Wildlife Trade Operation Proposal – Antastic

1. Title and Introduction

1.1/1.2 Scientific and Common Names Please refer to Attachment A, which details the ant species earmarked for harvest and specifies the annual harvest quota, ensuring it remains within acceptable limits.

Wildlife Trade

1.3 Harvest Location The harvesting activities will be conducted on privately owned land and non-protected public spaces, such as footpaths, roads, and parks in Queensland, as well as other approved Wildlife Trade Operations. In cases where the taxa are not found in Queensland, legal sourcing will be done from other approved WTOs or collected by Antastic's representatives from unprotected areas. This may include public spaces like roadsides, unprotected council parks, and privately owned properties.

1.4 Description of Harvested Species For a comprehensive outline of the taxa to be harvested, please refer to Attachment A. The focus of the harvest will be on live adult queen ants that are recently mated.

1.5 Species Protection Status Ants fall under the category of non-listed invertebrates and, consequently, enjoy no protected status in Queensland. Federal legislation only extends protection to these species concerning their export, a requirement this application seeks to fulfill. The harvesting process will not affect any species listed under the EPBC Act as threatened (excluding the conservation dependent category) or under Queensland legislation as endangered, vulnerable, or least concern.

2. General Goals/Aims The applicant has recently initiated the trade of queen ants within Queensland, initially as a personal hobby but has since garnered substantial international interest in these ant species. Strategic partnerships have been established with manufacturers and suppliers of various hobbyist ant nesting equipment in Europe. The aim is to further cultivate these commercial relationships by ethically exporting queen ants harvested by Antastic.

3. Harvest Details

3.1 Harvesting Locations Harvesting will primarily occur in the following areas:

- [redacted] Moy Pocket, Queensland 4574 (6.5 Acres) – Attached PERMISSION letter.
- [redacted] – [redacted] Boodua, Queensland 4401 (500 Acres) – Attached PERMISSION letter.
- Non-protected public lands, including footpaths, roads, and parks in Queensland

3.2 Land Ownership The applicant has obtained permission from the specified landowners mentioned above. All other collection sites are either non-protected public spaces or privately owned by stakeholders.

3.3 Harvest Quantity Please refer to Attachment A for an overview of the expected annual quota for each harvest area. This quota will be strictly adhered to, though the actual harvest numbers may fluctuate based on demand and availability of suitable queen ants. The applicant will monitor actual harvest numbers to ensure ongoing sustainability, considering the unpredictability of nuptial flight times and locations.

3.4 Harvesting Methods and Equipment Harvests will only be undertaken during nuptial flights. All ants will be manually harvested by the applicant and trained associates, ensuring a professional and ethical approach. Only species outlined in Attachment A will be collected. Queen ants will either be visually located and carefully collected or attracted to a light source during the night and selectively collected. These methods will have no impact on undesired species.

3.5 Timing and Duration of Harvesting Period Queen ants can emerge for nuptial flights throughout the year, with a concentration during the warmer months (September to April).

4. Impact of Harvest on Taxa and Ecosystem The harvesting will occur in a limited portion of accessible properties. Harvesting will only take place in areas that are already cleared and easily accessible via established tracks or clearings. The surrounding ecosystem will remain undisturbed, especially in areas with significant undergrowth or ground cover, which is challenging to harvest in. This approach ensures no disturbance to the ecosystem and minimal impact on any species, listed or not listed in Attachment A.

The harvest quotas outlined in Attachment A are minimal in comparison to the estimated number of queen ants emerging for nuptial flights, thus posing little to no threat to the sustainability of each species. Antastic's goal is to raise awareness about ants and ant keeping, potentially preventing the unnecessary removal of natural ant colonies treated as pests. Established colonies/nests on the property will be protected to ensure long-term sustainability, aligning with Antastic's commitment to preserving ant colonies for the overall well-being of the natural ecosystem and trading stock.

5. Monitoring and Assessment

5.1 Resource Assessment The applicant closely monitors the properties and has not observed significant population declines since beginning the ant-related activities. Several new ant colonies have recently been discovered and will be safeguarded.

The applicant rotates harvest activities around specific identified and defined quadrants on each property; four on the Moy Pocket property each with an area of approximately 50m x 50m - and six on the Boodua property each with an area of approximately 100m x 100m, and at a more detailed level, using an approximate sub-grid pattern in ten metre intervals.

However, harvesting is yet to commence on the Boodua property.

With reference to both properties, it is planned that each quadrant will be harvested no more often than three times per year. Any nests located in each specified quadrant will be monitored for changes in terms of size and activity and any changes will be logged. Any new nests and any new species located in each quadrant will also be logged, and to ensure the nest is allowed to thrive in its infancy, a date for the first potential harvest assessment will be noted to be no earlier than twelve months after the new nest is first identified. To date only two harvests have been undertaken on the Moy Pocket property on the first two quadrants identified in the six months leading up to the date on this application.

The size of the combined quadrant areas identified for harvesting effectively leaves over 90% of the Moy Pocket property completely untouched and over 95% of the Boodua property completely untouched.

Logs are kept manually in a separate notepad dedicated for each property noting; date, time, quadrant, nest location, and any significant changes in weather patterns since the previous harvest. An assessment of the health of each colony is made by identifying any fluctuations in the following variables: approximate size, worker numbers and activity. In an effort to increase accuracy through continuity, the same Staff are used wherever possible in repeat assessments.

To date the following genera and respective quantities of adult queens have been harvested from the Moy Pocket property:

- Iridomyrmex x 275
- Pheidole x 75
- Camponotus x 120
- Myrmecia x 75
- Rhytidoponera x 175
- Melophorus x 150
- Polyrhachis x 200

On both of these private properties, current population estimates of the various genera are difficult to assess. However, particular care will be taken to note any relative noticeable changes over time as an important metric of assessment. It is significant to note that many nests have been identified across both properties, and given the proportionately small percentage of the properties that have been earmarked for harvesting, we believe the impact of harvesting the quantities we have set out in Attachment A will have little to no effective impact on the ant populations.

On all non-protected public lands, Antastic's environmental sustainability procedures are, by virtue of circumstance, different from those undertaken on our private holdings. All harvesting is only undertaken during nuptial flights. In every instance, the process and the parameters used by Antastic are simple and consistent; two staff undertake the collection and the quantities of queens harvested are limited in number to either 50 queens, or whatever quantity that can be harvested within a one-hour time block. This way, if the

flight is in large numbers, the Staff may collect 50 queens within 20 minutes and then stop as they have reached the pre-defined quota. However, if the flight is small, they may only collect ten queens in one hour before stopping the harvest. Essentially this applies a relatively sound solution to ensure that the queens collected – as a percentage of the relative size of the flight – is consistently reasonably proportional, and as such offers a simple layer of surety against over-harvesting.

Antastic is a business, and as a business, we are very cognisant of developing and implementing simple, workable systems to ensure the environmental sustainability that underpins the long-term success of our business model.

5.2 Independent Supervision At present, there are no plans for independent monitoring or state/territory oversight. The applicant will monitor queen ant abundance during harvest and adjust or suspend harvesting quotas if significant declines are noted in any species within an area.

With regards to our two private land holdings, given the proportionally relatively small physical harvesting land allocations defined (10% and 5%) and expected quotas, when measured against the total size of the properties, overall decreases are unlikely. However, Antastic has in place a procedure to reallocate defined harvesting grid patterns to other areas on the properties in response to any decreases noted that indicate a reduction in the number of queens collected that are 20% or more, comparatively speaking, in year-to-year harvesting logs. If required for implementation, this procedure will ensure every opportunity is given for these areas to rejuvenate.

With regards to harvesting collections undertaken on non-protected public lands the same principles are applied. Antastic has a procedure in place whereby in each location, any reduction in numbers of queens collected within the allotted one-hour timeframe, in comparison to previously logged harvesting data that is noted to be 20% or more, results in the triggering of a purely monitoring strategy. In these instances, the two Staff allocated to a nuptial flight spend the allotted one-hour period identifying and counting queens and logging their numbers – not harvesting them. Once numbers noted in flights have returned to pervious levels then the strict harvesting parameters are then reintroduced.

5.3 Monitoring Methods All specimens will be collected by hand, with the applicant meticulously recording all harvested queens. The records will include collector details, collection area, date and time of collection, species, and numbers collected. These records will facilitate compliance with legal sources for export and allow the applicant to monitor changes in abundance and ensure compliance with collection criteria and harvest quotas. Any general changes noted, possibly due to climate or weather variations, will be recorded and considered when adjusting collection numbers.

5.4 Biological and Environmental Monitoring Any known established ant nests/colonies in the catchment areas will be closely monitored and protected. This proactive approach ensures the sustainability of the ant species to be collected. The applicant and their trained associates will only harvest in accessible areas, thus safeguarding bush areas and ecosystems.

6. Management Strategies Considering the relatively small harvest quotas, it is unlikely that collections will cause significant population changes. Population fluctuations may occur due to factors such as weather conditions and seasonal variations. If a decline in any harvested species within a particular area is detected for any reason, collection practices will be adjusted to maintain long-term sustainability.

7. Compliance All ants will be harvested by hand, catalogued, and individually housed. This allows for accurate identification before entering the trade. Identification methods include the applicant's general and specific knowledge, along with online resources like www.antweb.com. If identification cannot be achieved through these methods, specimens will not be exported until positive identification is confirmed. Only ants collected under the authority of the WTO will be eligible for export.

8. Reports Mandatory periodic reports to the Department, as specified in the operation approval declaration, will be submitted by the applicant. These reports will include records of all transactions between the applicant and approved suppliers.

9. Background Information Ants have been a part of the Earth's ecosystems for millions of years, with their evolutionary roots traced back to wasp-like ancestors. They contribute significantly to terrestrial animal biomass, comprising 15-20% of ecosystems globally. Ants, part of the Formicidae family within the Hymenoptera order, exhibit unique behaviour that makes ant keeping a popular and rewarding hobby.

Ants undergo various life stages, beginning as eggs and progressing to larvae, pupae, and specialized forms within the ant society. Worker ants handle most colony duties, while female alates become young virgin queens that establish their colonies after mating during a nuptial flight. Male ants, tasked solely with mating during this flight, perish afterward.

Nuptial flights involve hundreds of female alates mating in the air before dropping to the ground to establish new colonies. The applicant and stakeholders will search for these mated queens during this period. Once mated, a queen ant can continue laying fertilized eggs for up to 30 years.

The hobby of ant keeping dates back to 1956 and continues to grow. Australia is home to unique and highly sought-after native ant species, generating substantial international demand. This application aims to promote awareness and interest in ant keeping by providing an ethical, sustainable, and legal means for international enthusiasts to keep and study Australian native ants.

General References:

- Australian Ants – Their Biology and Identification (CSIRO Publishing)
- Ants Canada - The Ultimate Ant Keeping Handbook
- Amazon – The Ant Keeping Course: An Essentials Guide eBook
- A guide to Camponotus Ants of Australia (McArthur, Archie)
- The Ants of Northern Australia: A Guide to the Monsoonal Fauna (CSIRO Publishing)