

APPENDIX F ECOLOGICAL ASSESSMENT



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Dear Matt

***Grevillea parviflora* subsp. *parviflora* translocation, Bennetts Green**

This letter relates to the management of *Grevillea parviflora* subsp. *parviflora* at Lot 4b South Street Windale / Bennetts Green. *Grevillea parviflora* subsp. *parviflora* is listed as vulnerable under the NSW *Threatened Species Conservation Act 1995* and the Federal *Environmental Protection and Biodiversity Conservation Act 1999*. The originally proposed construction of the Masters development (comprising a building products warehouse, restaurant, eight bulky goods retail outlets, car parking, and associated infrastructure) as per designed would have required removal of numerous individuals and habitat for a population of *Grevillea parviflora* subsp. *parviflora* at the site.

Impact assessment of threatened species (including *Grevillea parviflora* subsp. *parviflora*) across the site was carried out as part of the Species Impact Statement (SIS) for the original proposed Masters development (ELA, 2012). The SIS determined that a significant impact would occur to the sub-population of *Grevillea parviflora* subsp. *parviflora* should the development proceed. As a result, several Conditions of Consent (CoC) as determined by Lake Macquarie City Council (LMCC), were placed on the project. Two CoC in particular related to *Grevillea parviflora* subsp. *parviflora*:

1. CoC to establish a biodiversity offset site at Ryhope to be managed *in perpetuity* for conservation purposes. The Ryhope site contains a large viable population of *Grevillea parviflora* subsp. *parviflora* and is managed as part of a Vegetation Management Plan (VMP) and a separate, but over-arching Plan of Management (PoM).

This CoC has been carried out and a VMP and PoM have been produced and are instrumental in the implementation of the management of the area.

2. CoC 28 requires the proponent undertake the translocation of 10 individuals of *Grevillea parviflora* subsp. *parviflora* from the development footprint into a suitable area within the development lot, but outside the development area. The original proponent (Hydrox) has undertaken the initial translocation program under the direction of ELA. This included: the site selection process; the actual translocation; maintenance and monitoring for 12 months; and production of an annual monitoring report.

The annual monitoring has been carried out for the originally established translocation area and submitted to Hydrox / Masters (ELA, 2017). A summary of the results are as follows:

A translocation of 11 individuals has been successfully accomplished. As part of this process, monitoring and weed management has been undertaken to ensure a high survival success rate.

The four monitoring events showed that overall the translocation process was very successful at a 91% survival rate, (10 of the 11 individuals) with only one individual (GP6) not surviving the translocation. All plant heights / stem lengths have increased by at least 25% to 50% with branching and new growth. Total *Grevillea parviflora* subsp. *parviflora* stem counts in the translocation area have increased from 11 to 14 stems over the first 12 months, noting that this includes the loss of one stem (GP6).

The timing of the translocation and the methods used were likely instrumental in the high survival rate and the improved health and vigour of the individuals. The regular weed management undertaken across nine events from December 2015 through to November of 2016 is likely to have contributed to the successful establishment of the remaining 10 individuals.

As part of the new project design for Bunnings (**Figure 1**) the area previously identified and currently dedicated for the establishment of the translocated *Grevillea parviflora* subsp. *parviflora* is in part compromised due to design modifications. **Figure 2** provides an enlarged section of the proposed translocation areas. **Figure 3** indicates that the majority of the previously translocated individuals are not located within the newly proposed translocation areas.

Although, no further impact assessment is required, (as this was undertaken as part of the SIS development approval process), there is still a requirement for the proponent (now Bunnings) (through CoC 28) that 10 individuals of *Grevillea parviflora* subsp. *parviflora* translocated into a dedicated area / areas are within the site boundary and managed into the future. Based on the current design, up to nine additional individuals will need to be translocated into the newly proposed translocation areas presented in **Figure 2**. Note that there are two translocation areas now proposed to accommodate the 10 individuals.

It would be preferable to retain the translocated individuals in their current location, although based on the new design this is unlikely to be possible. As such it is suggested that these individuals be translocated again to the new areas or other suitable individuals from other locations within the development footprint be translocated.

Upon any future translocation of *Grevillea parviflora* subsp. *parviflora*, which should be carried out in the near future and when conditions are favourable and before any construction works commence, the following recommendations to ensure the long-term survival (which are also part of CoC) are as follows:

- Translocation methods are to be similar to those successfully implemented
- A 12 month initial maintenance and monitoring programme to be carried out
- Installation of protective fencing (post and rail) and interpretive signage as per the CoC
- Continued ongoing maintenance and weed management by bushland regenerators on a regular basis (estimate three or four visits annually)
- Translocation areas to be retained at current land levels to ensure linkage to adjacent council managed native vegetation is retained
- Continued monitoring as per the CoC

Please contact me if any additional information is required.

Yours sincerely,

Gordon Patrick

Senior Botanist / Ecologist

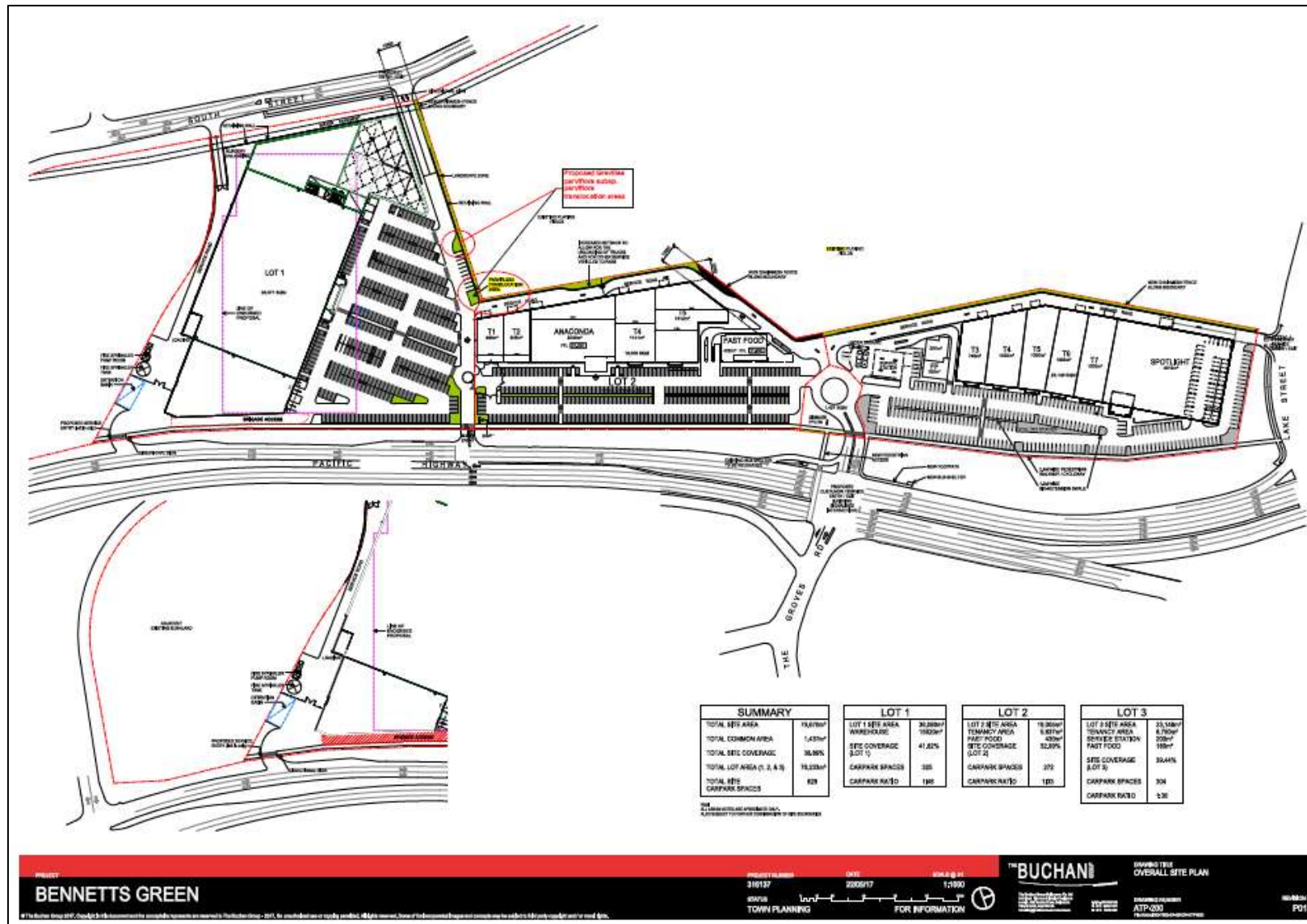


Figure 1: Overall Bunnings Bennetts Green design – with *Grevillea parviflora* subsp. *parviflora* translocation areas indicated

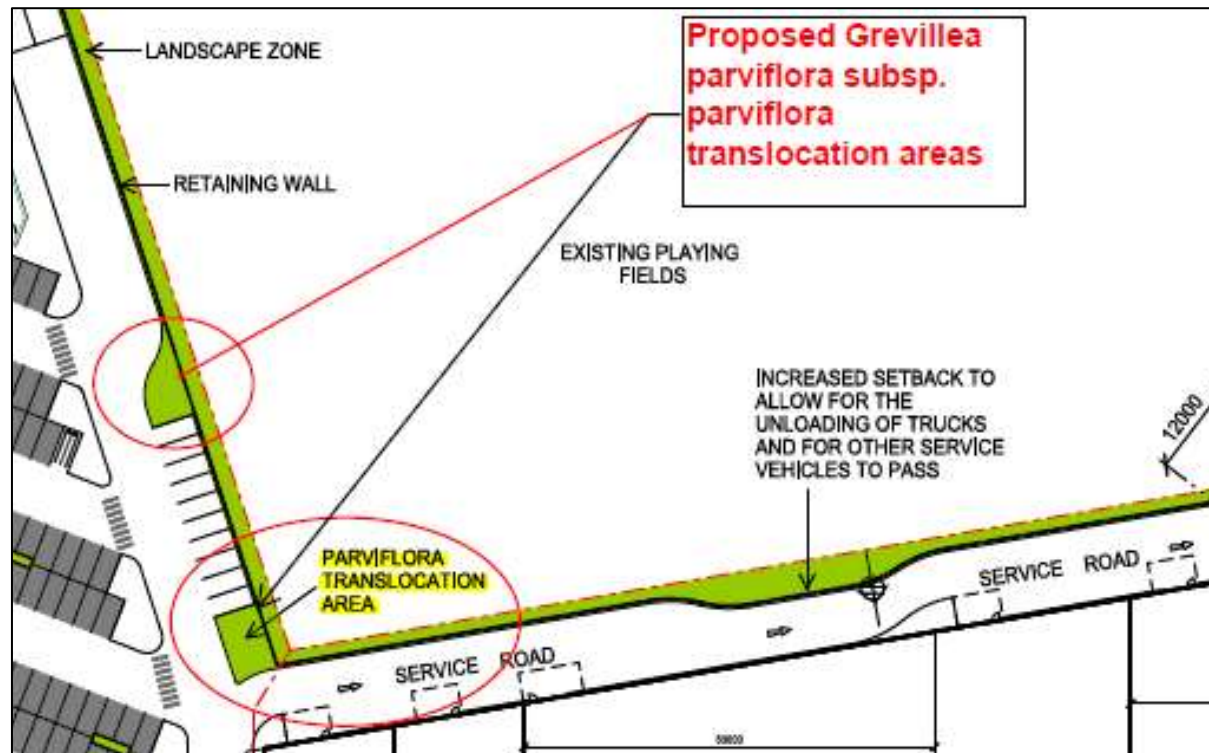


Figure 2: Augmented section where *Grevillea parviflora* subsp. *parviflora* is proposed to be translocated



Figure 3: *Grevillea parviflora* subsp. *parviflora* original translocation area