlighting gaps in infrastructure layout information, limited assessment of all water resources, limitations of the Queensland Office of Groundwater Impact Assessment (OGIA) model for surface expression GDEs, and the need for ground-truthing and baseline data before commencement.

Reconsiderations

- 8) On 8 July 2022, Environmental Justice Australia (EJA) submitted a reconsideration request, on behalf of the Environment Council of Central Queensland Inc, on the basis of the availability of substantial new information (section 78(1)(a) of the EPBC Act).
- 9) EJA stated that the information provided with the reconsideration request demonstrated that the proposed action will or is likely to have significant physical effects on a number of matters of national environmental significance because of the greenhouse gas emissions associated with the proposed action. EJA requested that the minister revoke the original referral decision and substitute a new decision under section 75(1) of the EPBC Act, listing all matters of national environmental significance that EJA had identified as affected by climate change as controlling provisions.
- 10) On 19 February 2026, you, as a delegate of the minister, determined that the information provided with the request is not about the impacts that the proposed action has or is likely to have on matters of national environmental significance and confirmed the original referral decision (reconsideration decision) ([Attachment N](#)). You found that the physical effects of climate change on matters of national environmental significance were not 'impacts' of the proposed action.

Variations

- 11) On 5 July 2022, the department received a request from the proponent to vary the proposed action to excise Mahalo Block A from the project area ([Attachment O1](#)). On 5 August 2022, the department agreed to accept this variation request ([Attachment O2](#)).
- 12) On 20 December 2024, the department received a request from the proponent to vary the proposed action to excise part of Denison Block A, all of Denison Blocks B and C, all of Spring Gully B, and part of Ironbark, with the remaining areas forming a revised project area ([Attachment O3](#)). On 28 January 2025, the department agreed to accept this variation request ([Attachment O4](#)).

Proposed approval

- 13) The stage 3 cost recovery fee was paid on 18 November 2025, and the stage 4 fee on 12 December 2025.
- 14) On 13 February 2026 in accordance with section 132 of the EPBC Act, the department requested further information on water resources, in relation to unconventional gas or large coal mining development (section 24D & 24E). The proponent provided the requested information on 18 February 2026. In accordance with section 130(5) of the EPBC Act, this request stops the statutory clock for the approval decision for 4 business days. As such, the statutory deadline for the final approved decision is 17 March 2026.

Sensitivities and handling

- 15) The proposed action is expected to have a significant impact on the following listed species and communities. As explained in the recommendation report at Attachment A, the maximum disturbance limits are indicative only:
 - a) 64 hectares (ha) of Brigalow (*Acacia harpophylla* dominant and co-dominant) ecological community
 - b) 106 ha of Poplar Box Grassy Woodland on Alluvial Plains ecological community
 - c) 56 ha of *Adclarkia cameroni* (Brigalow Woodland Snail) habitat
 - d) 10 ha of *Adlcarkia dulacca* (Dulacca Woodland Snail) habitat
 - e) 602 ha of *Chalinolobus dwyeri* (Large-eared Pied Bat) habitat
 - f) 960 ha of *Delma torquata* (Collared Delma) habitat
 - g) 10 ha of *Denisonia maculata* (Ornamental Snake) habitat
 - h) 1,177 ha of *Egernia rugosa* (Yakka Skink) habitat
 - i) 1,202 ha of *Erythroriorchis radiatus* (Red Goshawk) habitat
 - j) 1,015 ha of *Furina dunmalli* (Dunmall's Snake) habitat
 - k) 755 ha of *Geophaps scripta scripta* (Squatter Pigeon (southern)) habitat
 - l) 765 ha of *Grantiella picta* (Painted Honeyeater) habitat
 - m) 1,227 ha of *Nyctophilus corbeni* (South-eastern Long-eared Bat) habitat
 - n) 428 ha of *Petauroides volans* (Greater Glider) habitat
 - o) 853 ha of *Phascolarctos cinereus* (Koala) habitat
 - p) 28 ha of *Rheodytes leukops* (Fitzroy River Turtle) habitat
 - q) 146 ha of *Rostratula australis* (Australian Painted Snipe) habitat

- r) 449 ha of *Acacia luata* (Tara Wattle) habitat
 - s) 19 ha of *Cadellia pentastylis* (Ooline) habitat
 - t) 391 ha of *Eucalyptus virens* (Shiny-leaved Ironbark) habitat
 - u) 228 ha of *Homopholis belsonii* (Belson's Panic) habitat
 - v) 124 ha of *Thesium australe* (Austral Toadflax) habitat
 - w) 293 ha of *Xerothamnella herbacea* habitat
- 16) Potential impacts to water resources from the proposed action, and management actions for these, identified by the proponent were:
- a) Changed surface water quality from discharges of treated produced water. Discharges would occur from previously approved infrastructure and be managed through existing conditions relating to these facilities.
 - b) Drawdown exceeding accepted thresholds at 5 groundwater bores associated with the Ironbark and Spring Gully development areas. Impacts to be managed through 'make good' arrangements under the *Water Act 2000* (Qld).
 - c) Drawdown not exceeding accepted thresholds (e.g., <0.2m) at the 4 EPBC-listed springs and 2 springs supporting EPBC-listed species within 50 km of the proposed action due to the action. Impacts to be managed through Joint Industry Framework (JIF) conditions.
 - d) 381 ha of probable and 3,841 ha of potential groundwater dependent ecosystems that could be impacted by shallow groundwater drawdown. The proponent expects no impacts however, as the proponent considered this vegetation would be able to adapt to changes in groundwater availability.

Recommendation Report

- 17) The Recommendation Report ([Attachment A](#)), prepared in accordance with section 100 of the EPBC Act, concludes that the proposed action should be approved under sections 130 and 133 of the EPBC Act subject to the proposed conditions recommended by the department (see proposed approval notice at [Attachment B](#)). This conclusion was reached by having regard to the likely impact of the proposed action for the purposes of each controlling provision and the relevant social and economic considerations under section 136 of the EPBC Act.
- 18) Relevant statutory documentation is referenced in the recommendation report
- 19) The attached recommendation report ([Attachment A](#)) identifies:
- a) The matters which you must and may consider in making your proposed decision on whether or not to approve the proposed Action, including the likely impacts of the proposed Action for the purpose of each controlling provision, principles of ecologically sustainable development, economic and social matters, and matters relevant to listed threatened species and communities, and

- b) The department's analysis and conclusions in respect of these matters and the recommended proposed decision.
- 20) The IESC noted that the assessment of water resources other than EPBC-listed springs or springs supporting EPBC-listed species was inadequate. The IESC and Geoscience Australia highlighted the lack of baseline data and ground truthing provided in the assessment to support the proponents' conclusions of no significant impacts.
- 21) Due to the iterative manner in which coal seam gas fields are developed over time, it is notable that in their assessment, the proponent has relied heavily on modelling occurrence of protected matters, and setting out processes for identifying, quantifying and managing those impacts. There is less emphasis on field survey and project design than in many other assessments, and consequently less quantitative analysis of impacts.
- 22) As described in detail in the recommendation report, the department has recommended several conditions specifically to manage the risks associated with this uncertainty.
- 23) The department recommends an approval period of 55 years to account for construction, operation, decommissioning, and for reasonable audit and compliance work.

Public submissions on assessment documents

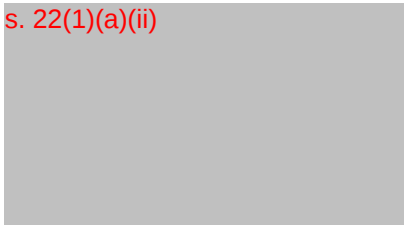
Number	1276	For	0	Against	1276	Not specified	0
24)	On 9 May 2025, the draft PER was made available for public comment for 30 business days in accordance with section 98(3) of the EPBC Act.						
25)	On 25 November 2025, the proponent provided the department with the public comments made during the specified comment period. These public comments have been included in <u>Attachment C21</u> .						
26)	All public comments were not in support of the proposed action and raised concerns about:						
	a) potential greenhouse gas emissions and climate change impacts						
	b) effects on biodiversity including threatened species, threatened communities and migratory species						
	c) disturbance to water resources including groundwater, aquifers and surface water						
	d) cultural heritage and consultation with indigenous groups						
	e) community related concerns including changes to rural landscapes and potential public health matters						
	f) project description and how the Project meets the required assessment framework						
	g) economic assessment and gas supply / demand rationale						
	h) the project's implications for National and World Heritage values						

- i) the need for new gas developments in the context of Australia's energy transition.
- 27) The department considers adequate public consultation for the proposed action has occurred, and that inviting public comment under section 131A on the proposed decision and recommended conditions of approval is unlikely to elicit views or information that have not already been considered in relation to the proposed action. As such, the department recommends that you do not publish the proposed decision for public comments.

Consultation

- 28) Before deciding whether or not to approve the proposed action, you are required under section 131 and 131AA of the EPBC Act to consult with the person proposing to take the action and any other minister you, as the delegate of the minister believe has administrative responsibilities relating to the action. The department recommends you consult with:
- a) the proponent
 - b) the Minister for Indigenous Australia
 - c) the Minister for Resources and Northern Australia
 - d) the Minister for Climate Change
 - e) the Minister for Agriculture, Fisheries and Forestry
 - f) The Queensland Department of Environment, Tourism, Science and Innovation
- 29) Letters for your signature are at Attachment H.

s. 22(1)(a)(ii)



Position: Director, Queensland North Assessments
 Branch: Environment Assessments Queensland
 Phone: s. 22(1)(a)(ii)
 Date: 24 February 2026

Contact officer

Name: s. 22(1)(a)(ii)
 Section: Queensland North Assessments
 Phone: s. 22(1)(a)(ii)

Attachments

- A - Recommendation Report (included in this document)
- B - Proposed approval decision **DO NOT SIGN** (included in this document)
- C - PER (included in this document)

D - Conservation advices and recovery plans

E - Threat Abatement Plans

F - Significant Impact Guidelines

G - Other departmental documents

H - Letters to relevant parties **FOR SIGNATURE**

1- Letter to Proponent

2- Letter to Minister for Indigenous Australians

3- Letter to Minister for Resources and Minister for Northern Australia

4- Letter to Minister for Climate Change

5- Letter to Minister for Agriculture, Fisheries and Forestry

6- Letter to Queensland Department of Environment, Tourism, Science and Innovation

I - Referral Documentation

J - IESC Advice

K - Statutory Document Report

L - Environmental History Check

M - Reconsideration Decision

N - Stop Clock Information

O - Variation Request Information

Recommendation Report

Gas Supply Security Project

EPBC 2020/8856

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Recommendation

- 1) That the proposed action to construct, operate, decommission and rehabilitate coal seam gas (CSG) infrastructure within the Surat and Bowen Basins, Queensland, be approved under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), subject to the conditions specified at Attachment B.

Duration of approval

- 2) The department recommends that the approval remain valid for a period of 55 years to allow sufficient time to undertake the proposed action and fulfil the conditions of approval.

Background

Description

Action and location

- 3) Australia Pacific LNG Pty Ltd (the proponent, represented by joint venture partner and operator, Origin Energy) is proposing to develop the Gas Supply Security Project (the action), consisting of gas field infrastructure in existing petroleum tenures within the Surat and Bowen Basins, south central Queensland.
- 4) The action would extend the commercial production area of existing, previously approved Australia Pacific LNG Pty Ltd (APLNG) Project (EPBC 2009/4974) gas fields into adjacent development areas not subject to an existing EPBC Act approval. The action would involve the construction, operation, decommissioning, and rehabilitation of gas field development infrastructure, including wells, gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities).
- 5) The PER presents a 'maximum development scenario' for the action, which represents the upper limit of development for the proposed action. Table 1 below summarises the estimated construction and operational footprint for the action associated with the maximum development scenario.

Table 1: Estimated construction and operational footprint for the Gas Supply Security Project.

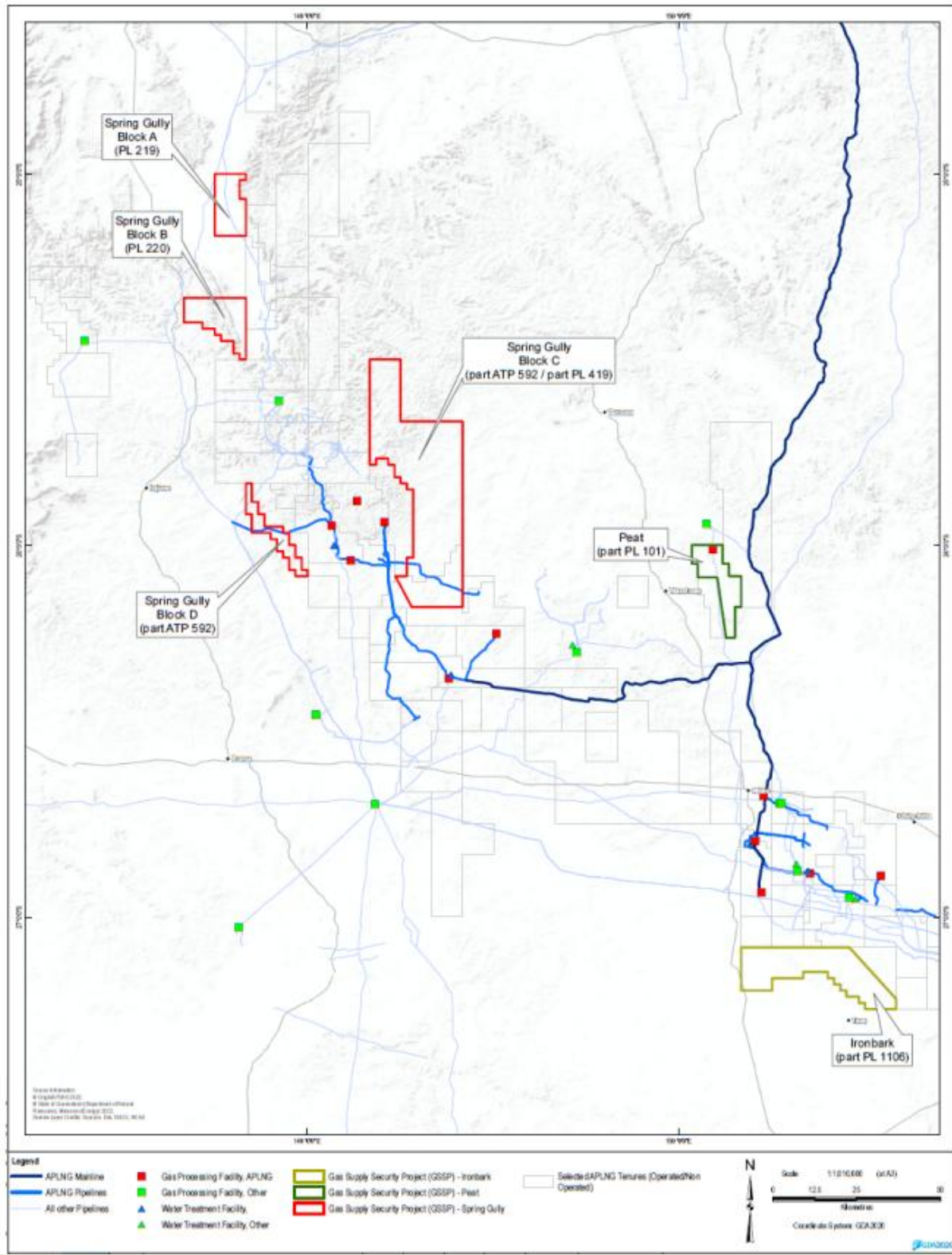
Key action components	Maximum development scenario	Construction footprint (approx.)	% of construction footprint (approx.)	Operational footprint (approx.)
Wells	Up to 1,695	Up to 1.5 ha per well	36%	0.3 ha per well
Gas and water gathering pipelines	Up to 1,545 km	Up to 25 m right of way (RoW)	55%	6 m RoW
GPFs and Water Management Facilities	Up to 3 combined facilities	Up to 120 ha per combined facility	5%	100 ha per combined facility
Supporting infrastructure	NA	Up to 271 ha	4%	41 ha
Approximate maximum footprint	7,036 ha		100%	1,777 ha

- 6) The public environment report (PER) prepared for the action states that several major pipelines already traversing the action area (including the Santos GLNG pipeline, Jemena Queensland Gas pipeline and APLNG transmission pipelines) have approved capacity to accommodate the additional gas volumes generated by the proposed action. The department notes that the maximum development scenario components presented in Table 1 above only considers gas and water gathering pipelines. The PER states that gas transmission pipelines (if required as 'supporting infrastructure') would require a right of way up to approximately 40 metres (m).
- 7) The action is located in central and southwest Queensland within the Surat and Bowen basins. The action area covers approximately 211,472 hectares (ha) split across 6 development areas (also referred to as blocks): Spring Gully Blocks A, B, C, and D; Peat; and Ironbark. See Figure 1 below. These development areas are the basis for some types of geographically-based management documentation. They are different from 'stages', which are tranches of work that will be identified and defined iteratively as the project evolves. Land tenure relates to land ownership, occupation and management, including exploration and production rights granted by the Queensland Government.
- 8) The peak production rate of co-produced water (by-product) for the action is approximately 4.7 gigalitres per annum (GL/year), or 34.1 GL over the life of the action.

Description of the environment

- 9) The action area is located entirely within the southern Brigalow Belt Bioregion. The Brigalow Belt Bioregion contains a broad range of habitat types that provide suitable values for species including birds, bats, mammals and reptiles.
- 10) The action area contains 52,800 ha of remnant vegetation, or approximately 25% of the action area, with the majority of remnant vegetation found within Spring Gully Blocks B and C, and Ironbark (see Table 2 below).
- 11) Of the remnant vegetation, the PER states that the majority (73.7%) is eucalypt woodlands to open forests. Eucalypt dry woodlands on inland depositional plains (14.9%), and other acacia dominated open forests, woodlands, and shrublands (4.8%) are the next most prevalent.
- 12) The landscape is largely composed of alluvial plains (flat, near flat and undulating plains associated within valleys along the main rivers and tributary streams), undulating low hills, broad ridges and wide, flat-bottomed valleys and plateau remnants (flat to strongly undulating plateau surface remnants cut by very steep slopes and escarpments). Across the action area elevations range from less than 250 metres (m) Australian Height Datum (AHD) in the north and east Spring Gully, as well as in Ironbark and Peat, with the maximum peak of 650 m AHD in Spring Gully north.
- 13) The action area is mostly freehold land (approximately 78%) associated with larger agricultural properties. The remainder of the land tenure is a combination of lands lease, road reserves, easements and unallocated state land.

Figure 1. Map of the action area, located within the Surat and Bowen basins in central and southwest Queensland.



- 14) **Table 2. Area and proportional area of remnant vegetation on each development block within the action area.**

Development Block	Size (ha)	% of action area	Amount of remnant vegetation (ha)	% of block comprising remnant vegetation
Spring Gully A	14,590	7%	1,389	9.5%
Spring Gully B	18,889	9%	10,585	56%
Spring Gully C	110,070	52%	29,530	27%
Spring Gully D	9,861	4.5%	2,194	22%
Peat	16,098	7.5%	615	4%
Ironbark	41,964	20%	8,487	20%
Total action	211,472	100%	52,800	25%

- 15)
- 16) The action area is subject to a range of land uses, including agricultural production (cropping land and cattle grazing), resource extraction (petroleum activities) and protected areas with conservation and recreation values. Many areas have been subjected to extensive grazing and agricultural related land use activities such as clearing of woody vegetation.
- 17) Urban development comprises of regional towns including Injune, Tara and Wandoan and rural residences outside of urban areas.
- 18) The regional climate is classified as subtropical with moderately dry winters (between April and September) and dry hot summers (between October and March) (Bureau of Meteorology (BoM), 2019). Changes in terrain across the action area contribute to some variability in local climate recorded at local stations operated by the BoM.
- 19) Rainfall is at its highest from late spring through to the end of summer. The wettest month is January, with a median rainfall of 98 millimetres (mm). The driest months of the year are April to September. The mean monthly maximum temperature ranges from 19.3°C in July to 34.8°C in January, with the lowest mean minimum temperatures experienced in June, July and August.

- 20) The action area is situated across two geological basins, the Permo-Triassic Bowen Basin in the north and the Jurassic-Cretaceous Surat Basin in the south. The Bowen Basin is an elongated north-south trending basin which covers approximately 160,000 square kilometres (km²) of Queensland and New South Wales. The Surat Basin partially overlies the Bowen Basin and extends from north of Taroom, Queensland, to north of Dubbo, New South Wales.
- 21) Geologic formations within these basins comprise various layers of sandstone, siltstone and mudstone that were primarily deposited by rivers and lakes, with occasional marine influences. These basins have structurally separate depositional sedimentary centres but are stratigraphically and hydraulically connected. Overlying these basins are extensive areas of unconsolidated younger alluvial sediments and volcanics that can be deeply weathered and laterised.

Referral, controlling provisions, assessment approach decision and public consultation

- 22) The proposed action was referred on 19 January 2021.
- 23) It was published on the department's website on 19 January 2021, and public comments were invited until 3 February 2021. Due to an incorrect attachment being uploaded at the time of publication, the public comment period was extended until 10 February 2021 to ensure the full referral documentation was available for 10 business days in accordance with section 74(3) of the EPBC Act.

Public Comments

- 24) Two public submissions were received in response to that invitation, which are summarised below and attached at [Attachment I1](#) and [Attachment I2](#).

Joint submission

- 25) On 10 February 2021, the department received a joint submission from 58 individuals, which stated that the proposed action should be:
- a) determined a controlled action and that relevant controlling provisions are listed threatened species and communities (sections 18 and 18A), migratory species (sections 20 and 20A) and water resources (sections 24D and 24E)
 - b) assessed by public environment report or environmental assessment (taken by the department to mean 'environmental impact statement')
 - c) referred to the IESC.
- 26) The submission also noted:
- a) concerns with a lack of data and investigation of key issues in relation to groundwater monitoring bores and impacts on stream complexes

- b) a perceived significant lack of monitoring bores in the action area, including a lack of replicate sample sites
 - c) a lack of localised information and investigation regarding faults and impacts on groundwater dependent ecosystems (GDEs).
- 27) The submission also called for the data and modelling by the Queensland Office of Groundwater Impact Assessment (OGIA) for the proposed action to be made available to the public.

Lock the Gate Alliance

- 28) On 10 February 2021, the department received a submission from Lock the Gate Alliance, which raised a number of issues, including their view that:
- a) water resources should be recognised as a controlling provision for the proposed action
 - b) the proposed action should be assessed by environmental impact statement
 - c) although the proponent has acknowledged there is likely to be a significant impact on threatened species, these impacts are likely to be substantially understated
 - d) there are incongruities between the development areas mapped and the text description provided in the referral
 - e) there is inadequate baseline water monitoring, including limited monitoring bores.

Comments from Commonwealth Ministers

- 29) By letter dated 19 January 2021, the following ministers were invited to comment on the referral:
- a) the Hon Keith Pitt, then Minister for Resources, Water and Northern Australia
 - b) the Hon Karen Andrews MP, then Minister for Industry, Science and Technology
 - c) the Hon Ken Wyatt AM MP, then Minister for Indigenous Australians
 - d) the Hon David Littleproud MP, then Minister for Agriculture, Drought and Emergency Management
 - e) the Hon Angus Taylor MP, then Minister for Energy and Emissions Reduction.
- 30) By letter dated 19 January 2021, an invitation to comment was also provided to the Great Barrier Reef Marine Park Authority (GBRMPA).
- 31) No comments were received from Minister Taylor or Minister Andrews in response to that invitation.

- 32) On 29 January 2021, on behalf of Minister Pitt, comments were received from the Murray Darling Basin Authority (MDBA) and the National Water Policy Branch of the Department of Agriculture, Water and the Environment ([Attachment I4](#)). On 10 February 2021, comments were received from Geoscience Australia ([Attachment I5](#)).

Murray Darling Basin Authority

- 33) The MDBA noted that:
- a) there is a need to monitor the groundwater drawdown in the shallow Condamine Alluvium and to assess leakage from the Condamine Alluvium to the Walloon Coal Measures due to CSG development; and
 - b) if there is any evidence of enhanced drawdown in Condamine Alluvium, and hence leakage from the Alluvium to the Walloon Coal Measures, it has to offset by buying groundwater entitlements from the Alluvium.

National Water Policy Branch

- 34) The National Water Policy Branch noted that:
- a) management of both surface water and groundwater quantity and quality are covered by the Condamine-Balonne Water Resource Plan (WRP), which was accredited by Minister Pitt on 21 September 2019; and
 - b) the WRP identifies a medium risk in the Upper Condamine Alluvium at current rates of interception by CSG industries.

Geoscience Australia

- 35) Geoscience Australia considered that:
- a) without a review of local scale conceptualisations, it is unclear if the regional scale assessment provided in the UWIR (see paragraph 1066)) modelling is appropriate to represent the potential local scale groundwater impacts for each area; and
 - b) there are insufficient information and assessment at the project scale to rule out the potential for direct impacts on water resources to be significant.
- 36) On 4 February 2021, Minister Littleproud responded, noting that he had no comments from an agricultural perspective on whether the proposed action may have impacts on matters of national environmental significance ([Attachment I3](#)). However, he requested that, when assessing the referral, particular attention is made to ensuring the proponent has a fit-for-purpose surface subsidence monitoring program in place to ensure agricultural production within the vicinity of the gas field developments is not negatively impacted.

- 37) On 4 February 2021, GBRMPA provided comments to the department noting that the proposed action is unlikely to have a significant impact on the Great Barrier Reef Marine Park ([Attachment I9](#)).
- 38) On 10 February 2021, a delegate of Minister Wyatt responded ([Attachment I6](#)), noting that:
- a) the proponent has developed a Cultural Heritage Management Plan with the Iman people.
 - b) other traditional groups affected by the proposed action, including the Gaangalu Nation people, Bidjara people and Kanolu people, may have been excluded from the process.
 - c) the proponent should be encouraged to engage in a thorough and genuine manner with all traditional owners in the Surat and Bowen Basins to ensure that all potentially affected Indigenous parties are provided the opportunity to engage; and
 - d) should the action proceed; to help realise its economic potential for local Indigenous people, the proponent should be encouraged to work with the National Indigenous Australians Agency (NIAA) and traditional owner groups to create sustainable Indigenous enterprise and employment opportunities.

Comments from state government ministers

- 39) By letter dated 19 January 2021, [s. 47F\(1\)](#), delegated contact for the Hon Meaghan Scanlon MP, then Minister for the Environment and the Great Barrier Reef and Minister for Science and Youth Affairs, was invited to comment on the referral.
- 40) On 10 February 2021 [s. 47F\(1\)](#) responded, advising that the proposed action will not be assessed in a manner under which the bilateral agreement between the Commonwealth and the State of Queensland would apply ([Attachment I7](#) and [Attachment I8](#)). Further, the response noted that:
- a) the extent of the approvals under the proponent's environmental authorities (EAs) does not translate entirely to the proposed action area
 - b) the referral appears to be proposing approximately 8 times the number of wells currently approved on the relevant tenures under the *Environmental Protection Act 1994* (Qld)
 - c) the Energy and Extractive Resources unit has not received any applications seeking any significant increase to activities on the relevant sites
 - d) it is expected that all relevant EAs will require amendments to authorise any expansion required for the proposed action.

Determination

- 41) On 17 February 2021, a delegate of the minister determined that the proposed action is a controlled action, due to likely significant impacts on:

- a) listed threatened species and communities (sections 18 and 18A)
 - b) listed migratory species (sections 20 and 20A)
 - c) a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E).
- 42) On the same day, a delegate determined that the proposed action was to be assessed by a public environment report (PER).

Reconsideration request

- 43) On 8 July 2022 [s. 47F\(1\)](#) of Environmental Justice Australia (EJA), on behalf of the Environment Council of Central Queensland Inc requested reconsideration of the controlled action decision of 17 February 2021 for the Gas Supply Security Project (EPBC 2020/8856), under section 78A of the EPBC Act ([Attachment M1](#)).
- 44) On 20 February 2026, you confirmed the controlled action decision of 17 February 2021, which applies in relation to the proposed action to take the proposed action as varied on 28 January 2025 ([Attachment M2](#)).

Assessment

Variations

- 45) On 5 July 2022, the department received a request from the proponent to vary the proposed action to excise Mahalo Block A from the project area ([Attachment O1](#)). On 5 August 2022, the department agreed to accept this variation request ([Attachment O2](#)).
- 46) On 20 December 2024, the department received a request from the proponent to vary the proposed action to excise part of Denison Block A, all of Denison Blocks B and C, all of Spring Gully B, and part of Ironbark, with the remaining areas forming a revised project area ([Attachment O3](#)). On 28 January 2025, the department agreed to accept this variation request ([Attachment O4](#)).

Public environment report

- 47) On 25 June 2021, following extensive consultation with the proponent, the department issued the final guidelines for the content of the draft PER (PER guidelines).
- 48) The proponent submitted the first draft of their PER to the department on the 26 October 2021. On 21 December 2021, in accordance with section 131AB of the EPBC Act, the department sought advice from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) in relation to potential impacts on water resources from the action.

- 49) The proponent provided the department with an updated draft PER on 25 October 2022, which was superseded by drafts submitted on 21 December 2023, 25 October 2024, 14 March 2025, 7 April 2025 and 23 April 2025. On 30 April 2025, the department determined that the draft PER was in a state that was acceptable to be published, noting that before the final PER was published, several issues would have to be addressed alongside concerns raised during the public comment period. These issues included:
- a) The levels of assessment undertaken / proposed must be more clearly explained / distinguished – evolution of the assessment methodology over time has left a legacy of conflicting terminology and commitments.
 - b) The commitment that ‘all direct impacts on habitat will be offset for threatened species and TECs likely to be significantly impacted by the action’ must be clarified and defined.
 - c) Definitions of habitat must be clear enough at species / threatened ecological community (TEC) level to guide ground-truthing surveys and interpretation.
 - d) Acceptability of impacts must be better justified.
 - e) Plans including the environmental management plan, rehabilitation plan and offset management strategy should identify accountable triggers for when particular actions will be taken.
 - f) Plans including the environmental management plan, rehabilitation plan and offset management strategy must discuss likely efficacy of measures proposed, with accompanying evidence.
 - g) Descriptions, terminology and commitments must be consistent across the PER and all of its attachments.
- 50) On 21 August 2025, the proponent submitted the final PER to the department, noting that 1,276 comments were received during the comment period. The comments are provided in full at Attachment I10 for your consideration and raised the following key issues:
- a) potential impacts from greenhouse gas emissions and climate change
 - b) effects on biodiversity including threatened species, threatened communities and migratory species
 - c) disturbance to water resources including groundwater, aquifers and surface water
 - d) cultural heritage and consultation with indigenous groups
 - e) community related concerns including changes to rural landscapes and potential public health matters
 - f) action description and how the action meets the required assessment framework

g) economic assessment and gas demand / supply rationale.

- 51) In addition to the above, comments were also made regarding the action's implications for National and World Heritage values and the overall need for new gas developments in the context of Australia's energy transition.
- 52) The proponent's register of issues raised is at [Attachment C21](#), which includes the proponent's response to each submission. Accordingly, the department considers that the proponent has complied with their obligations under subsection 99(2) of the EPBC Act.
- 53) On 20 November 2025, the proponent provided the final version of the final PER which was deemed adequate for publication on 13 January 2026. The department considered that the matters raised at publication of the draft PER have been addressed to the extent feasibly possible given the nature of the action, and to an extent that the minister can make a responsible decision whether to approve the action and what conditions to impose.
- 54) On 16 January 2026, the proponent published the final PER for information only, in accordance with subsection 99(4) of the EPBC Act.

Approval

- 55) On 13 February 2026, under section 132 of the EPBC Act, a delegate of the minister believed on reasonable grounds that he or she did not have enough information to make an informed decision whether or not to approve, for the purposes of a controlling provision, the taking of an action ([Attachment N1](#)). Additional information relevant to making the decision was requested from the proponent ([Attachment N2](#)). A response to the department's Request for Information was received from the proponent on 18 February 2026 ([Attachment N3](#) and [Attachment N4](#)). Broadly, this request allowed for the recommendation of more efficient conditions.

State assessment and approval

- 56) The PER states that petroleum and gas tenure approvals have been granted over the action area, including 1 authority to prospect (ATP) for exploration and appraisal activities and 5 petroleum leases (PLs) for development and production activities administered under the *Petroleum Act 1923* (Qld), the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) and the *Mineral and Energy Resources (Common Provisions) Act 2014* (Qld).
- 57) The action also holds three Environmental Authorities (EAs) issued under the *Environmental Protection Act 1994* (Qld) over all development areas ([Attachment C18](#)). EA EPPG00885313 took effect on 10 April 2025, EPPG00968013 took effect on 17 November 2023, and EPPG00653413 took effect on 7 October 2021.

58) Table 3 Relevant Environmental Authorities

Development area	Tenure Code (Name)	Environmental Authority (Name)
Spring Gully	PL419 (Clifford), PL219 (Membrane), PL220 (Lonesome), ATP592 (Spring Gully)	EPPG00885313 (Spring Gully) EPPG00968013 (Gas Fields)
Peat	PL101 (Peat)	EPPG00653413 (Peat)
Ironbark	PL1106 (Ironbark)	EPPG00968013 (Gas Fields)

59)

- 60) The action falls entirely within the Surat CMA and will be subject to responsible tenure holder obligations applied through the UWIR under the *Water Act 2000* (Queensland Water Act) (see paragraph 1064) and following for explanation of this regime).

Mandatory considerations – section 136

Section 136(1) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the minister must consider the following, so far as they are not inconsistent with any other requirement of Subdivision B, Division 1 of Part 9 of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act):

- a) matters relevant to any matter protected by a provision of Part 3 that the minister has decided is a controlling provision for the action;
- b) economic and social matters.

Controlling provisions – section 136(1)(a)

61) The proposed action was determined to be a controlled action under the following controlling provisions of the EPBC Act:

- listed threatened species and ecological communities (sections 18 and 18A)
- listed migratory species (sections 20 and 20A)
- a water resource, in relation to unconventional gas development and large coal mining development (sections 24D and 24E)

62) These controlling provisions are discussed respectively below.

Listed threatened species and ecological communities (sections 18 and 18A)

Overview

63) The proponent considers the following threatened species and ecological communities are likely to occur within the action area:

64) **Table 4 Relevant listed species and threatened ecological communities**

	Common Name	Scientific Name	Status*
Threatened	Brigalow (<i>Acacia harpophylla</i> dominant and co- dominant)		endangered
Ecological	Coolibah – Black Box Woodlands of the Darling Riverine		endangered
Communities	Plains and the Brigalow Belt South bioregions		
	Poplar Box Grassy Woodland on Alluvial Plains		endangered
	Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar bioregions		endangered
	Weeping Myall Woodlands		endangered
	The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin		endangered

Flora	Curly-bark Wattle	<i>Acacia curranii</i>	vulnerable
	Tara Wattle	<i>Acacia lauta</i>	vulnerable
	(No common name)	<i>Bertya opposens</i>	vulnerable
	Ooline	<i>Cadellia pentastylis</i>	vulnerable
	Bluegrass	<i>Dichanthium setosum</i>	vulnerable
	Salt Pipewort	<i>Eriocaulon carsonii</i>	endangered
	Shiny-leaved Ironbark	<i>Eucalyptus virens</i>	vulnerable
	Belson's Panic	<i>Homopholis belsonii</i>	vulnerable
	Austral Toadflax	<i>Thesium australe</i>	vulnerable
	(No common name)	<i>Xerothamnella herbacea</i>	endangered
Birds	Australian Painted Snipe	<i>Rostratula australis</i>	endangered
	Red Goshawk	<i>Erythrorhynchus radiatus</i>	vulnerable
	Painted Honeyeater	<i>Grantiella picta</i>	vulnerable
	Squatter Pigeon (southern)	<i>Geophaps scripta scripta</i>	vulnerable
	Grey Falcon	<i>Falco hypoleucos</i>	vulnerable
Reptiles	Ornamental Snake	<i>Denisonia maculata</i>	vulnerable
	Dunmall's Snake	<i>Furina dunmalli</i>	vulnerable
	Yakka Skink	<i>Egernia rugosa</i>	vulnerable
	Fitzroy River Turtle	<i>Rheodytes leukops</i>	vulnerable*
	White-throated Snapping Turtle	<i>Elseya albagula</i>	critically endangered
Snails	Brigalow Woodland Snail	<i>Adclarkia cameroni</i>	endangered
	Dulacca Woodland Snail	<i>Adclarkia dulacca</i>	endangered
Marsupials	Koala	<i>Phascolarctos cinereus</i>	vulnerable*
	Greater Glider	<i>Petauroides volans</i>	vulnerable*
Bats	Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	vulnerable
	South-eastern Long- eared Bat	<i>Nyctophilus corbeni</i>	vulnerable
	Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	vulnerable

65)

- 66) The * symbol in Table 4 identifies species where the listing status has changed since the referral decision. Greater Glider, Koala, and Fitzroy River Turtle have all been uplisted since the time of the referral decision from vulnerable to endangered.

Habitat modelling

- 67) The department notes that the PER does not present ecological survey data of the proposed action area. The PER relies on modelling to inform what potential habitat for the species in Table 4 occurs within the action area. The proponent proposes to conduct ground-truthing surveys of habitat prior to commencement of the action, on a staged basis.

- 68) The PER states that habitat modelling relies on Queensland RE (RE) mapping as the primary input, supplemented by other factors on a species-by-species basis (see paragraphs 117) to 1041)1012) for details).
- 69) The PER states that the modelled extent of habitat is likely to be overestimated, largely due to RE mappings not always being a strong predictor of occurrence. The PER states that where uncertainties exist, the modelling conservatively included all potential areas of habitat.
- 70) The department notes that the rules informing the habitat models for each species and TEC are generally consistent with the PER Guidelines. However, high uncertainty regarding the actual extent of habitat for each species and TEC remains given the following:
- a) Very little on-ground ecological survey was conducted within the action area. Ecological surveys that did inform the modelling rules were often conducted outside of the action area
 - b) RE mapping contains many uncertainties and is often not a reliable predictor of habitat for matters of national environmental significance.
- 71) The department accepts that RE the modelling approach is likely to overestimate habitat overall, but notes that at any given location it may overestimate or underestimate the likelihood of occurrence for a species or its habitat. This can be important, especially for species which are poorly understood, sensitive to disturbance or have limited or sparse distribution.
- 72) Species specific concerns in the habitat modelling methodology are discussed where relevant for each species below.

Direct habitat disturbance

- 73) The disturbance layout and size of the proposed action is unknown. The PER states that it is not feasible to provide a defined or known disturbance with a specific footprint for the proposed action (Attachment C4). The reasoning provided is that gas field development processes are dynamic in nature, and the placement of wells and associated infrastructure evolves over the life of the action, based on the viability of the resource for development and other land use constraints. The department acknowledges that this presents technical and practical challenges in accurately characterising the impacts of the entire action prior to its commencement.
- 74) Instead of a defined disturbance footprint, the PER relies on disturbance modelling to estimate the maximum potential impacts on threatened species habitat and TECs. The Probabilistic Disturbance Methodology and Model (hereafter the disturbance modelling) is summarised in the PER and described in detail in Attachment C4.

75) The disturbance modelling was used to estimate the maximum disturbance to threatened species and TECs for a variety of scenarios, involving different intensities of infrastructure (i.e. 1, 2, or 3 wells per km²). Some scenarios assume that the occurrence of habitat has no effect on the placement of infrastructure ('no avoidance') while others assume that where the initial placement of infrastructure encounters habitat, an attempt to reduce habitat disturbance will occur ('with avoidance'). See Figure 2 below.

76) **Figure 2. Development modelling scenarios**

Scenario	Model Parameters
Scenario 1	One well per 1 km ² cell with no avoidance
Scenario 2	well per 1 km ² cell with avoidance
Scenario 3	Two wells per 1 km ² cell with no avoidance
Scenario 4	Two wells per 1 km ² cell with avoidance
Scenario 5	Three wells per 1 km ² cell with no avoidance
Scenario 6	Three wells per 1 km ² cell with avoidance
Scenario 7	Intensified development no avoidance - two wells per 1km ² cell in various locations within a defined boundary and one well per cell in locations outside this boundary.
Scenario 8	Intensified development in the south - two wells in each per 1km ² cell in southern Project Area tenements and no wells in the other Project Area tenements.
Scenario 9	Intensified development in the centre - two wells per 1km ² cell within the central Project area tenements and the remainder of the wells distributed across the other tenements.
Scenario 10	Intensified development in the northern - two wells per 1km ² cell within the northern Project Area tenements and the remainder of the wells distributed across the other tenements.

77)

78) The most conservative scenario (Scenario 7 in Figure 2 above) which assumed 2 wells per 1 km² in locations within 50 kilometres (km) of APLNG facilities, and 1 well per 1 km² outside this boundary, with no avoidance of habitat, was used to derive 'maximum disturbance limits' for each species or TEC. These maximum disturbance limits are important in the assessment of impacts as they establish the likely upper limits of impact without any avoidance or mitigation.

79) For most species and TECs, it is apparent that avoidance and mitigation measures are required to reduce the maximum disturbance limits to acceptable residual levels, and offset as appropriate. As described in this recommendation report, the proponent has committed to several such measures, and the department recommends additional measures in many cases.

80) For these reasons, the maximum disturbance limits should not be understood as precise estimates of likely impact.

Habitat fragmentation

- 81) The PER states that habitat disturbance will largely consist of narrow corridors associated with linear infrastructure or relatively small patches associated with well pads (~1.5 ha per well pad). According to Table 1 (in action description section), approximately 91% of the maximum development scenario consists of well pads and gas and water pipelines.
- 82) The department notes that the final PER does not contain a whole-of-action approach to discussing or assessing potential fragmentation arising from the action, however the PER lists fragmentation as a potential impact for some individual species and TECs, and discusses the implications of potential fragmentation against the significant impact criteria in Appendix B5.
- 83) It is known that native fauna composition and dominance can also be influenced by habitat fragmentation, with high road densities and disturbance in forests linked to the proliferation of native pest species, such as Noisy Miners (*Manorina melanocephala*). Additionally, small perforations (~7 ha) within forests can influence the ecological processes in the surrounding forest due to the pervasiveness of edge effects. This factor may have consequences in the Queensland gasfields, where there has been clearing of small but numerous areas of forest for CSG gas well pads and pipelines (Williams *et al.* 2014)¹.
- 84) The department notes that the potential impacts on Biodiversity from CSG activities extend across different spatial scales and are highly varied according to the species being studied.
- 85) The action will consist of up to 1,545 km of gas and water pipelines with a right of way width up to 25 m during construction and reduced to 6 m during operation. Even assuming that rehabilitation restores habitat function to the cleared areas, whether such fragmentation and perforation still provide a barrier for local fauna movement and genetic exchange in the Brigalow Belt is not straightforward (Williams *et al.* 2014)**Error! Bookmark not defined..** Additionally, edge effects from roads may resonate further into the adjacent vegetation than the road width alone and remain for a considerable time after rehabilitation (Williams *et al.* 2014)**Error! Bookmark not defined..**

¹ Williams E., Erskine P., Schoettker B., Adams-Hosking C., McAlpine C. and Seabrook L. (2014). *Scoping study: final report—The Potential Impacts of Coal Seam Gas on Biodiversity*. The Sustainable Minerals Institute and Landscape Ecology and Conservation Group, The School of Geography, Planning and Environmental Management, University of Queensland, Brisbane.

- 86) Fragmentation is species dependent. Some species are more mobile than others. The level of scientific information about fragmentation also varies for the threatened species and TECs potentially impacted by the action.
- 87) The impacts of habitat fragmentation cannot be quantified at this stage. Potential impacts associated with habitat fragmentation are discussed on a species and TEC specific basis below.

Other impacts

- 88) Ponce Reyes *et al.* (2016)² notes that CSG development can add to the existing threatened processes in the Queensland Brigalow Belt region, including the clearing and fragmentation of native vegetation. Road strikes, noise disturbances, increased predation, and aggressive noisy minors arising from CSG development can exacerbate existing population declines of various fauna groups.
- 89) Fracking and associated chemical use present risks to MNES primarily through spills, leaks, and contamination of soil, groundwater, and surface water, which can degrade significant vegetation, fauna habitat, and threatened ecological communities. These risks include hazardous material spills, chemical drift, nutrient enrichment, and contamination from produced water, all of which may disrupt species movement, alter habitat quality, or exacerbate existing stressors.

Avoidance and mitigation

- 90) The primary mechanism for avoiding and minimising impacts on species is the implementation of the project *Environmental Constraints Planning and Field Development Constraints Protocol* (the Constraints Protocol; Attachment C2), which aims to ensure that petroleum activity siting adequately avoids, minimises, mitigates, and offsets disturbances to matters of national environmental significance when siting infrastructure. The Constraints Protocol categorises and maps areas where impacts are restricted.

² Ponce Reyes, R., Firn, J., Nicol, S., Chades, I., Stratford, D., Martin, T., Whitten, S. and Carwardine, J. (2016). *Priority threat management for imperilled species of the Queensland Brigalow Belt*. CSIRO Publishing.

- 91) The Constraints Protocol uses three constraint categories for impacts on matters of national environmental significance; 'no-go' avoidance areas, where no petroleum activities are permitted; 'high constraint' areas, where low impact petroleum activities and linear infrastructure are permitted, and 'moderate constraint' areas, where all petroleum activities are permitted.
- 92) The categories within the Constraints Protocol rely on the avoid > mitigate > offset hierarchy and preferential avoidance. Most species habitat within the Constraints Protocol is in the moderate and high constraint categories, which does not dictate how much avoidance must occur or to what parts of the habitat, although for some species with moderate and high constraints there is a preference for impacts on lower quality habitat.
- 93) A significant portion of the action's disturbance footprint is estimated to be linear infrastructure, which impacts listed species through the same mechanisms for both medium and high constraint categories.
- 94) The department discusses the level of protection to individual threatened species and TECs provided by the Constraints Protocol in relation to each species below.
- 95) The project *Environmental Management Plan* (EMP; [Attachment C7](#)) outlines the overarching environmental management requirements for the action. This EMP describes:
 - a) environmental management requirements for the action that are not already detailed in the other action-specific management documents
 - b) specific requirements for compliance with government regulations and environmental approval conditions
 - c) communication and documentation of environmental compliance
 - d) environmental management measures to be implemented to minimise potential environmental and matters of national environmental significance values impacts.
- 96) The EMP has been prepared in accordance with the Environmental Management Plan Guidelines (DCCEEW, 2024) and is consistent with the Queensland regulatory framework for environmental management of resource activities.
- 97) The objectives of this EMP are to ensure:
 - a) Potential impacts from the action on matters of national environmental significance values are preferentially avoided, minimised, mitigated and rehabilitated; and
 - b) Potential impacts on matters of national environmental significance that are identified within the pre-disturbance assessment process (refer to the Constraints Protocol) are incorporated into field management procedures.

- 98) A number of overarching performance targets have been developed for the action. The performance targets are relevant to each of the mitigation and management measures listed in Section 4.5. The overarching performance targets are:
- a) no impacts (vegetation clearing and / or disturbance) to matters of national environmental significance fauna or flora habitat or TECs outside of approved disturbance footprints
 - b) no unforeseen loss of, or serious injury to matters of national environmental significance fauna resulting directly from action activities
 - c) no fires resulting directly from action activities within ground-truthed areas supporting matters of national environmental significance
 - d) no unauthorised release of hazardous materials within areas supporting matters of national environmental significance
 - e) no unauthorised releases of contaminants directly or indirectly to water(s)
 - f) no new infestations of weed species, that remain uncontrolled and prolific, resulting directly from action activities
 - g) no environmental nuisance at areas supporting matters of national environmental significance due to dust, light, noise or vibration emissions resulting directly from the action
 - h) no demonstrated direct or indirect impacts on matters of national environmental significance associated with increased prevalence of pest (feral animal) species resulting directly from action activities
- 99) More specific development area EMPs (DAEMPs), in accordance with the department's *Environmental Management Plan Guidelines (Attachment G3)*, will be prepared for situations where matters of national environmental significance are identified and disturbance to those values are planned. The boundary of the development area subject of a DAEMP will largely be driven by tenure boundaries but may include more than one (1) tenure area where these are near one another.
- 100) DAEMPs will be developed based on both matters of national environmental significance which are expected to occur within the specific development area (based on predictive habitat modelling) and also confirmed to occur within the development (utilising data from ground-truthing and / or baseline surveys, if available at the time of preparation).
- 101) DAEMPs are primarily operational documents to direct on-ground activities within broad development areas. Specific mitigation and management measures to be implemented through the DAEMPs at each impact site have been outlined within the Project EMP (*Attachment C7*). Specific mitigation and management measures are outlined below in Table 5.

102) Table 5. Avoidance and mitigation measures for Listed Threatened Species and Ecological Communities

Activity	Potential Impact	Mitigation/Management Measure	TEC	Flora	Fauna
Vegetation Clearing	- Disturbance / loss of habitat critical to the survival of a species - Fragmentation of habitat resulting in loss of connectivity between suitable habitats within the action area - Unforeseen impact (injury/death) to individuals	- The Constraints Protocol will be used to avoid and minimise disturbance - Clearing only to occur within approved disturbance footprints - A fauna spotter catcher will be present during disturbance of confirmed matters of national environmental significance fauna habitat and will undertake all fauna management activities in accordance with the NC Act			✓
	Disturbance / loss of habitat critical to the survival of a species	- The Constraints Protocol will be used to avoid and minimise disturbance - Clearing only to occur within approved disturbance footprints - Clearing will be in accordance with clearing permits issued under the NC Act	✓	✓	
	Indirect disturbance / loss of threatened species, including impacts outside the immediate clearing area due to degradation of habitat caused by sediment deposition, weed invasion, clearing outside approved disturbance footprint	- Clearing only to occur within approved disturbance footprints - Biosecurity management measures will be implemented and maintained - Erosion and sedimentation control measures will be implemented and maintained	✓	✓	✓
	Indirect loss of threatened fauna species due to increased pathways for pest species movement resulting directly from clearing within remnant areas	- Clearing only to occur within approved disturbance footprints - Progressive rehabilitation to occur within required timeframes following clearing - Biosecurity management measures will be implemented and maintained			✓
Vehicle Movements	Direct impact (injury/death) to individual	- A fauna spotter catcher will be present during disturbance of confirmed matters of national environmental significance fauna habitat and will undertake all fauna management activities in accordance with the NC Act - Measures to prevent fauna entrapment and facilitate escape will be implemented within open trenches - Vehicles and machinery to remain on approved and / or existing tracks unless otherwise authorised or required for safety and / or emergency response			✓

	Degradation of habitat / vegetation community/ alteration of community composition due to introduction and / or spread of weeds	- Vehicles and machinery to remain on approved and / or existing tracks unless otherwise authorised or required for safety and / or emergency response - Biosecurity management measures will be implemented	✓	✓	✓
Dust emissions	Direct impact (injury/death) to individuals	- A fauna spotter catcher will be present during disturbance of confirmed matters of national environmental significance fauna habitat and will undertake all fauna management activities in accordance with the NC Act - Measures to prevent fauna entrapment and facilitate escape will be implemented within open trenches - Vehicles and machinery to remain on approved and / or existing tracks unless otherwise authorised or required for safety and / or emergency response			✓
	Particulate emissions may reduce the photosynthetic abilities of plants	As above	✓	✓	
Noise emissions and vibration	Loss of useable habitat and behavioural disruptions due to noise and vibration disturbance	- Noise impacts will be minimised by orientating the activity away from sensitive receptors or using the best available technology - Noise attenuation devices will be installed and maintained on all equipment during construction activities - Regular service and maintenance of plant and machinery will be undertaken			✓
Light emissions	- Disturbance to nocturnal foraging patterns due to altered lighting - Disruption to nocturnal dispersal when individuals travel between roosts	- Directional lighting or shrouding of lights will be used - Minimise lighting as far as practicable for safe works - Avoid night works as far as practicable			✓
Chemical and fuel use	Disturbance / loss of significant vegetation, flora or habitats due to spills	- Hazardous materials and spill response plans implemented - Management and storage of hazardous materials to Australian Standards and consistent with SDS - Storage and refuelling areas will be preferentially located away from watercourses, sensitive areas and any source of ignition as determined by the Site Supervisor	✓	✓	✓

Construction in a watercourse	Contamination of surface water resources from sediments, chemical or hazardous material spills and / or unintentional discharge or leaks of produced water	- Construction will be undertaken in accordance with the Accepted development requirements for operational work that is constructing or raising waterway barrier works - Measures to avoid changes in the quality and quantity of water in watercourses associated with either/both of ground and surface water flows will be implemented - Biosecurity management measures will be implemented and maintained - Erosion and sedimentation control measures will be implemented and maintained	✓		✓ (with habitat near or in association with a watercourse)
Waste management	Disturbance / loss of vegetation, flora or habitats due to spills	- Wastes stored, handled and transported in accordance with WRR Act and / or EA conditions - Management and storage of hazardous materials to Australian Standards and consistent with SDS	✓	✓	✓
	Availability of potential food source may attract pest fauna to action sites	Putrescible waste to be stored in appropriate enclosed bins and removed from site on a regular basis			
Produced water storage, beneficial use of produced water	- Scour damage and erosion to dispersive soils - Contamination and loss of water source (pond) - Disruption of migratory patterns	- Implementation of safe operating procedures - Produced water will be managed in accordance with the Produced Water Management Plan	✓	✓	✓

103)

Accounting and Offsetting Significant residual impacts on threatened species and TECs

104) The PER (Attachment C1) states that based on the predicted maximum disturbance areas, a significant impact assessment was completed for each species or TEC which are likely to be impacted within the action area (Appendix B5). These assessments give an overview of the potential significant impacts that may occur from the action using the EPBC Act *Matters of National Significance Significant Impact Guidelines 1.1* (SIG 1.1) and criteria.

105) The PER also states that where impacts as a result of the action are considered to have any significant residual impact on a threatened species or TEC (i.e. with a predicted maximum disturbance value greater than 0 ha), this impact will be offset in accordance with the project *Offset Strategy* (Offset Strategy; Attachment C9). This is important for the management of cumulative impacts, because it means that impacts that may not reach the threshold of significance for an individual stage will be treated as significant, as long as it is expected that impacts will be significant at the whole of action level.

106) The Offset Strategy presents the modelled significant residual impact for each species as a result of the action, including both activities that are predicted to have a significant residual impact, and activities that are considered temporary, reversible or negligible in consequence and are not considered to have a significant residual impact.

- 107) The Offset Strategy states that actions considered to have a significant residual impact (direct impacts) - are actions (project activities) that are expected to result in measurable, potentially irreversible adverse outcomes for matters of national environmental significance and are counted toward significant residual impact and offset liability quantification.
- 108) The Offset Strategy also states that actions which are not considered to have a 'significant residual impact' - are actions (project activities) which are considered temporary, reversible, or negligible in consequence (e.g. minimal disturbance activities). These actions are not counted toward significant residual impact and offset.
- 109) The quantification of significant residual impact for each stage will be based on ground-truthed information on species habitat and occurrence, and specific avoidance, mitigation and management commitments consistent with the Constraints Protocol and EMP.
- 110) The inputs and outcomes of determining significant residual impacts for each stage will be documented in Stage Area Environmental Management Plan (SAEMP). The PER states that SAEMPs (referred to in the PER as Stage Assessment Reports) will be provided to the department prior to a stage commencing. However, the department recommends additionally requiring SAEMPs to be approved by the minister prior to the stage commencing. It is expected that in most cases a SAEMP will trigger a requirement for a Stage Offset Management Plan (SOMPs), which will also require the approval of the minister.

Compensatory measures

- 111) The Offset Strategy (Attachment C9) describes how offsets will be secured and managed for the action. The purpose of this Offset Strategy is to:
1. Commit to the delivery of offsets for the action consistent with the requirements of the *EPBC Act Environmental Offsets Policy* (DSEWPaC, 2012a) (EPBC Offsets Policy)
 2. Establish a staged approach to offset implementation, ensuring that offsets are identified, secured, and managed in a way that achieves an environmental conservation outcome in association with the action;
 3. Provide the framework for:
 - a) quantifying significant residual impact of the action
 - b) delivering legally secured offsets that provide measurable biodiversity gains
 - c) demonstrating additionality, ensuring that offset benefits exceed what would have occurred otherwise
 - d) implementing monitoring, reporting, and adaptive management to track offset effectiveness over time

- e) demonstrating that the action is well placed to successfully deliver the required offsets for the life of the action.

112) The Offset Strategy also describes how offset obligations will be acquitted over the life of the action and how significant residual impacts on matters of national environmental significance will be determined in accordance with the EPBC Act. As noted above, a staged approach will be utilised to acquit the significant residual impact and corresponding offsets for the action in a progressive manner, with offset requirements triggered by impact assessments based on pre-construction ground-truthed surveys.

113) Where a significant residual impact for matters of national environmental significance is identified in a SAEMP, an SOMP will be required for the impacted matters of national environmental significance in accordance with the EPBC Offsets Policy and the conditions of this approval. Approval of a SOMP (or SOMPs) by the minister will be required prior to commencement of the stage.

114) The PER states that a conservation gain will be achieved by a direct offset protecting areas currently not protected from other impacts e.g. agricultural clearing. Other compensatory measures (indirect offsets) may be considered in some limited circumstances.

115) The Offset Strategy states that the approval holder has established an offsets bank of properties either owned or commercially secured by APLNG which contain habitat values known or likely to support relevant threatened species and / or TECs. The offsets bank will be maintained and added to as needed to acquit action offset requirements.

116) The actual availability of offsets provides a further practical constraint on impacts on matters of national environmental significance, in that impacts will be considered unacceptable where suitable offsets cannot be identified and committed to. For some species, suitable offsets are becoming very difficult to identify or acquire, and the department has discussed with the proponent how this might bias development of the project in favour of avoidance and mitigation.

Threatened Ecological Communities

Brigalow (*Acacia harpophylla* dominant and co- dominant) – endangered

Description

117) The Brigalow (*Acacia harpophylla* dominant and co-dominant) threatened ecological community (Brigalow TEC) is characterised by the presence of Brigalow (*Acacia harpophylla*) as one of the three most abundant tree species, and is dominant or co-dominant with *Casuarina crista*, other species of *Acacia*, or species of *Eucalyptus*. The vegetation structure ranges from open forest to open woodland with a prominent shrub layer and has a varying tree layer from approximately 9 m to approximately 25 m depending on the average rainfall.

118) The Brigalow TEC occurs over a substantial geographic area in semi-arid eastern Australia. Brigalow woodlands are found mostly west of the Great Dividing Range, stretching in a broad swathe east of Blackall, Charleville and Cunnamulla, north almost to Townsville in Queensland, South to Narrabri in New South Wales, and west to Bourke on the Darling River and Blackall in central western Queensland. Remnants of Brigalow TEC mostly occur north of Bourke; west of Narrabri and North of Moree in New South Wales.

119) According to the *Approved Conservation Advice for the Brigalow (Acacia harpophylla dominant and co-dominant) ecological community (2013)* (Brigalow TEC Conservation Advice) ([Attachment D1](#)), in Queensland the Brigalow TEC is found in the Brigalow Belt North, Brigalow Belt South, Mulga Lands, Darling Riverine Plains and Southeast Queensland Interim Biogeographic Regionalisation for Australia bioregions.

120) The main threats to Brigalow TEC include:

- Clearing, particularly through mining within the Bowen Basin and logging for fence posts in the Brigalow Belt South bioregion of Queensland. Illegal clearing remains an ongoing concern for both the remnant and regrowth areas of the Brigalow TEC.
- Fire, especially where fuel characteristics have changed. This threat increases with further fragmentation and disturbance, which give way to an increase in biomass.
- Pest plant species can increase the biomass and potential fire impacts (see above), while climbing weeds can also be problematic. Feral fauna species can have serious impacts on Brigalow TEC flora and fauna.
- Inappropriate grazing regimes can lead to excessive compression of the soil, reduce the amount of leaf litter and woody debris, and alter the composition of herbs and shrubs in the understorey.
- Potentially, the high rate of change may exacerbate existing threats such as fire, as well as slowing recovery of the community.

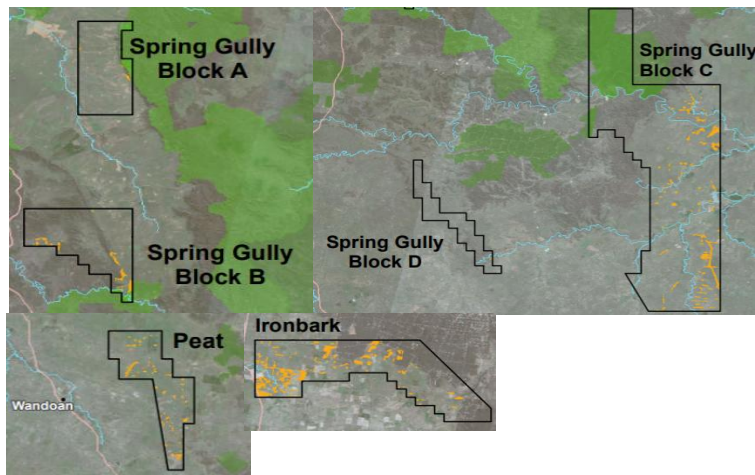
Proposed action Area

Modelled habitat and survey records

121) The proponent has modelled Brigalow TEC according to the PER Guidelines, although the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled and actual occurrence of the ecological community.

122) According to Appendix B5 of the PER ([Attachment C6](#)), the proponent has modelled 4,015 ha of Brigalow TEC within the action area, within Spring Gully blocks A, B, and C, Peat and Ironbark development areas (see Figure 3 below).

123) **Figure 3 Modelled habitat for the Brigalow TEC (Orange colouring indicated Brigalow TEC habitat)**



124)

125) The PER states that the modelled community's area of occupancy is likely overestimated but is a conservative approximation of where it may occur.

Ground-truthing of habitat

126) Appendix B5 of the PER states that all Brigalow TEC will be ground-truthed using the definition for areas critical to the survival of the ecological community within the Brigalow TEC Conservation Advice, which defines critical areas as all patches that meet the key diagnostic characteristics and condition thresholds for the ecological community; plus the buffer zones, particularly where these include native vegetation.

127) Additional areas that do not meet the minimum condition thresholds may be critical to the survival of the ecological community depending on factors such as their size and shape, landscape linkages to other patches and landscape position.

128) The department considers the above to be an appropriate definition of areas critical to the survival of Brigalow TEC.

Impact

129) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Brigalow TEC would be up to 282 ha. As explained in paragraphs 78) to 80)80), this figure is a conservative estimate based on maximum development with no avoidance.

130) The significant impact assessment of the PER states that the action will possibly fragment or increase existing fragmentation of Brigalow TEC. Appendix E states that If disturbance of Brigalow TEC results in retained Brigalow TEC no longer meeting the patch size threshold, the entirety of affected patches should be included in the significant residual impact calculations.

131) The PER does not discuss potential indirect impacts on the TEC in detail, but lists erosion and sedimentation, dust, spills, fire, weeds and pests as impacts which may occur adjacent to disturbance footprints in retained areas of confirmed species habitat.

Avoidance and mitigation measures

132) The Constraints Protocol (Attachment C2) states that the proposed action will avoid all Brigalow TEC within Spring Gully D block. It further states that only low impact petroleum activities and linear infrastructure will be permitted in Brigalow TEC within Spring Gully A, B and C blocks, and Peat block, with a preference to locate activities in areas of lower TEC quality. All petroleum activities will be permitted within Brigalow TEC within Ironbark Block, however with the preference of locating activities within areas of lower TEC quality.

133) The significant impact assessment of the PER states that indirect impacts which may arise from the proposed action will be mitigated and managed in accordance with the measures detailed in the Project EMP (Attachment C7) and DAEMPs. The document states that implementation of these plans will minimise and / or manage impacts which may occur adjacent to disturbance footprints in retained areas of TEC.

134) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Brigalow TEC is 64 ha.

Compensatory measures

135) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

136) The significant impact assessment of the PER states the action is likely to have a significant residual impact on Brigalow TEC and offsets will be required. The Offset Strategy states that offsets will be developed for each stage once the actual disturbance is known for that stage.

137) The Offset Strategy states that the proponent's existing intended offset areas contain up to 2,228.3 ha of Brigalow TEC. The department notes that of this amount, 1,889.1 ha has been confirmed to contain remnant Brigalow TEC with a habitat score ranging from 7 to 8, while the remainder 399.2 ha has been identified as containing areas of young Brigalow growth that does not currently meet age criteria thresholds and / or condition thresholds that have the potential to form Brigalow TEC in the future if management measures are implemented, with a habitat score of between 3 and 4 for all properties, except the Seven Trees property that has a habitat score of 8.

138) The Offset Strategy states that management actions proposed for Brigalow TEC offsets include access and vegetation clearing restrictions, fire management, weed management, and pest animal management.

139) The Offset Strategy notes that Brigalow TEC is slow growing and shows limited condition improvement over offset timeframes, and that the uplift requirements under the EPBC assessment guidance are challenging for the TEC, so avoidance will be prioritised to reduce offset requirements for the TEC, and realistic condition uplift targets based on literature and expert review will be implemented, with longer timeframes for monitoring progress.

Proposed outcomes and conditions

140) The department agrees that the proposed maximum disturbance of 64 ha could have a significant impact on Brigalow TEC. In the absence of more information about the extent of the TEC within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Brigalow TEC. The department recommends that this uncertainty be managed to acceptable levels using the following measures.

141) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Brigalow TEC of 64 ha, as outlined within the significant impact assessment of the PER.

142) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Brigalow TEC.

143) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Brigalow TEC, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

144) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Brigalow TEC.

Conclusion

145) The department has considered all available relevant information on the impact of the proposed action on Brigalow TEC, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

146) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Brigalow TEC.

Poplar Box Grassy Woodland on Alluvial Plains - endangered

Description

147) The Poplar Box Grassy Woodland on Alluvial Plains ecological community (Poplar Box TEC) is characterised by a grassy woodland with a canopy dominated by *Eucalyptus populnea* and understorey predominantly composed of perennial forbs and C₄ grasses.

148) Depending on the characteristics of the site, other tree species of similar height may occasionally occur in the tree canopy, but do not dominate a patch, including *Callitris glaucophylla*, *Casuarina cristata*, *Eucalyptus coolabah*, *E. largiflorens*, and *E. melanophloia*. The canopy height of Poplar Box TEC typically ranges up to 20 m.

149) Tall shrubs and small trees may occur in the mid layer, though they are mostly absent to sparse. The ground layer of Poplar Box TEC can vary in composition depending on local hydrological conditions, rainfall, landscape position, soil type and season. Typically, the ground layer is open, low and dominated by a variety of summer growing or C₄ grasses.

150) According to *Conservation Advice for the Poplar Box Grassy Woodland on Alluvial Plains (2019)* (Poplar Box TEC Conservation Advice) ([Attachment D2](#)), Poplar Box TEC is located west of the Great Dividing Range, typically at less than 300 m above sea level, and between latitudes 20°S to 34°S. The ecological community is scattered across a broad distribution within an area that is roughly south of Charters Towers in Queensland, north of Leeton in New South Wales, West of Ipswich in Queensland and Armidale in New South Wales, and East of Longreach in Queensland and Hillston in New South Wales.

151) Poplar Box TEC occurs typically occurs on palaeo and recent depositional soil in flat terrain and occasionally along watercourses in undulating country and occasionally on gentle slopes on a wide range of soil types of alluvial and depositional origin. Poplar Box TEC is sometimes found in close proximity to ephemeral watercourses and depressions.

152) Threats identified within the Poplar Box TEC Conservation Advice include:

- Clearance and fragmentation, particularly from agricultural and pastoral activities. The loss of the understorey is stated as effectively irreversible if remnants are converted cleared.
- Mining, particularly from coal and coal seam gas activities within the Bowen, Surat and Galilee Basins. Exploration for and extraction of unconventional gas also often impacts remnant vegetation, provides an opportunity for fast growing, colonising species which can lead to changes in the floristic structure and composition of vegetation communities.
- Invasive weeds and pest animals.

- Inappropriate fire regimes, particularly increased fire intensity and frequency.
- Grazing, can change the structure, composition and ecological function of Poplar Box TEC.
- Dieback, particularly from water stress, herbivory, pathogens and parasites, and woodland fragmentation.
- Chemical impacts, spraydrift and nutrient enrichment from surrounding or adjacent crops and pastures.
- Salinity, as a consequence of the lateral flow of subsurface seepage from hill slopes to valley floors.
- The increasingly fragmented nature of Poplar Box TEC increases its vulnerability to the effects of changing climate.

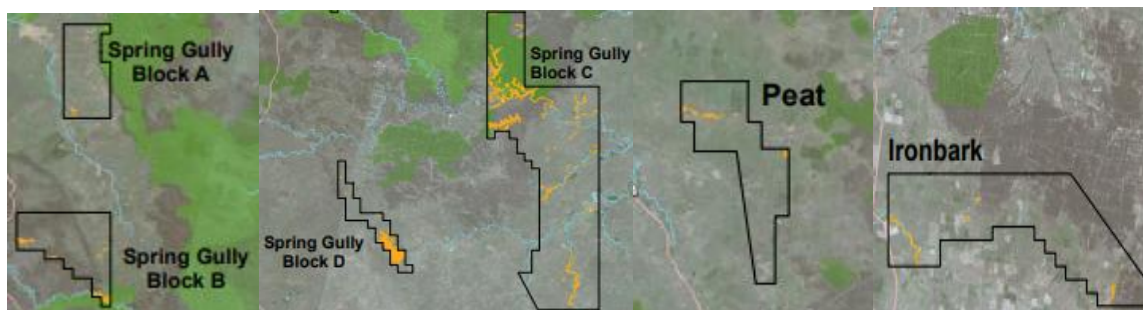
Proposed action Area

Modelled habitat and survey records

153) The proponent has modelled Poplar Box TEC according to the PER Guidelines, although the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled and actual occurrence of the ecological community.

154) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), the proponent has modelled 7,639 hectares (ha) of Poplar Box TEC within the action area, within Spring Gully blocks A, B, C and D, Peat and Ironbark development areas (see Figure 4 below)

155) **Figure 4 Modelled habitat for Poplar Box TEC (Orange colouring indicates Poplar Box TEC habitat)**



156)

157) The PER states that the modelled community's area of occupancy is likely overestimated but is a conservative approximation of where it may occur.

158) *Ground-truthing of habitat*

159) Appendix B5 of the PER states that all Poplar Box TEC will be ground-truthed using the definition for areas critical to the survival of the ecological community within the Poplar Box TEC Conservation Advice, which defines critical areas as all patches that meet the key diagnostic characteristics and condition thresholds for the ecological community; plus the buffer zones, particularly where these include native vegetation.

160) Additional areas that do not meet the minimum condition thresholds may be critical to the survival of the ecological community depending on factors such as their size and shape, landscape linkages to other patches and landscape position; this is because they could retain some Biodiversity, wildlife corridor, or habitat values.

161) The department considers the above to be an appropriate definition of areas critical to the survival of Poplar Box TEC.

Impact

162) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Poplar Box TEC would be up to 488 ha. As explained in paragraphs 78) to 80)157), this figure is a conservative estimate based on maximum development with no avoidance.

163) Appendix B5 of the PER states that the action activities as a result of the proposed action will possibly fragment or increase existing fragmentation of Poplar Box TEC.

164) The PER does not discuss potential indirect impacts on the species in detail, however, the PER notes that edge effects from clearing as the most relevant, while most other threats outlined in the conservation advice are not applicable to the action.

Avoidance and mitigation measures

165) The Constraints Protocol states that the proposed action will avoid all Poplar Box TEC in Spring Gully D, Peat and Ironbark. It further states that only low impact petroleum activities and linear infrastructure will be permitted in Poplar Box TEC within Spring Gully A, B, and C, with a preference to locate activities in areas of lower TEC quality.

166) Appendix B5 of the PER states that indirect impacts which may arise from the proposed action will be mitigated and managed in accordance with the Environmental Management Plan and Development Area Environmental Management Plans. The document states that implementation of these plans will minimise and / or manage impacts which may occur adjacent to disturbance footprints in retained areas of TEC.

167) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Poplar Box TEC is 106 ha.

Compensatory measures

- 168) Within the Offset Strategy ([Attachment C9](#)), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.
- 169) Appendix B5 states that through the reduction in area of the TEC, the action is likely to have a significant impact on Poplar Box TEC and will require offsets. The Offset Strategy proposes that offsets will be developed for each stage once the actual disturbance is known for that stage.
- 170) The Offset Strategy states that the proponent's existing offsets contain up to 106.4 ha of Poplar Box TEC. The department notes that of this amount, 45.85 ha has the potential to be Poplar Box TEC but cannot be confirmed as such (with a habitat score of 5), and 60.5 ha of young growth that does not currently meet age criteria thresholds and / or condition thresholds that have the potential to form Poplar Box TEC in the future if management measures are implemented, with a habitat score of at least 4.
- 171) The Offset Strategy states that management actions proposed for Poplar Box TEC offsets include access and vegetation clearing restrictions, fire management, weed management, and pest animal management.
- 172) The Offset Strategy notes that Poplar Box TEC is slow growing and shows limited condition improvement over offset timeframes, and that the uplift requirements under the EPBC assessment guidance are challenging for the TEC, so avoidance will be prioritised to reduce offset requirements for the TEC, and realistic condition uplift targets based on literature and expert review will be implemented, with longer timeframes for monitoring progress.
- 173) The department notes that the total offsets provided for Poplar Box TEC will not provide 100% acquittal for the impacts (predicted maximum disturbance) to the ecological community.

Proposed outcomes and conditions

- 174) The department agrees that the proposed maximum disturbance of 106 ha could have a significant impact on Poplar Box TEC. In the absence of more information about the extent of TEC within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Poplar Box TEC. The department recommends that this uncertainty be managed to acceptable levels using the following measures.
- 175) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Poplar Box TEC of 106 ha, as outlined within the significant impact assessment of the PER.
- 176) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Poplar Box TEC.

177) The department recommends conditions 1 and 60 to 78, requiring that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Poplar Box TEC, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to

178) The department recommends conditions 79 to 84, requiring that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Poplar Box TEC.

Conclusion

179) The department has considered all available relevant information on the impact of the proposed action on Poplar Box TEC, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

180) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Poplar Box TEC.

181) The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin TEC – endangered

Description

- 182) The *Approved Conservation Advice for the Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin* (GAB TEC conservation advice) ([Attachment D3](#)) describes Great Artesian Basin (GAB) TEC as the species assemblage and area in nature that comprises the discharge spring wetlands. More recent information is included to provide clarity in identifying this TEC, its hydrogeology and its ecological and cultural values. The GAB TEC is the assemblage of plants, animals and other organisms associated with a type of wetland that is found on the margins of the GAB. It is comprised of native species which depend on the natural discharge groundwater from the GAB for their existence.
- 183) The IESC (2015) described groundwater dependent ecosystems (GDE), such as the GAB TEC, as natural ecosystems which require access to groundwater on a permanent or intermittent basis to meet all or some of their water requirements so as to maintain their communities of plants and animals, ecological processes and ecosystem services (Richardson *et al.*, 2011). The broad types of GDE are (Eamus *et al.*, 2006):
- a) ecosystems dependent on subsurface presence of groundwater
 - b) subterranean ecosystems.
- 184) GAB spring wetlands vary in size from <1 m² to over 100 ha. In some locations, the spring wetlands include open pools, but they usually form shallow vegetated wetlands. GAB Spring wetlands can be distinguished from most other wetlands of the region because they are not subject to seasonal drying out and are sustained by a relatively constant water supply.
- 185) Flora composition and structure are highly variable between springs. Spring wetlands are typically not dominated by woody vegetation, though can be dominated by *Melaleuca* and *Pandanus* spp. GAB discharge spring wetlands provide habitat for a variety of aquatic and semi-aquatic species including fish, frogs, and aquatic invertebrates such as snails, flatworms, insects and their larvae. Many endemic invertebrates are dependent on well-oxygenated flowing water, which is often extremely shallow. Shelter, for example from fallen trees, rocks and sedges, is also important with these flows.
- 186) Historically, drilling of bores for pastoral industry since the nineteenth century has created thousands of free-flowing artesian bores throughout the GAB, resulting in pressure head declines of up to 120 m. Spring flows in the discharge areas of the GAB have declined dramatically because of aquifer pressure decline from artificial extraction, which has put pressure onto and lead to the loss of endemic species.

187) Water extraction from gas developments is an ongoing and substantial threat to the GAB. Reduced pressure from gas development can lead to a reduction in flow of localised springs and can lead to the extinction of localised springs as well.

188) The Surat Cumulative Management Area (CMA) approach presents a method for managing and monitoring cumulative impacts of groundwater extraction on GAB discharge spring wetlands which could be applied to other regions with concentrated developments. Addressing the knowledge gaps around how groundwater extraction may affect springs in the north-eastern portion of the GAB, and ongoing monitoring of trends in aquifer pressure and spring wetland area are required.

189) Other threats to the GAB TEC include:

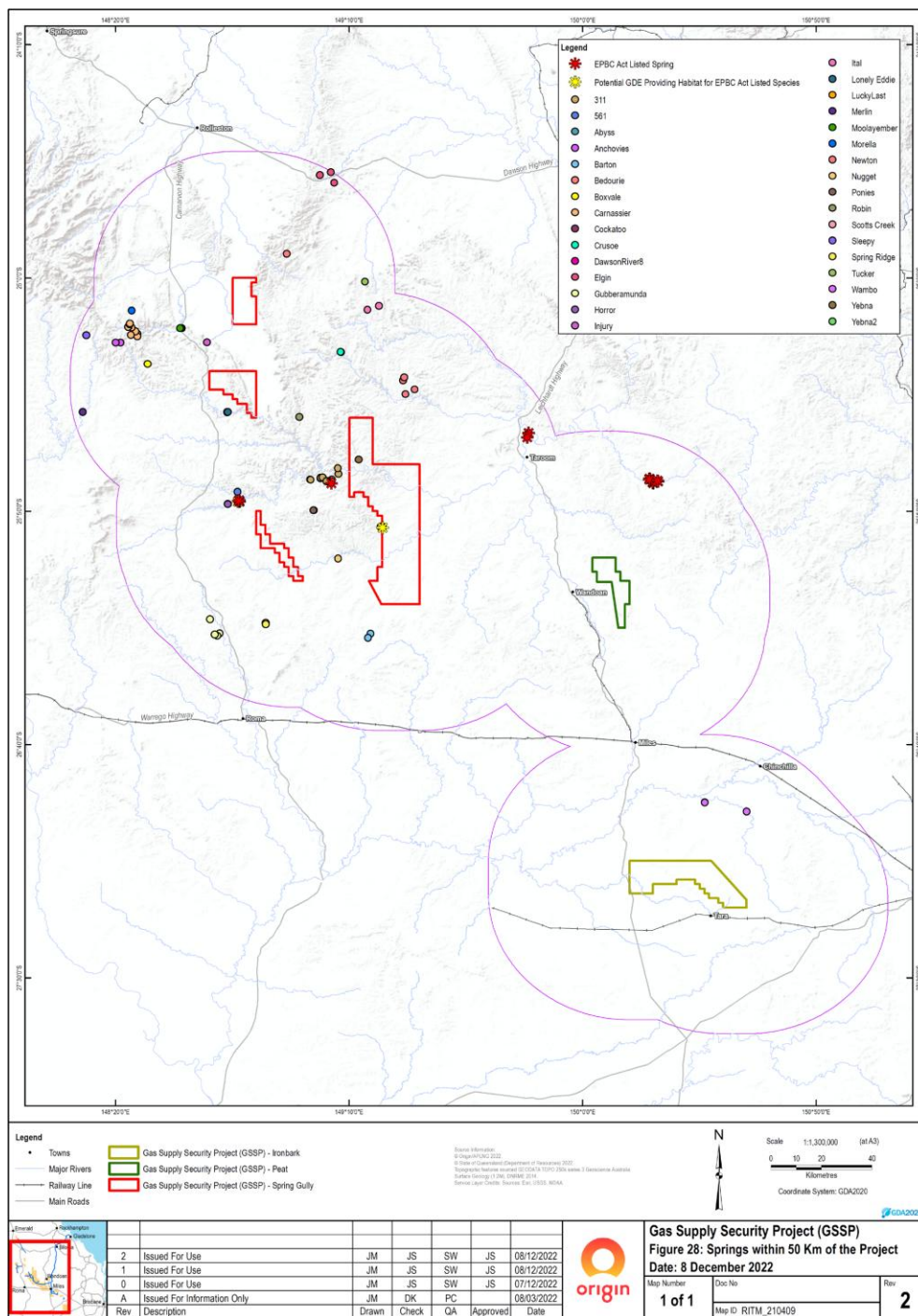
- The excavation of springs. No known GAB discharge springs wetlands are known to have been excavated since 2010.
- Exotic plants are known to infest other wetlands including GAB recharge springs and can displace the native species.
- Grazing, particularly grazing pressure, trampling and pugging from domestic stock negatively effects the biological value of springs.
- Poor fire regimes, resulting in increases in vegetation cover and common reed density.
- Exotic aquatic animals, which threaten native species within the GAB springs.
- Tourist visitation, which can lead to trampling of wetland vegetation and impacts associated with inappropriate bathing and swimming (introduces soaps, sunscreens and detergents to the environment).
- Impoundment and flooding, which leads to the inundation of GAB spring discharge wetlands.
- Climate change, particularly the variation in weather which can lead to droughts/flooding.

Proposed action Area

190) According to the PER (Attachment C1) the proponent has ground-truthed GAB TEC within Spring Gully Block C and has identified an area of very high ecological significance.

191) The PER details location of potential surface GDEs (spring vents and watercourse springs) within 50 km of the action area (Figure 5).

192) Figure 5 Locations of potential surface GDEs (spring vents and watercourse springs) within 50 km of the action area associated with GAB TEC



193)

Impact

- 194) The proponent identified, through remote sensing analyses, that there was 381 ha of vegetation that was probably groundwater-dependent, and 3,841 ha of vegetation that was potentially groundwater-dependent that could be impacted by shallow groundwater drawdown from the proposed action (Attachment C10).
- 195) This vegetation is located to the west and northwest of Spring Gully A and B development areas (Attachment C10), an area that includes Carnarvon Creek which was noted to have permanent reaches (indicative of groundwater discharge to the creek).
- 196) Shallow groundwater drawdown was predicted to be up to 1.2 m in this area where the Rewan Group sediments outcrop or subcrop to alluvium (Attachment C10).
- 197) The GDE study (Attachment C10) does not indicate that any ground truthing of this vegetation has occurred.
- 198) The department notes that the proponents process for identifying risks to terrestrial GDEs may only consider TECs or habitat for EPBC-listed species (Attachment C10). This is not consistent with the department's interpretation of the water trigger.
- 199) The IESC considered that the assessment of terrestrial GDEs was inadequate and that ground truthing of the desktop analysis was needed¹⁰⁵⁹b).

Avoidance and mitigation measures

- 200) The PER states that all GAB TEC within the action area is considered of very high ecological significance, and as such the Constraints Protocol (Attachment C2) states that the proposed action will avoid GAB TEC within the action area in its entirety.
- 201) The Offset Strategy (Attachment C9) States that broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.
- 202) As a result of this avoidance, the PER states that 0 ha of GAB TEC will be impacted via clearance by the proposed action.

Compensatory measures

- 203) As there will be 0 ha of clearance the Offset Strategy does not propose any offsets for GAB TEC.

Proposed outcomes and conditions

- 204) The department notes the plan to avoid GAB TEC entirely within the action area, as proposed within the Constraints Protocol for the proposed action.

- 205) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding GAB TEC.
- 206) Given the above, the department also recommends condition 5, that all areas of confirmed habitat, after ground-truthing surveys are conducted, must be avoided.
- 207) To address the inadequate assessment and proposed monitoring of potential impact on GDEs, the department recommends the inclusion of conditions 56 to 59, requiring field-verification of areas of terrestrial GDE identified as at high or medium risk by OGIA, with ongoing monitoring under the JIF required if groundwater dependence is confirmed.

Conclusion

- 208) The department has considered all available relevant information on the impact of the proposed action on GAB TEC, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.
- 209) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on GAB TEC.

Tara Wattle (*Acacia lauta*) - vulnerable

Description

- 210) Tara Wattle is a sprawling shrub up to 2 m tall, occurring in south-east Queensland in a small region of the Darling Downs between Inglewood and Tara, on sandy soils in open woodland. According to SPRAT, the main method of regeneration is from seed which falls to the ground beneath the parent plant. However, seeds have a small pale aril (a fleshy growth) which usually suggests secondary dispersal by ants.
- 211) According to SPRAT, the main method of regeneration is from seed which falls to the ground beneath the parent plant. However, seeds have a small pale aril (a fleshy growth) which usually suggests secondary dispersal by ants.
- 212) According to SPRAT, the main method of regeneration is from seed which falls to the ground beneath the parent plant. However, seeds have a small pale aril (a fleshy growth) which usually suggests secondary dispersal by ants.
- 213) The *Approved Conservation Advice for Acacia lauta* (Tara Wattle Conservation Advice) ([Attachment D4](#)) reports three known populations, with an unconfirmed fourth population:
- a) Spinifex Corner: 110 adult plants in an area of 10 ha, 15 km north of Tara, Queensland

- b) 16 km east of Tara, Queensland: 8 adult plants in an area of 3000 m².
- c) Marron Glen: 1890 adult plants in an area of 25 ha, 15 km southeast of Inglewood
- d) Unconfirmed fourth population: 100 plants near the Marron Glen site.

214) The total population size of the three confirmed populations has been estimated to be 2,000 plants.

215) Threats to the species are not well understood, although the restriction of the distribution to a small number of sites makes the species susceptible to disturbance. The other potential threat identified is depletion of the soil bank via too frequent fire.

216) Regional and local priority actions identified in the Conservation Advice include:

- a) to ensure that development activities in areas where Tara Wattle occurs do not adversely impact on known populations.
- b) Manage any known, potential or emerging threats.
- c) Minimise adverse impacts from land use at known sites.
- d) Develop and implement a suitable fire management strategy for Tara Wattle.

217) The department notes that very little appears to be known about the species. Little to no information is available about its reproductive ecology, recruitment, dispersal, or other ecological requirements. It is unclear whether growing individuals from seed or translocating individuals is viable.

Proposed action Area

Modelled habitat and survey records

218) The proponent has modelled habitat for Tara Wattle according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

219) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat has been modelled as any RE that occurs in the action area that:

- Is one of four REs identified in the referenced literature
- Is dominated by White Cypress Pine and / or Bull-oak and occurs on sandy soil

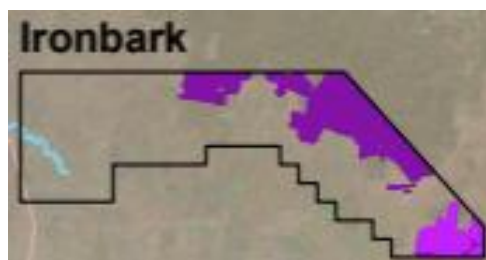
220) Preferred habitat has been modelled as any suitable habitat RE in the action area that:

- Is identified in the referenced literature
- Contains at least one survey record

221) A total of ten REs represent suitable habitat, with five of these representing preferred habitat.

222) According to the significant impact assessment of the PER (Attachment C6), a total of 8,046 ha of Tara Wattle habitat has been mapped within the action area. The species has been mapped in Ironbark development area (see Figure 6 Below)

223) **Figure 6 Modelled habitat for Tara Wattle - Pink colouring indicates suitable habitat - Purple colouring indicates preferred habitat**



224)

225) The PER states that the species that the modelled habitat is likely overestimated but is a conservative approximation of where it may occur. Further the PER states that the maximum disturbance limit of 449 ha is not suggestive that 449 ha of Tara Wattle habitat will be lost.

226) The Spinifex Corner population of the species, one of three confirmed populations identified in the Conservation Advice, is located within the Ironbark development area. The department notes that the size of this known population is 110 plants in an area of 10 ha.

227) The department notes that the PER does not acknowledge or discuss the occurrence of the known Spinifex Corner population as being located within the action area. The PER states that 'given the occurrence of modelled habitat and noting the species is recorded in the surrounding landscape (north of Tara), it is possible that the action area may support the species.'

228) The department notes that while it is possible that more Tara Wattle occurs in the areas modelled as potential habitat within the action area, it is also possible that Tara Wattle's occurrence in the action area is restricted to the 10 ha of the known Spinifex Corner population. Accordingly, in the absence of ecological surveys, there is a large uncertainty as regarding the extent of the species' presence within the action area.

229) *Ground-truthing of habitat*

230) Appendix B5 states that any areas identified through ground-truthing surveys as supporting Tara Wattle – indicatively, a patch of suitable habitat in which at least one plant is detected (and surrounds, as delineated by the extent of connected habitat that shares the same floristic, abiotic and condition attributes as the location where the plant was detected) will be considered habitat critical to the survival of the species.

231) The department agrees with this assessment of significant impacts in relation to the proposed action.

Impact

- 232) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Tara Wattle habitat would be up to 616 ha. As explained in paragraphs 78) to 80)225), this figure is a conservative estimate based on maximum development with no avoidance.
- 233) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two in more populations; adversely affect habitat critical to the survival of the species; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.
- 234) The PER does not discuss potential indirect impacts on the species in detail, but lists erosion and sedimentation, dust, spills, fire, weeds and pests as impacts which may occur adjacent to disturbance footprints in retained areas of confirmed species habitat.

Avoidance and mitigation measures

- 235) The Constraints Protocol (Attachment C2) states that mitigation strategies for the species include avoidance of all confirmed populations and habitat within Spring Gully Blocks A, B, C, D, and Peat. The department notes that the species is not likely to occur in any of these development blocks.
- 236) The Constraints Protocol states that within the Ironbark development block impacts on confirmed populations will be undertaken in accordance with the *Nature Conservation Act 1992* (Qld) Clearing Permit and Impact Management Plan. The PER does not specify what clearing is allowed or what management measures are required under the Clearing Permit and Impact Management Plan.
- 237) The significant impact assessment of the PER Constraints Protocol states that within the Ironbark property all petroleum activities will be allowed in all other confirmed habitat that does not support confirmed populations, with a preference to locate activities in areas of lower quality habitat.
- 238) Criteria for identifying confirmed habitat that does not support confirmed populations has not been provided.
- 239) The department considers that in the absence of information on criteria for identifying confirmed habitat without existing populations detected, that all confirmed habitat, whether populations detected or not during surveys, should be considered habitat critical to the survival of the species.

240) The Significant Impact Assessments of the PER states that indirect impacts which may arise from the proposed action will be mitigated and managed in accordance with the measures detailed in the Environmental Management Plan (Attachment C7) and Development Area Environmental Management Plans. The document states that implementation of these plans will minimise and / or manage impacts which may occur adjacent to disturbance footprints in retained areas of TEC.

241) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Tara Wattle is 449 ha.

Compensatory measures

242) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

243) The Significant Impact Assessments of the PER states that the action is likely to have a significant impact on Tara Wattle and offsets will be required. The Offset Strategy states that offsets will be developed for each stage once the actual disturbance is known for that stage.

244) The Offset Strategy states that any area of the disturbance footprint intersecting ground-truthed habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Areas intersecting the disturbance footprint with ground-truthed habitat, but where surveys were not conducted according to the *Flora Survey Guidelines – Protected Plants* (DETSI, 2025) (Attachment G1), will also count toward offset liability.

245) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for these species, and early identification / mapping of known records and suitable habitat will be undertaken.

246) The Offset Strategy proposes to use area of habitat as the relevant protected matter attribute for calculating offset liability. However, the department notes that the impact a given disturbance footprint has to Tara Wattle could vary depending on the density of Tara Wattle individuals within that area. The PER does not justify why the attribute for calculating offset liability is based on 'area of habitat', rather than number of individuals. The department notes that the known Spinifex Corner population within the action area was last estimated to consist of only 110 plants and the total known population size of the species has been estimated to be approximately 2000 plants.

247) The Offset Strategy proposes that offsets will be developed for each stage once the actual disturbance is known for that stage.

248) There are currently no offsets for Tara Wattle proposed as part of the action.

249) The Offset Strategy lists Tara Wattle as a species which has a very small known range meaning offsets must occur within limited, spatially constrained areas.

- 250) Management actions proposed for potential Tara Wattle offsets include access and vegetation clearing restrictions, fire management, weed management, and pest animal management. The department considers that restricting access or vegetation clearing to a Tara Wattle offset is unlikely to lead to a conservation gain as clearing of Tara Wattle would likely require a referral under the EPBC Act. Further, while an effective fire control program is likely to be beneficial for the species (Attachment D4), weeds and pests are not identified threats to the species.
- 251) Potential additional management measures listed for a future Tara Wattle offset include seed collection and propagation, prescribed burn program, seed cultivation and ripping, and tree / shrub / grass planting. The department notes that the likely efficacy of these measures is not discussed, and in the absence of more knowledge about the species the effectiveness of these measures is highly uncertain.

Proposed outcomes and conditions

- 252) The department considers the proposed maximum disturbance of 449 ha could have a significant impact on Tara Wattle. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Tara Wattle.
- 253) The department notes that the action area contains one of only 3 or 4 known populations of the species which consists of 110 individuals across 10 ha. The department also notes that additional Tara Wattle populations may be discovered as a result of ecological surveys prior to construction.
- 254) The Conservation Advice states that one of the regional and local priority is to ensure that development activities in areas where Tara Wattle occurs do not adversely impact on known populations.
- 255) The department considers that impacting up to 449 ha of 'modelled habitat' is not an appropriate upper limit on the action's impacts on the species at the time of action approval.
- 256) The department further notes that the proponent does not currently have any offsets for the species, and there is high uncertainty that a future proposed offset would be able to deliver a conservation gain.
- 257) Given the above and noting the high uncertainty around species presence on site, the department recommends conditions 7 to 9 that in undertaking the proposed action, the approval holder must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Tara Wattle.
- 258) Given the above, the department also recommends condition 5, that all individuals and areas of confirmed habitat (whether populations are identified within the habitat area or not), after ground-truthing surveys are conducted, must be avoided.

Conclusion

- 259) The department has considered all available relevant information on the impact of the proposed action on Tara Wattle, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.
- 260) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Tara Wattle.

***Bertya opposens* – vulnerable**

Description

- 261) *Bertya opposens* is a slender shrub that grows to 4 m tall. It may be multi-stemmed or have a single trunk. The branches and stems are densely covered with intertwined hairs. The thick leaves are smooth and dark green above and are covered in velvety hairs on the underside. The leaves are 10 to 80 mm) long, and 5 to 25 mm wide.
- 262) According to the *Conservation Advice Bertya opposens (2016) (Attachment D5)*, the species is suspected to be pollinated by wind. Some populations may need some form of disturbance – either fire or physical disturbance – to stimulate recruitment. Flowering of the species has been recorded from June to November, January, and March, with fruits appearing between June, August and November.
- 263) Appendix B4 states that *Bertya opposens* occurs within several isolated locations within Queensland. The general known population within Queensland is bounded by Emerald in the north and Charleville in the west, with an outlier population occurring near Charters Towers. In New South Wales there are two known populations – one near Nurrungal containing 500 to 600 plants in poor condition, and a second at Jacks Creek State Forest with at least 5,000,000 plants in one population, and 5 plants in another 12 km to the north-west.
- 264) Appendix B4 also states that within Queensland *Bertya opposens* generally is found within shallow sandy loams or red earths which are associated with sandstone, and sometimes with rhyolite, shale and metasediments (Threatened Species Scientific Committee, 2016d).
- 265) According to the conservation advice for the species (*Attachment D5*), the main identified threats to *Bertya opposens* are infrequent or too frequent fire disturbance; infrequent or too frequent mechanical disturbance; habitat clearance for agricultural purposes; and inhibition of recruitment via browsing of habitat by goats.

Proposed action Area*266) Modelled habitat and survey records*

267) The proponent has modelled habitat for *Bertya opposens* in accordance with the PER Guidelines, although the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

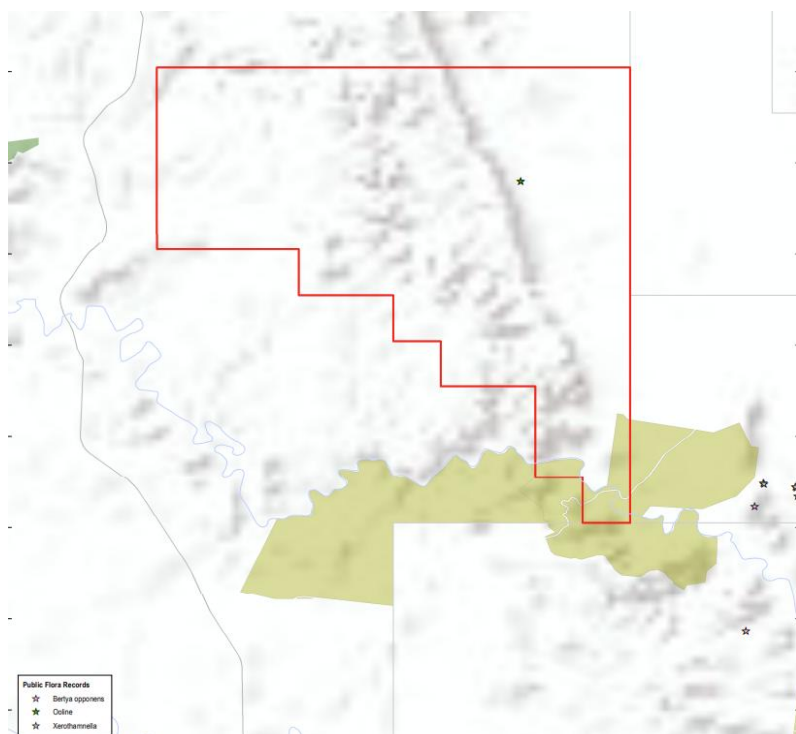
268) Appendix B4 states that only vegetation within the species extent of occurrence within the action area is included within spatial rules for modelling suitable habitat for the species. Suitable habitat has been defined to include:

- a) Vegetation that could be considered habitat for *Bertya opposens*, including mixed shrubland, lancewood woodland, mallee woodland, eucalypt / acacia open forest with shrubby understorey, eucalypt / callitris open woodland and semi-evergreen vine thicket.
- b) Shallow sandy loam soils or red earths associations with sandstone.

269) Based upon the proponent's habitat modelling methodology, 0 ha of potential habitat for *Bertya opposens* has been modelled within the action area, and therefore, no mapping has been provided for *Bertya opposens*.

270) Appendix B4 states that two public records of *Bertya opposens* occur within 6 kilometres (km) of the action area at Spring Gully Block B (see Figure 7 below).

271) Figure 7 Public Occurrence records of *Bertya opposens*, *Ooline*, *Xerothamnella herbacea*



272)

273) *Ground-truthing of habitat*

274) As *Bertya opposens* has not been modelled within the action area, the proponent has not provided definitions to identify the species through targeted surveys.

Impact

275) The PER states that 0 ha of modelled *Bertya opposens* habitat may be disturbed as a result of the proposed action.

276) However, based on the existence of two public records within 6 km of the action area at Spring Gully Block B and noting the uncertainty in the modelling and the lack of ground-truthed ecological surveys, the department is not satisfied that the proposed action will not impact any populations or habitat of *Bertya opposens*.

Avoidance and Mitigation

277) The proponent has sited the action area to avoid all modelled *Bertya opposens* habitat, as no modelled habitat will be impacted, the Constraints Protocol (Appendix B) does not discuss avoidance and mitigation for *Bertya opposens*.

278) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

279) The Environment Management Plan (Attachment C7) likewise does not discuss any management measures for indirect impacts on *Bertya opposens*. Although mitigation measures outlined in the EMP may benefit *Bertya opposens* through a more suitable fire regime and the removal of grazing pests that may impact the species.

Compensatory measures

280) The PER states that there is no *Bertya opposens* habitat modelled within the action area, as such, there are currently no offsets for *Bertya opposens* proposed as part of the action.

Proposed Outcomes and Conditions

281) The department notes that as no habitat of *Bertya opposens* was modelled within the action area, the species has not been included within the Constraints Protocol and therefore is not subject to the measures listed within the Constraints Protocol if it is discovered within the action area.

282) Given the lack of ground-truthing of habitat for the species occurring within the action area, the lack of proposed offset for the species, and the known records adjacent to the action area, the department considers that there is high uncertainty regarding the overall significance of the action's potential impacts on the species.

283) To reduce uncertainty on potential impacts on the *Bertya opposens*, the department recommends condition 5, that all individuals and areas of confirmed habitat, after ground-truthing surveys are conducted, must be avoided.

Conclusion

284) The department has considered all available relevant information on the impact of the proposed action on *Bertya opposens*, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

285) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on *Bertya opposens*.

Ooline (*Cadellia pentastylis*) – vulnerable

Description

286) Ooline is a medium-sized spreading tree growing to 10 m and rarely to 25 m high. It is very slow growing. The species grows in dry rainforest, semi-evergreen vine thickets and sclerophyll ecological communities, often locally dominant or as an emergent. Ooline is a relic of the extensive rainforest vegetation which covered much of Australia during the Pleistocene (1.6 million to 10,000 years ago). It is the only species within its genus and one of only four species in its family.

287) The *Approved Conservation Advice for Cadellia pentastylis (Ooline)* ([Attachment D6](#)) states that Ooline occurs on the north-west slopes of New South Wales (NSW) and in central and southern Queensland. The species occurs within the 500 mm and 750 mm rainfall belts, typically at elevations 300 m to 460 m above sea level (ASL). In Queensland, the species occurs from Balcomba (west of Rockhampton) south to the New South Wales border and west to near Blackall. The most recent assessment of Ooline occurrences in Queensland, undertaken during 2000, lists 15 known localities. Within at least three of these localities Ooline exists as isolated trees within a pasture or along narrow roadside reserves.

288) Ooline appears to flower spasmodically, during a general flowering period of October to January. Dispersal of fruit and seed is probably by “passive fall” or by birds. Seeds showed a high rate of infertility at all sites, although they have been successfully germinated and established after heat application. Ooline has the capacity to resprout from rootstock and coppice vigorously from stumps, a feature that may be critical to the species survival in a fire prone environment ([Attachment D6](#)).

289) The *Approved Conservation Advice for Cadellia pentastylis (Ooline)* states that the main identified threats to the species are localised extinction due to small and scattered populations; inbreeding which threatens genetic diversity in small populations; low seed viability which threatens breeding success; clearing for agriculture; grazing and soil compaction by domestic stock, feral goats and pigs; invasion of habitat by weeds, such as Tiger Pear (*Opuntia aurantiaca*); frequent fires; tunnel and sheet erosion; damage to roadside populations during roadworks; and high insect attack.

Proposed action area

Modelled habitat and survey records

290) The proponent has modelled habitat for Ooline in accordance with the PER Guidelines, although the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

291) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat for the species has been modelled as any RE (RE) that occurs in the action area that is either:

- identified in the referenced literature;
- is a semi-evergreen rainforest type outside Land Zone 3;
- contains at least 3 survey records.

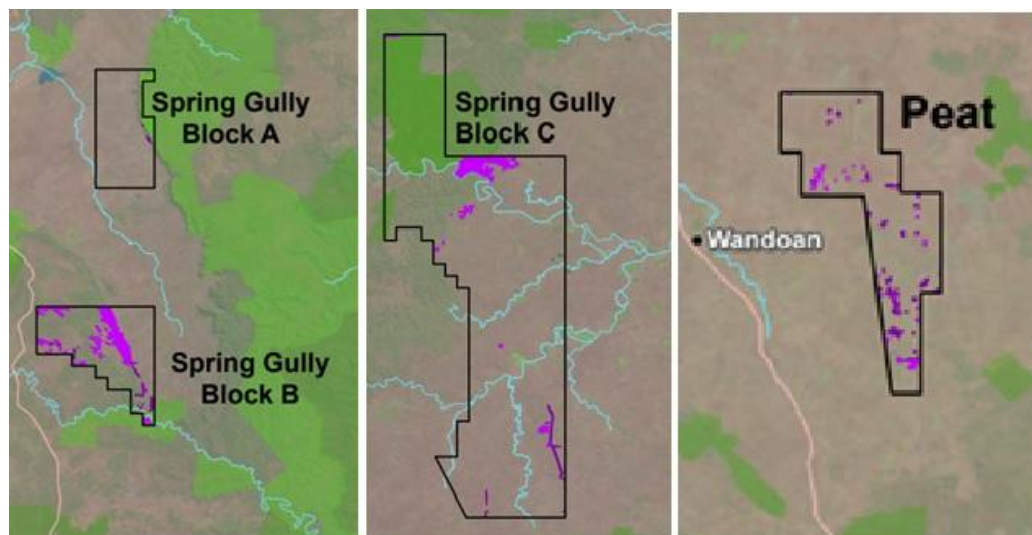
292) The Species Profiles and Mapping of the PER has modelled preferred habitat for the species as any RE polygon in the action area that:

- Contains at least one record, and any suitable habitat in the RE that:
 - is identified in the referenced literature;
 - contains at least three survey records; and
 - is not regrowth vegetation.

293) A total of 12 REs represent suitable habitat for Ooline of which three REs represent preferred habitat.

294) According to the Significant Impact Assessments of the PER (Attachment C6), 5,026 ha of potential habitat for Ooline has been modelled within the action area, based upon the proponent's habitat modelling methods. The species has been mapped in Spring Gully A, B, C and Peat (see Figure 8 below).

295) **Figure 8. Modelled habitat for Ooline in the proposed action area. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



296) While the Significant Impact Assessments of the PER states that 'it is possible that the action area may support the species', the flora occurrence record map submitted to the department by the proponent shows approximately 15 records of Ooline within Spring Gully C, and one public occurrence record within Spring Gully B.

297) The PER states that the modelled community's area of occupancy is likely overestimated but is a conservative approximation of where it may occur. Further, the PER states that the maximum disturbance limit of 19 ha is not suggestive that 19 ha of Ooline habitat will be lost.

298) *Ground-truthing of habitat*

299) The Significant Impact Assessments of the PER states that any areas identified through targeted surveys as supporting Ooline – indicatively, a patch of suitable habitat in which at least one plant is detected (and surrounds, as delineated by the extent of connected habitat that shares the same floristic, abiotic and condition attributes as the location where the plant was detected) – represents habitat critical to the survival of the species.

300) The department considers the above to be an appropriate definition of habitat critical to the survival of Ooline.

301) The Significant Impact Assessments of the PER states that confirmed habitat that does not support confirmed populations will be available for development of petroleum activities. The survey methodology does not define criteria for identifying confirmed habitat that does not support confirmed populations.

302) The department considers that in the absence of information on confirmed habitat without existing populations, that all confirmed habitat should be considered habitat critical to the survival of the species.

Impact

- 303) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Ooline would be up to 131 ha. As explained in paragraphs 78) to 80)80), this figure is a conservative estimate based on maximum development with no avoidance.
- 304) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two in more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.
- 305) The department agrees with this assessment of significant impacts in relation to the proposed action.
- 306) The PER does not discuss potential indirect impacts on the species in detail, but lists erosion and sedimentation, dust, spills, fire, weeds and pests as impacts which may occur adjacent to disturbance footprints in retained areas of confirmed species habitat.

Avoidance and mitigation measures

- 307) The Constraints Protocol of the PER (Attachment C2) states that the proposed action will avoid all Ooline within Spring Gully D. It further states that only low impact petroleum activities and linear infrastructure will be permitted in Ooline habitat within Spring Gully A, B, C, and Peat, with a preference to locate activities in areas of lower TEC quality. All petroleum activities will be permitted within Ooline within Ironbark, however with the preference of locating activities within areas of lower TEC quality.
- 308) The Significant Impact Assessments of the PER states that indirect impacts which may arise from the proposed action will be mitigated and managed in accordance with the measures detailed in the Environmental Management Plan of the PER (Attachment C7) and Development Area Environmental Management Plans. The document states that implementation of these plans will minimise and / or manage impacts which may occur adjacent to disturbance footprints in retained areas of TEC.
- 309) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Ooline is 19 ha.

Compensatory Measures

- 310) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5.

- 311) The Offset Strategy states that offsets will be provided for any significant residual impacts on Ooline.
- 312) The Offset Strategy states that any area of the disturbance footprint intersecting ground-truthed habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Areas intersecting the disturbance footprint with ground-truthed habitat, but where surveys were not conducted according to the *Flora Survey Guidelines - Protected Plants* (Attachment G1), will also count toward offset liability.
- 313) The department notes that the Offset Strategy states that predicted maximum disturbance values are conservative in nature and do not represent the final expected impact values. The Offset Strategy states that, therefore, the offset liability will be less than the predicted maximum disturbance and in some cases nil, because habitat extents are overestimated, all impacts can be avoided or can be avoided to an extent there are no residual impacts.
- 314) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for these species, and early identification/mapping of known records and suitable habitat will be undertaken.
- 315) No offsets for Ooline are currently proposed.
- 316) Ooline is a slow-growing tree species with poor reproductivity, increasing the uncertainty of any offsetting success.
- 317) The Offset Strategy does not address the specific risks for successfully offsetting Ooline or demonstrate how an offset would achieve 'no net loss'. It simply lists Ooline as a species which has "specific habitat requirements or features that may lead to challenges in finding suitable offsets."
- 318) Offsetting measures proposed for Ooline are restricting access and vegetation clearance, pest animal control, weed control, fire management (e.g., 'prescribed burn program'), seed collection and propagation, and 'tree / shrub / grass planting'. The likely efficacy of these measures is not discussed.

Proposed Outcomes and Conditions

- 319) The department considers the proposed maximum disturbance of 19 ha could have a significant impact on Ooline. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Ooline.
- 320) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Ooline of 19 ha, as outlined within the significant impact assessment of the PER.

321) The department recommends condition 5, that in undertaking the proposed action, the proponent will not disturb any Ooline individuals.

322) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Ooline.

323) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Ooline, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

324) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Ooline.

Conclusion

325) The department has considered all available relevant information on the impact of the proposed action on Ooline, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

326) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Ooline.

Shiny-leaved Ironbark (*Eucalyptus virens*) – vulnerable

Description

327) Shiny-leaved Ironbark (*Eucalyptus virens*) is a small to medium sized ironbark tree growing to 15 m and endemic to south-east Queensland. The bark is rough on the trunk and all branches, deeply furrowed, hard and dark grey in colour. The bark on small branchlets is soft and corky. Adult leaves are stalked, lance-shaped, 6–11.5 cm long and 1–2 cm wide, dark green on both surfaces, and very glossy. *Eucalyptus virens* is similar to *E. dura* but the buds and fruit are smaller.

328) According to the *Conservation advice for Eucalyptus virens* ([Attachment D7](#)), the species grows in woodland communities and occurs on sandy soils on low rises, hillslopes, sandstone escarpments and scree slopes. Most populations occur in areas of remnant vegetation. There are only five known recorded sites of the species scattered over a distance of approximately 500 km. The total population is unknown.

329) The distribution of this species overlaps the following EPBC Act-listed threatened ecological communities:

- Brigalow (*Acacia harpophylla* dominant and co-dominant);
- Bluegrass (*Dichanthium* spp.) dominant grasslands of the Brigalow Belt Bioregions (North and South);
- Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions;
- The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin; and
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

330) The main potential threats to this species listed in the *Conservation advice for Eucalyptus virens* include timber harvesting, disturbance of habitat during timber harvesting operations, and loss of habitat due to vegetation clearing.

331) The department notes that very little appears to be known about the species. Little to no information is available about its reproductive ecology, recruitment, dispersal, or other ecological requirements. It is unclear whether growing individuals from seed or translocating individuals is viable.

Proposed action area

Modelled habitat and survey records

332) The proponent has modelled habitat for Shiny-leaved Ironbark according to the PER Guidelines, although the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

333) According to the Species Profiles and Mapping for the PER ([Attachment C5](#)), suitable habitat has been modelled as any RE that occurs in the action area that either:

- is one of the three REs identified in the referenced literature;
- is dominated by *Angophora leiocarpa*, *Corymbia trachyphloia*, *Eucalyptus exserta*, *Allocasuarina inophloia* and / or *Lysicarpus angustifolius*; or

- contains at least one survey record.

334) Preferred habitat has been modelled as any suitable habitat RE in the action area that satisfies at least two of the following:

- is specifically identified in the referenced literature;
- Is dominated by *Angophora leiocarpa*, *Corymbia trachyphloia*, *Eucalyptus exserta*, *Allocasuarina inophloia* and / or *Lysicarpus angustifolius*; and / or
- Contains at least one survey record.

335) A total of 13 REs represent suitable habitat, with four of these representing preferred habitat.

336) Modelled habitat for Shiny-leaved Ironbark can be seen in Figure 9 below.

337) **Figure 9. Modelled habitat for Shiny-leaved Ironbark. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



338)

339) The PER reports there are four public occurrence records within the Ironbark development area intersecting with the proponent's modelled habitat.

340) The PER states that the modelled species habitat is likely overestimated but is a conservative approximation of where it may occur. Further, the PER states that the maximum disturbance limit of 391 ha is not suggestive that 391 ha of Shiny-leaved Ironbark will be lost.

341) *Ground-truthing of habitat*

342) The Significant Impact Assessments of the PER ([Attachment C6](#)) states that any patch of suitable habitat in which at least one plant is detected (and surrounds, as delineated by the extent of connected habitat that shares the same floristic, abiotic and condition attributes as the location where the plant was detected) will be considered habitat critical to the survival of the species.

343) The department considers the above to be an appropriate definition of habitat critical to the survival of Shiny-leaved Ironbark

Impacts

344) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Shiny-leaved Ironbark would be up to 521 ha. As explained in paragraphs 78) to 80)80),340) this figure is a conservative estimate based on maximum development with no avoidance.

345) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two in more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.

346) The department agrees with this assessment of significant impacts in relation to the proposed action.

Avoidance and mitigation measures

347) The Constraints Protocol states that mitigation strategies for the species include avoidance of all confirmed populations and habitat within Spring Gully Blocks A, B, C, D, and Peat. The department notes that the species is not likely to occur in any of these development blocks.

348) For the Ironbark development block, the Constraints Protocol states that impacts on confirmed populations will be undertaken in accordance with the Queensland *Nature Conservation Act 1992* Clearing Permit and Impact Management Plan. The Constraints Protocol does not specify what protections to Shiny-leaved Ironbark this provides.

349) The PER states that indirect impacts on the species will be mitigated and managed via the application of the action Environmental Management Plan and the Development Area Environmental Management Plans.

350) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Shiny-leaved Ironbark is 391 ha.

Compensatory Measures

351) Within the Offset Strategy ([Attachment C9](#)), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

352) The Significant Impact Assessment states that the project is likely to have a significant impact on Shiny-leaved Ironbark and offsets will be required. The Offset Strategy states that offsets will be developed for each stage once the actual disturbance is known for that stage.

- 353) The proponent states that any area of the disturbance footprint intersecting ground-truthed habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Areas intersecting the disturbance footprint with ground-truthed habitat, but where surveys were not conducted according to the *Flora Survey Guidelines – Protected Plants* (DETSI, 2025), will also count toward offset liability.
- 354) There are currently no offsets for Shiny-leaved Ironbark proposed as part of the action.
- 355) The Offset Strategy lists Shiny-leaved Ironbark as a species which has a very small known range meaning offsets must occur within limited, spatially constrained areas.
- 356) Management actions proposed for future Shiny-leaved Ironbark offsets include access/vegetation clearing restrictions, fire management, weed management, and pest animal management. The department considers that restricting access or vegetation clearing to a Shiny-leaved Ironbark offset is unlikely to lead to a conservation gain. Further, the department notes that while controlling for fire, weeds, and grazing/browsing threats are relatively effective strategies for eucalypts generally, none of these are identified as specific threats to Shiny-leaved Ironbark in the *Conservation advice for Eucalyptus virens*.
- 357) Potential additional management measures listed for a future Shiny-leaved Ironbark offset include seed collection and propagation, prescribed burn program, seed cultivation and ripping, and tree/shrub/grass planting. The department notes that the likely efficacy of these measures is not discussed, and in the absence of more knowledge about the species the effectiveness of these measures is highly uncertain.

Proposed outcomes and conditions

- 358) The department considers the proposed maximum disturbance of 391 ha of Shiny-leaved Ironbark could significantly impact one of the five only known populations of the species. The department notes that while little is known specifically about Shiny-leaved Ironbark, eucalypts in general tend to be relatively slow growing as a plant group and particularly susceptible to inbreeding depression, meaning it might take hundreds of years to recover to their initial state if fragmented (Encinas-Viso and Schmidt-Lebuhn, 2018).
- 359) In the absence of more information about the population size, the species' ecology, and the action's disturbance footprint, there is high uncertainty regarding the overall significance of the action's potential impacts on the species. There is also high uncertainty that any future proposed offset would deliver a conservation gain to the species.
- 360) The department notes that one of the regional and local priority actions listed in the Conservation Advice for the species is to ensure that vegetation disturbance in areas where Shiny-leaved Ironbark occurs does not adversely impact on known populations.

361) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Shiny-leaved Ironbark of 391 ha, as outlined within the significant impact assessment of the PER.

362) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Shiny-Leaved Ironbark.

363) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Shiny-leaved Ironbark, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

364) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Shiny-leaved Ironbark.

Conclusion

365) The department has considered all available relevant information on the impact of the proposed action on Shiny-leaved Ironbark, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

366) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Shiny-leaved Ironbark.

Belson's Panic (*Homopholis belsonii*) - vulnerable

Description

367) Belson's Panic (*Homopholis belsonii*) is a rhizomatous and stoloniferous perennial grass growing to 0.5 m high. It is generally found among fallen timber at the base of trees or shrubs, among branches and leaves of trees hanging to ground level or along the bottom of netting fences. Belson's Panic may be shade-dependent as it is almost always observed in greatest abundance in shady areas beneath or between trees.

368) The *Approved Conservation Advice for Homopholis belsonii* ([Attachment D8](#)) states that Belson's Panic occurs within the southern Brigalow Belt in Queensland and on the north-western slopes and plains of New South Wales. In Queensland, it has been identified in an area of over 200 km by 400 km, at elevations ranging 340 m – 500 m, in areas of light to moderate shade beneath or beside trees, principally in the soils and plant communities of the Poplar Box (*Eucalyptus populnea*) woodlands. These woodlands occur on level terraces on rock free, clay loam soils that are not prone to regular flooding. Population sizes of Belson's Panic appear to be similar in both NSW and Queensland with the species apparently rare on a landscape scale but locally abundant at some sites.

369) According to the *Approved Conservation Advice for Homopholis belsonii*, Belson's Panic spreads mainly by the stolons and can form colonies in a matter of months. However, it further states that Belson's Panic may have the ability to recolonise cleared or a highly disturbed area as it has been found in regenerating vegetation along roadsides. The exact viability time for seeds is not known. However, initial trials have indicated that it germinates readily without the need for a dormancy period. Dispersal of seed occurs when the panicle dries after seed formation and breaks off in the wind.

370) The main threats to the species identified in the *Approved Conservation Advice for Homopholis belsonii* are clearing of habitat for agriculture, development or pasture improvement; overgrazing of habitat by domestic stock; invasion of habitat by introduced weeds; and clearing of habitat for mining (Conservation Advice). The SPRAT Database further identifies chemical drift from herbicide application, soil compaction, roadworks, and rubbish dumping and firewood collection as threats to the species.

Proposed action area

Modelled habitat and survey records

371) The proponent has modelled habitat for Belson's Panic according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

372) According to Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat has been modelled as any RE that occurs in the action area that either:

- Is identified in the referenced literature
- Is a forest/woodland type dominated by White Box (*Eucalyptus albens*) on basaltic hills, Poplar Box (*E. populnea*), Belah (*Casuarina cristata*) and Brigalow (*Acacia harpophylla*) on alluvial soils, and Mountain Coolibah (*E. orgadophila*) woodlands.
- Contains at least 1 survey record

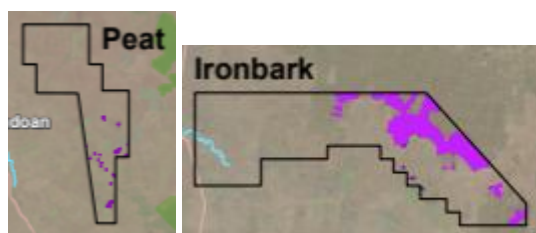
373) Preferred habitat has been modelled as any suitable habitat RE in the action area that

- Is identified in the referenced literature
- Contains at least 1 survey record
- Has a combined overstorey and midstorey canopy cover (i.e. trees + shrubs) $\geq 50\%$.

374) A total of 18 REs represent suitable habitat, with five of these further meeting the requirements of preferred habitat

375) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), a total of 4,069 ha of Belson's Panic habitat has been mapped within the action area. The species has been mapped in all development areas (see Figure 10 Below)

376) **Figure 10. Modelled habitat for Belson's Panic. Pink colouring indicates suitable habitat Purple colouring indicates preferred habitat**



377)

378) The PER states that the modelled species' habitat is likely overestimated but is a conservative approximation of where it may occur. Further, the PER states that the maximum disturbance limit of 228 ha is not suggestive that 228 ha of Belson's Panic will be lost.

379) *Ground-truthing of habitat*

380) The Significant Impact Assessments of the PER states that any areas identified through ground-truthing surveys as supporting Belson's Panic – indicatively, a patch of suitable habitat in which at least one plant is detected (and surrounds, as delineated by the extent of connected habitat that shares the same floristic, abiotic and condition attributes as the location where the plant was detected – represents habitat critical to the survival of the species.

381) The department considers the above to be an appropriate definition of areas critical to the survival of Belson's Panic.

Impacts

382) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Belson's Panic would be up to 338 ha. As explained in paragraphs 78) to 80)80),340) this figure is a conservative estimate based on maximum development with no avoidance.

383) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two or more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; modify, destroy, remove, or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.

384) The Significant Impact Assessments of the PER states that Belson's panic is considered rare at the landscape scale, but locally abundant in certain areas. Noting its rarity, any populations located within the action area will be considered important populations.

Avoidance and mitigation measures

385) The Environmental Constraints Protocol of the PER (Appendix C2) states that only low impact petroleum activities and linear infrastructure will be allowed in the Ironbark development area in accordance with the *Nature Conservation Act 1992* (Qld) where populations of Austral Toadflax are confirmed. Where habitat for Austral Toadflax is confirmed, without populations, all other petroleum activities will be allowed but will be preferentially located in lower habitat quality areas.

386) The Environmental Constraints Protocol requires all confirmed populations in the Peat development area to be avoided plus a buffer of 100m around the population. However, all other confirmed habitat that does not include a confirmed population, disturbance will be preferentially located in areas of lower habitat quality.

387) All confirmed populations must be avoided in development areas Spring Valley A, B, C and D. The department notes that no habitat has been modelled in these development areas.

388) The Significant Impact Assessments of the PER states that indirect impacts which may arise from the proposed action will be mitigated and managed in accordance with the measures detailed in the Environmental Management Plan (Attachment C7) and Development Area Environmental Management Plans. The document states that implementation of these plans will minimise and / or manage impacts which may occur adjacent to disturbance footprints in retained areas of TEC.

389) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Belson's Panic is 228 ha.

Compensatory measures

390) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

- 391) The Significant Impact Assessment of the PER states that the project is likely to have a significant impact on Belson's Panic and offsets will be required. The Offset Strategy states that offsets will be developed for each stage once the actual disturbance is known for that stage.
- 392) The Offset Strategy states that the proponent's existing offsets contain up to 358.1 ha of Belson's Panic habitat. However, the department notes that Belson's Panic has not been identified as occurring within those properties during surveys, and the nearest records are from disconnected habitat patches at least 14 km away from each potential offset site.
- 393) The Offset Strategy states that any area of the disturbance footprint intersecting ground-truthed habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Areas of disturbance footprint intersecting ground-truthed habitat that is contiguous with the confirmed species presence location (per above) and is of equivalent ecological condition (i.e., similar in% cover of exotic ground layer species and% cover of native ground layer species), will also count toward offset liability. Areas intersecting the disturbance footprint with ground-truthed habitat, but where surveys were not conducted according to the *Flora Survey Guidelines – Protected Plants* ([Appendix G1](#)), will also count toward offset liability.
- 394) Management actions proposed for Belson's Panic offsets include access/vegetation clearing restrictions, fire management, weed management, and pest animal management. The department considers that restricting access or vegetation clearing to a Belson's Panic offset is unlikely to lead to a conservation gain.
- 395) The Offset strategy also states that translocation, seed collection and propagation, prescribed burning programs and tree/shrub/grass planting are all additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

- 396) The department agrees that the proposed maximum disturbance of 228 ha could have a significant impact on Belson's Panic. In the absence of more information about the extent of the species within the project area and the project's disturbance footprint, there is a high uncertainty regarding the overall significance of the project's potential impacts on Belson's Panic. The department recommends that this uncertainty be managed to acceptable levels using the following measures.
- 397) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Belson's Panic of 228 ha, as outlined within the significant impact assessment of the PER.
- 398) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Belson's Panic.

399) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Belson's Panic, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

400) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Belson's Panic.

Conclusion

401) The department has considered all available relevant information on the impact of the proposed action on Belson's Panic, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

402) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Belson's Panic.

Austral Toadflax (*Thesium australe*) - vulnerable

Description

403) Austral Toadflax is a hairless yellow-green perennial herb with slender wiry stems to 40 cm high and with tiny white flowers. It is semi-parasitic on roots of grassland species, notably kangaroo grass (*Themeda australis*). It mostly flowers in spring and summer.

404) The *Approved Conservation Advice for Thesium australe (austral toadflax) (2013)* (Austral Toadflax conservation advice) ([Attachment D9](#)) states that the species occurs in New South Wales, Queensland, the Australian Capital Territory, and Victoria. Its current distribution is sporadic but widespread occurring between the Bunya Mountains in south-east Queensland to north-east Victoria and as far inland as the southern, central and northern tablelands in New South Wales and the Toowoomba region. The Austral Toadflax has been recorded once in Tasmania from the Derwent River valley in 1804 and is considered extinct in the state.

405) Austral Toadflax occurs across a wide range of eastern Australian IBRA bioregions and NRM regions from the Australian Alps to Southeast Queensland.

406) The distribution of this species overlaps the following EPBC Act-listed threatened ecological communities:

- Lowland Grassy Woodland in the South East Corner Bioregion.
- New England Peppermint (*Eucalyptus nova-anglica*) Grassy Woodland.
- Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin.
- Natural Grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland.
- Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory.
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derie Native Grassland.

407) The Austral Toadflax conservation advice states that the main threats to the species are: lack of fire/disturbance; existing and intensified grazing by livestock, native herbivores and feral herbivores; residential, infrastructure and agricultural development, weed invasion; and infrastructure (road and rail) maintenance, particularly road widening and re-routing.

Proposed action area

Modelled habitat and survey records

408) The proponent has modelled habitat for Austral Toadflax according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

409) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat for the species has been modelled as any RE (RE) that occurs in the action area that either:

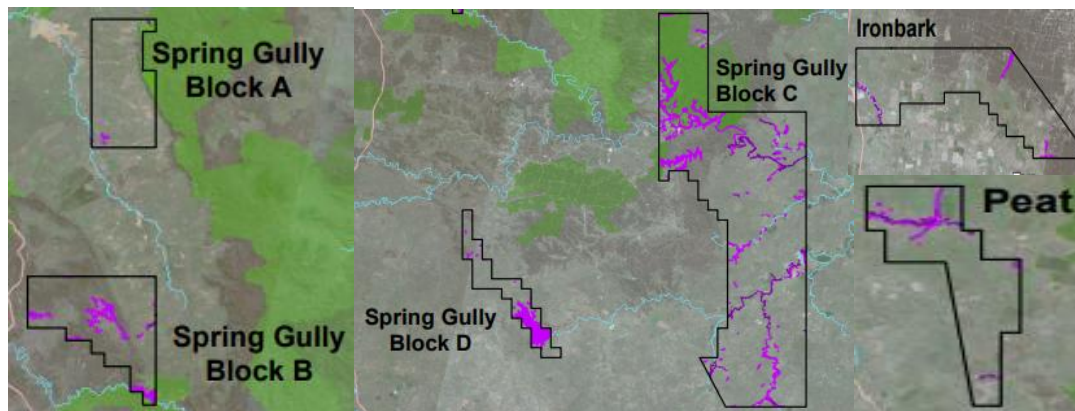
- Is an RE identified in literature as an RE for the species
- Is a relatively moist RE that contains at least one of the following diagnostic flora species as a dominant species: *Cymbopogon refractus*; *Dichanthium sericeum*; *Eucalyptus populnea*; *Eucalyptus tereticornis*; *Leptospermum myrtifolium*; or *Themeda triandra*.

410) Preferred habitat for the species has been modelled as any RE that either

- Contains *Themeda triandra* as a dominant species
- Is recognised in the literature
- Contains at least one other diagnostic species as a dominant species.

411) According to the Significant Impact Assessments of the PER (Attachment C6), a total of 10,375 ha of Austral Toadflax habitat has been mapped within the action area. The species has been mapped in Spring Gully A, B, C, D, Peat, and Ironbark (see Figure 11 Below).

412) **Figure 11 Modelled habitat of Austral Toadflax. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



413) There is one public record of Austral Toadflax, located approximately 50 km north of the Ironbark development area.

414) The PER states that the modelled species' habitat is likely overestimated but is a conservative approximation of where it may occur. Further, the PER states that the maximum disturbance limit of 124 is not suggestive that 124 ha of Austral Toadflax will be lost.

415) *Ground-truthing of habitat*

416) The Significant Impact Assessments of the PER states that any areas identified through ground-truthing surveys as supporting Austral toadflax – indicatively, a patch of suitable habitat in which at least one plant is detected (and surrounds, as delineated by the extent of connected habitat that shares the same floristic, abiotic and condition attributes as the location where the plant was detected) – represents habitat critical to the survival of the species.

417) The department considers the above to be an appropriate definition of habitat critical to the survival of Austral Toadflax.

Impact

418) The PER states that through the reduction in area of habitat and population, the action is likely to have a significant impact on *Austral Toadflax*.

419) The PER (Attachment C1) states that up to 124 ha of modelled Austral Toadflax habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

421) The Significant Impact Assessments of the PER states that the species is likely to be impacted through: a reduction in the area of occupancy of an important species; fragmentation of an existing important population into two or more populations; adverse effects to habitat critical to the survival of the species; disruption to the breeding cycle of an important population; the modification, destruction, removal or isolation or decrease the availability or quality of habitat to the extent that the species is likely to decline; interfere substantially with the recovery of the species.

Avoidance and mitigation measures

422) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Austral Toadflax would be up to 626 ha.

423) The Environmental Constraints Protocol of the PER (Attachment C2) states that the proposed action will avoid all populations and habitat of Austral Toadflax in Spring Gully A. In Spring Gully B, D, Peat and Ironbark all populations will be avoided with a 100-metre buffer. In Spring Gully C, confirmed populations subject to the *Nature Conservation Act 1992* (Qld) Clearing Permit and Impact Management Plan will allow development in line with low impact petroleum activities and linear infrastructure only. All other confirmed habitat within Spring Gully B, C, D, Peat and Ironbark that is not already subject to a higher constraint will be able to be developed with all petroleum activities permitted.

424) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

425) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Austral Toadflax is 124 ha.

Compensatory measures

426) The PER states that a predicted maximum disturbance of up to 124 ha of Austral Toadflax habitat may be disturbed as a result of the proposed action.

427) The Offset Strategy states that predicted maximum disturbance values are conservative in nature and do not represent the final expected impact values. The Offset Strategy states that, therefore, the offset liability will be less than the predicted maximum disturbance and in some cases nil, because habitat extents are overestimated, all impacts can be avoided or can be avoided to an extent there are no residual impacts.

428) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

429) The Offset Strategy states that any area of the disturbance footprint intersecting ground-truthed habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Areas intersecting the disturbance footprint with ground-truthed habitat, but where surveys were not conducted according to the *Flora Survey Guidelines – Protected Plants* (DETSI, 2025), will also count toward offset liability

430) However, the Offset Strategy has not identified any offset sites for Austral Toadflax.

431) The Offset strategy states that translocation, seed collection and propagation, prescribed burning programs and tree/shrub/grass planting are all additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

432) The department considers the proposed maximum disturbance of 124 ha could have a significant impact on Austral Toadflax. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is an uncertainty regarding the overall significance of the action's potential impacts on Austral Toadflax.

433) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Austral Toadflax.

434) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Austral Toadflax, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

435) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Austral Toadflax.

Conclusion

436) The department has considered all available relevant information on the impact of the proposed action on Austral Toadflax, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

437) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Austral Toadflax.

***Xerothamnella herbacea* - endangered**

Description

438) *Xerothamnella herbacea* is a sparse, sprawling perennial herb growing to a height of 30 cm. Stems arise from a central point but can root at the nodes where they contact the soil. Leaves in opposite pairs are soft, linear to narrowly ovate in outline, dark green above and paler beneath. Flowers are small, bright pink to mauve, two lipped, to 6.5 mm long, and occur in the upper leaf axils.

439) According to the *Approved conservation advice for Xerothamnella herbacea (2008)* (*Xerothamnella herbacea* conservation advice) (Attachment D10), the species is known from two sites north-east of Chinchilla, a single record from near Theodore and a record near Yelarbon east of Goondiwindi, Queensland. This species occurs within the Condamine, Border Rivers Maranoa-Balonne and Fitzroy (Qld) Natural Resource Management Regions.

440) *Xerothamnella herbacea* occurs in Brigalow (*Acacia harpophylla*) dominated communities in shaded situations, often in leaf litter and is associated with gilgais (shallow ground depressions). Soils are heavy, grey to dark brown clays. Three of the four known populations occur in cleared areas or non-remnant vegetation that are not protected under the *Vegetation Management Act 1999* (Qld). The distribution of this species overlaps with: Brigalow (*Acacia harpophylla* dominant and co-dominant); Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions, and; White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

441) The Species Profiles and Mapping of the PER (Attachment C5) notes that *Xerothamnella herbacea* dies back during prolonged dry conditions making it easily missed in surveys. It also notes that most populations of this species identified in a 2017³ study were found to be small, with less than 100 plants.

³ Shapcott, A., Lamont, R.W., Conroy, G., James, H. E., Shimizu-Kimura, Y. (2017) A genetic, demographic and habitat evaluation of an endangered ephemeral species *Xerothamnella herbacea* from Australia's Brigalow Belt. *Australian Journal of Botany*, 65, 38-57.

442) The main threat to the species is competition from invasive plant species as it occurs in a niche with few other ground layer species. Particularly from Green Panic and to a lesser extent Buffel Grass, both of which threaten *X. herbacea* by either direct competition, or by increasing the fuel load and altering fire regimes.

443) Other threats to *X. herbacea* include road widening and maintenance activities, surface erosion, and grazing and trampling by cattle and native macropods.

Proposed action area

444) Modelled habitat and survey records

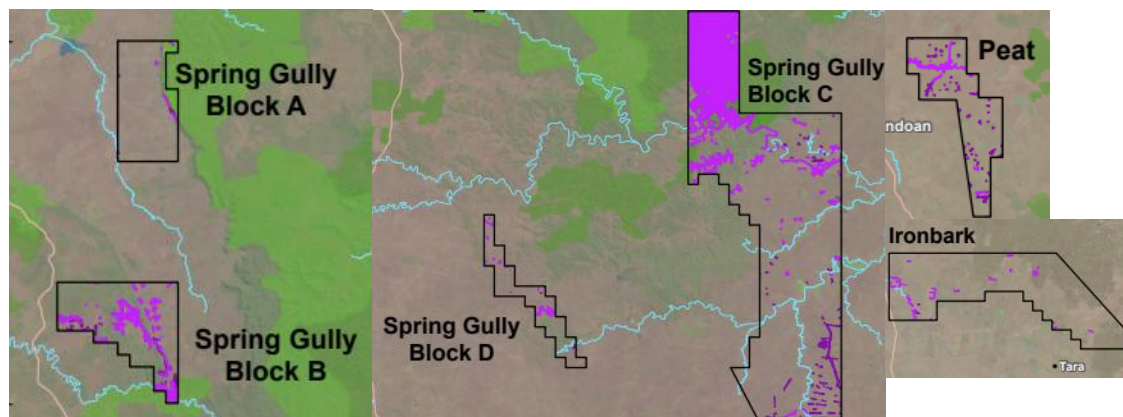
445) The proponent has modelled habitat for *X. herbacea* according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

446) According to the Species Profiles and Mapping of the PER, suitable habitat for the species has been modelled as any RE that occurs in the action area that is specifically identified in the referenced literature within section 3.13.1 of the Species Profiles and Mapping of the PER.

447) Preferred habitat for the species has been modelled as any suitable RE that occurs in the action area that is specified in the referenced literature within section 3.13.1 the Species Profiles and Mapping of the PER and is associated with heavy soil / gilgais, or any RE in the action area that contains at least three species records.

448) According to the Significant Impact Assessments of the PER (Attachment C6), a total of 21,295 ha of *Xerothamnella herbacea* habitat has been mapped within the action area. The species has been mapped in all development areas (see Figure 12 Below).

449) Figure 12 Modelled habitat for *Xerothamnella herbacea*. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.



450) The Species Profiles and Mapping of the PER states that a total of ten records of *Xerothamnella herbacea* occur in the action area landscape, with seven of these occurring in RE 11.3.7, and two occurring in RE 11.9.5.

451) *Ground-truthing of habitat*

452) The Significant Impact Assessments of the PER states that any areas identified through ground-truthing surveys as supporting *Xerothamnella herbacea* – indicatively, a patch of suitable habitat in which at least one plant is detected (and surrounds, as delineated by the extent of connected habitat that shares the same floristic, abiotic and condition attributes as the location where the plant was detected) – represents habitat critical to the survival of the species.

453) The department considers the above to be an appropriate definition of habitat critical to the survival of *Xerothamnella herbacea*.

454) The Significant Impact Assessments of the PER states that confirmed habitat that does not support confirmed populations will be available for development of petroleum activities. The survey methodology does not define criteria for identifying confirmed habitat that does not support confirmed populations.

455) The department considers that in the absence of information on confirmed habitat without existing populations, that all confirmed habitat should be considered habitat critical to the survival of the species.

Impact

456) The PER states that through the reduction in area of habitat and population, the action is likely to have a significant impact on *Xerothamnella herbacea*.

457) The PER (Attachment C1) states that up to 293 ha of modelled *Xerothamnella herbacea* habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

458) The Significant Impact Assessments of the PER states that the species is likely to be impacted through: a reduction in the area of occupancy of an important species; fragmentation of an existing important population into two or more populations; adverse effects to habitat critical to the survival of the species; disruption to the breeding cycle of an important population; the modification, destruction, removal or isolation or decrease the availability or quality of habitat to the extent that the species is likely to decline; interfere with the recovery of the species.

Avoidance and mitigation measures

459) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for *Xerothamnella herbacea* would be up to 1,396 ha.

460) The Environmental Constraints Protocol of the PER (Attachment C2) states that the proposed action will avoid all populations of *X. herbacea* in all development areas, with a 100-metre buffer. All other confirmed habitat that does not contain a population of the species will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.

461) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

462) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for *Xerothamnella herbacea* is 293 ha.

Compensatory measures

463) The department notes that a predicted maximum disturbance of up to 293 ha of *X. herbacea* habitat may be disturbed as a result of the proposed action.

464) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Areas intersecting the disturbance footprint with ground-truthed habitat, but where surveys were not conducted according to the *Flora Survey Guidelines – Protected Plants* (Attachment G1), will also count toward offset liability.

465) The Offset Strategy (Attachment C9) states that the proponent's existing offsets contain a total of 302.22 ha of *X. herbacea* habitat, with 164.92 ha of that considered remnant habitat with a score of at least 3, and the remaining 137.3 ha as regrowth habitat with a habitat score of 2.

466) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for these species, and early identification/mapping of known records and suitable habitat will be undertaken.

467) The Offset Strategy also states that translocation, plant cuttings and cultivation, seed collection and propagation, prescribed burning programs and tree/shrub/grass planting are all additional management measure options for the species to achieve a conservation gain.

468) The department notes that the proposed offsets for *X. herbacea* would not fully acquit the impacts on the species.

Proposed outcomes and conditions

469) The department considers the proposed maximum disturbance of 293 ha could have a significant impact on *Xerothamnella herbacea*. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on *X. herbacea*.

470) The department recommends a condition 5, that in undertaking the proposed action, the proponent must avoid all *X. herbacea* confirmed populations, plus a 100 m buffer.

471) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding *X. herbacea*.

472) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including *X. herbacea*, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

473) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including *X. herbacea*.

Conclusion

474) The department has considered all available relevant information on the impact of the proposed action on *Xerothermella herbacea*, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

475) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on *Xerothermella herbacea*.

Birds

Australian Painted Snipe (*Rostratula australis*) – endangered

Description

476) Australian Painted Snipe is a stocky wading bird approximately 240 mm to 300 mm in length, with a wingspan of 500 to 540 mm, weighing approximately 130 grams. A chocolate-brown head with chestnut patch in the nape, a comma-shaped white marking around the eye and metallic green back and wings. A diagnostic white 'harness marking' runs from the mantle onto the breast, brown eyes, white belly, bluish-green legs and long pink-orange bill darkening towards the tip. Adult females are more colourful and larger than the males.

477) According to the *Approved Conservation Advice for Rostratula australis (Australian painted snipe) (2013)* (Australian Painted Snipe Conservation Advice) ([Attachment D11](#)), the species occurs in shallow freshwater (occasionally brackish) wetlands, both ephemeral and permanent, such as lakes, swamps, claypans, inundated or waterlogged grassland/saltmarsh, dams, rice crops, sewage farms and bore drains, generally with a good cover of grasses, rushes and reeds, low scrub, *Muehlenbeckia* spp. (lignum), open timber or samphire. It has been recorded at wetlands in all states and territories and is most common in eastern Australia.

- 478) Important areas for this species in the past have included the Murray-Darling Basin (particularly the Riverina of Victoria and New South Wales), Queensland Channel Country, Fitzroy Basin of Central Queensland, south-eastern South Australia and adjacent parts of Victoria. Records over the past 20 years provide evidence for Australian Painted Snipe occurring more widely and frequently in the remote arid and tropical regions of Australia than was previously thought.
- 479) The species is widespread and is not considered to have a limited geographic distribution. Its current extent of occurrence is estimated to be 7,100,000 km² and stable. The species' area of occupancy was estimated to be 2000 km² and decreasing. The species occurs within many Natural Resource Management Regions and Interim Biogeographic Regionalisation for Australia Bioregions across Australia. The distribution of this species overlaps with a number of EPBC Act-listed threatened ecological communities, including Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains and Upland Wetlands of the New England Tablelands and the Monaro Plateau.
- 480) It is inferred that the species is to have undergone a decline in the number of mature individuals since the 1950s and specifically over the last three generations (~26 years) due to the loss and degradation of its wetland habitat. It is estimated that the species population at the time of publication of the Australian Painted Snipe Conservation Advice is 2,500 mature individuals.
- 481) The main identified threat to the Australian Painted Snipe is the loss and degradation of wetlands, through drainage and the diversion of water for agriculture and reservoirs.
- 482) Other threats to the species include grazing and associated trampling of wetland vegetation/nests, nutrient enrichment and disturbance to substrate by livestock, reduced rainfall and runoff in the Murray-Darling Basin associated with climate change, predation by feral animals, coastal and port infrastructure, shale oil mining near autumn-winter sites for the species on the central Queensland coast, and the replacement of native wetland vegetation by invasive weeds.

Proposed action area

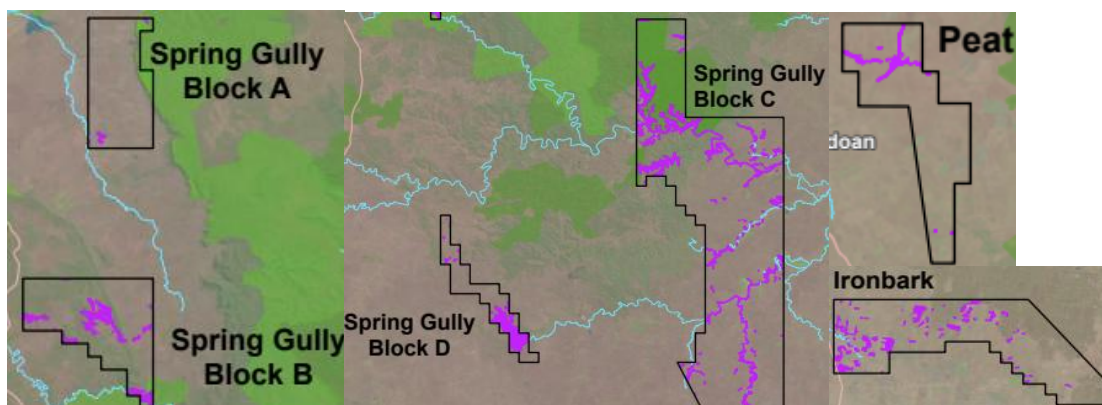
Modelled habitat and survey records

- 483) The proponent has modelled habitat for Australian Painted Snipe according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.
- 484) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat for the species has been modelled as only vegetation recorded within wetlands throughout Australia. The Queensland spatial wetland layer was used to define suitable habitat. The following REs intersect the Queensland spatial wetlands layer: part of REs 11.3.1, 11.3.2, 11.3.3, 11.3.3a, 11.3.4, 11.3.17, 11.3.18, 11.3.25, 11.3.27b and f, 11.3.39, 11.4.2, 11.4.3, 11.4.8, 11.4.10, 11.4.12, 11.5.1, 11.7.4, 11.7.5, 11.7.7, 11.8.11, 11.9.1, 11.9.5, 11.9.5a, 11.9.7, 11.9.7a, 11.9.10, 11.9.13, 11.10.1, 11.10.4, 11.10.4a, 11.10.7a, 11.10.9, 11.10.11, and 11.10.13a

485) Preferred habitat for the species has been modelled as any wetland or wetland RE patch mapped in the action area in which Australian Painted Snipe has previously been recorded within 5 km, including but not limited to REs 11.3.27a, and 11.3.27c.

486) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), a total of 10,839 ha of Australian Painted Snipe habitat has been mapped within the action area. The species has been mapped in all development areas (see Figure 13 Below).

487) **Figure 13. Modelled habitat for Australian Painted Snipe. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



488)

489) The Significant Impact Assessments of the PER states that there are two public records of Australian Painted Snipe within 20 km of the action area.

490) *Ground-truthing of habitat*

491) The Significant Impact Assessments of the PER states that any natural wetland habitat where the species is known or likely to occur (especially with suitable breeding habitat) within its distribution, and any location outside the aforementioned area that may be periodically occupied by Australian Painted Snipe when wetland conditions are favourable – represents habitat critical to the survival of the species.

492) The department considers the above to be an appropriate definition of habitat critical to the survival of Australian Painted Snipe.

Impact

493) The PER ([Attachment C1](#)) states that up to 146 ha of modelled Australian Painted Snipe habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

494) The Significant Impact Assessments of the PER states that impacts on the species are unlikely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of the species; fragment an existing population into two or more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of a population; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; result in invasive species that are harmful to a vulnerable species becoming established in the endangered species' habitat; introduce disease that may cause the species to decline and; interfere with the recovery of the species.

495) However, the department notes that the PER states that the modelling data is unable to distinguish important micro habitat features such as grasses, rushes and reeds. Further, the PER states that additional ecological assessment of habitat will be required.

Avoidance and mitigation measures

496) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Australian Painted Snipe would be up to 658 ha.

497) The Environmental Constraints Protocol of the PER (Attachment C2) states that the proposed action will avoid all breeding habitat of Australian Painted Snipe in all development areas, with a 100-metre buffer. All other confirmed habitat types (foraging habitat) that do not constitute breeding habitat will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.

498) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

499) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Australian Painted Snipe is 146 ha.

Compensatory measures

500) The PER states that through the reduction in area of habitat, the action is unlikely to have a significant residual impact on Australian Painted Snipe.

501) However, the Offset Strategy states that any area of the disturbance footprint intersecting ground-truthed foraging habitat where the presence of the species has been confirmed through field surveys will count toward offset liability. Changes to the surface water hydrology associated with construction and maintenance of waterway barriers where (i) the surface water hydrology is changed as a result of action activities, and (ii) the change in surface water hydrology results in the loss of ground-truthed breeding or foraging habitat and (iii) that area of loss is located outside of the disturbance footprint – will also count toward offset liability.

502) The Offset Strategy states that the proponent's existing offsets contain a total of 296.58 ha of Australian Painted Snipe habitat, with 159.28 ha of that considered remnant habitat with a score between 5 and 6, and the remaining 137.3 ha as regrowth habitat with a habitat score of 5.

503) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for these species, and early identification / mapping of known records and suitable habitat will be undertaken.

504) The Offset Strategy also states that barbed wire fence removal, prescription burning program, sediment and erosion control program, tree / shrub / grass planting and water point creation (dams, wetlands, leaky weirs) are all additional management measure options for the species to achieve a conservation gain.

505) The department notes that the proposed offsets for Australian Painted Snipe would not fully acquit the impacts on the species.

Proposed outcomes and conditions

506) The department considers the proposed maximum disturbance of 146 ha could have a significant residual impact on Australian Painted Snipe.

507) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Australian Painted Snipe of 146 ha of foraging habitat, as outlined within the significant impact assessment of the PER.

508) The department recommends condition 5, that in undertaking the proposed action, the proponent will not disturb any Australian Painted Snipe breeding habitat

509) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Australian Painted Snipe.

510) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Australian Painted Snipe, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

511) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Australian Painted Snipe.

Conclusion

512) The department has considered all available relevant information on the impact of the proposed action on Australian Painted Snipe, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

513) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Australian Painted Snipe.

Red Goshawk (*Erythrotriorchis radiatus*) - endangered

Description

514) Red goshawk is a large, swift, powerful hawk that is rufous-brown in colour, and grows to a length of 45-60 cm, with a wingspan of 100-135 cm. It is sexually dimorphic, with females (1100 g) nearly twice as heavy as males (630 g). Adult males are boldly mottled and streaked, with rufous scalloping on the back and upper wings, rufous underparts, bold bars on the underwings, with large yellowing legs and feet. Adult females are more powerfully built, paler and more heavily streaked below, and showing some white on the underbody. It is a solitary and secretive bird species that is generally silent, even when nesting. They do not usually reveal themselves by flying off in alarm when approached.

515) According to the *Erythrotriorchis radiatus* (Red Goshawk) Conservation Advice 2023 (Red Goshawk Conservation Advice) ([Attachment D44](#)) are currently known to breed from the Kimberley, east to the Cape York Peninsula, and on the Tiwi Islands. They may still breed at very low densities in the Wet Tropics and Einasleigh Uplands though record data for this is scarce. Birds recorded from far outside the breeding range in central Australia and the Pilbara likely include both dispersive juveniles and seasonal migrants from further north. This inference is based on data from satellite tagged adult females completing their non-breeding migration, which have covered distances of greater than 1000 km to more southerly non-breeding home ranges.

516) Red goshawks are usually observed alone, but occasionally in pairs or family groups. Some pairs remain within the nesting territory year-round, whilst some adult females are known to migrate from northern Australia to more southerly home ranges when not breeding. In the south-east of their distribution, some adults appeared to migrate down from the ranges to lowland winter territories. Juveniles may disperse widely and are probably responsible for the bulk of the sightings outside the core breeding areas.

517) Red goshawks have large home ranges and occur at low densities. Breeding home range has been shown to be 120 km² and 200 km² for females and males respectively, and hunting areas have been recorded to be 6-10 km away from home ranges. Other satellite tracking has also shown Red Goshawks travelling distances over 1500 km and soaring to heights of > 1000 m.

518) The main threats to Red Goshawk include habitat loss, degradation, and fragmentation, particularly land clearing and modification for agriculture, forestry and mining. The effects of these threats are evident on the east coast, widespread deforestation, particularly of lowland and riverine forests, has caused the species to decline in New South Wales and Queensland, and will the northern part of the range as clearing continues and previously intact habitat is fragmented by greenfield development.

519) The risk of habitat loss is also evident in the degradation and / or clearing of native ecosystems for agriculture and urbanisation, leading to the loss of natural wetlands across Australia. Given the presence of permanent fresh water is an essential component of Red Goshawk habitat, the degradation of rivers and wetlands utilised by potential prey species of the Red Goshawk may reduce prey availability, impacting foraging and breeding success. A reduction in prey abundance is also pressured via domestic livestock grazing.

520) Other threats to the species include: inappropriate fire regimes that alter habitat structure and prey species; climate change driving more extreme weather events; secondary poisoning via pesticide contamination of prey species; and Psittacine Beak and Feather Disease, to which Red Goshawk is susceptible.

Proposed action area

521) Modelled habitat and survey records

522) The proponent has modelled habitat for Red Goshawk according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

523) According to the Species Profiling and Mapping of the PER (Attachment C5), preferred breeding habitat has been modelled as any RE that occurs in the action area that either

- Has a maximum stand height of ≥ 20 m
- Is represented by at least one survey record

And

- Is within 2.5 km of the nearest 3rd (or above) order stream or waterbody (reservoir > 1 ha or lake)

And

- Is connected to a contiguous patch of vegetation of $\geq 10,000$ ha.

524) Preferred foraging habitat for the species has been modelled as any RE in the action area that either

- Satisfies the conditions of preferred breeding habitat, but is > 2.5 km from the nearest 3rd (or above) order stream or waterbody (reservoir > 1 ha or lake) and / or is regrowth status
- Is identified in literature
- Is a riparian forest or woodland type
- Has a tree canopy cover $\geq 50\%$
- And
 - Overlaps the extent of the 'likely to occur' public distribution grid for Red Goshawk established by the Australian Government
 - Is connected to a contiguous patch of vegetation of $\geq 10,000$ ha.

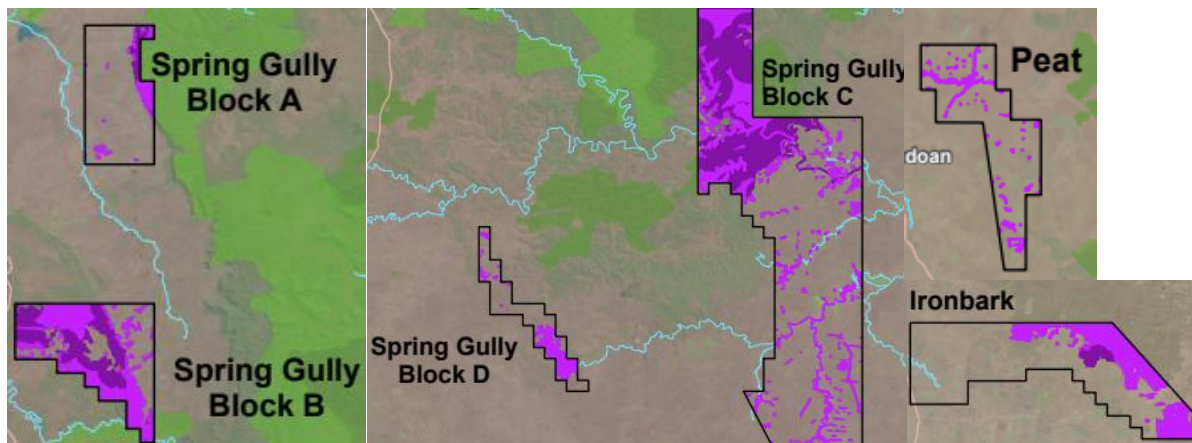
525) Suitable foraging habitat for the species has been modelled as any RE in the action area that:

- Is not preferred foraging habitat (as identified above)
- Is a forest or woodland type (not including open woodland) with canopy cover $\geq 20\%$
- Overlaps the extent of the 'may occur' and / or 'likely to occur' public distribution grid for Red Goshawk established by the Australian Government
- Is connected to a contiguous patch of vegetation of ≥ 10 ha.

526) Based on the above ruleset, a total of 56 REs represent potential habitat for Red Goshawk, including 16 REs for preferred breeding habitat, 14 REs for preferred foraging habitat, and 26 REs for suitable foraging habitat.

527) The Significant Impact Assessments of the PER ([Attachment C6](#)) states that a total of 57,176 ha of Red Goshawk habitat has been mapped within the action area. The species has been mapped in all development areas (see Figure 14 Below).

528) **Figure 14 Modelled habitat for Red Goshawk. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



529)

530) There are no species records of Red Goshawk within 20 km of the action area.

531) *Ground-truthing of habitat*

532) The Significant Impact Assessments of the PER states that locations that contain all known sites for nesting, food resources, water, shelter, essential travel routes, dispersal, buffer areas, and sites needed for the future recovery as defined by the EPBC Act – represents habitat critical to the survival of the species.

533) The department considers the above to be an appropriate definition of habitat critical to the survival of Red Goshawk

Impact

534) The PER ([Attachment C1](#)) states that up to 1,202 ha of modelled Red Goshawk habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

535) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; adversely affect habitat critical to the survival of the species; and modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

Avoidance and mitigation measures

536) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Red Goshawk would be up to 3,767 ha.

537) The Environmental Constraints Protocol of the PER (Attachment C1) states that the proposed action will avoid all confirmed active nest trees in all development areas, with a 100-metre buffer to the tree and must also ensure that no more than 25% of confirmed habitat (of the total of confirmed breeding/foraging) within a 4km radius of an active nest is cleared. All other confirmed habitat types (foraging habitat) that do not constitute breeding habitat will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.

538) The department notes that if the Constraints Protocol of the PER directions regarding Red Goshawk are adhered to, disturbance to the species' habitat will mostly be reflected in foraging habitat.

539) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

540) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Red Goshawk is 1,202 ha.

Compensatory measures

541) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Red Goshawk.

542) The department notes that a predicted maximum disturbance of up to 1,202 ha of Red Goshawk habitat may be disturbed as a result of the proposed action. However, there is high uncertainty regarding the disturbance levels due to the lack of ground-truthed surveys.

543) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed breeding/foraging habitat which is located greater than 100 m but less than 4 km from a confirmed active nest site will count toward offset liability. Areas of disturbance footprint intersecting with ground-truthed foraging habitat will also count toward offset liability.

544) The Offset Strategy shows that no offset for Red Goshawk has been proposed.

545) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

546) The Offset Strategy also states that barbed wire fence removal, prescription burning program, tree/shrub/grass planting, tree thinning, and water point creation (dams, wetlands, leaky weirs) are all additional management measure options for the species to achieve a conservation gain.

547) The department notes that the proposed offsets for Red Goshawk would not fully acquit the potential impacts on the species.

Proposed outcomes and conditions

- 548) The department considers the proposed maximum disturbance of 1,202 ha could have a significant impact on Red Goshawk. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Red Goshawk.
- 549) Noting the high uncertainty around species presence on site and the importance of nest trees in the conservation of the species, the department also recommends condition 5, that in undertaking the proposed all nest trees, including a 100 m buffer around nest trees, after ground-truthing surveys are conducted, must be avoided.
- 550) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Red Goshawk.
- 551) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Red Goshawk, based on:
- a) work plans
 - b) ground-truthing surveys
 - c) avoidance and mitigation measures committed to.
- 552) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Red Goshawk.

Conclusion

- 553) The department has considered all available relevant information on the impact of the proposed action on Red Goshawk, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.
- 554) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Red Goshawk.

Painted Honeyeater (*Grantiella picta*) – vulnerable

Description

- 555) The *Conservation Advice* *Grantiella picta painted honeyeater* (Painted Honeyeater Conservation Advice) ([Attachment D12](#)) states that the painted honeyeater has black upperparts, white underparts, black spots on its flanks and yellow edges to the flight and tail feathers. The bill is a deep pink and the eye red. The females are smaller and browner on the back than the male, frequently with fewer streaks or spots on their breast and flanks.
- 556) The painter honeyeater is the only small medium honeyeater with wholly or mostly pink bill, and the only yellow-winged honeyeater with almost wholly white underparts (marked only with sparse, fine and short black streaks) (Painted Honeyeater Conservation Advice).
- 557) The species inhabits mistletoes in eucalypt forests/woodlands, riparian woodlands of black box and river red gum, box-ironbark-yellow gum woodlands, acacia-dominated woodlands, paperbarks, casuarinas, callitris, and trees on farmland or gardens. The species prefers woodlands which contain a higher number of mature trees as these host more mistletoes. It is more common in wider blocks of remnant woodland than in narrower strips, although it breeds in quite narrow roadside strips if ample mistletoe fruit is available. The species often occurs in singly or in pairs, and less often in small flocks.
- 558) The species appears to prefer mistletoe as a nest substrate and selects nest sites in habitats where mistletoe prevalence and parasitism rates are high. Nesting success is relatively low; in the foliage of trees it is approximately 43% and within mistletoe clumps it is only 17%, with 83% of nest failures caused by predation. Generation time is estimated at 5.8 years, with a maximum longevity in the wild estimated at 10.1 years.
- 559) The species diet mainly consists of mistletoe fruits, but also includes nectar (from flowering mistletoe, eucalypts and possibly banksias) and arthropods, especially in the non-breeding season. Arthropods are an important dietary item provided to nestlings and for adults during the breeding season.
- 560) The main threat to the species is habitat loss. Much of the species breeding habitat has been cleared or has been reduced to ageing, widely-spaced trees, particularly in box-ironbark and boree woodlands. Its non-breeding habitat is also still being cleared for agriculture. Some acacia and casuarina woodlands, in which the species occurs, have been heavily cleared and degraded to the extent that they are now nationally endangered ecological communities. In the breeding strongholds of south-eastern Australia, woodlands, are being cleared at a greater rate than they are being restored. In particular, regrowth woodland, which contains similar or higher densities of mistletoe than remnant woodland, is viewed as having little conservation value and is being cleared at an unsustainable rate.

561) Most of the painted honeyeater's remaining habitat is on private land which continues to be degraded by grazing by livestock, native macropods and rabbits. Grazing inhibits tree recruitment through the consumption of seedlings and suckers, and as mature trees die there is insufficient recruitment to replace them. Grazing results in an uneven age structure of mistletoe host trees and promotion of future collapse of mistletoe resources. Grazing thresholds supporting non-significant effects to mistletoe resources are unknown but may be very low. Additionally, many landholders remove mistletoes from trees as they view it as a pest. Mistletoe becomes more abundant on trees that have become isolated as a result of land disturbance or clearing.

562) Even with no further loss or degradation of habitat, the species is likely to continue to decline at some of the edges of its distribution. It is likely that numbers of painted honeyeaters breeding in southern and central Queensland are already extremely low, and the use of habitat by painted honeyeaters in north-west Queensland is becoming increasingly uncommon. Under current trends, the painted honeyeater may become extinct or absent from the extremes of its northern distribution.

563) Other threats to the painted honeyeater include: competition with aggressive noisy minor; predation by invasive species; deliberate destruction of mistletoe in production forests; exacerbation of tree decline through pasture improvement activities; collision with road vehicles; and nest predation by over-abundant pied currawongs, pied and grey butcherbirds, and crows and ravens.

Proposed action area

Modelled habitat and survey records

564) The proponent has modelled habitat for painted honeyeater according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

565) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat has been modelled as any RE that occurs in the action area that either:

- Is identified in the referenced literature
- Is a dry forest or woodland type that contains a species of *Amyema* that is dominant or frequent in the overstorey
- Has a tree canopy of 40% and a large-tree basal area 1 m²/ha
- Is represented by at least three survey sites

566) Preferred habitat has been modelled as any suitable habitat RE in the action area that

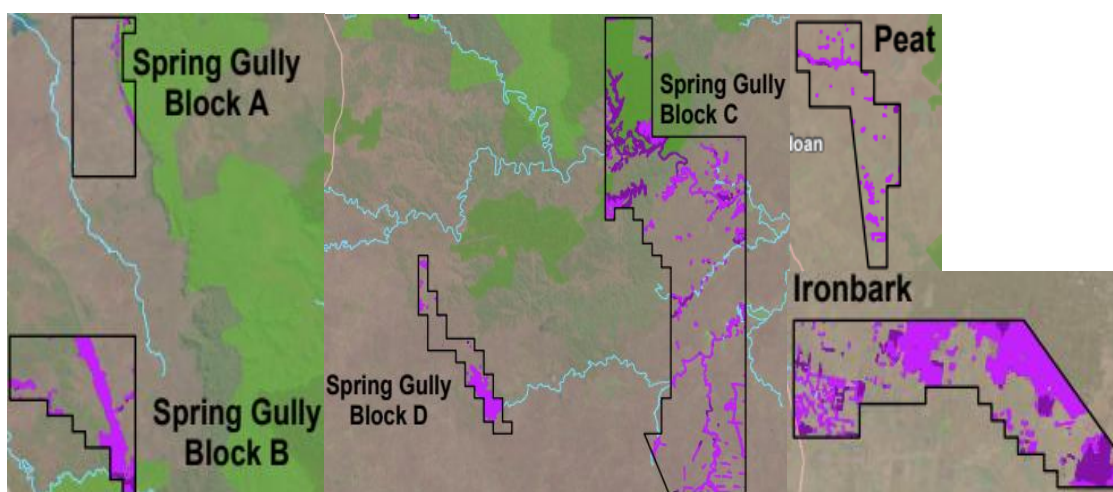
- Satisfies at least three of four suitable habitat criteria

- Occurs within 'remnant' vegetation (not regrowth)
- Occurs within a patch ≥ 100 ha

567) A total of 31 REs represent suitable habitat, with six of these further meeting the requirements of preferred habitat.

568) According to the Significant Impact Assessment for the PER ([Attachment C6](#)), a total of 27,347 ha of painted honeyeater habitat has been mapped within the action area. The species has been mapped in all development areas (see Figure 15 Below).

569) **Figure 15 Modelled habitat for Painted Honeyeater. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.**



570) According to the Species Profiles and Mapping for the PER, several species records are located within 20 km of the Ironbark development area.

571) *Ground-truthing of habitat*

572) The Significant Impact Assessment for the PER states that known or likely breeding habitat in Boree / Weeping Myall (*Acacia pendula*), Brigalow (*A. harpophylla*) woodlands, box-gum woodlands and box-ironbark forests on inland slopes of the Great Dividing Range in New South Wales, Victoria and southern Queensland – represents habitat critical to the survival of the species. All preferred foraging species within known and likely foraging habitat particularly mistletoes of the genus *Amyema* growing on forest and woodland eucalypts and acacias, all key Biodiversity areas with painted honeyeater as a trigger species, and suitable habitat in future climate niches as information becomes available, are also considered habitat critical to the survival of the species.

573) The department considers the above to be an appropriate definition of habitat critical to the survival of painted honeyeater.

Impact

- 574) The PER (Attachment C1) states that up to 765 ha of modelled painted honeyeater habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.
- 575) The Significant Impact Assessment for the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; adversely affect habitat critical to the survival of the species; and modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.
- 576) Indirect impacts and relevant threats from edge effects from the action include increased competition from aggressive noisy miner birds; predation by invasive species; collision with road vehicles; and nest predation by over-abundant pied currawongs, pied and grey butcherbirds, and crows and ravens.

Avoidance and mitigation measures

- 577) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for painted honeyeater would be up to 1,839 ha.
- 578) The Environmental Constraints Protocol of the PER (Attachment C2) states that all confirmed painted honeyeater habitat types will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.
- 579) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.
- 580) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for painted honeyeater is 765 ha.

Compensatory measures

- 581) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on painted honeyeater.
- 582) The department notes that a predicted maximum disturbance of up to 765 ha of painted honeyeater habitat may be disturbed as a result of the proposed action. However, there is high uncertainty regarding the disturbance levels due to the lack of ground-truthed surveys.
- 583) The Offset Strategy states that any area of the disturbance footprint intersecting ground-truthed habitat will count toward the offset liability.

584) The Offset Strategy (Attachment C9) states that the proponent's existing offsets contain a total of 2,533.91 ha of painted honeyeater habitat, with 2,183.11 ha of that considered remnant habitat with a score of at least 5, and the remaining 350.8 ha as regrowth habitat with a habitat score of at least 4.

585) The Offset Strategy states that as the species has very specific habitat types or structural features, which may be rare or fragmented across the landscape, avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

586) The Offset Strategy also states that barbed wire fence removal and tree/shrub/grass planting are additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

587) The department considers the proposed maximum disturbance of 765 ha could have a significant impact on painted honeyeater. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Painted Honeyeater.

588) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Painted Honeyeater.

589) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Painted Honeyeater, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

590) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Painted Honeyeater.

Conclusion

- 591) The department has considered all available relevant information on the impact of the proposed action on Painted Honeyeater, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.
- 592) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Painted Honeyeater.

Squatter Pigeon (southern) (*Geophaps scripta scripta*) - vulnerable

Description

- 593) According to the *Conservation Advice (Geophaps scripta scripta) Squatter Pigeon (southern) (2015)* (Squatter Pigeon conservation advice) ([Attachment D13](#)), the Squatter Pigeon (southern) is a medium sized, ground-dwelling bird approximately 30 cm in length and weighing 190 – 250 g. Adults are predominantly grey-brown, with bold black and white stripes on the face and throat. The upperwings are dark-brown, the upperbreast light grey-brown grading to blue-grey on the lower breast and centre of the belly, and the rest of the belly and flanks are white. The underwings are white with a dark leading edge. It has a black bill and dull-purple legs and feet. The sexes are similar in appearance. Juveniles can be distinguished from adults by their duller colouring and less distinctive black and white facial stripes.
- 594) The Squatter Pigeon conservation advice states that the Squatter Pigeon occurs on the inland slopes of the Great Dividing Range. Its current distribution extends from the Burdekin-Lynd Divide in central Queensland, west to Longreach and Charleville, east to the coast between Port Curtis and Proserpine, and south to New South Wales north of 29°S. There is a broad zone of hybridisation with the northern subspecies along the Burdekin-Lynd Divide. The subspecies has disappeared from the southern half of its historical range. Formerly widespread and abundant in New South Wales, occurring south to West Wyalong at 34°S, its range has contracted since the 1870s.
- 595) Squatter Pigeon (southern) inhabits the grassy understorey of open eucalypt woodland, and less often savannas. It is nearly always found near permanent water such as rivers, creeks and waterholes. Sandy areas dissected by gravel ridges, which have open and short grass cover allowing easier movement, are preferred. It is less commonly found on heavier soils with dense grass. It often occurs in burnt areas and is sometimes found on tracks and roadsides.
- 596) The subspecies nests on the ground, usually laying two eggs among or under vegetation. It forages for seeds among sparse and low grass, in improved pastures, and beside railway lines and with domestic fowl around settlements. It roosts in low trees at night. Its movement are poorly known but it appears to be locally dispersive or resident, with no long-distance seasonal movements recorded. The generation time is estimated at five years.

597) Current threats to the species include ongoing vegetation clearance and fragmentation, overgrazing of habitat by livestock and feral herbivores such as rabbits, introduction of weeds, inappropriate fire regimes, thickening of understorey vegetation, predation by feral cats and foxes, trampling of nests by domestic stock and illegal shooting.

Proposed action area

598) Modelled habitat and survey records

599) The proponent has modelled habitat for Squatter Pigeon (southern) according to the PER Guidelines. The PER ([Attachment C1](#)) also notes that the broad habitat associations (i.e. RE types, reliance on water) are well understood for Squatter Pigeon, and that these habitat associations can be readily modelled, as the PER considers that the model provides a reasonable approximation of habitat distribution including areas that will be retained and those that may be lost. However, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

600) According to the Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat has been modelled as any RE that occurs in the action area that:

- Contains < 35% grass cover in the understorey (observed from benchmark data or profile data)
- Occurs within land-zones 4, 5, and 7
- Comprises an overstorey dominated by *Eucalyptus*, *Corymbia*, *Acacia* and / or *Callitris* species
- Or
- Is identified within the referenced literature
- Is represented by at least three survey sites.

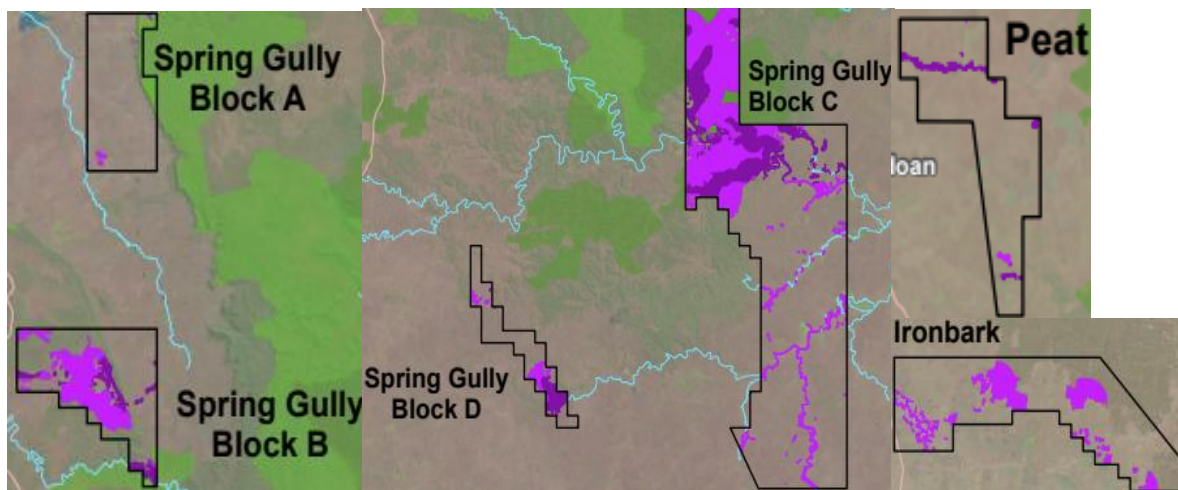
601) Preferred habitat for the species has been modelled as any suitable habitat RE in the action area that:

- Occurs within the extent of the 'likely to occur' public distribution grid for Squatter Pigeon established by the Australian Government
- Is within 1km of the nearest 3rd order stream (or above) or waterbody
- Occurs within land-zones 5 and 7 or is represented by at least 3 survey sites.

602) A total of 33 REs represent suitable habitat, with 12 of these further meeting the requirements of preferred habitat.

603) According to the significant impact assessment of the PER ([Attachment C6](#)), a total of 39,310 ha of Squatter Pigeon (southern) habitat has been mapped within the action area. The species has been mapped in all development areas (see Figure 16 Below).

604) **Figure 16. Modelled habitat for Squatter Pigeon (southern). Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



Ground-truthing of habitat

605) The significant impact assessment of the PER ([Attachment C6](#)) states that areas suitable for breeding (well-drained soils in woodlands within 1 km of water) and foraging (especially a diversity of seeding grasses with a woody overstorey, within 3 km of water) habitat – represents habitat critical to the survival of the species.

606) The department considers the above to be an appropriate definition of habitat critical to the survival of Squatter Pigeon.

Impact

607) The PER states that up to 755 ha of modelled Squatter Pigeon (southern) habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

608) The significant impact assessment of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; adversely affect habitat critical to the survival of the species; and modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

609) The significant impact assessment of the PER identifies additional indirect impacts from potential edge effects of clearing habitat, including feral (pest animal species), dust, light and noise increase and potential mortality or injury from vehicle movements.

Avoidance and mitigation measures

- 610) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Squatter Pigeon (southern) would be up to 2,628 ha.
- 611) The Environmental Constraints Protocol of the PER (Attachment C2) states that all confirmed Squatter Pigeon (southern) habitat types will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.
- 612) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.
- 613) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Squatter Pigeon (southern) is 755 ha.

Compensatory measures

- 614) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Squatter Pigeon (southern).
- 615) The department notes that a predicted maximum disturbance of up to 755 ha of Squatter Pigeon (southern) habitat may be disturbed as a result of the proposed action. However, there is high uncertainty regarding the disturbance levels due to the lack of ground-truthed surveys.
- 616) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed breeding and foraging habitat will count toward the offset liability. Areas of the disturbance footprint intersecting with ground-truthed dispersal habitat that does not include impacts on trees or shrubs, or is reinstated with cover grasses, and retained breeding / foraging / dispersal habitat adjacent to the disturbance footprint, will also count towards the offset liability.
- 617) The Offset Strategy states that the proponent's existing offsets contain a total of 841.08 ha of Squatter Pigeon (southern) remnant habitat with a habitat score of at least 4.
- 618) The department notes that the proposed offsets are unlikely to fully acquit the proposed maximum disturbance of 755 ha of Squatter Pigeon (southern) habitat.
- 619) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.
- 620) The Offset Strategy also states that barbed wire fence removal and prescription burning are additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

621) The department considers the proposed maximum disturbance of 755 ha could have a significant impact on Squatter Pigeon (southern). In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Squatter Pigeon (southern).

622) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Squatter Pigeon (southern).

623) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Squatter Pigeon (southern), based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

624) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Squatter Pigeon (southern).

Conclusion

625) The department has considered all available relevant information on the impact of the proposed action on Squatter Pigeon (southern), and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

626) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Squatter Pigeon (southern).

Reptiles

Ornamental Snake (*Denisonia maculata*) – vulnerable

Description

- 627) Ornamental Snake is a brown, grey-brown, or black snake with lighter coloured body scales often with darker streaks that grows to 50 cm in length. The head is darker brown / black with lighter flecks, distinctly barred lips, white / cream belly with dark spots / flecks on the outer edges.
- 628) According to the *Approved Conservation Advice for Denisonia maculata (Ornamental Snake) (2014)* (Ornamental Snake Conservation Advice) ([Attachment D14](#)), the Ornamental Snake is known only from within the drainage system of the Fitzroy and Dawson Rivers in Queensland. Its distribution overlaps with the Brigalow Belt North and parts of the Brigalow Belt South biogeographical regions and is associated with the Brigalow TEC
- 629) The Ornamental Snake inhabits floodplains, undulating clay plans and along the margins of swamps, lakes and watercourses. It also occurs on adjoining areas of elevated ground and has been recorded in woodlands and open woodlands, and in fringing vegetation along watercourses. The Survey guidelines for Australia's threatened reptile and the Draft Referral guidelines for the nationally listed Brigalow Belt reptiles states that important habitat for the species are gilgai depressions or melon-hole country.
- 630) The species is nocturnally active, sheltering during the day under fallen timber and in deep soil cracks. Its diet consists predominantly of frogs, requiring the species to be close to water bodies, including inundated cracking clay. The species is thought to become active during extended dry periods.
- 631) The department notes that the species is sparsely distributed across the geographic range and its population size is unknown.
- 632) The Ornamental Snake Conservation Advice states that it is primarily threatened by the continued legacy of previous broadscale land clearing and habitat modification for agricultural and urban development.
- 633) The *Draft Referral guidelines for the nationally listed Brigalow Belt reptiles (2023)* ([Attachment G2](#)) states that important habitat for Ornamental Snake is 'gilgai depressions and mounds', and that 'habitat connectivity between gulgais and other suitable habitats is important'.

Proposed action area

634) Modelled habitat and survey records

- 635) The proponent has modelled habitat for Ornamental Snake according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

636) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat has been modelled as any RE that occurs in the action area that either:

- Is specifically identified in the referenced literature
- Occupies lower slopes or flats in which gilgais are specifically mentioned
- Contains at least one survey record.

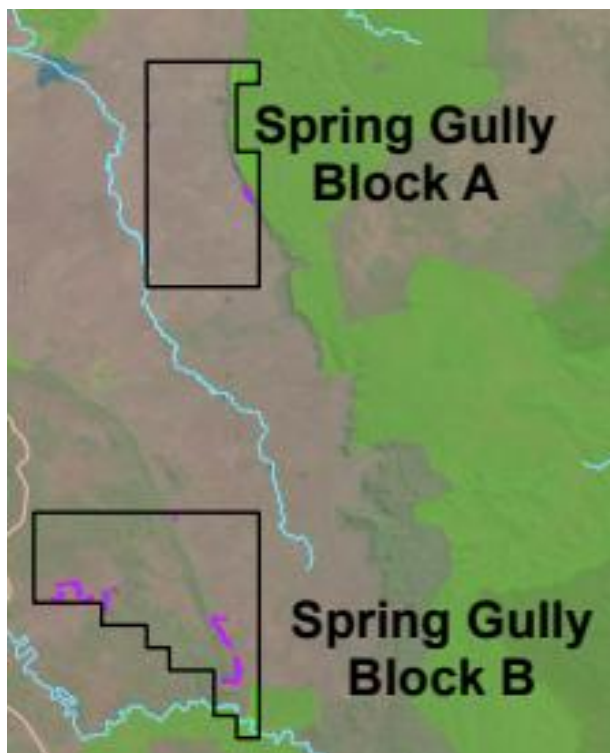
637) Preferred habitat has been modelled as any suitable habitat RE in the action area that

- Is specifically identified in the referenced literature
- Contains a relatively high volume of coarse woody debris (> 500 m/ha) and relatively high litter cover (> 40%)
- Coincides with the extent of the 'likely habitat' class in the public distribution grid for Ornamental Snake established by the Australian Government.

638) A total of 13 REs represent suitable habitat, with four of these representing preferred habitat.

639) According to the Significant Impact Assessments of the PER (Attachment C6), a total of 229 ha of Ornamental Snake habitat has been mapped within the action area. The species has been mapped in Spring Gully A and B (see Figure 17 Below).

640) **Figure 17 Modelled habitat for Ornamental Snake. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.**



641)

642) Atlas of Living Australia records show that there is one record of the species within 10 km of Spring Gully Block A from 1998.

643) *Ground-truthing of habitat*

644) The Significant Impact Assessments of the PER states that any habitat defined by the Conservation Advice as being important habitat represents habitat critical to the survival of the species.

645) The department considers the above to be an appropriate definition of habitat critical to the survival of Ornamental Snake.

Impact

646) The PER ([Attachment C1](#)) states that up to 10 ha of modelled Ornamental Snake habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur. It also states that the predicted maximum disturbance estimate refers to predicted disturbance to modelled habitat for this species only, not confirmed populations.

647) The Significant Impact Assessments of the PER states impacts from the action are unlikely to meet any of the significant impact criteria for vulnerable species.

648) The draft referral guidelines state that clearing 2 or more hectares of important habitat presents a high risk of significant impacts on Ornamental Snake. The department therefore does not agree with the assessment within the Significant Impact Assessments of the PER.

Avoidance and mitigation measures

649) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Ornamental Snake would be up to 229 ha.

650) The Environmental Constraints Protocol of the PER (Attachment C2) states that the proposed action will avoid all confirmed Ornamental Snake breeding/foraging habitat that supports confirmed populations and must also ensure that populations do not become isolated. All other confirmed habitat types will have low impact petroleum activities and linear infrastructure

651) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

652) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Ornamental Snake is 10 ha.

Compensatory measures

653) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Ornamental Snake.

654) The department notes that a predicted maximum disturbance of up to 10 ha of Ornamental Snake habitat may be disturbed as a result of the proposed action. However, there is high uncertainty regarding the disturbance levels due to the lack of ground-truthed surveys.

655) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed breeding/foraging habitat that does not support confirmed populations will count toward offset liability. Areas of disturbance footprint intersecting with ground-truthed foraging habitat will also count toward offset liability.

656) The department notes that no offsets are proposed for impacts on Ornamental Snake.

657) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

658) The Offset Strategy also states that restrictions to vegetation clearing, fire management, and weed and animal pest management are additional management measures identified for offset sites to achieve a conservation gain for the species.

659) The department notes that the proposed offsets for Ornamental Snake would not fully acquit the impacts on the species.

Proposed outcomes and conditions

660) The department considers the proposed maximum disturbance of 10 ha could have a significant impact on Ornamental Snake. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Ornamental Snake.

661) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Ornamental Snake of 10 ha, as outlined within the significant impact assessment of the PER.

662) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Ornamental Snake.

663) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Ornamental Snake, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

664) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Ornamental Snake.

Conclusion

665) The department has considered all available relevant information on the impact of the proposed action on Ornamental Snake, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

666) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Ornamental Snake.

Yakka Skink (*Egernia rugosa*) – vulnerable

Description

667) The Yakka Skink is a robust bodied skink that grows up to 40 cm long. It has a broad dark brown to black stripe from nape to tail bordered on either side by a narrow, pale fawn back/side stripe. It has dark to pale to reddish-brown scales on the flanks that form a faintly variegated orange-brown pattern. Its throat is cream-yellow, with blackish flecks/spots, and the chest and abdomen are yellow-orange. This skink is often described as robust and is about the same size as a Blue Tongue Lizard.

668) According to the *Approved Conservation Advice for Egernia rugosa (Yakka Skink) (2014)* (Yakka Skink Conservation Advice) (Attachment D15), the Yakka Skink is endemic to Queensland with a patchy distribution. Isolated populations occur throughout subhumid areas in the interior of Queensland from St George in the south, to Coen and Cape York in the north. In the southern half of the Brigalow Belt it occurs near Rockhampton, south to St George and west to Chesterton Range National Park. The core habitat of this species is within the Mulga Lands and Brigalow Belt South Bioregions. Other populations have been recorded throughout the Brigalow Belt North and Einasleigh Uplands Bioregions.

669) The species is found in open dry sclerophyll forest or woodland. The species will often take refuge among dense ground vegetation, large hollow logs, cavities in soil-bound root systems of fallen trees and beneath rocks. They may also exacerbate burrow systems among low vegetation or below logs. In cleared habitat, Yakka Skinks may persist where shelter sites such as tunnel erosion, rabbit warrens and log piles exist. They are extremely secretive and seldom venture far from shelter sites, where they retreat to at the first sign of disturbance. Their presence is often indicated by a shared site where they deposit their droppings. The species is associated with the “Brigalow (*Acacia harpophylla*) dominant and co-dominant” EPBC Act-listed TEC.

670) The species occurs within the Border Rivers Maranoa-Balonne, Burdekin, Burnett Mary, Cape York, Condamine, Desert Channels, Fitzroy, Mackay Whitsunday and South West Natural Resource Management Regions.

671) The main identified threat to the species is a continued legacy of past broadscale land clearing and habitat degradation. The Brigalow Belt Bioregion is an area of high human impact with much of the region modified through agricultural and urban development. Other threats to the Yakka Skink include inappropriate roadside management, removal of wood debris and rock microhabitat features, ripping of rabbit warrens and predation by feral animals.

Proposed action area

Modelled habitat and survey records

672) The proponent has modelled habitat for Yakka Skink according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

673) According to the Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat has been modelled as any RE that occurs in the action area that:

- Occurs within Land Zones 3, 5, 7, 9 and 10
- Has Brigalow, Bendee, Lancewood, Belah, Poplar Box, Ironbark and White Cypress Pine as a dominant canopy species
- Occurs on sandy or loamy soils (not heavy clays)

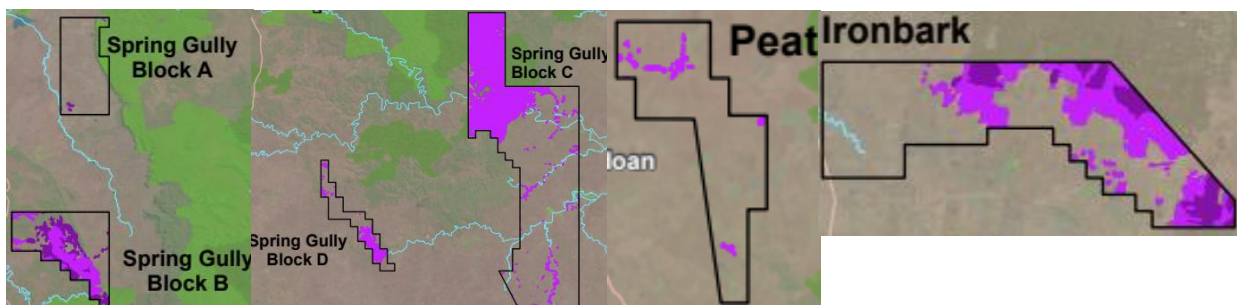
674) Preferred habitat has been modelled as any suitable habitat RE in the action area that:

- Is identified in the referenced literature
- Has canopy height <16 m and / or a coarse woody debris length of >300 m/ha
- Has at least one associated cluster of records
- Coincides with the extent of 'likely habitat' class in the public distribution grid for Yakka Skink established by the Australian Government.

675) A total of 24 REs represent suitable habitat, with nine of these representing preferred habitat.

676) According to the significant impact assessment of the PER ([Attachment C6](#)), a total of 48,990 ha of Yakka Skink habitat has been mapped within the action area. The species has been mapped in Spring Gully A and B (see Figure 18 Below).

677) **Figure 18 Modelled habitat for Yakka Skink. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.**



678)

679) There are three public records of Yakka Skink within 20 km of the action area, with one record found within Spring Gully C.

680) Ground-truthing of habitat

681) The significant impact assessment of the PER states that any breeding and foraging habitat represents habitat critical to the survival of the species.

682) The department considers the above to be an appropriate definition of habitat critical to the survival of Yakka Skink.

Impact

683) The PER (Attachment C1) states that up to 1,177 ha of modelled Yakka Skink habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

684) The significant impact assessment of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two or more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.

685) The department agrees with this assessment of significant impacts in relation to the proposed action.

Avoidance and mitigation measures

686) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Yakka Skink would be up to 3,391 ha.

687) The Environmental Constraints Protocol of the PER (Attachment C2) states that all confirmed Yakka Skink habitat types will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.

688) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

689) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Yakka Skink is 1,177 ha.

Compensatory measures

- 690) The PER states that through the reduction in area of habitat, the action is likely to have a significant residual impact on Yakka Skink.
- 691) The department notes that a predicted maximum disturbance of up to 1,177 ha of Yakka Skink habitat may be disturbed as a result of the proposed action. However, there is high uncertainty regarding the disturbance levels due to the lack of ground-truthed surveys.
- 692) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed habitat will count toward offset liability. Areas of disturbance that bisects a contiguous functional habitat patch (e.g. linear infrastructure of sufficient width) resulting in two or more smaller, isolated habitat patches with reduced capacity to support breeding, recruitment, and long-term population viability - will also count toward the offset liability.
- 693) The Offset Strategy states that the proponent's existing offsets contain a total of 3016.43 ha of Yakka Skink habitat, with 2671.39 ha of that considered remnant habitat with a score of a least 4 (1997.2 ha with a score of 6), and the remaining 345.04 ha as regrowth habitat with a habitat score of 5.
- 694) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.
- 695) The Offset Strategy also states that fauna translocation and / or hatchery programs, habitat log/rock pile construction, and prescribed burn programs are all additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

- 696) The department considers the proposed maximum disturbance of 1,177 ha could have a significant impact on Yakka Skink. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Yakka Skink.
- 697) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Yakka Skink.
- 698) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Yakka Skink, based on:
- a) work plans
 - b) ground-truthing surveys

c) avoidance and mitigation measures committed to.

699) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Yakka Skink.

Conclusion

700) The department has considered all available relevant information on the impact of the proposed action on Yakka Skink, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

701) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Yakka Skink.

Dunmall's Snake (*Furina dunmalli*) - vulnerable

Description

702) Dunmall's Snake is a small to medium sized snake, growing to a total length of 60 cm. It is a grey-brown snake with a white underbelly, and pale blotches that may be present on the upper lip scales. Body scales are smooth and light edged in 21 rows on the mid-body. The head is large and distinct from neck.

703) According to the *Approved Conservation Advice for Furina dunmalli (Dunmall's snake) (2014)* (Dunmall's Snake Conservation Advice) ([Attachment D16](#)), Dunmall's Snake is found in open forest, particularly brigalow *Acacia harpophylla* forest and woodland growing on floodplains of deep-cracking black clay and clay loam soils. Captive specimens indicate that the species is nocturnal, and shelters under fallen timber and in deep soil cracks and other cavities. Its diet consists of small skinks and geckos.

704) The species is found in central and south-central and potentially inland north-eastern New South Wales. In Queensland, its range extends from Yeppoon and the Expedition Range in the north, to Oakey, Glenmorgan and Inglewood in the south. Most locality records are from between 200 and 500 m above sea level. This species occurs within the Brigalow Belt Bioregion and may also occur in the Burdekin, Fitzroy, Desert Channels, Burnett Mary, South East, Condamine (Queensland), Border Rivers Maranoa-Balonne, South West and the Border Rivers/Gwydir (NSW) Natural Resource Management Regions.

705) The main threat to Dunmall's Snake is the continued legacy of past broadscale land clearing and habitat modification. The preferred habitat for this species has been extensively modified and continues to be threatened by overgrazing by stock, modification for grazing and agriculture, pasture improvement, crop production and urban development. Drainage of swamps and predation by feral animals may also be a threat to the species.

Proposed action area

706) Modelled habitat and survey records

707) The proponent has modelled habitat for Dunmall's Snake according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

708) According to the Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat has been modelled as any RE that occurs in the action area that:

- Is identified within the referenced literature
- Is dominated by *Acacia* spp., *Callitris* spp. or *Allocasuarina leuhmanii* on black cracking clays or clay loams
- Occurs on sandstone derived soils dominated by Lemon-scented Gum (*Corymbia citriodora*), ironbark (*Eucalyptus crebra* and *E. melanophloia*), White Cypress Pine (*Callitris glaucophylla*) or Bull-oak (*Allocasuarina leuhmanii*) open forest and woodland associations
- Occurs on hard ironstone country within Land Zone 7
- Contains at least three survey records

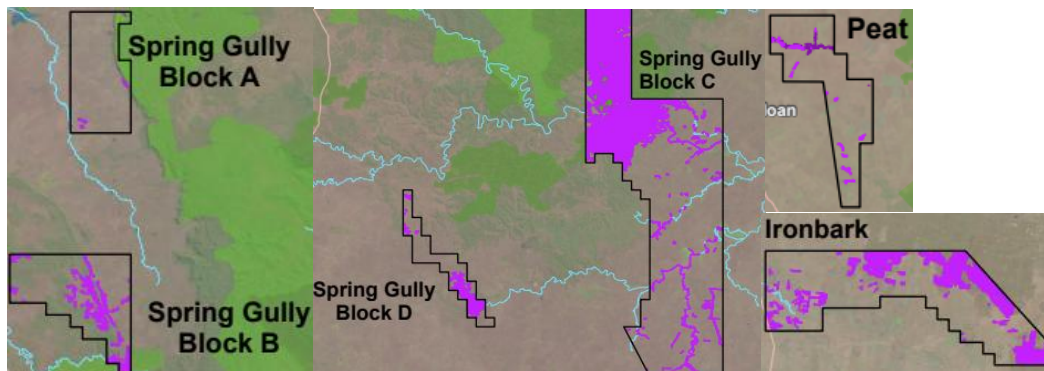
709) Preferred habitat has been modelled as any suitable habitat RE that:

- Is dominated by its preferred species, occurs in Land Zone 7, or comprises a large-tree basal area of > 1m²/ha
- Contains at least three survey records
- Occurs within 'remnant' vegetation (not regrowth)
- Occurs within the extent of the 'likely to occur' public distribution grid for Dunmall's Snake established by the Australian Government.

710) A total of 29 REs represent suitable habitat for Dunmall's Snake, of which nine REs represent preferred habitat.

711) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), a total of 43,161 ha of Dunmall's Snake habitat has been mapped within the action area. The species has been mapped in Spring Gully A and B (see Figure 19 Below).

712) **Figure 19 Modelled habitat for Dunmall's Snake. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.**



713) *Ground-truthing of habitat*

714) The Significant Impact Assessments of the PER states that all breeding / foraging and dispersal habitat at represents habitat critical to the survival of the species.

715) The department considers the above to be an appropriate definition of habitat critical to the survival of Dunmall's Snake.

Impact

716) The PER ([Attachment C1](#)) states that up to 1,015 ha of modelled Dunmall's Snake habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

717) The Significant Impact Assessments of the PER ([Attachment C6](#)) states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two in more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; and modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

718) The department agrees with this assessment of significant impacts in relation to the proposed action.

Avoidance and mitigation measures

719) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Dunmall's Snake would be up to 2,973 ha.

720) The Environmental Constraints Protocol of the PER ([Attachment C2](#)) states that all confirmed Dunmall's Snake habitat will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.

721) Within the Offset Strategy ([Attachment C9](#)), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

722) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Dunmall's Snake is 1,015 ha.

Compensatory measures

723) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Dunmall's Snake.

724) The department notes that a predicted maximum disturbance of up to 1,015 ha of Dunmall's Snake habitat may be disturbed as a result of the proposed action. This equates to up to 0.033% of the bioregional extent of the TEC.

725) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed breeding/foraging habitat will count toward offset liability. Areas of disturbance that bisects a contiguous functional habitat patch (e.g. linear infrastructure of sufficient width) resulting in two or more smaller, isolated habitat patches with reduced capacity to support breeding, recruitment, and long-term population viability - will also count toward the offset liability.

726) Areas of disturbance footprint intersecting with ground-truthed dispersal habitat will also count toward the offset liability, except for:

- Where co-located with existing disturbance (existing access track, fence line, or other linear clearing)
- Where disturbance does not include impacts on trees or shrubs, or where microhabitat features are salvaged and reinstated to emulate pre-disturbance state.
- Where adjacent to the disturbance footprint (no minimum patch size).

727) The Offset Strategy states that the proponent's existing offsets contain a total of 2793.14 ha of Dunmall's Snake habitat, with 2464.29 ha of that considered remnant habitat with a score of at least 5 (1997.2 ha with a score of 6), and the remaining 328.85 ha as regrowth habitat with a habitat score of at least 3.

728) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

729) The Offset Strategy also states that fauna translocation and / or hatchery programs, sediment and erosion control program, and water point creation (dams, wetlands, leaky weirs) are all additional management measure options for the species to achieve a conservation gain.

730) The department notes that the proposed offsets may not be enough to fully acquit the significant impacts of the proposed action

Proposed outcomes and conditions

731) The department considers the proposed maximum disturbance of 1,015 ha could have a significant impact on Dunmall's Snake. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Dunmall's Snake.

732) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Dunmall's Snake.

733) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Dunmall's Snake, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

734) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Dunmall's Snake.

Conclusion

735) The department has considered all available relevant information on the impact of the proposed action on Dunmall's Snake, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

736) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Dunmall's Snake.

**Fitzroy River turtle (*Rheodytes leukops*) – endangered (vulnerable at time of referral decision); and
White-throated Snapping Turtle (*Elseya albagula*) – critically endangered**

Description

737) The Fitzroy River turtle (*Rheodytes leukops*) is a moderate-sized freshwater turtle, with a maximum carapace length of 26 cm for males, and 28 cm for females. It has a moderately long neck and head, which, when extended, is much shorter than the carapace. The head has a horny shield, and the temporal region is covered with prominent raised tubercles, and large conical tubercles are present on the dorsal surface of the neck, and a temporal stripe is absent.

738) According to the *Conservation Advice for Rheodytes leukops (Fitzroy River turtle) (2024)* (Fitzroy River turtle Conservation Advice) ([Attachment D17](#)), the species can respire bimodally via the air and aquatically. The species utilises cloacal respiration, which extends the dive duration of the average 39 dives per day the species undertakes to an average of 33 minutes. Diving time is significantly reduced if an individual is acutely exposed to high concentrations of suspended sediments, leading to a greater reliance on aerial breathing, less time foraging, and greater exposure to predation. The species' reliance on aquatic breathing also means they are susceptible to natural and anthropogenic-induced changes in environmental conditions.

739) The home range of the Fitzroy River turtle is generally estimated to be small (< 4 ha), with an average movement rate per day of 20 m, spending from 3 – 24 hours sedentary. Dam and weir infrastructure can be a barrier to upstream migration of Fitzroy River turtles, and they will attempt to climb even vertical walls adjacent to an attractant flow in their efforts to move upstream, resulting in increased frequency of injuries to the turtles.

740) The White-throated snapping turtle is one of the largest short-necked freshwater turtles in Australia, with females growing up to 38 cm long. Adults are large and heavily built, with a large head, with females being the largest, and also having a white neck and face.

741) According to the *Conservation Advice Elseya albagula White-throated snapping turtle (2014)* (White-throated snapping turtle Conservation Advice) ([Attachment D18](#)), the species will breed in each successive year, though is also a low fecundity species, laying only a single clutch of eggs per annual breeding season. The species first breeds at approximately 15 – 20 years. Survivorship of adult turtles is high while that of eggs or small juveniles is low.

742) The White-throated snapping turtle is a habitat specialist, preferring clear, flowing, well-oxygenated waters. This preference is associated with their physiological adaption to extract oxygen from water via cloacal respiration. While the species does also occupy non-flowing waters, this is typically at reduced densities.

743) Both the Fitzroy River turtle and the White-throated snapping turtle occur within the Fitzroy River catchment. The White-throated snapping turtle also occurs within the Mary and Burnett Rivers and associated smaller drainages in southeastern Queensland; however the White-throated snapping turtle Conservation Advice suggests that the Fitzroy catchment population has displayed some genetic distinction from the Mary and Burnett catchment populations.

744) The main threat for both species is the predation of their nests by native and introduced predators, particularly feral dogs, pigs, and cats, and the native varanid and water rat. Both species are also threatened by habitat degradation through the construction and maintenance of dams and weirs, which fragment preferred habitat, obstruct migration within rivers, lead to injury and death during over-topping and water releases, increasing potential for low flow events, flooding of traditional nesting areas, and the loss of riparian vegetation overhanging riverine habitat.

Proposed action area

Modelled habitat and survey records

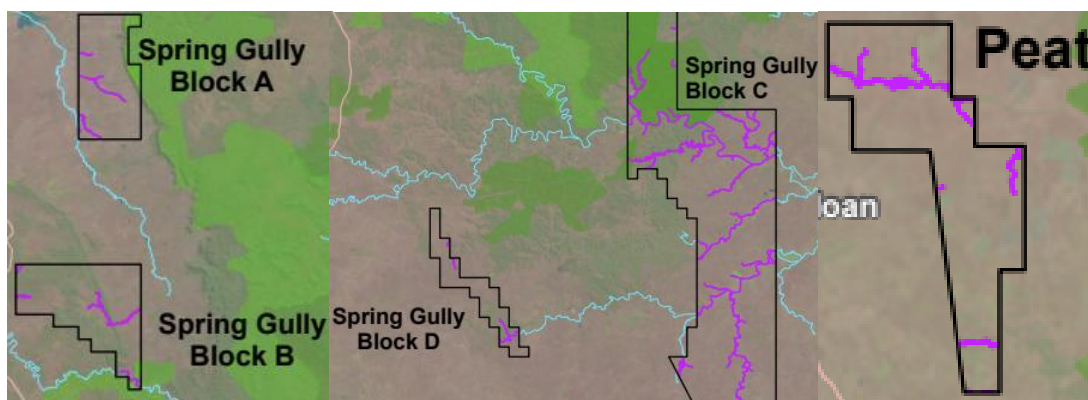
745) The proponent has modelled habitat for Fitzroy River turtle and White-throated snapping turtle according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

746) According to the Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat for Fitzroy River turtle has been modelled as all stream orders 4 and above, with a 50 m zone both sides of the hydro-line used to designate habitat

747) Suitable habitat for White-throated snapping turtle has been modelled as a 50 m zone both sides of mapped hydro-lines (stream order 3+ in the tenement areas).

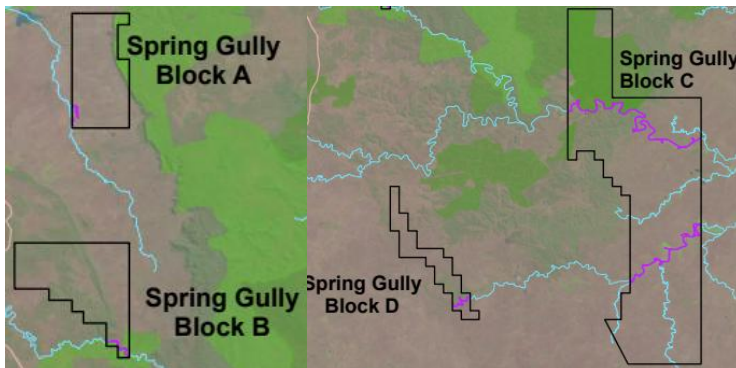
748) Modelled habitat for both species can be seen in Figures 20 and 21 below.

749) **Figure 20 Modelled habitat for Fitzroy River turtle. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



750)

751) **Figure 21 Modelled habitat for White-throated snapping turtle. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.**



752) According to Atlas of Living Australia, there are two White-throated snapping turtle records within 20 km of the proposed action.

753) *Ground-truthing of habitat*

754) The significant impact assessment of the PER ([Attachment C6](#)) states that habitat that is confirmed to provide potential breeding, resting or foraging habitat represents habitat critical to the survival of the Fitzroy River turtle.

755) The Fitzroy River turtle Conservation Advice states that habitat critical to the survival of the species includes:

- Submerged hard substrates such as logs, tree trunks, and rock within shallow aerobic margins of large, slow flowing reaches or large, non-flowing pools that can provide permanent dry season refugia and ephemeral wetlands
- Alternating riffle zones and deep pools that provide a well oxygenated environment suitable for the species, which utilises cloacal respiration and obtains parts of its diet from the aquatic invertebrates associated with riffle zones
- Nesting banks throughout the species' range with sandy or loamy banks
- Nesting banks that are protected from potential invasive predators
- Funnel Creek and Connors River, as they represent the pre-development environment and remain unregulated
- Rockwood Weir pool-riffle complex and associated sand bars

756) The significant impact assessment of the PER notes that the Fitzroy River turtle Conservation Advice states any habitat where the species is known, likely, newly discovered, including breeding and foraging habitat currently unoccupied by the species.

757) The department considers the above to be an appropriate definition of habitat critical to the survival of Fitzroy River turtle.

758) The significant impact assessment of the PER states that habitat critical to the survival of White-throated snapping turtle, defined within the *National Recovery Plan for the White-throated Snapping Turtle (2021)* (Attachment D19), that is defined as:

- Parts of riverine systems with permanent water, including pools, within the species' distribution that contain shelter and refuges (e.g. bank overhangs, overhanging riparian vegetation, macrophyte beds, moderate to high densities of submerged boulders and / or log jams).
- All currently known and new aggregated nesting sites (all nesting sites should be considered to be part of an aggregation unless it can be demonstrated otherwise).

759) The department considers the above to be an appropriate definition of habitat critical to the survival of White-throated snapping turtle.

Impacts

760) The PER (Attachment C1) states that up to 28 ha of modelled Fitzroy River turtle habitat, and 0 ha of White-throated snapping turtle habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

761) The significant impact assessment of the PER states that impacts on the vulnerable Fitzroy River turtle species are unlikely to lead to a significant impact on the species. It further states that there will be no significant impacts on the White-throated snapping turtle as a result of the action.

762) The department agrees with this assessment of significant impacts on both species.

Avoidance and mitigation measures

763) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Fitzroy River turtle would be up to 180 ha, and the unmitigated maximum disturbance for White-throated snapping turtle would be 105 ha.

764) The Environmental Constraints Protocol of the PER ([Attachment C2](#)) states that all confirmed Fitzroy River turtle habitat will be avoided withing Spring Gully Blocks A, D and Ironbark. All confirmed habitat will be avoided within Spring Gully Block C and Peat, except a limited number of creek crossings for linear infrastructure where construction and maintenance activities must occur outside of breeding season, and all disturbed watercourse bed and banks must be reinstated to pre-disturbance conditions. Impacts on confirmed habitat at Spring Gully B will be limited to linear infrastructure only, where construction and maintenance activities must occur outside of breeding season, and all disturbed watercourse beds and banks must be re-instated to pre-disturbance condition.

765) The Environmental Constraints Protocol of the PER states that all confirmed White-throated snapping turtle habitat will be avoided within all tenements of the proposed action.

766) Within the Offset Strategy ([Attachment C9](#)), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

767) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Fitzroy River turtle is 28 ha, while the predicted maximum disturbance for White-throated snapping turtle is 0 ha.

Compensatory measures

768) The PER states that even though the proposed action will result in a reduction of up to 28 ha of Fitzroy River turtle habitat, it is unlikely to have a significant impact on the species.

769) The department notes that a predicted maximum disturbance of up to 28 ha of Fitzroy River Turtle habitat may be disturbed as a result of the proposed action. This equates to up to 0.014% of the bioregional extent of the TEC.

770) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed habitat that results in permanent loss of habitat will count toward offset liability for Fitzroy River turtle.

771) The department notes that no offsets are proposed for impacts on Fitzroy River turtle.

772) As the proponent states that there will be no significant impact on White-throated snapping turtle, a definition of offset liability has not been provided for the species.

773) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

774) The Offset Strategy also states that fauna translocation and / or hatchery programs are an additional management measure option for the Fitzroy River turtle to achieve a conservation gain.

775) The department notes that the proposed offsets for Fitzroy River turtle would not fully acquit the impacts on the species.

Proposed outcomes and conditions

776) The department considers the proposed maximum disturbance of 28 ha could have a significant impact on Fitzroy River turtle. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Fitzroy River turtle and White-throated snapping turtle.

777) The department recommends condition 5, that in undertaking the proposed action, the proponent will not disturb any White-throated Snapping Turtle habitat.

778) The department recommends condition 5, that in undertaking the proposed action, the proponent will not disturb any Fitzroy River Turtle habitat during the breeding and hatching season for the species.

779) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Fitzroy River Turtle.

780) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Fitzroy River Turtle, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

781) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Fitzroy River Turtle.

Conclusion

782) The department has considered all available relevant information on the impact of the proposed action on Fitzroy River turtle and White-throated snapping turtle, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

783) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Fitzroy River turtle and White-throated snapping turtle.

Snails

Brigalow Woodland Snail (*Adclarkia cameroni*) – endangered and Dulacca Woodland Snail (*Adclarkia dulacca*) – endangered

Description

784) The Brigalow Woodland Snail is a medium to large, shelled snail that is thin, light brownish yellow, with a reddish band on the whorls of the shell. The shell is somewhat flattened, with a low, domed spire. The tip of the shell bares small, rounded knobs, while the rest of the shell bares fine, scaly knobs on the upper of the whorls, glossy underneath. The shell also bares very fine ridges running across each whorl. The animal is grey.

785) The *Conservation Advice Adclarkia cameroni brigalow woodland snail (2016)* (Brigalow Woodland Snail Conservation Advice) ([Attachment D20](#)) states that the Brigalow Woodland Snail is endemic to south-east Queensland, where it occurs in a small number of remnant and scattered *Acacia harpophylla* (brigalow) and eucalypt woodland patches (Such as road verges and riparian corridors) on the Condamine River floodplain, especially in the area around Dalby and Chinchilla. The brigalow patches occur on alluvial black soils. The narrow Condamine River riparian corridor is important refuge for the species, particularly in an area that has been largely cleared for cattle grazing and agriculture. Here the canopy cover is dense, scattered timber (flood debris) is greatest, and environmental moisture is at its most stable, even in drier times.

786) The species is of very limited mobility. Under favourable conditions, such as rain, the species can move between suitable areas of microhabitat, but the extent to which this occurs will be limited by the spatial arrangement of habitat patches.

787) The Dulacca Woodland Snail is a medium sized snail with a pale green/brown shell with a brown band above the periphery of the spirals. The tip of the shell bares small, rounded knobs, with the rest of the shell bearing weak growth lines and fine scales. The species differs from *A. cameroni* by having a flatter shell, with 'tighter' coiling.

788) The *Conservation Advice Adclarkia dulacca Dulacca woodland snail (2016)* (Dulacca Woodland Snail Conservation Advice) ([Attachment D21](#)) states that the Dulacca Woodland Snail is endemic to south-east Queensland, where it occurs as a small number of isolated and fragmented populations in the area between Miles and Dulacca, and south to Meandarra. The species inhabits a variety of remnant and scattered habitats, such as vine thicket and brigalow woodland patches on rocky outcrops with clay to loam soils, as well as *Eucalyptus* (ironbark) species and *Acacia shirleyi* (lancewood) woodlands on ridges (with and without rock) and *E. woollsiana* (gum-topped box) woodland.

789) The species is of limited mobility; however it will move between areas of suitable microhabitat given the right environmental conditions, e.g. from one pile of timber to another. The level of recruitment is likely to be low, with recruitment events limited to periods of rainfall.

790) The main threat to both species is habitat loss and fragmentation, particularly from coal seam gas extraction and coal mining activities. Other threats to both species include impacts from invasive flora and fauna species, trampling impacts from domestic species such as horses and livestock, and fire induced habitat loss.

Proposed action area

Modelled habitat and survey records

791) The proponent has modelled habitat for Brigalow Woodland Snail and Dulacca Woodland Snail according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

792) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat for Brigalow Woodland Snail has been modelled as any RE that occurs in the action area that either:

- Is RE 11.4.3 or 11.4.9
- Is an alluvial RE that occurs on alluvial black soils

793) Preferred habitat for the Brigalow Woodland Snail has been modelled as any suitable habitat RE in the action area that occurs within the “likely to occur” class of the public distribution grid for Brigalow Woodland Snail established by the Australian Government, and either:

- Is identified in the referenced literature
- Contains at least one record

AND

- Has a coarse woody log length of > 500 m/ha
- Has a litter cover of > 50%
- Has tree cover of > 25% and a shrub cover > 25%

794) A total of nine REs represent suitable habitat for Brigalow Woodland Snail, of which four REs represent preferred habitat.

795) According to the Species Profiles and Mapping of the PER, suitable habitat for Dulacca Woodland Snail has been modelled as any RE that occurs in the action area that either:

- Is an RE identified in the referenced literature
- Is a vine thicket or Brigalow type within Land Zones 4, 5, 7 or 9
- Contains at least three records

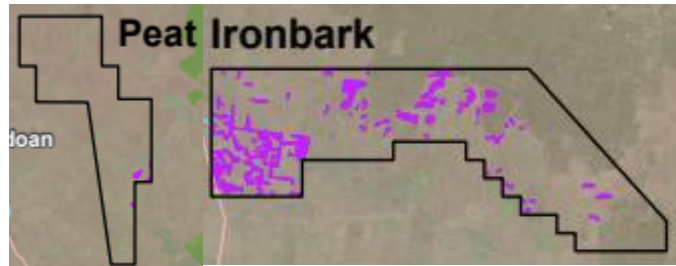
796) Preferred habitat for the Dulacca Woodland Snail has been modelled as any suitable habitat RE in the action area that occurs within the “likely to occur” class of the public distribution grid for Brigalow Woodland Snail established by the Australian Government, and:

- Contains at least three records
- Has a course woody log length of > 500 m/ha
- Has a litter cover of > 50%
- Has tree cover of > 25% and a shrub cover > 25%

797) A total of 13 REs represent suitable habitat, of which five REs represent preferred habitat.

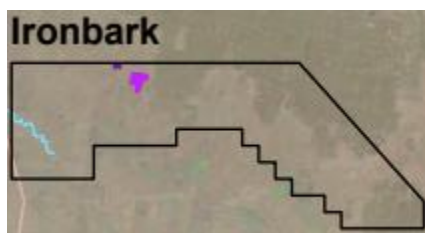
798) Modelled habitat for both snail species can be seen below in Figures 22 and 23.

799) Figure 22 Modelled habitat for Brigalow Woodland Snail. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat



800)

801) Figure 23 Modelled habitat for Dulacca Woodland Snail. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat



802)

803) The Species Profiles and Mapping of the PER also states that there are two public records of Brigalow Woodland Snail, and two public records of Dulacca Woodland Snail within 20 km of the action area, near the Ironbark tenement.

804) *Ground-truthing of modelled habitat*

805) The Significant Impact Assessments of the PER (Attachment C6) states that areas of relatively cooler or damper woodland (Brigalow) with an overstorey of trees and shrubs with a high% age of on-ground timber cover, represented in the region as remnant good quality Brigalow TEC, represents habitat critical to the survival of the Brigalow Woodland Snail.

806) The Significant Impact Assessments of the PER also states that areas of relatively cooler and damper woodland with an overstorey of trees and shrubs with a high% age of on-ground timber cover, represented in the northern portion of Ironbark as remnant good quality Brigalow TEC, represents habitat critical to the survival of the Dulacca Woodland Snail.

807) The Brigalow Woodland Snail Conservation Advice and the Dulacca Woodland Snail Conservation Advice both do not define habitat critical for either species, however the Dulacca Woodland Snail Conservation Advice does state that habitat with tree cover, and ground debris is critical to the survival of native land snails and increases the species' ability to disperse and recolonise.

808) The department agrees with the definitions of habitat critical for both species as outlined in Appendix B4.

Impact

809) The PER (Attachment C1) states that up to 56 ha of modelled Brigalow Woodland Snail habitat, and 10 ha of Dulacca Woodland Snail habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

810) The Significant Impact Assessments of the PER states that impacts on the endangered Brigalow Woodland Snail and endangered Dulacca Woodland Snail are unlikely to lead to a significant impact on the species.

811) The department agrees with this assessment of significant impacts on both species.

Avoidance and mitigation measures

812) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Brigalow Woodland Snail would be up to 155 ha, and the unmitigated maximum disturbance for Dulacca Woodland Snail would be 16 ha.

813) The Environmental Constraints Protocol for the PER (Attachment C2) states that all confirmed Brigalow Woodland Snail and Dulacca Woodland Snail confirmed habitat will be avoided for the following tenements: Spring Gully A, Spring Gully B, Spring Gully C, Spring Gully D, and Peat. For the Ironbark tenement, all confirmed habitat that supports confirmed populations for both species will be avoided, plus a 100 m buffer, and must also ensure the populations do not become isolated. All other confirmed habitat for both species will have all petroleum activities permitted, with disturbance being preferentially located in areas of lower habitat quality.

814) Within the Offset Strategy for the PER (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

815) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Brigalow Woodland Snail is 56 ha, while the predicted maximum disturbance for Dulacca Woodland Snail is 10 ha.

Compensatory measures

816) The PER states that even though the proposed action will result in a reduction of up to 56 ha of Brigalow Woodland Snail habitat, and up to 10 ha of Dulacca Woodland Snail habitat, it is unlikely to have a significant impact on the species.

817) The department notes that a predicted maximum disturbance of up to 56 ha of Brigalow Woodland Snail habitat may be disturbed as a result of the proposed action. This equates to up to 0.08% of the bioregional extent of the TEC.

818) The department notes that a predicted maximum disturbance of up to 10 ha of Dulacca Woodland Snail habitat may be disturbed as a result of the proposed action. This equates to up to 0.04% of the bioregional extent of the TEC

819) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed habitat located outside of habitat that supports a confirmed population plus a 100 m buffer will count toward offset liability for Brigalow Woodland Snail and Dulacca Woodland Snail. Areas of disturbance footprint intersecting ground-truthed habitat that does not support confirmed populations will also count towards the offset liability of both species.

820) The department notes that a total of 583.02 offsets are proposed for impacts on both Brigalow Woodland Snail and Dulacca Woodland Snail, of which 425.22 ha is considered remnant habitat with a score of at least 5, and 157.8 ha of which is considered regrowth habitat with a habitat score of 4.

821) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

822) The Offset Strategy also states that fauna translocation and / or hatchery programs, and habitat log/rock pile construction are additional management measure options for the Fitzroy River turtle to achieve a conservation gain.

Proposed outcomes and conditions

823) The department considers the proposed maximum disturbance of 56 ha of Brigalow Woodland Snail habitat, and 10 ha of Dulacca Woodland Snail habitat, could have a significant impact on both species. In the absence of more information about the extent of both species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on Brigalow Woodland Snail and Dulacca Woodland Snail.

824) The department recommends condition 5, that in undertaking the proposed action, the proponent will not disturb any Brigalow Woodland Snail habitat within the Spring Gully A, Spring Gully B, Spring Gully C, Spring Gully D, and Peat development areas.

825) The department recommends condition 5, that in undertaking the proposed action, the proponent will not disturb any Dulacca Woodland Snail habitat within the Spring Gully A, Spring Gully B, Spring Gully C, Spring Gully D, and Peat development areas.

826) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Brigalow Woodland Snail and Dulacca Woodland Snail.

827) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Brigalow Woodland Snail and Dulacca Woodland Snail, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

828) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Brigalow Woodland Snail and Dulacca Woodland Snail.

Conclusion

829) The department has considered all available relevant information on the impact of the proposed action on Brigalow Woodland Snail and Dulacca Woodland Snail, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

830) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on Brigalow Woodland Snail and Dulacca Woodland Snail.

Marsupials

Koala (combined populations of Queensland, NSW and the ACT) (*Phascolarctos cinereus*) – endangered

Description

831) On 12 February 2022, the Koala (*Phascolarctos cinereus*) was uplisted from vulnerable to endangered under the EPBC Act. Consistent with section 158A of the EPBC Act, the 'endangered' listing of 12 February 2022 for the Koala will not be considered in the environmental assessment or calculation of offsets for the proposed action, as the new listing for this species was made after the proposed action referral decision. However, the minister must not act inconsistently with a recovery plan and must take account of any new conservation advice in making a decision on whether or not to approve the action.

832) The Koala inhabits eucalypt forests and woodlands in eastern Australia, from north-east Queensland to south-east South Australia.

833) The Koala occurs at relatively low densities in the Brigalow Belt, although this is one of the regions within the Koala's range that has experienced the most Koala habitat loss since the 1970s (Recovery Plan). There have been substantial declines in Koala populations within south-west and central Queensland in recent years due to land use pressures, extended drought, and heatwaves.

834) Western populations of the Koala (including those in the Brigalow Belt) are at the greatest and most urgent risk from climate change (Recovery Plan). These populations may have also traits and underlying genetics that will particularly be important for the long-term survival of the species into the future. Historic and ongoing habitat loss and degradation intensifies the effects of climate change by reducing the availability of climate-suitable habitat (Koala Recovery Plan).

835) Western Koala populations are also characterised by a high level of isolation from other populations, making them increasingly vulnerable to environmental change and habitat loss (Koala Conservation Advice).

836) The extensive footprint of coal seam gas actions imposed on already cleared and fragmented landscapes very likely leads to the loss of significant numbers of koalas from otherwise stable populations through fragmentation, habitat clearing, and direct mortality where roadkill is severe due to increased traffic (McAlpine *et al.*, 2015)⁴.

837) The main threats to the Koala identified in the approved *Conservation Advice for Phascolarctos cinereus (Koala) (2022) (Attachment D22)* include:

- a) clearing and degradation of Koala habitat for grazing, agriculture, urbanisation, timber harvesting, mining and other activities
- b) vehicle collisions
- c) dog attacks
- d) Koala retrovirus and Chlamydia
- e) Climate driven processes and drivers such as:
 - i) increased intensity/frequency of drought, heatwaves and bushfires
 - ii) declining nutritional value of foliage

838) The Habitat for the Koala differs across regions and is defined by the availability and nutritional quality of food trees, presence of suitable resting trees and microclimates, age structure of vegetation, history, and impediments to dispersal.

⁴ McAlpine, CA, Lunney, D, Melzer, A, Menkhorst, P, Phillips, S, Phalen, D, Ellis, W, Foley, W, Baxter, G, de Villiers, D. Kavanagh, R, Adams-Hosking, C, Todd, C, Whisson, D, Molsher, R, Walter, M, Lawler IR & Close, R (2015), *Conserving Koalas: A review of the contrasting regional trends, outlooks and policy challenges*, Biological Conservation, vol. 192, pp. 226–236. DOI: 10.1016/j.biocon.2015.09.020.

- 839) The National Recovery Plan for the Koala (*Phascolarctos cinereus*) combined populations of Queensland, New South Wales and the Australian Capital territory ([Attachment D23](#)) states and the department considers habitat critical to the survival of the Koala to include any forest or woodland (including remnant, regrowth, and modified vegetation communities) containing species that are Koala food trees, or any shrubland with emergent Koala food trees, as well as grassy areas between patches of Koala primary or secondary food trees.
- 840) Climate refugia such as drainage lines, riparian zones and patches that are resilient to drying conditions were also noted as habitat critical for the Koala over longer time frames. This includes habitat which may be currently unoccupied by Koalas but is available for future recolonisation.
- 841) In fragmented and agricultural landscapes, scattered paddock trees have been found to be disproportionately important to local Koala populations, with riparian vegetation facilitating local movement and being crucial in long-distance dispersal.
- 842) Koalas are recorded to disperse up to 20 km from their natal areas. A decrease in connectivity can precipitate local population extinction in fragmented landscapes.
- 843) Riparian habitats and surface water bodies are essential for the survival of Koalas at the western margins of Koala distribution, but persistence in these areas is supported by the presence of intact non-riparian habitat (Recovery Plan). McAlpine *et al.*, (2015)⁴ state that refugial habitat offers the best chances of survival for western koalas under climate change.

Proposed action area

Modelled habitat and survey records

- 844) The proponent has modelled habitat for Koala according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.
- 845) According to the Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat for Koala has been modelled as any RE that occurs in the action area that either:
- Is specifically identified in the referenced literature
 - Contains at least one feed tree as a dominant species where total cover of dominant species is $\geq 15\%$
 - Contains at least one feed tree as a dominant species where total cover of dominant species is 5-15%, and the ecosystem contains at least one survey record
 - Contains at least three species survey records and is a forest or woodland type
 - Is a riverine community.

846) Preferred habitat for the koala has been modelled as any suitable habitat RE in the action area that either:

- Contains dominant feed tree species that collectively comprise $\geq 30\%$ foliage cover
- Occurs in alluvial flats or clay plains represented by land zones 3 and 4, which are more likely to support groundwater dependent trees with higher foliar moisture
- Is a riverine community

847) A total of 26 REs represent suitable habitat for Koala, of which 11 REs represent preferred habitat.

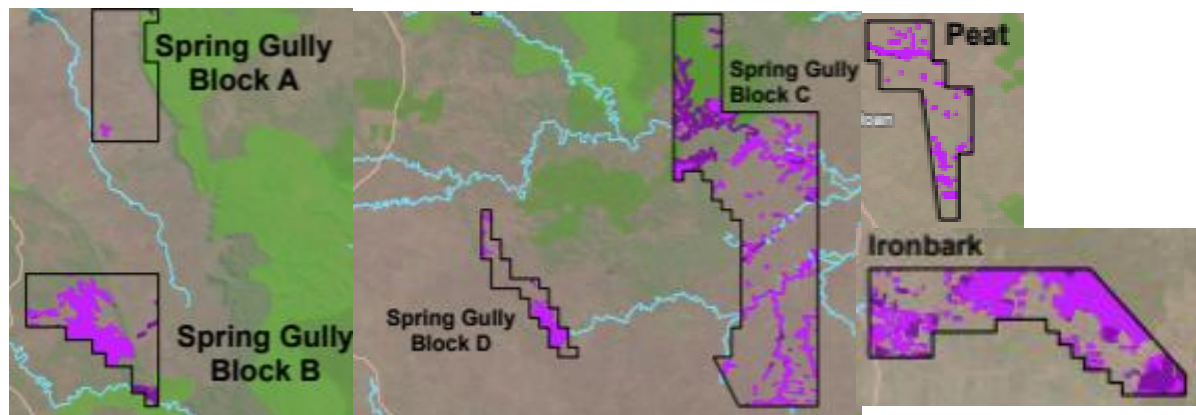
848) The department notes that there is no agreement in the literature about how many preferred food trees are needed in the landscape to support a koala population, and the true amount likely differs across the koala's range due to variation in nutritional quality and biomass (Youngentob *et al.*, 2021)⁵.

849) The Significant Impact Assessments for the PER ([Attachment C6](#)) states that 42,004 ha of modelled Koala habitat exists within the action area. While the modelling rules were formed consistent with the PER Guidelines, the department notes that there may be significant discrepancies between the modelled habitat and true Koala habitat across the entirety of the action area ([Attachment C5](#)).

850) Modelled habitat for Koala can be seen in Figure 24 below.

⁵ Youngentob, KN, Lindenmayer, DB, Marsh, KJ, Krockenberger, K, Foley, WJ (2021), *Food intake: an overlooked driver of climate change casualties?* Trends in Ecology & Evolution, vol. 36, no.8, DOI: 10.1016/j.tree.2021.04.003.

851) Figure 24 Modelled habitat for Koala. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat.



852)

Ground-truthing of habitat

853) Appendix B5 ([Attachment C6](#)) states that any breeding/foraging and dispersal habitat represents habitat critical to the survival of the species.

854) The department considers the above to be an appropriate definition of habitat critical to the survival of Koala.

Impact

855) The PER ([Attachment C1](#)) states that up to 853 ha of modelled Koala habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

856) The Significant Impact Assessments for the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; adversely affect habitat critical to the survival of the species; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.

857) The department agrees with this assessment of significant impacts in relation to the proposed action.

858) Given the disturbance footprint has not been provided, the department is unable to assess issues of connectivity, edge effects, etc. The department notes that typical coal seam gas infrastructure will often not have any functional impact on Koala dispersal, although this will depend on specific circumstances related to the scale and nature of the impact, and its context in relation to Koala habitat in the landscape.

859) The PER states that ground-truthing surveys will be undertaken to determine the presence and extent of confirmed habitat for the Koala relative to proposed disturbance areas. Attachment D of the Offset Strategy ([Attachment C9](#)) states that the proponent will offset any area of the disturbance footprint that intersects with ground-truthed breeding/foraging habitat or dispersal habitat.

860) According to Attachment D of the Offset Strategy, the proponent will not offset impacts on Koala habitat that impact only the ground layer (ie no Locally Important Koala Trees >2 m in height are impacted or directly taken). The department considers that the significance of these types of impacts would be context dependent and therefore this is not an appropriate blanket rule. Koalas frequently rest in trees from which they do not feed, but which may be important for thermoregulation (Youngentob *et al.*, 2021)^{Error! Bookmark not defined.}. The availability of certain tree species and other vegetation types not commonly recognised as important food may still be essential for koala survival due to the shelter or other resources they provide (Youngentob *et al.*, 2021).

861) The proponent also does not propose to offset any impacts relating to fragmentation of Koala habitat.

862) The department considers that in addition to breeding/foraging habitat and dispersal habitat, climate refugia habitat (defined as drainage lines, riparian zones and patches that are resilient to drying conditions, and includes habitat which may be currently unoccupied by Koalas but is available for future recolonisation) is an important category of habitat for the Koala.

Avoidance and mitigation measures

863) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Koala would be up to 2,855 ha.

864) The Environmental Constraints Protocol of the PER ([Attachment C2](#)) states that all confirmed Koala habitat will have all petroleum activities permitted, with disturbance being preferentially located in areas of lower habitat quality.

865) The PER states that indirect impacts on confirmed habitat of this species, such as altered surface hydrology and erosion and sediment control, will be mitigated and managed via application of the action Environmental Management Plan and the DAEMPs.

866) The department notes that despite the preferential avoidance of matters of national environmental significance habitat, up to 853 ha of Koala habitat may be cleared as a result of the proposed action. The department notes that this maximum disturbance could occur to habitat of any type (breeding/foraging, dispersal, refugia, etc) and quality.

867) The department further notes that the disturbance could impact Koala habitat in a variety of ways, from perforating and reducing large patches of intact, high-quality habitat, to reducing habitat in areas of already highly fragmented habitat where maintaining existing dispersal corridors is especially important.

868) Without a detailed assessment of the habitat on site, and without further information about the disturbance footprint, the department considers there is high uncertainty regarding the overall significance of the action's impacts on the Koala.

869) The Recovery Plan states that in order to halt decline and promote recovery of the listed Koala, the following should be avoided:

- Clearing of habitat used by Koalas for feeding and resting
- Reducing connectivity between patches of habitat used by Koalas for feeding, resting, commuting and dispersing
- Clearing of habitat used by Koalas during extreme events (heat waves, drought/fire refuge)

870) Within the Offset Strategy ([Attachment C9](#)), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

871) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Koala is 853 ha.

Compensatory measures

872) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Koala.

873) The department notes that a predicted maximum disturbance of up to 853 ha of Koala habitat may be disturbed as a result of the proposed action.

874) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed breeding/foraging or dispersal habitat will count toward offset liability, except for:

- Where co-located with existing disturbance (existing access track, fence line, or other linear clearing); or
- Disturbance to ground-truthed breeding/foraging habitat or dispersal habitat which is associated with the ground layer only i.e., no Locally Important Koala Trees > 2 m in height are impacted or directly taken, and retained ground-truthed foraging habitat adjacent to the disturbance footprint (no minimum patch size) will not be counted towards the offset liability.

875) The Offset Strategy shows that the proponent's existing offsets contain a total of 1739.52 ha of Koala habitat, including 1581.98 ha of remnant habitat with a score of at least 5, and 157.54 ha of regrowth habitat with a score of at least 5.

876) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

877) The Offset Strategy also states that barbed wire fence removal, prescribed burn programs, and tree/shrub/grass planting are additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

878) The department notes that climate refugia habitat is critical to the survival of western populations of Koala into the future. The department notes that the Offset Strategy does not detail how climate refugia habitat would be offset if impacted.

879) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Koala of 853 ha, as outlined within the significant impact assessment of the PER.

880) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Koala.

881) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Koala, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

882) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Koala.

Conclusion

883) The department has considered all available relevant information on the impact of the proposed action on the Koala, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

884) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on the Koala.

Greater Glider (southern and central) (*Petauroides volans*) - vulnerable

Description

885) The greater glider (southern and central) (hereafter referred to as 'greater glider') was uplisted from vulnerable to endangered on 5 July 2022. The species is considered as vulnerable for the purposes of this assessment as per s 158A of the *Environment Protection Biodiversity Conservation Act 1999* because the s 75 Controlled action decision for this proposed action was made on 17 February 2021. Offset calculations also include the vulnerable listing status for the species. The minister must take account of any new conservation advice in making a decision on whether or not to approve the action.

886) According to *Conservation Advice for Petauroides volans (greater glider (southern and central)) 2022* (Greater Glider Conservation Advice) ([Attachment D24](#)) the greater glider is a large gliding arboreal possum found only on the east coast of Australia, from the Windsor Tableland in north Queensland to central Victoria. It is mostly found in eucalypt forests and woodlands, with the highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows. The species is highly reliant on hollows in trees for denning, including both live and dead trees with a preference for live trees.

887) The Greater Glider Conservation Advice states that the species' home range can vary from 1-4 ha, but is larger in less fertile forests (up to 19 ha).

888) According to the Greater Glider Conservation Advice, habitat critical to the survival of the species includes one or more of the following:

- a) large contiguous areas of eucalypt forest, which contain mature hollow-bearing trees and a diverse range of the species' preferred food species in a particular region; and
- b) smaller or fragmented habitat patches connected to larger patches of habitat, that can facilitate dispersal of the species and / or that enable recolonization; and
- c) cool microclimate forest/woodland areas (e.g. protected gullies, sheltered high elevation areas, coastal lowland areas, southern slopes); and

- d) areas identified as refuges under future climate changes scenarios; and
- e) short-term or long-term post-fire refuges (i.e. unburnt habitat within or adjacent to recently burnt landscapes) that allow the species to persist, recover and recolonise burnt areas.

889) All populations of the species are considered important populations for the survival of the species according to the Greater Glider Conservation Advice.

890) Threats to the species include frequent and intense bushfires, climate change and habitat clearing. The species is vulnerable to fragmentation as it mostly moves across the landscape by gliding between trees. It is known to have limited dispersal ability in highly fragmented areas. It is in decline and is at risk of local extinction. The Greater Glider Conservation Advice states that once habitat trees are lost from the system, the length of time required for the development/recruitment of replacement trees appropriate for the species is largely prohibitive.

Proposed action area

Modelled habitat and survey records

891) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), 36,078 ha of potential habitat for Greater Glider has been modelled within the action area, based upon the proponent's habitat modelling methodology. This is stated as the potential maximum disturbance size, however, the proponent has stated that the final disturbance size will be smaller. The PER does not provide any further information on the final disturbance size of the impact on greater glider habitat. Therefore, the department has undertaken its assessment on the maximum potential disturbance area of greater glider habitat.

892) The proponent has modelled habitat for Greater Glider according to the PER Guidelines, the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

893) According to the Species Profiles and Mapping of the PER ([Attachment C5](#)), suitable habitat for Greater Glider has been modelled as any RE that occurs in the action area that either:

- a) specific Queensland REs (REs) that are noted in the referenced literature as preferred by the greater glider in the Mahalo region. These are 11.3.1, 11.3.2, 11.3.3, 11.3.6, 11.4.2, 11.5.2, 11.5.20, 11.8.4, 11.10.3, 11.10.4
- b) contains *Corymbia citriodora*, *Eucalyptus camaldulensis* or *E. tereticornis* as a dominant or frequent species, where total cover is $\geq 5\%$; and
- c) has a stand height of ≥ 20 m and a basal area of large trees of ≥ 1 m²/ha.

894) Preferred habitat for Greater Glider has been modelled as any RE that occurs in the action area that either:

895) Contains the following REs: 11.3.4, 11.3.25, 11.7.6, 11.10.1.

896) is part of a contiguous patch of native vegetation $\geq 16,000$ ha;

897) contains *Corymbia citriodora* or *Eucalyptus tereticornis* as a dominant or frequent species, where total cover is $\geq 15\%$;

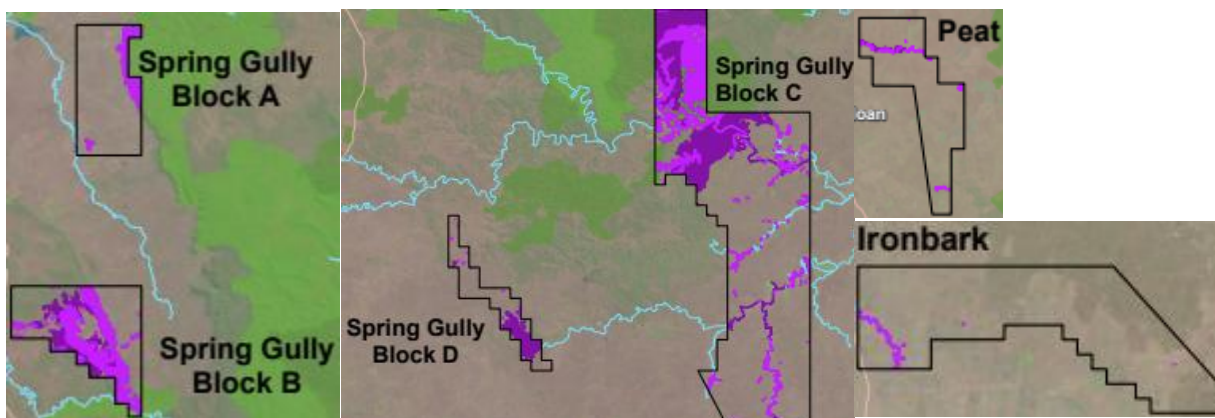
898) contains *Corymbia citriodora* or *Eucalyptus tereticornis* as a dominant or frequent species with total cover $\geq 5\%$, and stand height ≥ 20 m and large-tree basal area ≥ 1 m²/ha.

899) A total of 14 REs represent suitable habitat for Greater Glider, of which 4 REs represent preferred habitat.

900) The PER states that 36,078 ha of modelled Greater Glider habitat exists within the action area. While the modelling rules in the Species Profiles and Mapping of the PER were formed consistent with the PER Guidelines, the department notes that there may be significant discrepancies between the modelled habitat and true Greater Glider habitat across the entirety of the action area.

901) Modelled habitat for Greater Glider can be seen in Figure 25 below

902) **Figure 25 Modelled habitat for Greater Glider. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



903)

904) The Significant Impact Assessments of the PER states that there are several records of Greater Glider recorded within 20 km of the action area.

905) *Ground-truthing of habitat*

906) The Significant Impact Assessments of the PER states that any breeding/foraging and dispersal habitat represents habitat critical to the survival of the species.

907) The department considers the above to be an appropriate definition of habitat critical to the survival of Greater Glider.

Impacts

- 908) The PER (Attachment C1) states that up to 428 ha of modelled Greater Glider habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.
- 909) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; fragment an existing important population into two in more populations; adversely affect habitat critical to the survival of the species; disrupt the breeding cycle of an important population; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.
- 910) The department agrees with this assessment of significant impacts in relation to the proposed action.

Avoidance and mitigation measures

- 911) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Greater Glider would be up to 2,279 ha.
- 912) The Environmental Constraints Protocol of the PER (Attachment C2) states that all confirmed denning habitat within Spring Gully A must be avoided, with all other confirmed habitat types (foraging, dispersal habitat) will have all petroleum activities permitted, with a preference for lower quality habitat. All other confirmed denning habitat within the other action development areas
- 913) The PER states that indirect impacts on confirmed habitat of this species, such as altered surface hydrology and erosion and sediment control, will be mitigated and managed via application of the action Environmental Management Plan and the DAEMPs.
- 914) The department notes that despite the preferential avoidance of matters of national environmental significance habitat, up to 45 ha of Koala habitat may be cleared as a result of the proposed action. The department notes that this maximum disturbance could occur to habitat of any type (breeding/foraging, dispersal, refugia, etc) and quality.
- 915) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.
- 916) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Greater Glider is 428 ha.

Compensatory measures

917) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Greater Glider.

918) The department notes that a predicted maximum disturbance of up to 428 ha of Greater Glider habitat may be disturbed as a result of the proposed action.

919) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed denning, foraging, or dispersal habitat will count toward offset liability, except for:

- Area of disturbance footprint intersecting with ground-truthed denning habitat, foraging habitat and dispersal habitat for linear infrastructure (<10m in width) which is:
 - Co-located with existing disturbance (e.g. existing access track fence line or other linear clearing); AND
 - Does not result in impact on (i.e. direct take of) den trees (defined as: hollow > 80 mm diameter entrance; or DBH exceed large eucalypt tree threshold; or DBH exceeds 30 cm)
- Disturbance to ground-truthed denning habitat, foraging habitat and dispersal habitat which is associated with the ground-layer only i.e., there is no impact (direct take) to:
 - Den trees (as defined above), and
 - Feed tree species > 10 cm DBH
- Retained ground-truthed denning habitat, foraging habitat and dispersal habitat adjacent to the disturbance footprint (no minimum patch size)

920) Disturbance that results in any patch of denning habitat becoming isolated (i.e. >100 m) from other denning habitat, foraging habitat or dispersal habitat, will also count toward offset liability (through the inclusion of the isolated patches)

921) The Offset Strategy shows that the proponent's existing offsets contain a total of 614.04 ha of Greater Glider remnant habitat with a score of at least 5.

922) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

923) The Offset Strategy also states that barbed wire fence removal, Nest Box/Cockatube installation, prescribed burn programs, and tree/shrub/grass planting are additional management measure options for the species to achieve a conservation gain.

Proposed outcome and conditions

- 924) The Offset Strategy states that predicted maximum disturbance values are conservative in nature and do not represent the final expected impact values. The Offset Strategy states that, therefore, the offset liability will be less than the predicted maximum disturbance and in some cases nil, because habitat extents are overestimated, all impacts can be avoided or can be avoided to an extent that there are no residual impacts.
- 925) The department recommends condition 4, that in undertaking the proposed action, the proponent will not disturb more than the predicted maximum disturbance for Greater Glider of 428 ha, as outlined within the significant impact assessment of the PER.
- 926) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Greater Glider.
- 927) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Greater Glider, based on:
- a) work plans
 - b) ground-truthing surveys
 - c) avoidance and mitigation measures committed to.
- 928) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Greater Glider.

Conclusion

- 929) The department has considered all available relevant information on the impact of the proposed action on the Greater Glider, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.
- 930) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on the Greater Glider.

Bats**Large-eared Pied Bat (*Chalinolobus dwyeri*) – endangered (vulnerable at time of referral decision)**Description

- 931) The Large-eared Pied Bat is a medium sized insectivorous bat measuring approximately 10 cm from head to tail and weighing between 7 and 12 grams. It has large ears, and lobes of skin that adorn the lower lip and between the corner of the mouth and bottom of the ear. It has shiny black fur on the body and a white stripe on the ventral side of the torso where it adjoins the wings and tails.
- 932) According to the *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat) (2023) (Attachment D25)*, the species is patchily distributed in central-eastern New South Wales and south-eastern and central Queensland, from the area bounded by Shoalwater Bay north of Rockhampton, south to Ulladulla, New South Wales. The species distribution is fragmented, as most individuals occur in small and relatively isolated subpopulations due to specific requirements for foraging and roosting habitat. Individuals have been recorded from seal level to nearly 1500 m above sea level at the top of Mt Kaputar in New South Wales. The Central Queensland Sandstone Belt is considered a main stronghold of the species.
- 933) The Queensland distribution of the species is centred on the sandstone escarpments of the Blacktown Tableland and Carnarvon Range, though records are also known from the Expedition Ranges and Cania Gorge. It is likely that these areas support a high proportion of the Queensland population, though the number of maternity roosts in the area is unknown.
- 934) The species requires a combination of sandstone cliffs or escarpments to provide roosting habitat adjacent to higher fertility sites, particularly box gum woodlands or river/rainforest corridors which are used for foraging. Roosting has also been noted in disused mine shafts, caves, overhangs and disused Fairy Marin (*Hirundo ariel*) nests. The structure of primary nursery roosts appears to be very specific, i.e., arch caves with dome roofs that need to be deep enough to allow juvenile bats to learn to fly and with indentations in the roof. Available roosts are not evenly distributed across the species' range.
- 935) In the 2019-2020 years, following years of drought, catastrophic bushfire conditions resulted in extensive bushfires across eastern mainland Australia. It is estimated that 27% of the species' habitat occurs within areas affected by the 2019-2020 wildfires, with 10% of the range intersecting with severe fire. Furthermore, fires during 2018 impacted the northern extent of the range. These 2018 fires impacted 1.4 million hectares of land in central Queensland (where the Large-eared Pied Bat occurs), though the extent of intersection with the range of the species is unknown.
- 936) The species' total population size is likely between 10,000 and 20,000 individuals, although the number of mature individuals is lower. Across its range, the species is infrequently recorded. All populations are considered important because of their role in maintaining genetic diversity necessary for the ecological survival of the species.

937) The main threats to this species include habitat destruction and fragmentation, severe drought, fire, and invasive species. Habitat loss and fragmentation is typically associated with land clearing for agricultural, residential and commercial development, dam construction and waterway management, and from energy production and mining, particularly when these activities are undertaken near roosting sites and foraging areas. Changes to fire regimes (frequency, intensity, season and type) that cause Biodiversity declines are listed as a Key Threatening Process under the EPBC Act, especially when fire occurs within foraging distance of roosts. Other threats include increased temperatures, drought frequency and severity caused by climate change, competition and land degradation by feral goats (*Capra hircus*), predation by introduced predatory species, disease, disturbance from human recreational activities, and pesticide use. Threats may interact either additively or synergistically. For example, fire may interact with predation by introduced species because of reduced vegetation cover, and climate change may interact with severe drought and / or fire.

Proposed action area

938) The proponent has modelled habitat for Large-eared Pied Bat according to the PER Guidelines, and the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

939) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat for this model includes four (4) categories: preferred roosting habitat, potential roosting habitat, preferred foraging habitat, and suitable foraging habitat.

940) Preferred roosting habitat has been modelled as all slopes > 40% (incorporating all cliff-lines and major caves and crevasses).

941) Potential roosting habitat has been modelled as all slopes 25% to 40% (incorporating all other caves, fissures and boulders associated with escarpments and scree slopes, and steep slopes associated with gorges).

942) Preferred foraging habitat has been modelled as:

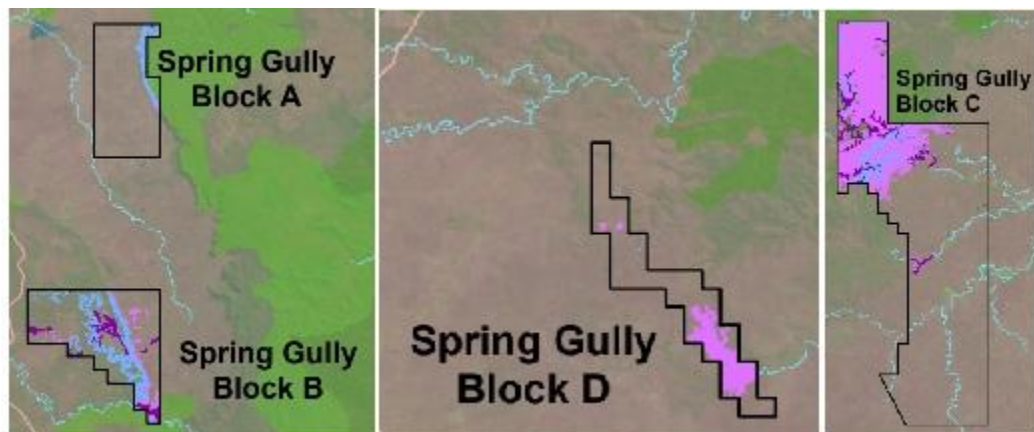
- Land Zone 3 forest and woodland R's identified in the literature that are within 3 km of potential roosting habitat
- Other Land Zone RE that is a riparian type (e.g., *Melaleuca* forest) and that occurs downslope of and within 3 km of potential habitat

943) Suitable foraging habitat has been modelled as any other forest and woodland RE that occurs downslope of and within 3 km of potential roosting habitat, including and mosaic polygon.

944) A total of 18 REs represent suitable foraging habitat for Large-eared Pied Bat, of which six REs represent preferred foraging habitat. These figures exclude Land Zone 10 REs, which were only considered if they were clearly lower in the landscape than roosting habitat.

945) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), a total of 34,491 ha of Large-eared Pied Bat habitat has been mapped within the action area. The species has been mapped in Spring Gully Block A, B, C and D (see *Figure 26* Below).

946) **Figure 26. Modelled habitat for Large-eared Pied Bat.** Pink colouring indicates suitable foraging habitat. Purple colouring indicates preferred foraging habitat. Light blue colouring indicates suitable roosting habitat. Dark blue colouring indicates preferred roosting habitat.



947) According to Atlas of Living Australia (ALA), there are 16 Large-eared Pied Bat records within approximately 50 km of the proposed action. This accounts for 36% of all ALA records of the species in the state of Queensland.

948) *Ground-truthing of habitat*

949) The *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)* ([Attachment D25](#)) states that habitat critical to the survival of the species includes:

- Sandstone or rhyolite cliffs, escarpments or rocky outcrops within reasonable proximity of fertile (relative to surrounding landscape) valleys and plains, areas with woodland along watercourses with moderately tall to taller trees, and upper slopes and crests of ranges
- Records from south-east Queensland suggest that rainforest and moist eucalypt forest habitats on other geological substrates (viz. rhyolite, trachyte and basalt) at high elevation are of similar importance for the species
- Any known roost site, or caves that could be roost sites
- Any maternity roosts (typically arched caves with domed roofs)

950) The *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)* further notes that the species' eligibility for listing and the key threat being the loss, degradation and fragmentation of habitat, particularly foraging habitat, suggests that all habitat for the species now or at some point in the future is likely to be critical to the survival of the species. This document additionally notes that the presence of foraging and roosting habitats in close proximity of each other should also be considered critical habitat.

951) The Significant Impact Assessments of the PER states that habitat critical to the survival of Large-eared Pied Bats, defined within the *National Recovery Plan for the Large-eared Pied Bat Chalinolobus dwyeri (2011)* (Attachment D26), is defined as:

- Sandstone cliffs and fertile wooded valley habitat within close geographical distance of each other
- Records from south-east Queensland suggest that rainforest and moist eucalypt forest habitats on other geological substrates (viz. rhyolite, trachyte and basalt) at high elevation are of similar importance for the species
- Any maternity roosts (typically arched caves with domed roofs)

952) The Significant Impact Assessments of the PER does not explicitly define habitat critical to the survival of the Large-eared Pied Bat. The document does, however, state that "... *foraging habitat is only habitat critical to the survival of the species if in close proximity to **occupied** roosting sites (e.g. escarpments)*" [emphasis added] (Attachment C6, p.125). However, this statement ignores that the species is known to be mobile which is explicitly acknowledged by the proponent in Attachment C6 (p.123), and that "... *caves that **could** be roosting sites, are considered critical to the survival of the species*" [emphasis added] according to the *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)*.

953) The department considers that habitat critical to the survival of the Large-eared Pied Bat used by the proponent is not clearly defined and / or inconsistent with the *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)* and the *National Recovery Plan for the Large-eared Pied Bat Chalinolobus dwyeri*.

Impact

954) The PER (Attachment C1) states that up to 602 ha of modelled Large-eared Pied Bat habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

955) The Significant Impact Assessments for the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; adversely affect habitat critical to the survival of the species; modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline; and interfere substantially with the recovery of the species.

956) The department agrees with this assessment of significant impacts in relation to the proposed action.

Avoidance and mitigation measures

957) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for Large-eared Pied Bat would be up to 2,368 ha.

958) The Environmental Constraints Protocol of the PER (Attachment C2) states petroleum activities must be avoided in all confirmed Large-eared Pied Bat (active and non-active) roosting/breeding sites plus 100m buffer. Otherwise, petroleum activities are permitted in all other confirmed habitat types (foraging habitat) that are not included in 'No-Go (Avoidance) Area' with disturbance being preferentially located in areas of lower quality habitat.

959) Within the Offset Strategy (Attachment C9), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

960) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Large-eared Pied Bat is 602 ha

Compensatory measures

961) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on Large-eared Pied Bat.

962) The department notes that a predicted maximum disturbance of up to 602 ha of Large-eared Pied Bat habitat may be disturbed as a result of the proposed action. This equates to up to 0.047% of the bioregional extent of the TEC.

963) The proponent states within the Offset Strategy that any area of the disturbance footprint intersecting ground-truthed foraging habitat will count toward offset liability, except for:

- Where co-located with existing disturbance (existing access track, fence line, or other linear clearing); or
- Where adjacent to the disturbance footprint (no minimum patch size).

964) The Offset Strategy shows that no offset for Large-eared Pied Bat has been proposed.

965) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

966) The Offset Strategy also states that barbed wire fence removal and prescribed burn programs are additional management measure options for the species to achieve a conservation gain.

967) The department notes that the absence of proposed offsets means the proponent cannot acquit the significant impacts of the proposed action.

Proposed outcomes and conditions

968) The department considers the proposed maximum disturbance of 602 ha could have a significant impact on Large-eared Pied Bat. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on this species.

969) The department does not agree with the proponent's assertion that the predicted maximum disturbance area is a conservative estimate because of disagreement stemming from the proponent's definition of habitat critical to the survival of the species.

970) The department recommends a condition 5, that in undertaking the proposed action, the proponent will not disturb any Large-eared pied bat (active and nonactive) roosting and breeding habitat, including a 100 m buffer around the habitat.

971) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding Large-eared pied bat.

972) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including Large-eared pied bat, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

973) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including Large-eared pied bat.

Conclusion

974) The department has considered all available relevant information on the impact of the proposed action on the Large-eared Pied Bat, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

975) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on the Large-eared Pied Bat.

South-eastern Long-eared Bat (*Nyctophilus corbeni*) – vulnerable

Description

976) This species was previously listed under the EPBC Act as a distinct form of the Greater Long-eared Bat (*Nyctophilus timoriensis*) complex. Following taxonomic revision in 2009 it was formally described as a separate species, *Nyctophilus corbeni* (South-eastern Long-eared Bat). From 17 August 2011, the name of this species as listed under the EPBC Act is now *Nyctophilus corbeni* (south-eastern long-eared bat).

977) The South-eastern Long-eared Bat is a relatively large and solid insectivorous bat measuring up to 125 mm from head to tail and weighing between 11 and 21 grams, with females (14 - 21 g) typically being heavier than males (11 – 15 g). It has a broad, robust skull and as the name suggests, has large ears approximately 30 mm in length which are erect when the bat is alert and folded back when the bat is at rest. The species' fur is a light brown to a dark grey-brown.

978) According to the *Conservation Advice for Nyctophilus corbeni (South-eastern long-eared bat) (2015)* (*Conservation Advice for Nyctophilus corbeni*) ([Attachment D27](#)), the South-eastern Long-eared Bat was originally considered to be found across temperate southern Australia, however this is most likely incorrect due to the separation of the taxon into three different species; therefore, the historic distribution is unclear. The species is found in southern central Queensland, central western New South Wales, north-western Victoria and eastern South Australia. The species is patchy and uncommon within this distribution and is rarely recorded, except in some areas including the Nandewar and Brigalow Belt South bioregions in New South Wales and Queensland. Approximately 30% of the total distribution of the species occurs in Queensland, although there are records from fewer than 30 localities, mainly from within the Brigalow Belt South bioregion.

979) The south-eastern long-eared bat is found in a wide range of inland woodland vegetation types. These include box / ironbark / cypress pine woodlands, Buloke woodlands, Brigalow woodland, Belah woodland, smooth-barked apple woodland, river red gum forest, black box woodland, and various types of tree mallee. In Queensland and NSW it inhabits a variety of vegetation types, but it is distinctly more common in box / ironbark / cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains of New South Wales and southern Queensland. The species is more abundant in extensive stands of vegetation in comparison to smaller woodland patches, suggesting its home range is probably large. The species has also been found to be much more abundant in habitats that have a distinct tree canopy and a dense, cluttered understorey layer.

980) The south-eastern long-eared bat is a slow-flying, agile insectivore that hunts by taking flying prey, by foliage-gleaning in flight, or by foraging on the ground. When hunting in flight it generally consumes beetles, bugs and moths, however it has also been recorded feeding on grasshoppers and crickets. Foraging appears to be concentrated around patches of trees in the landscape, with many individuals from different species of bat sharing the same foraging area.

981) Studies have found that this species of bat roosts solitarily, primarily in dead trees or dead spouts of live trees. In studies of roosting behaviour in Victoria most bats were found roosting individually in mallee eucalypts in areas of long-unburnt mallee, with some under bark or in fissures of dead trees. A study in New South Wales found maternity colonies, consisting of 10-20 individuals, roosting in dead trees including ironbarks, cypress and buloke. It appears that most roost sites are used just for a single day and large distances are travelled at night, with consecutive roost sites generally within four km.

982) There is little information currently available regarding population numbers and structure for the south-eastern long-eared bat. Currently all population information is based on trapping results, and no detailed demographic studies have been conducted. Commonwealth documentation does not provide guidance on what constitutes an important population of South-eastern long-eared bat. Further, there is little available information on the species' reproductive biology. Breeding is likely to be seasonal, with pregnant and lactating females having been trapped in Queensland and New South Wales during November.

983) Providing a detailed assessment of the current threats to the survival of South-eastern Long-eared Bat is difficult because of the paucity of data available to assess the population decline of the species. However, it is likely that area of occupancy is declining due to habitat loss, particularly in New South Wales and Queensland, and to habitat degradation associated with altered fire regimes, timber extraction, mining and other factors. The *Conservation Advice for Nyctophilus corbeni* considers habitat loss and fragmentation as known threats. Fire, reduction in hollow availability, exposure to agrichemicals, grazing, and predation by feral animals are listed as potential threats. Given the species' requirements for large areas of land, smaller fragments may not provide viable habitat for the species, leaving bats more vulnerable to local extinction and reductions in fitness. Fragmentation of habitat may also exacerbate other threats to the species.

Proposed action area

Modelled habitat and survey records

984) The proponent has modelled habitat for South-eastern Long-eared Bat according to the PER Guidelines, and the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

985) According to the Species Profiles and Mapping of the PER, suitable habitat for this species includes any habitat that either:

- is identified in the referenced literature;
- is an RE representing either box/ironbark/cypress pine woodlands, Buloke woodlands, Brigalow woodlands, Belah woodlands, Smooth-barked Apple woodlands, Black Box woodlands or River Red Gum forests; or
- is represented by at least three survey records.

986) Preferred habitat has been modelled as any suitable habitat RE in the action area that:

- is identified in the literature and has at least three survey records;
- occurs in 'remnant' rather than regrowth vegetation in a patch ≥ 100 ha; and
- satisfies at least one of the following criteria:
 - tree canopy cover $\geq 40\%$;
 - shrub cover $\geq 10\%$; or
 - tree basal area $\geq 1 \text{ m}^2 \text{ ha}^{-1}$.

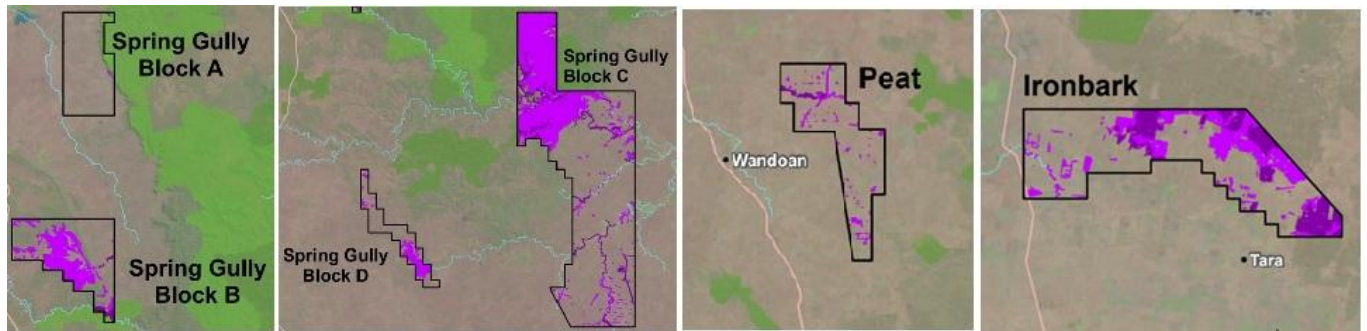
OR

- contains at least three survey records;
- occurs in 'remnant' rather than regrowth vegetation in a patch ≥ 100 ha; and
- satisfies all three of the following criteria.
 - tree canopy cover $\geq 40\%$;
 - shrub cover $\geq 10\%$; or
 - tree basal area $\geq 1 \text{ m}^2 \text{ ha}^{-1}$.

987) A total of 32 REs represents suitable habitat for South-eastern Long-eared Bat, of which nine REs represent preferred habitat.

988) According to the Significant Impact Assessments of the PER, a total of 52,372 ha of South-eastern Long-eared Bat habitat has been mapped within all the action area. The species has been mapped in all development areas for the action (see Figure 27 Below).

989) **Figure 27 Modelled habitat for South-eastern Long-eared Bat. Pink colouring indicates suitable habitat. Purple colouring indicates preferred habitat**



990) According to Atlas of Living Australia (ALA), there are at least 12 South-eastern Long-eared Bat records within approximately 50 km of the proposed action.

991) *Ground-truthing of habitat*

992) The *Conservation Advice for Nyctophilus corbeni (south-eastern long-eared bat)* does not explicitly define habitat critical to the survival of the species.

993) The proponent has determined habitat critical to the survival of the species based on guidance provided in *EPBC Act Policy Statement 1.1 Significant Impact Guidelines - Matters of National Environmental Significance 2013 (Significant Impact Guidelines)* ([Attachment F](#)).

994) Based on the Significant Impact Guidelines, the proponent determined that any populations of the species within the region are likely to be important because they are likely to be key source populations either for breeding or dispersal, populations that are necessary for maintaining genetic diversity, and / or populations that are near the limit of the species range. It then follows that any loss of breeding and foraging habitat for important populations represents a potential impact on habitat critical to the survival of the species. The relevant criteria listed in the Significant Impact Guidelines under the definition of habitat critical to the survival of the species are defined as areas that are necessary for activities such as foraging, breeding, roosting or dispersal; or to maintain genetic diversity and long-term evolutionary development.

995) The department considers the above to be an appropriate definition of areas critical to the survival of the South-eastern Long-eared Bat.

Impacts

996) The PER states that without applying avoidance and mitigation measures, the unmitigated maximum disturbance for South-eastern Long-eared Bat would be up to 3,324 ha. This figure is a conservative estimate based on maximum development with no avoidance.

997) The Significant Impact Assessments of the PER states that impacts on the species are likely to: lead to a long-term decrease in the size of a population; reduce the area of occupancy of an important population; adversely affect habitat critical to the survival of the species; and modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

998) The department agrees with this assessment of significant impacts in relation to the proposed action.

Avoidance and mitigation measures

999) The Environmental Constraints Protocol of the PER states that all confirmed South-eastern Long-eared Bat habitat will have all petroleum activities permitted, with a preference to locate activities in areas of lower quality habitat.

1000) The Significant Impact Assessments of the PER states that indirect impacts which may arise from the proposed action will be mitigated and managed in accordance with the measures detailed in the Environmental Management Plan (Attachment C7) and Development Area Environmental Management Plans. The document states that implementation of these plans will minimise and / or manage impacts which may occur adjacent to disturbance footprints in retained areas of confirmed species habitat.

1001) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for South-eastern Long-eared Bat is 1,227 ha.

Compensatory measures

1002) Within the Offset Strategy, broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

1003) The PER states that through the reduction in area of habitat, the action is likely to have a significant impact on South-eastern Long-eared Bat. The Offset Strategy states that offsets will be developed for each stage once the actual disturbance is known for that stage.

1004) The Offset Strategy states that any area of disturbance footprint intersecting with ground-truthed breeding/roosting/foraging habitat or foraging habitat will count toward offset liability, except for:

- where co-located with existing disturbance (existing access track, fence line, or other linear clearing); or
- where adjacent to the disturbance footprint (no minimum patch size).

1005) The Offset Strategy states that the proponent's existing offsets contain a total of 3,570.89 ha of South-eastern Long-eared Bat habitat, with 3,250.24 ha of that considered remnant habitat with a score of at least 5 (650.81 ha with a score of 6), and the remaining 320.65 ha as regrowth habitat with a habitat score of at least 3. Note: these are frequently listed in the Offset Strategy document using the synonym "Corben's Long-eared Bat".

1006) The Offset Strategy states that avoidance will be prioritised to remove or reduce offset requirements for the species, and early identification/mapping of known records and suitable habitat will be undertaken.

1007) The Offset Strategy also states that barbed wire fence removal, nest box installation, prescribed burn programs, and vegetation planting programs are additional management measure options for the species to achieve a conservation gain.

Proposed outcomes and conditions

1008) The department considers the proposed maximum disturbance of 1,227 ha could have a significant impact on South-eastern Large-eared Bat. In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on this species.

1009) The department recommends conditions 7 to 9, that in undertaking the proposed action, the proponent must not act contrary to the Constraints Protocol and the definitions and categories of avoidance as outlined within Appendix B of the Constraints Protocol regarding South-eastern Large-eared Bat.

1010) The department recommends condition 1 and 60 to 78, that no works commence until a SAEMP has been prepared and approved by the minister. The SAEMP must identify significant residual impacts for all matters of national environmental significance, including South-eastern Large-eared Bat, based on:

- a) work plans
- b) ground-truthing surveys
- c) avoidance and mitigation measures committed to.

1011) The department recommends conditions 79 to 84, that no works commence until an Offset Management Plan (or plans) has been prepared and approved by the minister for any Stage Area Environmental Management Plan identifying a significant residual impact for any matters of national environmental significance, including South-eastern Large-eared Bat.

Conclusion

1012) The department has considered all available relevant information on the impact of the proposed action on the South-eastern Long-eared Bat, and management of those impacts, including the finalised PER and relevant statutory documents. The department recommends several conditions as discussed above, to avoid, mitigate and offset those impacts. These include measures proposed by the proponent, as well as additional measures.

1013) The department considers that subject to the recommended conditions of approval, the proposed action will not have an unacceptable impact on the South-eastern Long-eared Bat.

Other listed threatened species and ecological communities

1014) The PER ([Attachment C1](#)) and likelihood of occurrence of other matters of national environmental significance ([Attachment C22](#)) identified the following additional threatened species and ecological communities as having the potential to occur within the action area:

- a) *Acacia grandifolia* – vulnerable
- b) *Aristida annua* – vulnerable
- c) Bean's Ironbark (*Eucalyptus beaniana*) – vulnerable
- d) Black-throated Finch (*Peophila cincta cincta*) – endangered
- e) Bluegrass (*Dichanthium setosum*) – vulnerable
- f) Collared Delma (*Delma torquata*) – vulnerable
- g) Coolibah–Black Box Woodland of the Darling Riverine Plains and Brigalow Belt South Bioregions – endangered
- h) Curlew Sandpiper (*Calidris feruginea*) – critically endangered, migratory
- i) Curly-bark Wattle (*Acacia curranii*) – vulnerable
- j) Grey Falcon (*Falco hypoleucos*) – vulnerable
- k) Grey-headed Flying Fox (*Pteropus poliocephalus*) – vulnerable
- l) Ghost Bat (*Macroderma gigas*) – vulnerable
- m) Hairy-joint Grass (*Arthraxon hispidus*) – vulnerable
- n) King Blue-grass (*Dichanthium queenslandicum*) – endangered
- o) Kogan Waxflower (*Philotheca sporadica*) – vulnerable
- p) *Macrozamia platyrhachis* – endangered

- q) *Marsdenia brevifolia* – vulnerable
- r) Murray Cod (*Maccullochella peelii*) – vulnerable
- s) Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin – endangered
- t) Northern Quoll (*Dasyurus hallucatus*) – endangered
- u) Salt pipewort (*Eriocaulon carsonii*) – endangered
- v) Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions – endangered
- w) Star Finch (eastern, southern) (*Neochmia ruficauda ruficauda*) – endangered
- x) The community of native species dependent on natural discharge of groundwater – endangered
- y) *Tylophera linearis* – endangered
- z) Weeping Myall Woodlands – endangered
- aa) White Box–Yellow Box–Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – critically endangered
- bb) White-throated Needletail (*Hirundapus caudacutus*) – vulnerable, migratory

1015) The proponent assessed the likelihood of occurrence (Attachment C22) for each species using an iterative process as follows:

- initial assessment of whether a threatened species or TEC has the potential to occur within the action area based on the species’ known distribution, understanding of habitat and species’ occurrence within the region and action area;
- for threatened species and TEC’s known, or with the potential to occur within the area, habitat modelling (Attachment C3) was undertaken; and
- results of habitat modelling were used to further inform the likelihood of occurrence, with some species predicted to have no suitable habitat in the action area.

1016) The department agrees with the proponent’s assessment of listed threatened species and ecological communities’ likely presence and potential habitat within the action area.

Species Presence and Habitat Assessment

1017) The department has considered the relevant statutory documents including those listed in the SPRAT database, the relevant conservation advices and recovery plans, and PER documentation including (but not limited to):

- a) Environmental Constraints Planning and Field Development Constraints Protocol of the PER (Attachment C2);
- b) matters of national environmental significance Likelihood of Occurrence of the PER (Attachment C22);
- c) Species Profiles and Mapping of the PER (Attachment C5);
- d) significant impact assessment of the PER (Attachment C6); and
- e) Environmental Management Plan of the PER (Attachment C7).

1018) Given the nature of these species, their behaviour and habitat, in combination with the likely impacts of the proposed action, and in consideration of the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines- Matters of National Environmental Significance 2013* (Attachment F), the department considers that significant impacts on these species or communities are unlikely.

Listed migratory species (sections 20 and 20A)

Satin Flycatcher (*Myiagra cyanoleuca*) - Migratory

Description

1019) The Satin Flycatcher is a small to medium sized bird, with a length of 17.5 cm, a wingspan of 23 cm and a weight of 17 g. The species is characterised by an upright posture, short erectile crest, and a distinctive habit of quivering the tail when perched. Males are glossy blue-black above, with a blue-black chest and white below, while females are duskier blue-black above, with an orange-red chin, throat and breast, and a white underparts and pale edged wing and tail feathers.

1020) According to the *Draft referral guideline for 14 birds listed as migratory species under the EPBC Act 2015* (Attachment G4), the species are eucalypt forest and woodland inhabitants, and are particularly common in tall wet sclerophyll forest, often in gullies or along water courses. In woodlands they prefer open, grassy woodland. The diversity of occupied habitats expands during migration, with the species recorded in most wooded habitats.

1021) The species is mostly insectivorous, primarily foraging arboreally, flitting from one perch to another, taking prey by sallying for insects in the area or picking insects off foliage and branches. They tend to forage in the canopy and sub-canopy, though occasionally forage in lower strata or descend to drink at forest streams.

1022) The core breeding distribution of Satin Flycatcher is in the eucalypt forests and woodlands along the east coast and across south-eastern mainland Australia and Tasmania. On mainland Australia the species is a high-altitude breeder. The species lays one to three eggs with both sexes sharing the incubation period of 17 days.

1023) Global population size for the species has not been quantified, but the species is reported to be commonest in the south of its range, and scarce in the north. The range of the population and the extent of the habitat used suggest that the population is at least in the tens of thousands, though there is some evidence of decline in response to land clearing. In Queensland, the species is considered widespread but scattered in the east, mainly on passage or non-on breeding periods, and mostly found from the Great Dividing Range to the coast.

Proposed action area

1024) The proponent has modelled habitat for Satin Flycatcher according to the PER Guidelines, and the department notes that in the absence of ecological surveys there are likely to be significant discrepancies between modelled habitat and actual habitat or occurrence.

1025) According to the Species Profiles and Mapping of the PER (Attachment C5), suitable habitat for this species includes any eucalypt-dominant forest or woodland RE that occurs in the action area that:

- Has a benchmark site height of at least 15 m; or
- Contains at least 1 species records;
- AND
- Occurs within 'remnant' vegetation.

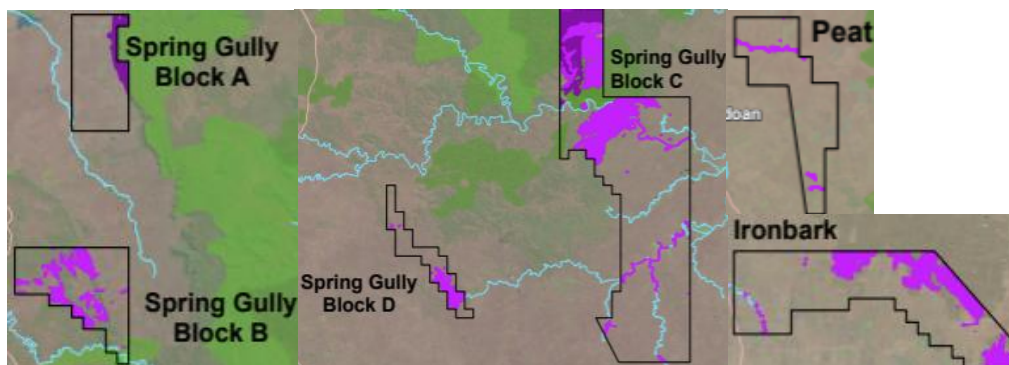
1026) Preferred habitat is modelled as any suitable forest or woodland RE that occurs in the action area that:

- Occurs within the extent of the 'likely to occur' public distribution grid for Satin Flycatcher established by the Australian Government.
- Is specifically identified in the literature; or
- Has a benchmark site height of at least 20 m; or
- Contains at least 3 survey records.

1027) A total of 14 REs represent suitable habitat for Satin Flycatcher, and 10 REs represent preferred habitat.

1028) According to the Significant Impact Assessments of the PER ([Attachment C6](#)), a total of 34,337 ha of Satin Flycatcher habitat has been mapped within the action area. The species has been mapped in all development areas (see *Figure 28 Below*).

1029) **Figure 28 Modelled habitat for Satin Flycatcher**



1030) The Species Profiles and Mapping of the PER ([Attachment C5](#)) states that there are 22 records of Sating Flycatcher within the action area landscape.

Impact

1031) The PER ([Attachment C1](#)) states that up to 677 ha of modelled Satin Flycatcher habitat may be disturbed as a result of the proposed action, though it also states that the modelled habitat is likely overestimated, but is a conservative approximation of where it may occur.

1032) According to the *Draft referral guidelines for 14 migratory bird species under the EPBC Act* ([Attachment G4](#)), an area of important habitat of international significance for Satin Flycatcher is 4,400 ha.

1033) The department notes that the predicted maximum disturbance for the species does not meet the threshold for the species.

1034) The PER states that impacts on the endangered Satin Flycatcher are unlikely to lead to a significant impact on the species.

1035) The department agrees with this assessment of significant impacts on both species.

Avoidance and mitigation measures

1036) Within the Offset Strategy ([Attachment C9](#)), broad avoidance and mitigation measures at the impact sites for fauna, flora, and TEC have been listed. These measures are detailed in Table 5 above.

1037) As a result of these avoidance and mitigation measures, the PER states that the predicted maximum disturbance for Satin Flycatcher is 677 ha.

Proposed outcomes and conditions

- 1038) The department notes that the predicted maximum disturbance for Satin Flycatcher is 677 ha, below the important area threshold identified within the *Draft referral guidelines for 14 migratory bird species under the EPBC Act* of 4,400 ha.
- 1039) In the absence of more information about the extent of the species within the action area and the action's disturbance footprint, there is a high uncertainty regarding the overall significance of the action's potential impacts on this species.
- 1040) Given the above and noting the high uncertainty, the department recommends condition 4, that in undertaking the proposed action, the approval holder must not clear more than the maximum disturbance limit of 677 ha Satin Flycatcher habitat, after ground-truthing surveys are conducted.

Conclusion

- 1041) Having considered all available information, including the nature of the proposed action, the PER, relevant statutory documents, the proposed avoidance, minimisation and mitigation measures, and the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines - Matters of National Environmental Significance 2013 (Attachment F)*, the department considers that the proposed action will not have an unacceptable impact on Satin Flycatcher.

Water resource, in relation to unconventional gas development and large coal mining development (sections 24D and 24E)

Background

- 1042) Groundwater abstraction is required to produce gas. Groundwater is abstracted (pumped) from a production well to depressurise the target coal seam. Depressurisation causes desorption of the gas from the coal seam and allows recovery of the gas.
- 1043) Produced water (the groundwater abstracted to enable gas recovery) typically peaks early in the life of each production well and reduces as gas recovery increases from the production well.
- 1044) The water assessment of the PER ([Attachment C10](#)) outlines that water production is predicted to peak approximately 4 years after the action commences at a rate of about 4.7 GL/year. This peak rate is equivalent to about 7.8% of the annual produced water volume generated by the petroleum industry in the Surat CMA (see paragraph 1064)).
- 1045) Produced water will gradually decline after this initial peak. Overall, the proponent predicts the total volume of produced water across all development areas throughout the life of the action will be 34.1 GL. This volume is considered conservative (an overestimate) as other adjacent operating gas fields will also contribute to dewatering of the target coal seams.

- 1046) Produced water will be collected via the water gathering system and processed using reverse osmosis (RO) – this is necessary for disposal or reuse as the groundwater varies in quality and is frequently saline. Existing processing facilities at Talinga, Condabri (for the Ironbark and Peat Development Areas), Reedy Creek (Peat and Spring Gully Development Areas), and Spring Gully (Spring Gully Development Area) are proposed to be used ([Attachment C11](#)).
- 1047) The proponent states that these facilities are approved and managed through EPBC 2009/4974 and EAs EPPG00968013, EPPG00653413, EPPG00968013 and EPPG00885313 ([Attachment C11](#)).
- 1048) The proponent states that there is existing capacity at the approved water processing facilities ([Attachment C11](#)). From the information provided the underutilised capacity at the water processing facilities appears sufficient for the estimated volumes and rates of produced water relating to this action. It appears that some of the capacity has yet to be constructed, thus the proponent may need to build some new water processing facilities, but these are stated to be provided for in existing approvals.
- 1049) Produced water will be managed to minimise releases to the environment with preference given to supplying treated produced water to third-party users (beneficial reuse) for agricultural purposes, or for reuse onsite ([Attachment C11](#)). The quality of this water is managed through Queensland EA conditions.
- 1050) Releases of treated produced water to the environment are permitted under the current conditions governing the water processing facilities. The relevant EAs ([Attachment C18](#)) contain conditions limiting the volume and the quality of releases. These EAs and associated existing approved management plans ([Attachment C11](#)) also outline the requirements for monitoring of the treated produced water and of the receiving environment covering water quality, flows, sediment quality, watercourse geomorphology and various aquatic biological parameters.
- 1051) Brine resulting from the RO treatment will be managed using industry standard processes including temporary storage in tanks and dams onsite before transport to a regulated waste facility ([Attachment C10](#)). The relevant EAs outline requirements for leak detection on these storages ([Attachment C18](#)).
- 1052) The chemical risk assessment at Appendix I ([Attachment C13](#)) indicates that the action will utilise hydraulic stimulation in the process of gas extraction. An assessment of impacts related to hydraulic stimulation was undertaken within the chemical risk assessment, with the outcomes of this assessment provided in Appendix F ([Attachment C10](#)).

Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC)⁶

- 1053) In accordance with section 131AB, the minister must obtain advice from the IESC if the action involves coal seam gas development and the minister believes the taking of the action is likely to have a significant impact on water resources, including any impacts of associated salt production and / or salinity; and may have an adverse impact on a matter protected by a provision of Part 3.
- 1054) On 21 December 2021, the department requested advice from the IESC on the action ([Attachment J1](#)). This request was subsequently accepted by the IESC on 22 December 2021.
- 1055) At the time of the IESC review, the proposed action was considerably larger (~7,700 production wells with additional proposed development areas) than the proposed action as varied.
- 1056) The department's request for advice focused on:
- a) whether the key potential risks and impacts on water resources as defined by the *Water Act 2007* (Cth) had been adequately identified and assessed, particularly in relation to the extent of drawdown, subsidence, GDEs other than EPBC-listed springs, surface water-groundwater interactions, and treated water releases
 - b) whether the assessment of cumulative impacts was sufficient
 - c) if the proposed monitoring, mitigation and management were adequate
- 1057) On 8 February 2022, the IESC provided their advice on the request ([Attachment J2](#)). Key pieces of advice included:
- a) that the lack of specific information on the layout and location of infrastructure was hindering the IESC's assessment of potential impacts of the action on water resources
 - b) while EPBC Act-listed springs were assessed, the documentation provided did not comprehensively assess risks and potential impacts on other water resources either at a local or regional scale
-

⁶ Note that the name and role of the IESC have changed slightly since its consideration of this action.

- c) the action, as proposed then, had a high risk of cumulative impacts exceeding ecological thresholds / tipping points for more than one water resource that could potentially result in irreversible environmental harm
- d) that the proponent hadn't adequately considered the limitations of using the OGIA model to assess and quantify potential impacts on surface expression GDEs given the OGIA model is not constructed at a scale appropriate for predicting ecological impacts relating to hydrogeological processes in Layer 1 of the model

1058) The IESC identified the following key potential impacts:

- a) extraction of 72.4 GL of groundwater over the life of the action, contributing to action-specific and cumulative drawdown impacts on 8 known springs (including 3 EPBC Act-listed springs), 21 watercourse springs, terrestrial GDEs, 13 private bores, and possibly subterranean GDEs
- b) local (development area-specific)- and regional-scale reductions in water availability to other water resources (e.g., ephemeral streams, riparian and floodplain ecosystems) as a result of groundwater drawdown, altered alluvial recharge and changes to surface runoff caused by infrastructure such as access tracks
- c) changes to surface water quality due to the intentional and unintentional releases of treated produced water and use of waste drilling fluids on-site, noting that the proponent has provided little information on these aspects
- d) legacy issues of substantial volumes (up to 9,500 ML) of brine and other contaminated by-products of produced water.

1059) Key additional work recommended included:

- a) providing sufficient detail on action infrastructure (e.g., locations of CSG wells, pipelines, water management infrastructure, access tracks)
- b) ground-truthing potential terrestrial and aquatic GDEs within the development footprints and further considering impacts on these GDEs within and near each development area where drawdown and altered alluvial recharge may occur
- c) providing information on produced water treatment and disposal of liquid and solid (e.g., brine) wastes, all of which occurs offsite, and potential impacts on surface water flow regimes, water quality and ecosystems
- d) evaluating the risk of action-specific and total cumulative subsidence across each development area and associated change of slope at the ground surface that may impact on surface water flow regimes. If subsidence is likely to exceed background trends, then it is recommended that appropriate remote-sensing or airborne monitoring be designed and implemented across development areas at risk

- e) providing development area- and action-specific ecohydrological conceptual models of how the action may impact the quality and functioning of water-dependent assets, taking into account the action's contribution to potential cumulative impacts at broad spatial and temporal scales
- f) reviewing and updating the action-specific management plans following collection of appropriate baseline and subsequent monitoring data that informs further assessment of action impacts. These management plans will need to be specific to each of the 5 development areas and their infrastructure footprints, acknowledging the hydrogeological and ecological difference among them and identifying where site-specific strategies will be required. These plans should also be integrated with the action-specific management plans, and the plans for offsite disposal of solid and liquid waste, to capture the regional context and cumulative impacts.

1060) On 12 October 2022 the proponent provided a response to the IESC advice. The proponent discussed the IESC advice and provided some additional information and clarification in the final PER.

1061) The department considers that issues relating to produced water management and potential surface water impacts were adequately addressed.

1062) However, the department considers that the following issues raised by the IESC were not adequately addressed:

- a) detail on the location of infrastructure
- b) ground truthing of GDEs other than EPBC-listed springs and springs supporting EPBC-listed threatened species
- c) the potential impacts from subsidence
- d) potential risks and impacts on water resources other than EPBC-listed springs and springs supporting EPBC-listed species
- e) the adequacy of proposed monitoring, mitigation and management measures

1063) The department has considered all the information provided by the proponent in response to the IESC advice and has used it to inform the department's assessment of impacts and in drafting the recommended proposed decision and conditions.

Surat Cumulative Management Area Joint Industry Framework (JIF)

1064) The Surat CMA is a cumulative management area declared under section 365 of the Queensland Water Act. The action is located entirely within the Surat CMA.

- 1065) The declaration of the CMA enables OGIA to undertake modelling of groundwater impacts, assign responsible tenure holders, and direct those responsible tenure holders to undertake specific monitoring and management actions.
- 1066) The work of OGIA is supported by industry levies. Groundwater modelling and updates to risk assessments and responsible tenure holder arrangements are reported in the *Underground Water Impact Report* (UWIR) on a 3-yearly cycle. The latest update to the UWIR was due in 2025. The Draft 2025 UWIR was released in October 2025 for public consultation and is in the process of being finalised.
- 1067) The JIF was developed by the department and the CSG industry as an approach to utilising the work of OGIA in the EPBC Act post-approvals processes to minimise duplication for the industry in responsible management of groundwater resources.
- 1068) The JIF assumes that baseline data has been collected, water resources characterised, and potential impacts have been adequately assessed at an appropriate scale during the impact assessment phase prior to the application of the JIF as a post-approval management framework.
- 1069) The JIF implements several risk-based management frameworks to achieve stated outcomes and sub-outcomes for the water resources matter of national environmental significance.
- 1070) Components of the water resource matter of national environmental significance include aquatic, terrestrial and subterranean GDEs, and groundwater bores.
- 1071) The JIF also provides outcomes and sub-outcomes for the GAB Springs TEC (also referred to as EPBC-listed springs) which qualifies as an aquatic GDE under the water trigger but is also protected in its own right as a listed threatened ecology community.
- 1072) When the JIF is applied to an action through approval conditions, the outcomes and sub-outcomes stated in the JIF apply during the life of an action, and if achieved ensure that the water resource matter of national environmental significance is protected.
- 1073) Each component of the water resources matter of national environmental significance has a specific management framework within the JIF. Each management framework outlines the process for assigning responsibility for a particular water resource (including monitoring and management), using OGIA groundwater modelling results, assessing and reassessing risk, and reporting outcomes.
- 1074) When defined risk thresholds are met (high (risk score 4) or very high (risk score 5) risks) the process escalates, and further, more detailed monitoring and management requirements are initiated. These include further impact assessment and the derivation of triggers to provide early warning of potential impact allowing mitigation and management measures to be initiated. If these are unsuccessful and defined limits are exceeded the JIF requires changes to production (e.g., ceasing of some production wells) to reverse impacts.

1075) Each management framework also has a safety net component. The safety net is fundamental to the JIF and ensures that monitoring and regular reassessment of risks occurs as the underlying OGIA model is updated (a 3-yearly cycle).

1076) The safety net relies on actual monitoring data being collected and used to validate model predictions. The safety net thus provides additional early warning of potential impacts on water resources through enabling monitoring of water resources where a lower risk has been identified.

1077) The safety net in the EPBC-listed springs and aquatic GDEs framework assumes that after identifying a risk to a specific water resource, OGIA will assign a responsible tenure holder. OGIA's processes outline that once a risk score of 2 (low) or greater is determined for a spring, then a responsible tenure holder assignment follows as shown in Figure 29.

1078) Figure 29 OGIA's process for spring impact assessment and management. Source Draft 2025 UWIR.

Appendix D Spring impact assessment and management process flow diagram

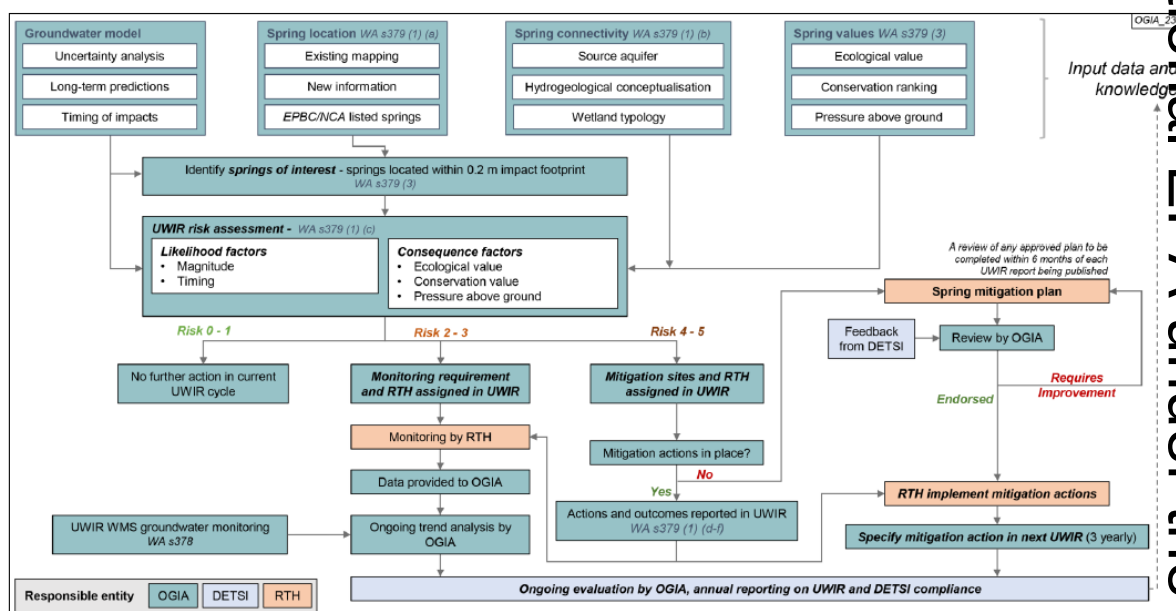


Figure D-1: Spring impact assessment and management process flow diagram

1079)

1080) Some springs and watercourse springs relevant to the proposed action currently have risk scores above 2 and have not had a responsible tenure holder assigned. Typically, this is justified by OGIA due to unresolved conceptual uncertainties (e.g., uncertainty in which aquifer is supporting the spring), with OGIA planning to do further work. This is acceptable when the predicted time to impacts exceeding the accepted threshold of 0.2 m of groundwater drawdown is in the mid- to long-term.

1081) However, some springs and watercourse springs relevant to the proposed action have short-term groundwater drawdown predictions (0 to 8 years) exceeding thresholds, meaning impact at these springs will occur potentially imminently. A more precautionary approach than is currently being used is warranted at these locations.

- 1082) Additionally, the lack of responsible tenure holder assignment at some springs and watercourse springs means that the safety net in the JIF will not function as expected and that baseline data which is key to have in order to set appropriate triggers and limits under the JIF, should high or very high risks be identified at the spring in the future, is not being collected.
- 1083) A similar scenario occurs if potential terrestrial and subterranean GDEs are not adequately ground-truthed during the action impact assessment. While management of these water resources is not reliant on OGIA assigning a responsible tenure holder, the relevant management framework in the JIF relies on the CSG operators determining if they are the responsible CSG operator. Where ground-truthing has not occurred during the action impact assessment, or where an operator is stating that there are no GDEs based only on desktop analysis, there is heightened uncertainty about the groundwater dependence of the potential GDEs and less confidence that they will be monitored and managed as per the JIF.
- 1084) Where there is a lack of baseline data and ongoing monitoring at water resources then there is no validation of modelled impacts occurring and there is potential for impacts on be unobserved and hence unmanaged.
- 1085) When these scenarios occur, the department considers that it may be necessary to apply additional conditions to an approval holder. Such additional conditions would be used to ensure baseline data and ongoing monitoring occurs at specific water resources where the department has identified higher potential risks or uncertainties. The additional conditions would be used to ensure that the JIF conditions are able to protect water resources during operations.

Impacts – Surface water

- 1086) The action is in the Condamine-Balonne and Fitzroy River catchments. The Condamine-Balonne is part of the Murray-Darling Basin.
- 1087) Key watercourses in the action development areas include the Condamine, Balonne, Dawson, Comet and Brown Rivers, and the Undulla, Baffle, Hutton, Injune, Eurombah, Spring, Moolayember and Carnarvon Creeks (Attachment C10).
- 1088) Most watercourses are stated to be ephemeral, though the Dawson River and Carnarvon Creek are known to have permanently flowing reaches (Attachment C10).
- 1089) Several surface water allocations exist near Ironbark, Peat and Spring Gully development areas (Attachment C10). These allocations provide third-party users with surface water for irrigation and other purposes.
- 1090) The action does not propose direct abstraction from, nor diversion of, watercourses.
- 1091) Discharges of treated produced water may occur to Eurombah Creek in the Spring Gully C development area and the Condamine River downstream of Chinchilla Weir (Attachment C11). These discharges would comply with existing conditions as discussed in paragraphs 1046) to 1047) 1046)1050).

- 1092) As the action does not propose any new or additional authorisations for discharge to, or abstraction from, surface water systems; and does not include significant interaction with surface water bodies, the proponent does not consider that there will be any direct impacts on surface water from the action ([Attachment C10](#)).
- 1093) Potential impacts on surface water were noted as possible due to produced water management (e.g., unplanned releases), beneficial reuse of treated produced water (e.g., water quality or irrigation runoff) and construction activities (e.g., erosion and sedimentation) ([Attachment C11](#)). These were considered by the proponent to be adequately managed through current conditions governing the produced water processing facilities, or through standard management approaches for erosion and sedimentation.
- 1094) The IESC also noted the potential for these impacts on surface water from the action. Additionally, they noted that groundwater drawdown could affect surface waters.
- 1095) The department agrees with the proponent's assessment that the potential impacts on surface water from produced water management, beneficial reuse of produced water and construction activities will be adequately managed. However, the department also notes the potential for changes in spring and watercourse spring flows to indirectly impact surface water and considers conditions will be needed to mitigate and manage this potential impact as discussed further in paragraphs 1193) to 1203)1138)1148).

Impacts – Groundwater

Hydrogeology background

- 1096) The action is in the Bowen Basin with the Surat Basin also overlying the southern parts of the action area ([Attachment C12](#)). The action is located wholly within the Surat Cumulative Management Area (Surat CMA).
- 1097) The target coals seams are the Walloon Coal Measures (Ironbark), Bandanna Formation (Spring Gully A, B and C), Baralaba Coal Measures (Peat) and the Reids Dome Beds (Spring Gully D).
- 1098) Given the large spatial extent of the action the hydrogeology varies across the development areas. Key elements of the hydrostratigraphy are summarised in the Table 6 below based on information provided in the Water Assessment ([Attachment C10](#)) Regional aquifers are key water resources accessed by many users across a large area. Partial, tight and interbedded aquifers are water sources with more limited yields than regional aquifers. These can be locally important water sources or only minor water sources. Tight aquitards are strata which typically limit groundwater movement making them important for preventing propagation of groundwater drawdown to overlying aquifers.
- 1099) **Table 6 Summary of key hydrostratigraphy by development area.**

Hydrostratigraphic element	Ironbark	Peat	Spring Gully

Regional aquifers	Mooga Sandstone Gubberamunda Sandstone Precipice Sandstone Clematis Group	Precipice Sandstone Clematis Group	Mooga Sandstone Gubberamunda Sandstone Precipice Sandstone Clematis Group
Partial, tight and interbedded aquifers	Alluvium and basalt Bungil Formation Springbok Sandstone Walloon Coal Measures Hutton Sandstone Boxvale Sandstone Bandanna Formation Lower Bowen	Springbok Sandstone Walloon Coal Measures Hutton Sandstone Boxvale Sandstone Bandanna Formation Lower Bowen	Alluvium and basalt Springbok Sandstone Walloon Coal Measures Hutton Sandstone Boxvale Sandstone Bandanna Formation Cattle Creek Formation Lower Bowen
Tight aquitard	Wallumbilla Formation Orallo Formation Westbourne Formation Eurombah Formation Evergreen Formation Moolayember Formation Rewan Group	Eurombah Formation Evergreen Formation Rewan Group	Westbourne Formation Eurombah Formation Evergreen Formation Moolayember Formation Rewan Group

1100)

1101) Hydrostratigraphic layers of particular importance in the action area are:

- a) Clematis Group – source aquifer for many springs. Predicted to be impacted by the action in the Spring Gully development areas.
- b) Precipice Sandstone – source aquifer for many springs. In Peat and Spring Gully development areas this aquifer is not predicted, with the current modelling, to experience groundwater drawdown. However, it directly overlies aquifers that will experience groundwater drawdown due to the proposed action. Currently there is some uncertainty about the accuracy of the modelled groundwater drawdown predictions in the Precipice Sandstone due to contact between the Precipice Sandstone and the target coal seam in some locations.
- c) Rewan Group – a regionally extensive and thick aquitard that generally prevents propagation of groundwater drawdown into overlying aquifers. The Rewan Group is absent in some areas of the proposed action meaning there is a higher risk of groundwater drawdown occurring in the Precipice Sandstone at these locations.

1102) Faulting occurs throughout the region. Many faults have been incorporated into the groundwater model. The key faults of concern for propagating groundwater drawdown are:

- a) Hutton-Wallumbilla Fault – located east of Injune in the vicinity of Spring Gully B and D development areas. Where this fault occurs and the Rewan Group is absent with the Bandanna

Coal Measures in direct contact with the Precipice Sandstone, the area is known as the Western Contact Zone (WCZ)

- b) Burunga Fault – located east of Wandoan in the vicinity of Peat development area. Where this fault occurs and the Rewan Group is absent with the Baralaba Coal Measures in direct contact with the Precipice Sandstone, the area is known as the Eastern Contact Zone (ECZ)

1103) The OGIA identified location of the contact zones is shown in Figure 30 below from the Draft 2025 UWIR ([Publications and reports | Office of Groundwater Impact Assessment](#)).

1104) These contact areas are of particular interest as in both cases the Rewan Group is absent, and the target coal seams are in direct contact with the Precipice Sandstone aquifer.

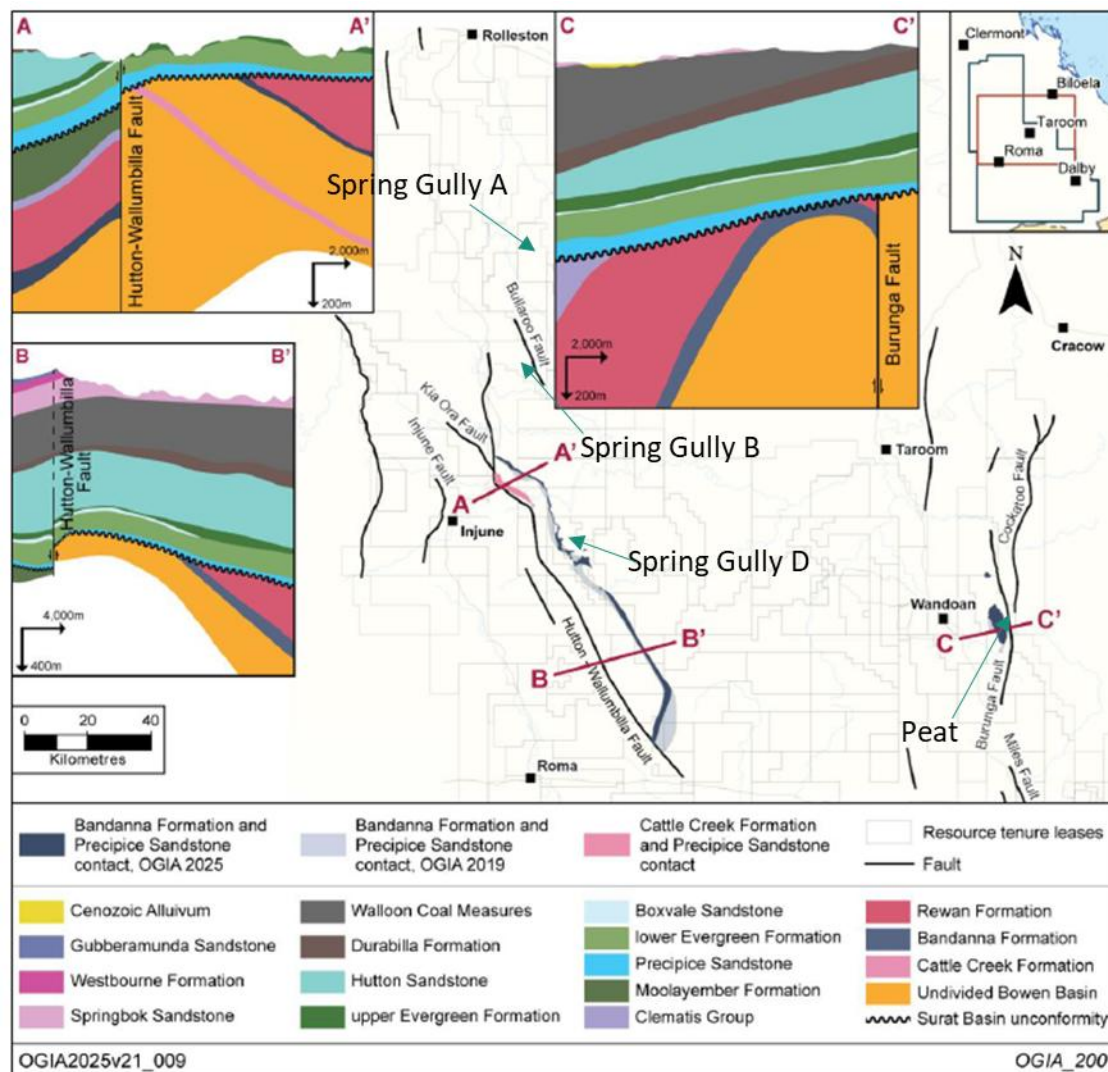
1105) OGIA notes in the Draft 2025 UWIR that there is monitoring data available from both the ECZ and WCZ areas that shows CSG production bores located within 12 km and 5 km respectively of the contact zones are potentially causing groundwater drawdown in the Precipice Sandstone.

1106) The proponent has proposed to not construct CSG wells close to the ECZ and WCZ at this time, however they have not ruled out constructing CSG wells close to either contact zone in the future as part of the proposed action ([Attachment C10](#)).

1107) The Draft 2025 UWIR also notes that further work and updates will be required to the OGIA groundwater model to make it consistent with the current conceptualisation and observations.

1108) The department notes that it is possible that when the OGIA groundwater model is updated, predicted impacts on groundwater and GDEs in the area near the contact zones will increase. Currently it is unclear how much groundwater drawdown in the Precipice Sandstone could increase by as the model doesn't accurately represent the available monitoring data. If the increase was large enough, it could result in the loss of water to some springs. OGIA is planning to undertake further work and analysis to update the model which will enable a better understanding of the potential magnitude of impacts, however this work, at the earliest, will not be available until the 2028 UWIR.

1109) Figure 30 Location of the WCZ and ECZ. Development areas for the action have been highlighted by the department.



1110) **Figure 7-16: Contact zones between the Bandanna Formation and overlying Surat Basin**

Modelling background

1111) The proponent's prediction of impacts relied entirely on the OGIA groundwater model. It is acceptable to use this model for determining cumulative impacts. However, as raised by the IESC (see paragraph 1057)d)), and Geoscience Australia ([Attachment I5](#)) additional considerations are needed when using it to attempt to predict impacts at a small scale such as an individual spring, in relation to hydrogeological processes in Layer 1 of the model. Both noted that this did not occur adequately in the proponent's assessment. The department notes that no updates of this nature have occurred to the final water assessment of the PER ([Attachment C10](#)).

- 1112) The proponent used a maximum development scenario (Attachment C10) in the groundwater modelling. This involved including a total number of CSG production wells that was higher than will occur, though it remains unclear how many production wells were modelled. The production wells are regularly spaced throughout the development areas and as such do not reflect how development is likely to proceed. While the department agrees that this approach will generally result in a higher (ie more conservative) predicted impact (groundwater drawdown) than will actually occur, there is potential, should the intensity of production wells in a particular area be greater than modelled, that impacts could also be locally greater than predicted. This approach also increases uncertainty in the predicted magnitude of impact for localised features such as specific springs and watercourse springs which are especially sensitive to the proximity of groundwater extraction.
- 1113) The proponent identified 2 key limitations with their impact modelling approach (Attachment C10) that are important considerations when assessing predicted impacts from the action.
- 1114) The target coal seam for Spring Gully D development area – Reids Dome Beds – cannot be explicitly modelled currently. The structure of the OGIA groundwater model requires updating first, which is planned to occur in the next 3-yearly UWIR cycle meaning results from the update will not be available before 2028.
- 1115) The ECZ is potentially not accurately represented in the current modelling. This has implications for CSG production in the Peat development area. Updates are planned to the OGIA groundwater model, though these will not be completed prior to 2028.
- 1116) An additional important consideration that has emerged since the 2019 UWIR, which is the information the proponent based their impact assessment on and the version of the OGIA groundwater model used for impact prediction, is the observed impacts on the Precipice Sandstone related to the WCZ and the need to update the OGIA groundwater model to ensure these are fully incorporated in the model and hence the model predictions on impact.
- 1117) The lack of explicit representation of the Reids Dome Beds, and the uncertainty about the representativeness of both the ECZ and WCZ in the OGIA groundwater model, means the confidence in the predicted impacts (estimates of the magnitude and spatial extent of groundwater drawdown) in the associated locations is lower. While there is work planned by OGIA to reduce the uncertainty and improve confidence in model predictions, it is currently unknown whether this will lead to higher or lower predicted impacts and the work won't be completed for at least 3 years.

Impact predictions – Groundwater

1118) Groundwater drawdown due to the proposed action is predicted to occur across multiple hydrostratigraphic layers. The impacted layers vary across the development areas as the geology varies. Table 7 below summarises the hydrostratigraphic layers predicted by the proponent to experience groundwater drawdown of greater than 0.2 m ([Attachment C10](#)). Layers are listed in order of proximity to the surface. The hydrostratigraphic layers that are immediately adjacent impacted layers are also noted.

1119) **Table 7 Summary of hydrostratigraphic layers and drawdown predictions.**

	Ironbark	Peat	Spring Gully
Hydrostratigraphic layer immediately above impacted layer (drawdown <0.2 m predicted)	Gubberamunda Sandstone	Clematis Group	Precipice Sandstone
Hydrostratigraphic layers predicted to be impacted (drawdown >0.2 m)	Westbourne Formation Springbok Sandstone Walloon Coal Measures Eurombah Formation Hutton Sandstone	Rewan Group Bandanna Formation	Moolayember Formation Clematis Group Rewan Formation Bandanna Formation Lower Bowen Cattle Creek Formation
Hydrostratigraphic layer immediately underlying impacted layer (drawdown <0.2 m predicted)	Evergreen Formation	Lower Bowen	Drawdown reaches model base

1120)

Impact predictions – Groundwater bores

1121) The proponent identified that 6,524 bores are located within 50 km of the proposed action ([Attachment C10](#)).

1122) Based on the accepted impact thresholds defined in the Queensland Water Act of 2 m for bores in unconsolidated aquifers and 5 m for bores in consolidated aquifers, the proponent considers that the proposed action will impact 5 bores. Predicted drawdown from the action at these bores will range from 7.3-19.2 m ([Attachment C10](#)).

1123) The impacted bores will be in the Springbok Sandstone (1 bore), Walloon Coal Measures (3) and the Bandanna Coal Measures (1). Two impacted bores are used for town water supply, with the other 3 used for stock and domestic supply. Four of the impacted bores are associated with the Ironbark development area and 1 with the Spring Gully development area ([Attachment C10](#)).

1124) The proponent concludes that the predicted impacts can be adequately managed through 'make good' arrangements under the Queensland Water Act.

1125) The department agrees with the proponent's assessment of impacts on groundwater bores. The department considers that these impacts can be adequately managed through the JIF standard conditions.

Impact predictions – EPBC-listed springs and springs supporting EPBC-listed species

1126) EPBC-listed springs are also referred to as GAB springs as they are springs meeting the criteria of the TEC *The Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*.

1127) The proponent identified 4 EPBC-listed springs occurring within 50 km of the proposed action. These springs are Cockatoo, Lucky Last, Yebna 2 and Dawson River 8 (Attachment C10).

1128) The proponent also identified a further 2 springs that support EPBC-listed species, Abyss and Scotts Creek.

1129) A summary of the key characteristics of these 6 springs is provided in Table 8 below.

1130) **Table 8 summary of EPBC-listed springs and springs supporting EPBC-listed species near the action.**

Spring	Location	Source	Project-only drawdown	% of cumulative drawdown	RTH ¹
Cockatoo	32 km NE Peat	Precipice Sandstone	~0.02 m	4	none
Lucky Last	9 km NW SGD ²	Boxvale Sandstone	~0.03 m	8	Santos
Yebna 2	6 km W SGC ³	Precipice Sandstone	~0.01 m	3	Santos
Dawson River 8	40 km ENE SGC ³	Hutton Sandstone	0 m	0	none
Abyss	7 km NW SGD ²	Hutton Sandstone	0 m	0	Santos
Scotts Creek	Boundary of SGC ³	Hutton Sandstone	0 m	0	Origin

1131) ¹ – Responsible tenure holder assigned by OGIA

1132) ² – Spring Gully D development area

1133) ³ – Spring Gully C development area

1134)

1135) The proponent concludes that the proposed action will have no impact on either EPBC-listed springs or springs supporting EPBC-listed species (Attachment C10). They consider that cumulative impacts on these springs will be adequately managed through the responsible tenure holder arrangements assigned by OGIA and the associated JIF conditions which require the responsible tenure holder to monitor and mitigate the entirety of the impact, whether or not it is caused by the responsible tenure holder.

1136) The IESC noted that impacts on EPBC-listed springs and springs supporting EPBC-listed species were the only impacts on water resources that were adequately considered (see paragraph 1057)b)).

1137) The department agrees with the proponent's assessment of impacts on EPBC-listed springs and springs supporting EPBC-listed species. The department considers that these impacts can be adequately managed through the JIF standard conditions.

Impact predictions – Other springs and watercourse springs

1138) The proponent identified numerous other springs and watercourse springs within 50 km of the action that exist across the development areas (Attachment C10) – these are also encompassed within the water resources matter of national environmental significance. The information on the characteristics of, and potential impacts on, these other springs and watercourse springs was scattered throughout the documentation. Springs and watercourse springs are mapped within the PER at:

- a) Ironbark – Figures III-70 and III-71;
- b) Peat – Figures IV-53 and IV54; and
- c) Spring Gully – Figures V-3.50 and V-3.51.

1139) The proponent stated that no other springs or watercourse springs are predicted to experience more than 0.2 m of drawdown as a result of the proposed action (Attachment C10). This level of drawdown corresponds with the accepted threshold for impact on springs under the Queensland Water Act.

1140) As a result, the proponent concludes that the proposed action will have no impact on other springs or watercourse springs (Attachment C10).

1141) In addition, the proponent has stated that the other springs or watercourse springs in the area do not support TECs or habitat for EPBC-listed species and therefore should not be considered under the water resources matter of national environmental significance.

1142) The department notes that the source of most watercourse springs and some other springs has not been field-verified, thus it is difficult to conclude that the source of such other springs and watercourse springs will not be affected by the proposed action.

- 1143) The department notes that the proponent has also apparently misinterpreted the water resources matters of national environmental significance to only include water resources with links to other matters of national environmental significance.
- 1144) The IESC also noted the inconsistency in the interpretation of the water resources matters of national environmental significance and that this had resulted in an inadequate assessment by the proponent of GDEs that were not EPBC-listed springs or springs that supported EPBC-listed species as discussed in paragraphs 1057)b) and 1059)b).
- 1145) Due to these inconsistencies, the concerns raised in the IESC advice, the issues with the modelling outlined in paragraphs 1111) to 1117)1117), and the observations relating to faulting and contact zones detailed in paragraphs 1102) to 1108)1108), the department considered other springs and watercourse springs impacts were not adequately assessed by the proponent.
- 1146) The department reviewed the available information on the other springs and watercourse springs considering the following factors:
- a) the proximity of the other springs and watercourse springs to the proposed action;
 - b) whether the other springs or watercourse springs were sourced from the Clematis Group (predicted to be impacted in the Spring Gully development area), Precipice Sandstone (heightened uncertainty regarding potential for impacts in the Spring Gully and Peat development areas) or unverified sources;
 - c) if responsible tenure holder arrangements for monitoring and management of impacts on springs through the OGIA UWIR were in place;
 - d) where the other springs and watercourse springs were located with reference to existing CSG tenures; and
 - e) what OGIA was predicting for the timing for drawdown of >0.2 m, and the overall risk rating assigned by OGIA.
- 1147) Through this process the department identified the following other springs and watercourse springs as having a higher risk of impact, or higher uncertainty about impacts:
- a) unknown source other springs – Kangaroo Creek
 - b) the watercourse spring located in Dawson River between the eastern boundary of Spring Gully B and Lonely Eddie Spring
 - c) watercourse springs within the Spring Gully C development area – W39, W198, W199 (Dawson River), W179 (Boyd Creek), and W222 (Kangaroo Creek)

1148) The department does not agree with the proponent's assessment of impacts on other springs and watercourse springs. The department considers that the other springs and watercourse springs identified above will need to be surveyed and monitored in order to address concerns raised by the IESC and to manage potential impacts. The department considers that additional conditions will be required to ensure adequate baseline data is obtained and monitoring undertaken which is required to inform management of these water resources through the standard JIF conditions.

Impact predictions – Terrestrial GDEs

1149) The proponent identified, through remote sensing analyses, that there was 381 ha of vegetation that was probably groundwater-dependent, and 3,841 ha of vegetation that was potentially groundwater-dependent that could be impacted by shallow groundwater drawdown from the proposed action (Attachment C10).

1150) This vegetation is located to the west and northwest of Spring Gully A and B development areas (Attachment C10), an area that includes Carnarvon Creek which was noted to have permanent reaches (indicative of groundwater discharge to the creek).

1151) Shallow groundwater drawdown was predicted to be up to 1.2 m in this area where the Rewan Group sediments outcrop or subcrop to alluvium (Attachment C10)

1152) The GDE study of the PER (Attachment C10) does not indicate that any ground truthing of this vegetation has occurred.

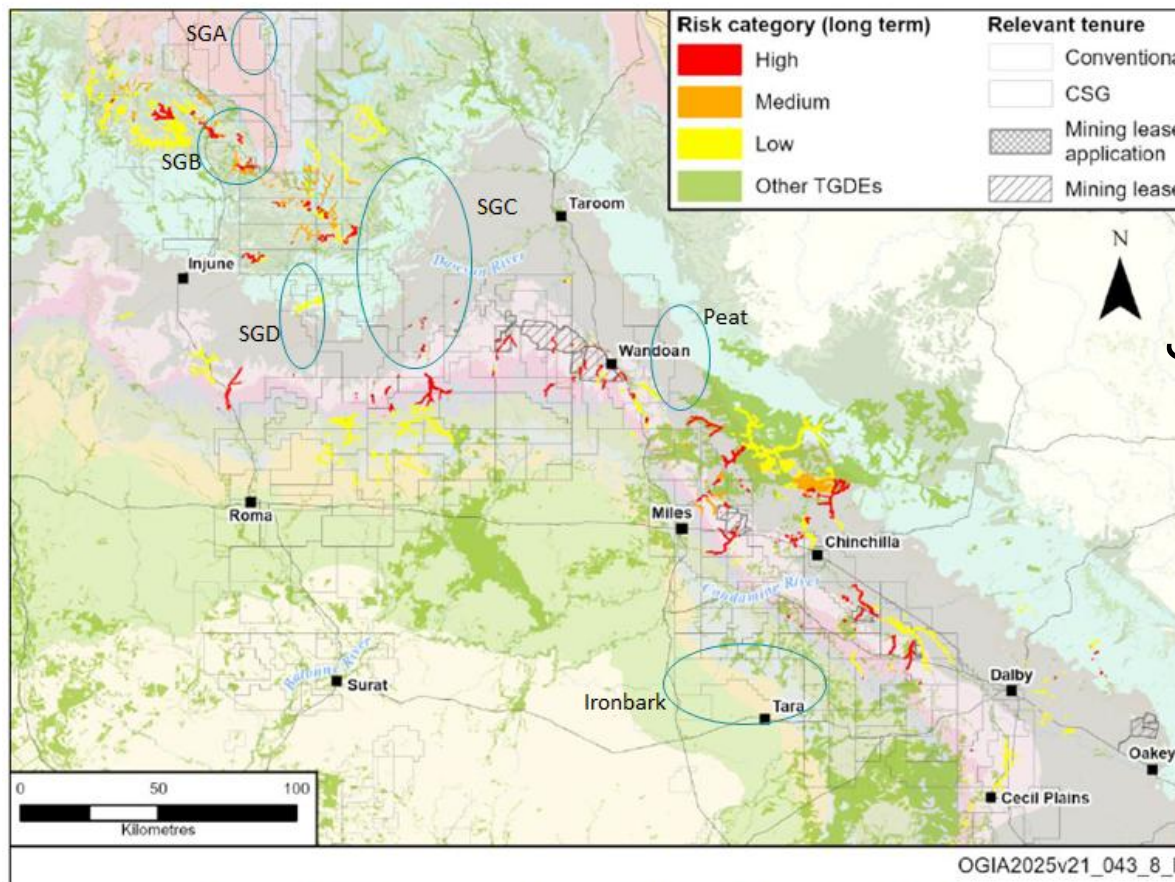
1153) The proponent considers that the vegetation identified is unlikely to be materially impacted by the proposed action, stating its belief that the vegetation would be only partially reliant on groundwater which is likely to be sourced from rainfall events, and that the vegetation is likely adapted to variability in water availability (Attachment C10).

1154) The department notes that the proponent's process for identifying risks to terrestrial GDEs may only incorrectly consider TECs or habitat for EPBC-listed species (Attachment C10), making a similar error as noted in paragraph 1143).

1155) The IESC considered that the assessment of terrestrial GDEs was inadequate and that ground truthing of the desktop analysis was needed (paragraph 1059)b).

1156) The Draft 2025 UWIR includes a risk assessment for terrestrial GDEs which identifies areas near and within the Spring Gully B and C development areas that are considered to be at high and medium risk of groundwater drawdown (corresponding to drawdown >1 m). These are shown in Figure 31 below. The approximate location of the action's development areas have been added to this figure.

1157) Figure 31 Draft 2025 UWIR terrestrial GDE risk assessment. Approximate locations of the actions development areas added by the department.



1158)

1159) The department does not agree with the proponent's assessment of impacts on terrestrial GDEs. The department considers that ground truthing of the terrestrial GDEs identified as high and medium risk in the Draft 2025 UWIR will be necessary to address concerns raised by the IESC and to manage potential impacts. The department considers that while longer term monitoring and management of terrestrial GDEs can occur through the JIF standard conditions, additional conditions will also be needed to ensure that ground truthing occurs to identify which areas will require ongoing management using the JIF.

Impact predictions – Subterranean GDEs

1160) The proponent undertook a desktop analysis of the potential for subterranean GDEs to occur across the development areas (Attachment C10). The assessment focused on the area to the west and northwest of Spring Gully development areas A and B where the groundwater modelling indicated the potential for drawdown in the near surface. The assessment only considered the Rewan Group areas of outcrop.

- 1161) The proponent concluded that there were generally unfavourable conditions for stygofauna in this area, thus the proposed action would not impact subterranean GDEs (Attachment C10).
- 1162) This conclusion relied mainly upon the assumed low hydraulic conductivity and aquifer porosity and was not field-verified. The data used was derived from various sources including OGIA and other environmental impact assessments across the broader region and it was not clear if site-specific measures of hydraulic conductivity or aquifer porosity had informed the assessment.
- 1163) The IESC noted that stygofauna have been found in the many hydrostratigraphic layers across the Bowen and Surat basins. The IESC considered that ground truthing of GDEs should occur (paragraph 1059)b)1059)1059)b).
- 1164) The department does not agree with the proponent's assessment of impacts on subterranean GDEs. The department considers that the desktop analysis is insufficient to demonstrate absence and that ground truthing will be needed to address concerns raised by the IESC and to manage potential impacts. The department considers that while longer term monitoring and management of subterranean GDEs can occur through the JIF standard conditions, additional conditions will also be needed to ensure that ground truthing occurs to identify which areas will require ongoing management using the JIF.

Impacts – Subsidence

- 1165) CSG production can result in subsidence. As groundwater and gas are extracted from the target formations these experience compaction. When water is removed from the pores of the target formation it is replaced by air and gas which are much more compressible than water. As a result, subsidence may be observed at the land surface. The amount of subsidence observed is related to the degree of depressurisation, the depth of the depressurisation and the strength of the overlying strata.
- 1166) Subsidence can cause:
- a) a change in the slope and topography of the land, altering how water moves across the land surface. This can lead to pooling and ponding of water and waterlogging of parts of the landscape, or quickened runoff that may cause increased erosion. It can also directly affect the bed of watercourses causing changes in flows by creating ponds and pools within watercourses.
 - b) a change in the integrity of hydrogeological units which can result in cracking and fracturing of rocks that may cause previously isolated aquifers to become connected, or weaken aquitards.
- 1167) Subsidence impacts from CSG are of a much smaller magnitude than from longwall coal mining. CSG subsidence also tends to result in less pronounced troughs and peaks on the land surface than what occurs from longwall coal mining.

- 1168) The relative impact of subsidence depends on what is present at the surface. Watercourses, wetlands and swamps, and irrigated agriculture are all relatively sensitive to changes in the land surface.
- 1169) The proponent has provided a summary of work completed by other CSG operators (Attachment C10), though no quantification of potential impacts from the proposed action has been provided.
- 1170) The proponent has concluded that subsidence impacts will be negligible as the shallowest target seam is approximately 170 m below ground (Attachment C10).
- 1171) The department notes that subsidence has been widely observed across the Surat CMA from CSG operations targeting coal seams both shallower and deeper than proposed for this action.
- 1172) The department notes that there are many springs, watercourse springs, potential GDEs and surface waterways within areas that could be impacted by subsidence by the action, and also by cumulative subsidence from the numerous gas fields in the region.
- 1173) The IESC noted that the subsidence assessment was inadequate as discussed in paragraph 1059)d) **1059)1059)d)**.
- 1174) The department agrees with the IESC that the information provided about subsidence impacts is inadequate. Baseline data will be needed, as will ongoing monitoring of ground surface changes to ensure impacts from the action are identified and remediated.
- 1175) The IESC indicated that subsidence monitoring methods used by OGIA would be suitable. These methods are summarised in Table 9 below sourced from the 2021 UWIR ([Underground Water Impact Report 2021 for the Surat Cumulative Management Area](#)).

1176) Table 9 Methods for monitoring subsidence.

Table 7-1: Methods for measuring ground movement

Method	Mode and frequency	Measured parameter	Suitability and practicality
InSAR	Satellite based, every 6 days	Change in elevation	- Measuring change over time (temporal monitoring) - Not suitable for establishing a digital terrain model - Some limitations in cultivated areas
Airborne LiDAR	Flight survey, when tasked	Absolute elevation	- Establishing digital terrain model and slopes (spatial measurement) - Not suitable for comparing absolute elevation from two different surveys at two different time periods - Some limitations in heavily vegetated areas
Drone LiDAR	Above-surface survey, when tasked	Absolute elevation	- Very similar to airborne LiDAR but with higher density of data points - More expensive than airborne LiDAR - Some limitations in heavily vegetated areas
Terrestrial survey	Physical on-ground survey, when tasked	Absolute elevation	- Similar to Drone LiDAR but most expensive - Some limitations in vegetative areas

Notes

LiDAR = light detection and ranging

1177) The department does not agree with the proponent's assessment of impacts from subsidence. The department considers that baseline and ongoing monitoring will be needed to address the concerns raised by the IESC and to manage potential impacts. The department notes that the Peat and Ironbark development areas are located within the area that OGIA is actively monitoring for subsidence based on the information contained in the Draft 2025 UWIR. As such, the department considers that these areas will not require additional conditions. However, the Spring Gully development areas are located on the edge of, and beyond, the current OGIA monitoring areas. These development areas also appear to be among the first CSG developments in their areas representing an expansion of the core area of CSG development. As such the department considers it essential that baseline data be collected and that ongoing monitoring occurs during the action as the early years of CSG development can be when some of the largest subsidence movements are observed.

Cumulative impacts

1178) The action is located adjacent numerous other CSG gas fields, and in regions where coal mining and agricultural activities occur, all of which contribute to the cumulative impact on water resources. Cumulative impacts can result in:

- a) additional groundwater drawdown

- b) higher levels of subsidence
- c) additional impacts on groundwater bores, GDEs and surface water systems.

1179) For surface water, as the action requires no changes to current permitted releases and is not going to extract surface water or divert waterways (Attachment C10), the cumulative impacts have been assessed and are managed under the existing approvals relating to the treated water processing facilities.

1180) For groundwater, as the impact assessment used the OGIA groundwater model, which is a regional scale model that includes other CSG and coal mining operations, cumulative impacts have been considered.

1181) Cumulative impacts on groundwater bores, EPBC-listed springs and springs supporting EPBC-listed species will be adequately managed through the JIF and OGIA processes.

1182) Other springs (non-EPBC-listed springs or not supporting EPBC-listed species), terrestrial GDEs and subterranean GDEs have had cumulative impacts assessed through the OGIA groundwater model. However, as discussed previously, the department has concerns about the lack of proposed monitoring and management measures in relation to specific identified water resources, due to several uncertainties affecting the prediction of, and management of, impacts on these water resources. The department considers that cumulative impacts on these water resources can be adequately managed through the JIF and OGIA processes in the future, if additional baseline data and monitoring requirements are put in place using additional conditions.

1183) Potential cumulative impacts on GDEs from subsidence will be managed through the proposed conditions relating to those aspects of the action.

1184) There are no expected cumulative impacts for chemical contamination.

Baseline monitoring

1185) Baseline monitoring for the action has been limited in relation to water resources as was noted in the IESC advice (Attachment J2) and comments received from Geoscience Australia (Attachment I5).

1186) The department considers that baseline data and ground truthing are essential elements for developing and implementing adequate monitoring and management plans. The baseline data and information provided for this action was not at the level that is typical of contemporary CSG actions.

1187) The proponent has not addressed the limited baseline data and lack of ground truthing in the final PER.

1188) The department considers that a range of conditions will be required to ensure suitable baseline data and ground truthing occurs prior to impacts occurring. These additional conditions will be important to ensure that site-specific data is available to allow the JIF standard conditions to function with maximum effectiveness.

Mitigation and management

1189) Management plans were provided in relation to produced water ([Attachment C11](#)). These plans relate to the requirements under relevant Queensland EAs and are already active.

1190) A groundwater monitoring and management plan ([Attachment C12](#)) specific to this action was provided. The plan is limited and only commits to undertaking monitoring and management as directed by OGIA. The commitments in the plan would likely align with requirements under the JIF standard conditions. However, the proposed Groundwater Monitoring and Management Plan will not address most of the concerns noted by the IESC, the inadequacies of baseline monitoring nor the uncertainties in impact prediction, monitoring and management noted previously. The department considers the plan inadequate.

1191) Monitoring and management of subsidence is not proposed unless the proponent is directed by OGIA to undertake monitoring. The department considers that this will not ensure adequate baseline monitoring data is obtained prior to potential impacts from this action, or that adequate ongoing monitoring of the Spring Gully development areas will occur as previously.

1192) The department considers the proposed mitigation and management measures will not be adequate. However, the department considers that adequate mitigation and management can be achieved through the proposed conditions.

Proposed conditions of approval – a water resource in relation to unconventional gas development and large coal mining development (sections 24D and 24E)

1193) The department notes that additional information provided by the proponent on 18 February 2026 (see paragraph 55)) has informed the detail of these conditions, by providing further information to inform risks of impacts on water resources.

1194) The full complement of proposed conditions can be found in the notice of proposed decision at [Attachment B](#).

1195) To manage impacts on water resources, the department recommends condition 2, which limits the action to a maximum of 1,695 production wells.

1196) As the gas target for the Spring Gully D development area, the Reids Dome Beds, is not explicitly included in the groundwater model, and due to the increased uncertainty of impacts in the area of the WCZ, the department recommends condition 3, which prohibits CSG production wells in the Spring Gully D development area under this approval.

- 1197) Due to the heightened potential for impacts on the Precipice Sandstone aquifer, an important source aquifer for many GDEs, the department recommends condition 3 which will prohibit CSG production wells being constructed close to the WCZ and ECZ respectively under this approval.
- 1198) In order to protect water resources from impacts from chemicals used to drill and hydraulically stimulate CSG production wells, the department recommends conditions 14 to 19. These conditions require strict adherence to the Chemical Risk Assessment (CRA), maintenance of a Register of Assessed Chemicals, frequent review of risk assessments for chemicals used, and regular peer review of the risk assessments.
- 1199) To address the lack of baseline data and proposed monitoring of subsidence the department recommends conditions 20 to 26. These conditions provide for:
- a) Baseline characterisation of Spring Gully A and B and development areas plus a 5 km buffer where current OGIA monitoring and modelling of subsidence impacts is limited (condition 20)
 - b) Provision of the information to the department prior to potential impact, along with the already collected but not provided baseline monitoring for Spring Gully C development area (condition 21)
 - c) Ongoing monitoring of the Spring Gully development areas throughout the life of the action with annual reporting requirements (condition 22)
 - d) Triggers for development of mitigation action plan which requires approval by the minister, and a requirement for its implementation (conditions 23 to 25)
 - e) A means for the minister, if not satisfied with the mitigation action plan, to require pausing of parts of the action (condition 26).
- 1200) To ensure adequate management of GDEs where the proponent is the assigned responsible tenure holder, (either now or in the future) under OGIA arrangements, or the identified responsible CSG operator under the relevant JIF management frameworks, the department recommends the inclusion of the standard JIF conditions (conditions 27 to 44). These conditions ensure the outcomes and sub-outcomes of the JIF are met and water resources protected through ongoing monitoring, risk assessment, mitigation and management.
- 1201) Due to the inadequate baseline data collection, ground truthing, assessment of impacts, and the higher risk of impact on specific other springs and watercourse springs, the department recommends the inclusion of conditions 45 to 54. These conditions provide for:
- a) Monitoring to occur at specific other springs and watercourse springs where the department's assessment has identified a heightened risk of impact (condition 45)
 - b) Baseline monitoring and field-verification at the identified sites (condition 46)
 - c) Provision of baseline information to the department prior to potential impact (condition 47)

- d) Ongoing monitoring throughout the life of the action at the identified sites (condition 48)
- e) A requirement to ensure the data collected at these springs is used in the trend monitoring that forms the basis of the JIF safety net (condition 49)
- f) A requirement to act upon unexpected trend monitoring results through updating risk assessments, provision of mitigation measures and outlining future monitoring and management in relation to the JIF (conditions 50 and 51)
- g) Clarification of requirements should any of the identified springs get an assigned responsible tenure holder throughout the life of the action (conditions 52 to 54).

1202) To address the inadequate assessment and proposed monitoring of potential impact on terrestrial and subterranean GDEs, the department recommends the inclusion of conditions 55 to 58. These conditions require field-verification of areas of terrestrial GDE identified as at high or medium risk by OGIA and a pilot study for stygofauna (condition 55), reporting to the department (conditions 56 and 57) and ongoing monitoring under the JIF required if groundwater dependence is confirmed (condition 58).

1203) Where conditions in addition to the JIF have been applied, the department has considered the following factors to limit duplication and ensure alignment whenever possible with the JIF and OGIA processes:

- a) whether the JIF covers the potential impact – chemicals and subsidence impacts are not managed as part of the JIF, nor is baseline data collection and water resource characterisation.
- b) location of the water resource – specified water resources are located within tenure or proximate to the proposed action making it more likely that any future responsible tenure holder assignment will be to the approval holder.
- c) data collection methodology – where possible data collection methods have been specified that are consistent with current OGIA methods. This will ensure that the data is compatible with the wider OGIA datasets and can contribute to OGIA's ongoing works.
- d) interoperability with the JIF – additional conditions have been designed to ensure data is collected that is able to be used to fulfil JIF conditions at a later time should the risk to the water resource become high or very high and escalate the requirements for management and mitigation under the JIF.

Conclusion – a water resource in relation to unconventional gas development and large coal mining development (sections 24D and 24E)

1204) The department considers that the potential impacts on water resources as a result of the action can be managed within acceptable limits provided all activities are conducted in accordance with the JIF, the CRA, the existing produced water management plan and the recommended conditions.

1205) Based on the information available to the department, including the discussion provided above, and assuming compliance with the proposed conditions of approval at Attachment B the department considers the proposed action will not have an unacceptable impact on a water resource, in relation to unconventional gas development and large coal mining development (sections 24D and 24E).

Economic and social matters – section 136(1)(b)

1206) Under subsection 136(1)(b) of the EPBC Act, in deciding whether or not to approve an action, and what conditions to attach to the approval, you must consider economic and social matters. Social and economic impacts of the proposed action are discussed in section 10 of the PER (Attachment C1).

1207) The proponent considers that the proposed action has the following key economic and social benefits, including:

- a) Construction employment
- b) Continuity of operational employment
- c) Opportunity to increase labour force participation and local skills capacity
- d) Employment and training opportunities for aboriginal peoples
- e) Continuity of population
- f) Opportunities for local and regional businesses to provide goods and services to the action
- g) Community investment
- h) Government royalties
- i) Landholder agreements and payments
- j) Supply of water for beneficial use
- k) Gas supply.

1208) The PER states that Australia Pacific LNG Pty Ltd continues to contribute positively to communities through social investment and partnerships. In 2024 Australia Pacific LNG Pty Ltd invested approximately \$3 million in community actions, bringing total investment at the time to \$64 million.

1209) The PER states that Australia Pacific LNG Pty Ltd contributes to regional economic participation by supporting local employment, apprenticeships, and procurement. More than 200 Origin employees live in the communities where it operates. Australia Pacific LNG Pty Ltd also state that they continue to support local, regional and Aboriginal and Torres Strait Islander suppliers, with a focus on suppliers based in the Maranoa, Western Downs and Banana Shire Local Government Areas. During 2024, 21% of total operational spend by Origin was made to businesses that are registered in the Local Government Areas close to the operated assets; and 99% of total operational spend was made to Australian businesses.

- 1210) The proponent states that Conduct and Compensation Agreements (CCAs) between Origin and landholders set out the requirements for how Origin enters land to carry out its activities and how landholders will be compensated. Origin negotiates CCAs, and in some instances may purchase or lease land to secure access for infrastructure and facilities. The PER states that during 2024, 32 CCAs were completed, bringing the total number of CCAs signed to 1,462.
- 1211) The PER states that Australia Pacific LNG Pty Ltd has continued its ongoing engagement with Traditional Owners, focusing on strengthening existing relationships and identifying opportunities for employment, capability building, and contractor engagement.
- 1212) According to the PER, since the first LNG shipment in 2016 through to 30 June 2025, Australia Pacific LNG Pty Ltd has paid AUD\$5.2 billion in income tax, royalties, stamp duties, and QLeave portable long service leave contributions. The PER further states that during the 2024 and 2025 financial years, Australia Pacific LNG Pty Ltd paid a total of AUD\$968 million in 2024 and expects to pay AUD\$1.9 billion for 2025 in taxes and royalties. Australia Pacific LNG Pty Ltd report in the PER that government royalties paid in the 2023 and 2024 financial years were AUD\$930 million and AUD\$760 million respectively, and in the 2025 financial year is expected to be AUD\$728 million.
- 1213) The proponent considers that the proposed action could potentially have the following negative economic and social impacts:
- a) Changes to Indigenous people's access to traditional Country or connection to cultural landscapes
 - b) Impacts on private land use or amenity
 - c) Potential to impact on important agricultural land
 - d) Impact on community amenity
 - e) Effects on transport facilities
 - f) Changes to the population or housing conditions relating to the action workforce
 - g) Increased cost of living due to inflationary pressure from higher incomes
 - h) Impact on local and regional businesses losing employees to the action
 - i) Increase in road movements impacting road safety
 - j) Concerns that workers accommodation facilities will foster antisocial behaviour and impact host communities
 - k) Increased demand for medical, health or emergency services
 - l) increased demand for community services and facilities (e.g., childcare and family support services)

- m) Reduced access to recreational areas
- n) Reduced amenity of recreation reserves
- o) Disruption of community events.

1214) The PER states that Australia Pacific LNG Pty Ltd works with stakeholders, including landholders, Traditional Owners, councils and government departments, to understand the potential for impacts on stakeholders' interests, values and assets, and avoid impacts wherever possible. Existing management systems and procedures are used to minimise the risk of economic and social impacts and ensure local communities' benefit from gas field development, including:

- a) the Health, Safety and Environment Assurance Management Plan
- b) compliance with International Finance Corporation performance standards and the Equator Principles
- c) a Community and Stakeholder Engagement Plan with dedicated staff implementing the plan
- d) Indigenous Land Use Agreements, Cultural Heritage Management Plans and partnership agreements with Traditional Owners
- e) workforce recruitment and development strategies, including a focus on locally based personnel
- f) a land use and land access action plan developed a part of Australia Pacific LNG Pty Ltd's Social Impact Management Plan, which provides guidance for minimising land and amenity impacts, and identifies means of sharing action benefits with directly impacted landholders
- g) regular engagement and partnerships with Councils and groups such as the Chinchilla Chamber of Commerce, Miles Chamber of Commerce and Tara Futures Group, Commerce Roma, Wandoan Chamber of Commerce, Advance Injune, Yuleba Development Group and Wallumbilla Town Improvement action group
- h) a Local Content policy aligned with the Australian Government's Australian Industry Participation Plan; and
- i) a Complaints and Grievance policy and procedure which enable resolution of operational issues affecting stakeholders.

1215) The department has considered economic and social matters in the assessment of the proposed action and in recommending the approval of the proposed decision.

Factors to be taken into account – section 136

136(2) In considering those matters, the minister must take into account:

Principles of ecologically sustainable development – section 136(2)(a)

1216) Section 10 of the PER (Economic and Social Matters) ([Attachment C1](#)), and PER Appendix L (Economic Assessment) ([Attachment C16](#)) provides a brief discussion on the principles of ecologically sustainable development (ESD).

1217) In deciding whether or not to approve the taking of an action and the conditions to attach to an approval, section 136(2)(a) of the EPBC Act provides that you are required to take into account the principles of ESD. The principles of ESD, as defined in Part 1, section 3A of the EPBC Act, are:

- a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;
- b) the principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- c) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making;
- d) improved valuation, pricing and incentive mechanisms should be promoted.

1218) In addition, section 391 of the EPBC Act provides that you must take into account the precautionary principle in deciding whether or not to approve the taking of an action. The precautionary principle requires that, if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

1219) In formulating this recommendation, the department has taken into account the principles of ecologically sustainable development. In particular:

- a) this report and the assessment documentation provided contain information on the long-term and short-term economic, environmental, social, and equitable considerations that are relevant to the decision and are presented for your consideration;
- b) any lack of certainty related to the potential impacts of the actions is addressed by conditions that restrict environmental impacts, impose strict monitoring, and adopt environmental

standards which, if not achieved, require the application of response mechanisms in a timely manner to avoid adverse impacts;

- c) the proposed conditions will ensure protection of EPBC listed species and communities, and the environment of Commonwealth land. Those conditions allow for the action to be delivered and operated in a sustainable way to protect the environment for future generations and preserve EPBC listed species and communities to in perpetuity;
- d) the department has considered the importance of conserving biological diversity and ecological integrity in relation to all the controlling provisions for this action, and the advice provided within this document reflects that consideration; and
- e) the department's advice includes reference to and consideration of a range of information on the economic costs, benefits and impacts of the action. Based on the reference to relevant Queensland Government Planning and policy documents in the assessment documentation, the action has considered evaluation, pricing, and incentive mechanism, relevant to the action.

1220) In accordance with section 136(2)(bc)(ii), this document forms the Recommendation Report relating to the action given to the minister in accordance with section 95C.

Public environment report – section 136(2)(c)

1221) In accordance with section 136(2)(c)(i), the finalised environment public environment report relating to the action given to the minister under section 99 is at Appendix C1.

1222) In accordance with section 136(2)(c)(ii), this document forms the Recommendation Report relating to the action given to the minister under section 100.

Relevant comments – section 136(2)(f)

1223) Under section 131, the minister must invite other ministers to give comments on the proposed decision within 10 business days.

1224) The ministers proposed to be invited to comment are:

- Senator the Hon Malarndirri McCarthy, Minister for Indigenous Australians (Attachment H2)
- The Hon Madeleine King MP, Minister for Resources and Minister for Northern Australia (Attachment H3)
- The Hon Chris Bowen MP, Minister for Climate Change and Energy (Attachment H4)
- The Hon Julie Collins MP, Minister for Agriculture, Fisheries and Forestry (Attachment H5)

- **s. 47F(1)** Queensland Department of Environment, Tourism, Science and Innovation, on behalf of the Hon Andrew Powell, the Queensland Minister for Environment and Tourism and Minister for Science and Innovation ([Attachment H6](#))

1225) The department considers that these ministers may have administrative responsibilities relating to the action.

1226) Under section 131AA(1), the proponent will be invited to give the minister comments on the proposed decision and recommended conditions of approval within 10 business days of the proposed decision date.

Relevant advice – section 136(2)(fa)

1227) On 21 December 2021 the department submitted the draft PER to the IESC for advice on the proposed action's potential impacts on water resources ([Attachment J1](#)). The IESC accepted this request on 22 December 2021.

1228) On 6 February 2022 the IESC provided advice on the potential impacts of the proposed action on water resources ([Attachment J2](#)).

1229) The proponent's memo provided in response to this advice is provided at [Attachment C20](#).

1230) The key potential impacts are identified with the IESC advice and are discussed at paragraphs 1057) to 1059)1053).

Other matters for decision making

Person's environmental history – section 136(4)

s136(4) In deciding whether or not to approve the taking of an action by a person, and what conditions to attach to an approval, the minister may consider whether the person is a suitable person to be granted an approval, having regard to:

- a) the person's history in relation to environmental matters; and*
- b) if the person is a body corporate – the history of its executive officers in relation to environmental matters; and*
- c) if the person is a body corporate that is a subsidiary of another body or company (the parent body) – the history in relation to environmental matters of the parent body and its executive officers.*

1231) The minister may consider whether the person proposing to take an action is a suitable person to be granted an approval. The minister can give consideration to a person's history in relation to environmental matters, and if the person is a body corporate, the history of the executive officers, and if relevant, the history of the parent company and its executive officers in relation to environmental matters.

1232) The PER ([Attachment C1](#)) states that Australia Pacific LNG Pty Ltd is committed to responsible environmental management and has in place a Health, Safety and Environment (HSE) Management Systems which helps to govern all activities and ensure continual improvement in managing environmental risks. The proponent states that through implementation of the HSE management, Australia Pacific LNG Pty Ltd is dedicated to ensuring that its actions are delivered and operated in an environmentally and socially responsible manner.

1233) The proponent states in the PER that Australia Pacific LNG Pty Ltd strives to comply with all environmental regulations and approval conditions and promptly report any non-compliance to relevant authorities. To increase its understanding and improve its company-wide performance, Australia Pacific LNG Pty Ltd maintains a register of all environmental incidents, observations and good practices.

1234) The department is not aware of any contraventions of the EPBC Act, any proceedings under a Commonwealth State or Territory Law for the protection of the environment or the conservation and sustainable use of natural resources or other reasons why the proponent would not be suitable to be granted an approval in consideration of the factors set out in section 136(4) of the EPBC Act. Further due diligence is underway and will be presented to you prior to recommending a final decision on this matter.

1235) The proponent has disclosed in the PER that in July 2023, the Queensland environmental regulator accepted an enforceable undertaking from Australia Pacific LNG Pty Ltd as a means of resolving proceedings brought in relation to alleged offences relating to incidents occurring in 2020 whereby water (captured and resuspended solids and salts) was released to land and waters.

Minister not to consider other matters – section 136(5)

s136(5) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the minister must not consider any matters that the minister is not required or permitted to consider by Division 1, Part 9 of the EPBC Act.

Threatened species and endangered communities – section 139

s139(1) In deciding whether or not to approve for the purposes of a subsection of section 18 or section 18A the taking of an action, and what conditions to attach to such an approval, the minister must not act inconsistently with:

- a) Australia's obligations under:*
 - i) the Biodiversity Convention; or*
 - ii) the Apia Convention; or*
 - iii) CITES; or*
- b) a recovery plan or threat abatement plan.*

s139(2) If:

- c) the minister is considering whether to approve, for the purposes of a subsection of section 18 or section 18A, the taking of an action; and*
- d) the action has or will have, or is likely to have, a significant impact on a particular listed threatened species or a particular listed threatened ecological community;*

the minister must, in deciding whether to so approve the taking of the action, have regard to any approved conservation advice for the species or community.

Biodiversity Convention

- 1236) The objectives of the [Biodiversity Convention](#), to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.
- 1237) The recommendations in this report are not considered by the department to be inconsistent with the Biodiversity Convention, which promotes environmental impact assessment (such as this process) to avoid and minimise adverse impacts on biological diversity. The department has also given particular consideration to an appropriate combination of avoidance and mitigation measures for the management of species potentially impacted by the proposed action.
- 1238) The Biodiversity Convention has been considered in, and is not inconsistent with, the recommended approval which requires avoidance, mitigation, and management measures for listed threatened species and communities. The recommended approval requires information related to the proposed action to be publicly available to ensure equitable sharing of information and improved knowledge relating to Biodiversity.

Apia Convention

- 1239) The [Convention on the Conservation of Nature in the South Pacific](#) (Apia Convention) encourages the creation of protected areas which together with existing protected areas will safeguard representative samples of the natural ecosystems occurring therein (particular attention being given to endangered species), as well as superlative scenery, striking geological formations, and regions and objects of aesthetic interest or historic, cultural, or scientific value.
- 1240) The Apia Convention was suspended with effect from 13 September 2006. While this Convention has been suspended, Australia's obligations under the Convention have been taken into consideration. The recommendations are not inconsistent with the Convention which has the general aims of conservation of Biodiversity.

International trade in endangered species

- 1241) The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.
- 1242) The recommendations are not inconsistent with CITES as the proposed action does not involve international trade.

Recovery Plans and Threat Abatement Plans

- 1243) The Recovery Plans relevant to the proposed action and assessment are:

- a) Fensham, R.J., W.F. Ponder & R.J. Fairfax (2010). *Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*. Report to Department of the Environment, Water, Heritage and the Arts, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin - DCCEEW](#)
- b) Department of Climate Change, Energy, the Environment and Water (2022). *National Recovery Plan for the Australian Painted Snipe* (*Rostratula australis*). Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [National Recovery Plan for the Australian Painted Snipe \(Rostratula australis\) - DCCEEW](#)
- c) Department of Environment and Resource Management (2012). *National recovery plan for the Red Goshawk* *Erythroriorchis radiatus*. Report to the Department of Sustainability, Environment, Water, Population and Communities, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the Red Goshawk \(Erythroriorchis radiatus\) - DCCEEW](#)
- d) Department of Agriculture, Water and the Environment (2021). *National Recovery Plan for the Painted Honeyeater* (*Grantiella picta*). Department of Agriculture, Water and the Environment, Canberra. Available from: [National Recovery Plan for the Painted Honeyeater \(Grantiella picta\) - DCCEEW](#)
- e) Department of Agriculture, Water and the Environment (2020). *National Recovery Plan for the White-throated Snapping Turtle* (*Elseya albagula*). Commonwealth of Australia, Canberra. Available at: [National Recovery Plan for the White-throated Snapping Turtle \(Elseya albagula\) - DCCEEW](#).
- f) Department of Agriculture, Water and the Environment (2022). *National Recovery Plan for the Koala* *Phascolarctos cinereus* (combined populations of Queensland, New South Wales, and the Australian Capital Territory). Department of Agriculture, Water and the Environment, Canberra. Available at: [National Recovery Plan for the Koala Phascolarctos cinereus \(combined populations of Queensland, New South Wales and the Australian Capital Territory\) - DCCEEW](#)
- g) Department of Environment and Resource Management (2011). *National recovery plan for the large-eared pied bat* *Chalinolobus dwyeri*. Report to the Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [National recovery plan for the large-eared pied bat Chalinolobus dwyeri - DCCEEW](#)
- h) Department of Agriculture, Water and the Environment (2021). *National Recovery Plan for the Grey-headed Flying-fox* *Pteropus poliocephalus*. Commonwealth of Australia, Canberra. Available at: [National Recovery Plan for the Grey-headed Flying-fox Pteropus poliocephalus - DCCEEW](#)

- i) Black-throated Finch Recovery Team, Department of Environment and Climate Change (NSW) and Queensland Parks and Wildlife Service (2007). *National recovery plan for the black-throated finch southern subspecies* *Poephila cincta cincta*. Report to the Department of the Environment and Water Resources, Canberra. Department of Environment and Climate Change (NSW), Hurstville and Queensland Parks and Wildlife Service, Brisbane. Available at: [National recovery plan for the Black-throated finch southern subspecies \(Poephila cincta cincta\) - DCCEEW](#)
 - j) Queensland Herbarium (2007). *National Multi-species Recovery Plan for the cycads*, *Cycas megacarpa*, *Cycas ophiolitica*, *Macrozamia cranei*, *Macrozamia lomandroides*, *Macrozamia pauli-guilielmi* and *Macrozamia platyrhachis*. Report to Department of the Environment and Water Resources, Canberra. Queensland Parks and Wildlife Service, Brisbane. Available at: [National Multi-species Recovery Plan for the cycads, Cycas megacarpa, Cycas ophiolitica, Macrozamia cranei, Macrozamia lomandroides, Macrozamia pauli-guilielmi and Macrozamia platyrhachis - DCCEEW](#)
 - k) National Murray Cod Recovery Team (2010). *National Recovery Plan for the Murray Cod* *Maccullochella peelii peelii*. Department of Sustainability and Environment, Melbourne. Available at: [National Recovery Plan for the Murray Cod \(Maccullochella peelii peelii\) - DCCEEW](#)
 - l) Hill, B.M. & S.J. Ward (2010). *National Recovery Plan For the Northern Quoll* *Dasyurus hallucatus*. Department of Natural Resources, Environment, The Arts and Sport, Darwin. Available at: [National Recovery Plan for the Northern Quoll \(Dasyurus hallucatus\) - DCCEEW](#)
 - m) McDonald, W.J.F (2010). National recovery plan for the "Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions" ecological community. Report to Department of the Environment, Water, Heritage and the Arts, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the "Semi-evergreen vine thickets of the Brigalow Belt \(North and South\) and Nandewar Bioregions" ecological community - DCCEEW](#)
 - n) Department of Environment, Climate Change and Water NSW (2010). *National Recovery Plan for White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Department of Environment, Climate Change and Water NSW, Sydney. Available at: [White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland National Recovery Plan - DCCEEW](#)
- 1244) These Recovery Plans are listed in the Statutory Documents Report ([Attachment K](#)) and are provided as appendices to this report at ([Attachment D19](#), [D23](#), [D26](#), [D28-D32](#), [D34-D38](#) and [D62](#)). This Recommendation Report provides a discussion of the Recovery Plans in respect of each listed threatened species and community (paragraphs 117) to 1041))1041).
- 1245) The Threat Abatement Plans relevant to the proposed action are:

- a) Department of Sustainability, Environment, Water, Population and Communities (2011). *Threat abatement plan for the biological effects, including lethal toxic ingestions, caused by cane toads*. Canberra, ACT: Commonwealth of Australia. Available at: [Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads - DCCEEW](#)
 - b) Department of Environment and Energy (2017). *Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (Sus scrofa) (2017)*. Department of Environment and Energy, Commonwealth of Australia, 2017. Available at: [Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs \(Sus scrofa\) \(2017\) – DCCEEW](#)
 - c) Department of the Environment and Energy (2016). *Threat abatement plan for competition and land degradation by rabbits*. Canberra, ACT: Commonwealth of Australia. Available from: [Threat abatement plan for competition and land degradation by rabbits - DCCEEW](#)
 - d) Department of the Environment, Water, Heritage and the Arts (2008). *Threat abatement plan for competition and land degradation by unmanaged goats*. DEWHA, Canberra. Available at: [Competition and land degradation by unmanaged goats - DCCEEW](#)
 - e) Department of Climate Change, Energy, the Environment and Water (2024), *Threat abatement plan for predation by feral cats 2024*. Canberra: Commonwealth of Australia. Available at: [Threat abatement plan for predation by feral cats - DCCEEW](#)
 - f) Department of the Environment, Water, Heritage and the Arts (2008). *Threat abatement plan for predation by the European red fox*. DEWHA, Canberra. Available at: [Threat abatement plan for predation by European red fox - DCCEEW](#)
 - g) Department of Sustainability, Environment, Water, Population and Communities (2012). *Threat abatement plan to reduce the impacts on northern Australia's Biodiversity by the five listed grasses*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Threat abatement plan to reduce the impacts on northern Australia's Biodiversity by the five listed grasses - DCCEEW](#)
 - h) Department of the Environment and Energy (2018). *Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomi*. Commonwealth of Australia, Canberra. Available at: [Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomi - 2018 - DCCEEW](#)
- 1246) These Threat Abatement Plans are provided as appendices to this report at [Attachment E1 to Attachment E8](#). This Recommendation Report provides a discussion of Threat Abatement Plans in respect of each listed threatened species and community to which the Threat Abatement Plan is relevant (paragraphs 117) to 1041))1041).
- 1247) The department has considered all relevant Recovery Plans and Threat Abatement Plans and is of the view that approval of this action would not be inconsistent with the above obligations.

Conservation Advice

1248) The approved conservation advices relevant to the proposed action are:

- a) Department of the Environment (2013). *Approved Conservation Advice for the Brigalow (Acacia harpophylla dominant and co-dominant) ecological community*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for the Brigalow \(Acacia harpophylla dominant and co-dominant\) ecological community](#)
- b) Department of Sustainability, Environment, Water, Population and Communities (2011). *Approved Conservation Advice for Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions ecological community*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Approved Conservation Advice for Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions ecological community](#)
- c) Department of the Environment and Energy (2019). *Conservation Advice (including listing advice) for the Poplar Box Grassy Woodland on Alluvial Plains*. Department of the Environment and Energy, Canberra. Available at: [Conservation Advice \(including listing advice\) for the Poplar Box Grassy Woodland on Alluvial Plains](#)
- d) Department of the Environment, Water, Heritage and the Arts (2009). *Approved Conservation Advice for Weeping Myall Woodlands ecological community*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for Weeping Myall woodlands ecological community](#)
- e) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for the Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Approved Conservation Advice for the Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin](#)
- f) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Acacia curranii (Curly-bark Wattle)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Acacia curranii \(Curly-bark Wattle\)](#)
- g) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Acacia lauta*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Acacia lauta](#)
- h) Threatened Species Scientific Committee (2016). *Conservation Advice Bertya opponens*. Department of the Environment and Energy, Canberra. Available at: [Conservation Advice Bertya opponens](#)

- i) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Cadellia pentastylis (Ooline)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Cadellia pentastylis \(Ooline\) - DCCEEW](#).
- j) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Dichanthium setosum*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [14159 - Approved Conservation Advice for Dichanthium setosum](#)
- k) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Eriocaulon carsonii (salt pipewort)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Eriocaulon carsonii \(salt pipewort\)](#)
- l) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Eucalyptus virens*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for Eucalyptus virens](#)
- m) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Homopholis belsonii*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Homopholis belsonii](#)
- n) Department of the Environment (2013). *Approved Conservation Advice for Thesium australe (austral toadflax)*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for Thesium australe \(austral toadflax\)](#)
- o) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Xerothamnella herbacea*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Xerothamnella herbacea](#)
- p) Department of Sustainability, Environment, Water, Population and Communities (2013). *Approved Conservation Advice for Rostratula australis (Australian painted snipe)*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Approved Conservation Advice for Rostratula australis](#)
- q) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Erythrorchis radiatus (Red Goshawk)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation advice Erythrorchis radiatus \(Red Goshawk\)](#)
- r) Department of the Environment (2015). *Conservation Advice Grantiella picta painted honeyeater*. Department of the Environment, Canberra. Available at: [Conservation Advice - painted honeyeater \(Grantiella picta\)](#)

- s) Threatened Species Scientific Committee (2015). *Conservation Advice* Geophaps scripta scripta *Squatter Pigeon (southern)*. Department of the Environment, Canberra. Available at: [Conservation Advice Geophaps scripta scripta Squatter Pigeon \(southern\) - DCCEEW](#)
- t) Threatened Species Scientific Committee (2020). *Conservation Advice* Falco hypoleucos *Grey Falcon*. Department of Agriculture, Water and the Environment, Canberra. Available at: [Conservation Advice Falco hypoleucos Grey Falcon](#)
- u) Department of the Environment (2014). *Approved Conservation Advice for* Denisonia maculata *(Ornamental Snake)*. Canberra: Department of the Environment. Available at: [Approved Conservation Advice for Denisonia maculata \(Ornamental Snake\) - DCCEEW](#).
- v) Department of the Environment (2014). *Approved Conservation Advice for* Furina dunmallii *(Dunmall's Snake)*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for Furina dunmalli \(Dunmall's Snake\)](#)
- w) Department of the Environment (2014). *Approved Conservation Advice for* Egernia rugosa *(Yakka Skink)*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for Egernia rugosa \(Yakka Skink\)](#)
- x) Department of Climate Change, Energy, the Environment and Water (2024). *Conservation Advice for* Rheodytes leukops *(Fitzroy River turtle)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Rheodytes leukops \(Fitzroy River turtle\)](#)
- y) Department of the Environment (2014). *Conservation Advice* Elseya albagula *White-throated snapping turtle*. Canberra: Department of the Environment. Available at: [Conservation Advice - Elseya albagula - White-throated snapping turtle](#)
- z) Threatened Species Scientific Committee (2016). *Conservation Advice* Adclarkia cameroni *brigalow woodland snail*. Department of the Environment and Energy, Canberra. Available at: [Conservation Advice Adclarkia cameroni brigalow woodland snail](#)
- aa) Threatened Species Scientific Committee (2016). *Conservation Advice* Adclarkia dulacca *Dulacca woodland snail*. Department of the Environment and Energy, Canberra. Available at: [Adclarkia dulacca — Dulacca Woodland Snail](#)
- bb) Department of Agriculture, Water and the Environment (2022). *Conservation Advice for* Phascolarctos cinereus *(Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory*. Department of Agriculture, Water and the Environment, Canberra. Available at: [Conservation Advice for Phascolarctos cinereus \(Koala\) combined populations of Queensland, New South Wales and the Australian Capital Territory](#)
- cc) Department of Climate Change, Energy, the Environment and Water (2022). *Conservation Advice for* Petauroides volans *(greater glider (southern and central))*. Department of Climate

Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Petauroides volans \(greater glider \(southern and central\)\)](#)

- dd) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Chalinolobus dwyeri \(large-eared pied bat\)](#)
- ee) Department of the Environment (2014). *Approved Conservation Advice for Acacia grandifolia*. Canberra: Department of the Environment. Available at: [Approved Conservation Advice for Acacia grandifolia](#)
- ff) Department of the Environment (2014). *Approved Conservation Advice for Aristida annua (a tufted grass)*. Canberra: Department of the Environment. Available at: [Approved Conservation Advice for Aristida annua \(a tufted grass\)](#)
- gg) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Eucalyptus beaniana*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Eucalyptus beaniana](#)
- hh) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Delma torquata (Collared Delma)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Delma torquata \(Collared Delma\)](#)
- ii) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Calidris ferruginea (curlew sandpiper)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Calidris ferruginea \(curlew sandpiper\)](#)
- jj) Threatened Species Scientific Committee (2016). *Conservation Advice Macroderma gigas ghost bat*. Department of the Environment, Canberra. Available at: [174 - Conservation Advice Macroderma gigas Ghost bat - approved 5 May 2016](#)
- kk) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Arthraxon hispidus (Hairy-joint Grass)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Arthraxon hispidus \(Hairy-joint Grass\)](#)
- ll) Department of Sustainability, Environment, Water, Population and Communities (2013). *Approved Conservation Advice for Dichanthium queenslandicum (king blue-grass)*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Approved Conservation Advice for Dichanthium queenslandicum \(king blue-grass\)](#)

- mm) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Marsdenia brevifolia*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for Marsdenia brevifolia](#)
- nn) Department of Climate Change, Energy, the Environment and Water (2024). *Conservation Advice for Maccullochella peelii (Murray cod)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Maccullochella peelii \(Murray cod\)](#)
- oo) Department of the Environment, Water, Heritage and the Arts (2009). *Approved Conservation Advice for Natural grasslands of the Queensland Central Highlands and the northern Fitzroy Basin*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for natural grasslands of the Queensland Central Highlands and northern Fitzroy Basin](#)
- pp) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Approved Conservation Advice for Semi-evergreen Vine Thickets of the Brigalow Belt \(North and South\) and Nandewar Bioregions](#)
- qq) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Neochmia ruficauda ruficauda (Star Finch (eastern))*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [26027 - Approved Conservation Advice for Neochmia ruficauda ruficauda \(Star Finch \(eastern\)\)](#)
- rr) Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Tylophora linearis*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Tylophora linearis](#)
- ss) Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Approved Conservation Advice for the White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland](#)
- tt) Threatened Species Scientific Committee (2019). *Conservation Advice Hirundapus caudacutus White-throated Needletail*. Department of the Environment and Energy, Canberra. Available at: [682 – conservation advice – Hirundapus caudacutus - 27 February 2019](#)
- uu) Threatened Species Scientific Committee (2015). *Conservation Advice Nyctophilus corbeni south-eastern long-eared bat*. Department of the Environment, Canberra. Available at: [Conservation Advice Nyctophilus corbeni](#)

1249) These approved conservation advices are provided as an Appendix to this report at ([Attachment D1-D18](#), [D20-D22](#), [D24](#), [D25](#), [D27](#), [D39-D61](#)).

1250) The department has had regard to the approved conservation advices relevant to the proposed action and has given consideration to the likely impacts of the proposed action on listed threatened species and endangered ecological communities. The department is of the view that approval of this action would not be inconsistent with the conservation advices.

Migratory species – section 140

s140 In deciding whether or not to approve for the purposes of section 20 or 20A the taking of an action relating to a listed migratory species, and what conditions to attach to such an approval, the minister must not act inconsistently with Australia's obligations under whichever of the following conventions and agreements because of which the species is listed:

- a) *the Bonn Convention;*
- b) *CAMBA;*
- c) *JAMBA;*
- d) *an international agreement approved under subsection 209(4).*

The Bonn Convention

1251) The [Convention on the Conservation of Migratory Species of Wild Animals](#) (Bonn Convention) aims to conserve terrestrial, aquatic, and avian migratory species throughout their range.

1252) The recommendations are not considered by the department to be inconsistent with the Bonn Convention. The department has also given particular consideration to an appropriate combination of avoidance and mitigation measures for the management of species potentially impacted by the proposed action.

1253) The Bonn Convention has been considered in, and is not inconsistent with, the recommended approval which requires avoidance, mitigation, and management measures for listed migratory species. The recommended approval requires information related to the proposed action to be publicly available to ensure equitable sharing of information and improved knowledge relating to Biodiversity.

China-Australia Migratory Bird Agreement

1254) The [China-Australia Migratory Bird Agreement](#) (CAMBA) lists terrestrial, water and shorebird species which migrate between Australia and the respective countries. In both cases the majority of listed species are shorebirds.

1255) The agreement requires the parties to protect migratory birds by:

- limiting the circumstances under which migratory birds are taken or traded;
- protecting and conserving important habitats;
- exchanging information; and
- building cooperative relationships.

1256) The CAMBA has been considered in, and is not inconsistent with, the recommended approval which requires avoidance, mitigation, and management measures for listed migratory. The recommended approval requires information related to the proposed action to be publicly available to ensure equitable sharing of information and improved knowledge relating to Biodiversity.

Japan-Australia Migratory Bird Agreement

1257) The [Japan-Australia Migratory Bird Agreement](#) (JAMBA) lists terrestrial, water and shorebird species which migrate between Australia and the respective countries. In both cases the majority of listed species are shorebirds.

1258) The agreement requires the parties to protect migratory birds by:

- limiting the circumstances under which migratory birds are taken or traded;
- protecting and conserving important habitats;
- exchanging information; and
- building cooperative relationships.

1259) The JAMBA has been considered in, and is not inconsistent with, the recommended approval which requires avoidance, mitigation, and management measures for listed migratory. The recommended approval requires information related to the proposed action to be publicly available to ensure equitable sharing of information and improved knowledge relating to Biodiversity.

Other International Agreements

Republic of Korea-Australia Migratory Bird Agreement

1260) The [Republic of Korea-Australia Migratory Bird Agreement](#) (ROKAMBA) lists terrestrial, water and shorebird species which migrate between Australia and the respective countries. In both cases the majority of listed species are shorebirds.

1261) The [ROKAMBA](#) requires the parties to protect migratory birds by:

- limiting the circumstances under which migratory birds are taken or traded;
- protecting and conserving important habitats;
- exchanging information; and

- building cooperative relationships.

1262) The ROKAMBA has been considered in, and is not inconsistent with, the recommended approval which requires avoidance, mitigation, and management measures for listed migratory. The recommended approval requires information related to the proposed action to be publicly available to ensure equitable sharing of information and improved knowledge relating to Biodiversity.

Bioregional plans - section 176(5)

s176(5) Subject to this Act (the EPBC Act), the minister must have regard to a bioregional plan in making any decision under this Act (the EPBC Act) to which the plan is relevant.

1263) The proposed action is not located within or near an area designated by a bioregional plan. The department considers that there are no bioregional plans relevant to the proposed action.

Conditions of approval – section 134

s134(1) The minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:

- a) protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or*
- b) repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage has been, will be or is likely to be caused by the action).*

Department's recommended conditions

1264) The department has considered the likely scope and severity of the impacts on matters of national environmental significance, and the proposed avoidance and mitigation measures, and determined that it is likely the proposed action will result in significant residual impact on listed threatened species and ecological communities.

1265) The approach taken by the department in recommending conditions for this action reflects two inherent aspects of coal seam gas development:

- the uncertainty of the pace and direction in which the gas resource will be developed, which depends on the nature of the resource itself as well as market conditions over a long time period
- the flexibility afforded by relatively narrow infrastructure corridors arranged across a vast landscape, combined with a range of available drilling techniques, to avoid particular features

1266) The department is confident that the conditions recommended will provide sufficient flexibility for the action to proceed without causing unacceptable impacts.

1267) The department has also considered the conditions imposed or likely to be imposed by Queensland Department of Environment, Science, Tourism and Innovation (DETSI), as described in the Environmental Authorities to the PER ([Attachment C18](#)). The department considers that the conditions described are not sufficient to manage the significant residual impacts on matters of national environmental significance resulting from the proposed action.

1268) After consideration of the above, the department considers that conditions under the EPBC Act are necessary or convenient to ensure the adequate protection or mitigation of damage to matters of national environmental significance resulting from the proposed action. As such, the department is proposing to apply approval conditions to this action, as detailed in the decision notice at Attachment B. The key conditions relating to protected matters have been discussed under each controlling provision.

1269) The conditions of approval proposed at Attachment B meet the section 134(1) tests as they are necessary for protecting, repairing and mitigation damage to listed threatened species and ecological communities, which are all matters protected by a provision of Part 3 for which the approval has effect.

Additional considerations for conditions

1270) In accordance with section 134(4), in deciding whether to attach a condition to an approval, the minister must consider all of the following:

s134(4)(a) Any relevant conditions that have been imposed, or the minister considers are likely to be imposed, under a law of a state or self-governing territory or another law of the Commonwealth on the taking of the action.

1271) The Queensland Environmental Authorities (EA) for the proposed action (Attachment C18) sets out conditions imposed for the proposed action by the Queensland Department of Environment, Tourism, Science and Innovation under the *Environmental Protection Act 1994*. The department has considered these conditions, to the extent they are relevant to the matters of national environmental significance and is of the view that the proposed conditions of approval at Attachment B are not inconsistent with the Queensland EA requirements. Further, the department has developed the proposed conditions of approval to avoid duplication with the Queensland EA conditions and other relevant Queensland legislation.

s134(4)(aa) Information provided by the person proposing to take the action or by the designated proponent of the action.

1272) Documentation provided by the proponent taking the action/designated proponent is at Attachment C1 to Attachment C22. This information has been taken into account in drafting this recommendation. The proponent will be given 10 business days to comment on the proposed decision and conditions of approval, and the comments provided by the proponent will be included in the final approval decision briefing package for consideration.

s134(4)(b) The desirability of ensuring as far as practicable that the condition is a cost-effective means for the Commonwealth and the person taking the action to achieve the object of the condition.

- 1273) The department considers that the proposed conditions are, as far as practicable, a cost-effective means for the Commonwealth and the person proposing the action to achieve the objectives of the conditions.

Material used to prepare this report

1274) In preparing this recommendation, the department has had regard to:

- a) Referral documentation and attachments.
- b) Final assessment documentation.
- c) Public submissions on assessment documentation.
- d) Information in the department's Species Profile and Threats database.
- e) Relevant statutory documents.

Attachments

Recommendation Report (This document)

Proposed approval decision DO NOT SIGN

PER

Conservation Advices and Recovery Plans

Threat Abatement Plans

Significant Impact Guidelines

Other departmental documents

Letters to relevant parties **FOR SIGNATURE**

- a. Letter to Proponent
- b. Letter to Minister for Indigenous Australians
- c. Letter to Minister for Resources and Minister for Northern Australia
- d. Letter to Minister for Climate Change
- e. Letter to Minister for Agriculture, Fisheries and Forestry
- f. Letter to Queensland Department of Environment, Tourism, Science and Innovation

Referral Information

IESC Advice

Statutory Document Report

Environmental History Check

Reconsideration Decision

Stop Clock

Variation

Gas Supply Security Project (EPBC 2020/8856) - Proposed decision package

Attachment	Name	Document description
QA Check	2020-8856-Proposed Decision-QA Check.docx	
Brief	2020-8856-Proposed Decision-Brief.docx	FOR SIGNATURE
Recommendation Report		
Attachment A	2020-8856-Proposed Decision-Att A-Recommendation Report.docx	
Notice		
Attachment B	2020-8856-Proposed Decision-Att B-Decision Notice.docx	DO NOT SIGN
Public Environment Report		
Attachment C1	2020-8856-Proposed Decision-Att C1-Public Environment Report	
Attachment C2	2020-8856-Proposed Decision-Att C2-Appendix A Environmental Constraints Protocol	
Attachment C3	2020-8856-Proposed Decision-Att C3-Appendix B2 Habitat Modelling Methods	
Attachment C4	2020-8856-Proposed Decision-Att C4-Appendix B3 Probabilistic Land Disturbance Methods	
Attachment C5	2020-8856-Proposed Decision-Att C5-Appendix B4 Species Profiles and Mapping	
Attachment C6	2020-8856-Proposed Decision-Att C6-Appendix B5 Significant Impact Assessments	
Attachment C7	2020-8856-Proposed Decision-Att C7-Appendix C Environmental Management Plan	
Attachment C8	2020-8856-Proposed Decision-Att C8-Appendix D Rehabilitation Management Plan	
Attachment C9	2020-8856-Proposed Decision-Att C9-Appendix E Offsets Strategy	
Attachment C10	2020-8856-Proposed Decision-Att C10-Appendix F Water Assessment	
Attachment C11	2020-8856-Proposed Decision-Att C11-Appendix G Produced Water Management Plan	
Attachment C12	2020-8856-Proposed Decision-Att C12-Appendix H Groundwater Monitoring and Management Plan	
Attachment C13	2020-8856-Proposed Decision-Att C13-Appendix I Chemical Risk Assessment	
Attachment C14	2020-8856-Proposed Decision-Att C14-Appendix J GHG Emissions Inventory	
Attachment C15	2020-8856-Proposed Decision-Att C15-Appendix K Social Assessment	
Attachment C16	2020-8856-Proposed Decision-Att C16-Appendix L Economic Assessment	
Attachment C17	2020-8856-Proposed Decision-Att C17-Appendix M Stage 1 Assessment	
Attachment C18	2020-8856-Proposed Decision-Att C18-Appendix N Environmental Authorities	
Attachment C19	2020-8856-Proposed Decision-Att C19-Appendix O Guidelines for Draft PER	
Attachment C20	2020-8856-Proposed Decision-Att C20-Appendix P Response to IESC Advice	
Attachment C21	2020-8856-Proposed Decision-Att C21-Appendix Q-Response to Public Submissions	
Attachment C22	2020-8856-Proposed Decision-Att C22-Appendix B1 MNES Likelihood of Occurrence	
Conservation Advice and Recovery Plans		
Attachment D1	Approved Conservation Advice for the Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) ecological community (2013)	
Attachment D2	Conservation Advice for the Poplar Box Grassy Woodland on Alluvial Plains (2019)	
Attachment D3	Approved Conservation Advice for the Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin	
Attachment D4	Approved Conservation Advice for <i>Acacia laeta</i> (Tara Wattle)	
Attachment D5	Conservation Advice <i>Bertya opposens</i> (2016)	
Attachment D6	Approved Conservation Advice for <i>Cadellia pentastylis</i> (Ooline)	
Attachment D7	Conservation advice for <i>Eucalyptus virens</i>	
Attachment D8	Approved Conservation Advice for <i>Homopholis belsonii</i>	
Attachment D9	Approved Conservation Advice for <i>Thesium australe</i> (austral toadflax) (2013)	
Attachment D10	Approved conservation advice for <i>Xerothermella herbacea</i> (2008)	
Attachment D11	Approved Conservation Advice for <i>Rostratula australis</i> (Australian painted snipe) (2013)	
Attachment D12	Conservation Advice <i>Grantiella picta</i> painted honeyeater	
Attachment D13	Conservation Advice (<i>Geophaps scripta scripta</i>) squatter pigeon (southern) (2015)	
Attachment D14	Approved Conservation Advice for <i>Denisonia maculata</i> (Ornamental Snake) (2014)	
Attachment D15	Approved Conservation Advice for <i>Egernia rugosa</i> (Yakka Skink) (2014)	
Attachment D16	Approved Conservation Advice for <i>Furina dunmalli</i> (Dunmall's snake) (2014)	
Attachment D17	Conservation Advice for <i>Rheodytes leukops</i> (Fitzroy River turtle) (2024)	
Attachment D18	Conservation Advice <i>Elseya albagula</i> White-throated snapping turtle (2014)	
Attachment D19	National Recovery Plan for the White-throated Snapping Turtle (<i>Elseya albagula</i>)	
Attachment D20	Conservation Advice <i>Adclarkia cameroni</i> brigalow woodland snail (2016)	
Attachment D21	Conservation Advice <i>Adclarkia dulacca</i> Dulacca woodland snail (2016)	
Attachment D22	Conservation Advice for <i>Phascolarctos cinereus</i> (Koala) (2022)	
Attachment D23	National Recovery Plan for the Koala (<i>Phascolarctos cinereus</i>) combined populations of Queensland, New South Wales and the Australian Capital territory	
Attachment D24	Conservation Advice for <i>Petauroides volans</i> (greater glider (southern and central)) 2022	
Attachment D25	Conservation Advice for <i>Chalinolobus dwyeri</i> (large-eared pied bat) (2023)	
Attachment D26	National Recovery Plan for the Large-eared Pied Bat <i>Chalinolobus dwyeri</i> (2011)	

Attachment D27	Conservation Advice for Nyctophilus corbeni (South-eastern long-eared bat) (2015).	
Attachment D28	Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin	
Attachment D29	National Recovery Plan for the Australian Painted Snipe (<i>Rostratula australis</i>)	
Attachment D30	National recovery plan for the red goshawk <i>Erythroriorchis radiatus</i>	
Attachment D31	National Recovery Plan for the Painted Honeyeater (<i>Granitella picta</i>)	
Attachment D32	National Recovery Plan for the Grey-headed Flying-fox <i>Pteropus poliocephalus</i>	
Attachment D34	National recovery plan for the Black-throated finch southern subspecies (<i>Poephila cincta cincta</i>)	
Attachment D35	National Multi-species Recovery Plan for the cycads, <i>Cycas megacarpa</i>, <i>Cycas ophiolitica</i>, <i>Macrozamia cranei</i>, <i>Macrozamia lomandroides</i>, <i>Macrozamia pauli-guilielmi</i> and <i>Macrozamia platyrhachis</i>	
Attachment D36	National Recovery Plan for the Murray Cod (<i>Maccullochella peelii peelii</i>)	
Attachment D37	National Recovery Plan for the Northern Quoll <i>Dasyurus hallucatus</i>	
Attachment D38	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland National Recovery Plan	
Attachment D39	Approved Conservation Advice for Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions ecological community	
Attachment D40	Approved Conservation Advice for Weeping Myall Woodlands ecological community	
Attachment D41	Approved Conservation Advice for <i>Acacia curranii</i> (Curly-bark Wattle)	
Attachment D42	Approved Conservation Advice for <i>Dichanthium setosum</i>	
Attachment D43	Conservation Advice for <i>Eriocaulon carsonii</i> (salt pipewort)	
Attachment D44	Conservation Advice for <i>Erythroriorchis radiatus</i> (red goshawk)	
Attachment D45	Conservation Advice <i>Falco hypoleucos</i> Grey Falcon	
Attachment D46	Approved Conservation Advice for <i>Acacia grandifolia</i>	
Attachment D47	Approved Conservation Advice for <i>Aristida annua</i> (a tufted grass)	
Attachment D48	Approved Conservation Advice for <i>Eucalyptus beaniana</i>	
Attachment D49	Approved Conservation Advice for <i>Delma torquata</i> (Collared Delma)	
Attachment D50	Conservation Advice for <i>Calidris ferruginea</i> (curlew sandpiper)	
Attachment D51	Conservation Advice <i>Macroderma gigas</i> ghost bat	
Attachment D52	Approved Conservation Advice for <i>Arthraxon hispidus</i> (Hairy-joint Grass)	
Attachment D53	Approved Conservation Advice for <i>Dichanthium queenslandicum</i> (king blue-grass)	
Attachment D54	Approved Conservation Advice for <i>Marsdenia brevifolia</i>	
Attachment D55	Conservation Advice for <i>Maccullochella peelii</i> (Murray cod)	
Attachment D56	Approved Conservation Advice for Natural grasslands of the Queensland Central Highlands and the northern Fitzroy Basin	
Attachment D57	Conservation Advice for Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions	
Attachment D58	Approved Conservation Advice for <i>Neochmia ruficauda ruficauda</i> (Star Finch (eastern))	
Attachment D59	Approved Conservation Advice for <i>Tylophora linearis</i>	
Attachment D60	Conservation Advice for the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	
Attachment D61	Conservation Advice <i>Hirundapus caudacutus</i> White-throated Needletail	
Attachment D62	National recovery plan for the "Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions" ecological community	
Threat Abatement Plans		
Attachment E1	Attachment E1 - Threat abatement plan for the biological effects, including lethal toxic ingestions, caused by cane toads.pdf	
Attachment E2	Attachment E2 - Threat abatement plan for predation by feral cats 2024.pdf	
Attachment E3	Attachment E3 - Threat abatement plan for predation by the European red fox.pdf	
Attachment E4	Attachment E4 - Threat abatement plan for competition and land degradation by rabbits.pdf	
Attachment E5	Attachment E5 - Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (<i>Sus scrofa</i>) (2017).pdf	
Attachment E6	Attachment E6 - Threat abatement plan for competition and land degradation by unmanaged goats	
Attachment E7	Attachment E7 - Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses	
Attachment E8	Attachment E8 - Threat abatement plan for disease in natural ecosystems caused by <i>Phytophthora cinnamomi</i>	
Significant Impact Guidelines		
Attachment F	Attachment F - Matters of National Environmental Significance - Significant Impact Guidelines 1.1.pdf	
Other departmental documents		
Attachment G1	Attachment G1 - Flora Survey Guidelines - Protected Plants	
Attachment G2	Attachment G2 - Draft Referral guidelines for the nationally listed Brigalow Belt reptiles (2023).	
Attachment G3	Attachment G3 - Environmental Management Plan Guidelines	
Attachment G4	Attachment G4 - Draft referral guideline for 14 birds listed as migratory species under the EPBC Act 2015	
Letters		
Attachment H1	Attachment H1 - Letter to Proponent	FOR SIGNATURE
Attachment H2	Attachment H2 - Letter to Minister for Indigenous Australians	FOR SIGNATURE
Attachment H3	Attachment H3 - Letter to Minister for Resources and Minister for Northern Australia	FOR SIGNATURE
Attachment H4	Attachment H4 - Letter to Minister for Climate Change and Energy	FOR SIGNATURE
Attachment H5	Attachment H5 - Letter to Minister for Agriculture, Fisheries and Forestry	FOR SIGNATURE
Attachment H6	Attachment H6 - Letter to Queensland Department of Environment, Tourism, Science and Innovation	FOR SIGNATURE

Referral information	
Attachment I1	Attachment I1 - Referral Brief Att E1 - public comment
Attachment I2	Attachment I2 - Referral Brief Att E2 - public comment
Attachment I3	Attachment I3 - Referral Brief Att H1 - comment from Minister Littleproud
Attachment I4	Attachment I4 - Referral Brief Att H2 - comment from MDBA and National Water Policy Branch
Attachment I5	Attachment I5 - Referral BriefAtt H3 - comment from Geoscience Australia
Attachment I6	Attachment I6 - Referral Brief Att H4 - comment from Minister Wyatt
Attachment I7	Attachment I7 - Referral Brief Att F - Qld DES comment 1
Attachment I8	Attachment I8 - Referral Brief Att F - Qld DES comment 2
Attachment I9	Attachment I9 - Referral Brief Att G - comment from GBRMPA
Attachment I10	Attachment I10 - Public Submissions
IESC Advice	
Attachment J1	Attachment J1 - Request for IESC Advice
Attachment J2	Attachment J2 - IESC Advice Gas Supply Security - 2021-129.pdf
Statutory Document Report	
Attachment K	Statutory Document Check - Gas Supply Security Project (EPBC 2020/8856)
Environmental History Check	
Attachment L	* TBD - ADVICE STILL TO COME FROM APPROPRIATE AREA *
Reconsideration Decision	
Attachment M1	Attachment M1 - Reconsideration Brief
Attachment M2	Attachment M2 - Reconsideration Decision Notice
Stop Clock	
Attachment N1	Attachment N1 - 2020-8856-Stop Clock-Request for further information-Brief
Attachment N2	Attachment N2 - 2020-8856-Attachment B-Request for Further Information
Attachment N3	Attachment N3 - 2020-8856-Response to Request for Information from proponent
Attachment N4	Attachment N4 - 2020-8856-Additional Information from Proponent
Variation	
Attachment O1	Attachment O1 - Variation Request 5 July 2022
Attachment O2	Attachment O2 - Decision notice variation 5 August 2022
Attachment O3	Attachment O3 - Variation Request 20 December 2024
Attachment O4	Attachment O4 - Decision notice variation 28 January 2025



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Quality Assurance Checklist – Proposed Decision Brief

Reviewing officer

Name: s. 22(1)(a)(ii)
 Position: Assessment Officer
 Branch: Environment Assessment Queensland
 Signature: s. 22(1)(a)(ii)
 Date: 24/02/26

Assessment officer

Name: s. 22(1)(a)(ii)
 Position: Senior Assessment Officer, Queensland North Assessments
 Branch: Environment Assessments Queensland

Project: Gas Supply Security Project, Surat and Bowen Basins, Queensland
EPBC No: EPBC 2020/8856
Decision due: 20/02/2026

General Requirements	Brief	Rec Report or Legal Cons	Decision Notice	Letter
Correct templates used (e.g. BRIEF 401, BRIEF 403, BRIEF ATT 402, BRIEF ATT 403, LET 401, LET 402, LET 403, LET 404, NOT 401, NOT 403)	☒	☐	☒	☐
Template version numbers	V5.5	V6.2	V10.9	V4.4 & 4.3
[If current template versions are not used, please provide explanation here otherwise delete row.]				
Template ID and version number retained in footer on first page	☒	☒	☒	☒
Signature blocks and dates are correct	☒	☒	☒	☒
EPBC reference number correct and used consistently	☒	☒	☒	☒
Action specified is consistent with referral or most recent variation notice	☒	☒	☒	☒
Statutory deadline consistent with database record	☐	☒		

General Requirements	Brief	Rec Report or Legal Cons	Decision Notice	Letter
The ACNs (or ABNs if no ACNs) are listed in the document, are the correct numbers for the designated proponent (if relevant) and the person proposing to take the Action	Yes ☐ N/A ☒	Yes ☐ N/A ☒	Yes ☒ N/A ☐	
(Proposed approval) The designated proponent or person to whom the approval is granted is correct and used consistently. Needs to be a 'person' for the purposes of the EPBC Act	☒	☐	☒	☒
(Proposed refusal) The person proposing to take the Action is correct and used consistently. Needs to be a 'person' for the purposes of the EPBC Act	☐	☐	☐	☐
Part 3 matters (controlling provisions) specified and consistent with CA decision	☒	☒	☒	
Public submissions or consultation tables reflect content of submissions	☒	☒		
List of attachments reflects the order they are referenced in the document, attachment numbers are correct throughout the document, and all attachments are included	☐	Yes ☐ N/A ☐	Yes ☐ N/A ☐	☒
All dates mentioned are correct	☒	☒	Yes ☐ N/A ☒	
All material used to prepare the document is listed	☒	☒		
ERT Report included and up to date	Yes ☐ N/A ☒	☐	Date of ERT Report: [Date]	
If species are referenced, all species references use SPRAT scientific names (first time that they are used) (if s18 and s18A, and/or s20 and s20A are controlling provisions)	Yes ☐ N/A ☐	Yes ☒ N/A ☐	Yes ☐ N/A ☐	Yes ☐ N/A ☒
Briefing package clearly states which Matters of National Environmental Significance (MNES) are considered likely to be significantly impacted by the proposed Action		☒		
Decision maker has had access to any legal advice sought	Yes ☐ N/A ☒	Yes ☐ N/A ☒		
<i>Do not attach legal advice to decision briefs unless you have been advised to do so by Legal Division</i>				

General Requirements	Brief	Rec Report or Legal Cons	Decision Notice	Letter
Any line area advice that has been obtained is included	Yes ☒	Yes ☒		
	N/A ☐	N/A ☐		
All line areas consulted are clearly identified (if advice has been sought)	Yes ☒	Yes ☒		
	N/A ☐	N/A ☐		
Monitoring Assurance have been consulted on any proposed conditions	Yes ☐			
	N/A ☐			
Biodiversity Division (BD) (Species Listing Information and Policy Section) weekly report is consulted to confirm imminent conservation advices, threat abatement plans, recovery plans and/or delistings or downlistings (if s18 and s18A are controlling provisions)	☒	Date of weekly report: 20/02/26		
Statutory Document Report from EIAS has been attached to the decision package and advice sought from QA officers in accordance with the Statutory Document Report SOP	☒	Date the report was requested: 11/02/2026		
BD (Species Listing Information and Policy Section) line area advice included on recent and pending conservation advices, threat abatement plans, recovery plans and/or delistings or downlistings (if s18 and s18A are controlling provisions)	Yes ☐	Yes ☐	Date advice received: 20/02/2026	
	N/A ☒	N/A ☒		
Copies of any approved conservation advices for listed species and/or ecological communities which are likely to be impacted by the proposed action (if s18 and s18A are controlling provisions) have been included in the decision brief.	Yes ☒	Yes ☒		
	N/A ☐	N/A ☐		

Legislative Requirements	Brief	Rec Report or Legal Cons	Decision Notice	Letters
Notice from State or Territory Minister received and incorporated (s132A), if requested	☐	☐		

s133 Proposed Approvals	Brief	Rec Report or Legal Cons	Decision Notice	Letters
Period of approval is specified	☒	☒	☒	
Part 3 matters (controlling provisions) specified and consistent with CA decision	☒	☒	☐	
Conditions attached and consistently referenced	☐	☐	☐	

s136 General Considerations	Brief	Rec Report or Legal Cons	Decision Notice	Letters
Briefing package includes assessment or recommendation documents required by s136(2)(b), (ba), (bc), (c), (ca) and (d)	☒	☒		
Briefing package discusses economic or social matters, ecologically sustainable development, and environmental history of proponent	☒	☒		
All other included information is permitted to be considered by the Minister	☒	☒		
Specific MNES requirements are addressed in the briefing package (s137, s137a, s138, s139, s140)	☒	☒		



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Notification of proposed approval decision

Gas Supply Security Project, Surat and Bowen Basins, Queensland (EPBC 2020/8856)

This decision is made under section 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Note that section 134(1A) of the EPBC Act also applies to this approval. That provision provides, in general terms, that if the approval holder authorises another person to undertake any part of the Action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such conditions.

Proposed Approved Action

person to whom the approval is granted (approval holder)	Australia Pacific LNG Pty Ltd ACN: 001646331
proposed Action	To construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland See EPBC Act referral 2020/8856.

Proposed Approval decision

proposed decision	My decision on whether or not to approve the taking of the Action for the purposes of each controlling provision for the Action are as follows.	
	Controlling Provision	Decision
	Listed threatened species and communities (section 18 and section 18A)	Approved
	Listed migratory species (section 20 and section 20A)	Approved
	Unconventional gas or large coal mining development with impact on water resources (section 24D and section 24E)	Approved
period for which the proposed approval has effect	This approval has effect until 22 February 2081.	
proposed conditions of approval	The approval is subject to conditions under the EPBC Act as set out in Annexure A.	

Person authorised to make decision

name and position	Declan O'Connor-Cox
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	Branch Head Environment Assessments Queensland
signature	PROPOSED DECISION DO NOT SIGN
date of decision	PROPOSED DECISION DO NOT DATE

Annexure A

Note: Words and terms appearing in **bold** (excluding headings) have the meaning assigned to them at **Part C – Definitions**.

Part A – Avoidance, mitigation, and compensation conditions

SCOPE AND AUTHORISATION

- 1) The approval holder must not:
 - a) **Clear** outside of the **Action area**.
 - b) **Construct** outside of the **Action area**.
 - c) **Operate** outside of the **Action area**.
 - d) Take the Action outside of the **Action area**.
 - e) **Construct** or **operate** any coal seam gas production wells or associated infrastructure that is not approved under a **Stage Area Environmental Management Plan**.
- 2) The approval holder must not:
 - a) **Construct** or **operate** more than 1,695 coal seam gas production wells in the **Action Area**.
 - b) **Construct** or **operate** more than 1,545 kilometres of right of way for gas and water pipelines in the **Action Area**.
- 3) The approval holder must not **construct** or **operate** any coal seam gas production wells:
 - a) Within the **Spring Gully D development area**;
 - b) Within the **Eastern Contact Zone**, or within 2 km of any boundary of the **Eastern Contact Zone**.

CLEARING LIMITS

- 4) Within the **Action Area** as a whole, the approval holder must not **clear** more than:
 - a) 64 hectares (ha) of **Brigalow Threatened Ecological Community (TEC)**
 - b) 106 ha of **Poplar Box Grassy Woodlands TEC**
 - c) 146 ha of **Australian Painted Snipe foraging habitat**

- d) 428 ha of **Greater Glider habitat**
 - e) 853 ha of **Koala habitat**
 - f) 10 ha of **Ornamental Snake habitat**
 - g) 19 ha of **Ooline**
- 5) The approval holder must not clear any:
- a) **Coolibah-Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South bioregions TEC**
 - b) **Ooline** individuals
 - c) **Semi-evergreen vine thicket of the Brigalow Belt TEC**
 - d) **Weeping Myall Woodlands TEC**
 - e) **Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin (Terrestrial GDE)**
 - f) **Salt pipewort** individuals
 - g) **Curly-bark wattle** individuals
 - h) **Shiny-leaved ironbark** individuals, plus a 30 m buffer
 - i) **Tara Wattle** in the following development areas **Spring Gully A, Spring Gully B, Spring Gully C, Spring Gully D or Peat**
 - j) **Belson's Panic** in the following development areas **Spring Gully A, Spring Gully B, Spring Gully C or Spring Gully D**
 - k) **Austral Toadflax** in the following development areas **Spring Gully A, Spring Gully B, Spring Gully D, Peat or Ironbark**
 - l) ***Bertya opposens***
 - m) **Red Goshawk nest trees**, including a 100 m buffer around nest trees
 - n) **Australian Painted Snipe breeding habitat**, including a 100 m buffer around habitat
 - o) **Large-eared pied bat (active and nonactive) roosting and breeding habitat**, including a 100 m buffer around habitat
 - p) **White-throated Snapping Turtle habitat**
 - q) **Fitzroy River Turtle habitat** during the **Fitzroy River Turtle breeding and hatchling season**
 - r) **Brigalow Woodland Snail habitat** in the following development areas **Spring Gully A, Spring Gully B, Spring Gully C, Spring Gully D or Peat**

- s) **Dulacca Woodland Snail habitat** in the following development areas **Spring Gully A, Spring Gully B, Spring Gully C, Spring Gully D** or **Peat**
 - t) ***Xerothamnella herbacea*** confirmed populations plus 100m buffer.
- 6) If the approval holder detects the presence of any **protected matter** or the habitat of a **protected matter** within the **Action area** that was not previously reported to the **department** as part of the referral of this Action or in accordance with this condition, the approval holder must notify the **department** in writing of the presence and likely extent of the **protected matter** or area of habitat within 10 **business days** following detection.

CONSTRAINTS

- 7) To avoid and mitigate **harm** to **protected matters** as a result of the Action, the approval holder must implement the **Environmental Constraints Planning and Field Development Protocol (Protocol)** from the **commencement of the Action** and continue to implement the **Protocol** until the expiry date of this approval, for the relevant protected matters identified in Appendix B of the **Protocol**.
- 8) The approval holder in the taking of the Action must:
 - a) Adhere to the Constraints Categories identified within each **Development Area** prescribed in the **Protocol**;
 - a) Not undertake petroleum activities within the '**No-Go (Avoidance) Areas**' nominated on the maps in Attachments B to G unless ground-truthing confirm the absence of all TECs and threatened species and habitat.
- 9) **Clearing** undertaken as per a *Nature Conservation Act 1992* (Qld) Clearing Permit and Impact Management Plan must not be inconsistent with
 - any conditions outlined in this approval, and
 - a **Stage Area Environmental Management Plan** approved by the Minister.

OFFSETS

- 10) To compensate for the residual significant impacts of the Action on **protected matters** the approval holder must commence implementation of the **Offset Management Strategy** no later than the **commencement of the Action** and continue to implement the **Offset Management Strategy** at least until the expiry date of this approval.

ENVIRONMENTAL MANAGEMENT PLAN

- 11) To avoid and mitigate **harm** as a result of the Action on **protected matters**, the approval holder must commence implementing the **Environmental Management Plan** no later than the **commencement of the Action** and continue to implement **Environmental Management Plan** until the expiry date of this approval.

REHABILITATION

- 12) The approval holder must commence implementing the **Rehabilitation Management Plan** from the **commencement of the Action** and continue to implement the **Rehabilitation Management Plan** until the expiry date of this approval.
- 13) All disturbed **Fitzroy River Turtle habitat** (including watercourse bed and banks) must be reinstated to pre-disturbance condition.

WATER RESOURCES

Chemical Risk Assessment

- 14) To avoid and mitigate **harm** from **chemicals** on **protected matters**, the approval holder must commence implementing the **Chemical Risk Assessment (CRA)** no later than the **commencement of the Action** and continue to implement **CRA** until the expiry date of this approval.
- 15) The approval holder must publish the **CRA** and **Register of Assessed Chemicals** on its **website** prior to the **commencement of the Action** and ensure the **CRA** and **Register of Assessed Chemicals** remain published on the **website** until at least the **completion of the Action**.
- 16) The approval holder must not use a **low-risk chemical** until that **chemical's** risk assessment has been recorded in the **Register of Assessed Chemicals** and provided to the **department**.
- 17) The approval holder must not use a **high-risk chemical** until that **chemical's** risk assessment, accompanied by an **independent** peer review by a **chemical risk assessment expert**, has been approved by the **Minister** in writing, and the risk assessment has been recorded in the **Register of Assessed Chemicals**.
- 18) The approval holder must engage a **chemical risk assessment expert** to peer review the **CRA** and all individual chemical risk assessments at least once every 5 years from the **commencement of the Action**. The peer review must be completed before each 5-year anniversary of the date of this approval. The peer review must include:
 - a) an assessment of whether all risk assessments on the register are consistent with current scientific knowledge;
 - b) an evaluation of the adequacy of relevant monitoring, mitigation and management measures that have been implemented by the approval holder; and
 - c) an explanation of how the approval holder will address or has addressed any concerns raised by the peer review.
- 19) The approval holder must, within 60 business days of the completion of the peer review required by Condition 18)18), submit to the department a signed statement by the **chemical risk assessment expert** detailing the findings of the 5-year peer review and provide evidence demonstrating how all concerns raised by the peer review have been, or will be, addressed.

Subsidence

- 20) To avoid and mitigate **harm to protected matters** from subsidence, the approval holder must undertake a baseline subsidence assessment covering **Spring Gully development areas A and B**. The assessment must include:
- a) data obtained using InSAR and airborne LiDAR and be consistent with methods used by OGIA;
 - b) analysis of historical data;
 - c) data obtained over a range of seasons and ground cover conditions;
 - d) contemporary data obtained after the date of this approval but prior to the construction of any production wells in **Spring Gully A and B development areas**; and
 - e) cover **Spring Gully A and B development areas** including a 5km buffer from the boundaries of each of these development areas.
- 21) The information and data required in Condition 20), plus existing baseline data for the **Spring Gully C development area**, must be incorporated into a report prepared by a **CSG subsidence expert** and be provided to the **department** prior to **operation of production wells in Spring Gully A, B or C development areas**. Separate reports for each development area can be undertaken to accommodate staging, but each report must be submitted to the **department** prior to **operation of production wells** in each development area.
- 22) Ongoing subsidence monitoring using InSAR and/or airborne LiDAR must occur at a minimum of 6-monthly intervals across **Spring Gully A, B and C development areas** and in the 5km buffer area described in Condition 20)e) from the commencement of the **operation of production wells** in each development area until the completion of gas production in each development area. The monitoring data must be analysed by a **CSG subsidence expert** and reported to the **department** in the **Annual Compliance Report**.
- 23) The approval holder must notify the **department** within 20 **business days** if the subsidence monitoring required in Condition 22)22), within **Spring Gully A, B or C development areas**, or within the 5km buffer area described in Condition 20)e), at any time identifies:
- a) total subsidence movement of 75mm or greater compared to the baseline; or
 - b) an annual subsidence rate of 16mm/year or greater over an area of 1,500 m by 1,500 m at 50% of data points; or
 - c) a change in slope of 100mm/km or greater in a watercourse.
- 24) Within 40 **business days** of notifying the department under Condition 23)23), the approval holder must submit a *Subsidence Mitigation Action Plan* to the department for the **Minister's** approval. The *Subsidence Mitigation Action Plan* must:
- a) be prepared by a **CSG subsidence expert** and a **suitably qualified water resources expert**;

- b) assess the potential extent and severity of actual and potential impacts to **protected matters** from the existing and any future predicted subsidence;
 - c) include mitigation measures tailored to site-specific conditions and the impacted **protected matter** which will be implemented to reduce the magnitude of the impact and remediate any **harm** caused to the **protected matter**;
 - d) include actions and operational changes to the **Action** to prevent further subsidence where it is predicted to exceed the values identified in Conditions 23)a) to 23)c); and
 - e) include a program of monitoring specific to the impacted **protected matter** to provide assurance that impacts are being mitigated and managed.
- 25) The approved *Subsidence Mitigation Action Plan* must be implemented until at least the completion of gas production.
- 26) If the **Minister** is not satisfied with the *Subsidence Mitigation Action Plan* required under Condition 24) or the **Minister** is not satisfied that the proposed mitigation measures and/or operational changes will prevent further subsidence, the **Minister** may direct in writing that the approval holder:
- a) provide specified additional data and/or information;
 - b) implement specified corrective actions and/or operational changes at the expense of the approval holder; and
 - c) pause the taking of a specified part of the **Action** until the **Minister** subsequently advises in writing that the approval holder may resume taking the specified part of the **Action**.

Surat Cumulative Management Area Joint Industry Framework

- 27) For the protection of **water resources** and **EPBC-listed springs** within the **Surat CMA**, the approval holder must ensure that the outcomes and sub-outcomes for water resources specified in the table below are achieved and maintained.

*Note: The approval holder is considered to have achieved and maintained an outcome for **water resources** within the **Surat CMA** when it has achieved and maintained the corresponding sub-outcomes for **water resources**.*

Controlling provision	Sections 18 and 18A of the EPBC Act	Sections 24D and 24E of the EPBC Act			
Protected matter or associated user of the protected matter	EPBC-listed springs	Water supply bores	Aquatic GDEs	Terrestrial GDEs	Subterranean GDEs
Outcome	Groundwater impacts due to CSG development must have no impact on the EPBC-listed springs. No impact is achieved by maintaining or enhancing groundwater discharge and environmental values at EPBC-listed springs.	Conditions within unconsolidated and consolidated hydrogeological units, including water level/pressure and water quality, maintain or improve ecosystem services and access by associated users.			
Sub-outcome	None	Water supply bore continues to supply water for its intended purpose, or is made good.	No adverse effects on the function and environmental values due to CSG development.	No adverse effects to ensure stygofauna habitat is maintained or improved.	

- 28) To ensure the outcomes in Condition 27) are achieved and maintained, the approval holder must manage **impacts** on **water resources** and **EPBC-listed springs** in accordance with the **relevant risk management frameworks**.
- 29) If, at any time during the period for which this approval has effect, an **impact** potentially occurring within the approval holder's project area is, or has been, identified as a **high-risk** or **very high-risk impact** in accordance with the **relevant risk management framework**, the approval holder must notify the **department** within 20 **business days**.
- 30) Within 9 months of notifying the **department** of the **high-risk** or **very high-risk impact**, the approval holder must provide for the written approval of the **Minister**:
- a description and location of **impact** and associated users;
 - performance criteria**;
 - trigger values**;
 - limits**; and
 - the **contributing wells**, including identification number, GPS coordinates and **shapefiles**.

Or provide a statement to the department as to why the provision of **performance criteria**, **trigger values**, **limits** and **contributing wells** is not necessary for the written agreement of the **Minister**.

- 31) If the statement provided under Condition 30) is not agreed to by the **Minister** in writing, the approval holder must provide the description and location of **impact** and associated users, **performance criteria, trigger values, limits** and **contributing wells** for the written approval of the **Minister** within a timeframe specified by the **Minister** in writing.
- 32) A description and location of **impact** and associated users, **performance criteria, trigger values, limits** and **contributing wells**, or statement provided under Condition 30), must be submitted to the **Minister** with an accompanying **site-specific assessment** prepared by a **suitably qualified water resources expert** and accompanied by a peer review undertaken by an **independent suitably qualified water resources expert**.

*Note: The approval holder may submit a **SIMS mitigation plan** as its **site-specific assessment** for **EPBC-listed springs** and **aquatic GDEs** provided that it meets the requirements of the **site-specific assessment**. Where a **SIMS mitigation plan** is determined by the **Minister** in writing to meet the requirements of the **site-specific assessment**, the **SIMS mitigation plan** is taken to be peer reviewed and therefore does not need to be accompanied by a **site-specific assessment** prepared by a **suitably qualified water resources expert**.*

- 33) If the information specified in Conditions 30)a) to 30)e) have not been approved by the **Minister** in writing within 6 months of being provided to the **Minister**, the approval holder must undertake impact management in accordance with any interim **performance criteria, trigger values** and **limits** set by the **Minister** in writing.

*Note: The approval holder will only be required to undertake impact management in accordance with interim **performance criteria, trigger values** and **limits** where the **Minister** is not satisfied that the information specified in Conditions 30)a) to 30)e) will ensure the outcomes specified under Condition 27) will be, or are likely to be, achieved.*

*Note: The **Minister**, in determining whether to direct the approval holder to undertake impact management in accordance with interim **performance criteria, trigger values** and **limits**, will consider all relevant information including but not limited to legislation and policy, information provided by the approval holder under Conditions 30) to 32), and any other relevant information available to the **Minister** at the time of the decision.*

- 34) The approval holder must undertake impact management in accordance with the interim **performance criteria, trigger values** and **limits** until the **performance criteria, trigger values** and **limits** required under Condition 30) are approved by the **Minister** in writing.
- 35) The approval holder must submit an **Outcomes Assurance Statement** for each **high-risk** of **very high-risk impact** to the **Minister** for each 12-month period:
- a) following the date of approval of the description and location of **impact** and associated users, **performance criteria, trigger values** and **limits**; or
 - b) following the date the **Minister** notified the approval holder in writing that interim **performance criteria, trigger values** and **limits** had been set; or
 - c) following the date otherwise agreed to in writing by the **Minister**.

The **Outcomes Assurance Statement** must be submitted in accordance with the reporting requirements specified in the **JIF**.

- 36) The approval holder must provide any additional information requested by the **Minister** in writing, within a timeframe specified by the **Minister** in writing, to substantiate an **Outcomes Assurance Statement** and/or to verify the risk of not achieving the outcomes specified in Condition 27).

*Note: The **Minister** may throughout the life of this approval seek advice from experts, or an expert panel. As a consequence, specific matters identified through such advice may need to be addressed in the **site-specific assessment** or any **Outcomes Assurance Statement**. Where such advice is sought, the approval holder will be provided with the opportunity to submit information and respond to the specific matters identified, in order to ensure the **Outcomes Assurance Statements** are based on the best available information. Review requirements will facilitate adaptive management, align with Queensland Government approval requirements, and account for potential cumulative impacts as new scientific information becomes available over the life of this approval.*

- 37) If the **Minister** believes on the basis of the **Outcomes Assurance Statement**, any information provided under Condition 38) and any other relevant information that the outcomes in Condition 27) are not likely to be achieved, the **Minister** may notify the approval holder in writing specifying the areas requiring improvement or additional information.

38) If notified, the approval holder must develop and implement adaptive management responses to address the specified areas and provide a written report to the **Minister** within 3 months of the notification setting out the responses and their effectiveness.

*Note: If there is an exceedance of a **limit**, Condition 39) **Error! Reference source not found.** requires this to be reported to the **Minister** and Condition 40) **Error! Reference source not found.** requires the approval holder to **cease groundwater extraction** within 10 **business days** of that notification.*

- 39) If the approval holder detects that an approved or interim **trigger value** has been exceeded, the approval holder must implement an approved management response to ensure approved or interim **limits** are not exceeded.
- 40) The approval holder must report this exceedance, and the **contributing well/s**, to the **department** within 10 **business days** of the detection.
- 41) If the approval holder detects that an approved or interim **limit** has been exceeded, the approval holder must report this and the **contributing well/s** to the **department** within 10 **business days** of the detection.
- 42) Unless otherwise notified by the **Minister** in writing, the approval holder must **cease groundwater extraction** associated with the **contributing well/s** identified in Condition 41) **Error! Reference source not found.** within 10 **business days** of an exceedance of a **limit** being reported to the **department**, or of receiving notification that the **Minister** has determined that the outcome/s specified under Condition 27) **Error! Reference source not found.** have not been achieved.

*Note: The **Minister**, in determining whether to give notice to the approval holder that it is not required to **cease groundwater extraction**, will consider all relevant information including but not limited to legislation and policy, information provided by the approval holder (including any submissions made by the approval holder on alternative corrective actions that it proposes to take) and any other information available to the **Minister** at the time of the decision.*

- 43) If the approval holder has been required to **cease groundwater extraction** pursuant to Condition 42), **Error! Reference source not found.** the approval holder must urgently implement corrective actions to reduce **performance criteria** below approved or interim **limits** and **trigger values**.
- 44) The approval holder must not recommence **groundwater extraction** until:
- a) the impact has been **reversed**; or
 - b) the **Minister** has agreed, in writing, that the outcome/s specified in Condition 27) **Error! Reference source not found.** has been achieved; and
 - c) written approval to recommence **groundwater extraction** has been given by the **Minister**.

*Note: Approval to recommence **groundwater extraction** may be subject to conditions that the **Minister** considers reasonable.*

Springs and watercourse springs

- 45) To avoid and mitigate **harm** to groundwater-dependent springs and watercourse springs the approval holder must undertake baseline monitoring at the following springs and watercourse springs:
- a) Kangaroo Creek Spring;
 - b) the watercourse spring located on the Dawson River within and adjacent **Spring Gully B development area**; and
 - c) the watercourse springs W39 Dawson River, W179 Boyd Creek, W189 Dawson River, W199 Dawson River and W222 Kangaroo Creek where they occur within **Spring Gully C development area**.
- 46) The baseline monitoring required by Condition 45) must include site-specific field surveys at each spring and watercourse spring to determine:
- a) the source of the groundwater supplying the spring or watercourse spring, using multiple lines of evidence, if this has not been field-verified;
 - b) baseline water chemistry at each spring using OGIA **Suite A** and **Suite B** parameters, determined from at least 4 samples over a minimum of 12 months, covering the range of seasons;
 - c) the discharge at each spring or watercourse spring consistent with OGIA **Method A** or **Method B**, including seasonal variation;

- d) the flora and fauna species present at each spring or watercourse spring and their current condition; and
 - e) the spatial extent and wetted extent of each spring or watercourse spring.
- 47) A report detailing the baseline monitoring and results required in Condition 45) and 46) must be prepared by a **suitably qualified water resources expert** and submitted to the **department**. The timing of submission will be dependent on the operation of production wells in each relevant development area such that:
- a) for the watercourse spring located on the Dawson River within and adjacent **Spring Gully B development area**, the **operation of production wells** in **Spring Gully B development area**;
 - b) for Kangaroo Creek Spring, and watercourse springs W222, the **operation of production wells** in **Spring Gully C development area** located within 50 km of either spring; and
 - c) for watercourse springs W39, W179, W198 and W199, the **operation of production wells** in **Spring Gully C development area** located within 50 km of any of the watercourse springs.
- 48) Ongoing monitoring of the springs and watercourse springs identified in Condition 45) must occur from **operation of production wells** in the relevant development area identified in Condition 47) until the **completion of the action**. The monitoring data must be analysed by a **suitably qualified water resources expert** and reported to the **department** in the **Annual Compliance Report**. At a minimum the ongoing monitoring must:
- a) monitor, every 6 months, the spatial extent and wetted extent of each spring using remote sensing techniques if the spring is large enough for these techniques to be accurate, otherwise field-based methods will need to be used;
 - b) determine vegetation condition, every 6 months, at each spring. NDVI methods can be used if the size of the spring is sufficient for these to be accurate; and
 - c) include field-based condition surveys where the spatial extent or wetted extent is reduced by 20% compared to baseline surveys.
- 49) The monitoring data obtained under Condition 48) must be provided to OGIA within 1 month of collection for use in ongoing trend analysis as outlined in the **relevant risk management framework** of the **JIF**.
- 50) If OGIA informs the approval holder that an unexpected trend has been identified at any of the springs or watercourse springs identified in Condition 45) as a result of the ongoing trend analysis, the approval holder must report this finding to the **department** and the cause of the trend as identified by OGIA within 10 **business days** of OGIA notifying the approval holder.
- 51) If the trend is identified to be due to CSG activities, then the approval holder must provide an *Updated Assessment of Impacts to Springs and Watercourse Springs* to the **department** within 40 **business days** of the notification required by Condition 50). The assessment must be consistent with the requirements of the **relevant risk management framework** of the **JIF** and include:

- a) an updated risk assessment for the spring or watercourse spring;
 - b) mitigation measures to be implemented; and
 - c) an outline of how the spring or watercourse spring will be monitored and managed under the **relevant risk management framework** of the JIF.
- 52) If any spring or watercourse spring identified in Condition 45) is assigned a responsible tenure holder by OGIA then the approval holder must report this to the **department** within 20 **business days** of becoming aware of the assignment.
- 53) If the approval holder is the assigned responsible tenure holder in relation to Condition 52) then the approval holder will be considered to have met the requirements of Conditions 45) to 51) if they demonstrate that they are undertaking all responsibilities for the spring or watercourse spring required by OGIA and are meeting the Surat CMA JIF requirements outlined in Conditions 27) to 44) for the particular spring or watercourse spring.
- 54) If the assigned responsible tenure holder is not the approval holder then the approval holder will be considered to have met the requirements of Condition 27) to 44) by reporting who the current responsible tenure holder is in each **Annual Compliance Report**.

Terrestrial and subterranean groundwater-dependent ecosystems

- 55) To avoid and mitigate **harm** to **terrestrial** and **subterranean GDEs** the approval holder must undertake:
- a) site-specific field-based surveys, using multiple lines of evidence, to determine the groundwater dependence of the **terrestrial GDEs** identified as at high or medium risk in the **Draft 2025 UWIR**
 - i) within **Spring Gully development areas A, B and C**; and
 - ii) within 50 km from each boundary of **Spring Gully development areas A, B and C** where the approval holder would be the responsible CSG operator; and
 - b) a pilot survey of **subterranean GDEs** consistent with **Queensland Government Guideline** at the locations identified in a)i) and a)ii).
- 56) The approval holder must provide a report to the **department**, prepared by a **suitably qualified GDE expert** in relation to Condition 55) detailing:
- a) the locations surveyed and the results; and
 - b) the method used to determine who the **responsible CSG operator** is for each GDE.
- 57) The report required by Condition 56) must be provided to the **department** prior to the **operation of production wells** in either **Spring Gully development areas A or B**.
- 58) Where the surveys required in Condition 55) **Error! Reference source not found.** demonstrate the presence of **terrestrial** or **subterranean GDEs**, these GDEs must be assessed and monitored

throughout the life of the Action in a manner consistent with the **relevant risk management framework** of the JIF. The approval holder must ensure that the requirements outlined in Conditions 27) to 44) are met for these GDEs and reporting as required by the **relevant risk management framework** occurs.

DEVELOPMENT AREA ENVIRONMENTAL MANAGEMENT PLAN

- 59) A Development Area Environmental Management Plan must include, where relevant:
- a) Mitigation and management measures specific to TECs and species and habitat which are confirmed or considered likely to occur in a **Development Area**; and
 - b) A discussion on how the mitigation and management measures can reduce potential direct and indirect impacts, including any supporting evidence; and
 - c) The timing for implementation of those mitigation and management measures; and
 - d) An assessment of risks relating to achieving the proposed outcomes and risk management strategies that will be applied to address identified risks; and
 - e) A monitoring program for the mitigation and management measures, which must include:
 - i) Performance indicators for each commitment; and
 - ii) Trigger values for corrective measures; and
 - iii) The timing and frequency of monitoring, ensuring monitoring is capable of detecting trigger values and changes in the performance indicators; and
 - iv) Proposed corrective measures if trigger values are reached.
- 60) All commitments, including environmental outcomes, management measures, corrective measures, trigger values and performance indicators in the Development Area Environmental Management Plan must be based on the SMART principle and supported by the statutory documents, referenced scientific studies or include other validated evidence of effectiveness.
- 61) Revisions and/or updates to the Development Area Environmental Management Plans must be:
- a) Based on **Ground-truthing** undertaken within a **Stage Area** to confirm TECs, species and habitat to guide management principles
 - b) Prepared in accordance with reference to contemporary relevant literature such as approved conservation advices, recovery plans, listing advices, SPRAT Database and relevant industry codes and standards.
- 62) The Development Area Environmental Management Plans must be:
- a) Provided to the **department** within 20 business days of revisions being made and prior to any revisions being implemented

- b) **Published** on the website within 10 business days of being provided to the **department** and prior to any revisions being implemented.

STAGE AREA ENVIRONMENTAL MANAGEMENT PLAN

- 63) To avoid and mitigate **harm** as a result of the Action on **protected matters**, the approval holder must submit a **Stage Area Environmental Management Plan** for each stage, defined in accordance with condition 68), of the project to the **department** for the **Minister's** approval.
- 64) The approval holder must not commence the Action for the relevant stage prior to approval of the **Stage Area Environmental Management Plan** for that stage by the **Minister** in writing.
- 65) The **Stage Area Environmental Management Plan** must adhere to the latest relevant Development Area Environmental Management Plan provided to the **department**.
- 66) The approval holder must implement the **Stage Area Environmental Management Plan** prior to commencement of the Action for each relevant stage and continue to implement the **Stage Area Environmental Management Plan** until the expiry date of this approval.
- 67) The **Stage Area Environmental Management Plan** must be published on the approval holder's website associated with the project prior to the commencement of the Action for the relevant Stage.

Defining the stage

- 68) In preparing the **Stage Area Environmental Management Plan**, the approval holder must define the stage in respect to:
 - a) a geographical area; and
 - b) a description and estimate of the type and quantity of petroleum activities proposed, including total number of coal seam gas production wells to be built and commenced within the prescribed geographical area.
- 69) The approval holder must provide the department with the following details in relation to every stage, each 12-month anniversary after the stage commences:
 - a) the unique identifier, location, the type of production well, the date on which construction commenced, and the date on which **operation of production wells** commenced for all wells constructed in the preceding 12 months;
 - b) the unique identifier and location of any production well commenced but abandoned in the preceding 12 months;
 - c) the unique identifier of any production well hydraulically stimulated in the preceding 12 months;
 - d) the unique identifier for all active production wells at any time in the preceding 12 months; and

- e) the unique identifier for any production wells which permanently ceased production in the preceding 12 months.
- 70) The stage definition must be clearly outlined in the **Stage Area Environmental Management Plan**, including maps, coordinates and submission of corresponding shapefiles.

Objectives of the Stage Area Environmental Management Plan

- 71) By implementing the **Stage Area Environmental Management Plan**, the approval holder must achieve the following environmental outcomes:
- a) Prevent any avoidable harm to **protected matters** and mitigate unavoidable and accidental harm to **protected matters**.
 - b) Not clear any individuals, populations or habitat as detailed in Condition 5)4).
 - c) Not exceed the disturbance limits prescribed in Condition 4) for the project as a whole.
- 72) All commitments, including environmental outcomes, management measures, corrective measures, trigger values and performance indicators in the **Stage Area Environmental Management Plan**, must be based on the **SMART** principle and supported by the **Environmental Management Plan Guidelines** and statutory documents (e.g. approved conservation advices, recovery plans, survey guidelines, referral guidelines and listing advices, and the SPRAT Database), referenced scientific studies or include other validated evidence of effectiveness.

Impacts

- 73) Each **Stage Area Environmental Management Plan** must be prepared by a **suitably qualified person**.
- 74) Each **Stage Area Environmental Management Plan** must include map/s, with a magnification of no less than 1:20,000, of the proposed disturbance footprint overlaid on top of the applicable No-go (Avoidance), 'High' and 'Medium' constraints categories as set out in the **Protocol**.
- 75) For the protected matters, as set out in the **Protocol**, the **Stage Area Environmental Management Plan** must include:
- a) results of all **ground-truthing** for the Stage, including confirmed habitat quality and connectivity (where relevant to individual species) and species presence/absence;
 - b) details of all proposed direct and indirect impacts resulting from proposed disturbance associated with the Stage;
 - c) a reconciliation of proposed disturbance associated with the Stage against the predicted maximum disturbance (ha) values provided in Table 1 of the **Offset Strategy**. The reconciliation is to address both Stage-specific and Project cumulative disturbance;
 - d) a statement detailing how the disturbance activities proposed as part of the Stage comply with the planning principles hierarchy and the relevant Constraints Categories listed in the **Protocol**;

- e) details and outcomes of impact avoidance, minimisation and mitigation measures to be implemented as part of the Stage;
- f) calculation of any residual significant impact to TECs, species or habitat and associated offset liability resulting from the disturbance activities associated with the Stage; and
- g) mitigation and management measures specific to impacted TECs, species and habitat as detailed in the relevant Development Area Environmental Management Plan received by the Minister.
 - i) the timing of those measures;
 - ii) a discussion on how the measures can reduce potential direct and indirect impacts, including any supporting evidence;
 - iii) an assessment of risks relating to achieving the proposed outcomes and risk management strategies that will be applied to address identified risks,
- h) reporting and review mechanisms to demonstrate compliance with the impact avoidance, mitigation and/or repair measures, including a monitoring program, which must include:
 - i) performance indicators for each commitment,
 - ii) trigger values for corrective measures,
 - iii) the timing and frequency of monitoring, ensuring monitoring is capable of detecting trigger values and changes in the performance indicators, and
 - iv) proposed corrective measures if trigger values are reached.
- i) references to other relevant plans or conditions of approval (including state or territory approval conditions) and a discussion on any measures prescribed within those plans or conditions of approval that support achieving the outcomes of the proposed avoidance, mitigation and/or repair measures.

Variation of a stage plan

- 76) Minor variation to an approved Stage Plan (no increase in impact risk, no encroachment into higher constraint classes, reduced or neutral footprint (see clearance limits in Part B – taking account of cumulative impacts across stages), no change to offset obligations) may proceed via written notification; deemed accepted 15 business days after acknowledgment unless the Department objects.
- 77) Major variation requires Department/Minister approval before implementation.

STAGE OFFSET MANAGEMENT PLAN

- 78) If the **Stage Area Environmental Management Plan** identifies residual significant impacts to any TEC or listed threatened species under Condition 75) **Error! Reference source not found.**, the approval holder must, as part of the approval of each **Stage Area Environmental Management**

Plan, submit a **Stage Offset Management Plan** for that stage, defined in accordance with condition 68), of the project to the **department** for the **Minister's** approval.

- 79) The approval holder must not commence the Action for the relevant stage prior to approval of the **Stage Offset Management Plan** for that stage by the **Minister** in writing.
- 80) Each **Stage Offset Management Plan** must meet the requirements of the **Environmental Offsets Strategy** and the *EPBC Act 1999 Environmental Offsets Policy* to the satisfaction of the **Minister**.
- 81) Each **Stage Offset Management Plan** must include:
 - a) Detailed information on the residual significant impacts of the Action within the stage on **protected matters** and how the impacts will be offset in accordance with the Environmental Offsets Policy compensated for by the offset for the relevant **Stage Offset Management Plan**. This must include the areas of habitat for **protected matters** and its condition and quality at all locations impacted by the **Action** which the offset is to address.

(Note: the offset comprises the securement of the offset site and the habitat condition improvements to be achieved at the offset site).
 - b) The relevant **protected matters** and a reference to the **EPBC Act** approval conditions to which the **Stage Offset Management Plan** refers.
 - c) Detailed information and **shapefiles** specifying the location, area and boundaries of the proposed offset site described in that **Stage Offset Management Plan**.
 - d) Detailed baseline information on the areas of habitat, their condition, and the presence (or not) of the **protected matters** on the proposed offset site.
 - e) Proposed improvements to achieve ecological benefits at the offset site and the timeframes in which they will be achieved.
 - f) A table summarising all commitments to achieve the proposed ecological benefits for **protected matters** at the offset site, and a reference to where each commitment is detailed in the **Stage Offset Management Plan**.
 - g) Reporting and review mechanisms to inform the **department** annually regarding compliance with the management and environmental outcome commitments, and attainment and maintenance of the ecological benefits specified in the **Stage Offset Management Plan**.
 - h) An assessment of risks to achieving the ecological benefit(s) and what risk management measures and/or strategies will be applied to address these.
 - i) A monitoring program, which must specify:
 - i) measurable performance indicators and the timeframes for their achievement to gauge attainment of the ecological benefits for the **protected matters**
 - ii) trigger values for corrective actions, and

- iii) the proposed timing (including season/time of day/frequency) methods and effort, and an explanation of how these will be effective for this purpose, of monitoring to detect trigger values, changes in the performance indicators and to gather evidence that effectively demonstrates actual progress towards, attainment of and maintenance of the ecological benefits for the **protected matters**.
 - j) Corrective actions to be implemented to ensure that the proposed ecological benefits for the **protected matters** are achieved or maintained if trigger values are reached or performance indicators not achieved in the specified timeframes.
 - k) Links to relevant referenced plans or conditions of approval (including state/territory approval conditions), and
 - l) Detail the mechanism, process and timing to legally secure the proposed offset site(s), at least until the expiry of this approval.
- 82) The approval holder must not commence the stage unless each offset site specified in the **Stage Offset Management Plan** has been secured.
- 83) The approval holder must secure the offset site(s) detailed in any **Stage Offset Management Plan** within 24-months of the date the relevant **Stage Offset Management Plan** is approved in writing by the Minister.

Part B – Administrative conditions

PLAN REVISION

Note: Section 143A of the **EPBC Act** entitles the approval holder to apply for the **Minister's** approval of a revised version of a **plan**.

- 84) The approval holder may choose to revise a **plan** required to be implemented under conditions (insert EMP, DAEMP, RMP, CRAR and PWMP conditions numbers here) without submitting it for approval under section 143A of the **EPBC Act**, if:
- a) the taking of the Action in accordance with the revised **plan** would be consistent with the approved Action,
 - b) the taking of the Action in accordance with the revised **plan** would be consistent with the conditions attached to this approval,
 - c) the taking of the Action in accordance with the revised **plan** would not be likely to have a **new or increased impact**, and
 - d) the approval holder notifies the **department** electronically that it has prepared a revised version of the **plan** (the 'revised **plan**'). In notifying the **department**, the approval holder must specify each condition which references the **plan** and provide the **department** with:
 - i) an electronic copy of the revised **plan**,

- ii) an electronic copy of the revised **plan** marked up with track changes to show the differences between the **plan** and the revised **plan**,
- iii) a comprehensive explanation of all differences between the **plan** and the revised **plan**,
- iv) a declaration that the approval holder has read and understands the *Guidance on 'new or increased impact' relating to changes to approved management plans under EPBC Act environmental approvals*, Commonwealth of Australia 2017,
- v) a comprehensive analysis and detailed discussion on the likelihood that taking the Action in accordance with the revised plan will not have, or will be not likely to have, a **new or increased impact**,
- vi) written notice of the date on which the approval holder will implement the revised **plan** (the 'revised **plan** implementation date'), being at least 30 **business days** after the date of providing notice of the revision of the **plan**, or a date agreed to in writing with the **department**, and
- vii) a copy of the **compliance report** for the latest **ACR period** and a statement of any relevant history of compliance (including non-compliance) in relation to the **plan**.

The approval holder must commence implementation of the revised **plan** from the revised **plan** implementation date unless otherwise notified in writing by the **Minister**.

- 85) If the **Minister** notifies the approval holder that the **Minister** is satisfied that the taking of the Action in accordance with a **plan** which has been revised without submitting it for the **Minister's** approval would be likely to have a **new or increased impact**, then:
- a) the approval holder's ability to revise a **plan** without submitting the **plan** for **Minister** approval does not apply, or ceases to apply, in relation to the revised **plan**,
 - b) the approval holder must implement the **plan** in force immediately prior to that revised **plan** or a version of the **plan** specified by the **Minister** in the notice, and
 - c) the **Minister** may also notify that, for a specified period, the approval holder's ability to revise a **plan** without submitting the **plan** for **Minister** approval does not apply for one or more specified **plans**.
- 86) The approval holder may, at any time by giving written notice to the **department**, revoke its choice to implement a **plan** which has been revised without submitting it for the **Minister's** approval. If the approval holder revokes the choice to implement a revised **plan**, the approval holder must implement the plan in force immediately prior to that revised **plan**.

Note: The above conditions are not intended to limit the operation of section 143A of the **EPBC Act**.

SUBMISSION AND PUBLICATION OF PLANS

- 87) Wherever these conditions require the approval holder to submit any **plan** to the **department**, all such **plans** must be submitted to the **department** electronically.

- 88) Unless otherwise agreed to in writing by the **Minister**, the approval holder must publish each **plan** on the **website** within 15 **business days** of the date:
- a) of this approval, if the version of the **plan** to be implemented is specified in these conditions,
 - b) the **plan** is approved by the **Minister** in writing, if the **plan** requires the approval of the **Minister**,
 - c) the **plan** is submitted to the **department** in accordance with a requirement of these conditions, if the **plan** does not require the approval of the **Minister**.
- 89) The approval holder must keep all **plans** published on the **website**, in a format that is easily accessible and downloadable, from the first date which that **plan** must be published and until the expiry date of this approval. This requirement applies to all current and superseded versions of **plans**.
- 90) The approval holder is required to exclude or redact **sensitive biodiversity data** from any version of a **plan** before that **plan** is published on the **website** or otherwise provided to a member of the public. If **sensitive biodiversity data** is excluded or redacted from a **plan**, the approval holder must notify the **department** in writing what exclusions and redactions have been made in the version published on the **website**.

COMMENCEMENT OF A STAGE

- 91) The approval holder must notify the **department** electronically of the date of **commencement of the Action**, within 5 **business days** following **commencement** of the first **Stage**.
- 92) The approval holder must not **commence a Stage** later than 5 years after the date of the approval of the **Stage Area Environment Management Plan**.
- 93) The approval holder must notify the **department** electronically of the date of **commencement** of each **Stage** within 5 **business days** following the commencement of that **Stage**.

COMPLIANCE RECORDS

- 94) The approval holder must maintain accurate and complete **compliance records** and document the procedure for recording and storing **compliance records**.
- 95) If the **department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **department** within the timeframe specified in the request.

Note: **Compliance records** may be subject to audit by the **department**, or by an **independent auditor** in accordance with section 458 of the **EPBC Act**, and/or be used to verify compliance with the conditions. Summaries of the results of an audit may be published on the **department's** website or through the general media.

- 96) The approval holder must ensure that any **monitoring data**, surveys, maps, and other spatial and metadata required under the conditions of this approval are prepared in accordance with the *Guidelines for biological survey and mapped data*, Commonwealth of Australia 2018, or as otherwise specified by the **Minister** in writing.

- 97) The approval holder must ensure that any **monitoring data**, surveys, maps, and other spatial and metadata required under the conditions of this approval are prepared in accordance with the *Guide to providing maps and boundary data for EPBC Act projects*, Commonwealth of Australia 2021, or as otherwise specified by the **Minister** in writing.
- 98) The approval holder must submit all **monitoring data**, surveys, maps, other spatial and metadata and all species occurrence record data (sightings and evidence of presence) electronically to the **department** within 20 business days of the next anniversary of the date of this approval decision except where otherwise specified in a **plan**.
- 99) In addition to the above conditions, the approval holder must provide when submitting a **Stage Area Environmental Management Plan** a cumulative total of both the total disturbance area (in hectares) for each **protected matter** and the total offsets applied for impacts to the Action.

ANNUAL COMPLIANCE REPORTING

- 100) The approval holder must prepare a **compliance report** for each **Annual Compliance Report period (ACR period)**.
- 101) The approval holder must ensure each **compliance report** includes:
- a) accurate and complete details of compliance and any non-compliance with:
 - i) each condition attached to this approval decision, and
 - ii) all commitments made in each **plan**,
 - b) a schedule of all **plans** in effect in relation to these conditions during the **ACR period**,
 - c) accurate and complete details of how each **plan** was implemented during the **ACR period**, and
 - d) if any **incident** occurred, accurate and complete details of each **incident**.
- 102) The approval holder must ensure each **compliance report** is completed to the satisfaction of the **Minister** and is consistent with the *Annual Compliance Report Guidelines*, Commonwealth of Australia 2023.
- 103) The approval holder must, within 20 **business days** following the end of each **ACR period**, in a format that is easily accessible and downloadable, publish on the **website**:
- a) each **compliance report**, and
 - b) a **shapefile** showing all **clearing** of **protected matters**, and their habitat, undertaken within the **ACR period**.
- 104) The approval holder must:
- a) Exclude or redact **sensitive biodiversity data** from each **compliance report** and **shapefile** published on the **website** or otherwise provided to a member of the public.

- b) If **sensitive biodiversity data** is excluded or redacted from a version of a **compliance report** published or otherwise provided to a member of the public, submit the full **compliance report** to the **department** within 5 **business days** of its publication on the **website** and notify the **department** in writing what exclusions and redactions have been made in the version published on the **website** or otherwise provided to a member of the public.
 - c) If **sensitive biodiversity data** is excluded or redacted from a version of a **shapefile** published or otherwise provided to a member of the public, submit the full **shapefile** to the **department** within 5 **business days** of its publication on the **website** and notify the **department** in writing what exclusions and redactions have been made in the version published on the **website** or otherwise provided to a member of the public.
- 105) The approval holder must notify the **department** electronically, within 5 **business days** of each date of publication that the **compliance report** has been published on the **website**. In this notification, the approval holder must provide the **department** with the web address for where the **compliance report** and related **shapefile** are published on the **website**.
- 106) The approval holder must keep each **compliance report** and related **shapefile** published on the **website** from the first date which that **compliance report** must be published and until the expiry date of this approval.

Note: **Compliance reports** may be published on the **department's** website.

REPORTING NON-COMPLIANCE

- 107) The approval holder must notify the **department** electronically, within 2 **business days** of becoming aware of any **incident**. The approval holder must specify in each notification:
- a) any condition or commitment made in a **plan** which has not been, or may have not been, complied with,
 - b) a short description of the **incident**, and
 - c) the location (if applicable, including co-ordinates), date and time of the **incident**.
- 108) The approval holder must provide to the **department** in writing, within 12 **business days** of becoming aware of an **incident**, the details of that **incident**. The approval holder must specify:
- a) all corrective measures and investigations which the approval holder has already taken in respect of the **incident**,
 - b) the potential impacts of the **incident**,
 - c) the method and timing of any corrective measures that the approval holder proposes to undertake to address the **incident**, and
 - d) any variation of these conditions or revision of a **plan** that will be required to prevent recurrence of the **incident** and/or to address its consequences.

109) Public Register and Transparency: The approval holder must maintain a **public Staging Register** with:

- a) All approved Stages; status (proposed, approved, active, completed); geographic extent; key dates; and links to **Stage Area Environmental Management Plan** documents.
- b) The Register must be updated within 10 business days of any new Stage approval, variation, or completion.
- c) Public disclosure: The approval holder must publish the approved **Stage Area Environmental Management Plan** within 10 business days after approval by the Minister.

INDEPENDENT AUDIT

110) The approval holder must ensure that an **independent audit** of compliance with the conditions is conducted for every **audit period**.

111) The approval holder must submit details of the proposed **independent auditor** and their qualifications to the **department** within 10 **business days** following the end of each **audit period**.

112) The approval holder must ensure the scope of each **independent audit** is sufficient to determine the compliance status for each condition of approval, and each commitment made in each **plan**.

113) The approval holder must ensure the criteria for each **independent audit** and the undertaking of each **independent audit** are consistent with the **Independent Audit and Audit Report Guidelines**.

114) The approval holder must submit an **audit report** to the **department** for written agreement from the **department** within 3 months following the end of each **audit period**, or as otherwise directed by the **Minister** in writing.

115) The approval holder must ensure each **audit report** is completed to the satisfaction of the **Minister** and is consistent with the **Independent Audit and Audit Report Guidelines** to the extent that the **Independent Audit and Audit Report Guidelines** are consistent with these conditions.

116) The approval holder must publish each **audit report** on the **website**, in a format that is easily accessible and downloadable, within 10 **business days** of the date the **department** agrees to that **audit report** in writing.

117) The approval holder must notify the **department** within 5 **business days** of the date the **audit report** is published on the **website**. In this notification, the approval holder must provide the **department** with the web address for where the **audit report** is published on the **website**.

118) The approval holder must keep each **audit report** published on the **website** from the first date which that **audit report** must be published and until the expiry date of this approval.

COMPLETION OF THE ACTION

119) Within 20 **business days** after the **completion of the Action**, and, in any event, at least 20 **business days** prior to the expiry date of this approval, the approval holder must notify the **department** electronically of the date of **completion of the Action** and provide **completion data**. The approval holder must submit any spatial data that comprises **completion data** as a **shapefile**.

120) The approval holder must notify the **department** electronically at least 60, but not more than 70, **business days** prior to the expiry date of this approval, that the approval is due to expire.

Note: Section 145C of the **EPBC Act** entitles the approval holder to request an extension to the period of effect of this approval.

Part C – Definitions

Words and terms appearing in **bold** (excluding headings) have the meaning assigned to them in the list below:

Action area or project area means the location of the Action, represented in Attachment A by the zone enclosed by the red, green, and gold lines designated Gas Supply Security Project (GSSP) – Ironbark, Gas Supply Security Project (GSSP) - Peat, and Gas Supply Security Project (GSSP) – Spring Gully.

Annual Compliance Report period or ACR period means each subsequent 12-month period following the date of this approval decision until the expiry date of this approval, unless otherwise specified in writing by the **Minister**.

Aquatic GDEs means ecosystems dependent on the surface expression of groundwater, including:

- river baseflow systems, aquatic and riparian ecosystems that exist in or adjacent to streams (including the hyporheic zone) which are fed by groundwater; and
- wetlands (aquatic communities and fringing vegetation dependent on groundwater-fed lakes and wetlands), including palustrine and lacustrine wetlands that receive groundwater discharge, and can include spring and swamp ecosystems.

Audit period means each subsequent five-year period following the **commencement of the Action** until the expiry date of this approval unless otherwise specified in writing by the **Minister**.

Audit report means a written report of an **independent audit**.

Australian Painted Snipe means the **EPBC Act** listed threatened species Australian Painted Snipe (*Rostratula australis*).

Australian Painted Snipe breeding habitat means habitat suitable for use or used by the **EPBC Act** listed threatened **Australian Painted Snipe** for breeding, as detailed within the *Approved Conservation Advice for Rostratula australis (Australian Painted Snipe) 2013*, and the *National Recovery Plan for the Australian Painted Snipe*.

Australian Painted Snipe foraging habitat means habitat suitable for use or used by the **EPBC Act** listed threatened **Australian Painted Snipe** for foraging, as detailed within the *Approved Conservation Advice for Rostratula australis (Australian Painted Snipe) 2013*, and the *National Recovery Plan for the Australian Painted Snipe*.

Austral Toadflax means the **EPBC Act** listed threatened species Austral Toadflax (*Thesium australe*).

Belson's Panic means the **EPBC Act** listed threatened species Belson's Panic (*Homopholis belsonii*).

Bertya opposens means the **EPBC Act** listed threatened species *Bertya opposens*.

Biodiversity data means 'biodiversity data' as described in the *Policy on Accessing and Sharing Biodiversity Data*, Commonwealth of Australia 2024.

Brigalow Threatened Ecological Community or **Brigalow TEC** means the **EPBC Act** listed threatened species Brigalow (*Acacia harpophylla* dominant and co-dominant).

Brigalow Woodland Snail means the **EPBC Act** threatened species Brigalow Woodland Snail (*Adclarkia cameroni*).

Brigalow Woodland Snail habitat means habitat suitable for use or used by the **EPBC Act** listed threatened species **Brigalow Woodland Snail** for foraging, sheltering or breeding as defined in *Conservation Advice Adclarkia cameroni brigalow woodland snail 2016*.

Business day means a day that is not a Saturday, a Sunday, or a public holiday in Queensland.

Cease groundwater extraction means to promptly discontinue all **groundwater extraction** from the **contributing well/s**.

Chemicals means the drilling fluid compounds, workover/maintenance and stimulation chemicals/compounds and their associated chemicals to be used in, or arising from, coal seam gas operations.

Chemical Risk Assessment or CRA means the document Chemical Risk Assessment, Revision 3 dated 31 October 2025, or the latest subsequent version revised in accordance with these conditions as prepared by a **Chemical Risk Assessment expert**.

Chemical Risk Assessment expert means a person with at least a post-graduate degree (or equivalent) in a suitable area (such as chemistry) and a minimum of 10 years relevant experience in **chemical** risk assessments, including at least one year of experience in Australia.

Clear, cleared or clearing means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting, or burning of vegetation but does not include weeds (see the *Australian Weeds Strategy 2017-2027*, Commonwealth of Australia 2017 for further guidance).

Commence the Action or **commences the Action** means the first instance of any on-site **clearing, construction** or other physical activity associated with the Action, but does not include minor physical disturbance necessary to:

- Undertake pre-clearance surveys or monitoring programs.
- Install signage and/or temporary fencing to prevent unapproved use of the **Action area**, so long as the signage and/or temporary fencing is located where it does not **harm** any **protected matter**.
- Protect environmental and property assets from fire, weeds, and feral animals, including use of existing surface access tracks.
- Install temporary site facilities for persons undertaking pre-commencement activities so long as these facilities are located where they do not **harm** any **protected matter**.

Commencement of the Action means the date on which the approval holder **commences the Action**.

Completion data means an environmental report and spatial data clearly detailing how the conditions of this approval have been met.

Completion of the Action means the date on which all activities associated with the approved Action, other than those which provide compensation for the impacts of the Action, have permanently ceased and/or been completed.

Compliance records means all documentation or other material in whatever form required to demonstrate compliance with these conditions of approval (including compliance with commitments made in **plans**) in the approval holder's possession, or that are within the approval holder's power to obtain lawfully.

Compliance report means a written report of compliance with, and fulfilment of, these conditions (including compliance with commitments made in **plans**).

Constraints mapping means maps in attachments B to G of this notice.

Constraint categories means categories as prescribed in Appendix B of the **Protocol**.

Construct or **Construction** means:

- the erection of a building or structure that is, or is to be, fixed to the ground and wholly or partially fabricated on-site,
- the alteration, maintenance, repair or demolition of any building or structure,
- any work which involves breaking of the ground (including pile driving) or bulk earthworks,
- the laying of pipes and other prefabricated materials in the ground, and

- any associated excavation work.

Construction does not include the installation of temporary fences or signage.

Contributing well/s means the coal seam gas **development** well(s) identified as, or likely to be, contributing to the exceedance of a **trigger value** and/or **limit**, in accordance with the methodology in the **site-specific assessment**.

Coolibah-Black Box Woodlands of the Darling Riverine Plains means the **EPBC Act** threatened ecological community Coolibah-Black Box Woodlands of the Darling Riverine Plains.

CSG subsidence expert means a person with at least a post-graduate degree (or equivalent) in a suitable area (such as mining or mechanical engineering) and a minimum of 5 years relevant experience in CSG impact assessment, including at least 1 year of experience in Australia.

Curly-bark wattle means the **EPBC Act** threatened species Curly-bark wattle (*Acacia curranii*).

Department means the Australian Government agency responsible for administering the **EPBC Act**.

Development means any activity associated in the exploration, construction, operation, production and decommissioning of a coal seam gas action.

Development Area means any or all of the development areas as defined in Attachments B to G in this notice.

Draft 2025 UWIR means the document *Consultation draft of the Underground Water Impact Report 2025 for the Surat Cumulative Management Area. Ver 1.2. October 2025*, prepared by OGIA and available at <https://www.ogia.water.qld.gov.au/publications-reports>

Dulacca Woodland Snail habitat means habitat suitable for use or used by the **EPBC Act** threatened species Dulacca Woodland Snail (*Adclarkia dulacca*), as defined in *Conservation Advice Adclarkia dulacca Dulacca Woodland Snail 2016*.

Eastern Contact Zone means the area represented in Attachment H by the zone present adjacent the line marked C-C' east of Wandoan coloured dark grey and designated 'Bandanna Formation and Precipice Sandstone contact, OGIA 2025', or subsequent updates to the Eastern Contact Zone as identified in future Underground Water Impact Assessments published by OGIA.

Ecosystem services means the benefits and services obtained from groundwater resources. These include:

- provisioning services (e.g. use by other industries and use as drinking water);
- regulating services (such as the climate regulation or the stabilisation of coastal systems);
- cultural services (including recreation and tourism, science and education); and
- supporting services (e.g. maintenance of ecosystem function).

Environmental Management Plan or **EMP** means the document *Environmental Management Plan, Version 4, Origin Energy 2025*, or the latest subsequent version revised in accordance with these conditions.

Environmental Management Plan Guidelines means the *Environmental Management Plan Guidelines*, Commonwealth of Australia 2024.

Environmental Offsets Policy means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy*, Commonwealth of Australia 2012.

Environmental value means a quality or physical characteristic of the associated user that is conducive to ecological health, public amenity or safety. In determining environmental value, the approval holder must take into consideration relevant threatened ecological communities and threatened species listed under the **EPBC Act** and their associated conservation advices and recovery plans.

EPBC Act means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

EPBC-listed springs means groundwater fed springs within the Surat CMA that support ‘*The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin threatened ecological community*’, as listed under the **EPBC Act**, and/or **listed threatened species** and/or their habitat.

Fauna Spotter-catcher means a person holding an appropriate license issued under the *Nature Conservation Act 1992* (Qld) to detect, capture, care for, assess, and release wildlife disturbed by vegetation clearance activities and has at least three years’ experience undertaking this work with the species likely to be impacted including, but not limited to, Koala, Squatter Pigeon (southern), Ornamental Snake, Grey Snake Australian Painted Snipe, Sharp-tailed Sandpiper and Latham’s Snipe.

Fauna Spotter-catcher Code of Practice means the document titled *Queensland Code of Practice for the welfare of wild animals affected by land clearing and other habitat impacts and wildlife spotter/catchers*- Draft, Australian Wildlife Hospital 2009.

Fitzroy River Turtle habitat means habitat suitable for use or used by the **EPBC Act** threatened species Fitzroy River Turtle (*Rheodytes leukops*) as defined within *Conservation Advice for Rheodytes leukops (Fitzroy River Turtle)*, Commonwealth of Australia 2024.

Fitzroy River Turtle breeding and hatchling season means the period between 1 September and 31 December in any year as defined within *Conservation Advice for Rheodytes leukops (Fitzroy River Turtle)*, Commonwealth of Australia 2024.

Function means the ecosystem components, processes and benefits or services that characterise the associated user, including support for biological diversity or species composition.

Greater glider means the **EPBC Act** listed threatened species Greater glider (southern and central) (*Petauroides volans*).

Greater Glider habitat means habitat suitable for use or used by the **EPBC Act** listed threatened species **Greater Glider**, as detailed within *Conservation Advice for Petauroides volans (greater glider (southern and central))*, Commonwealth of Australia 2022.

Ground-truthing means analysis supported by desktop searches and **pre-clearance surveys**, with reference to relevant departmental documents (e.g. approved conservation advices, recovery plans, survey guidelines, referral guidelines and listing advices, and the SPRAT Database) and relevant peer-reviewed literature.

- a) **Ground-truthing** must be undertaken prior to any disturbance associated with petroleum activities commencing.
- b) **Ground-truthing** must delineate habitat type (e.g. breeding / foraging / denning / dispersal), as relevant for the individual protect matter.
- c) **Ground-truthing** must be precautionary in accounting for temporal and spatial use of the habitat (e.g. species life cycles and climatic and environmental conditions at the time of surveys).

Groundwater extraction means the process of extracting groundwater from an aquifer, including as a by-product of coal seam gas production.

Habitat quality means a measure of the overall viability of a site and its capacity to support **protected matters**, with respect to site condition, site context and species stocking rate and/or composition.

Harm means to cause any measurable direct or indirect disturbance or deleterious change as a result of any activity associated with the Action.

High Constraint Areas means the areas as defined in the **Environmental Constraints Planning and Field Development Protocol** dated 25/11/2025.

High-risk chemical means a Teir 2 or Tier 3 **chemical** as classified by the **Chemical Risk Assessment**.

High risk/very high risk means the overall unmitigated risk rating in the **UWIR** and as otherwise determined in accordance with the **relevant risk management framework/s**. Note: Any **impact** requiring mitigation is considered **high risk/very high risk**.

linear infrastructure means Infrastructure including (but not limited to) gas and water gathering lines, low and high-pressure gas and water pipelines, roads and tracks, power lines and other service lines.

Impact/s (verb) means to cause any measurable direct or indirect disturbance or harmful change as a result of any activity associated with the action. **Impact** (noun) means any measurable direct or indirect disturbance or harmful change as a result of any activity associated with the action.

Incident means any:

- event which has the potential to, or does, **harm any protected matter**,
- potential non-compliance with these conditions, including the administrative requirements,
- actual non-compliance with these conditions, including the administrative requirements,
- potential non-compliance with one or more commitment made in a **plan**, and/or
- actual non-compliance with one or more commitment made in a **plan**.

Independent audit means an audit, conducted by an **independent auditor**, of compliance with and fulfilment of these conditions and the commitments made in **plans**, objectively evaluated against the audit criteria developed by the **independent auditor**, in accordance with the **Independent Audit and Audit Report Guidelines** to the extent that the **Independent Audit and Audit Report Guidelines** are consistent with these conditions.

Independent Audit and Audit Report Guidelines means the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines*, Commonwealth of Australia 2019.

Independent auditor means a person, or firm, who:

- does not have any individual, financial*, employment* or family affiliation or any conflicting interests with the Action, the approval holder or the approval holder's staff, representatives, or associated persons,
- has demonstrated experience in undertaking government-regulated environmental compliance audits, and
- holds relevant professional qualifications and accreditations.

*Other than for the purpose of undertaking the role for which the person, or firm, is required.

Independent suitably qualified water resources expert means a person with at least a postgraduate degree (or equivalent) in a suitable area (such as hydrology or hydrogeology) and a minimum of 10 years relevant experience in water resources assessment, including at least one year of experience in Australia, who is independent of the **suitably qualified water resources expert**.

Ironbark development area means the area as prescribed in Attachment G.

Joint Industry Framework (JIF) means the *Joint Industry Framework* (or chosen document title) as endorsed by the **Department** on 17 March 2021, including subsequent endorsed versions.

Koala means the EPBC Act listed threatened species Koala (*Phascolarctos cinereus*).

Koala habitat means any area of vegetation which supports the **Koala**, including habitat described in the *Conservation Advice for Phascolarctos cinereus (Koala) combined populations of*

Queensland, New South Wales and the Australian Capital Territory, Commonwealth of Australia 2022 and *National Recovery Plan for the Koala Phascolarctos cinereus (combined populations of Queensland, New South Wales and the Australian Capital Territory)*, Commonwealth of Australia 2022.

Large-eared pied bat (active and nonactive) roosting and breeding habitat means any habitat suitable for use or used by the **EPBC Act** listed threatened species Large-eared pied bat (*Chalinolobus dwyeri*) for breeding and roosting, including habitat described in the *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)* and the *National recovery plan for the large-eared pied bat Chalinolobus dwyeri*.

Limit/s means a threshold greater than a **trigger value** that must not be exceeded. Note: An exceedance of a **limit/s** constitutes a failure to achieve the outcome/s specified in Condition 27) and compliance actions will be implemented.

Listed threatened species means a threatened species listed under section 178 of the **EPBC Act** (other than a conservation dependent species).

Low impact petroleum activities means petroleum activities which do not result in the clearing of MNES habitat.

Low-risk chemical means any Tier 1 **chemical** as classified by the **Chemical Risk Assessment**.

Maintaining means the level and quality of groundwater discharge remains within the bounds of natural variability.

Maximum disturbance limits means the maximum area of impact, in hectares, as specified in the Condition 4) of this Notice.

Method A means to measure spring discharge through direct flow measurement using permanent stream gauging infrastructure, or standard low-flow field hydrology methods.

Method B means to measure spring discharge using a visual estimate when flows are too small to be practically measured using **Method A**.

Minister means the Australian Government Minister administering the **EPBC Act**, including any delegate thereof.

Monitoring data means the data required to be recorded under the conditions of this approval, including **sensitive biodiversity data**.

New or increased impact means any direct or indirect increase in the impacts of an Action, an increase to the likelihood of an impact occurring, a reduction to the monitoring or mitigation measures for a **protected matter**, and/or a change to the nature or management of an environmental offset as outlined in the *Guidance on 'new or increased impact' relating to changes to approved management plans under EPBC Act environmental approvals*, Commonwealth of Australia 2017.

No adverse effect/s means not reaching or exceeding an approved or interim **limit**, as a result of the **development**. Note: If **high risk** or **very high risk** is not identified in accordance with the **relevant risk management framework/s**, and **limits** are not required to be provided to the **Minister** under Condition 30), a **limit** is taken to not have been exceeded.

No-Go (Avoidance) Areas means the 'No-Go (Avoidance) Areas as defined in Appendix A: **Environmental Constraints Planning and Field Development Protocol** dated 25/11/2025.

No impact means not reaching or exceeding an approved or interim **limit**, as a result of the **development**.

Offset Management Strategy or **OMS** means the document titled *Final Public Environment Report Appendix E: Offsets Strategy*, or the latest subsequent version approved in writing by the **Minister**.

Offset site means the area represented in *Final Public Environment Report Appendix E: Offsets Strategy*, or the latest subsequent version approved in writing by the Minister.

Ooline means the EPBC Act listed threatened species Ooline (*Cadellia pentastylis*) and areas that meet Ooline habitat requirements consistent with the *Approved Conservation Advice for Cadellia pentastylis (Ooline)*.

Ornamental Snake confirmed breeding and foraging habitat means any habitat suitable for use or used by the **EPBC Act** listed threatened species Ornamental Snake (*Denisonia maculata*) for breeding or foraging as described in *Approved Conservation Advice for Denisonia maculata (Ornamental Snake)* and where the species has been confirmed on site through **pre-clearance surveys**.

Ornamental Snake habitat means any habitat suitable for use or used by the **EPBC Act** listed threatened species Ornamental Snake (*Denisonia maculata*) as described in *Approved Conservation Advice for Denisonia maculata (Ornamental Snake)*.

Operate and **operation** mean all activities comprising part of the Action from the date of commencement of the action.

Operation of production wells means the time from when produced water production commences at a production well.

Outcomes Assurance Statement means the statement to be submitted by the approval holder to the **Minister** for each **high risk** or **very high risk** impact in accordance with Condition 35) and specifications in the **JIF**.

Peat development area means the area as prescribed in Attachment F.

Performance criteria means specific parameters, associated with and relevant to **EPBC-listed springs** or **water resource function**, that will be monitored to demonstrate that the outcome of **no impact** to **EPBC-listed springs** or **no adverse effect** to **water resource function** is being achieved, measured at a specific time and place.

Plan means any action management plan or strategy that the approval holder is required by these conditions to implement.

Poplar Box Grassy Woodlands TEC means the EPBC Act threatened ecological community Poplar Box Grassy Woodland on Alluvial Plains.

Pre-clearance surveys means surveys that are undertaken within the **project area** prior to **clearing** to determine the occurrence and location of any **EPBC Act listed threatened species** and their habitat and ecological communities.

Project area means the location of the Action, represented in Attachment A by the zone enclosed by the dotted red line designated 'Project Area'.

Protected matter means a matter protected under a controlling provision in Part 3 of the **EPBC Act** for which this approval has effect.

Queensland Government Guideline means the document *Guideline for the Environmental Assessment of Subterranean Aquatic Fauna* dated December 2015 published by the Queensland Department of Science, Information Technology and Innovation and available at [Environmental Assessment of Subterranean Aquatic Fauna - Dataset - Publications | Queensland Government](#)

Red Goshawk means the EPBC Act listed threatened species Red Goshawk (*Erythrorchis radiatus*).

Red goshawk nest trees means any tree or group of tree where a potential red goshawk nest has been identified or that meets the description in the *National recovery plan for the red goshawk* *Erythrorchis radiatus*.

Register of assessed chemicals means a register of each **chemical**. The register must provide a summary of outcomes of **chemical** screening assessments. The screening assessments must include a risk level categorisation, the activities the **chemical** has been assessed for (e.g. drilling, water treatment) and the assessed persistence in the environment, bioaccumulation and acute and chronic toxicity level of the **chemical**. The **Register of Assessed Chemicals** must be published and maintained on the approval holders **website**.

Relevant risk management framework/s means as outlined in the endorsed **JIF** for **EPBC-listed springs**; water supply bores; **aquatic GDEs**; **terrestrial GDEs** and **subterranean GDEs**.

Responsible CSG operator means the CSG operator who is operating on the petroleum lease (PL or PLA) on which the **terrestrial** or **subterranean GDE** is located within or closest to.

Reversed means **impact/s** have been reduced to levels below the approved or interim **limit** and sustained for 10 **business days**. Note: This is to achieve the outcome/s for **EPBC-listed springs** and **water resources**.

Salt pipewort means the EPBC Act listed threatened species Salt pipewort (*Eriocaulon carsonii*).

Secure or secured means to provide enduring conservation protection on the title of land under mechanisms agreed to in writing by the **department**, to provide protection for the site against development incompatible with conservation.

Semi-evergreen vine thicket of the Brigalow Belt TEC means the EPBC Act threatened ecological community Semi-evergreen vine thicket of the Brigalow Belt.

Sensitive biodiversity data means **biodiversity data** which, if released, published or otherwise exposed, may result in **harm** to the relevant **protected matter** as a result of the intentional or unintentional misuse of that **biodiversity data**.

Shapefile means location and attribute information about the Action provided in an Esri shapefile format containing:

- '.shp', '.shx', '.dbf' files,
- a '.prj' file which specifies the projection or geographic coordinate system used, and
- an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

Shiny-leaved ironbark means the EPBC Act listed threatened species Shiny-leaved ironbark (*Eucalyptus virens*).

SIMS mitigation plan means the mitigation plan to be completed by approval holders as directed by the Queensland Office of Groundwater Impact Assessment and as required under section 379 of the Queensland *Water Act 2000* and endorsed by the relevant Queensland agency

Site-specific assessment means a report that meets the requirements specified in Section 9.3 in the **JIF** which includes the explanation of the scientific basis on which the description and location of impact/s and associated users, **performance criteria**, **trigger values**, **limits** and **contributing well/s** have been derived, or not derived, to ensure that Condition 27) will be achieved and how any areas of a coal seam gas action contributing to the exceedance of a **limit** will be identified, including those outside of the project area.

Site-specific assessment peer review means a review carried out by an **independent suitably qualified water resources expert** that meets the requirements specified in Section 9.4 in the **JIF** including the evaluation of whether the **site-specific assessment** required under Condition 32) will ensure the outcomes specified under Condition 27) will be met.

Where inadequacies are identified by the **independent suitably qualified water resources expert**, the approval holder must describe in the **site-specific assessment** what the inadequacy is, why it has occurred and what work must be taken to rectify it.

SMART means specific, measurable, achievable, relevant and time bound.

Spring Gully A development area means the area as prescribed in Attachment B.

Spring Gully B development area means the area as prescribed in Attachment C.

Spring Gully C development area means the area as prescribed in Attachment D.

Spring Gully D development area means the area as prescribed in Attachment E.

Squatter pigeon breeding habitat means any habitat suitable for use or used by the EPBC Act listed threatened species Squatter pigeon (southern) (*Geophaps scripta*) for breeding, including any confirmed sites with nests or any habitat within 1 km of permanent water sources like rivers, creeks, or dams.

Stage Area Environmental Management Plan means a document providing the disturbance footprint and potential impacts on protected matters for each development stage of the Project.

Stage Offset Management Plan means a document providing details of offset liabilities for each protected matter, offset sites and methods to secure the sites, and how conservation gains will be achieved for each protected matter. The **Stage Offset Management Plan** must meet the requirements of the *EPBC Act 1999 Environmental Offsets Policy*.

Suite A means the field water quality parameters of pH, electrical conductivity, redox and temperature.

Suite B means the laboratory analysed water quality parameters of total dissolved solids, alkalinity (total alkalinity as CaCO₃, bicarbonate as CaCO₃, carbonate as CaCO₃ and hydroxide as CaCO₃), sulfate, chloride, major cations (calcium, magnesium, potassium and sodium), bromide, iodide, fluoride, total nitrogen as N (including NO_x and TKN), total phosphorous as P, total organic carbon, and total and dissolved strontium.

Stygofauna habitat means the subterranean living and non-living components of where an organism and/or ecological community exists.

Subterranean GDEs means aquifer ecosystems, including stygofauna.

Suitably qualified GDE expert means a person with at least a degree in a suitable area (such as aquatic ecology) and a minimum of 5 years relevant experience in impact assessment of groundwater-dependent ecosystems, including at least 1 year of experience in Australia.

Suitably qualified water resources expert means a person with at least a degree in a suitable area (such as hydrology or hydrogeology) and a minimum of 5 years relevant experience in water resources assessment, including at least 1 year of experience in Australia.

Surat CMA means the Surat cumulative management area declared under the Queensland *Water Act 2000*.

Tara Wattle means the EPBC Act listed threatened species Tara wattle (*Acacia lauta*).

Terrestrial GDE means ecosystems partially or wholly dependent on the subsurface presence of groundwater.

Trigger value/s means where reached or exceeded (either through modelling or monitoring), the approval holder will implement an appropriate management response to ensure approved or interim **limits** are not exceeded.

UWIR means the Office of Groundwater Impact Assessment, Department of Natural Resources, Mines and Energy (2019). *Underground Water Impact Report for the Surat Cumulative Management Area, July 2019*. State of Queensland, or subsequent published versions.

Water resource means:

- surface water or groundwater; or
- a watercourse, lake, wetland or aquifer (whether or not is currently has water in it); and
- includes all aspects of the water resource (including water, organisms and other components and ecosystems that contribute to the physical state and environmental value of the water resource), as defined in the Water Act 2007 (Cth).

Website means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.

Weeping Myall Woodlands TEC means the EPBC Act threatened ecological community Weeping Myall Woodlands.

White-throated Snapping Turtle habitat means any habitat suitable for use or used by the EPBC Act listed threatened species White-throated Snapping Turtle (*Elseya albagula*) as described in the *Conservation Advice Elseya albagula White-throated snapping turtle* and the *National Recovery Plan for the White-throated Snapping Turtle (Elseya albagula)*.

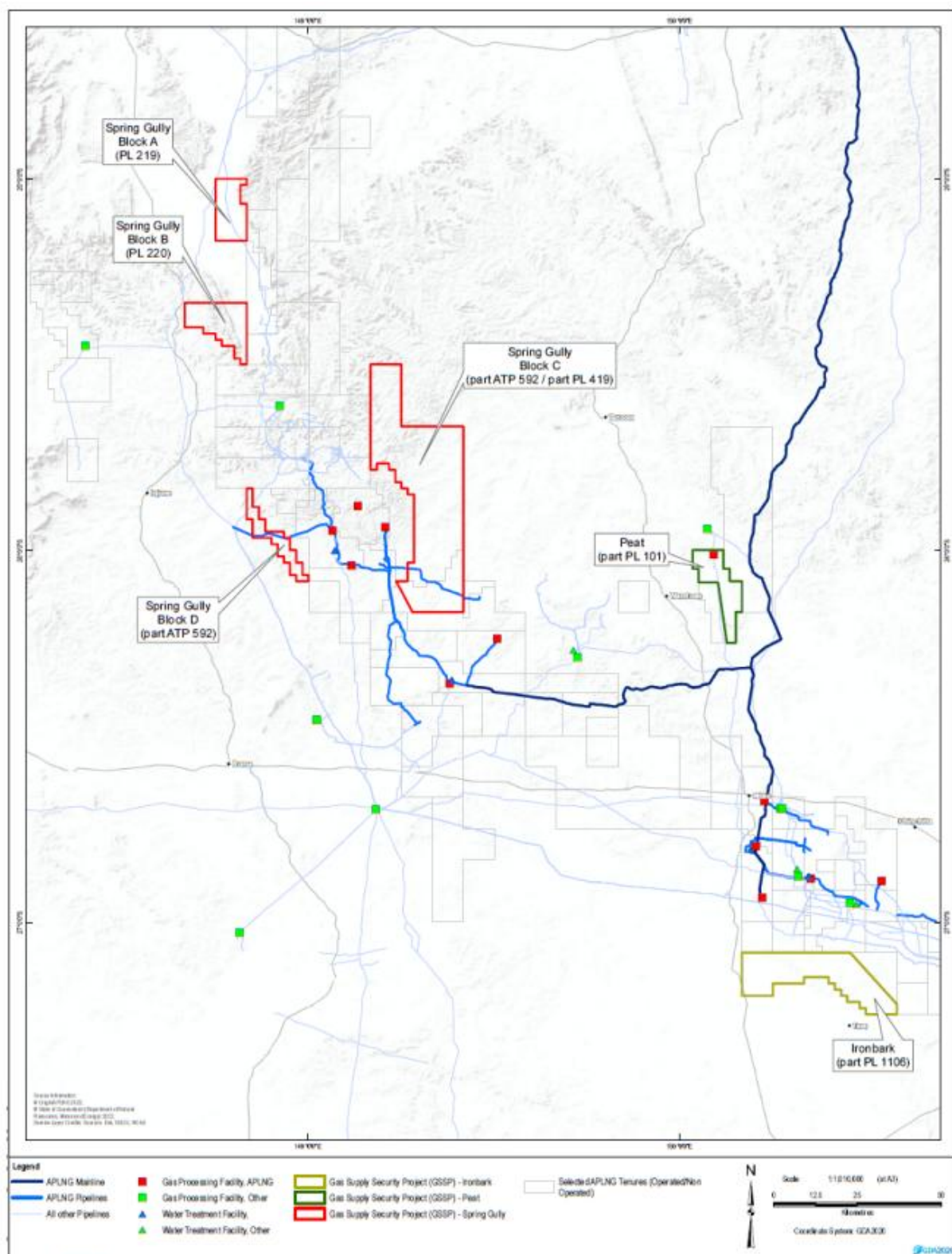
Xerothamnella herbacea means the EPBC Act listed threatened species *Xerothamnella herbacea*.

Attachments

- A: Map identifying the 6 development areas (Spring Gully A, B, C and D, Peat and Ironbark) that make up the Action Area.
- B: Map identifying the Spring Gully A development area including 'No-Go (Avoidance) Areas.
- C: Map identifying the Spring Gully B development area including 'No-Go (Avoidance) Areas.
- D: Map identifying the Spring Gully C development area including 'No-Go (Avoidance) Areas.
- E: Map identifying the Spring Gully D development area including 'No-Go (Avoidance) Areas.
- F: Map identifying the Peat development area including 'No-Go (Avoidance) Areas.

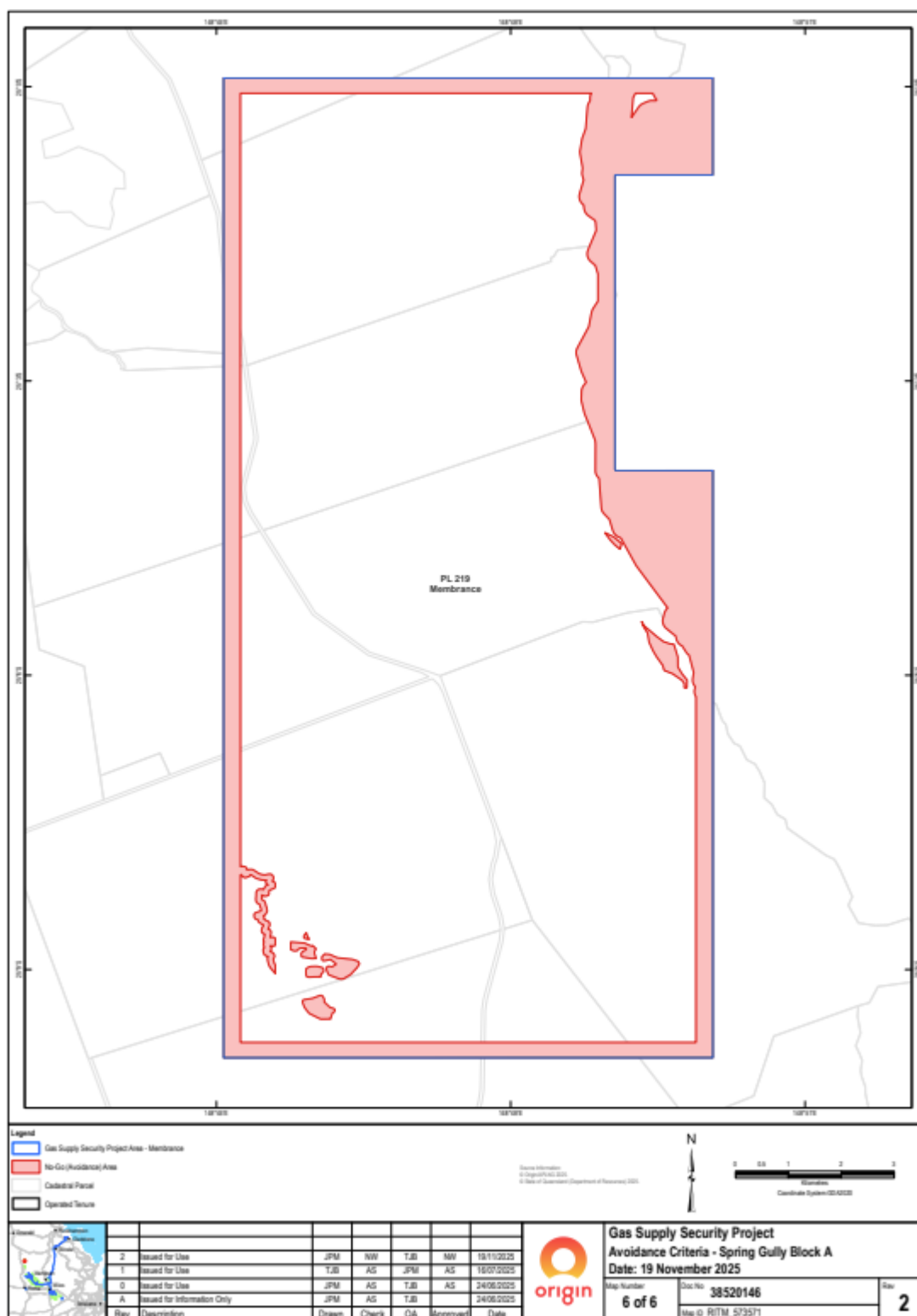
- G: Map identifying the Ironbark development area including 'No-Go (Avoidance) Areas.
- H: Map identifying the Eastern Contact Zone as identified in the Draft 2025 UWIR.

Attachment A: Map identifying the 6 development areas (Spring Gully A, B, C and D, Peat and Ironbark) that make up the Action Area.



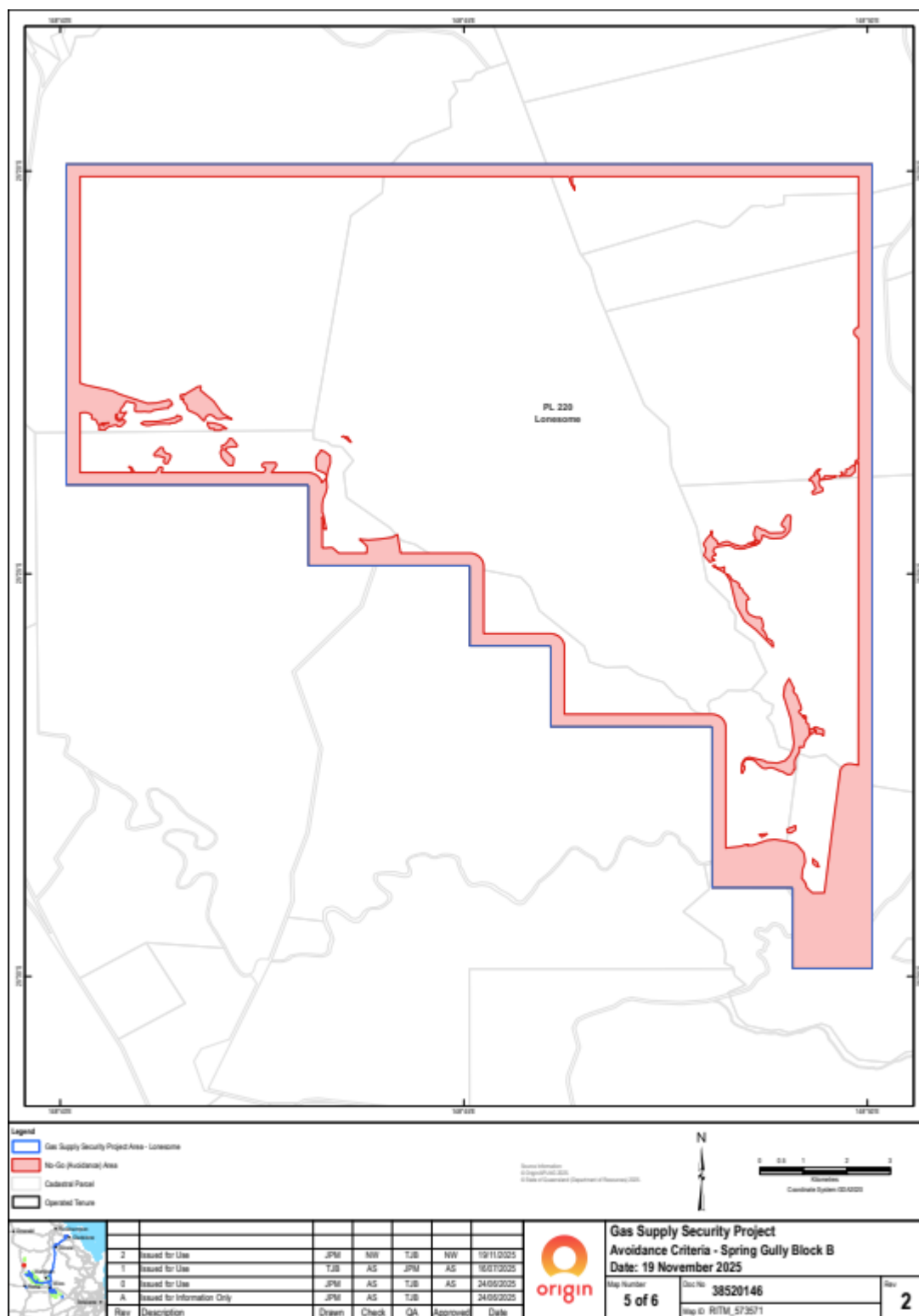
Released by National EPA under the FOI Act 1982

Attachment B: Map identifying Spring Gully Block A Development Area and No-Go (Avoidance) Areas.



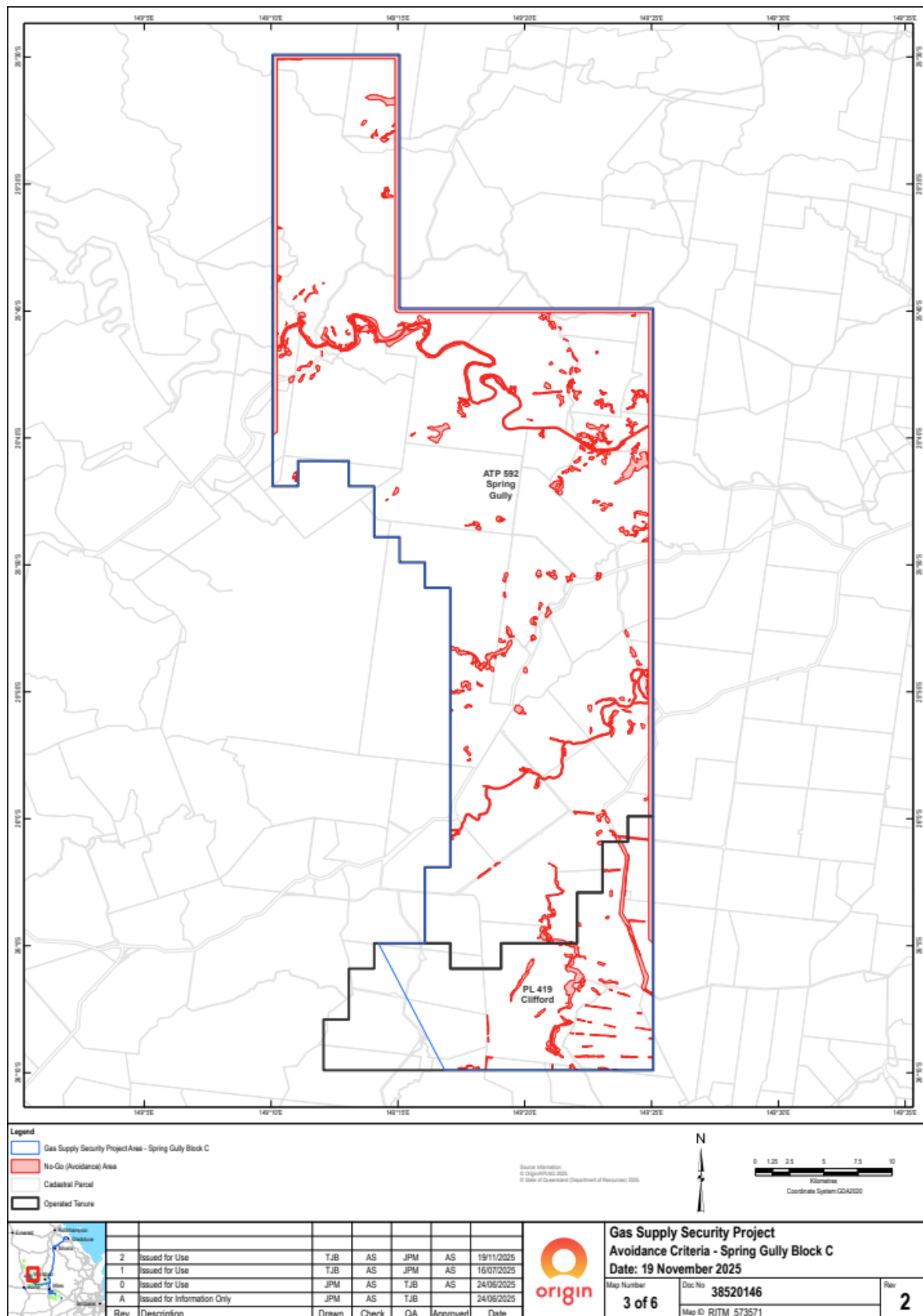
Released by National EPA under the FOI Act 1982

Attachment C: Map identifying Spring Gully Block B Development Area and No-Go (Avoidance) Areas.



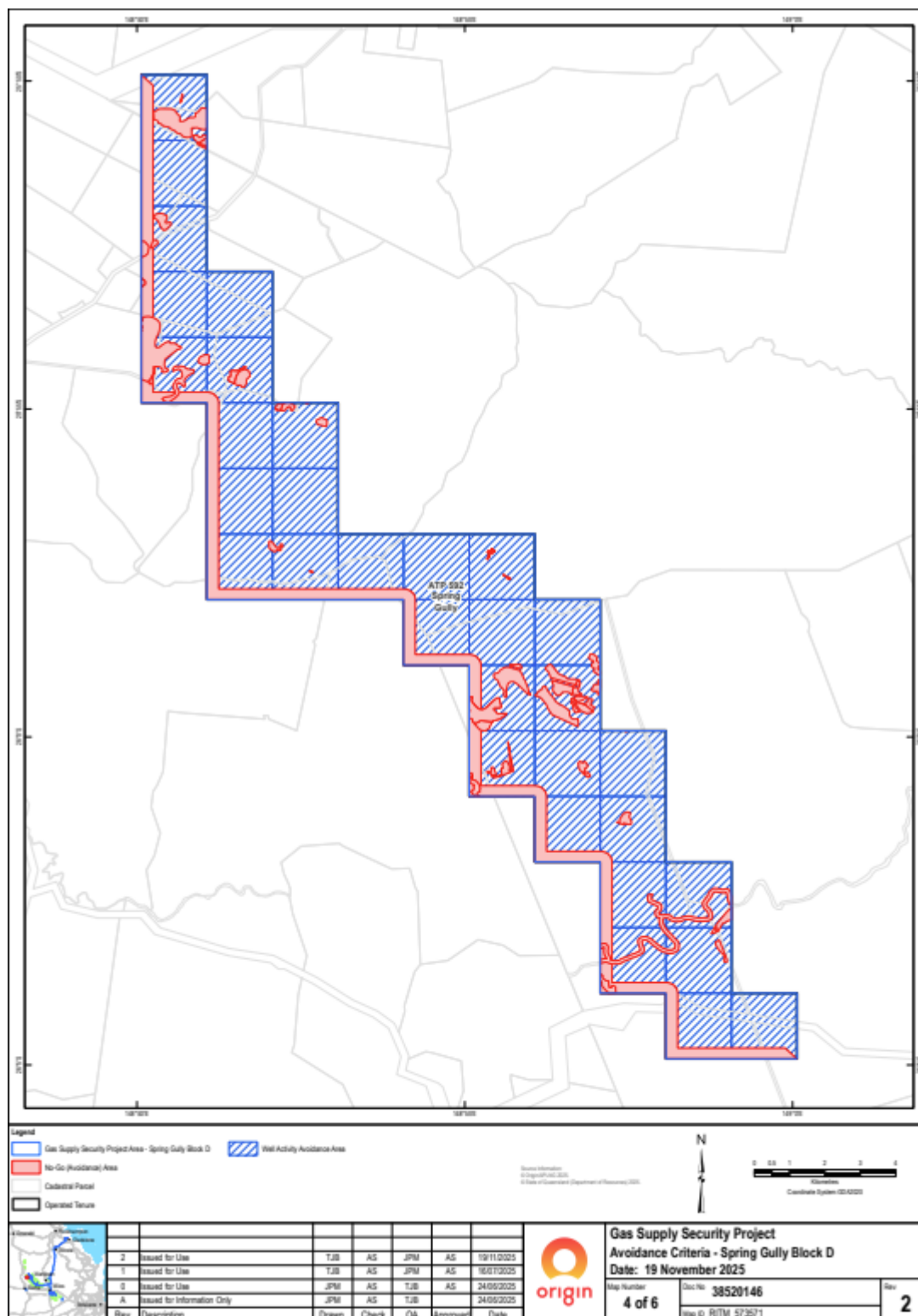
Released by National EPA under the FOI Act 1982

Attachment D: Map identifying Spring Gully Block C Development Area and No-Go (Avoidance) Areas.



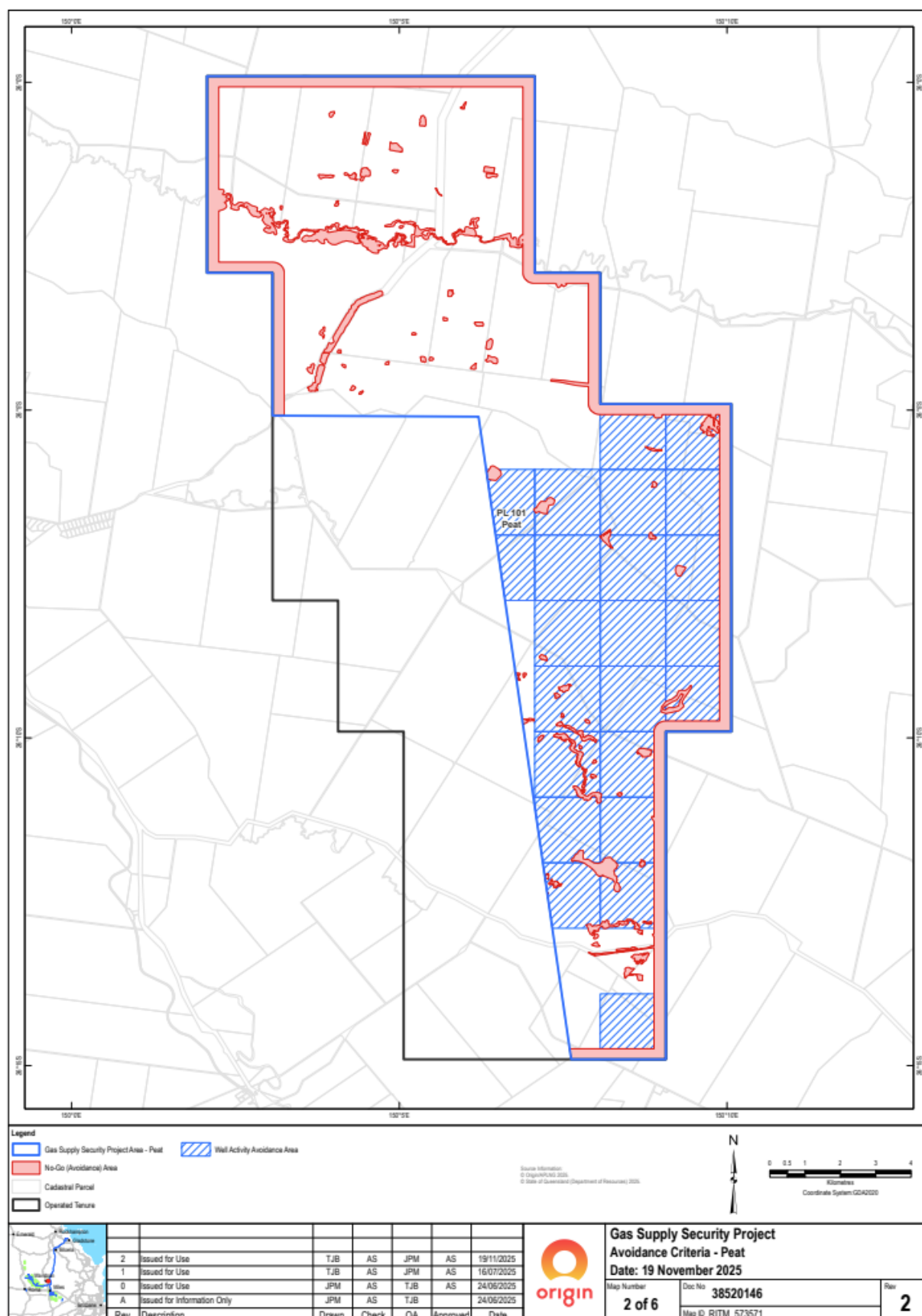
Released by National EPA under the FOI Act 1982

Attachment E: Map identifying Spring Gully Block D Development Area, No-Go (Avoidance) Areas, and Well Activity Avoidance Areas.



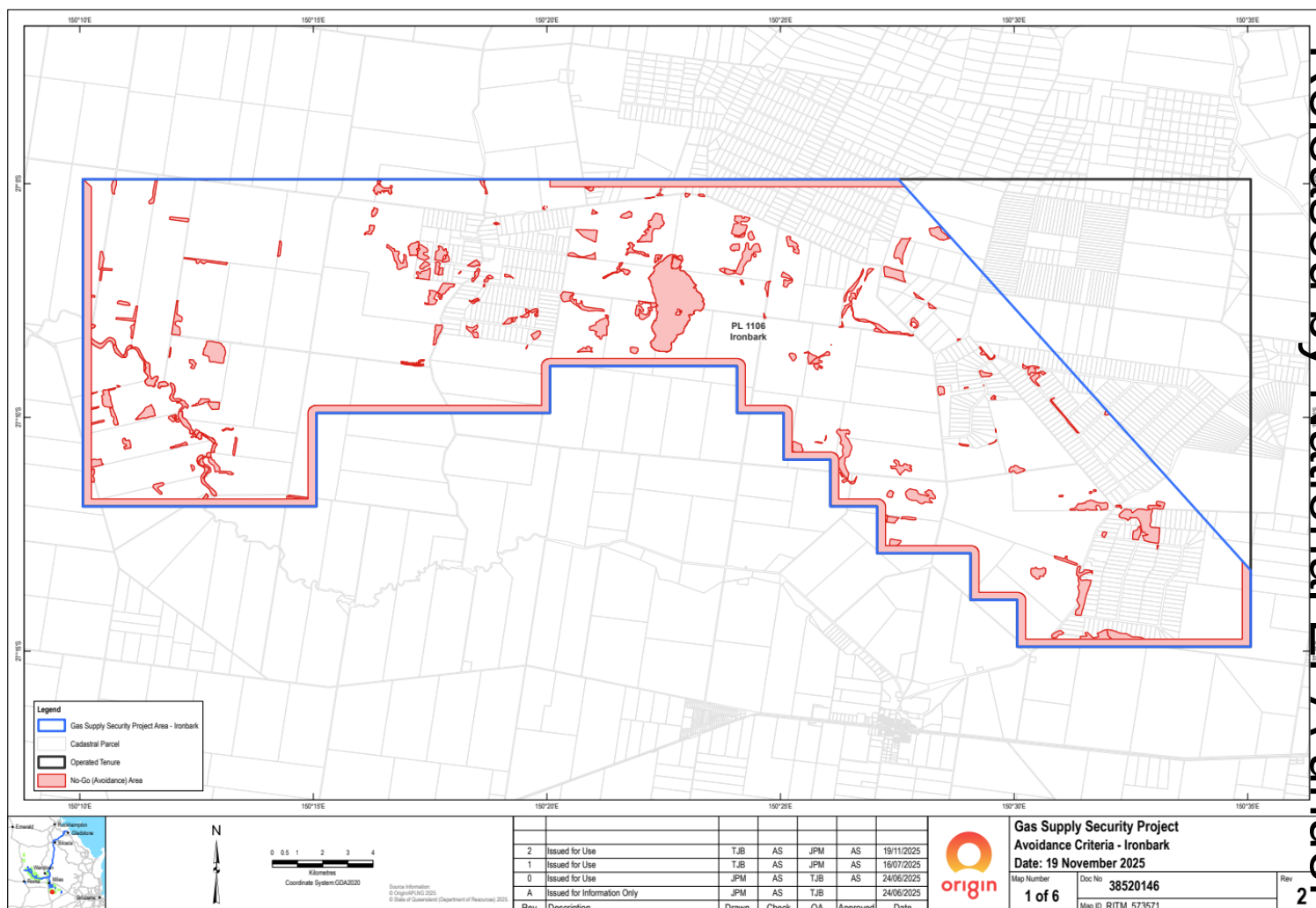
Released by National EPA under the FOI Act 1982

Attachment F: Map identifying Peat Development Area, No-Go (Avoidance) Areas, and Well Activity Avoidance Areas.



Released by National EPA under the FOI Act 1982

Attachment G: Map identifying Ironbark Development Area, and No-Go (Avoidance) Areas,



Released by National EPA under the FOI Act 1982

Attachment H: Map identifying the Eastern Contact Zone as identified in the **Draft 2025 UWIR**.

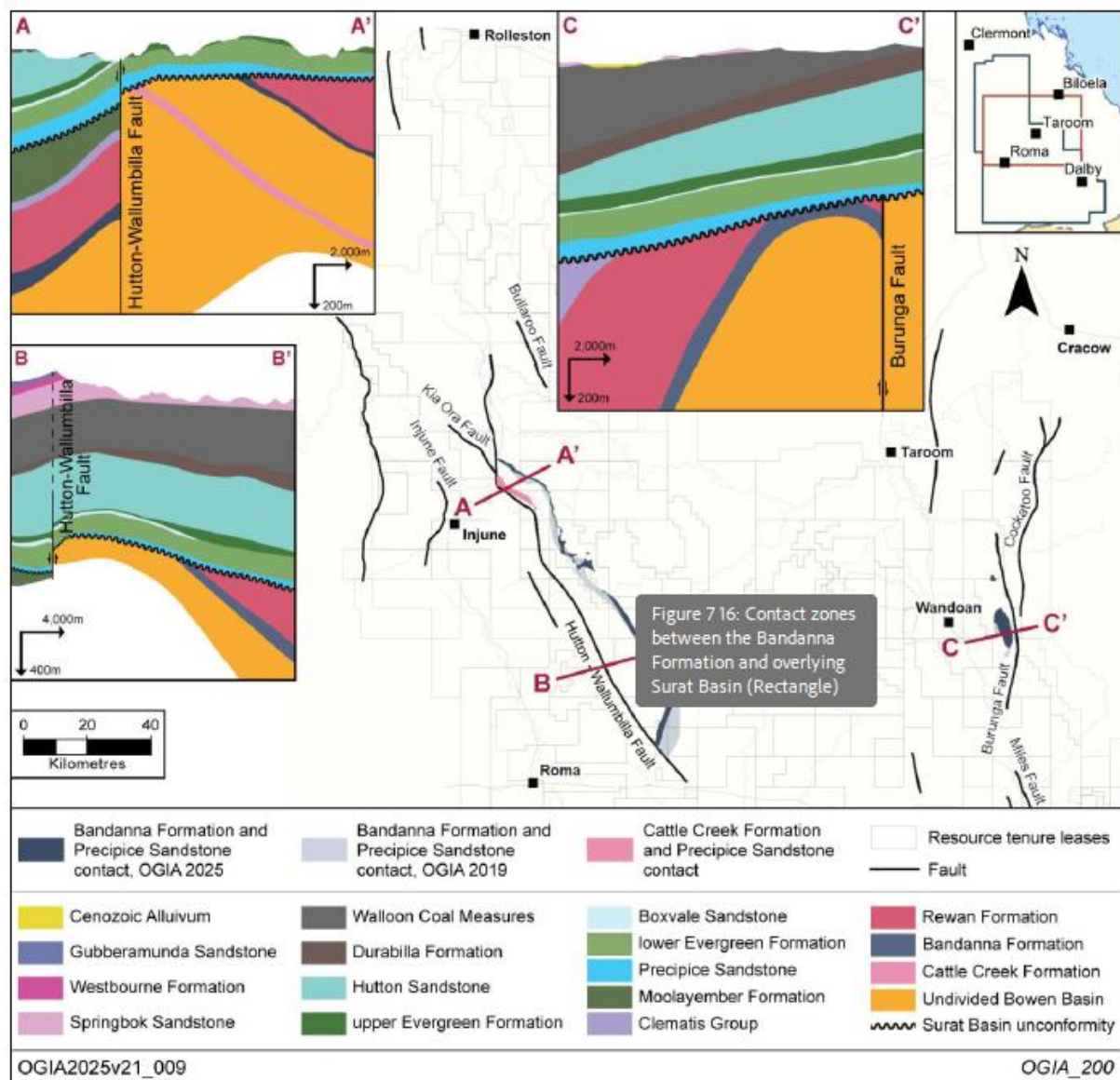


Figure 7-16: Contact zones between the Bandanna Formation and overlying Surat Basin



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Ms **s. 47F(1)**

Environmental Approvals Lead

Origin Energy on behalf of Australia Pacific LNG Pty Ltd

Level 28,180 Ann Street

BRISBANE QLD 4000

Invitation to comment on proposed approval decision – Gas Supply Security Project

Dear **s. 47F(1)**

I am writing to you about your proposed Gas Supply Security Project to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland. The proposed action has now been assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and coal seam gas or large coal mining development with impact on water resources (sections 24D and 24E).

I am proposing to approve this action, subject to conditions. My proposed decision is attached.

In accordance with the requirements of the EPBC Act, I invite you to provide comments on my proposed decision of approval, including the conditions which I propose to attach, within 10 business days of the date of this letter.

Please quote the title of the action and EPBC reference, as shown at the beginning of this letter, in any correspondence. You can send information to us:

By letter:

Queensland North Assessments
Environment Assessments Queensland
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
CANBERRA ACT 2601

By email: Queensland.north.assessments@dcceew.gov.au

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by e-mail to s. 22(1)(a)(ii) @dcceew.gov.au.

Yours sincerely



Declan O'Connor-Cox
Branch Head
Environment Assessments Queensland

26 February 2026



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Senator the Hon Malarndirri McCarthy
Minister for Indigenous Australians
Parliament House
CANBERRA ACT 2600

Invitation to comment on proposed approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the Gas Supply Security Project proposed by Australia Pacific LNG Pty Ltd, to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland. The proposed action was referred and has been assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and coal seam gas or large coal mining development with impact on water resources (sections 24D and 24E).

I am proposing to approve this action, subject to conditions. My proposed decision is attached.

I understand that you may have administrative responsibilities relating to the action. I invite you to provide comments on my proposed decision within 10 business days of the date of this letter, including on any matters of economic or social concern that should be considered consistent with the principles of ecologically sustainable development.

You can find the assessment documentation for this project on the proponent's website <https://aplng.com.au/government-approvals/>.

Please quote the title of the action and EPBC reference, as shown at the beginning of this letter, in any correspondence. You can send information to us:

By letter:

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Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
CANBERRA ACT 2601

By email: Queensland.north.assessments@dcceew.gov.au

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by e-mail to s. 22(1)(a)(ii) @dcceew.gov.au.

Yours sincerely



Declan O'Connor-Cox
Branch Head
Environment Assessments Queensland

26 February 2026



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

The Hon Madeleine King MP
Minister for Resources
Minister for Northern Australia
Parliament House
CANBERRA ACT 2600

Invitation to comment on proposed approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the Gas Supply Security Project proposed by Australia Pacific LNG Pty Ltd, to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland. The proposed action was referred and has been assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and coal seam gas or large coal mining development with impact on water resources (sections 24D and 24E).

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If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by e-mail to s. 22(1)(a)(ii) @dcceew.gov.au.

Yours sincerely



Declan O'Connor-Cox
Branch Head
Environment Assessments Queensland

26 February 2026



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

The Hon Chris Bowen MP
Minister for Climate Change and Energy
Parliament House
CANBERRA ACT 2600

Invitation to comment on proposed approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the Gas Supply Security Project proposed by Australia Pacific LNG Pty Ltd, to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland. The proposed action was referred and has been assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and coal seam gas or large coal mining development with impact on water resources (sections 24D and 24E).

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If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by e-mail to s. 22(1)(a)(ii) @dcceew.gov.au.

Yours sincerely



Declan O'Connor-Cox
Branch Head
Environment Assessments Queensland

26 February 2026



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

The Hon Julie Collins MP
Minister for Agriculture, Fisheries and Forestry
Parliament House
CANBERRA ACT 2600

Invitation to comment on proposed approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the Gas Supply Security Project proposed by Australia Pacific LNG Pty Ltd, to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland. The proposed action was referred and has been assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and coal seam gas or large coal mining development with impact on water resources (sections 24D and 24E).

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GPO Box 3090
CANBERRA ACT 2601

By email: Queensland.north.assessments@dcceew.gov.au

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) ,
by e-mail to s. 22(1)(a)(ii) @dcceew.gov.au.

Yours sincerely



Declan O'Connor-Cox
Branch Head
Environment Assessments Queensland

26 February 2026



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

s. 47F(1)

Director

Technical and Assessment Services

Department of the Environment, Tourism, Science and Innovation

GPO Box 2454

BRISBANE QLD 4001

Invitation to comment on proposed approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the Gas Supply Security Project proposed by Australia Pacific LNG Pty Ltd, to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland. The proposed action was referred and has been assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and coal seam gas or large coal mining development with impact on water resources (sections 24D and 24E).

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CANBERRA ACT 2601

By email: Queensland.north.assessments@dcceew.gov.au

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by e-mail to s. 22(1)(a)(ii) @dcceew.gov.au.

Yours sincerely



Declan O'Connor-Cox
Branch Head
Environment Assessments Queensland

26 February 2026

REQUEST FOR ADVICE

Summary			
Requesting agency	Department of Agriculture, Water and the Environment (DAWE)		
Project title	Gas Supply Security Project	Proponent	Australia Pacific LNG Pty Ltd
Reference no.	EPBC 2020/8856	State	Queensland
Project stage	The proponent has submitted a draft Public Environment Report (PER) for an adequacy review against the PER guidelines.		
Timing	The IESC advice and the proponent's response to the IESC advice will be incorporated into the revised draft PER (no statutory timeframe).		
Documentation	SPIRE folder		
	Draft PER Draft PER - Appendix A - Environmental Constraints Protocol Draft PER - Appendix A2 - Habitat Validation Method Draft PER - Appendix B1 - Likelihood of Occurrence and PMST results Draft PER - Appendix B2 - Habitat Modelling Method Draft PER - Appendix B3 - Probabilistic Land Disturbance Method Report Draft PER - Appendix B4 - Species Profiles and Mapping-part 1 of 5 Draft PER - Appendix B4 - Species Profiles and Mapping-part 2 of 5 Draft PER - Appendix B4 - Species Profiles and Mapping-part 3 of 5 Draft PER - Appendix B4 - Species Profiles and Mapping-part 4 of 5 Draft PER - Appendix B4 - Species Profiles and Mapping-part 5 of 5 Draft PER - Appendix B5 - Significant Impact Assessments Draft PER - Appendix C - Environmental Management Plan Draft PER - Appendix D - Rehabilitation Management Plan Draft PER - Appendix E - Offsets Plan Draft PER - Appendix F - Water Assessment-part 1 of 2 Draft PER - Appendix F - Water Assessment-part 2 of 2 Draft PER - Appendix G - Produced Water Management Plan Draft PER - Appendix H - Groundwater Monitoring and Management Plan Draft PER - Appendix I - Chemical Risk Assessment Draft PER - Appendix J - GHG emissions Inventory Draft PER - Appendix K - Social assessment Draft PER - Appendix L - Economic Assessment Draft PER - Appendix M - Proposed EPBC Approval Conditions Draft PER - Appendix N - Environmental Authorities Draft PER - Appendix O - PER Guidelines		
Description of the proposed project			

Development type	☒ Coal Seam Gas	☐ Open cut coal mine	☐ Underground coal mine	
	☐ Other:		Site	☒ New ☒ Expansion
Operational life	50 years		Scale	Up to 7,700 wells
Geological basin	Surat Basin & Bowen Basin		Coal resource	Walloon Coal Measures, Surat Basin Baralaba Coal Measures / Bandanna Formation and Reids Dome Beds, Bowen Basin
Assessment of impacts to water resources				
Surface water catchment	Fitzroy River		Groundwater basin	GAB
Key water related assets	- Landholder bores (4,850 known within 50 km of project area). - Groundwater dependent ecosystems (GDEs), including: - potential terrestrial GDEs, typically associated with alluvial aquifers, permeable rock aquifers (basalts), and unconsolidated and consolidated sedimentary aquifers; - surface-expression GDEs, including 8 spring complexes (including endangered GAB springs and springs providing habitat for listed threatened species) and 21 watercourse springs within 50 km of the project area; and - stygo fauna, with the project area containing favourable conditions. - Groundwater, with third party users accessing four primary groundwater systems (alluvium, basalt, Surat Basin, and Bowen Basin). - Surface water, with major watercourses in the project area including the Condamine River, Balonne River, Dawson River, and Comet River, though numerous major and minor watercourses traverse across the development areas.			
Relevant water management policies, regulations or information	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (C'wealth) <i>Water Act 2007</i> (C'wealth) Environmental Authorities issued to the proponent under the <i>Environment Protection Act 1994</i> (Qld), noting the extent of these approvals does not translate entirely to the project area Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin (2010)			
Key issues (identified by the requesting agency)	- Cumulative impacts on groundwater, with a proposed peak extraction rate of 6 GL/year over 50 years. - Omissions from the 2019 UWIR model relevant to the project, including: - Cumulative drawdown predictions between the project and three open cut coal mines located near Ironbark and Peat development areas are not available; - Production activities (including water production) within the Spring Gully D Block were not simulated, with the target Reids Dome Beds formation 'not yet properly represented' in the 2019 UWIR model; and			

	- Gas production in the Eastern Contact Zone of the Peat development was not simulated. - Impacts to GAB springs, both as an individual project and cumulatively, as a result of groundwater drawdown and resulting decreases in flows from springs. - Potential impacts to other GDEs from groundwater drawdown, including terrestrial GDEs, watercourse springs and stygofauna. - Up to 34 landholder bores are predicted to exceed drawdown triggers under the 95th percentile.
Request for Advice	
- Does the IESC consider the key potential risks and impacts of the proposed action on water resources and water-related assets (as defined by the Commonwealth <i>Water Act 2007</i>) have been adequately identified and assessed? In particular, does the IESC consider that the proponent has adequately considered impacts related to: - the extent of drawdown; - subsidence; - groundwater-dependent ecosystems in the area, including, but not limited to, Great Artesian Basin Springs; - surface water, groundwater and groundwater-surface water interactions due to drawdown; and - discharge and the disposal of water-treatment by-products. - If not, what additional work does the IESC consider is required to identify and assess the key risks and impacts? - Does the IESC consider there is adequate consideration of the proposed action's contribution to cumulative impacts associated with other coal seam gas production and mining activities in the area? If not, what additional work is required to adequately assess the proposed action's contribution to cumulative impacts? - Does the IESC consider the proposed monitoring, mitigation and management measures are adequate? If not, what additional measures does the IESC consider are required to monitor, mitigate and manage impacts on water resources?	
Contact information	
Agency contact officer/s	s. 22(1)(a)(ii) Assessment Officer, Queensland North Assessments, DAWE Ph: s. 22(1)(a)(ii) E: s. 22(1)(a)(ii) @environment.gov.au
Approval	
Agency Delegate	s. 22(1)(a)(ii) Director, Queensland North Assessments, DAWE
Signature	s. 22(1)(a)(ii)
Date	20/12/2021

From: Species Policy
Sent: Thursday, 12 February 2026 11:47 AM
To: s. 22(1)(a)(ii) ; Species Policy
Cc: s. 22(1)(a)(ii)
Subject: RE: Statutory Document Check: Gas Supply Security Project (EPBC 2020/8856) [SEC-OFFICIAL]

~~OFFICIAL~~

Hi s. 22(1)(a)(ii)

On behalf of the Protected Species and Communities Branch, I confirm that we are not anticipating any changes to the documents relating to the threatened species and ecological communities, identified by EAD in the email below, in the coming six weeks.

The report used to check this was published on 6 February 2026.

Please note that PSCB has not re-checked whether the correct documents are present or that the citation information is correct.

The next weekly report is due to come out on 13 February 2026.

You can view the weekly report at [Species & Ecological Communities](#)

Thanks,

s. 22(1)(a)(ii)
Senior Policy Officer

Species Listing, Information and Policy Section | Protected Species and Ecological Communities Branch
Biodiversity Division | Department of Climate Change, Energy, the Environment and Water
Turrbal Country Level 4, 145 Ann Street, Brisbane QLD 4000
P s. 22(1)(a)(ii) | E s. 22(1)(a)(ii)@dcceew.gov.au
DCCEEW.gov.au | ABN 63 573 932 849

OFFICIAL

From: s. 22(1)(a)(ii)@dcceew.gov.au>
Sent: Wednesday, 11 February 2026 11:48 AM
To: Species Policy <SpeciesPolicy@dcceew.gov.au>
Cc: s. 22(1)(a)(ii)@dcceew.gov.au> s. 22(1)(a)(ii)@dcceew.gov.au>
<s. 22(1)(a)(ii)@dcceew.gov.au>; s. 22(1)(a)(ii)@dcceew.gov.au>
Subject: Statutory Document Check: Gas Supply Security Project (EPBC 2020/8856) [SEC-OFFICIAL]

OFFICIAL

Hi Species Policy Team,

Australian Pacific LNG Pty Ltd is proposing to develop the Gas Supply Security Project (EPBC 2020/8856). The proposed decision is likely to be cleared by Declan circa 19 February 26 before going to the proponent for 10 days of consultation. We are aiming for a final decision on 10 March 2026.

We would be grateful if you could provide advice as to whether or not there are any new, revised or imminent conservation advices (CAs), recovery plans (RPs), or threat abatement plans (TAPs) that may be relevant to this project. It is a very big project, hence the very long list (refer below):

We know this is a substantial list to work through, and we really appreciate your help in getting it completed before it goes to Declan on 19 February.

Listed threatened species (s18 and s18A):

The following species and TEC's have been identified as likely to occur within the project area:

Threatened Ecological Communities

- a. Brigalow (Acacia harpophylla dominant and co- dominant) – Endangered;
- b. The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin TEC – Endangered;
- c. Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South bioregions – Endangered;
- d. Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin – Endangered;
- e. Poplar Box Grassy Woodland on Alluvial Plains – Endangered;
- f. Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar bioregions – Endangered;
- g. Weeping Myall Woodlands – Endangered;
- h. White Box–Yellow Box–Blakely's Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered

Threatened Species:

- a. *Acacia grandifolia* – vulnerable
- b. *Aristida annua* – vulnerable
- c. Austral Toadflax (*Thesium australe*) – vulnerable
- d. Australian Painted Snipe (*Rostratula australis*) - endangered
- e. Bean's Ironbark (*Eucalyptus Beaniana*) - vulnerable
- f. *Bertya opposens* – vulnerable
- g. Belson's Panic (*Homopholis belsonii*) - vulnerable
- h. Black-throated Finch (*Peophila cincta cincta*) – endangered
- i. Bluegrass (*Dichanthium setosum*) – vulnerable
- j. Brigalow Woodland Snail (*Adclarkia cameroni*) - endangered
- k. Collared Delma (*Delma torquata*) – vulnerable
- l. Curlew Sandpiper (*Calidris feruginea*) - critically endangered

- m. Curly-bark Wattle (*Acacia curranii*) – vulnerable
- n. Dulacca Woodland Snail (*Adclarkia dulacca*) - endangered
- o. Dunmall's Snake (*Furina dunmalli*) – vulnerable
- p. Fitzroy River Turtle (*Rheodytes leukops*) – endangered
- q. Greater Glider (*Petaurids' volans*) - endangered
- r. Grey Falcon (*Falco hypoleucos*) - vulnerable
- s. Grey-headed Flying Fox (*Pteropus poliocephalus*) – vulnerable
- t. Grey Falcon (*Falco hypoleucos*) - vulnerable
- u. Ghost Bat (*Macroderma gigas*) – vulnerable
- v. Hairy-joint Grass (*Arthraxon hispidus*) – vulnerable
- w. King Blue-grass (*Dichanthium queenslandicum*) – endangered
- x. Koala (*Phascolarctos cinereus*) - endangered
- y. Kogan Waxflower (*Philotheca sporadica*) – vulnerable
- z. Large-eared Pied Bat (*Chalinolobus dwyeri*) - vulnerable
- aa. *Macrozamia platyrhachis* – endangered
- ab. *Marsdenia brevifolia* - vulnerable
- ac. Murray Cod (*Maccullochella peelii*) – vulnerable
- ad. Northern Quoll (*Dasyurus hallucatus*) – endangered
- ae. Ooline (*Cadellia pentastylis*) – vulnerable
- af. Ornamental Snake (*Denisonia maculata*) - vulnerable
- ag. Painted Honeyeater (*Grantiella picta*) - vulnerable
- ah. Red Goshawk (*Erythroriorchis radiatus*) - vulnerable
- ai. Salt pipewort (*Eriocaulon carsonii*) – endangered
- aj. Shiny-leaved Ironbark (*Eucalyptus virens*) – vulnerable
- ak. South-eastern Long-eared Bat (*Nyctophilus corbeni*) - vulnerable
- al. Squatter Pigeon (*Geophaps scripta scripta*) - vulnerable
- im. Star Finch (eastern, southern) (*Neochmia ruficauda ruficauda*) – endangered
- an. Tara Wattle (*Accacia luata*) - vulnerable
- ao. *Tylophera linearis* – endangered
- ap. White-throated Needletail (*Hirundapus caudacutus*) – vulnerable
- aq. White-throated Snapping Turtle (*Elseya albagula*) – critically endangered
- ar. Xerothamnella herbacea – endangered
- as. Yakka Skink (*Egernia rugosa*) - vulnerable

The Recovery Plans relevant to the proposed Action and assessment are:

- a. Fensham, R.J., W.F. Ponder & R.J. Fairfax (2010). *Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*. Report to Department of the Environment, Water, Heritage and the Arts, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin - DCCEEW](#)
- b. Fensham, R.J., W.F. Ponder & R.J. Fairfax (2010). *Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*. Report to Department of the Environment, Water, Heritage and the Arts, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the](#)

[community of native species dependent on natural discharge of groundwater from the Great Artesian Basin - DCCEEW](#)

- c. Department of Climate Change, Energy, the Environment and Water (2022). *National Recovery Plan for the Australian Painted Snipe* (*Rostratula australis*). Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [National Recovery Plan for the Australian Painted Snipe \(Rostratula australis\) - DCCEEW](#)
- d. Department of Environment and Resource Management (2012). *National recovery plan for the red goshawk* *Erythrotriorchis radiatus*. Report to the Department of Sustainability, Environment, Water, Population and Communities, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the red goshawk \(Erythrotriorchis radiatus\) - DCCEEW](#)
- e. Department of Agriculture, Water and the Environment (2021). *National Recovery Plan for the Painted Honeyeater* (*Grantiella picta*). Department of Agriculture, Water and the Environment, Canberra. Available from: [National Recovery Plan for the Painted Honeyeater \(Grantiella picta\) - DCCEEW](#)
- f. Department of Agriculture, Water and the Environment (2020). *National Recovery Plan for the White-throated Snapping Turtle* (*Elseya albagula*). Commonwealth of Australia, Canberra. Available at: [National Recovery Plan for the White-throated Snapping Turtle \(Elseya albagula\) - DCCEEW](#)
- g. Department of Agriculture, Water and the Environment (2022). *National Recovery Plan for the Koala Phascolarctos cinereus (combined populations of Queensland, New South Wales, and the Australian Capital Territory)*. Department of Agriculture, Water and the Environment, Canberra. Available at: [National Recovery Plan for the Koala Phascolarctos cinereus \(combined populations of Queensland, New South Wales and the Australian Capital Territory\) - DCCEEW](#)
- h. Department of Environment and Resource Management (2011). *National recovery plan for the large-eared pied bat* *Chalinolobus dwyeri*. Report to the Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [National recovery plan for the large-eared pied bat Chalinolobus dwyeri - DCCEEW](#)
- i. Department of Agriculture, Water and the Environment (2021). *National Recovery Plan for the Grey-headed Flying-fox* *Pteropus poliocephalus*. Commonwealth of Australia, Canberra. Available at: [National Recovery Plan for the Grey-headed Flying-fox Pteropus poliocephalus - DCCEEW](#)
- j. Black-throated Finch Recovery Team, Department of Environment and Climate Change (NSW) and Queensland Parks and Wildlife Service (2007). *National recovery plan for the black-throated finch southern subspecies* *Poephila cincta cincta*. Report to the Department of the Environment and Water Resources, Canberra. Department of Environment and Climate Change (NSW), Hurstville and Queensland Parks and Wildlife Service, Brisbane. Available at: [National recovery plan for the Black-throated finch southern subspecies \(Poephila cincta cincta\) - DCCEEW](#)
- k. Queensland Herbarium (2007). *National Multi-species Recovery Plan for the cycads*, *Cycas megacarpa*, *Cycas ophiolitica*, *Macrozamia cranei*, *Macrozamia lomandroides*, *Macrozamia pauli-guilielmi* and *Macrozamia platyrhachis*. Report to Department of the Environment and Water Resources, Canberra. Queensland

Parks and Wildlife Service, Brisbane. Available at: [National Multi-species Recovery Plan for the cycads, *Cycas megacarpa*, *Cycas ophiolitica*, *Macrozamia cranei*, *Macrozamia lomandroides*, *Macrozamia pauli-guilielmi* and *Macrozamia platyrhachis* - DCCEEW](#)

- l. National Murray Cod Recovery Team (2010). National Recovery Plan for the Murray Cod *Maccullochella peelii peelii*. Department of Sustainability and Environment, Melbourne. Available at: [National Recovery Plan for the Murray Cod \(*Maccullochella peelii peelii*\) - DCCEEW](#)
- m. Hill, B.M. & S.J. Ward (2010). National Recovery Plan For the Northern Quoll *Dasyurus hallucatus*. Department of Natural Resources, Environment, The Arts and Sport, Darwin. Available at: [National Recovery Plan for the Northern Quoll \(*Dasyurus hallucatus*\) - DCCEEW](#)
- n. McDonald, W.J.F (2010). *National recovery plan for the "Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions" ecological community*. Report to Department of the Environment, Water, Heritage and the Arts, Canberra. Queensland Department of Environment and Resource Management, Brisbane. Available at: [National recovery plan for the "Semi-evergreen vine thickets of the Brigalow Belt \(North and South\) and Nandewar Bioregions" ecological community - DCCEEW](#)
- o. Department of Environment, Climate Change and Water NSW (2010). *National Recovery Plan for White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Department of Environment, Climate Change and Water NSW, Sydney. Available at: [White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland National Recovery Plan - DCCEEW](#)

The Threat Abatement Plans relevant to the proposed Action are:

- a. Department of Sustainability, Environment, Water, Population and Communities (2011). *Threat abatement plan for the biological effects, including lethal toxic ingestions, caused by cane toads*. Canberra, ACT: Commonwealth of Australia. Available at: [Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads - DCCEEW](#)
- b. Department of Environment and Energy (2017). *Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (*Sus scrofa*)* (2017). Department of Environment and Energy, Commonwealth of Australia, 2017. Available at: [Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs \(*Sus scrofa*\) \(2017\) – DCCEEW](#)
- c. Department of the Environment and Energy (2016). *Threat abatement plan for competition and land degradation by rabbits*. Canberra, ACT: Commonwealth of Australia. Available from: [Threat abatement plan for competition and land degradation by rabbits - DCCEEW](#)
- d. Department of the Environment, Water, Heritage and the Arts (2008). *Threat abatement plan for competition and land degradation by unmanaged goats*. DEWHA, Canberra. Available at: [Competition and land degradation by unmanaged goats - DCCEEW](#)
- e. Department of Climate Change, Energy, the Environment and Water (2024), *Threat abatement plan for predation by feral cats 2024*. Canberra: Commonwealth of

Australia. Available at: [Threat abatement plan for predation by feral cats - DCCEEW](#)

- f. Department of the Environment, Water, Heritage and the Arts (2008). *Threat abatement plan for predation by the European red fox*. DEWHA, Canberra. Available at: [Threat abatement plan for predation by European red fox - DCCEEW](#)
- g. Department of Sustainability, Environment, Water, Population and Communities (2012). *Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses - DCCEEW](#)
- h. Department of the Environment and Energy (2018). *Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomi*. Commonwealth of Australia, Canberra. Available at: [Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomi - 2018 - DCCEEW](#)

The approved conservation advices relevant to the proposed Action are:

- a. Department of the Environment (2013). *Approved Conservation Advice for the Brigalow (Acacia harpophylla dominant and co-dominant) ecological community*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for the Brigalow \(Acacia harpophylla dominant and co-dominant\) ecological community](#)
- b. Department of Sustainability, Environment, Water, Population and Communities (2011). *Approved Conservation Advice for Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions ecological community*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Approved Conservation Advice for Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions ecological community](#)
- c. Department of the Environment and Energy (2019). *Conservation Advice (including listing advice) for the Poplar Box Grassy Woodland on Alluvial Plains*. Department of the Environment and Energy, Canberra. Available at: [Conservation Advice \(including listing advice\) for the Poplar Box Grassy Woodland on Alluvial Plains](#)
- d. Department of the Environment, Water, Heritage and the Arts (2009). *Approved Conservation Advice for Weeping Myall Woodlands ecological community*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for Weeping Myall woodlands ecological community](#)
- e. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for the Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Approved Conservation Advice for the Community of native species dependent on natural discharge of groundwater from the Great Artesian Basin](#)
- f. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Acacia curranii (Curly-bark Wattle)*. Department of the

- Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for *Acacia curranii* \(Curly-bark Wattle\)](#)
- g. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for *Acacia lauta**. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for *Acacia lauta*](#)
- h. Threatened Species Scientific Committee (2016). *Conservation Advice *Bertya opposens**. Department of the Environment and Energy, Canberra. Available at: [Conservation Advice *Bertya opposens*](#)
- i. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for *Cadellia pentastylis* (Ooline)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for *Cadellia pentastylis* \(Ooline\) - DCCEEW](#).
- j. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for *Dichanthium setosum**. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [14159 - Approved Conservation Advice for *Dichanthium setosum*](#)
- k. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for *Eriocaulon carsonii* (salt pipewort)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for *Eriocaulon carsonii* \(salt pipewort\)](#)
- l. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for *Eucalyptus virens**. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for *Eucalyptus virens*](#)
- m. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for *Homopholis belsonii**. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for *Homopholis belsonii*](#)
- n. Department of the Environment (2013). *Approved Conservation Advice for *Thesium australe* (austral toadflax)*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for *Thesium australe* \(austral toadflax\)](#)
- o. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for *Xerothamnella herbacea**. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for *Xerothamnella herbacea*](#)
- p. Department of Sustainability, Environment, Water, Population and Communities (2013). *Approved Conservation Advice for *Rostratula australis* (Australian painted snipe)*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Approved Conservation Advice for *Rostratula australis*](#)
- q. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for *Erythrotriorchis radiatus* (red goshawk)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation advice *Erythrotriorchis radiatus* \(red goshawk\)](#)
- r. Department of the Environment (2015). *Conservation Advice *Grantiella picta* painted honeyeater*. Department of the Environment, Canberra. Available at: [Conservation Advice - painted honeyeater \(*Grantiella picta*\)](#)

- s. Threatened Species Scientific Committee (2015). *Conservation Advice Geophaps scripta scripta squatter pigeon (southern)*. Department of the Environment, Canberra. Available at: [Conservation Advice Geophaps scripta scripta squatter pigeon \(southern\) - DCCEEW](#)
- t. Threatened Species Scientific Committee (2020). *Conservation Advice Falco hypoleucos Grey Falcon*. Department of Agriculture, Water and the Environment, Canberra. Available at: [Conservation Advice Falco hypoleucos Grey Falcon](#)
- u. Department of the Environment (2014). *Approved Conservation Advice for Denisonia maculata (Ornamental Snake)*. Canberra: Department of the Environment. Available at: [Approved Conservation Advice for Denisonia maculata \(Ornamental Snake\) - DCCEEW](#).
- v. Department of the Environment (2014). *Approved Conservation Advice for Furina dunmallii (Dunmall's Snake)*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for Furina dunmallii \(Dunmall's Snake\)](#)
- w. Department of the Environment (2014). *Approved Conservation Advice for Egernia rugosa (Yakka Skink)*. Department of the Environment, Canberra. Available at: [Approved Conservation Advice for Egernia rugosa \(Yakka Skink\)](#)
- x. Department of Climate Change, Energy, the Environment and Water (2024). *Conservation Advice for Rheodytes leukops (Fitzroy River turtle)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Rheodytes leukops \(Fitzroy River turtle\)](#)
- y. Department of the Environment (2014). *Conservation Advice Elseya albagula White-throated snapping turtle*. Canberra: Department of the Environment. Available at: [Conservation Advice - Elseya albagula - White-throated snapping turtle](#)
- z. Threatened Species Scientific Committee (2016). *Conservation Advice Adclarkia cameroni brigalow woodland snail*. Department of the Environment and Energy, Canberra. Available at: [Conservation Advice Adclarkia cameroni brigalow woodland snail](#)
- aa. Threatened Species Scientific Committee (2016). *Conservation Advice Adclarkia dulacca Dulacca woodland snail*. Department of the Environment and Energy, Canberra. Available at: [Adclarkia dulacca — Dulacca Woodland Snail](#)
- ab. Department of Agriculture, Water and the Environment (2022). *Conservation Advice for Phascolarctos cinereus (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory*. Department of Agriculture, Water and the Environment, Canberra. Available at: [Conservation Advice for Phascolarctos cinereus \(Koala\) combined populations of Queensland, New South Wales and the Australian Capital Territory](#)
- ac. Department of Climate Change, Energy, the Environment and Water (2022). *Conservation Advice for Petauroides volans (greater glider (southern and central))*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Petauroides volans \(greater glider \(southern and central\)\)](#)
- ad. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Chalinolobus dwyeri (large-eared pied bat)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Chalinolobus dwyeri \(large-eared pied bat\)](#)

- ae. Department of the Environment (2014). *Approved Conservation Advice for Acacia grandifolia*. Canberra: Department of the Environment. Available at: [Approved Conservation Advice for Acacia grandifolia](#)
- af. Department of the Environment (2014). *Approved Conservation Advice for Aristida annua (a tufted grass)*. Canberra: Department of the Environment. Available at: [Approved Conservation Advice for Aristida annua \(a tufted grass\)](#)
- ag. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Eucalyptus beaniana*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Eucalyptus beaniana](#)
- ah. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Delma torquata (Collared Delma)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Delma torquata \(Collared Delma\)](#)
- ai. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Calidris ferruginea (curlew sandpiper)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Calidris ferruginea \(curlew sandpiper\)](#)
- aj. Threatened Species Scientific Committee (2016). *Conservation Advice Macroderma gigas ghost bat*. Department of the Environment, Canberra. Available at: [174 - Conservation Advice Macroderma gigas Ghost bat - approved 5 May 2016](#)
- ak. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Arthraxon hispidus (Hairy-joint Grass)*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Arthraxon hispidus \(Hairy-joint Grass\)](#)
- al. Department of Sustainability, Environment, Water, Population and Communities (2013). *Approved Conservation Advice for Dichanthium queenslandicum (king blue-grass)*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available at: [Approved Conservation Advice for Dichanthium queenslandicum \(king blue-grass\)](#)
- im. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Marsdenia brevifolia*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for Marsdenia brevifolia](#)
- an. Department of Climate Change, Energy, the Environment and Water (2024). *Conservation Advice for Maccullochella peelii (Murray cod)*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Conservation Advice for Maccullochella peelii \(Murray cod\)](#)
- ao. Department of the Environment, Water, Heritage and the Arts (2009). *Approved Conservation Advice for Natural grasslands of the Queensland Central Highlands and the northern Fitzroy Basin*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved conservation advice for natural grasslands of the Queensland Central Highlands and northern Fitzroy Basin](#)
- ap. Threatened Species Scientific Committee (2005). *Commonwealth Listing Advice on Northern Quoll (Dasyurus hallucatus)*. Available at: [Northern Quoll \(Dasyurus hallucatus\) - DCCEEW](#)

- aq. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Approved Conservation Advice for Semi-evergreen Vine Thickets of the Brigalow Belt \(North and South\) and Nandewar Bioregions](#)
- ar. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Neochmia ruficauda ruficauda (Star Finch (eastern))*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [26027 - Approved Conservation Advice for Neochmia ruficauda ruficauda \(Star Finch \(eastern\)\)](#)
- as. Department of the Environment, Water, Heritage and the Arts (2008). *Approved Conservation Advice for Tylophora linearis*. Department of the Environment, Water, Heritage and the Arts, Canberra. Available at: [Approved Conservation Advice for Tylophora linearis](#)
- at. Department of Climate Change, Energy, the Environment and Water (2023). *Conservation Advice for the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available at: [Approved Conservation Advice for the White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland](#)
- au. Threatened Species Scientific Committee (2019). *Conservation Advice Hirundapus caudacutus White-throated Needletail*. Department of the Environment and Energy, Canberra. Available at: [682 – conservation advice – Hirundapus caudacutus - 27 February 2019](#)

Kind regards,

s. 22(1)(a)(ii)

Assessment Officer

Environment Regulation Division | Environment Assessments Queensland | Queensland North Section
Ngunnawal Country, John Gorton Building, King Edward Terrace, Parkes ACT 2600
Australia GPO Box 3090
Department of Climate Change, Energy, the Environment and Water

P s. 22(1)(a)(ii) | E s. 22(1)(a)(ii) [@dcceew.gov.au](mailto:s.22(1)(a)(ii)@dcceew.gov.au)

Please note that I work s. 22(1)(a)(ii)

DCCEEW.gov.au ABN 63 573 932 849



We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

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Australian Government

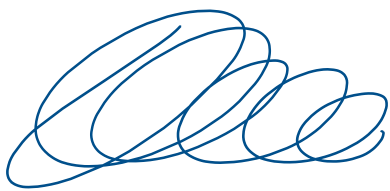
Department of Climate Change, Energy,
the Environment and Water

To: Declan O'Connor-Cox – Branch Head, Environment Assessments Queensland Branch (for decision)

Request for reconsideration of controlled action decision – Gas Supply Security Project, Surat and Bowen basins, Queensland (EPBC 2020/8856)

Timing: There is no statutory timeframe for this decision, however a decision should be made as soon as practicable after the consultation period closes. The public comment period closed on 24 November 2022.

Recommended decision	Confirm original decision: ☒ OR Revoke and substitute new decision: NCA ☐ NCA(pm) ☐ CA ☐																		
Controlling provisions triggered	<i>Unchanged from original decision:</i> <table border="0"> <tr> <td>World Heritage (sections 12 and 15A)</td> <td>No</td> </tr> </table> <table border="0"> <tr> <td>National Heritage values of a National Heritage place (sections 15B and 15C)</td> <td>No</td> </tr> </table> <table border="0"> <tr> <td>Wetlands of international importance (sections 16 and 17B)</td> <td>No</td> </tr> </table> <table border="0"> <tr> <td>Listed threatened species and communities (sections 18 and 18A)</td> <td>Yes</td> </tr> </table> <table border="0"> <tr> <td>Listed migratory species (sections 20 and 20A)</td> <td>Yes</td> </tr> </table> <table border="0"> <tr> <td>Nuclear Actions (sections 21 and 22A)</td> <td>No</td> </tr> </table> <table border="0"> <tr> <td>Commonwealth marine area (sections 23 and 24A)</td> <td>No</td> </tr> </table> <table border="0"> <tr> <td>Great Barrier Reef Marine Park (sections 24B and 24C)</td> <td>No</td> </tr> </table> <table border="0"> <tr> <td>Unconventional gas or large coal mining development with impact on water resources (sections 24D and 24E)</td> <td>Yes</td> </tr> </table>	World Heritage (sections 12 and 15A)	No	National Heritage values of a National Heritage place (sections 15B and 15C)	No	Wetlands of international importance (sections 16 and 17B)	No	Listed threatened species and communities (sections 18 and 18A)	Yes	Listed migratory species (sections 20 and 20A)	Yes	Nuclear Actions (sections 21 and 22A)	No	Commonwealth marine area (sections 23 and 24A)	No	Great Barrier Reef Marine Park (sections 24B and 24C)	No	Unconventional gas or large coal mining development with impact on water resources (sections 24D and 24E)	Yes
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Great Barrier Reef Marine Park (sections 24B and 24C)	No																		
Unconventional gas or large coal mining development with impact on water resources (sections 24D and 24E)	Yes																		

	Commonwealth land (sections 26 and 27A)	No
	Commonwealth heritage places overseas (sections 27B and 27C)	No
	Commonwealth Actions (section 28)	No
Designated Proponent	Australia Pacific LNG Pty Limited ACN: 001 646 331	
Public comments on reconsideration request	Yes ☒ No ☐ See <u>Attachment K</u>	
Ministerial comments on reconsideration request	Yes ☒ No ☐ See <u>Attachments F and G</u>	
Recommendations: - Consider the information in this brief, the original referral decision package (<u>Attachment A</u>), the reconsideration request (<u>Attachment B</u>) and all other attachments to this brief. Considered / Please discuss - Note that public comment on the reconsideration request was invited for 15 business days from 3 to 24 November 2022. Noted / Please discuss - Agree to confirm the original referral decision. Agreed / Not agreed - If you agree to recommendation 3, and you accept the reasoning in the departmental briefing package as the basis for your decision, indicate this. Accepted / Please discuss - If you agree with recommendation 3, sign the notice at <u>Attachment C</u> (which will be published if you make the recommended decision). Signed / Not signed - If you agree with recommendation 3, sign the letters to Environmental Justice Australia (the requestor), the designated proponent, and relevant Ministers at <u>Attachment D</u>. Signed / Not signed		
Signature of delegate:		
	Date:	20/2/26

Comments:			
Clearing Officer:	Declan O'Connor-Cox	Branch Head, Environment Assessments Queensland Branch	Mob: 0459 242 234
Contact Officer:	s. 22(1)(a)(ii)	Director, Queensland North Assessments Section	Mob: s. 22(1)(a)(ii)
Date cleared:		Date sent to MO:	

PURPOSE OF THIS BRIEF

- On 8 July 2022, s. 47F(1) of Environmental Justice Australia (EJA), on behalf of the Environment Council of Central Queensland Inc., sent a letter, with supporting documents (Attachments B1 to B7), requesting reconsideration under section 78A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) of the controlled action decision of 17 February 2021 for the Gas Supply Security Project (EPBC 2020/8856). Subsequent to the original request, on 11 August 2022, EJA sent a supplementary letter referring to further substantial new information, relevant to the request, that had been previously published on 8 July 2022 (Attachments B8 to B9).
- This brief recommends that you confirm the controlled action decision of 17 February 2021, which applies in relation to the proposal to take the proposed action as varied on 28 January 2025.

BACKGROUND

Referral decision

- On 19 January 2021, the department received a valid referral from Australia Pacific LNG Pty Ltd (the proponent) to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen basins, south central Queensland (the proposed action) (Attachment A1).
- On 17 February 2021, a delegate of the then minister for the Environment (the delegate) determined under section 75 of the EPBC Act that the proposed action was a controlled action and sections 18, 18A, 20, 20A, 24D and 24E are the controlling provisions (the original referral decision). The referral decision notice is at Attachment A2.

Variations to proposal

- On 5 July 2022, the proponent submitted a request for variation of the proposed action under section 156A(1) of the EPBC Act. On 5 August 2022, a delegate of the then minister for the Environment accepted the proposed variation under section 156B(1) (Attachment B19). In summary, the variation resulted in the removal of a component of the project area ('Mahalo Block A'), which had been sold off by the proponent and no longer formed part of the proposed action. This represented a decrease in the project area from 476,492 hectares (ha) to 377,725 ha.
- On 24 November 2022, EJA wrote to the then minister, following the publication of the variation notice that was published on 5 August 2022, to acknowledge the delegate's decision to accept the

variation and the subsequent effect of the varied proposal on the reconsideration request (Attachment B20).

7. On 20 December 2024, the proponent submitted a second request for variation of the proposed action under section 156A(1) of the EPBC Act. On 28 January 2025, a delegate of the then minister for the Environment accepted the proposed variation under section 156B(1) (Attachment B21). In summary, the second variation resulted in the removal of two gas field development areas ('Denison JV Area' and 'Iron Bark Area') from the proposed action. This represented a decrease in the project area from 377,725 ha approximately 211,472 ha.
8. A letter to EJA notifying them of the second variation was not sent.
9. Consistent with section 156D(1) of the EPBC Act, any relevant provisions of Chapter 4 (environmental assessments and approvals) that applied in relation to the original proposal ceased and started to apply to the varied proposal.

RECONSIDERATION REQUEST

10. On 8 July 2022, EJA submitted a reconsideration request (Attachments B1 to B7) on the basis of the availability of substantial new information (section 78(1)(a) of the EPBC Act) (the reconsideration request). On the same day, EJA also submitted reconsideration requests for 18 other coal and gas projects that had been determined to be controlled actions.
11. On 11 August 2022, EJA sent a supplementary letter referring to further substantial new information, which it stated was relevant to this request and to the other 18 requests, that had been published since 8 July 2022 (Attachments B8 to B9).
12. In the reconsideration request, EJA stated that its request was made on the basis of substantial new information about the impacts the proposed action will have or is likely to have on matters of national environmental significance, including a number of matters of national environmental significance not listed in the original referral decision. EJA stated that the information provided with the reconsideration request demonstrated that the proposed action will or is likely to have significant physical effects on a number of matters of national environmental significance because of the greenhouse gas emissions associated with the proposed action. EJA requested that the then minister revoke the original referral decision and substitute a new decision under section 75(1) of the EPBC Act, listing all matters of national environmental significance that it had identified as affected by climate change as controlling provisions.
13. EJA estimated the greenhouse gas emissions associated with the extraction and combustion of the gas from the proposed action. It contended that, if the proposed action goes ahead, there is a real (as opposed to remote) chance that these greenhouse gas emissions will result in physical effects of climate change (fire, ocean heatwaves and acidification, drought, rainfall extremes and flooding) and the proposed action will have, or is likely to have, a significant impact on a number of matters of national environmental significance.
14. EJA analysed documents that referred to climate change and its effects on matters of national environmental significance (Attachments B5 to B7) with reference to certain reports on climate change by authoritative national and international organisations (Attachments B1 to B2). EJA outlined its methodology and collated its findings in Annexure 2 of its reconsideration request (Attachment B4 to B7). Some of the key findings are:

- a. The *Working Group I contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Climate Change 2021: The Physical Science Basis*, establishes unequivocally that human actions have caused a global temperature increase.
 - b. The frequency, severity and duration of extreme fire weather conditions have increased in southern and eastern Australia. Extreme fire weather in 2019/2020 was at least 30% more likely than a century ago due to climate change (*Working Group II to the IPCC's Sixth Assessment Report, Climate Change 2022: Impacts, Adaptation and Vulnerability (IPCC WGII Report)*).
 - c. Rising sea surface temperatures have exacerbated marine heatwaves, notably near Western Australia in 2011, the Great Barrier Reef in 2016, 2017 and 2020, and the Tasman Sea in 2015/2016, 2017/2018 and 2018/2019 (IPCC WGII Report).
 - d. The oceans around Australia are acidifying — the average pH of surface waters has decreased since the 1880s by about 0.1, representing an over 30% increase in acidity. These changes have led to a reduction in coral calcification and growth rates on the Great Barrier Reef (WGII AR6; Commonwealth Scientific and Industrial Research Organisation and Bureau of Meteorology, *State of the Climate 2020*).
 - e. Climate change will result in more drought in southern and eastern Australia (IPCC WGII Report).
 - f. Extreme rainfall intensity in northern Australia has been increasing (IPCC WGII Report).
 - g. Governments plan to produce more than twice the amount of fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C (*United Nations Environment Programme, The Production Gap: 2021 Report*).
 - h. All global modelled pathways that limit warming to 1.5°C with no or limited overshoot, and those that limit warming to 2°C, involve rapid and deep and in most cases immediate greenhouse gas emission reductions in all sectors (*Intergovernmental Panel on Climate Change (Working Group III) Report, Summary for Policy Makers*).
 - i. As part of further climate change, more extreme fire weather in southern and eastern Australia can be expected (high confidence) (IPCC WGII Report).
 - j. In southern Australia, some forest ecosystems (Alpine Ash, Snowgum woodland, pencil pine and northern jarrah) are projected to transition to a new state or collapse due to hotter and drier conditions with more fires (IPCC WGII Report).
 - k. Future ocean warming, coupled with periodic extreme heat events, is projected to lead to the continued loss of ecosystem services and ecological functions (*high confidence*) (IPCC WGII Report).
15. The reconsideration request stated that, in order to demonstrate the likely significant impacts of climate change on matters of national environmental significance, EJA reviewed and analysed authoritative sources of information relevant to the protection of matters of national environmental significance. The material included conservation advices, listing advices, management plans, information from the department's Species Profile And Threats database (SPRAT). Ecological character descriptions for Ramsar Wetlands, World Heritage State Party Reports, International Union for the Conservation of Nature (IUCN) Conservation Outlook Assessments for World Heritage

properties, management plans for National Heritage places, Commonwealth marine environment report cards and bioregional plans – referred to by EJA as ‘source material’.

16. EJA subjected this source material to a code-driven, text-mining process that identified statements that appear to acknowledge the impacts of climate change. The code was prepared by Dr Isaac Peterson. A subsequent search was performed to identify statements on the impacts of fire, which EJA stated was a specific focus because of the directness of its impacts on matters of national environmental significance and because of its particular significance for the Australian environment. The outcome of the text-mining process was reviewed by EJA reviewers to confirm each search result was relevant, in the sense of conveying the idea that a value, property or other aspects of an matters of national environmental significance is, will be, or will potentially be vulnerable to or impacted by climate change or the physical effects of climate change. The review process was also used to enable EJA to identify any gaps, incoherence or formatting errors in the results produced by the code.
17. EJA’s findings from its text-mining process were that climate change is likely to impact the following matters of national environmental significance:
 - a. the World Heritage values of declared World Heritage properties
 - b. the National Heritage values of National Heritage places
 - c. the ecological character of declared Ramsar wetlands
 - d. listed threatened species in the critically endangered category
 - e. listed threatened species in the endangered category
 - f. listed threatened species in the vulnerable category
 - g. listed threatened ecological communities in the critically endangered category
 - h. listed threatened ecological communities in the endangered category
 - i. listed threatened species (other than a species included in the extinct category or a conservation dependent species) and listed threatened ecological communities (other than an ecological community in the vulnerable category)
 - j. listed migratory species
 - k. the environment in a Commonwealth marine area (containing listed marine species)
 - l. the environment in the Great Barrier Reef Marine Park.
18. EJA’s findings included that climate change decreases habitat availability by increasing fragmentation, changes species’ distribution, facilitates the spread of invasive species, increases erosion rates, and decreases water quality. EJA’s conclusions about the impact of climate change on matters of national environmental significance from this process are discussed further under the Protected Matters heading below.
19. EJA sought from s. 47F(1)
 Macquarie University, an independent expert opinion on the analysis and conclusions in the reconsideration request (Attachment B2). s. 47F(1)

opinion is that the material used by EJA and EJA's analysis of that material supports the following propositions:

- a. There is a real (as opposed to a remote) chance that a consequence of continued emission of greenhouse gas emissions into the atmosphere — including through the combustion of coal and / or gas — will be an increase in the regularity, scope and intensity of climate hazards (such as fire, heat extremes, marine heatwaves and ocean acidification, heavy precipitation and flooding, and drought).
- b. There is a real (as opposed to a remote) chance that those events (or one or more of them) will adversely affect the following matters of national environmental significance:
 - i. the World Heritage values of declared World Heritage properties
 - ii. the National Heritage values of National Heritage places
 - iii. the ecological character of declared Ramsar wetlands
 - iv. listed threatened species in the critically endangered category
 - v. listed threatened species in the endangered category
 - vi. listed threatened species in the vulnerable category
 - vii. listed threatened ecological communities in the critically endangered category
 - viii. listed threatened ecological communities in the endangered category
 - ix. listed threatened species (other than a species included in the extinct category or a conservation dependent species) and listed threatened ecological communities (other than an ecological community in the vulnerable category)
 - x. listed migratory species
 - xi. the environment in a Commonwealth marine area (containing listed marine species)
 - xii. the environment in the Great Barrier Reef Marine Park.

20. EJA also sought from s. 47F(1) [REDACTED] the University of Melbourne, an expert report on the analysis and conclusions on the climate system and the physical impacts of climate change in the reconsideration request (Attachment B2). s. 47F(1) [REDACTED] opinion is that the material used by EJA and EJA's analysis of that material supports the following propositions:

- a. There is an approximately linear relationship between anthropogenic CO₂ emissions and global temperature, such that every tonne of CO₂ emissions adds to global warming. Reaching net zero anthropogenic CO₂ emissions is a requirement to stabilise human-induced global temperature at any level.
- b. Limiting human-induced global warming requires deep reductions in CO₂ and other greenhouse gas emissions (compared to historical and present rates) in the coming decades. The modelled pathways for limiting global warming necessitate drastic cuts to the use of fossil fuels and require a substantial amount of fossil fuels to remain unburned.

- c. Human-induced climate change will cause unavoidable increases in multiple climate hazards in Australia, including fire, heat extremes, marine heatwaves and acidification, heavy precipitation and flooding and drought. These physical effects become larger in direct relation to increased global warming.
- d. There is a real (as opposed to a remote) chance that a consequence of continued emission of greenhouse gas emissions into the atmosphere — including through the combustion of coal and / or gas — will be an increase in the regularity, scope and intensity of climate hazards (such as fire, heat extremes, marine heatwaves and ocean acidification, heavy precipitation and flooding, and drought).
- e. There is a real (as opposed to a remote) chance that those events (or one or more of them) will adversely affect the following matters of national environmental significance:
 - i. the World Heritage values of declared World Heritage properties
 - ii. the National Heritage values of National Heritage places
 - iii. the ecological character of declared Ramsar wetlands
 - iv. listed threatened species in the critically endangered category
 - v. listed threatened species in the endangered category
 - vi. listed threatened species in the vulnerable category
 - vii. listed threatened ecological communities in the critically endangered category
 - viii. listed threatened ecological communities in the endangered category
 - ix. listed threatened species (other than a species included in the extinct category or a conservation dependent species) and listed threatened ecological communities (other than an ecological community in the vulnerable category)
 - x. listed migratory species
 - xi. the environment in a Commonwealth marine area (containing listed marine species)
 - xii. the environment in the Great Barrier Reef Marine Park.

21. **s. 47F(1)** also considered that additional material is likely to strengthen the analysis in Annexure 2 of the reconsideration request (Attachment B4). **s. 47F(1)** stated that:

- a. One of the key risks provided in *IPCC Sixth Assessment Report Working Group II Fact Sheet – Australasia: Climate Change Impacts and Risk* is the “Inability of institutions and governance systems to manage climate risks (high confidence)”, which is of particular relevance to this case.
- b. There is an additional climate hazard - sea level rise and extreme sea level and storm surge events - that is, increasing in frequency and intensity due to climate change along all Australian coasts. Coastal inundation associated with this climate hazard is likely to have major impacts on coastal ecosystems and coastal wetlands.

- c. The *2021 State of the Environment Report* (SOE 2021) (which had not been published at the time s. 47F(1) provided his report) would be likely to supplement the material in Annexure 1 and Annexure 2, but was unlikely to change any of the propositions.
22. The department has also considered the *Sixth Assessment Report Synthesis Report: Climate Change 2023* (AR6 SR; Attachment M) released by the IPCC on 20 March 2023. This report synthesises the findings from the IPCC's earlier reports on climate science, impacts and adaptation, and mitigation of climate change, including in relation to the contribution of greenhouse gas emissions from fossil fuel infrastructure.
23. EJA's supplementary letter dated 11 August 2022 (Attachment B8) referred to the SOE Report (Attachment B9) as additional information to support its request of 8 July 2022. In that supplementary letter, EJA highlighted the following from the SOE Report as key findings relevant to the reconsideration requests:
- a. Warming of the Australian climate, and associated changes in the climate system, are driven by increased concentrations of greenhouse gases in the atmosphere. Changes to the climate are inevitable, based on greenhouse gases that have already been emitted, but further changes in the second half of the 21st century will depend on the level of future global emissions.
 - b. The intensity and frequency of extreme weather-related events – including heatwaves, droughts, bushfires and floods – are changing. Ongoing increases in land and sea temperatures across Australia driven by climate change have coincided with multiple extreme weather events, devastating impacts on many of Australia's unique natural ecosystems and caused the death of many individuals of many species.
 - c. Pressures on Australian biodiversity have not improved since the *2016 State of the Environment Report* (SOE 2016) and outcomes for species and ecosystems are generally poor. Multiple pressures are interacting to amplify threats to biodiversity, and abrupt changes in ecological systems that are occurring. In particular, climate change and associated extreme events, compounded by other pressures, have had a major impact on biodiversity over the past 5 years, with consequences likely to be evident for many years to come. Many species and ecosystems will require their status to be assessed or reassessed in the coming years, and urgent recovery actions will be needed to avert extinction.
 - d. Climate change (affecting water temperature, salinity, acidification, circulation and ocean nutrients) remains one of the pressures with the highest impact on the Australian marine environment. Substantial and widespread degradation of Australia's marine environmental values is expected if the pressures identified in SOE 2021 are not addressed.
24. The department has also considered SOE 2021 and identified additional relevant themes:
- a. Climate change is seen as one of the most significant threats to the Outstanding Universal Value of World Heritage properties globally. Identified climate change-related impacts to Australian World Heritage properties in the last 5 years include: bushfires which cause loss of vegetation and other landscape impacts, mass coral bleaching events, significant seagrass dieback and marine ecosystem changes, increased drying, vegetation community

decline, increased habitat reduction, changes to saltwater and freshwater wetlands, increased wetness and more waterway sedimentation due to intense wet events after drought.

- b. A 2016 national review of National Heritage Places (Wildlife Heritage & Marine Division 2017) found that 67% of National Heritage Places experienced climate change pressures.
 - c. The *Great Barrier Reef Marine Park Authority Outlook Report* (2019) identified the main threat to the Great Barrier Reef as climate change. Marine heatwaves have been associated with coral bleaching on the Great Barrier Reef in successive years, resulting in impaired recruitment and recovery of reefs. Before 2016, only 2 mass coral bleaching events had occurred in the Great Barrier Reef. Following the bleaching event of 2016, there were further mass bleaching events in 2017 and 2020. Projections reported by the IPCC indicate that coral reefs are expected to decline globally by a further 70-90% (relative to 2015) at 1.5°C global warming, and by more than 99% at 2°C global warming.
 - d. Threats to migratory seabirds include the redistribution of their prey in response to climate change and the southwards movement of some species due to climate change.
 - e. Ramsar wetlands are vulnerable to further hydrological changes and drying under future climate change scenarios. Drought conditions, in conjunction with increased consumptive water use, result in a decrease in flows into wetlands and reduction in inundation. The *2019 Aerial Survey of Wetland Birds in Eastern Australia* (Porter et al. 2019) found that the wetland area index was the lowest since surveys began in 1983.
25. On 29 August 2023, EJA ([Attachment B12](#)) noted with respect to two of its other reconsideration requests that it had provided pre-final-publication versions of WGII AR6 and WGIII AR5 ([Attachment B10](#)) and that final consolidated versions of those reports ([Attachment B11](#)) have since been released. EJA advised that there were no material differences between the versions, only that the pre-final-publication version was 'subject to error correction'. The department considers that as well as the pre-final-publication versions of the IPCC WGII and WGII Reports, the final consolidated versions of those reports are part of the reconsideration request, and as such the department has considered both versions of the reports in preparing this brief.
 26. On 4 October 2023, EJA sent a letter ([Attachment B13](#)) to the then minister regarding Annexure III of WGII AR6 (Annex III: Scenarios and Modelling Methods). EJA said it had become apparent that this document was not successfully uploaded to the link through which Annexure 1 to the reconsideration request was provided to the then minister on 8 July 2022. EJA then provided the document ([Attachment B14](#)) via email on 6 October 2023. The department considers that this document is part of the reconsideration request and has reviewed it in preparing this brief.
 27. On 29 April 2024, EJA sent a letter to the then minister with enclosed material to further support the position set out in the reconsideration requests of the remaining 11 coal and gas projects ([Attachments B15 to B18](#)). The enclosed material included:
 - a. the *2023 International Energy Agency's (IEA) Net Zero Roadmap: A Global Pathway to keep the 1.5°C Goal in Reach* (IEA NZR; [Attachment B16](#)). This report includes data and analysis that maps out a pathway for the global energy sector to achieve net zero CO₂ emissions by 2050 and play its part in achieving the 1.5°C goal;

- b. the IEA's *World Energy Outlook 2023* (IEA WEO 2023; [Attachment B17](#)). The report revises its 2022 projections in its stated policies scenario on the direction of the energy economy, based on the actual state in different sectors, countries and regions; and
 - c. an expert report by [s. 47F\(1\)](#), dated 26 April 2024 ([Attachment B18](#)). This report provides an opinion from an economist with expertise in the electricity and fossil fuels markets and modelling, that supports the substitution submission made in the reconsideration requests. The department notes [s. 47F\(1\)](#) opinions include that 'one cannot know with a level of certainty or confidence that any particular forecast will be correct to 2050, as to either coal or gas markets, and that similarly it is 'unknowable' what will be the effect or removal or a particular supply of coal or gas from the coal or gas markets'.
28. EJA noted in its letter that it had already provided to the then minister 2022 versions of the IEA reports in Annexure 1 of the reconsideration request ([Attachment B2](#)), and as an Attachment to EJA's response to invitation to comment ([Attachment K4](#)). The department has considered both the newer and older versions of the IEA reports in preparing this brief. The department notes that it had not previously received the expert report by [s. 47F\(1\)](#), and it considers that this document is supplementary information to the reconsideration request and has reviewed it in preparing this brief.

Validity of Request

29. On 3 November 2022, a delegate of the then minister determined, based on the information then available, that the reconsideration request met the requirements of the EPBC Act and the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations) and was therefore a valid request (see validity brief at [Attachment E](#)).

Submissions

30. Under section 78B of the EPBC Act, public comment on the reconsideration request was invited for 15 business days from 3 to 24 November 2022 and comments were also sought from the proponent and relevant state and Commonwealth Ministers.

Commonwealth Ministers

31. On 3 November 2022, in accordance with section 78B(4) of the EPBC Act, the following Commonwealth Ministers were informed of the reconsideration request and invited to give the department, within 15 business days, information about whether a matter referred to in any of paragraphs 78(1)(a) to (ca) of the EPBC Act was applicable in relation to the proposed action:
- a. Minister for Indigenous Australians, the Hon Linda Burney MP
 - b. Minister for Agriculture, Fisheries and Forestry, Senator the Hon Murray Watt
 - c. Minister for Climate Change and Energy, the Hon Chris Bowen MP
 - d. Minister for Industry and Science, the Hon Ed Husic MP
 - e. Minister for Resources and Minister for Northern Australia, the Hon Madeleine King MP
32. On 24 November 2022, a representative of the National Indigenous Australians Agency responded on behalf of the Minister for Indigenous Australians and noted they had no comment on the reconsideration request.

33. On 24 November 2022, a representative of the Department of Agriculture, Fisheries and Forestry responded on behalf of the Minister for Agriculture, Fisheries and Forestry and noted that they had no comment on the reconsideration request.
34. On 28 November 2022, a representative of the Department of Climate Change, Energy, the Environment and Water responded on behalf of the Minister for Climate Change and Energy and noted they had no comment on the reconsideration request.
35. On 9 December 2022, the Minister for Industry and Science responded that he had no comment on the reconsideration request.
36. On 13 December 2022, a representative of the Department of Industry, Science and Resources (DISR) responded on behalf of the Minister for Resources and Minister for Northern Australia and noted (also referring to the other projects subject to EJA's reconsideration request of 8 July 2022):
 - a. DISR supports the sustainable development of all resource projects where they are conducted in compliance with relevant environmental protection legislation. The support of DISR for the original assessment of projects was subject to the proponent obtaining the relevant environmental approvals, required by State and Commonwealth agencies. New information provided in the reconsideration requests does not alter the original conditional support of DISR toward the reconsidered projects.
37. All Commonwealth Ministers' responses are at Attachment F.

State Ministers

38. On 3 November 2022, in accordance with section 78B(5) of the EPBC Act, s. 47F(1) as delegate for the Hon Meaghan Scanlon MP, Queensland Minister for Environment and the Great Barrier Reef, was informed of the reconsideration request and invited to give, within 15 business days, comment on whether a matter referred to in any of paragraphs 78(1)(a) to (ca) of the EPBC Act was applicable in relation to the proposed action, and any other information they considered relevant to the reconsideration.
39. On 28 November 2022, s. 47F(1) responded (Attachment G), noting he considered that, as the referral decision is made by the Commonwealth Environment Minister under the EPBC Act, the reconsideration decision is the minister's alone, and he had no further comments to provide.

Public comments – department's public portal

40. As required under section 78B(6) of the EPBC Act, the reconsideration request was published on the department's public internet portal on 3 November 2022. Public comments on whether a matter referred to in any of paragraphs 78(1)(a) to (ca) was applicable in relation to the action were invited for 15 business days, from 3 to 24 November 2022.
41. The department received 975 comments (Attachments K1 to K2) through its public portal.
42. On the public portal, members of the public were invited to answer the five prompts set out in Table 1 below.

Table 1: Public comment questions and response options

Question Number	Question	Response Options
1	Do you consider there is substantial new information available about the impacts the action has, will have or is likely to have on a matter protected under Part 3* of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) (EPBC Act)?	Yes / No or Blank
2	Provide reasons for your answer and / or any comments below.	Text Comment or Blank
3	Do you consider there has been a substantial change in circumstance that was not foreseen at the time of the first referral decision and that relates to the impacts the action has, or will have or is likely to have on a matter protected under Part 3* of the EPBC Act?	Yes / No or Blank
4	Provide reasons for your answer and / or any comments below.	Text Comment or Blank
5	If applicable, provide any other comments on whether you consider there are reasons to revoke the first referral decision and substitute a new decision. This may include any other comments on whether a matter referred to in any of paragraphs 78(1)(a) to (ca) of the EPBC Act applies in relation to the action. *(The current version of the EPBC Act can be accessed through the department's website).	Text Comment or Blank

43. The department has reviewed all submissions received through the public portal and the matters raised in them are summarised below under the relevant questions. In making your decision, you must consider the public submissions provided in response to the invitation to comment at [Attachments K1](#) to [K2](#).

Question 1: Do you consider there is substantial new information available about the impacts the action has, will have or is likely to have on a matter protected under Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)?

44. The department received the following responses in relation to Question 1:
- Yes – 905 responses
 - No – 12 responses
 - Blank – 58 responses

Question 2: Provide reasons for your answer and / or any comments below.

45. The department received the following responses in relation to Question 2:
- Comment – 924 responses
 - Blank – 51 responses
46. The department notes that the public comments raised similar issues to public comments the department received in relation to other reconsideration requests made by EJA. Respondents who answered 'Yes' in response to Question 1 made comments summarised as follows:
- a. The reconsideration request includes information that is new and substantial because it did not exist when the first decision was made or was not before the decision maker when the first decision was made.
 - b. Information about the climate change fuelled 2019-20 bushfires and the impacts on species, communities and other protected areas was not available when the first decision was made.
 - c. The reconsideration request includes recent, factual and scientific information about climate change from documents such as IPCC reports and the 2021 State of the Environment Report.
 - d. The reconsideration request includes scientific information the proposed action will increase greenhouse gas emissions which will accelerate climate change and extreme weather events such as floods and droughts.
 - e. The reconsideration request includes information that details the climate impacts of the proposal on matters of national environmental significance.
 - f. Assessment of the proposed action must take into account the precautionary principle.
 - g. The government's newly legislated emissions targets mean that the impacts of this project should be assessed.
 - h. The project should not proceed.
 - i. The proposed action will affect culturally significant places for Indigenous people.
 - j. Undertaking the proposed action would contravene international agreements and conventions.
 - k. Undertaking the proposed action would be morally irresponsible.
 - l. Australia should move away from fossil fuels to ensure resource sustainability, social and economic stability, and to safeguard the planet for future generations.
 - m. The approval of the proposed action would be inconsistent with scientific advice and would result in global warming [exceeding 1.5°C in global temperature] with catastrophic results, some of which are irreversible.
47. The respondents who answered 'No' in response to Question 1 made comments summarised as follows:
- a. Development should proceed as jobs are needed in rural communities.

- b. Climate change is not real / does not exist.
- c. Gas is needed as it is cleaner than coal.

Question 3: Do you consider there has been a substantial change in circumstance that was not foreseen at the time of the first referral decision and that relates to the impacts the action has, or will have or is likely to have on a matter protected under Part 3 of the EPBC Act?

48. The department received the following responses in relation to Question 3:
- Yes – 145 responses
 - No – 675 responses
 - Blank – 155 responses

Question 4: Provide reasons for your answer and / or any comments below.

49. The department received the following responses in relation to Question 4:
- Comment – 634 responses
 - Blank – 341 responses
50. The department notes that the public comments raised similar issues to public comments the department received in relation to other reconsiderations requests made by EJA. Respondents who answered 'Yes' to Question 3 made comments summarised as follows:
- a. The condition of the environment is further worsening and being degraded because of climate change.
 - b. There is a need to consider cumulative impacts of coal and gas projects and greenhouse gas emissions.
 - c. There is a new government with different policies and commitments in relation to climate change.
 - d. There has been an increase in extreme weather events impacting communities and the environment.
 - e. The *Final Report of the Independent Review of the Environment Protection and Biodiversity Act 1999* (Samuel Review) highlighted the substantial decrease in effectiveness of the EPBC Act regarding climate change.
 - f. There has been a significant increase in scientific knowledge and public understanding regarding consequences of environmental harm.
 - g. The rapid and accelerating change in climate has led to climate emergency and environmental tipping points.
51. Respondents who answered 'No' for Question 3 made comments summarised as follows:
- a. Not applicable (N/A).
 - b. Climate science has been known for a long time and has been ignored.
 - c. The environmental impacts from climate change were foreseeable.

- d. The circumstances are much the same as they were when the project was first assessed.
- e. There has not been a change in circumstances, however, there has been a change in acknowledgement of the circumstances documented by scientists and experienced by the population.

Question 5: If applicable, provide any other comments on whether you consider there are reasons to revoke the first referral decision and substitute a new decision. This may include any other comments on whether a matter referred to in any of paragraphs 78(1)(a) to (ca) of the EPBC Act applies in relation to the action.

52. The department received the following responses in relation to Question 5:
- Comment – 728 responses
 - Blank – 247 responses
53. The majority of the responses made comments similar to those in Questions 2 and 4, and raised similar issues to public comments received in relation to other reconsideration requests made by EJA, and also raised the following issues:
- a. Global warming must be limited to 1.5°C.
 - b. Climate change will impact future generations.
 - c. Climate change is having impacts on people's physical and mental health.
 - d. Climate change has economic and social impacts, including impacts to food security.
 - e. Concern about climate change impacts on the Great Barrier Reef, Ningaloo Reef and other protected areas, biodiversity and plant and animal species.
 - f. There should be no new gas or coal projects.
 - g. The Samuel Review outlines that cumulative impacts and future challenges like climate change are not effectively considered under the EPBC Act.
 - h. The need to take responsibility for the emissions of our exported fossil fuels that are burned overseas and contribute to global climate change.
 - i. Global contributions to climate change impacts other countries, such as our Pacific neighbours.
 - j. Concerns about impacts on Aboriginal and Torres Strait land and heritage.
 - k. Humanity must be considered before economic profits.
 - l. There is a lack of support and funding for Australian environmental research.
 - m. The capacity for the Australian environment and its people to recover from climate change effects is diminishing.
 - n. Support for renewable energy and decarbonising our economy, no more 'business as usual'.

- o. 'Every emission counts' – feelings of shame / guilt / stress about Australia's role in accelerating climate change.
- p. Scope 3 emissions need to be included in assessment and reporting.
- q. approving this project is incompatible with goals to achieve net-zero emissions.

Other public comments received

54. The department notes that three additional public submissions relating to EJA's 18 reconsideration requests (prior to the public comment period, EJA advised that it suspended its reconsideration request for a project that was subject to a proposed refusal decision) were submitted through the online portal for another project (EPBC 2022/09393) which was open for comment on a referral. The submissions were made during the public comment period for EJA's 18 reconsideration requests and are included at Attachment K5.

Public comments – made directly to the minister

55. In addition to the above public comments, members of the public also wrote directly to the then minister regarding the proposed action, or generally concerning EJA's 18 reconsideration requests. These comments were provided outside of the department's formal public comment process. The then minister received 33 direct submissions concerning the proposed action (Attachment K3). Of these submissions, three did not agree with the premise of the reconsideration request, noting, in summary:
- a. The EPBC Act is not the appropriate legislative instrument to regulate carbon emissions.
 - b. There is no proof that fossil fuels are linked to climate change.
56. The remaining 30 direct submissions either supported the reconsideration request and / or considered the proposed action should not proceed. The submissions made comments similar to those discussed in paragraphs 46, 50 and 53.
57. EJA (on behalf of the Environment Council of Central Queensland) also made a submission to the then minister on 24 November 2022 (Attachment K54) on the 18 reconsideration requests. The submission referred to the IEA *World Energy Outlook 2022* (IEA WEO 2022) which provides an update to the IEA's *Net Zero by 2050 – A Roadmap for the Global Energy Sector Emissions by 2050* (IEA NZE 21). In particular, EJA noted that the update to the IEA NZE 21 confirms previous scenarios presented by the IEA and IPCC, being that deep reductions are required in coal and gas markets to meet temperatures below 1.5°C, and those markets do not require the approval of long lead-time gas projects or any new coal mines or coal mine extensions. It also noted that the update to IEA NZE 21 confirms that:
- a. If the proposed action (or any of the other proposed projects, being the proposed action and the other projects also subject to EJA's reconsideration request of 8 July 2022) is assumed to be approved and exist, then, at minimum, emissions resulting from the extraction of coal and gas from the proposed action would result in reaching a minimum temperature which is above 1.5°C. Less harmful scenarios cannot occur in a future with any of the proposed projects.

- b. In order to achieve the updated IEA NZE 21 scenario, total energy supply of coal has already peaked, and total energy supply of natural gas will peak by 2030. In light of this, the demand for the coal or gas that would be extracted pursuant to each of the proposed projects (being the proposed action and the other projects also subject to EJA's reconsideration request of 8 July 2022) is not fixed and it cannot be said that the impacts will necessarily be the same in a future without the Proposed project as they would be in a future with it.
- c. There are many scenarios (and other technically feasible scenarios which have been validated by WGIII AR6) which cannot be achieved with input assumptions equivalent to the projected future supply of coal or gas entailed by the 18 proposed projects.

58. The department has considered all submissions received, including those sent to the then minister outside of the formal public comment process in preparing this brief ([Attachment K3](#)). The department recommends that you also consider the submissions received outside of the formal public comment process.

Proponent's submission on the reconsideration request

59. On 3 November 2022, in accordance with section 78B(2) of the EPBC Act, the proponent was invited to comment on the reconsideration request.
60. On 2 February 2023, the proponent provided its response to the invitation to comment ([Attachment H1](#)). A revised response was then provided on 16 December 2025 after the project was varied ([Attachment H2](#)). In summary, the response states that revocation and substitution of the original decision is not warranted or appropriate and the original decision should stand.
61. The proponent contends that the simple fact that the proposed action will generate emissions does not, by itself, demonstrate that the proposed action will lead to a global increase in net emissions that will lead to a global increase in temperatures, which will in turn lead to significant impacts on matters of national environmental significance.
62. The proponent considers the reconsideration request does not establish that the following events or circumstances are consequences of the proposed action for the purposes of section 527E:
- a. The consumption of the gas from the proposed action results in a net global increase in the consumption of gas.
 - b. This increased gas consumption (together with any Scope 1 and 2 emissions generated as part of the proposed action) leads to a net increase in global greenhouse gas emissions.
 - c. This net increase in greenhouse gas emissions will lead to an increase in global temperatures that can be attributed to the proposed action.
 - d. The increase in global temperatures attributed to the proposed action will have a significant impact on a relevant matters of national environmental significance.
63. The submission states that the amount of gas consumed globally is driven by demand and not supply. If the proposed action did not proceed, it is highly likely that other producers of gas would increase production to meet that demand, and that consumers of gas would be able to obtain gas from other sources and would still consume the same amount of gas.

64. The submission continues that, even if an increase in global gas consumption is an impact of the proposed action, it does not follow that the proposed action will result in an increase in net global greenhouse gas emissions. Whether the consumption of gas produced as part of the proposed action will cause a net increase in global greenhouse gas emissions will depend on a number of factors, including:
- a. the extent to which any emissions generated by the consumption of the gas will be offset, mitigated or abated
 - b. the extent to which consumption of gas will displace consumption of other fossil fuels, such as coal, which have a higher emissions profile
 - c. developments in technology during the life of the proposed action which may otherwise reduce the direct emissions from the consumption of gas produced as part of the proposed action or global emissions generally
 - d. domestic and international measures to reduce greenhouse gas emissions more generally
 - e. the volume of net greenhouse gas emissions from all other sources globally.
65. Even if the proposed action will, or is likely to, lead to an increase in net global greenhouse gas emissions, the submission considers that it cannot be demonstrated that the proposed action will result in an identifiable increase in global temperatures.
66. Even if the proposed action will lead to an identifiable increase in global temperatures, the submission considers the reconsideration request does not establish that this increase will have a significant impact on any matters of national environmental significance.

Request for further information on greenhouse gas emissions from the proponent

67. On 10 November 2022, the department sent the proponent a request for further information on the greenhouse gas emissions associated with the proposed action (Attachment I). Information was requested on:
- a. Scope 1, 2, and 3 emissions associated with the proposed action
 - b. emissions management
 - c. consumers of end-product extracted as part of the proposed action
68. The request sought that greenhouse gas emissions estimates should be aggregated in million tonnes carbon dioxide equivalent (Mt CO₂-e) and defined greenhouse gas by reference to section 7A of the *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act). It also defined Scope 1, 2

and 3 greenhouse gas emissions by reference to the department's *National Greenhouse Accounts Factors workbook*,¹ which categorises emissions as follows:

- a. Scope 1 – direct emissions which are produced from sources within the boundary of an organisation and as a result of that organisation's activities (e.g. fugitive emissions from gas production)
- b. Scope 2 – indirect emissions which occur outside of the boundary of an organisation from the generation of electricity that is consumed by the organisation
- c. Scope 3 – indirect emissions, other than electricity, which occur outside of the boundary of an organisation as a result of actions by the organisation (e.g. the regasification and the burning of the product gas from the proposed action by a third party to generate electricity)

Response to RFI Question 1: Scope 1, 2, and 3 emissions associated with the proposed action

69. On 16 December 2025, the proponent responded to the department's RFI about the projected emissions associated with the proposed action (Attachment J).
70. The proponent identified the activities resulting in Scope 1, 2 and 3 greenhouse gas emissions associated with the proposed action. Mitigated Scope 1 emissions from the proposed action are expected to occur through diesel use, fugitive emissions, land clearing, gas flaring and other well operations (drilling and workovers). Scope 2 emissions from the proposed action come from electricity consumption. The Scope 3 emissions derive from the combustion of saleable product gas by third parties overseas.
71. The proponent quantified the total and average annual estimated Scope 1, 2 and 3 greenhouse gas emissions associated with the proposed action, within and outside Australia, as set out in Table 2 below. The department notes, based on these figures, that Scope 1 emissions account for approximately 5.07% of total projected emissions from the proposed action and Scope 2 emissions represent approximately 0.21% of total projected emissions from the proposed action. The majority of the emissions associated with the proposed action are Scope 3 (approximately 94.71% of total projected emissions from the proposed action).

Table 2: Proponent's estimate of greenhouse gas emissions associated with the proposed action (Mt CO₂-e)

	Scope 1	Scope 2	Scope 3		Total (Scope 1, 2 and 3)	
	Australia		Australia	Overseas	Australia	Globally (includes Aust.)
Annual average	0.17	0.007	0.75	2.47	0.94	2.65
Total	5.9	0.25	25.63	85.23	31.82	117.05

72. The proponent also advised that the proposed action's *total average annual* emissions (Scope 1, 2, and 3) *within Australia* represent 0.2% of Australia's estimated annual national emissions from the

¹ Available at <https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-to-accounts-factors>.

Paris Agreement inventory for the 2023 reporting year, which was the latest year with reported data available at the time.

73. Further, the proponent advised the proposed action's *total average annual* emissions (Scope 1, 2 and 3) *within Australia and outside Australia combined* represent 0.0046% of global emissions (measured in CO₂-e) in 2022 which was the latest year with reported data available at the time.
74. The department notes that the proponent's estimate over the life of the proposed action (117.05 Mt CO₂-e) is lower than the estimate of 223 Mt CO₂-e provided by EJA in their initial letter to the department. This is likely due to a combination of factors, including a reduction in the size and scope of the proposed project (variations dated 5 August 2022 and 28 January 2025) since the original estimate by EJA, and a difference in the NGA Factors reporting year (2020 for EJA and 2022 for the proposed project). Noting that these factors likely contribute to the discrepancy in estimates, and that the proponent has provided detail of the methodology used for calculating emissions, including the emissions factors and sources of information, for each emissions activity source of Scope 1, 2 and 3 emissions, the department is satisfied the proponent has provided an appropriate estimate of greenhouse gas emissions in accordance with the request for information.

Response to RFI Question 2: Emissions Management

75. The proponent also advised the department of the measures that are proposed to avoid, reduce and monitor emissions associated with the proposed action, including:
- a. any measures required under relevant state / territory legislation and policies (e.g. greenhouse gas abatement plans)
 - b. any measures required under relevant Commonwealth legislation and policies (e.g. Safeguard Mechanism)
 - c. potential reduction measures include using digital tools to transfer gas to minimise flaring, replacement of equipment with more efficient alternatives, sequestering carbon by progressively re-establishing vegetation within disturbed areas

Response to RFI Question 3: Consumers of end-product

76. As noted above, the proponent predicted that the majority of the emissions associated with the proposed action are Scope 3 emissions from the combustion of product gas by third parties. The proponent provided information about the customer countries, noting gas would be exported to Japan and China. The proponent has not provided information on the product volume (%) that will go to the intended export countries. The department notes that each customer country is a party to the Paris Agreement.
77. The department notes that countries to which the gas is exported have announced or adopted domestic laws and policies to achieve their targets to reduce their greenhouse gas emissions as set out in their nationally determined contributions (NDCs – being emissions reduction commitments), set out in Table 3 below.

Table 3: The NDCs of each export country party to the Paris Agreement

Country / Jurisdiction	NDC
Japan	Reduce greenhouse gas emissions by 60% by 2035 and 73% by 2040 from 2013 levels. Net zero commitment by 2050.
China	Reduce greenhouse gas emissions by 7 to 10% from 2020 levels by 2035. Net zero commitment by 2060.

International gas initiatives

78. One of the primary concerns with the use of gas is the emission of methane. Methane is a greenhouse gas which absorbs heat 84 times faster than carbon dioxide over a 20-year period. During COP26, the Global Methane Pledge (GMP) was launched by the EU and the United States. The pledge seeks to reduce global methane emissions across all sectors by at least 30% below 2020 levels by 2030.
- China is the only country in Table 3 which has not joined the pledge.
 - Australia joined the pledge.
79. The department is not aware of any existing natural gas or LNG specific initiatives aimed at reducing the volume of natural gas consumed globally. Rather, there is significant global development of LNG export projects.
80. The *Global Gas Security Review 2024* notes that the balance of domestic demand and supply has allowed Algeria from North Africa to increase exports, particularly as EU nations seek alternatives to Russian gas due to the sanctions. Nigeria is the top LNG exporter in Africa and are developing new gas pipelines to increase gas volumes available for LNG exports, expecting to add 5 billion cubic meters (bcm) per year of liquefaction capacity by 2026. The department notes that this is approximately equivalent to 3.675 Mtpa.
81. The Global Energy Monitor develops and analyses data on energy infrastructure, resources and uses. The department notes that each country listed above exports LNG into the Asian market. The LNG terminals data released September 2024 notes that:
- The United States has 57 proposed export projects, 17 export projects in construction resulting in 274.9 Mtpa and 75.5 Mtpa respectively of LNG export capacity.
 - Russia has 25 proposed export projects, 2 export projects in construction resulting in 255.5 Mtpa and 13.2 Mtpa respectively of LNG export capacity.
 - Canada has 8 proposed export projects, 3 export projects in construction resulting in 36.8 Mtpa and 16.1 Mtpa respectively of LNG export capacity.
 - Qatar has 2 proposed export projects, 6 export projects in construction resulting in 16.0 Mtpa and 49.0 Mtpa respectively of LNG export capacity.

International momentum behind the transition away from fossil fuels

82. The Global Stocktake, agreed at 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC), saw parties agree to transition away from fossil fuels in energy systems. This is the first time all parties to the Paris Agreement have acknowledged the need to transition away from fossil fuels under the UNFCCC.
83. The Global Stocktake decision also called on parties to the Paris Agreement to triple renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030, and to accelerate efforts to transition away from fossil fuels in energy systems.
 - a. Over 120 countries, including Australia, also signed the Global Pledge on Renewables and Energy Efficiency, which commits them to work together to triple the world's installed renewable energy generation capacity to at least 11,000 GW by 2030 and collectively to double the global average annual rate of energy efficiency improvements from around 2% to over 4% every year until 2030.
 - b. Of the 2 countries listed in Table 3, Japan joined the pledge. Australia also joined the pledge.

Regional Action

84. The Asia-Pacific Energy Cooperation has set two energy goals through its Energy Working Group:
 - a. To improve energy intensity by at least 45% by 2035 compared to 2005 levels;
 - b. To double the share of modern renewables in the energy mix by 2030, relative to the numbers from 2010.
85. The Association of Southeast Asian Nations (ASEAN), while not having an emissions reduction target, does have the:
 - a. *ASEAN Strategy for Carbon Neutrality*, which includes eight strategies to deliver the carbon-neutral journey;
 - b. *ASEAN Plan of Action of Energy Cooperation*, which sets aspirational targets of 23% share of Renewable Energy in total primary energy supply, and 35% share of renewable energy in ASEAN installed power capacity by 2025.
86. The European Council and Parliament reached a provisional agreement on a new EU Regulation to reduce energy sector methane emissions in Europe and in global supply chains in November 2023.
 - a. The regulation will oblige the fossil gas, oil and coal industry to properly measure, monitor, report and verify their methane emissions according to the highest monitoring standards, and take action to reduce them;
 - b. The agreement now requires formal adoption by both the European Parliament and the Council. Once this process is completed, the new legislation will be published in the Official Journal of the Union and enter into force.

87. In 2023 the Asia Zero Emissions Community (AZEC) was launched by 11 partner countries to advance decarbonisation in Asia towards the goal of carbon neutrality while achieving economic growth and energy security. During the launch from Japanese Prime Minister Kishida said the community would 'create a huge new decarbonisation market in Asia.' Through the AZEC countries apply for Japanese funding for energy projects. Most approved projects have been mainly fossil fuel-based technologies such as LNG, ammonia co-firing with coal plants and carbon capture and storage.

Japanese policies that may reduce demand for Australian gas

There are no explicit statements from the Japanese government that they plan to completely phase out gas in their domestic energy system. However, Japan has clearly signalled a plan to reduce gas use in favour of renewable alternatives in their Outline of Strategic Energy Plan (OSEP).

- a. The OSEP involves reducing LNG for energy generation from 37% in 2019 to 20% in 2030, with concurrent increases in the adoption of nuclear and renewable energy for electricity generation.
 - b. Under the OSEP Japan 'will pursue the shift to natural gas on demand side and decarbonization of gas through methanation and other means, which play a significant role in decarbonizing heat demand. We will also work to further strengthen the resilience of gas.'
88. Similarly, in their First NDC (22 October 2021) they explained that to meet their goal of net-zero by 2050, 'Japan will put forward all possible efforts in all areas including by thorough energy efficiency measures, maximum introduction of renewable energy, as well as decarbonization of public sectors and local communities.'
89. There are several policies in place that will reduce the use of fossil fuels. In December 2022, the Japanese government announced Japan's Green Transformation (GX) Strategy to drive economic growth and development through emissions mitigation. The GX Strategy is economy wide, covering the energy, transport, built environment, industry and finance sectors. The GX Strategy targets in the energy and industry sectors that will likely impact demand for Australian fossil fuels include:
- a. to reach 36 to 38% of renewable energy in the country's power mix by 2030
 - b. to install 10GW of Offshore Wind Power and 104-118GW Solar Power by 2030
 - c. to restart nuclear power and aim for 20-22% of country's power mix by 2030
 - d. to establish successful cases of ammonia / hydrogen co-firing by 2024, so as to support development of supply chain starting 2025, and to achieve lowered costs by 2030
 - e. to expand supply of green steel to 10 million tonnes by 2030
 - f. to cut 30% of CO₂ emission in steel industry from 2013 levels by 2030.
90. To assist in meeting these targets, the Japanese government has committed 20 trillion yen (about USD 140 billion) of government funding to the GX Strategy to realise, within the next ten years, a combined total investment of 150 trillion yen in green transformation, from both the public and private sectors. Some of this funding has so far been allocated to:

95. China is rapidly scaling up electricity storage capacity. This has the potential to significantly reduce China's reliance on coal- and gas-fired power plants to meet peaks in electricity demand and to facilitate the integration of larger amounts of variable wind and solar power into the grid.⁴
96. China has made significant investments in renewable energies, including almost two-thirds of global wind and solar projects under construction in recent years.⁵

International framework for addressing climate change

97. The international climate treaties – the Paris Agreement, adopted on 12 December 2015 and the UNFCCC, adopted on 9 May 1992 – are the primary multilateral mechanisms governing the international response to climate change.
98. The Paris Agreement entered into force on 4 November 2016. There are 198 parties to the UNFCCC, of which 194 are parties to the Paris Agreement, including Australia. The Paris Agreement 'aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:
 - a. holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change'.
99. Under the Paris Agreement, all parties must prepare, communicate and maintain successive NDCs and pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions. Under the Paris Agreement, emissions that occur within a party's jurisdiction are accounted for within that party's national greenhouse gas inventory. Emissions associated with the combustion of exported Australian fossil fuels are accounted for in the national greenhouse gas inventories of the importing countries.
100. In Australia, emissions reduction targets and national climate mitigation policies are the responsibility of the Minister for Climate Change and Energy, the Hon Chris Bowen MP.
101. Under Article 4 of the Paris Agreement, Parties 'aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.'
102. The Australian Government has committed to reduce national greenhouse gas emissions, track progress towards those commitments, and report annually on Australia's greenhouse gas emissions.

⁴ [Analysis: Clean energy was top driver of China's economic growth in 2023 - Carbon Brief](https://www.carbonbrief.org/analysis-clean-energy-was-top-driver-of-chinas-economic-growth-in-2023/#:~:text=China's%20%24890bn%20investment%20in,%25%20year-on-year): <https://www.carbonbrief.org/analysis-clean-energy-was-top-driver-of-chinas-economic-growth-in-2023/#:~:text=China's%20%24890bn%20investment%20in,%25%20year-on-year>.

⁵ [China building two-thirds of world's wind and solar projects | China | The Guardian](https://www.theguardian.com/world/article/2024/jul/11/china-building-twice-to-as-much-wind-to-and-solar-power-to-as-rest-of-world-report): <https://www.theguardian.com/world/article/2024/jul/11/china-building-twice-to-as-much-wind-to-and-solar-power-to-as-rest-of-world-report>

Australia submitted its first NDC to the UNFCCC in 2015, and in September 2025, Australia submitted its updated NDC that commits to reducing net emissions by 62 to 70% below 2005 levels by 2035.

103. On 12 December 2023, the Australian Government agreed to the Parties' first Global Stocktake under the Paris Agreement. Paragraph 28 of the Global Stocktake report 'calls on Parties to contribute to the following global efforts, in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches:
- a. tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030
 - b. accelerating efforts towards the phase-down of unabated coal power
 - c. accelerating efforts globally towards net zero emission energy systems, utilizing zero- and low-carbon fuels well before or by around mid-century
 - d. transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science
 - e. accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to to Abate sectors, and low-carbon hydrogen production
 - f. accelerating and substantially reducing non-carbon-dioxide emissions globally, including in particular methane emissions by 2030
 - g. accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero and low-emission vehicles
 - h. phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible'

Domestic Measures

104. The *Climate Change Act 2022* (Cth) enshrines Australia's emissions reduction targets in legislation – 62 to 70% below 2005 levels by 2035 and net zero emissions by 2050.
105. These targets are supported by a suite of measures, including:
- a. the Australian Government's commitment to 82% renewable electricity by 2030, a national target to ensure a timely transition away from reliance on increasingly unreliable and uneconomic ageing coal generation to a more reliable system with lower cost and emissions
 - b. a Capacity Investment Scheme, to encourage new investment in renewable energy by underwriting 23GW renewable generation and 9GW clean dispatchable capacity
 - c. the National Reconstruction Fund, which will provide up to \$3 billion for renewable and low emissions technology investment

- d. the decarbonisation of existing industries and creation of new clean energy industries through the \$1.9 billion Powering the Regions Fund
- e. the National Energy Transformation Partnership to coordinate action by the Commonwealth states and territories to achieve net zero emissions in the electricity system by 2050 and reach 82% renewable electricity by 2030
- f. \$20 billion investment to upgrade the electricity grid to manage more renewable energy through the Rewiring the Nation program
- g. introducing climate reporting standards for financial institutions and large publicly listed companies
- h. \$224.3 million investment in new community batteries across Australia to support the grid and maximise the benefits of Australia's rooftop solar installations, through the Community Batteries for Household Solar program
- i. \$102.2 million for the Community Solar Banks program to establish solar banks around Australia, providing access to solar for around 25,000 households who are unable to install rooftop solar
- j. \$83.8 million to develop and deploy microgrid technology across First Nations communities
- k. Australia's first National Electric Vehicle Strategy
- l. the Future Gas Strategy that maps the Australian Government's plan for how gas will support the Australian economy's transition to net zero
- m. reforms to the Safeguard Mechanism
- n. National Hydrogen Strategy

Future Gas Strategy

106. In May 2024, the Federal Government released the Future Gas Strategy (the strategy) which maps the plan for how gas will support the transition to net zero. The objectives of the strategy are to:
 - a. support decarbonisation of the Australia economy
 - b. safeguard energy security and affordability
 - c. entrench Australia's reputation as an attractive trade and investment destination
 - d. help our trade partners on their own paths to net zero
107. The strategy outlines the role that gas will have in helping both Australian and international economies transition to global net zero. The long-term role of gas-powered generation is to provide firming and peaking support as the grid becomes increasingly powered by renewable energy.
108. Additionally, the strategy outlines that LNG will continue to play a significant role in reducing the carbon intensity of the region's energy mix, particularly by replacing more emission intensive fuels like coal, while supporting energy security and stability.
109. Importantly, the strategy specifies that the current emissions from the extraction and production of gas must reduce for Australia to reach net zero by 2050.

Safeguard Mechanism

110. The Safeguard Mechanism requires Australia's largest greenhouse gas emitters to keep their net emissions below emissions limits (baselines). The Safeguard Mechanism applies to facilities that have direct (Scope 1) emissions of more than 100,000 tCO₂-e in a financial year.
111. The reformed Safeguard Mechanism commenced on 1 July 2023 and requires facility baselines to decline each year, reducing net emissions in line with Australia's climate targets. The reforms introduced a requirement that information on Scope 1 emissions provided in the course of EPBC assessment must be reported to the Climate Change Authority, the Minister for Climate Change and the Secretary of the relevant department, on approval of the action if the action is likely to result in:
 - a. a new designated facility (that is, a facility the operation of which will result in a total amount of covered emissions of greenhouse gases during a financial year with a carbon dioxide equivalence exceeding 100,000 tonnes or more), or
 - b. an increase in the emissions of a facility which is already covered by the Safeguard Mechanism.
112. The proponent advised in its response to the RFI that the facilities where gas from the proposed action will be processed, will be covered by the Safeguard Mechanism.

Domestic Gas markets

113. The Australian Energy Market Operator (AEMO) releases two annual Gas Statement of Opportunities (GSOO) for Australia's East Coast and the Western Australian Gas Markets.
114. In December 2024, AEMO published the Western Australian GSOO (WA GSOO). The WA GSOO forecasts an improved near-term supply adequacy outlook compared to the 2023 WA GSOO and continues to forecast risks of annual supply gaps that will require new sources of supply from 2030 onwards. Gas consumption by industrial, commercial and residential consumers is forecast to increase while existing gas fields are depleting. Western Australian domestic gas consumption is expected to increase from 1,119 TJ / day in 2024 to 1,336 TJ / day in 2034, with an average annual growth rate of 1.8%.
115. In March 2025, AEMO released the annual East Coast GSOO (EC GSOO). The EC GSOO forecasts the adequacy of gas supplies to meet consumers' needs for 20 years. The EC forecasts risks of peak day shortfalls from 2028, and structural supply gaps emerging from 2029 in southern Australia. While the scale of gas consumption remains uncertain through the energy transition, particularly gas usage for electricity generation, all scenarios identify the need for new supply investments to maintain supply adequacy.
116. Key forecasts from the GSOO include:
 - a. annual consumption is forecast to decline modestly over the forecast period
 - b. expected reduction in gas use from electrification of heating, cooking and other traditional residential and commercial appliances is anticipated to reduce the peak day demands, particularly in southern regions

- c. gas for generation of electricity is forecast to increase in the longer term due to growing electricity demand, coal generation retirements, and the need to firm renewable generation supply in the National Electricity Market.

International Gas markets

117. The IEA *Gas 2025 medium-term report* (IEA Gas 2025), released in October 2025 ([Attachment L4](#)), provides an overview of potential supply, demand, and trade trends in global natural gas markets for the coming years, reviews recent market developments, and assesses supply security, LNG expansion, and pathways for low-emission gases. Key findings of IEA Gas 2025 include the following:
- a. About 300 bcm / year (the department notes this is approximately equivalent to 219 Mt) of new LNG export capacity is expected by 2030, mainly from the US and Qatar.
 - b. Long-term LNG contracts remain critical as risk-sharing tools, with growing flexibility and pricing diversity to enhance resilience against supply shocks.
 - c. The LNG market is becoming more liquid and diversified, with destination-free contracts and hub-based pricing gaining traction, reducing reliance on oil indexation.
 - d. Carbon capture, utilisation and storage (CCUS) is moving from demonstration to deployment in LNG operations, aiming to cut emissions intensity and secure financing.
 - e. Supply of biomethane and hydrogen is projected to increase 2.5 times by 2030, though their share remains under 1% of global gaseous fuels.
 - f. Global gas demand is forecast to grow by around 9% by 2030, driven mainly by Asia and the Middle East.
118. The department also reviewed the *Global Gas Report 2024* ([Attachment L2](#)) released in August 2024 by the International Gas Union (IGU), Snam and Rystad Energy. The IGU represents the global gas industry covering over 90% of the global gas market. Key findings from the *Global Gas Report 2024* include:
- a. Global gas demand increased 1.5% from 2022 in 2023 and expected to further increase 2.1% in 2024. It is forecasted to increase to 4138 bcm (the department notes that this is approximately equivalent to 3,037 Mt) in 2024. Asia's strong demand contributes to increases in global gas imports.
 - b. North America and the Middle East mainly contribute to the increase in global gas exports to balance the increase in demand. Global gas production only increased by 0.5% due to production declines in Europe and Russia.
 - c. Geopolitical tensions (as well as any significant shift in demand or supply) continue to cause price volatility in the market.
 - d. Natural gas combustion for power generation creates approximately half of the CO₂ emissions when compared to coal emissions, which is crucial to the transition to renewable energy.

- e. Emerging zero and low CO₂ technology such as biomethane, hydrogen and CO₂ capture capacity are expected to be critical in decarbonisation of energy.
 - f. Global shifts including the increase use of artificial intelligence, extreme weather events and electric vehicles leading to a future increase in power demand. This future demand will likely be more than the world's 2030 demand reduction targets. Current investment in natural gas supply is insufficient to meet the global demand trend towards 2030.
 - g. CO₂-e emissions from gas are expected to remain level, despite the increase in demand and production due to ongoing reductions in gas value chain emissions intensity.
119. The department also reviewed the *Global LNG Outlook 2024-2028* (Attachment L3) released in April 2024 by the Institute for Energy Economics and Financial Analysis (IEEFA). Key findings of the *Global LNG Outlook 2024-2028* included:
- a. Lacklustre demand growth combined with a massive wave of new export capacity is poised to send global liquefied natural gas (LNG) markets into oversupply within two years.
 - b. In Japan, South Korea, and Europe—which together account for more than half of the world's LNG demand—combined imports fell in 2023 and will likely continue falling through 2030.
 - c. In emerging Asian markets, structural LNG demand growth faces economic, political, financial, and logistical challenges that an oversupplied environment may not fully resolve.
 - d. IEEFA expects global LNG supply capacity to rise to 666.5 Mtpa by the end of 2028, which exceeds International Energy Agency (IEA) demand scenarios through 2050.

Statutory framework for reconsideration decisions

120. Under section 78C(1) of the EPBC Act, as soon as practicable after the end of the time within which information or comments may be given under section 78B in relation to a request under section 78A to reconsider a decision about an action, you must:
- a. reconsider the decision; and
 - b. either:
 - i. confirm the decision; or
 - ii. revoke the decision in accordance with section 78(1), and substitute a new decision for it (the reconsideration decision).
121. Under section 78(1) of the EPBC Act, you may revoke a decision made under section 75(1) about an action and substitute a new decision under that section for the first decision, but only if one of the circumstances in section 78(1)(a)-(ca) applies.
122. EJA's reconsideration request was made on the basis of section 78(1)(a). Under that provision, you may revoke a decision and substitute a new decision if you are satisfied that the revocation and substitution is warranted by the availability of substantial new information about the impacts that the action has or will have or is likely to have on a matter protected by a provision of Part 3 (protected matter) (paragraph 78(1)(a)).

123. The department noted that section 78(1)(aa) contained another ground for reconsideration which appeared potentially applicable having regard to the information in EJA's request and provided through the section 78B consultation process. Under section 78(1)(aa), you may revoke a decision and substitute a new decision if you are satisfied that the revocation and substitution is warranted by a substantial change in circumstances that was not foreseen at the time of the first decision has occurred that relates to the impacts that the action has or will have or is likely to have on a protected matter.
124. Under section 75 of the EPBC Act, you are required to decide whether the action that is the subject of the referred proposal is a controlled action, and which provisions of Part 3 (if any) are controlling provisions for the action. In making your decision, you must consider all adverse impacts the action has, will have, or is likely to have, on the matter(s) protected by a provision (or provisions) of Part 3. You must not consider any beneficial impacts the action has, will have or is likely to have on the protected matters.
125. Section 391 provides that you must take account of the precautionary principle in making a decision under section 75, to the extent you can do so consistently with the other provisions of the EPBC Act. While a reconsideration decision is not a decision listed in section 391 as a decision where the precautionary principle must be taken into account, section 78C(1) requires you to reconsider a section 75 decision, and a section 75 decision is listed in section 391.

RECOMMENDED DECISION

Protected Matters

126. The reconsideration request of 8 July 2022 states that there is substantial new information about the impacts that the proposed action has or will have, or is likely to have, on various matters protected by Part 3 of the EPBC Act and that this warrants the revocation and substitution of the original referral decision. The department's consideration of the reconsideration request and corresponding recommendation is set out below, with respect to each of the protected matters specified in the request:
- a. the World Heritage values of declared World Heritage properties (sections 12 and 15A)
 - b. the National Heritage values of National Heritage places (sections 15B and 15C)
 - c. the ecological character of declared Ramsar wetlands (sections 16 and 17B)
 - d. listed threatened species in the critically endangered category (section 18(2))
 - e. listed threatened species in the endangered category (section 18(3))
 - f. listed threatened species in the vulnerable category (section 18(4))
 - g. listed threatened ecological communities in the critically endangered category (section 18(5))
 - h. listed threatened ecological communities in the endangered category (section 18(6))
 - i. listed threatened species and listed threatened ecological communities (section 18A)
 - j. listed migratory species (sections 20 and 20A)

- k. the environment in Commonwealth marine areas (sections 23(2), 24A(3), (4)) (containing listed marine species)
 - l. the environment in the Great Barrier Reef Marine Park (sections 24B(2), 24C(5), (7))
- 127. The department has also considered whether any of the grounds at sections 78(1)(aa) to (d) may be the basis for a decision to reconsider the original referral decision. It has determined they would not be, for the following reasons:
 - a. The requirements for the grounds at sections 78(1)(b) to (ca) are not met because the original referral decision was a controlled action decision, and those grounds only apply where the original referral decision was that the action was 'not a controlled action'.
 - b. The requirement for the ground at section 78(1)(d) is not met because the reconsideration request was not made under section 79.
 - c. The requirements for the ground at section 78(1)(aa) are not met because, for the reasons set out with respect to the ground at section 78(1)(a), below, the department considers that, having regard to the information provided by EJA and through the section 78B consultation process, there has not been a substantial change in circumstances that relates to the impacts of the action.

World heritage values of declared World Heritage properties (sections 12 and 15A)

Referral information

- 128. The original referral decision does not include this controlling provision because the proposed action does not occur within or adjacent to any declared World Heritage properties. The delegate considered it unlikely that the proposed action would have a significant impact on the World Heritage values of declared World Heritage properties given the nature and scale of the proposed action, its potential impacts, and its distance from declared World Heritage properties.
- 129. Climate-related evidence was not considered by the delegate in relation to this protected matter. No consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

- 130. In the reconsideration request, EJA identified over 470 documents that it considers demonstrate the likely significant impacts of climate change on matters protected under this controlling provision. These publicly available documents include World Heritage nominations, management plans for World Heritage places and the IUCN World Heritage Outlook.
- 131. The department considers that this information is substantial new information as:
 - a. much of the information contained in the reconsideration request was not before the delegate and so is considered new information; and
 - b. the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.
- 132. The information in the reconsideration request identifies 17 of the 20 Australian declared World Heritage properties as likely to be impacted by climate change (Attachment B4):

- a. Budj Bim Cultural Landscape
- b. Fossil Mammal Sites
- c. Gondwana Rainforests of Australia
- d. Great Barrier Reef
- e. Greater Blue Mountains
- f. Heard and MacDonald Islands
- g. K'gari (Fraser Island)
- h. Kakadu
- i. Lord Howe Island
- j. Macquarie Island
- k. Ningaloo Coast
- l. Purnululu National Park
- m. Shark Bay
- n. Tasmanian Wilderness
- o. Uluru Kata-Tjuta National Park
- p. Wet Tropics of Queensland
- q. Willandra Lakes Region

133. The information in the reconsideration request identifies that climate change and its flow-on effects are affecting or will affect the ecology and / or other heritage values of the identified declared World Heritage properties. Based on the information provided, the extent of the effects appears to vary between the properties, reflecting their unique natural environments. In summary, World Heritage properties containing ecosystems and / or species with low temperature range tolerances (e.g. alpine and coastal environments) are more susceptible to climate change. In general, climate change reduces the resilience of ecosystems due to the increased risks from a range of factors including:
- a. altered (or reduced) abundance and distribution of species critical (and / or unique) to the ecological integrity of the property
 - b. altered hydrological flows causing increasing incursions of saltwater into freshwater (and the reverse) damaging important feeding and breeding habitat
 - c. invasive / pest species gaining a greater foothold
 - d. extreme temperature events causing heat stress to susceptible plants and animals (e.g. the Spectacled Flying Fox *Pteropus conspicillatus*)
 - e. altered or inappropriate fire regimes associated with temperature extremes

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on the World Heritage values of a declared World Heritage property?

134. The information in the reconsideration request shows that climate change is having or will have adverse effects on the flora, fauna and ecosystems of the identified World Heritage properties. This will, in turn, have adverse effects on the World Heritage values of those properties. Whether the information relates to adverse impacts of the proposed action on this protected matter is discussed below.
135. In accordance with the statutory test described at paragraph 121 above, to be satisfied under section 78(1)(a) of the EPBC Act that revocation and substitution of the original referral decision is warranted by the availability of substantial new information, you must be satisfied that the information is about the impacts the proposed action has or will have, or is likely to have, on one or more of the relevant protected matters.

Statutory test

136. Section 527E of the EPBC Act defines 'impact' for the purposes of the Act. An event or circumstance is an impact of a proposed action if:
 - a. the event or circumstance is a direct consequence of the action (section 527E(1)(a)), or
 - b. for an event or circumstance that is an indirect consequence of the action – subject to subsection 527E(2), the action is a substantial cause of that event or circumstance (section 527E(1)(b)).
137. Section 527E(2) provides for the purposes of paragraph (1)(b) that if:
 - (a) a person (the primary person) takes an action (the primary action); and
 - (b) as a consequence of the primary action, another person (the secondary person) takes another action (the secondary action); and
 - (c) the secondary action is not taken at the direction or request of the primary person; and
 - (d) an event or circumstance is a consequence of the secondary action;
 then that event or circumstance is an impact of the primary action only if:
 - (e) the primary action facilitates, to a major extent, the secondary action; and
 - (f) the secondary action is:
 - (i) within the contemplation of the primary person; or
 - (ii) a reasonably foreseeable consequence of the primary action; and
 - (g) the event or circumstance is:
 - (i) within the contemplation of the primary person; or
 - (ii) a reasonably foreseeable consequence of the secondary action.

138. The department considers that the reconsideration request contains information which demonstrates in a general sense that climate change from anthropogenic sources of greenhouse gas emissions has and / or will have physical effects on protected matters.
139. To the extent the information may be relevant to the physical effects of climate change caused by the proposed action, the reconsideration request contains information about emissions resulting from the combustion by third parties of the gas to be extracted in the proposed action. Having regard to the information provided by EJA and through the section 78B consultation process, the physical effects of climate change on the World Heritage values of declared World Heritage properties (which the request is about) are, if anything, *indirect consequences* of the proposed action: they are events or circumstances that are removed in time and distance from the taking of the action, which is the extraction of gas.
140. Therefore, for the information in the reconsideration request to be about the impacts of the proposed action under section 527E of the EPBC Act, it must show that the proposed action is a substantial cause of the physical effects of climate change on the World Heritage values of a declared World Heritage property.

Applying the statutory test

141. The department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on the World Heritage values of declared World Heritage properties. Therefore, the information is not about impacts the proposed action has or will have, or is likely to have, on the World Heritage values of declared World Heritage properties. As explained below, this is because:
- a. the information does not demonstrate that the proposed action will cause any net increase in global greenhouse gas emissions and global average temperature (and so, any of the stated physical effects of climate change on the World Heritage values of declared World Heritage properties). Whether this will happen is subject to multiple variables; and
 - b. even if that were demonstrated, any contribution from the proposed action to global greenhouse gas emissions would be very small. It is therefore not possible to say that the proposed action will be a substantial cause of the stated physical effects of climate change on the World Heritage values of declared World Heritage properties.

Will the proposed action cause a net increase in greenhouse gas emissions and global average temperature?

142. The likely contribution of the proposed action's emissions towards a net increase in global greenhouse gas emissions and global average temperature is subject to a number of variables. Therefore, it is reasonably open to you not to be satisfied that the proposed action will be a cause of the stated physical effects of climate change on the World Heritage values of declared World Heritage properties.
143. One variable is whether any emissions generated by the combustion of the gas from the proposed action will be offset, mitigated or abated. The countries or jurisdictions where the prospective buyers of the gas are expected to combust the gas may at any time implement new policies or regulations regarding emissions within their borders.

144. As set out at paragraph 77 above, the countries where it is anticipated that the gas from the proposed action will be consumed (China and Japan) each have respective NDCs under the Paris Agreement to reduce national emissions and adapt to the impacts of climate change. Under the Paris Agreement (referred to at paragraphs 97 to 103 above), each Party must submit an NDC every five years. These NDCs are required to reflect increased ambition over time. Parties may also submit new or updated NDCs at any time. The emissions generated by combusting gas (including gas from the proposed action) would be counted as Scope 1 emissions in the country where combustion occurred and may be subject to mitigation actions or offsetting. These emissions may also qualify as the indirect Scope 3 emissions of the source country (in this case, Australia).
145. Further, as set out at paragraph 103 above, a Global Stocktake has been agreed to by Parties under the Paris Agreement, which includes a call to transition away from fossil fuels in energy systems to achieve net zero by 2050. As set out at paragraphs 78 to 87, there are international and regional initiatives including the GMP, Global Pledge on Renewables and Energy Efficiency and ASEAN Plan of Action on Energy Cooperation, which are directed at encouraging a transition from fossil fuel powered energy to renewable energy.
146. The level of global greenhouse gas emissions from the proposed action will also likely be subject to the emissions reduction policies of power companies, and any changes to the efficiency of their power plants. The department has noted examples of changes to the emissions reduction policies of certain companies. For example:
- a. Power companies in Japan have committed to being carbon-neutral by 2050 including phasing out inefficient power plants and improving the efficiency of LNG thermal power generation.⁶⁷
 - b. There is a working example of a 50 MWe gas-fired power plant which captures 97% of produced CO₂ emissions using various carbon capture, utilisation and storage (CCUS) technologies. The US company responsible for the project is building a 300 MWe utility scale plant using the technology which will be operational by 2026⁸.
147. The IEA's Tracking Clean Energy Progress report⁹, released in July 2023, notes that:
- a. Since January 2022 around 15 CCUS projects at gas-fired power plants were announced. In total, nearly 50 Mt CO₂ of capture capacity at gas-fired power plants is in the project pipeline, primarily in the United States and United Kingdom.
 - b. Emission reduction at gas-fired power plants is being accomplished through a combination of applying CCUS, increasing plant efficiencies and co-firing hydrogen-based fuels.

⁶ [JERA Zero CO₂ Emissions 2050 | Our Company | JERA](#)

⁷ [J-POWER BLUE MISSION 2050 | J-POWER \(jpower.co.jp\)](#)

⁸ [Clean, Reliable, Low-Cost Energy. | NET Power](#)

⁹ [Tracking Clean Energy Progress 2023 – Analysis - IEA](#)

148. More broadly, if the proposed action does not proceed, this will not necessarily affect the level of greenhouse gas emissions worldwide or the extent to which the World Heritage values of declared World Heritage properties will be impacted by the physical effects of climate change stated in the request. That will be subject to a range of other factors, including the level of emissions from sources other than the proposed action.
149. These factors make it very difficult to estimate the likely net increase in global greenhouse gas emissions from the proposed action's emissions and, by extension, the extent of any net increase in global average temperature and the extent to which the World Heritage values of declared World Heritage properties will be impacted by the stated physical effects of climate change.
150. It is also likely that, if the proposed action does not proceed, the prospective buyers will purchase an equivalent amount of gas from a supplier other than the proponent, which would result in an equivalent amount of greenhouse gas emissions when combusted, when compared with the amount estimated for the proposed action.
151. The Global Gas Security Review 2024 notes that destination-free contracts rose from 30% in 2016 to 47% in 2023, mostly driven by the expansion of US LNG supplies. These contracts are forecasted to increase to 51% by 2027 with the gradual expiry of destination-fixed contracts in response to gas supply and demand shocks as highlighted in the 2022-23 gas supply shock from Russia's invasion of Ukraine and more recently, the low availability of hydropower in South Africa.
152. The department considers it is reasonable to assume that should the proposed action not proceed, the market would respond through an increase in supply elsewhere, in circumstances where there is still anticipated demand for the gas from the proposed action. The department recommends that you conclude that you are not satisfied that the proposed action is likely to result in a net increase to greenhouse gas emissions or affect the extent to which the World Heritage values of declared World Heritage properties will be impacted by the stated physical effects of climate change.
153. EJA submitted that it is not possible for you to be satisfied that the same or a worse impact will necessarily occur in scenarios without the proposed project. The department notes that while the argument presented below by EJA uses the example of coal projects, it remains relevant for all fossil fuel projects, including the proposed action. EJA stated that, although the following same analysis is available for the proposed action and it could be precisely modelled for the proposed action, detailed modelling is not necessary to demonstrate it as a matter of logic:

'It is not open to you to rationally be satisfied that the same or worse impact will necessarily occur in scenarios without the Proposed project. That is because, the best feasible future scenarios (in terms of total future emissions before the achievement of net zero greenhouse gas emissions, and consequent level of warming) cannot eventuate if the Proposed project is to exist....

This can be explained by a simple hypothetical. If a coal miner refers a proposed coal mine to the minister, by which it proposes to extract and sell 10 Mtpa of thermal coal on the seaborne thermal coal market, every year from 2030 to 2050, the minister must, in making the section 75 decision, assume that coal mine will exist. The minimum likely significant impacts from the accumulated greenhouse gas emissions, including those from that coal mine, are the minimum impacts from a total temperature increase of total future emissions in a world in which: (a) there is a coal market out to 2050; (b) within that coal market, there is a seaborne

thermal coal market out to 2050; (c) within that thermal seaborne coal market out to 2050, there is sufficient demand for seaborne thermal coal such that all of the coal from the proposed coal mine is burned, together with all of the more desirable coal on the seaborne thermal coal market from 2030 to 2050 (with desirability determined by the market, primarily by reference to quality, cost and price). By contrast, if the existence of that mine is not assumed, there are feasible scenarios available where there is no coal market out to 2050, no seaborne thermal coal market, or a smaller seaborne thermal coal market out to 2050. As demonstrated by WGIII AR6, there is a large range of better feasible scenarios (in terms of lowest temperature increase) which are simply not available if one assumes the existence of the coal mine with 10Mtpa on the seaborne thermal coal market out to 2050.

The same analysis is available for the Proposed project. It could be precisely modelled for the Proposed project, but detailed modelling is not necessary to demonstrate it as a matter of logic.

It follows that it would be irrational to conclude that the likely significant impacts will necessarily be the same with or without the Proposed project.'

154. The reconsideration request also stated that, in all feasible scenarios in which the proposed action is carried out, there will very likely be physical effects of climate change on World Heritage properties, and, conversely, that feasible scenarios with lesser increases in those effects are available in a future without the proposed action.
155. The department considers that EJA's analysis at paragraphs 153 to 154 above does not address the relevant statutory question, which requires you to consider, in light of new information, whether the proposed action is a substantial cause of the event or circumstance, as outlined at paragraphs 136 to 140 above.
156. The request also stated that, in all feasible scenarios in which the proposed action is carried out, there will very likely be physical effects of climate change on World Heritage properties, and, conversely, that feasible scenarios with lesser increases in those effects are available in a future without the proposed action.
157. The department considers that EJA's analysis at paragraphs 153 to 154 above does not address the relevant statutory question, which requires you to consider, in light of new information, whether the proposed action is a substantial cause of the event or circumstance, as outlined at paragraphs 136 to 140 above.

Even if the proposed action were to cause a net increase in greenhouse gas emissions and global average temperature, would it be a substantial cause of any physical effects of climate change on the World Heritage values of declared World Heritage Properties?

158. For completeness, the department considers that, even if the information in the reconsideration request demonstrated that the proposed action would result in a net increase in global greenhouse gas emissions and global average temperature, there is no reasonable basis for concluding that the proposed action will be a substantial cause of the physical effects of climate change on the World Heritage values of declared World Heritage properties.
159. As outlined at paragraphs 69 to 73 above, in response to a request by the department for information, the proponent provided information demonstrating that the average total annual greenhouse gas emissions (Scope 1, 2 and 3) from the proposed action represents approximately 2.65Mt CO₂-e or 0.0046% of global annual emissions (measured in CO₂-e). The proponent used

Climate Watch's Historical greenhouse gas Emissions 2022 data as the basis for its calculations, consistently with the department's request for information (Table 2 above and Attachment J).

160. Further, the proponent estimated, in response to the same request for information, that the total greenhouse gas emissions associated with the proposed action would be approximately 117.05 MtCO₂-e. The department estimates that the likely increase in global temperature that could arise from the proposed action's estimated total greenhouse gas emissions, in a scenario where it could be shown that the proposed action would result in a net increase in global greenhouse gas emissions and global average temperature, is approximately 0.00007162 °C. The department prepared this estimate assuming a one-for-one relationship between temperature and tonnes of greenhouse gas emissions, based on the information EJA provided about findings by the IPCC Working Group I that the relationship between anthropogenic CO₂ and global temperature has thus far been approximately linear, meaning that each 1,000 gigatons of cumulative CO₂ emissions contributes to an approximate 0.45°C increase in global temperature.
161. The IEA *Global Gas Security Review 2024* (Attachment L1) also noted global natural gas consumption in 2024 was 4,200 bcm (the department notes that this is approximately equivalent to 3,486 Mt). The proposed action's maximum annual output is 1.8 bcm and this represents 0.044% of the global coal consumption that was reached for 2024.
162. In considering the amounts outlined above, the department notes that the IPCC has estimated that total warming from greenhouse gas emissions to date is approximately 1.09°C. In view of the amounts outlined at paragraphs 158**Error! Reference source not found.** to **Error! Reference source not found.**1 above, the department considers that the amount of fossil fuels to be combusted from the proposed action, and any possible increase in net global greenhouse gas emissions and global average temperature that would result from combusting this amount of fossil fuels, are very small. It is open to you to conclude that the proposed action is not a 'substantial' cause of the physical effects of climate change on World Heritage properties.
163. The reconsideration request asserts that 'there is an approximately linear relationship between cumulative anthropogenic CO₂ emissions and global temperature, such that every tonne of CO₂ emissions adds to global warming', and the department accepts this. However, for the reasons discussed above, the department does not accept that the contribution this action makes to emissions will be a 'substantial cause' of the physical effects of climate change on the World Heritage values of declared World Heritage properties.

Policy Statement on 'Indirect consequences' of an action

164. The request cites the following excerpt from the department's *Policy Statement on 'Indirect consequences' of an action: Section 527E of the EPBC Act* (Policy Statement). In the Policy Statement, this excerpt appears under the heading: 'is the impact too remote from the action?':

...an impact that evidence strongly suggests might manifest itself many years later, or occurs at a substantial geographic distance from the location of the original action, may still be an indirect consequence that is substantial enough to be considered an impact.

165. For the reasons set out above, the department is not satisfied that there is any relevant impact.

Conclusion

166. For the reasons at paragraphs 128 to 165 above, the information in the request and the information provided in the department's consultation on the request do not demonstrate that the proposed action will cause a net increase in global greenhouse gas emissions and global average temperature (and, therefore, the relevant physical effects of climate change on the World Heritage values of declared World Heritage properties).
167. The difficulty in estimating the likely contribution (if any) of the proposed action to the relevant physical effects of climate change on the World Heritage values of declared World Heritage properties is one reason that the department recommends you find that the proposed action is not a substantial cause of those effects.
168. Further, even if it could be shown that the emissions from the project would result in an increase in net global greenhouse gas emissions and global average temperature, the contribution of the proposed action would be very small. It is open to you to conclude that the 'substantial cause' requirement for an indirect impact under section 527E(2) of the EPBC Act is not satisfied.
169. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on the World Heritage values of declared World Heritage Properties.

National Heritage values of National Heritage places (sections 15 and 15C)*Referral information*

170. The original referral decision does not include this controlling provision because the proposed action does not occur within or adjacent to any National Heritage places. The delegate considered it unlikely the proposed action would have a significant impact on National Heritage places given the nature and scale of the proposed action, its potential impacts, and its distance from National Heritage places.
171. Climate-related evidence was not considered by the delegate in relation to this protected matter. As noted above, no consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

172. EJA identified over 230 documents that it considers demonstrate the likely significant effects of climate change on matters protected under this controlling provision. These publicly available documents include information in the Australian Heritage database and management plans for National Heritage places.
173. The department considers this information is substantial new information as:
- much of the information contained in the reconsideration request was not before the delegate and so is considered new information; and
 - the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.

174. The information in the reconsideration request related to 19 National Heritage places (Attachment B4):
- a. Australian Alps National Parks and Reserves
 - b. Dampier Archipelago
 - c. Elizabeth Springs
 - d. Glass House Mountains National Landscape
 - e. Grampians Greater Gariwerd National Park
 - f. Ku-ring-gai Chase National Park
 - g. Kurnell Peninsula Headland
 - h. Lesueur National Park
 - i. Porongurup National Park
 - j. Recherche Bay (NE Peninsula) Area
 - k. Stirling Range National Park
 - l. Warrumbungle National Park
 - m. Witjira-Dalhousie Springs National Park
 - n. K'gari (Fraser Island)
 - o. Great Barrier Reef
 - p. Greater Blue Mountains
 - q. Macquarie Island
 - r. Uluru-Kata Tjuta National Park
 - s. Wet Tropics of Queensland
175. The last six places listed above are also declared World Heritage properties. In respect of those six places EJA relied on the information it provided for the World Heritage properties. The discussion below therefore relates to the information EJA provided in relation to the 13 National Heritage places that are not also World Heritage properties.
176. Broadly, the information presented by EJA about the effects of climate change on National Heritage places showed there are effects on biodiversity in these places due to changing population size and distribution of species, the modification of species composition, and alteration of the geographical extent of habitats and ecosystems. Climate change is likely to exacerbate many existing threats to the ecological integrity of National Heritage places such as:
- a. Decreasing and changing water flows
 - b. Fire weather

- c. Invasive species
- d. Habitat fragmentation and the loss of key habitat such as hollow bearing trees.

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on the National Heritage values of a National Heritage place?

- 177. The information in the reconsideration request identified that climate change is having or will have adverse effects on the flora, fauna and ecosystems of the identified National Heritage places. This will in turn have adverse effects on the National Heritage values of those places.
- 178. For the same reasons as those set out at paragraphs 138 to 139 above in relation to the World Heritage values of declared World Heritage properties, having regard to the information provided by EJA and through the section 78B consultation process, flow-on climate change effects would be indirect consequences of the proposed action on the National Heritage values of the identified National Heritage places for the purposes of the EPBC Act.
- 179. For the same reasons as those set out at paragraphs 140 to 169 above in relation to the World Heritage values of declared World Heritage properties, the department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on the National Heritage values of the identified National Heritage places.

Conclusion

- 180. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on the National Heritage values of a National Heritage place.

Ecological character of declared Ramsar wetlands (sections 16 and 17B)

Referral information

- 181. The original referral decision does not include this controlling provision because the proposed action does not occur within or adjacent to any Ramsar listed wetland of international importance. The delegate considered it unlikely that the proposed action would have a significant impact on the ecological character of a declared Ramsar wetland given the nature and scale of the proposed action, its potential impacts, and its distance to Ramsar listed wetlands of international importance.
- 182. Climate-related evidence was not considered by the delegate in relation to this protected matter. As discussed above, no consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

- 183. EJA has identified over 50 documents that it considers demonstrate the likely significant impacts of climate change on matters protected under this controlling provision. These publicly available documents include the ecological character descriptions for Ramsar sites.
- 184. The department considers that this information is substantial new information as:
 - a. much of the information contained in the reconsideration request was not before the delegate and so is considered new information; and

- b. the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.

185. The information in the reconsideration request identified 51 of Australia's 53 Ramsar wetlands as likely to be affected by climate change (Attachment B4). The effects of climate change identified in the information relate predominately to changes associated with altered water balance, including:

- a. Rising sea levels that increase the incursion of salt water into estuary waters and freshwater wetland habitat, affecting the freshwater biota within the wetlands.
- b. The increased intensity of tidal storm surges, increasing foreshore shoreline erosion and inundation processes.
- c. Altered rainfall patterns, affecting water quality, ground water recharge and vegetation.
- d. Longer drier periods, increasing evaporation which affect salinity and groundwater levels.

186. The information in the reconsideration request also shows that climate change exacerbates existing pressures on Ramsar wetlands from water resource developments, invasive species and drought.

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on the ecological character of declared Ramsar wetlands?

187. The ecological character of a Ramsar wetland is the combination of the ecosystem components, processes and benefits / services that characterise the wetland at a given point in time. The information in the reconsideration request states that climate change is altering the water balance of Ramsar wetlands which in turn is having adverse effects on the ecological character of declared Ramsar wetlands.

188. For the same reasons as those set out at paragraphs 138 to 139 above in relation to the World Heritage values of declared World Heritage properties, having regard to the information provided by EJA and through the section 78B consultation process, flow-on climate change effects are indirect consequences of the proposed action on the ecological character of declared Ramsar wetlands for the purposes of the EPBC Act.

189. For the same reasons as those set out at paragraphs 140 to 169 above in relation to the World Heritage values of declared World Heritage properties, the department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on the ecological character of declared Ramsar wetlands.

Conclusion

190. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on the ecological character of Ramsar wetlands.

Listed threatened species and ecological communities (sections 18 and 18A)

Referral information

191. The original referral decision includes controlling provisions under sections 18 and 18A because the delegate considered it likely the proposed action would result in significant impacts to 24 listed threatened species and 6 ecological communities due to habitat clearing.

192. Climate-related evidence was not considered by the delegate in relation to these protected matters. As discussed above, no consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

193. EJA has identified over 2,000 documents that it considers demonstrate the likely significant impacts of climate change on matters protected under these controlling provisions. These publicly available documents include conservation advices and listing advices for individual species and the IUCN Red List assessments. EJA divided its information for these provisions into three groups – listed fauna, listed flora and listed ecological communities (Attachment B5). The department's consideration of this information is thus grouped in the same way below.
194. The department considers this information is substantial new information as:
- a. some of the information contained in the reconsideration request was not before the delegate and so is considered new information; and
 - b. the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.

Listed threatened fauna

195. EJA considers that 366 listed faunal species are likely to be affected by climate change (Attachment B4). The information in the reconsideration request identified that climate change is likely to increase the frequency and severity of droughts, floods, and bushfire due to increased temperature and altered rainfall patterns. These weather events will affect the availability and distribution of breeding and foraging habitats for listed faunal species. For example, reduced waterflows can result in the loss of streamside vegetation and floods and bushfires impact on the water quality of aquatic environments. The effects of climate change are more pronounced for fauna with restricted area of occupancy and low-density populations at those sites.
196. The information in the reconsideration request also identified other sources of physical pressures on listed faunal species such as water extraction, feral predation, feral herbivores, introduced pests and developments (e.g. roads and agriculture).

Listed threatened flora

197. EJA considers that 1,048 listed floral species are likely to be affected by climate change (Attachment B4). The EJA information identified that climate change will cause Australia's climate to get hotter and drier, resulting in the potential for increased drought and climate-induced bushfires of increased intensity and frequency. This change in climate will affect the habitat suitability of listed floral species – particularly those which occur in small, fragmented populations with specific habitat requirements (e.g. moisture content) or in a highly restricted geographic range (e.g. alpine regions). In addition, the effects of extreme rainfall flood events associated with climate change may affect listed floral species, for example, by leading to the erosion of swampy floodplain habitat and causing physical damage to listed flora.
198. The information in the reconsideration request also identified other pressures on listed floral species, such as habitat fragmentation, encroachment from developments, introduced pests and diseases, and human recreational activities (e.g. bushwalking, camping and abseiling).

Listed ecological communities

199. EJA considers that 74 listed threatened ecological communities are likely to be affected by climate change (Attachment B4). The information in the reconsideration request identified that climate change poses a serious long-term threat to terrestrial, coastal, and aquatic ecosystems that are listed threatened ecological communities. Wetlands, swamps, moist open forest, and rainforests will be under greater stress from a drier climate. Coastal ecological communities will be impacted by rising sea levels.
200. The information in the reconsideration request also noted that climate change not only directly threatens the species within ecological communities that cannot adapt, but it is also likely to exacerbate existing threats including:
- Loss of habitat
 - Altered hydrological regimes
 - Altered fire regimes
 - The spread of invasive species and disease
 - Tree decline due to prolonged drought and heat stress
 - Human activities.

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on listed threatened species and ecological communities?

201. The information in the reconsideration request identified that climate change is having, or will have, adverse effects on the habitats of listed threatened species and the composition of listed threatened ecological communities.
202. For the same reasons as those set out at paragraphs 138 to 139 above in relation to the World Heritage values of declared World Heritage properties, having regard to the information provided by EJA and through the section 78B consultation process, flow-on climate change effects are indirect consequences of the proposed action on listed threatened species and ecological communities for the purposes of the EPBC Act.
203. For the same reasons as those set out at paragraphs 140 to 169 above in relation to the World Heritage values of declared World Heritage properties, the department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on listed threatened species and ecological communities.

Conclusion

204. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on listed threatened species and ecological communities.
205. The department also notes that because the original referral decision specified sections 18 and 18A as controlling provisions, impacts on listed threatened species and ecological communities will be assessed for the purposes of the decision whether or not to approve the proposed action. The further information provided by EJA would not warrant the revocation and substitution of the

original decision in relation to the identified controlling provisions, including the controlling provisions under sections 18 and 18A.

Listed migratory species (sections 20 and 20A)

Referral information

206. The referral decision for the proposed action includes this controlling provision because of habitat clearing covering a large area.
207. Climate-related evidence was not considered by the delegate in relation to this protected matter. As discussed above, no consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

208. EJA has identified over 150 documents and information that it considers demonstrate the likely significant impacts of climate change on matters protected under this controlling provision. This publicly available material includes information about individual species from the department's SPRAT and conservation and listing advices.
209. The department considers this information is substantial new information as:
- a. some of the information contained in the reconsideration request was not before the delegate and so is considered new information; and
 - b. the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.
210. EJA considers 133 listed migratory species are likely to be impacted by climate change (Attachment B4). The information in the reconsideration request identifies relationships between climate change and listed migratory species, for example:
- a. Migratory waders – global warming and associated changes in sea level are likely to have long-term effects on breeding, staging, and non-breeding grounds.
 - b. Cold water marine mammals – increasing ocean temperatures predicted by climate change scenarios could potentially decrease the extent of their occurrence with warmer water extending southwards.
 - c. Marine turtles – changing temperatures and weather patterns associated with climate change are likely to have both direct physiological effects on marine turtles as well as indirect effects through impacts on critical habitats.

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on listed migratory species?

211. The information in the reconsideration request identified that climate change is having, or will have, adverse effects on migratory species.
212. For the same reasons as those set out at paragraphs 138 to 139 above in relation to the World Heritage values of declared World Heritage properties, having regard to the information provided by

EJA and through the section 78B consultation process, flow-on climate change effects are indirect consequences of the proposed action on listed migratory species for the purposes of the EPBC Act.

213. For the same reasons as those set out at paragraphs 140 to 169 above in relation to the World Heritage values of declared World Heritage properties, the department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on listed migratory species.

Conclusion

214. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on listed migratory species.
215. The department also notes that because the original referral decision specified sections 20 and 20A as controlling provisions, impacts on listed migratory species will be assessed for the purposes of the decision whether or not to approve the proposed action. The further information provided by EJA would not warrant the revocation and substitution of the original decision in relation to the identified controlling provisions, including the controlling provisions under sections 20 and 20A.

Environment in a Commonwealth marine area (sections 23 and 24A)

Referral information

216. The original referral decision for the proposed action does not include this controlling provision because the proposed action does not occur in a Commonwealth marine area (**CMA**). Based on the information provided in the referral the delegate considered that the proposed action was unlikely to have a significant impact on the environment in a CMA.
217. Climate-related evidence was not considered by the delegate in relation to this protected matter. As discussed above, no consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

218. EJA has identified over 540 documents that it considers demonstrate the likely significant impacts of climate change on the matter protected under this controlling provision. These publicly available materials include bioregional plans, species group and marine environment report cards and region profiles.
219. The department considers this information is substantial new information as:
- a. much of the information contained in the reconsideration request was not before the delegate and so is considered new information; and
 - b. the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.
220. EJA considers that the environment in five of the six CMAs and over 390 listed marine species are likely to be impacted by climate change (Attachment B4).
221. The information in the reconsideration request identifies the relationships between climate change related events and the environment in CMAs, for example:

- a. Increased frequency of storms – may cause habitat modification by altering coastal landscapes, particularly sandy beaches and low-lying islands, resulting in changes to the structure, function, and capacity of coastal ecosystems to deliver ecosystem function.
 - b. Sea level rise – may have consequences when combined with increasing cyclone frequency, particularly for habitats associated with inshore dolphins and some breeding seabirds.
 - c. Ocean acidification – may have physiological effects on many species and may also cause changes to the composition of ecological community structures dependent on hard substrate environments, which may in turn impact on food sources for higher trophic level species.
222. The information in the reconsideration request identifies that one third of reef building corals face an elevated extinction risk from climate change, and that climate change may thus threaten all sea snakes, which are coral reef specialists. The information in the reconsideration request also indicates that climate change, and associated changes in sea level, are likely to have a long-term impact on the breeding, staging, and non-breeding grounds of migratory shorebirds. In general, species that inhabit low-lying areas (e.g. beaches and atolls) will be subject to inundation and loss of habitat, and species that are geographically bounded will be impacted by rising temperatures.

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on the environment in a Commonwealth marine area?

223. The information in the reconsideration request identified that climate change is, or will have, adverse effects on the environment in a CMA, in particular ecosystems and their constituent parts which in turn impact on the qualities and characteristics of locations and places within a CMA.
224. For the same reasons as those set out at paragraphs 138 to 139 above in relation to the World Heritage values of declared World Heritage properties, having regard to the information provided by EJA and through the section 78B consultation process, flow-on climate change effects are indirect consequences of the proposed action on the environment in a CMA for the purposes of the EPBC Act.
225. For the same reasons as those set out at paragraphs 140 to 169 above in relation to the World Heritage values of declared World Heritage properties, the department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on the environment in a CMA.

Conclusion

226. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on the environment in a CMA.

Environment in the Great Barrier Reef Marine Park (sections 24B and 24C)

Referral information

227. The original referral decision does not include this controlling provision because the proposed action is not being undertaken in the Great Barrier Reef Marine Park (the **Park**). Based on the information contained in the referral documentation, the nature and scale of the proposed action and its

potential impacts, and the distance to the Park, the delegate considered that the proposed action was unlikely to have a significant impact on the Park.

228. Climate-related evidence was not considered by the delegate in relation to this protected matter. As discussed above, no consideration was given to potential climate change flow-on effects of greenhouse gas emissions, or greenhouse gas emissions, as impacts on protected matters from the proposed action.

Substantial new information about the impacts of the proposed action

229. EJA has identified over 13 documents and information that it considers demonstrate the likely significant impacts of climate change on matters protected under this controlling provision. These publicly available materials include bioregional plans, species group and marine environment report cards and region profiles. The information provided for this controlling provision was the same information as provided for the Park under the World Heritage controlling provision.
230. The department considers this information is substantial new information as:
- a. much of the information contained in the reconsideration request was not before the delegate and so is considered new information; and
 - b. the information is of substance and is not trivial or inconsequential, and demonstrates that climate change has various effects on this protected matter.
231. The EJA information identified that climate change is the most serious threat to the environment in the Park and compounds the impacts of other existing threats such as land-based run off, coastal development, and direct use (particularly fishing).
232. For example, climate change reduces the Park's resilience, with thermal extremes causing mass mortality of adult coral and a decline in coral recruitment, as well as mass mortality of fish and invertebrates, in shallow northern reef lagoons in 2016. Small changes in sea levels also increase erosion, which has effects on turtle and seabird nesting beaches and causes land inundation, affecting tidal habitats (e.g. brackish saltmarsh habitats are being displaced by mangroves).

Does the information relate to the impacts that the proposed action has or will have, or is likely to have, on the environment in the Great Barrier Reef Marine Park?

233. The information in the reconsideration request identified that climate change is having, or will have, adverse effects on the environment in the Park, in particular its ecosystems and constituent parts, which can in turn impact on the qualities and characteristics of locations and places with the Park and its heritage values.
234. For the same reasons as those set out at paragraphs 138 to 139 above in relation to the World Heritage values of declared World Heritage properties, having regard to the information provided by EJA and through the section 78B consultation process, flow-on climate change effects are indirect consequences of the proposed action on the environment of the Park for the purposes of the EPBC Act.
235. For the same reasons as those set out at paragraphs 140 to 169 above in relation to the World Heritage values of declared World Heritage properties, the department considers that the proposed action is not a substantial cause of the stated physical effects of climate change on the environment in the Park.

Conclusion

236. As such, the department recommends you determine that the new information is not about the impacts the proposed action has, will have or is likely to have on the environment in the Park.

OTHER MATTERS FOR DECISION-MAKING**Precautionary principle**

237. As a request has been made pursuant to section 78A of the EPBC Act, you are required to reconsider the decision under section 75 (about whether an action is a controlled action and which provisions of Part 3 (if any) are controlling provisions for the action). As noted above, in making a decision under section 75, you are required to take account of the precautionary principle (section 391) to the extent that you can do so consistently with the other provisions of the EPBC Act. The precautionary principle is that a lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage. The precautionary principle was applied in the original referral decision (Attachment A1).
238. The department has taken into account the precautionary principle. While the information in the reconsideration request demonstrates that there is a risk of serious or irreversible harm arising from climate change, for the reasons contained in this decision brief, the department considers that it is open to you to be satisfied that the greenhouse gas emissions from the proposed action do not cause 'impacts' on protected matters. If you reach this conclusion, you cannot be satisfied that the revocation and substitution is warranted by substantial new information about the impacts of the proposed action. The department recommends that you find that the revocation and substitution of the original decision is not warranted by the availability of substantial new information about the impacts that the action has or will have, or is likely to have, on protected matters.

ATTACHMENTS

A.	Original referral decision material A1. Signed referral brief dated 17 February 2021 A2. Signed referral decision notice dated 17 February 2021 A3. Original referral decision briefing package dated 17 February 2021
B.	Request for reconsideration B1. Letter from EJA dated 8 July 2022 B2. Annexure 1 B3. Sources of Information for Annexure 1 B4. Annexure 2 – Analysis of research on climate change and its impacts on Matters of National Environmental Significance under the EPBC Act B5. Annexure 2.1 – Spreadsheets of data

	B6. Annexure 2.2 – Sources of data for Annexure 2.1 B7. Annexure 2.3 – Fire Impact Maps B8. Letter from EJA providing further material dated 11 August 2022 B9. State of the Environment Report 2021 B10. Pre-final-publication versions of the IPCC WGII and WGIII Reports B11. Final consolidated versions of the IPCC WGII and WGIII Reports B12. Letter from EJA regarding IPCC WGII and WGIII Reports dated 29 August 2023 B13. Letter from EJA regarding Annexure III of the WGII Report (Annex III: Scenarios and Modelling Methods) dated 4 October 2023 B14. Annexure III of the WGII Report (Annex III: Scenarios and Modelling Methods) provided by EJA via email on 6 October 2023 B15. Letter from EJA providing further material dated 29 April 2024 B16. IEA Net Zero Roadmap, 2023 update B17. IEA World Energy Outlook, 2023 B18. Expert report by s. 47F(1), 26 April 2024 B19. Decision notice for first variation dated 5 August 2022 B20. Letter from EJA regarding the approval of the variation dated 24 November 2022 B21. Decision notice for second variation dated 28 January 2025
C.	Reconsideration decision notice – FOR SIGNATURE
D.	Letters – FOR SIGNATURE D1. Letter to proponent D2. Letter to requestor D3. Letter to State Minister D4. Letter to Minister for Indigenous Australians, Senator the Hon Malrindirri McCarthy D5. Letter to Minister for Climate Change and Energy, the Hon Chris Bowen MP D6. Letter to Minister for Resources and Minister for Northern Australia, the Hon Madeleine King MP D7. Letter to Minister for Industry and Science, the Hon Ed Husic MP

	D8. Letter to Minister for Agriculture, Fisheries and Forestry, the Hon Julie Collins MP
E.	Signed validity briefing package dated 3 November 2022
F.	Commonwealth Ministers' responses to invitation to comment: F1. Minister for Indigenous Australians, the Hon Linda Burney MP F2. Minister for Agriculture, Fisheries and Forestry, Senator the Hon Murray Watt. F3. Minister for Climate Change and Energy, the Hon Chris Bowen MP F4. Minister for Industry and Science, the Hon Ed Husic MP F5. Minister for Resources and Minister for Northern Australia, the Hon Madeleine King MP
G.	State Minister response to invitation to comment
H.	H1. Proponent response to invitation to comment – February 2023 H2. Proponent revised response to invitation to comment – December 2025
I.	Request for further information (RFI) on proposed action's emissions
J.	Proponent final response to RFI
K.	Public Comments K1. Public Portal Comments K2. Attachments to Public Portal Comments K3. Ministerial Submissions direct to the minister K4. Requestor Submission dated 24 November 2022, including attached World Energy Outlook 2022 (Free Data Set) K5. Additional Public Portal Comments
L.	L1. IEA Global Gas Security Review 2024 (IEA's annual gas market report for 2024) L2. IGU Global Gas Report 2024 L3. Global LNG Outlook 2024-2028 L4. IEA Gas 2025 medium term report
M.	Synthesis Report of the IPCC Sixth Assessment Report (AR6)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Request for further information to inform decision on approval - brief

To: s. 22(1)(a)(ii) Director, Queensland North Assessments, Environment Assessments Queensland

Action required: For Decision

Timing: ASAP – 13 February 2026 – statutory timeframe

Gas Supply Security Project, Surat and Bowen Basins, Queensland

Recommendations	
1) Consider the information presented in this brief	Considered / Not considered
2) Agree to make a decision under section 132(b) of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) to request further information for an approval decision.	Agreed/Not agreed
3) Sign the letter at <u>Attachment A</u> seeking further information from the proponent.	Signed/Not signed
s. 22(1)(a)(ii) s. 22(1)(a)(ii) s. 22(1)(a)(ii) Director, Queensland North Assessments Environment Assessments Queensland Date: 13 February 2026 Comments:	

Key issues

- The proposed action, Gas Supply Security Project (EPBC 2020/8856) will have impacts on the listed threatened species, migratory species including listed marine turtle species, and water resources (that relate to unconventional gas development and large coal mining development), and is being assessed through the public environment report (PER) process.

- 2) On 13 February 2026, the department met with the proponent to discuss conditions regarding the controlling provision “water resources (that relate to unconventional gas development and large coal mining development)” in preparation of the proposed approval/refusal decision. During this meeting, the department expressed interest in seeking further information from the proponent regarding impacts to water resources to develop relevant appropriate conditions.
- 3) Throughout the referral and assessment process, the department has proactively engaged with the proponent on clarifying issues in relation to impacts to water resources and, as discussed at **Error! Reference source not found.** **Error! Reference source not found.** **Error! Reference source not found.** to **Error! Reference source not found.**. However, a number of key uncertainties regarding impacts to water resources remain, therefore, the department recommends that you request further information from the proponent in relation to these uncertainties, outlined at **Error! Reference source not found.** **Error! Reference source not found.** **Error! Reference source not found.** below and in detail at Attachment B. The department notes that under section 130(5) of the EPBC Act that this request will essentially stop the approval decision timeframe, until the relevant information has been received.

Background

- 4) The proposed action involves the construction, operation, decommissioning and rehabilitation of gas field infrastructure within the Surat and Bowen Basins, Queensland, totalling 211,472 ha in total project area.
- 5) On 17 February 2021, the proposed Action was determined by the delegate of the Minister to be a controlled action, due to likely significant impacts on listed threatened species and communities (sections 18 and 18A); listed migratory species (sections 20 and 20A); and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E).
- 6) On the same day, the delegate determined the proposed Action was to be assessed by a public environment report (PER).
- 7) The proponent submitted the first draft of their public environment report (PER) to the department on the 26 October 2021. On 21 December 2021, in accordance with section 131AB of the EPBC Act, the department sought advice from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) in relation to potential impacts to water resources from the project.
- 8) The proponent provided the department with an updated draft PER on 25 October 2022, which was superseded by drafts submitted on 21 December 2023, 25 October 2024, 14 March 2025, 7 April 2025 and 23 April 2025. On 30 April 2025, the department determined that the draft PER was in a state that was acceptable to be published, under the caveat that before the final PER was published, several issues were addressed alongside concerns raised during the public comment period. These issues included:
 - a) The level of assessment undertaken / proposed must be more clearly explained / distinguished – evolution of the assessment methodology over time has left a legacy of conflicting terminology and commitments

- b) The commitment that 'all direct impacts to habitat will be offset for threatened species and TECs likely to be significantly impacted by the Project' must be clarified and defined
 - c) Definitions of habitat must be clear enough at species/TEC level to guide ground-truthing surveys and interpretation
 - d) Acceptability of impacts must be better justified
 - e) Plans including the environmental management plan, rehabilitation plan and offset management strategy should identify accountable triggers for when particular actions will be taken
 - f) Plans including the environmental management plan, rehabilitation plan and offset management strategy must discuss likely efficacy of measures proposed, with accompanying evidence, and
 - g) Descriptions, terminology and commitments must be consistent across the PER and all of its attachments.
- 9) On 21 August 2025, the proponent submitted the final PER to the department, noting 1,276 comments were received during the comment period. The comments raised the following key issues:
- a) potential impacts from greenhouse gas emissions and climate change;
 - b) effects on biodiversity including threatened species, threatened communities and migratory species;
 - c) disturbance to water resources including groundwater, aquifers and surface water;
 - d) cultural heritage and consultation with indigenous groups;
 - e) community related concerns including changes to rural landscapes and potential public health matters;
 - f) project description and how the project meets the required assessment framework; and
 - g) economic assessment and gas demand/supply rationale.
- 10) In addition to the above, comments were also made regarding the project's implications for National and World Heritage values and the overall need for new gas developments in the context of Australia's energy transition.
- 11) On 20 November 2025, the proponent provided the final version of the final PER which addressed the issues raised by the department raised during the draft PER publication. This was deemed adequate for publication on 13 January 2026.
- 12) On 16 January 2026, the proponent published the final PER for information only in accordance with subsection 99(4) of the EPBC Act.

Information gaps

- 13) Currently the PER provides uncertainty regarding the process to provide baseline monitoring of groundwater-dependent springs and watercourses at Carnassier, Moolayember, Injury and Kangaroo springs, as well as a watercourse spring located on the Dawson River between the eastern boundary of Spring Gully B and Lonely Eddie Spring, and the watercourse springs W39 Dawson River, W179 Boyd Creek, and W222 Kangaroo Creek where they occur within Spring Gully C development Area. The department is requesting the proponent provide further information detailing how baseline monitoring of these springs and watercourses would be managed.

Issues or sensitivities

- 14) Under section 132 of the EPBC Act, if the Minister believes on reasonable grounds that he or she does not have enough information to make an informed decision whether or not to approve, for the purposes of a controlling provision, the taking of an action, the Minister may request the designated proponent and/or any other person the Minister considers appropriate to provide specified information relevant to making the decision.
- 15) The current statutory timeframe for the final approval decision of the proposed action under the EPBC Act is 11 March 2026. If you agree to seek further information under section 132 of the EPBC Act, the statutory timeframe for making an approval decision is stopped until the Minister receives the information requested, under section 130(5) of the EPBC Act.
- 16) The letter informing the proponent of the request for further information and the halting of the approval decision clock is set out at [Attachment A](#).
- 17) Under subsection 520(4A) of the EPBC Act and Regulation 5.19 of the *Environment Protection and Biodiversity Conservation Regulations 2000* the project is subject to cost recovery for the request to provide information. An invoice for \$1,701.00 for payment will be provided to the proponent at the same time as the request for further information.

Cleared by

Name: s. 22(1)(a)(ii)
 Position: Assistant Director, Queensland North Assessments
 Branch: Environment Assessments Queensland
 Phone: s. 22(1)(a)(ii)
 Date: 13 February 2026

Contact officer

Name: s. 22(1)(a)(ii)
 Section: Queensland North Assessments
 Phone: s. 22(1)(a)(ii)

Attachments

- A: Letter to proponent – request for further information FOR SIGNATURE

B: Detailed request for further information

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Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

s. 47F(1)

Environmental Approvals Lead

Origin Energy on behalf of Australia Pacific LNG (APLNG)

Level 28, 180 Ann Street

BRISBANE QLD 4000

Request for further information – Gas Supply Security Project

Dear s. 47F(1)

I refer to the proposed action listed above which is currently being assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Under section 132 of the EPBC Act, if the Minister for the Environment and Water believes on reasonable grounds that he or she does not have enough information to make an informed decision whether or not to approve, for the purposes of a controlling provision, the taking of an action, the minister may request that the designated proponent, and / or any other person the minister considers appropriate, to provide specified information relevant to making the decision. On this basis and as a delegate of the minister, I request the provision of the information outlined in the attached document.

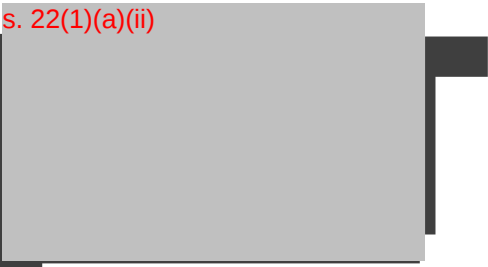
Please note that the statutory timing on this decision stops on the date of this letter and restarts once we have received satisfactory information and cost recovery fees have been paid.

Please note, under subsection 520(4A) of the EPBC Act and Regulation 5.19 of the *Environment Protection and Biodiversity Conservation Regulations 2000*, your project is subject to cost recovery for the request to provide specific information. An invoice for \$1,701.00 will be provided to you for payment.

The department considers that if the proposed action is to be approved, conditions will be necessary to address uncertainties over its impact on water resources such as groundwater-dependent springs and watercourses at Carnassier, Moolayember, Injury and Kangaroo springs, as well as a watercourse spring located on the Dawson River between the eastern boundary of Spring Gully B and Lonely Eddie Spring, and the watercourse springs W39 Dawson River, W179 Boyd Creek, and W222 Kangaroo Creek where they occur within Spring Gully C development Area. The department considers that the information requested is necessary to ensure that conditions can be drafted clearly and with maximum efficiency.

If you have any questions about this decision, please contact the project manager s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au and quote the EPBC reference number shown at the beginning of this letter.

s. 22(1)(a)(ii)



Assistant Director
Environment Assessments Queensland

13 February 2026

Released by National EPA under the FOI Act 1982



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

s. 47F(1)

Environmental Approvals Lead

Origin Energy, on behalf of Australia Pacific LNG Pty Ltd

Level 28, 180 Ann Street

BRISBANE QLD 4000

Approval decision – Gas Supply Security Project

Dear s. 47F(1)

I am writing to you about your proposed Gas Supply Security Project, to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland. Notice of my decision is attached, and will shortly be published on the department's website. The action must be undertaken in accordance with the conditions specified in the approval.

Please note that through Conditions 82 and 84, I have also effectively approved the commencement of Stage 1 of the action.

Any plans required to be implemented under the conditions of approval will be regarded as public documents unless the approval holder provides sufficient justification to warrant a commercial-in-confidence status.

Approval under the EPBC Act does not affect obligations to comply with any other laws of the Commonwealth, state or territory that are applicable to the action. Neither does this approval confer any right, title or interest that may be required to access land or waters to take the action.

Section 142 of the EPBC Act requires an approval holder to comply with conditions attached to an approval. Penalties may apply to approval holders who contravene conditions.

The department actively monitors and audits proposals referred or approved under the EPBC Act. The audit program aims to ensure approval holders comply with conditions of approval and implement any commitments made in management plans. Your project may be selected for audit by the department at any time and all related records and documents may be examined. Please refer to

the department's [Compliance and enforcement](#) page for further information on the compliance monitoring and auditing program.

I have also written to the following parties to advise them of this decision:

State government minister	a delegate for the Hon Andrew Powell MP, Minister for Environment and Tourism and Minister for Science and Innovation
Other relevant authority or authorities	Senator the Hon Malarndirri McCarthy, Minister for Indigenous Australians The Hon Madeleine King MP, Minister for Resources and Minister for Northern Australia The Hon Chris Bowen MP, Minister for Climate Change and Energy The Hon Julie Collins MP, Minister for Agriculture, Fisheries and Forestry

Please advise the department when you commence the action and ensure you keep the details of the person responsible for administration of the approval decision up to date throughout the life of the approval via email to epbcmonitoring@dcceew.gov.au.

You will soon receive a letter regarding the requirements of the approval conditions. For general enquiries regarding post approval matters, e.g. approval of management plans, please contact PostApproval@dcceew.gov.au.

If you have any questions about this decision, please contact the project managers [s. 22\(1\)\(a\)\(ii\)](#) by email to [s. 22\(1\)\(a\)\(ii\)](#) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

Encl: notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

s. 47F(1)

Director

Technical and Assessment Services

Department of the Environment, Tourism, Science and Innovation

GPO Box 2454

BRISBANE QLD 4001

Approval decision – Gas Supply Security Project

Dear s. 47F(1)

I am writing to you about the proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland. Notice of my decision is attached, and will shortly be published on the department's website.

If you have any questions about this decision, please contact the project managers s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Declan O'Connor-Cox

Branch Head

EPBC Regulatory Support Branch

17

March 2026

Encl: notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

The Hon Julie Collins MP
Minister for Agriculture, Fisheries and Forestry
Parliament House
CANBERRA ACT 2600

Approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland. Notice of my decision is attached, and will shortly be published on the department's website.

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

Encl: notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

The Hon Chris Bowen MP
Minister for Climate Change and Energy
Parliament House
CANBERRA ACT 2600

Notification pursuant to section 15A of the *Climate Change Act 2022*
Approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland. Notice of my decision is attached, and will shortly be published on the department's website.

I am also writing to you to provide you with an estimate of the scope 1 emissions of greenhouse gases for the purposes of section 15A of the *Climate Change Act 2022*, in relation to the above proposal.

For the purposes of section 15A of the *Climate Change Act 2022* (CC Act), I am satisfied that this action is likely to result in an increase of scope 1 emissions of greenhouse gases from two existing designated large facilities (Spring Gully Reedy Creek Combabula facility and Condabri Talinga Orana facility) and potentially a third new facility in the 2026-27 to 2080-81 financial years.

Australia Pacific LNG Pty Ltd has provided an estimate to the department that the Gas Supply Security Project will produce scope 1 greenhouse gas emissions totalling 5,970,000 tonnes of carbon dioxide equivalent (t CO₂-e) in 2026-27 to 2080-81 financial years. The department considers that this estimate has been undertaken in accordance with the methodology prescribed in the *National Greenhouse and Energy Reporting Act 2007*. The supporting documentation of this estimate is attached.

If you have any questions about this decision, please contact the project managers s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

CC: Emma Flanigan, Branch Head responsible for Safeguard Mechanism

Encl:

1. notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)
2. Greenhouse Gas Emissions Inventory – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Senator the Hon Malarndirri McCarthy
Minister for Indigenous Australians
Parliament House
CANBERRA ACT 2600

Approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland. Notice of my decision is attached, and will shortly be published on the department's website.

If you have any questions about this decision, please contact the project managers [s. 22\(1\)\(a\)\(ii\)](#) by email to [s. 22\(1\)\(a\)\(ii\)](#) [@dcceew.gov.au](mailto:s.22(1)(a)(ii)@dcceew.gov.au), and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

Encl: notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

The Hon Madeleine King MP
Minister for Resources
Minister for Northern Australia
Parliament House
CANBERRA ACT 2600

Approval decision – Gas Supply Security Project

Dear Minister

I am writing to you about the proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission and rehabilitate gas field infrastructure within the Surat and Bowen Basins, Queensland.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland. Notice of my decision is attached, and will shortly be published on the department's website.

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

Encl: notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Ms Kath Rowley
Chief Executive Officer
Climate Change Authority
Level 1, 7 London Circuit
CANBERRA ACT 2601

Notification pursuant to section 15A of the *Climate Change Act 2022***Approval decision – Gas Supply Security Project**

Dear Ms Rowley

I am writing to you to provide you with an estimate of the scope 1 emissions of greenhouse gases for the purposes of section 15A of the *Climate Change Act 2022*. The estimate relates to a proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland.

As a delegate of the Minister for the Environment and Water, I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd.

For the purposes of section 15A of the *Climate Change Act 2022* (CC Act), I am satisfied that this action is likely to result in an increase of scope 1 emissions of greenhouse gases from two existing designated large facilities (Spring Gully Reedy Creek Combabula facility and Condabri Talinga Orana facility) and potentially a third new facility in the 2026-27 to 2080-81 financial years.

Australia Pacific LNG Pty Ltd has provided an estimate to the department that the Gas Supply Security Project will produce scope 1 greenhouse gas emissions totalling 5,970,000 tonnes of carbon dioxide equivalent (t CO₂-e) in 2026-27 to 2080-81 financial years. The department considers that this estimate has been undertaken in accordance with the methodology prescribed in the *National Greenhouse and Energy Reporting Act 2007*. The supporting documentation of this estimate is attached.

I understand that this estimate will be taken into account in the Climate Change Authority's advice to the Minister for Climate Change in accordance with section 14(1A) of the CC Act.

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

CC: Emma Flanigan, Branch Head responsible for Safeguard Mechanism

Encl:

1. notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)
2. Greenhouse Gas Emissions Inventory – Gas Supply Security Project (EPBC 2020/8856)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC 2020/8856

Mr Mike Kaiser
Climate Change Secretary
Department of Climate Change, Energy, the Environment and Water
John Gorton Building
PARKES ACT 2600

Notification pursuant to section 15A of the *Climate Change Act 2022***Approval decision – Gas Supply Security Project**

Dear Secretary

I am writing to you to provide you with an estimate of the scope 1 emissions of greenhouse gases for the purposes of section 15A of the *Climate Change Act 2022*. The estimate relates to a proposal by Australia Pacific LNG Pty Ltd to construct, operate, decommission, and rehabilitate gas field development infrastructure, including up to 1,695 coal seam gas wells, 1,545 kilometres (km) of gas and water pipelines, gas processing and water management facilities, and supporting infrastructure (accommodation, access tracks, maintenance facilities, laydown areas and utilities) in the Surat and Bowen Basins, Queensland.

As a delegate of the Minister for the Environment and Water, I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Australia Pacific LNG Pty Ltd.

For the purposes of section 15A of the *Climate Change Act 2022* (CC Act), I am satisfied that this action is likely to result in an increase of scope 1 emissions of greenhouse gases from two existing designated large facilities (Spring Gully Reedy Creek Combabula facility and Condabri Talinga Orana facility) and potentially a third new facility in the 2026-27 to 2080-81 financial years.

Australia Pacific LNG Pty Ltd has provided an estimate to the department that the Gas Supply Security Project will produce scope 1 greenhouse gas emissions totalling 5,970,000 tonnes of carbon dioxide equivalent (t CO₂-e) in 2026-27 to 2080-81 financial years. The department considers that this estimate has been undertaken in accordance with the methodology prescribed in the *National Greenhouse and Energy Reporting Act 2007*. The supporting documentation of this estimate is attached.

I understand that reporting obligations under section 22XS(1D) of the *National Greenhouse and Energy Reporting Act 2007* may be triggered, and you may wish to seek a further briefing from the Branch Head responsible for the Safeguard Mechanism, Emma Flanigan.

If you have any questions about this decision, please contact the project manager, s. 22(1)(a)(ii) by email to s. 22(1)(a)(ii) @dcceew.gov.au, and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



Declan O'Connor-Cox
Branch Head
EPBC Regulatory Support Branch

17 March 2026

CC: Emma Flanigan, Branch Head responsible for Safeguard Mechanism

Encl:

1. notice of approval decision – Gas Supply Security Project (EPBC 2020/8856)
2. Greenhouse Gas Emissions Inventory – Gas Supply Security Project (EPBC 2020/8856)



Mara –2020/8856 Gas Supply Security Project Environment History Check Response completed.

24/02/2026 4:38 PM

Reference Number	EHC-26-01219
EPBC Number	2020/8856
Project Title	Gas Supply Security Project
Entity Name	Australia Pacific LNG Pty Ltd
Requesting officer	s. 22(1)(a)(ii)
Requested on	23/02/2026 5:47 PM
Request approving officer	s. 22(1)(a)(ii)
Request approved on	24/02/2026 4:38 PM
Responding officer	s. 22(1)(a)(ii)
Response approving officer	s. 22(1)(a)(ii)
Response approved on	24/02/2026 4:38 PM
Advice	Dear s. 22(1)(a)(ii) Thank you for your request for an Environmental History Check for Australia Pacific LNG Pty Ltd (ABN 68001646331), relating to EPBC 2020/8856. On 23/02/2026, an Environmental History Check was conducted by the Compliance and Enforcement Branch (CEB) within the Department of Climate Change, Energy, the Environment and Water (the department) for Australia Pacific LNG Pty Ltd (ABN 68001646331), and EPBC 2020/8856. The department identified three contraventions of EPBC Act section 142 Compliance with conditions on approval as follows: Case reference: CR-23-002975: 2017/7881 Spring Gully NW and NE CSG Development NE of Roma, QLD - OFFSETS Case details: Condition 4 attached to EPBC Act approval for Spring Gully North-West and North-East CSG Development, north-east of Roma, Queensland (EPBC 2017/7881) requires Australia Pacific LNG Pty Limited to implement the Spring Gully Offset Area Management Plan – Spring Gully North-West and North-East Project (OAMP) from the date of commencement of the action.



Australian Government

Department of Climate Change, Energy, the Environment and Water

Condition 27 concerns requirements for annual compliance reporting.

Findings:

The action commenced on 26 May 2019 and the OAMP has and was not being implemented in full. An infringement notice (\$18,780) for contravention of Condition 4, alongside a warning notice for contraventions of Condition 27, were issued to Australia Pacific LNG Pty Limited on 3 January 2024. A Directed Variation was issued (variation of conditions attached to the approval) on 6 November 2024.

Case reference: 2017/7902 - Alfredson Block CSG Project, QLD

Case details: Self-reported non-compliance with EPBC Approval 2017/7902 (approval holder: Australia Pacific LNG Pty Limited). The Annual Compliance Report (ACR) was published on the Australia Pacific LNG (APLNG) website on 08/11/2024. The Department was advised of the publication on 20/11/2024; 8 business days after the publishing of the report on the APLNG web site.

Condition 14(b) of the approval requires that the Department be notified of ACR publication within 5 business days.

Findings: ACS recorded the non-compliance with condition 14(b). The department did not take any further action in response to the non-compliance (ACS advised the approval holder that no further action would be taken on 21/11/2024).

Case reference: CR-24-004582: 2017/7881 - Spring Gully North West and North East Development, QLD

Case details: A Contravention of Condition 12 of Spring Gully North-West and North-East CSG Development (EPBC 2017/7881) was substantiated. Under condition 12 the approval holder must implement the Environmental Constraints Planning and Field Development Protocol for the duration of the approval.

Findings: On 31 January 2025, the department issued a warning letter to Australian Pacific LNG Pty Ltd for contravening section 142 of the EPBC Act.

- In addition to contraventions identified as of 13/02/2026, we note that further allegations of non-compliance have been received and are currently undergoing investigation.

Details cannot be provided at this time, as doing so may compromise the integrity of ongoing compliance activities. It is important to note that the receipt of an allegation does not indicate that a contravention of environmental legislation has occurred.

Please note:

- CEB cannot advise whether there has been a contravention of



Australian Government

**Department of Climate Change, Energy,
the Environment and Water**

state or territory laws associated with this entity.

- The information provided is based on the last three years of history.

Please don't hesitate to contact CEB by reply email if you have any questions.

Kind regards,

s. 22(1)(a)(ii)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Quality Assurance Checklist – Final Decision Brief

Reviewing officer

Name: s. 22(1)(a)(ii)

Position: Assessment Officer, Queensland North Assessments

Branch: Queensland Assessments

Signature: s. 22(1)(a)(ii)

Date: 16/03/2026

Assessment officer

Name: s. 22(1)(a)(ii)

Position: Senior Assessment Officer

Branch: Environment Assessments Queensland

Project: Gas Supply Security Project, Surat and Bowen Basins, Queensland

EPBC No: EPBC 2020/8856

Decision due: 17 March 2026

General Requirements	Brief	Decision Notice	Letter
Correct templates used (e.g. BRIEF 402, BRIEF 404, LET 405, LET 406, LET 407, NOT 401, NOT 403)	☒	☒	☒
Template version numbers	V5.4	V10.9	V5.3, V4.3
Template ID and version number retained in footer on first page	☒	☒	☒
Signature blocks and dates are correct	☒	☒	☒
EPBC reference number correct and used consistently	☒	☒	☒
Action specified is consistent with proposed decision or most recent variation	☒	☒	☒
Statutory deadline consistent with database record	☒		
The ACNs (or ABNs if no ACNs) are listed in the document, are the correct numbers for the designated proponent (if relevant) and the person proposing to take the Action	Yes ☐	Yes ☒	
	N/A ☒	N/A ☐	

General Requirements	Brief	Decision Notice	Letter
(Approval) The designated proponent or person to whom the approval is granted is correct and used consistently. Needs to be a 'person' for the purposes of the EPBC Act.	☒	☒	☒
(Refusal) The person proposing to take the Action is correct and used consistently. Needs to be a 'person' for the purposes of the EPBC Act.	☐ NA	☐ NA	☐ NA
Proposed decision briefing package is attached	☒		
Part 3 matters (controlling provisions) specified and consistent with proposed decision	☒	☒	
List of attachments reflects the order they are referenced in the document, attachment numbers are correct throughout the document, and all attachments are included	☒	Yes ☒ N/A ☐	☒
Updated Recommendation Report or Legal Considerations Report is attached to the brief (if relevant)	☐		
Letters have been drafted to relevant Commonwealth Ministers advising them of the final decision (if relevant)	Yes ☐ N/A ☐		Yes ☒ N/A ☐
A letter has been drafted advising the designated proponent and the person proposing to take the Action of the final decision	☐		☒
Delete all mentions of the word 'proposed' from the final decision notice		☒	
All dates mentioned accord with records	☒	☒	☒
All references used in document are listed (if relevant)	Yes ☐ N/A ☒		
ERT Report included (if different results to ERT Report attached to proposed decision brief)	Yes ☐ N/A ☒		
Decision maker has had access to any legal advice sought	Yes ☐ N/A ☒		
Any line area advice that has been obtained is included	Yes ☐ N/A ☒		
All line areas consulted are clearly identified (if advice has been sought)	Yes ☐ N/A ☒		
Monitoring Assurance have been consulted on any substantial changes to conditions they commented on previously (if relevant)	Yes ☐ N/A ☒		

General Requirements	Brief	Decision Notice	Letter
Link to DCCEEW Compliance and enforcement webpage provided in the approval decision letter to the person proposing to take the Action. Check that the link works			☒
Biodiversity Division (BD) (Species Listing Information and Policy Section) weekly report is consulted to confirm imminent conservation advices, threat abatement plans, recovery plans and/or delistings or downlistings (if s18 and s18A are controlling provisions)	☒	Date of weekly report: 13 March 2026	
Statutory Document Report from EIAS has been attached to the decision package and advice sought from QA officers in accordance with the Statutory Document Report SOP	☒	Date the report was requested: 12 February 2026	
BD (Species Listing Information and Policy Section) line area advice included on recent and pending conservation advices, threat abatement plans, recovery plans or delistings or downlistings (if s18 and s18A are controlling provisions)	Yes ☒	Date of advice received: 12 February 2026	
	N/A ☐		
Copies of any approved conservation advices for listed species and/or ecological communities which are likely to be impacted by the proposed Action (if s18 and s18A are controlling provisions, and if not already included in the proposed approval decision package) have been included in the decision brief.	Yes ☐		
	N/A ☒		

Legislative Requirements	Brief	Decision Notice	Letter
Comments from other Ministers included and incorporated (s131)	☒		
Comments from the designated proponent or person proposing to take the Action included and incorporated (s131 AA)	☒		
Comments from the public included and incorporated (s131A), if requested	Yes ☐		
	N/A ☒		
Notice from State or Territory Minister included and incorporated (s132A), if requested	☒		

s133 Approvals	Brief	Decision Notice	Letter
Period of approval is specified	☒	☒	
Part 3 matters (controlling provisions) specified and consistent with CA decision	☒	☐	

s133 Approvals	Brief	Decision Notice	Letter
Conditions attached and consistently referenced	☒	☒	

s136 General Considerations	Brief	Decision Notice	Letter
Briefing package (or Brief includes, per DOC 403?) includes assessment or recommendation documents required by s136(ba), (bc), (c) or (d)	☒		
Briefing package (or Brief discusses, per DOC 403?) discusses economic or social matters, ecologically sustainable development, and environmental history of proponent	☒		
All other included information is permitted to be considered by the Minister	☒		
Specific MNES requirements are addressed in the briefing package (or Brief, per DOC 403?) (s137, s137a, s138, s139, s140)	☒		