

22 February 2024

Ref: 0034

Nimble Estates Pty Ltd
151 Federal Drive
Eureka NSW 2480

Hairy-joint Grass Survey at 1055 Bruxner Highway, Goonellabah (Lot 42 DP868366 and Lot 1 DP957677)

Thank you for the opportunity to complete the Hairy-joint Grass (*Arthraxon hispidus*) survey at 1055 Bruxner Highway, Goonellabah (Lot 42 DP868366 and Lot 1 DP957677) on behalf of Nimble Estates Pty Ltd.

We understand the work will inform a Planning Proposal Application to rezone this property from Primary Production (RU1) to a mixed-use development through amendment of the Lismore *Local Environment Plan 2012*. The zoning amendments are proposed to facilitate a future residential community, consisting of multiple freehold land parcels and associated road access.

Background

In 2016, a random meander technique flora survey was completed by Bushfiresafe (Aust) Pty Ltd as part of another project involving Lot 42 DP868366 and Lot 1 DP957677. They did not detect any Hairy-joint Grass (HJG) during the site survey, though the extent of their meander is not fully known and the survey was undertaken early in the HJG season (October).

In 2022, Bower Ecology was commissioned to complete an Ecological Assessment Report (EAR) for the site, and this was completed in November 2022. The EAR identified that, despite the fact no HJG was found during the 2016 survey, HJG may occur on the site, particularly as local population numbers of HJG can fluctuate due to year-to-year climatic influences.

Given the period of time between the 2016 survey and the 2022 EAR, it was identified that there would be a requirement for a targeted survey for HJG as part of any future approvals process, due to the species being listed as threatened under the NSW *Biodiversity Conservation Act 2016* (BC Act) and Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The targeted survey was not completed with the EAR assessment due to timing, as the flora survey period for the report was outside the survey season for HJG (i.e. between September and April each year).

Methods:

HJG surveys were conducted on 15 and 16 February 2024 by two qualified ecologists. An initial survey via parallel transect across the study area was completed to identify areas of suitable microhabitat for Hairy-joint Grass. Microhabitats included any:

- exposed basalt rock extrusions in paddocks that may represent areas of ephemeral or permanent groundwater seepage;
 - other ephemeral groundwater seepages in paddocks – as identified by topography, floristics and/or the presence of surface water (e.g. hillside ‘bogs’ or other small areas where surface expressions of ground water flow or pool); or
 - creek banks, and drainage lines.
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A targeted HJG survey was then conducted across areas of suitable habitat utilising transects widths of approximately 10m wide, in accordance with the NSW threatened flora guidelines. Attachment A shows the tracks of the surveys and provides an indication of the terrain of the site.

Where HJG was observed, a survey point was taken for each 2m x 2m area where the plant existed. In each area, the number of individual plants was also recorded.

Findings

Patches or clumps of HJG were found at 26 sites (including two sites just outside the property footprint) across the survey area (see Attachment B). HJG was only found in areas immediately adjacent to Tucki Tucki Creek, which runs east to west across the centre of the site.

Approximately 1,735 individual plants were identified across the total 26 micro-sites, with patches or clumps found with as many as 200 individual plants. HJG was found on the creek bank, in moist or damp soil, and among ferns, sedges and other grasses that are adapted to wetter environments (e.g. *Leersia hexandra*, *Persicaria hydropiper*, *Paspalum urvillei*, amongst others).

Photographs of the species and the associated habitat is provided in Attachment C.

Conclusion

The targeted survey found HJG in areas consistent with what would be considered suitable habitat for the species. Based on the search for microhabitat that was undertaken, it is considered unlikely that HJG would exist beyond the suitable habitat of the creek (and 'boggy' areas immediately adjacent).

The project currently proposes to largely avoid development in these areas, rehabilitating them as riparian corridors (greenspace) – see the illustrative concept plan in Attachment D. Further, the HJG is located in an area that is not only being protected and ecologically enhanced, but is also proposed to be transferred to Lismore City Council as Public Recreation (in public ownership) as per the LCC Planning Proposal zoning map extracted in Appendix E.

Further, stormwater design/management (hydraulics and water quality), and greenspace buffers can be confirmed in future stages of the project to further avoid and mitigate impacts.

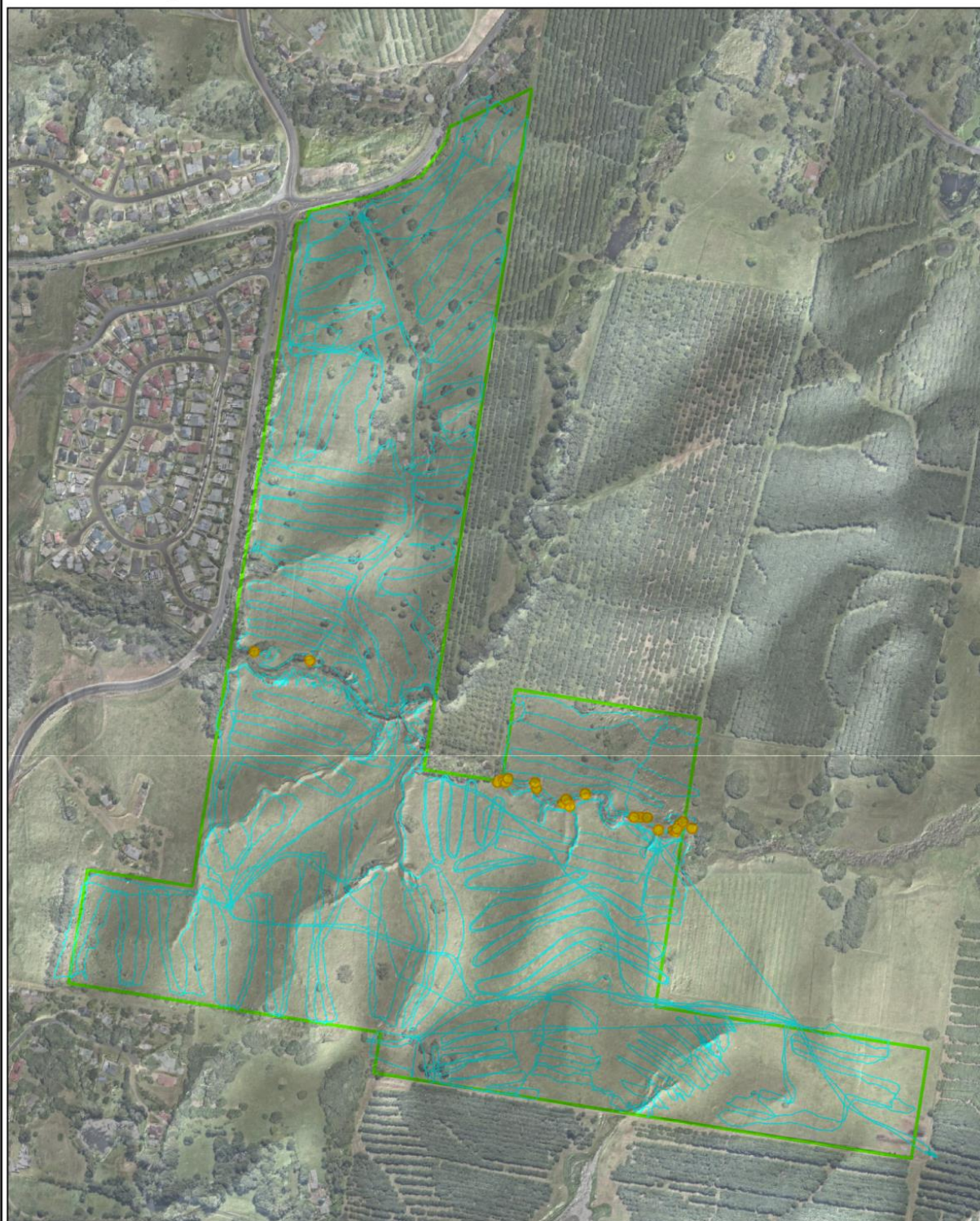
Therefore, it is considered that impacts to this species can be appropriately avoided and mitigated. With appropriate measures, it is feasible that the species can persist in this location after development occurs.

Regards,



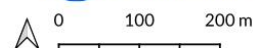
Steve Jarman
Principal Ecologist

HJG Survey Tracks and Sites



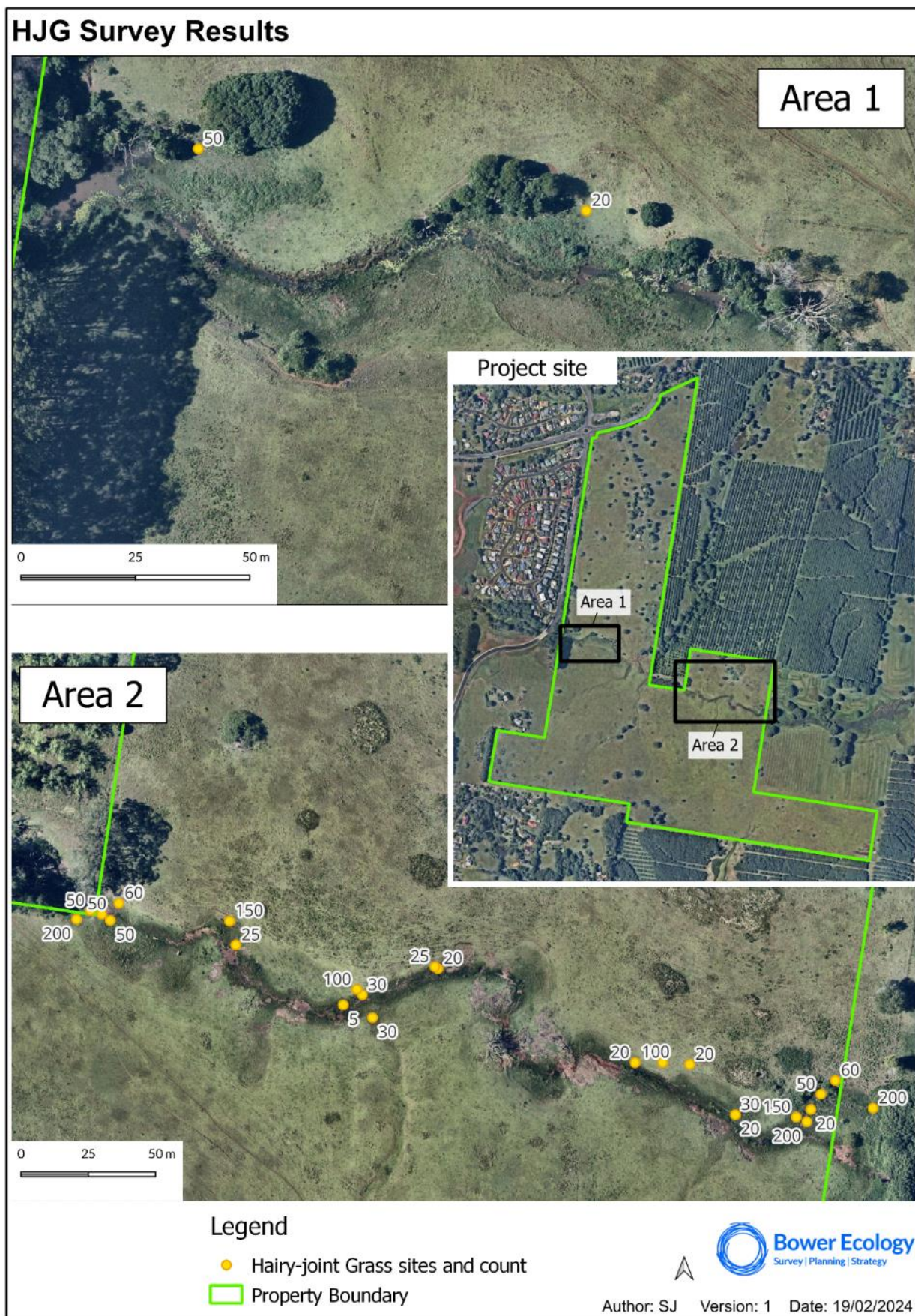
Legend

- Property Boundary
- HJG Sites
- Survey tracks



Author: SJ Version: 1 Date: 21/02/2024

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Attachment C – Photographs of HJG taken on site, and the associated habitat



Attachment D: Illustrative Concept Plan (c/o Urbis)



OLIVER AVE, LISMORE GOONELLABAH
ILLUSTRATIVE CONCEPT PLAN

DISCLAIMER:
This plan is conceptual and is for discussion purposes only and is subject to further detail study, Council approval, engineering input, and survey. Cadastral boundaries, areas and dimensions are approximate only. Written figured dimensions shall take preference to scaled dimensions.

DATE: 26 SEP 2022
JOB NO: P0040564
1:7,500 (A1)
0 20 40 60 80 100 120 140 160 180 200

Figure 3: Proposed LEP zoning

