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Level 15, 207 Kent Street
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Supplied by email

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Re: Biodiversity Assessment, 48 Broadhead Road (Lot 40 // DP756894), Spring Flats, NSW

Dear Tom

This letter has been prepared to outline the results of a biodiversity survey carried out at 48 Broadhead Road (Lot 40 // DP756894), Spring Flats, NSW ('the site'; **Figure 1**). The purpose of this survey was to identify the biodiversity values of the subject land to inform the proposed school development at the site.

Site description

This site covers a total area of approximately 12 ha comprising a single lot (Lot 40 // DP756894). The site is regular in shape and is bound by Bruce Road to the south, Broadhead Road to the west and cleared grazing land to the north and east (**Figure 1**).

The site currently supports large areas of cleared land with a small area of native woodland vegetation in the north-west of the site. The site is relatively flat and generally slopes to the north-east. One mapped drainage line, Sawpit Gully, a 4th order drainage line, is present within the site and flows across the north-western part of the site (**Figure 1**).

The proposed development

The proposed school development is to initially accommodate 600 secondary school students with an ultimate comprehensive relocation to the new site as a K-12 school (accommodating a total of 1,230 students). The 630 K-6 students will join the secondary school in the second stage of development.

The masterplan for the proposed school development is concentrated in the southern and north-eastern parts of the site and has been situated to avoid any impacts to the woodland vegetation in the north-west of the site and the riparian corridor.

Riparian corridors

As discussed, the site contains a 4th order drainage line, Sawpit Gully. Sawpit Gully enters the site via a culvert under Broadhead Rd on the western boundary of the site and flows in a north-easterly direction into a small dam (**Plate 1**). Overflows from this dam continue to flow north-east towards and beyond the northern boundary of the site. The reach of Sawpit Gully within the site follows a relatively straight flow path which has been defined by the creation of earth bunds on either side of the drainage line (**Plate 1**). It is likely that the reach of Sawpit Gully within the site was historically a poorly defined drainage line with little or no top of bank features and consisted of a broad area which was wet/damp following rainfall events. The installation of earth bunds to contain and define Sawpit Gully is likely to have been undertaken to improve the suitability of the site for grazing and agricultural land uses.

In accordance with the NSW *Water Management Act 2000*, a controlled activity approval must be obtained from the Natural Resources Access Regulator (NRAR) before commencing development on waterfront land, which includes the bed and bank of any river, lake or estuary and all land within 40 m of the highest bank of the river, lake or estuary. The *Guidelines for controlled activities on waterfront land* (NSW DPI 2018) outlines the requirement to establish a 40 m wide Vegetated Riparian Zone (VRZ) extending perpendicular from the top of bank, on either side of Sawpit Gully.

Native vegetation

Native vegetation across the site has been heavily impacted by historic clearing and a long history of grazing. Native woodland within the site was limited to an area of approximately 0.5 ha in the north-west of the site (**Figure 3**). The remainder of the site supported grasslands dominated by exotic grass species including *Paspalum dilatatum** (Paspalum), *Cenchrus clandestinus** (Kikuyu), *Carthamus lanatus** (Saffron Thistle) and *Centaurea solstitialis** (St Barnabys Thistle) with relatively few native species present with low foliage cover and abundance. Along the western and southern boundaries of the site, the exotic grasslands included planted windrows with non-local native eucalyptus species including *Eucalyptus nicholii* (Narrow-leaved Black Peppermint).

The native woodland within the site consisted of mature *Eucalyptus albens* x *moluccana* (White Box x Coastal Grey Box) over a predominately exotic understorey. The woodland vegetation within the site was identified as being broadly consistent with Plant Community Type 274 ('White Box - Rough-barked Apple alluvial woodland of the NSW central western slopes including in the Mudgee region') which forms part of the 'White Box Yellow Box Blakely's Red Gum Woodland' Endangered Ecological Community listed under the NSW *Biodiversity Conservation Act 2016* (BC Act). This vegetation does **not** form part of the critically endangered ecological community listed under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as it does not meet the minimum condition thresholds for the community as listed under the EPBC Act.

The current proposed development does not include any impacts to woodland vegetation within the site, with impacts limited to areas of exotic grassland.



Threatened species

As part of the biodiversity surveys, targeted surveys were undertaken for threatened flora. These surveys involved traverses of the entire site and in particular targeted *Leucochrysum albicans* var. *tricolor* (Hoary Sunray), an Endangered species listed under the EPBC Act, which is known to occur to the west of the site, along Bruce Rd. *Leucochrysum albicans* var. *tricolor* was confirmed to be flowering during the survey period off the site (**Plate 2**). No threatened flora species were observed during surveys on the site and, based upon the habitat present and the surveys conducted, it is unlikely that any threatened flora species are present within the site.

Based upon the IBRA subregion in which the site occurs (Inland Slopes) and the Plant Community Type (PCT) present within the site (PCT 274), a number of threatened fauna have been identified as having potential to occur within the site (OEH 2019). However, none of these species are likely to occur within the exotic grasslands within the site due to the degraded nature of this area. The exotic grasslands within the site do not include the micro-habitats and ecological features utilised by these threatened fauna species including hollow-bearing trees, fallen logs, rocky outcrops or canopy vegetation. No threatened fauna species are considered likely to utilise the exotic grassland within the site which would be impacted by the proposed school.

Conclusions

The site has limited biodiversity values due to historic clearing and ongoing disturbances including grazing. The remaining biodiversity values of the site are predominately in association with areas of remnant woodland vegetation and the riparian corridor. Avoiding disturbance to these areas would largely avoid impacts to the biodiversity values of the site.

It is recommended that an application is made for a waiver under section 7.9 of the BC Act. This application for a waiver would need to include a Test of Significance under section 7.3 of the BC Act and would need to consider all aspects required under sections 1.5 of the BC Act and clauses 1.4 and 6.1 of the NSW *Biodiversity Conservation Regulation 2017*.

If you have any queries regarding any of this information, please do not hesitate to contact me.

Yours sincerely,



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References

NSW Department of Primary Industries (2018). *Guidelines for controlled activities on waterfront land*. NSW Department of Industry.

NSW Office of Environment and Heritage (2019). *BioNet*. Online database, accessed 24 January 2019.

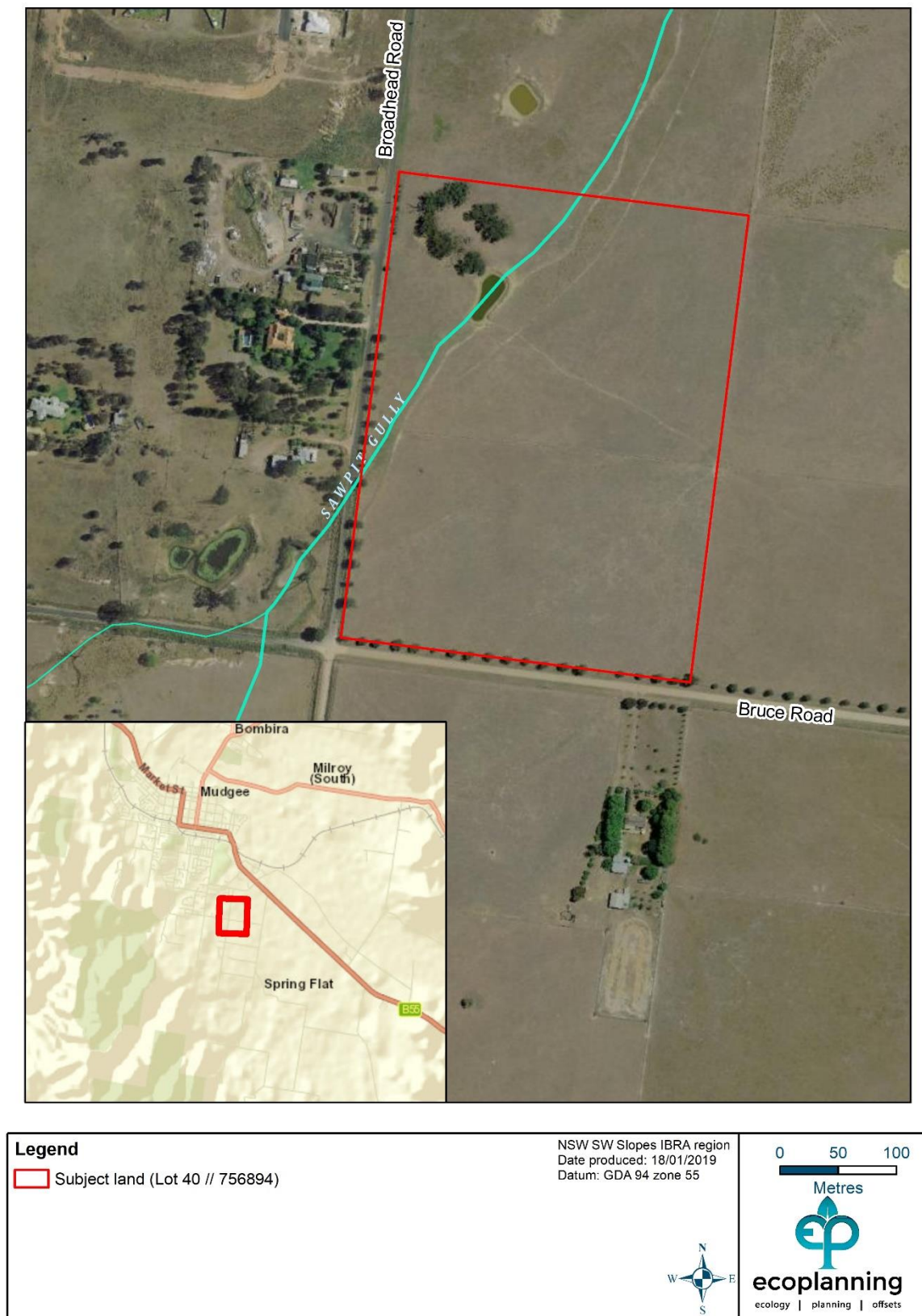


Figure 1: Site location



Plate 2: Culvert under Broadhead Rd (upper) and earth bunds defining Sawpit Gully (lower)



Plate 1: *Leucochrysum albicans* var. *tricolor* (Hoary Sunray) flowering outside the site – Photo taken 10 January 2019



Figure 2: Riparian buffers within the site



Figure 3: Vegetation communities within the site