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Environmental
Geotechnical
Asbestos
Services

13 May 2024

Stephen and Daniel Mansley
c/- iPlan Projects
91 Heifer Station Lane
Orange NSW 2800

Ref: L16412ff1

Dear Stephen and Daniel,

Preliminary flora and fauna assessment, 109 Woodward Street, Parkes NSW

1. Background

A planning proposal is being prepared for 109 Woodward Street, Parkes NSW. The planning proposal is expected to nominate a residential development for the site and preliminary conceptual plans include the creation of twenty-four residential lots. An existing dwelling and associated infrastructure are located in the northwestern section of the site. The site has a current and historical land-use of cropping and livestock grazing.

A preliminary flora and fauna assessment of the proposed development area is required to determine vegetation characteristics and requirements for a biodiversity assessment as part of the development proposal.

2. Scope

Envirowest Consulting Pty Ltd was commissioned by Stephen and Daniel Mansley to undertake a preliminary flora and fauna assessment of 109 Woodward Street, Parkes NSW. The assessment will assess vegetation characteristics, faunal habitat and fauna species present on-site.

3. Site description

The subject site is 109 Woodward Street, Parkes NSW and has an area of approximately 2.4 hectares located adjacent to an existing developing residential area (Figure 1). Land in all directions of the subject site has been developed for residential to rural-residential land-use with agricultural areas, and land to the west remains agricultural land with residential land beyond.

4. Assessment method

An overall description of the subject site was completed by conducting a general field survey. The aim of the survey was to assess the subject site and study area which included a vegetation assessment, identification of major land-uses, species identification and evaluation of potential habitat for fauna.

A groundcover assessment was undertaken in accordance with the Local Land Services *Assessing Native Groundcover* (n.d.) method. The survey was undertaken on 13 December 2023. The conditions on the day were fine and warm. Representative photographs of the site are presented in Figure 5.

The field data for flora species was recorded on a presence or absence basis.

The proposed development was assessed against the Biodiversity Offset Scheme thresholds in accordance with the *Biodiversity Conservation Act 2016* to determine if the Biodiversity Assessment Method applied.

5. Proposed development

The conceptual development plan proposes subdivision of the subject site into twenty-four residential lots ranging in size from 850m^2 to 980m^2 and include paved areas and road verges (Figure 3). The proposed lots are expected to be connected to reticulated water and sewerage infrastructure and be accessible from sealed access roads. The existing dwelling located in the northwestern section of the site may be retained subject to structural integrity assessment. The proposed development is expected to remove all existing groundcover vegetation at the location of the twenty-four lots. Preliminary conceptual plans indicate that some trees on the subject site will be retained (Figure 4).

6. Results

6.1 Database searches

The site is not mapped on the Biodiversity Values map under Part 7 of the *Biodiversity Conservation Act 2016*.

6.2 Flora

The study area consists of mixed grasslands.

The subject site has an agricultural land-use history of as a storage site for disused vehicles in the northwestern section of the site (over an area of approximately 300m^2), cropping and livestock grazing. The site is currently a rural-residential holding with intermittent cropping and grazing. Vegetation across the subject site is managed by slashing and has been modified by the agricultural land-use.

The subject site consists primarily of grasslands divided equally between introduced broadleaved weeds and native grasses and herbs. Dominant introduced species included *Solanum elaeagnifolium* (silverleaf nightshade), *Alternanthera pungens* (khaki weed), *Dichondra argentea* (kidney weed), *Paspalum dilatatum* (paspalum grass) and *Urochloa panicoides* (African liverseed grass)..

Dominant native species included *Walenbergia communis* (tufted bluebell), *Chloris truncata* (windmill grass), *Cynodon dactylon* (couch grass), *Dichanthium sericeum* (silky bluegrass) and *Calotis lappulacea* (yellow burr daisy). The calculated area of native grass and herb groundcover species was estimated to be approximately 54% of total groundcover vegetation on the subject site representing an area of approximately 0.85ha.

Ornamental vegetation surrounding the existing dwelling located in the northwestern section of the subject site was predominantly limited to hardy tree species and fruit trees. Introduced species included *Pinus radiata* (radiata pine), *Cedrus deodara* (deodar cedar), *Schinus molle* (peppercorn tree) and *Platanus acerifolia* (London Plane) across the residential yard area. Native tree species identified included *Callitris endlicheri* (black cypress pine), *Callitris columellaris* (white cypress pine) and *Brachychiton populneum* (kurrajong) amongst ornamental vegetation surrounding the existing dwelling on-site and as isolated vegetation in paddock areas. A row of planted *Eucalyptus.sp* was identified along the western boundary adjacent the existing driveway.

No threatened or endangered species were observed within the grasslands of the subject site. Flora recorded during the field surveys are presented in Table 1.

Table 1. Flora species recorded for each vegetation type

Scientific name	Common name	Species origin
Trees		
Brachychiton populneum	Kurrajong	Native
Callitris columellaris	White cypress pine	Native
Callitris endlicheri	Black cypress pine	Native
Cedrus deodara	Himalayan cedar	Introduced
Pinus radiata	Radiata pine	Introduced
Platanus acerifolia	London plane tree	Introduced
Prunus domestica	Plum tree	Introduced
Schinus molle	Peppercorn tree	Introduced
Herbs		
Alternanthera pungens	Khaki weed	Introduced
Anagallis arvensis	Scarlett pimpernell	Introduced
Anagallis foemina	Blue pimpernell	Introduced
Brachyscome multifida	Cut leaf daisy	Native
Calotis lappulacea	Yellow burr daisy	Native
Chondrilla juncea	Skeleton weed	Introduced
Cirsium vulgare	Black thistle	Introduced
Convolvulus clementii	Desert bindweed	Native
Convolvulus clementii	Desert bindweed	Native
Conyza bonariensis	Flaxleaf fleabane	Introduced
Dichondra repens	Kidney weed	Native
Echium plantagineum	Paterson's curse	Introduced
Ehrharta calycina	Veldt grass	Introduced
Malva neglecta	Dwarf malloweed	Introduced
Malva parviflora	Common mallow weed	Introduced
Marrubium vulgare	White horehound	Introduced
Osteospermum sp.	African daisy	Introduced
Oxalis corniculata	Creeping woodsorrel	Introduced
Plantago lanceolata	Plantain	Introduced
Sida corrugata	Corrugated sida	Native
Solanum elaeagnifolium	Silverleaf nightshade	Introduced
Sonchus oleraceus	Sow thistle	Introduced
Trifolium arvense	Hare's-foot clover	Introduced
Wahlenbergia capillaris	Tufted bluebel	Native
Xanthium spinosum	Bathurst burr	Introduced
Grasses		
Austrodanthonia sp.	Wallaby grass	Native
Avena sativa	Oat	Introduced
Bromus catharticus	Prairie grass	Introduced
Chloris truncata	Windmill grass	Native
Cynodon dactylon	Couch grass	Native
Dichanthium sericeum	Silky blue grass	Native
Ehrharta calycina	Veldt grass	Introduced
Panicum capillare	Witchgrass	Introduced
Paspalum dilatatum.	Paspalum grass	Introduced
Setaria parviflora	Slender pigeon grass	Introduced
Sporobolus creber	Slender rats tail grass	Native
Urochloa panicoides	African liverseed grass	Introduced

6.3 Fauna

Faunal habitat within the subject site was dominated by mixed grasslands with isolated paddock trees and ornamental vegetation located around the existing dwelling. The trees may be used by fauna as a food source in the form of insects, nesting in branches (birds) and habitat for reptiles.

Logs and dead standing timber may provide habitat for reptiles and foraging habitat for insectivorous birds. No tree hollows were observed on the subject site.

Groundcover vegetation would provide fauna with food (grazing, seeds and insects) and shelter. The historical land-use of livestock grazing is expected to impact on the usage of the grassland by fauna. Livestock grazing increases bare ground cover, reduces native vegetation cover and diversity, increases the risk of weed invasion and reduces foraging habitat and shelter derived from the grasslands for fauna.

Species opportunistically observed such as *Grallina cyanoleuca* and *Trichoglossus moluccanus* are regarded as resilient to the urban and agricultural landscapes. Other species identified including *Struthidea cinerea* may occupy native woodland adjacent to agricultural areas and have been observed grazing along road reserves, orchards and golf courses. Fauna recorded during the field surveys are presented in Table 2.

No threatened or endangered fauna species were observed within the subject site.

Table 2. Fauna species identified in opportunistic observations

Scientific Name	Common Name	Comments
Grallina cyanoleuca	Magpie lark	Sighted
Struthidea cinerea	Apostle bird	Sighted
Trichoglossus moluccanus	Rainbow lorikeet	Sighted

6.6 Impacts from the development

A residential subdivision is proposed for the subject site. The proposed development plans are not finalised, and preliminary conceptual plans include the creation of residential lots, access roads, and installation of underground services. The subject site is dominated by mixed grasslands which will be removed as part of site development works for road construction, installation of underground services and contouring. Figure 4 indicates preliminary conceptual plans for tree removal to enable development works on the subject site. Some native trees are proposed to be retained. The total area of disturbance from the development works across the subject site is approximately 2.5ha. Some areas of native trees outside the subject site along the road verges of Medlyn Street and Lee Street may be removed to enable lot access and removal plans have not been finalised. Final design is expected to minimise tree removal to enable lot access and services.

Areas of native vegetation will require removal. Native vegetation on the subject site includes herbs, grasses, native pine and kurrajong tree species. Native herb and grass species were identified in the paddock areas comprising the majority of the site. Native pine and kurrajong species were identified as isolated paddock trees and ornamental vegetation around the dwelling in the northwestern section of the site. Eucalypts located along the northwest lot boundary are proposed to be retained. The total area of native vegetation removal on the subject site is approximately 0.85ha. Some areas of native eucalypt and cypress trees located along Medlyn Street and Lee Street are expected to be removed to enable lot access and servicing. Removal works have not been finalised and the final design is expected to minimise tree removal to enable development works.

6.7 Biodiversity offsets scheme thresholds

6.7.1 Thresholds

Whether the amount of native vegetation being cleared exceeds a threshold area based on the minimum lot size associated with the property

The minimum lot size permitted for the site is 4,000m^2 (Parkes LEP 2012). The development is permitted to clear up to 0.25ha. Native herb, grass and trees will be removed on the subject site equating to approximately 0.85ha of native vegetation. The area to be cleared on the subject site is greater than the threshold for native vegetation clearing. Additional native vegetation including eucalypt and cypress trees are expected to be removed along Medlyn Street and Lee Street to enable lot access. Plans for tree removal works have not been finalised. The final design is expected to minimise tree removal to enable access and services to lots.

Whether the impacts occur on an area mapped on the Biodiversity Values map published by the Minister for the Environment

The site is not located within land with high biodiversity value as defined by clause 7.3(3) of the Biodiversity Conservation Regulation 2017 from a review of the biodiversity values map.

The test of significance indicates no significant impact
The test of significance was not undertaken on threatened flora, fauna or communities as the native vegetation clearance threshold was exceeded.

7. Conclusion

An assessment of the impacts of the subdivision was undertaken by site inspection and desktop study.

The subject site comprises mixed grassland with introduced pasture grasses and broadleaved weeds and native grasses, herbs and isolated trees. A stand of exotic trees exist as ornamental vegetation in the northwestern section of the site surrounding the existing dwelling. Vegetation has been extensively modified through historical practices associated with pasture improvement and livestock grazing. Current livestock and slashing practices are expected to impact on the usage of the grassland by fauna. Grazing increases bare ground cover, reduces native vegetation cover and diversity, increases the risk of weed invasion and reduces foraging habitat and shelter for fauna derived from the grasslands. Bare areas were observed across the subject site and calculated to comprise approximately 34% of the site. No threatened floral species were identified on the subject site.

Faunal habitat comprised nesting areas at significant trees located around the dwelling. Smaller isolated paddock trees may also provide nesting areas for avifauna. Native grasses and herbs provide shelter and foraging habitat for fauna. Native flowers encourage pollinating insects. Food sources include insects, berries, seeds, flower pollen and grazing fodder. No threatened fauna species were identified on the subject site. No tree hollows were observed in trees located on the subject site.

All groundcover vegetation on the subject site is expected to be removed to enable development works. Some native trees are proposed to be retained and tree removal plans have not been finalised. The final subdivision design is expected to minimise tree removal to enable development works.

The calculated area of native groundcover species was calculated to be approximately 54% of total groundcover vegetation on the subject site, which represents an area of approximately 0.85ha. The development is permitted to clear up to 0.25ha. The area to be cleared is greater than the threshold for native vegetation clearing. The site is not located within land with high biodiversity value as defined by clause 7.3(3) of the Biodiversity Conservation Regulation 2017 from a review of the biodiversity values map. The proposed development will trigger the Biodiversity Offset Scheme Thresholds.

8. Recommendations

The following actions are recommended:

- Assessment of the proposed subdivision plan by an accredited Biodiversity Assessment Method consultant.

9. Limitations

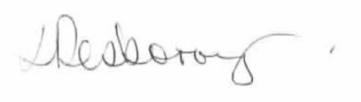
The assessment was preliminary and did not include a detailed trapping or spotlighting program. The information presented is thought to be accurate however Envirowest Consulting Pty Ltd will not be responsible for any errors of omissions or the results of any actions taken on the basis of the information.

Please call if you require additional information.

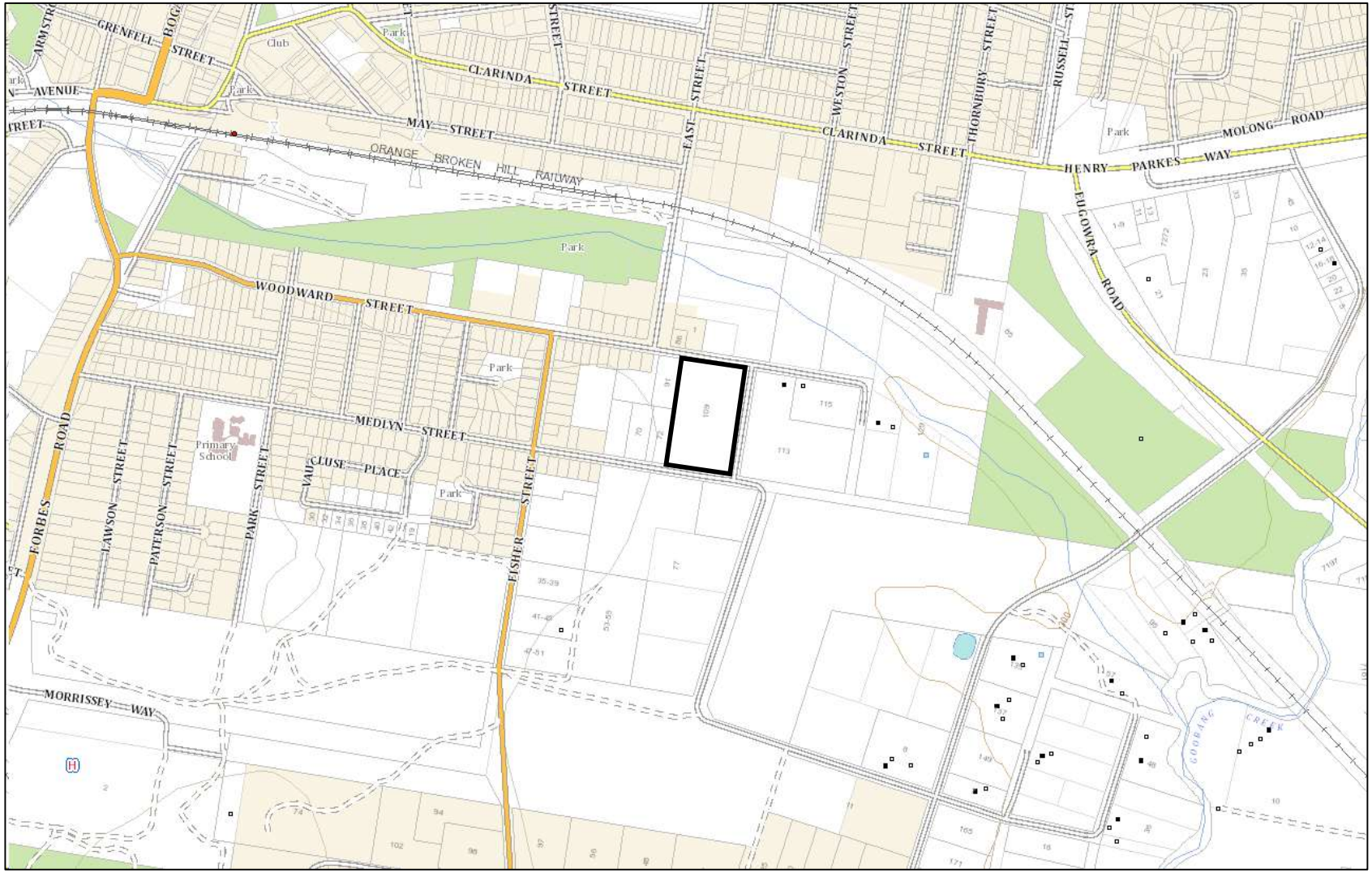
Regards,

Eliza Hurst BSc & BNSc
Environmental Scientist

Checked by:
Leah Desborough CEnvP
Senior Environmental Scientist



Figures



Legend

Lot boundary

Figure 1. Site locality map		
109 Woodward Street, Parkes NSW		
	Envirowest Consulting Pty Ltd	
Job: R16412ff	Drawn by: EH	Date: 05/02/2024

Approximate Scale 1: 1,500

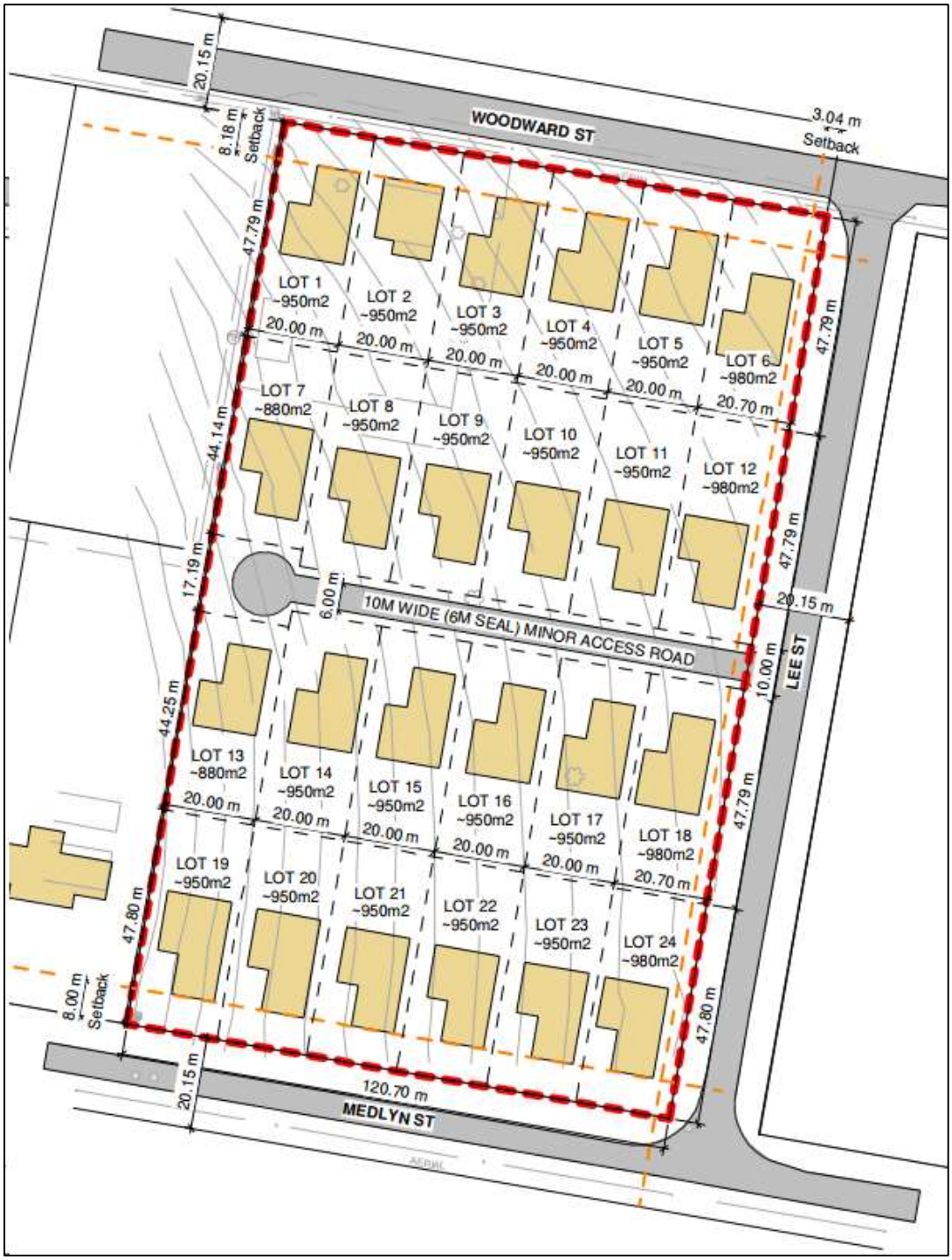
0 15 30 60

Legend

Subject site

Study area

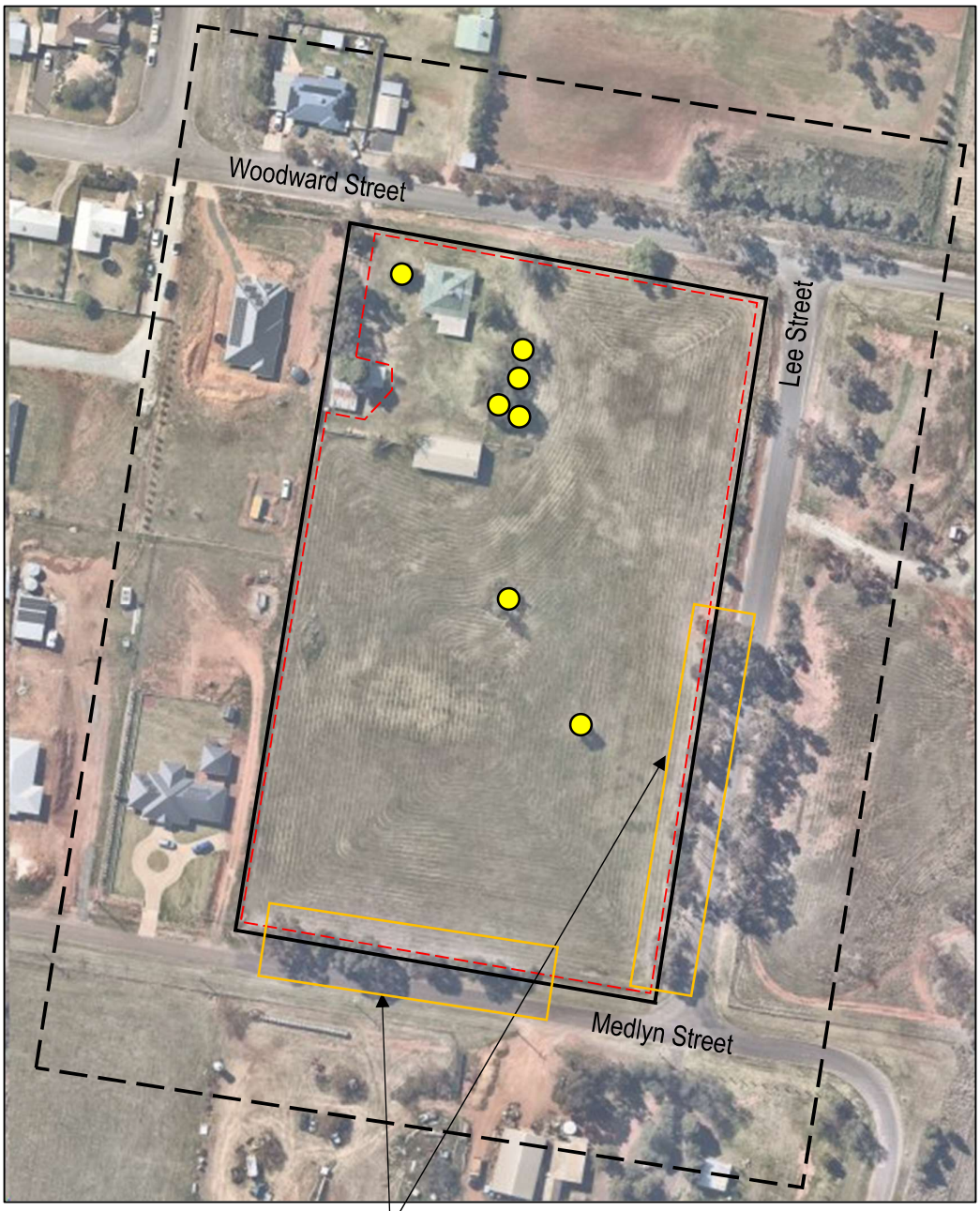
Figure 2. Aerial photograph of the subject site		
109 Woodward Street, Parkes NSW		
	Envirowest Consulting Pty Ltd	
Job: R16412ff	Drawn by: EH	Date: 05/02/2024



Legend

Subject site boundary

Figure 3. Proposed development plan		
109 Woodward Street, Parkes NSW		
	Envirowest Consulting Pty Ltd	
Job: R16412ff	Drawn by: -	Date: 05/02/2024



Disturbance works to native roadside eucalypts and cypress pines have not been finalised. The final development design is expected to minimise tree removal to enable services and access to lots.

Legend

- Subject site
- Study area
- Native grassland to be removed (>50% coverage in feature area)
- Native trees to be removed (singular plants)

Approximate Scale 1: 4,500

0 45 90 180m

Figure 4. Native vegetation to be removed		
109 Woodward Street, Parkes NSW		
	Envirowest Consulting Pty Ltd	
Job: R15156ff	Drawn by: EH	Date: 13/05/2024

Figure 5. Photographs of the subject site