APPENDIX 4

FLORA AND FAUNA ASSESSMENT

CUMBERLAND ECOLOGY

29 May 2014

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FLORA AND FAUNA ASSESSMENT, OLD WALLGROVE ROAD UPGRADE

Dear Chris,

The purpose of this letter is to provide a flora and fauna assessment of the proposed upgrade to a section of Old Wallgrove Road, Eastern Creek.

Our analysis has been based on literature reviews, database analysis and a site inspection carried out in May 2014. This letter contains the following:

- Appendix A - report on the flora and fauna values of the subject site;
- Appendix B – figures;
- Appendix C - site photographs; and
- Appendix D - assessments of significance.

The key findings of our assessment are summarised below:

- A limited number of remnant trees and the margins of remnant Cumberland Plain Woodland patches will be removed for the road upgrade;
- Planted areas and exotic grassland will also be removed;
- The threatened fauna habitats that would be affected by the road works represent poor quality habitat for threatened flora species and occasional foraging habitat for most threatened fauna expected to occur over the subject site from time to time;
- The majority of the woodland patches in the vicinity of the subject site would remain and, provided that control measures were implemented

during construction, the road upgrade is not expected to significantly affect these areas.

Please do not hesitate to contact me if you have questions regarding this assessment.

Yours sincerely

David Robertson

Dr David Robertson
Director
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Appendix A

Old Wallgrove Road Upgrade: Flora and Fauna Assessment

A.1 Introduction

A.1.1 Purpose

Cumberland Ecology has been requested by Mackenzie Group to undertake a flora and fauna assessment of the proposed upgrade to a section of Old Wallgrove Road, Eastern Creek (hereafter referred to as the 'subject site') (see **Figure 1** in **Appendix B**).

The purpose of this letter report is to:

- Describe the vegetation communities within the subject site and map any occurrences of threatened ecological communities (TECs);
- Assess the likelihood of occurrence of threatened species or threatened populations within the subject site; and
- Assess the potential impacts of the proposed upgrade on threatened species, threatened populations and TECs.

Note that threatened species, populations and TECs referred to in this assessment are those listed under the NSW *Threatened Species Act 1995* (TSC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

A.1.2 Background

i. Location

The subject site is located between the intersection with the Erskine Park Link Road at the north, and the intersection with the Oakdale Estate Access Road to the south (near Burley Road), Eastern Creek (see **Figure 1** of **Appendix B**). The subject site forms part of the Oakdale Estate within the Western Sydney Employment Hub that is located within the Fairfield and Penrith Local Government Areas (LGAs). The subject site extends to the north of this area into Blacktown LGA. The subject site is currently surrounding by industrial development, a substation and cleared grasslands. A Sydney Catchment Authority (SCA) pipeline runs east-west through the subject site.

ii. Context

The existing section of Old Wallgrove Road between the recently completed Erskine Park Link Road and the Oakdale Estate, is a rural road comprising a variable width pavement from 7 to 8 metres (m) with flush shoulders and table drains. This section of road is approximately 1600 m in length. The road is unlit and is in a poor condition with numerous pavement failures along the stretch of road (AT&L, 2014).

As part of the Concept Approval for the Oakdale Estate, a section of Old Wallgrove Road was temporarily upgraded to provide additional road width to cater for additional heavy traffic. Since the completion of these roadworks in 2011, the pavement has deteriorated and potholes have

developed (AT&L, 2014). In recognition of the need to rehabilitate Old Wallgrove Road and in consideration of the Goodman Property Services (Goodman) proposal to develop the remainder of the Oakdale Estate (which necessitates consideration of the required road connection), the Road and Maritime Services (RMS) has requested that Old Wallgrove Road be permanently upgraded (AT&L, 2014).

iii. Project Description

In conjunction with a State Significant Development at the Oakdale Estate, Goodman is upgrading Old Wallgrove Road on behalf of the Department of Planning and Environment (DPE) and Blacktown Council. In broad terms the proposed project includes the upgrade and reconstruction of the portion of the road occurring within the subject site, which will ultimately support further development south of the SCA pipeline. This will entail utilisation of the existing road reserve, following the existing road carriageway and upgrading to a four lane two way carriageway with kerb and gutter and a centre painted median.

AT&L are preparing the road design and project managing the delivery of the upgrade on behalf of Goodman. AT&L have been commissioned to develop and design the proposed permanent upgrade solution of Old Wallgrove Road. It is expected detailed design will commence during May 2014 with completion of construction documentation targeted for August 2014. Construction is expected to commence in October 2014 with completion targeted for June 2015.

A.2 Methodology

A.2.1 Scope of Assessment

The scope of this assessment focuses on the area contained within the subject site (i.e. the limits of impact for the road widening works), although some reference to adjacent vegetation is made to assist in assessing the predicted impacts.

A.2.2 Database Analysis

Database analysis was conducted for the locality using both the NSW Office of Environment and Heritage (OEH) Atlas of NSW Wildlife Database (OEH, 2014) and the Commonwealth Department of the Environment (DoE) Protected Matters Search Tool (DoE, 2014) to determine the types of threatened species and ecological communities that may occur within the subject site. The Atlas of NSW Wildlife search recovered records of threatened flora and fauna species and endangered ecological communities listed under the TSC Act within a 5 km radius of the subject site (the locality). The EPBC Protected Matters Search Tool revealed threatened species, and other Matters of National Environmental Significance as listed under the EPBC Act that are known, or with potential, to occur within the locality of the subject site.

Other databases consulted during this assessment included:

- OEH Vegetation Types Database;
- OEH Critical Habitat register;

- OEH Threatened Species Profiles; and
- DoE Community and Species Profile and Threats Database.

A.2.3 Literature Review

A review of ecological literature relevant to the project was undertaken as part of this assessment to evaluate the flora and fauna values associated with the subject site and locality (5km radius from the subject site). The results of these assessments provide an overview of the ecology of the locality, particularly in relation to the occurrence of TECs and threatened species. Key documents reviewed for this ecological assessment include:

- AT&L (2014) Oakdale Central Development, Regional Link Roads. Old Wallgrove Road Upgrade - Road Design Report, R002-rev3. AT&L, St Leonards;
- Cumberland Ecology (2013) Re: Preliminary Grassland Assessment for Oakdale Central (13097 - Let3);
- Aurecon (2012) Ecological Assessment Report: Old Wallgrove Road Widening (Roberts Road - M7 Motorway), Eastern Creek;
- Parsons Brinkerhoff (2010) Erskine Park Link Road - terrestrial ecology assessment update for Ropes Creek realignment;
- Cumberland Ecology (2007) Ecological Assessment: Oakdale Concept Plan; and
- NPWS (NSW) (2002) Native Vegetation Maps of the Cumberland Plain Western Sydney.

A.2.4 Imagery Interpretation

Aerial photographs and Google© Maps 'Street View' function of the subject site were analysed in conjunction with the database analysis and literature review. The extent of vegetation and surrounding land uses were examined using these tools.

A.2.5 Site Survey

A survey of the subject site was conducted on the 28th May 2014 by an ecologist to verify the results of the desktop assessment. As part of the site survey, the entire length of the subject site was traversed and each patch of vegetation examined.

Searches were undertaken for threatened flora species and notes were recorded on the condition of any threatened fauna habitat present. In particular, searches at the bases of suitable habitat trees (including Forest Red Gum, *Eucalyptus tereticornis*) were undertaken.

A.2.6 Limitations

The flora survey was conducted during one site visit in May 2014. Growing conditions in the vicinity of the survey area had been suitable to enable adequate production of features to

enable identification to be made of most plants to species level at the time of the survey and accurate assessment of the subject site's conservation significance.

No targeted fauna surveys were undertaken for this assessment, which relied on database analysis and a fauna habitat assessment. The data produced by the database analysis and fauna habitat assessment is intended to be indicative of the types of species that could occur on the subject site.

A.3 Desktop Results

A.3.1 Vegetation Communities

i. Vegetation Mapping within the Subject Site

The subject site has been mapped as part of broad scale mapping of the Cumberland Plain undertaken by NPWS (NSW) (2002). This mapping indicates that a small patch of Shale Plains Woodland occurs in the northern portion of the subject site (see **Figure 2** in **Appendix B**). Shale Plain Woodlands forms a component of the critically endangered ecological community (CEEC) Cumberland Plain Woodland listed under both the TSC Act and EPBC Act.

Within the Aurecon report (2012), this patch of vegetation has been classified as Cumberland Dry Sclerophyll Forest and not aligned with any TEC. The descriptions provided within the report indicates that the vegetation is largely comprises of native vegetation; however a shrub and grassy understorey is not present.

The modified portions of the subject site have not been aligned within any vegetation communities within both the NPWS (NSW) (2002) and Aurecon (2012) reports. Cumberland Ecology (2007) noted that vegetation within a nearby pipeline corridor and the existing road reserve along Old Wallgrove Road consisted mainly of exotic grasses.

ii. TECs Identified within the Locality

A number of TECs have been identified in the locality of the subject site. **Table 1** lists the native vegetation communities mapped by NPWS (NSW) (2002) within the locality.

Table 1 TECs identified within the locality of the subject site (NPWS (NSW) (2002))

Vegetation Community	TSC Act	EPBC Act
Shale Plains Woodland	CEEC - Cumberland Plain Woodland in the Sydney Basin Bioregion	CEEC - Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest
Shale Hills Woodland	CEEC - Cumberland Plain Woodland in the Sydney Basin Bioregion	CEEC - Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest

Table 1 TECs identified within the locality of the subject site (NPWS (NSW) (2002))

Vegetation Community	TSC Act	EPBC Act
Shale/Gravel Transition Forest	EEC - Shale gravel Transition Forest in the Sydney Basin Bioregion	CEEC - Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest
Alluvial Woodland	EEC - River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Not listed.

The EPBC Protected Matters Search Tool also identified an additional CEEC, namely 'Western Sydney Dry Rainforest and Moist Woodland on Shale', that may occur within the locality of the subject site. This community is also listed as an EEC under the TSC Act as 'Western Sydney Dry Rainforest in the Sydney Basin Bioregion'.

A.3.2 Threatened Flora Species

Database records indicate the occurrence of a number of threatened flora species within the locality of the subject site. The locations of threatened flora species records held in the Atlas of NSW Wildlife database are shown on **Figure 3** in **Appendix B**. The habitat requirements of each of these species are provided in **Table 2**. Many of these species occur in woodland habitats, particularly Cumberland Plain Woodland; however one species *Grevillea juniperina subsp. juniperina* is known to occur in roadside verges. There is the potential for a number of the species listed in **Table 2** to occur within the subject site.

Table 2 Threatened flora species recorded in the locality of the subject site

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Habitat Requirements
Acacia pubescens	Downy Wattle	V	V	Occurs on alluviums, shales and at the intergrade between shales and sandstones. Occurs in open woodland and forest, in a variety of plant communities, including Cooks River/Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland.
Dillwynia tenuifolia		V		May be locally abundant particularly within scrubby/dry heath areas within Castlereagh Ironbark Forest and Shale Gravel Transition

Table 2 Threatened flora species recorded in the locality of the subject site

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Habitat Requirements
				Forest on tertiary alluvium or laterised clays. *Eucalyptus fibrosa* is usually the dominant canopy species.
Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	V		Grows on reddish clay to sandy soils derived from Wianamatta Shale and Tertiary alluvium (often with shale influence), typically containing lateritic gravels. Recorded from Cumberland Plain Woodland, Castlereagh Ironbark Woodland, Castlereagh Scribbly Gum Woodland and Shale/Gravel Transition Forest.
Hypsela sessiliflora		E	Ex	Currently known from only two adjacent sites on a single private property at Erskine Park. Known to grow in damp places, on the Cumberland Plain, including freshwater wetland, grassland/alluvial woodland and an alluvial woodland/shale plains woodland (Cumberland Plain Woodland) ecotone.
Marsdenia virdiflora subsp. virdiflora		EP		Recent records are from Prospect, Bankstown, Smithfield, Cabramatta Creek and St Marys. Grows in vine thickets and open shale woodland.
Pimelea spicata	Spiked Rice-flower	E	E	In both the Cumberland Plain and Illawarra environments this species is found on well-structured clay soils. On the Cumberland Plain sites it is associated with Grey Box communities (particularly Cumberland Plain Woodland variants and Moist Shale Woodland) and in areas of ironbark.
Pultenaea parviflora		E	V	May be locally abundant, particularly within scrubby/dry heath areas within Castlereagh Ironbark Forest and Shale Gravel Transition Forest on tertiary alluvium or laterised clays. *Eucalyptus fibrosa* is usually the dominant canopy species. Often found in association with other threatened species such as *Dillwynia tenuifolia*, *Grevillea juniperina*, *Micromyrtus minutiflora* and *Persoonia nutans*.

TSC Act Status / EPBC Act Status: V = Vulnerable, E = Endangered, EP = Endangered Population, CE = Critically Endangered

A.3.3 Threatened Fauna Species

Database records indicate the occurrence of a number of threatened fauna species within the locality of the subject site. The locations of threatened fauna species records held in the Atlas of NSW Wildlife database are shown on **Figure 4** in **Appendix B**.

The habitat requirements of each of these species are provided in **Table 3**.

Table 3 Threatened flora species recorded in the locality of the subject site

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Habitat Requirements
Birds				
Daphoenositta chrysoptera	Varied Sittella	V		Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and *Acacia* woodland.
Anthochaera phrygia	Regent Honeyeater	CE	E	Inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. Feeds on the nectar from a wide range of eucalypts and mistletoes. Key eucalypt species include Mugga Ironbark, Yellow Box, Blakely's Red Gum, White Box and Swamp Mahogany.
Lophoictinia isura	Square-tailed Kite	V		Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses.
Hieraaetus morphnoides	Little Eagle	V		Occupies open eucalypt forest, woodland or open woodland. Nests in tall living trees within a remnant patch.
Tyto novaehollandiae	Masked Owl	V		Lives in dry eucalypt forests and woodlands from sea level to 1100 m. A forest owl, but often hunts along the edges of forests, including roadsides.
Gastropods				
Meridolum corneovirens	Cumberland Plain Land Snail	E		Primarily inhabits Cumberland Plain Woodland. Lives under litter of bark, leaves and logs, or shelters in loose soil around grass clumps. Occasionally shelters under rubbish.
Mammals				

Table 3 Threatened flora species recorded in the locality of the subject site

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Habitat Requirements
Phascolarctos cinereus	Koala	V	V	Inhabit eucalypt woodlands and forests.
Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	V		Caves are the primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures. Hunt in forested areas, catching moths and other flying insects above the tree tops.
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V		Prefers moist habitats, with trees taller than 20 m. Generally roosts in eucalypt hollows, but has also been found under loose bark on trees or in buildings. Hunts beetles, moths, weevils and other flying insects above or just below the tree canopy.
Mormopterus norfolkensis	Eastern Freetail-bat	V		Occur in dry sclerophyll forest, woodland, swamp forests and mangrove forests. Roost mainly in tree hollows but will also roost under bark or in man-made structures.
Scoteanax rueppellii	Greater Broad-nosed Bat	V		Utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest. Usually roosts in tree hollows. Forages along creek and river corridors.
Myotis macropus	Southern Myotis	V		Generally roosts close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools.
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Feed on the nectar and pollen of native trees, in particular *Eucalyptus, Melaleuca* and *Banksia*, and fruits of rainforest trees and vines.

TSC Act Status / EPBC Act Status: V = Vulnerable, E = Endangered, CE= Critically Endangered

A.4 Field Results

A.4.1 Vegetation Communities

The subject site is largely cleared of native vegetation. Fragmented patches of vegetation and occasional isolated remnant trees occur along the length of the existing Old Wallgrove Road but are largely adjacent to the subject site (**Figure 5**).

The isolated remnant trees that occur within the subject site are consistent with the historical occurrence of Cumberland Plain Woodland, as these trees comprise the community dominants, including Forest Red Gum (*Eucalyptus tereticornis*) and Grey Box (*Eucalyptus moluccana*). These remnant trees occur above an exotic and mown understorey dominated by Rhodes Grass (*Chloris gayana*). These trees no longer conform to the EPBC Act and TSC Act descriptions of the CEEC Cumberland Plain Woodland.

The patches of vegetation that occur within and adjacent to the subject site are comprised of:

- Narrow rows or small groves of planted local (possible) and non-local native canopy trees (**Photograph 1** in **Appendix C**);
- Larger landscaped areas containing a planted mix of local (possible) and non-local native canopy trees (**Photograph 2** in **Appendix C**);
- A plantation of Forest Red Gum (*Eucalyptus tereticornis*) to the north of the subject site;
- Small and highly fragmented remnant patches of Cumberland Plain Woodland. The tree species recorded include one or a mix of the following: Forest Red Gum (*Eucalyptus tereticornis*), Grey Box (*Eucalyptus moluccana*), Narrow-leaved Ironbark (*Eucalyptus crebra*) and Spotted Gum (*Corymbia maculata*). The understorey is sparsely shrubby. The ground cover component is variable but is largely exotic and shows evidence of regular mowing (**Photograph 3** and **Photograph 4** in **Appendix C**); and
- A relatively large remnant patch of Cumberland Plain Woodland that occurs to the immediate east of the northern section of the subject site. This patch contains a moderately diverse native understorey. The remnant patch becomes increasingly weedy as it approaches the road verge (**Photograph 5** in **Appendix C**).

i. Cumberland Plain Woodland

The patches Cumberland Plain Woodland that occur within and adjacent to the subject site are largely degraded or are regenerating. These remnant patches, although degraded, contain the characteristic canopy tree species described in the Final Determination and Listing Advice for Cumberland Plain Woodland, namely Forest Red Gum (*Eucalyptus tereticornis*), Grey Box (*Eucalyptus moluccana*), Narrow-leaved Ironbark (*Eucalyptus crebra*) and Spotted Gum (*Corymbia maculata*).

The understorey is highly variable and most patches are dominated by exotic perennial grasses including Rhodes Grass (*Chloris gayana*), Paspalum (*Paspalum dilatatum*), Kikuyu (*Pennisetum clandestinum*) and Pigeon Grass (*Setaria parviflora*); exotic dicots such as Cobbler's Pegs (*Bidens pilosa*) and Farmer's Friend (*Sida rhombifolia*); and exotic pasture forbs and weeds, such as Medic Burr (*Medicago polymorpha*), Fire Weed (*Senecio madagascariensis*) and Spear Thistle (*Cirsium vulgare*).

In the larger patches of Cumberland Plain Woodland outside of the subject site, the understorey contains characteristic native shrubs species such as *Daviesia ulicifolia, Pultenaea microphylla*, *Bursaria spinosa* and *Dillwynia sieberi*; and characteristic ground cover species including Kidney Weed (*Dichondra repens*), Weeping Meadow Grass (*Microlaena stipoides*) and *Brunoniella australis.* However, the understorey becomes increasingly exotic as the patch approaches the existing road verge and the subject site limits.

The majority of areas of Cumberland Plain Woodland within the subject site do not conform to the EPBC Act listing because the understorey is more than 50% exotic, are less than 5 ha in size and are isolated from other native vegetation, and do not contain at least one tree per hectare that has a diameter at breast height greater than 80 cm or a hollow. However, these areas still conform to the TSC Act listing, despite their degraded condition.

Only one patch of Cumberland Plain Woodland is large enough and retains sufficient native species diversity in the understorey to meet the EPBC Act listing.

ii. Grassland

The grassland throughout the subject site is exotic and is dominated by Rhodes Grass (*Chloris gayana*). The vegetation within these areas has been disturbed by existing and adjoining land uses. The There is the potential for some areas of grassland to have been derived from Cumberland Plain Woodland, particularly in areas located in close proximity to woodland patches. Within the southern-most extent of the subject site, the original Cumberland Plain soil profile appears to be relatively intact and supports grassland containing native forbs and grasses derived from Cumberland Plain Woodland. Notwithstanding, the proportion of the understorey cover in these areas is still predominantly exotic (60% projective foliage cover attributable to exotic species) and occurs adjacent to landscaped plantings (**Photograph 6** in **Appendix C**). Therefore, the grassland areas within the subject site are not considered to conform to Cumberland Plain Woodland Derived Native Grassland that is protected under the TSC Act.

A.4.2 Threatened Species

No threatened flora species were recorded during the site survey.

The habitats available for the threatened flora species identified as having potential to occur within the subject site are likely to be confined to remnant woodland patches outside of the subject site where the understorey is relatively protected from exotic perennial grass incursions and regular mowing. These threatened species are unlikely to occur in the exotic grassland

areas due to the prevalence of Rhodes Grass (*Chloris gayana*), which is a very competitive species, and landscaping areas recorded within the subject site.

No threatened fauna were recorded during the site survey.

The habitats for threatened fauna within the subject site provide only limited foraging, nesting and/or roosting habitat for some of the threatened fauna species known from the locality. Habitat utilisation by these species is likely to primarily be confined to woodland patches outside of the subject site.

A.5 Impact Assessment

A.5.1 Direct Removal of Vegetation

The proposed project will require some land clearance to facilitate the widening of Old Wallgrove Road within the subject site. The desktop assessment and site survey results show that the majority of remnant vegetation in the vicinity of Old Wallgrove Road occurs outside of the subject site (i.e. the proposed limits of impact).

Within the subject site, the vegetation is largely exotic grassland, small occurrences of planted vegetation and remnant trees. Some individual trees on the margins of remnant patches of Cumberland Plain Woodland will require removal; however, the removal of these trees is unlikely to have a detrimental significant impact on the function and persistence of the woodland patch.

An assessment of the significance under the TSC Act for Cumberland Plain Woodland is presented in **Appendix D**. An assessment of the significance under the EPBC Act is also presented in **Appendix D**.

A.5.2 Direct Removal of Threatened Species Habitat

The proposed will remove very poor quality habitat for threatened flora species, as the subject site is dominated by exotic perennial grasses and is regularly mown. The proposed project is unlikely to have a significant impact on threatened flora species known from the locality.

The proposed project will remove small areas of foraging habitat for most threatened fauna species predicted to occur across the subject site from time to time. The proposed project is unlikely to have a significantly detrimental impact on most threatened fauna species, as these are highly mobile bird and bat species with large foraging ranges.

The proposed project will remove some habitat for the Cumberland Land Snail (*Meridolum corneovirens*); however, the majority of the Cumberland Land Snail habitat will be retained outside of the subject site within the adjacent woodland patches. The proposed project is unlikely to have a significant impact on the species. Nevertheless, an assessment of the significance of impacts of the project on Cumberland Land Snail is presented in **Appendix D**.

A.6 Recommendations and Mitigation Measures

Potential impacts to flora and fauna occurring in the construction phase that can be managed include: unnecessary vegetation removal, runoff, sedimentation, erosion and pollution. As the subject site is located adjacent to areas of Cumberland Plain Woodland, precautions need to be taken to minimise the impacts to these areas.

Unnecessary vegetation removal may occur if the boundaries of the subject site are not clearly defined. The clearance boundaries should be clearly marked to ensure no vegetation beyond these marks is removed.

During development, precautions should be taken to ensure that no sediment or pollution drains into adjoining areas. To prevent excess runoff flowing off the building site, barriers should be established to divert the flow of water away from the surrounding native woodland and into appropriate drainage systems. Silt traps should be established to prevent the impacts of sedimentation on the surrounding woodland. To reduce sedimentation on the construction site, erosion control measures need to be implemented. This may involve minimising the amount of exposed soils on the site at any given time. During development, precautions should be taken to ensure that no pollution escapes the construction site. Pollution traps and efficient removal of pollution to an offsite location would help to minimise pollution impacts.

Monitoring of the proposed mitigation measures should be undertaken through the construction process.

A.7 Conclusion

The proposed upgrade of Old Wallgrove Road involves the clearance of remnant native trees above an exotic understorey, planted areas and exotic grassland. It will also remove a few native trees from the margins of existing woodland patches that conform to the CEEC Cumberland Plain Woodland.

The Cumberland Plain Woodland patches that occur in the vicinity of the subject site is highly fragmented. In addition to this, the margins of the woodland patches that approach the existing road verge (and is contained within the subject site) is highly degraded and no longer supports a native understorey. For this reason, the proposed project is unlikely to have a significant detrimental impact on CEEC Cumberland Plain Woodland such that its local persistence and long-term survival in the wider locality is at risk.

Furthermore, the fauna habitats present within the subject site provide very poor quality habitat for threatened flora species and only marginal foraging habitat for threatened fauna species. The majority of habitat in the vicinity of the subject site will be retained outside of the subject site within the adjacent woodland patches. Thus, the proposed project is unlikely to have a significant detrimental impact on threatened species such that their local persistence is at risk.

Notwithstanding the above, it is recommended that the appropriate mitigation measures outlined above are implemented during construction to minimise unintended impacts on the surrounding remnant vegetation and potential threatened species habitat.

A.8 References

AT&L (2014). *Oakdale Central Development, Regional Link Roads*. Old Wallgrove Road Upgrade - Road Design Report, R002-rev3. AT&L, St Leonards.

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Appendix B

Figures

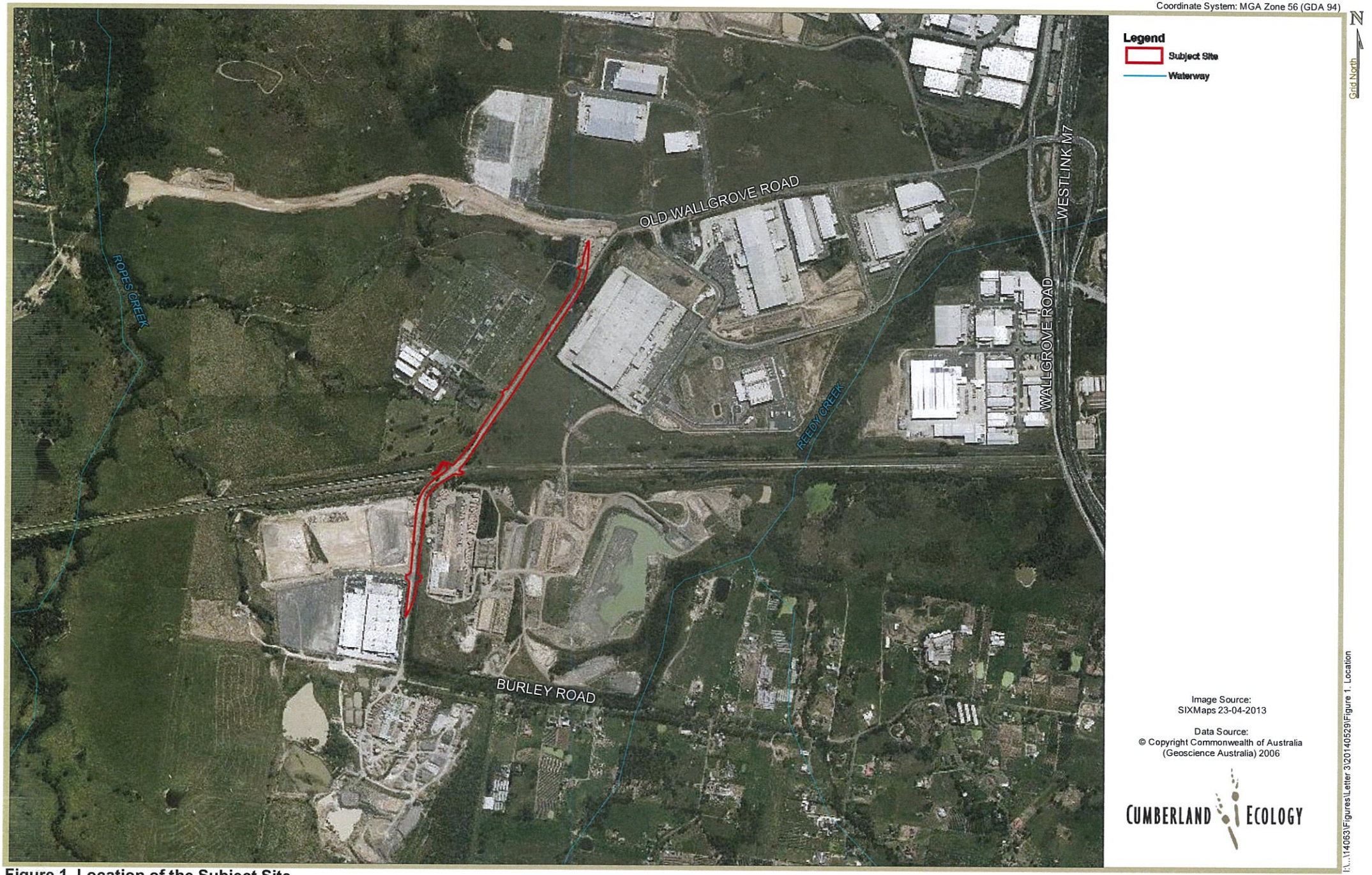

Figure 1. Location of the Subject Site

Figure 2. Vegetation Communities (DECCW, 2008) of the Subject Site

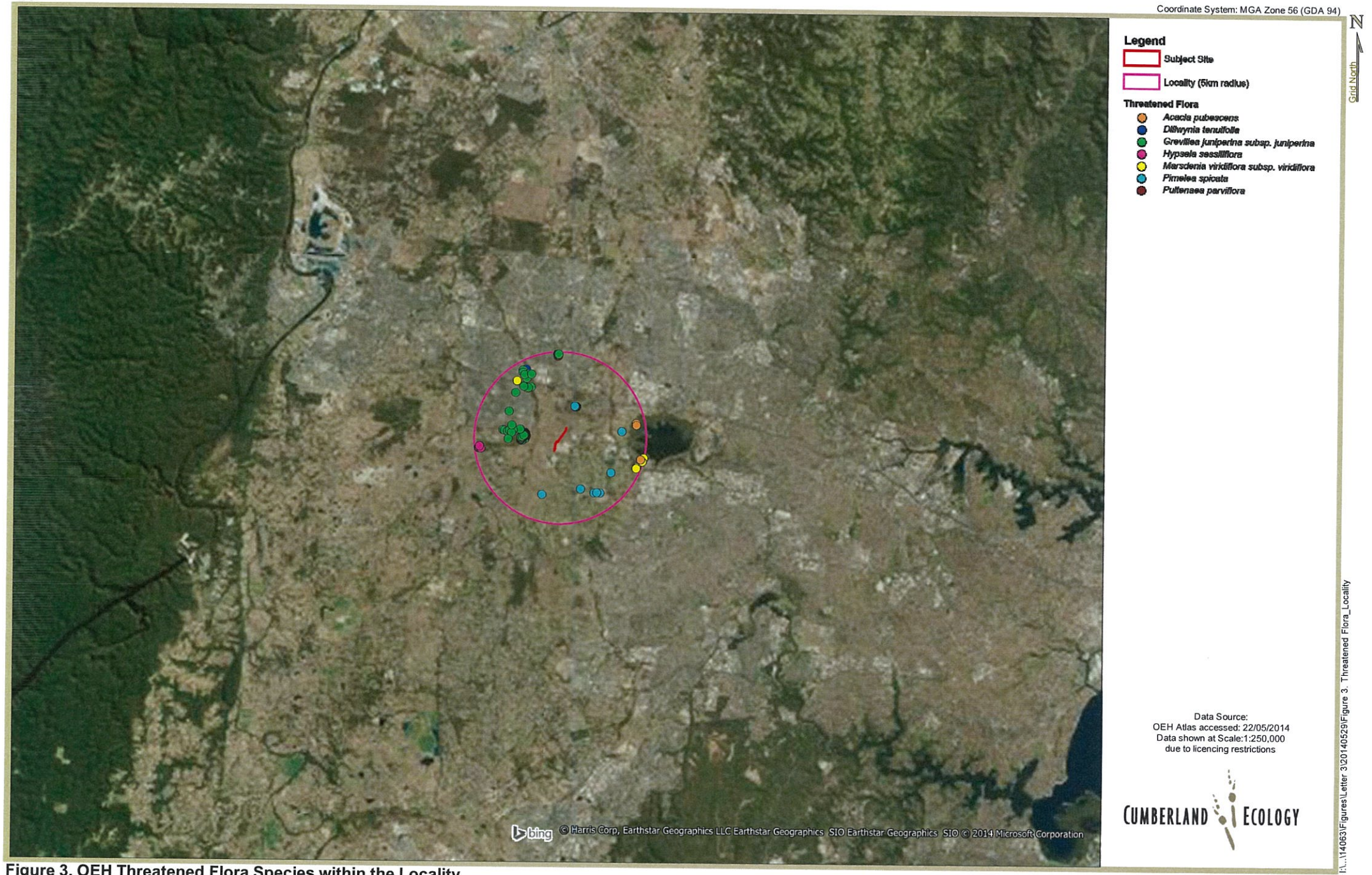

Figure 3. OEH Threatened Flora Species within the Locality

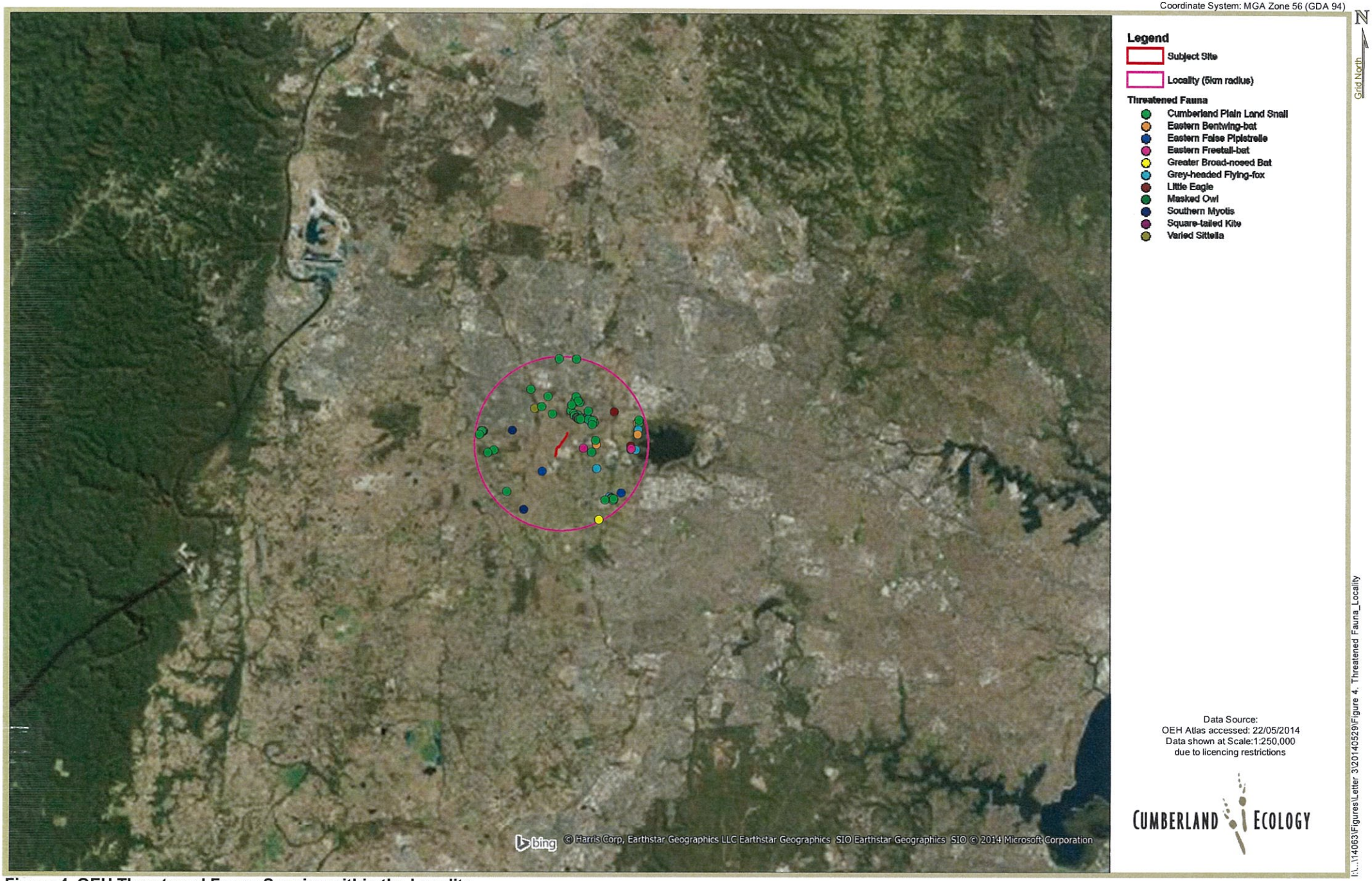

Figure 4. OEH Threatened Fauna Species within the Locality

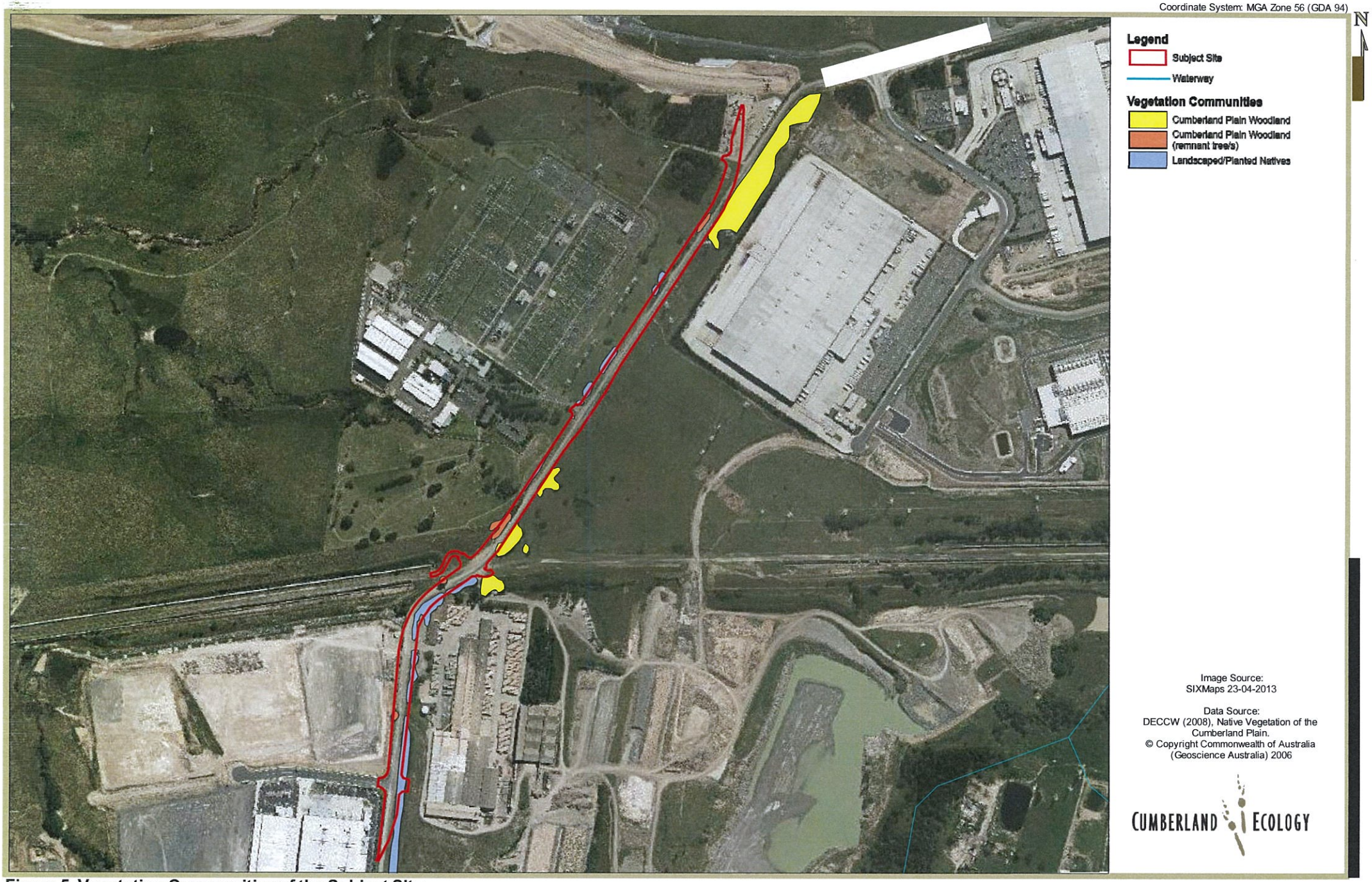

Figure 5. Vegetation Communities of the Subject Site

Appendix C

Site Photographs

Photograph 1 Narrow strip of landscaping containing native local and non-local canopy trees. Understorey is mown.

Photograph 2 Larger area of landscaping containing native local and non-local canopy trees. Understorey is mown.

Photograph 3 Small patch of degraded Cumberland Plain Woodland with exotic understorey.

Photograph 4 Another small patch of degraded Cumberland Plain Woodland with exotic understorey.

Photograph 5 Cumberland Plain Woodland patch in northern section of subject site. Contains regenerating canopy trees. Note dominance of Rhodes Grass in foreground within the road verge.

Photograph 6 Grassland on roadside verge in southern extent of subject site. Contains native species derived from Cumberland Plain Woodland but is still >50% exotic.

Appendix D

Assessments of Significance

D.1 Cumberland Plain Woodland

D.1.1 Legal Status

The ecological community was previously listed as nationally endangered under the name Cumberland Plain Woodlands. The community has since been uplisted from endangered to critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999*. The community is under pressure from numerous threats, the main being clearing for development resulting in further fragmentation and loss of native vegetation (Threatened Species Scientific Committee, 2008).

In New South Wales the national ecological community is listed as two separate threatened ecological communities under the *Threatened Species Conservation Act 1995*: Cumberland Plain Woodland in the Sydney Basin Bioregion; and Shale-Gravel Transition Forest in the Sydney Basin Bioregion. Cumberland Plain Woodland in the Sydney Basin Bioregion was also uplisted from endangered to critically endangered under the *Threatened Species Conservation Act 1995*. However, Shale-Gravel Transition Forest in the Sydney Basin Bioregion remains listed as endangered.

D.1.2 Distribution

The Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest is endemic to New South Wales, specifically the area in and around western Sydney on clay soils derived from the Wianamatta Shale Group. It mostly occurs within the Cumberland subregion of the Sydney Basin bioregion (as defined by the Interim Biogeographic Regionalisation for Australia—IBRA v6.1), with some occurrences extending into neighbouring subregions.

Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest is is well adapted to fire and drought and typically receives between 700-900 mm annual rainfall.

Today all occurences are located in western Sydney in the Auburn, Bankstown, Baulkham Hills, Blacktown, Camden, Campbelltown, Fairfield, Hawkesbury, Holroyd, Liverpool, Parramatta, Penrith and Wollondilly local government areas (NSW Scientific Committee, 2009).

D.1.3 Floristics

The dominant canopy trees in the ecological community are Grey Box (*Eucalyptus moluccana*) and Forest Red Gum (*E. tereticornis*) with Spotted Gum (*Corymbia maculata*), Narrow-leaved Ironbark (*E. crebra*) and Thin-leaved Stringybark (*E. eugenioides*) occurring less frequently. The shrub layer is dominated by Blackthorn (*Bursaria spinosa*) with other shrubs such as *Acacia implexa* and *Indigofera australis*.

Grasses such as Kangaroo Grass (*Themeda australis*), Weeping Meadow Grass (*Microlaena stipoides var stipoides*) and herbs, such as Kidney Weed (*Dichondra repens*), Blue Trumpet (*Brunoniella australis*) and *Desmodium varians* are common through this community.

Various threatened species are found in the Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest, with one endemic to the Cumberland Plain region (Cumberland Land Snail, *Meridolum corneovirens*). Certain species are of higher conservation concern, including the Swift Parrot (*Lathamus discolor*), Regent Honeyeater (*Xanthomyza phrygia*), Spotted-tail Quoll (*Dasyurus maculatus maculatus*) and the Narrow-leaved Geebung (*Persoonia nutans*) (Threatened Species Scientific Committee, 2008).

Assessment of Significance – TSC Act

a) *in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,*

Not applicable to threatened communities.

b) *in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,*

Not applicable to threatened communities.

c) *in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*

   i. *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*

The action proposed is unlikely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction. The action proposed will remove isolated remnant trees and a limited number of additional trees from the margins of existing patches.

   ii. *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,*

The action proposed is unlikely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction. The remnant trees and individual trees at the margins of existing patches occur in a degraded state and will not affect the remaining patches outside of the subject site.

d) *in relation to the habitat of a threatened species, population or ecological community:*

   i. *the extent to which habitat is likely to be removed or modified as a result of the action proposed, and*

The action proposed will remove isolated remnant trees and a limited number of additional trees from the margins of existing patches.

ii. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

The habitat already exists in a highly fragmented and isolated state and the action proposed will not substantially increase this.

iii. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality,

The habitat to be removed is not important to the long term survival of the ecological community in the locality.

e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),

No critical habitat for this community has been declared.

f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,

A recovery plan for the Cumberland Plain has been published (DECCW, 2010). The action proposed is not consistent with the objectives or actions of this recovery plan.

g) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

The action proposed constitutes the key threatening process, 'clearing of native vegetation'; and has potential to exacerbate the key threatening process, 'invasion of native plant communities by exotic perennial grasses'.

Conclusion

The proposed action is not likely to have a significant detrimental impact on Cumberland Plain Woodland as it will only remove a few remnant trees over exotic understorey and a few trees from the margins of existing patches of woodland. The margins of the woodland are highly degraded and the trees to be removed occur over an exotic understorey.

Assessment of Significance – EPBC Act

Of the patches of modified Cumberland Plain Woodland identified during surveys, only one patch is of a large enough size to potentially conform to the EPBC Act listing of the community. This patch is located at the northern extent of the subject site, extending further east. As the larger extent of the patch was not surveyed in detail, it has been assumed that the understorey is of a high enough quality (>50% native groundcover) to conform. The portion of the patch that occurs within the subject site has a predominantly (85%) exotic groundcover.

An assessment of significance of impacts to this patch is provided below.

An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will:

• *reduce the extent of an ecological community*

The proposal includes the clearing of scattered regenerating trees and shrubs above a predominantly exotic ground stratum in the northern portion of the subject site.

• *fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines*

The habitat already exists in a highly fragmented and isolated state and the action proposed will not substantially increase this.

• *adversely affect habitat critical to the survival of an ecological community*

A small area of habitat above a predominantly exotic understorey will be cleared. The proposed action is not considered likely to adversely affect critical habitat for this community.

• *modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns*

The project is not considered to significantly modify or destroy abiotic factors necessary for the community's survival beyond current conditions.

• *cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting*

The proposed development has the potential to facilitate the introduction of weed species into the remaining portion of the patch. Implementation of mitigation measures will assist in minimising indirect impacts to this patch.

• *cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:*

-- assisting invasive species, that are harmful to the listed ecological community, to become established, or

-- causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or

-- interfere with the recovery of an ecological community.

The remaining patch of Cumberland Plain Woodland currently experiences impacts from weed invasion. It is not expected that the project will introduce fertilisers, herbicides or other chemicals or pollutants. Implementation of mitigation measures will assist in minimising indirect impacts to this patch.

The project is not considered likely to impact on the continued recovery of this remnant vegetation community.

D.2 Cumberland Land Snail

The Cumberland Land Snail is an endangered gastropod protected under *Threatened Species Conservation Act 1995*.

The Cumberland Land Snail occurs in Cumberland Plain Woodland of western Sydney. Its distribution ranges from Richmond and Windsor south to Picton and from Liverpool west to the Hawkesbury and Nepean Rivers (OEH, 2013).

It lives under leaf and bark litter, logs or around grass clumps or in loose soil. It feeds specifically on fungus and may burrow several centimetres into the ground to escape drought (OEH, 2013).

Assessment of Significance

h) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

The action proposed is not likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction. Although some native remnant trees will be removed that comprise habitat for the species, remnant woodland outside of the subject site will not be affected by the action proposed.

i) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,

Not applicable.

j) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:

iii. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

Not applicable to threatened species.

iv. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

Not applicable to threatened species.

k) in relation to the habitat of a threatened species, population or ecological community:

iv. the extent to which habitat is likely to be removed or modified as a result of the action proposed, and

The action proposed will remove isolated remnant trees and a limited number of additional trees from the margins of existing patches. Remnant woodland comprising habitat for the species exists outside of the subject site and will not be affected by the action proposed.

v. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

The habitat already exists in a highly fragmented and isolated state and the action proposed will not substantially increase this.

vi. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality,

The habitat to be removed is not important to the long term survival of the ecological community in the locality.

l) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),

No critical habitat for this community has been declared.

m) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,

No recovery plan exists for the Cumberland Land Snail.

n) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

The action proposed constitutes the key threatening process, 'clearing of native vegetation'; and has potential to exacerbate the key threatening process, 'invasion of native plant communities by exotic perennial grasses'.

Conclusion

The proposed action is not likely to have a significant detrimental impact on Cumberland Land Snail as it will only remove a few remnant trees over exotic understorey and a few trees from the margins of existing patches of woodland habitat. The remainder of the woodland habitat will be retained outside of the limits of the subject site.

APPENDIX 5

ABORIGINAL HERITAGE DUE DILIGENCE ASSESSMENT

GML HERITAGE

Old Wallgrove Road Upgrade

Aboriginal Heritage Due Diligence Report

Report prepared for Goodman Property Services

May 2014

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Report Register

The following report register documents the development and issue of the report entitled Old Wallgrove Road Upgrade—Aboriginal Heritage Due Diligence, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
14-0174	1	Final Report	23 May 2014

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Tim Owen	**Project Director & Reviewer:**	Prof Richard Mackay, AM
Issue No.	1	**Issue No.**	1
Signature		**Signature**	
Position:	Associate	**Position:**	Partner
Date:	23 May 2014	**Date:**	23 May 2014

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1.0 Introduction

GML Heritage (GML) Pty Ltd has been engaged by Goodman Property Services to prepare a Due Diligence Aboriginal Heritage Report for the proposed upgrade of Old Wallgrove Road (the study area). This report forms part of the Environmental Assessment for the study area prepared under Part 4 of the *Environmental Planning and Assessment Act 1979.*

The purpose of this report is to identify whether the study area possesses or has the potential to possess Aboriginal heritage sites, places, objects and/or values, in accordance with the Office of Environment and Heritage (OEH) guidelines for due diligence.

This report does not provide a significance assessment of any Aboriginal sites, places and/or values. This project does not follow the OEH guidelines for Aboriginal community consultation. Recommendations are provided as to whether further Aboriginal heritage assessment and management will be necessary.

This report was prepared by Dr Tim Owen, GML Associate; with review by Prof Richard Mackay, AM, GML Partner.

1.1 NSW Legislation Relevant to Aboriginal Heritage

In NSW Aboriginal heritage is principally protected under two Acts:

- the *National Parks and Wildlife Act 1974* (NPW Act); and
- the *Environmental Planning and Assessment Act 1979* (EPA Act).

1.1.1 National Parks and Wildlife Act 1974

All Aboriginal cultural material receives statutory protection under the NPW Act. If Aboriginal cultural material is found, the NSW National Parks and Wildlife Service (NPWS) must be informed under Section 89A of the NPW Act.

New offences relating to the harm to, or desecration of, an Aboriginal object or declared Aboriginal Place were introduced with the *NPW Amendment (Aboriginal Objects and Places) Regulation 2010* on 1 October 2010. The definition of 'harm' now includes to destroy, deface, damage or move an Aboriginal object or declared Aboriginal Place. The OEH has stated:

> *The most significant change is the introduction of tiered offences and penalties. Offences committed with knowledge, in aggravating circumstances or in relation to an Aboriginal Place will attract higher penalties than previously. There is a new strict liability offence of harming Aboriginal objects and of harming or desecrating Aboriginal Places.*[1]

The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to this project include the statutory defence of due diligence through complying with an adopted industry code of practice (see due diligence below) or compliance with the conditions of an Aboriginal Heritage Impact Permit (AHIP).

1.1.2 Environmental Planning and Assessment Act 1979

The EPA Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional

Environmental Plans (REPs). Heritage items in planning instruments are usually historic sites but can include Aboriginal objects and places. The EPA Act requires that appropriate measures be taken for the management of the potential archaeological resource by means consistent with practices and standards adopted in meeting the requirements of the NPW Act.

1.2 Approach to Aboriginal Heritage Management

In order to administer the NPW Act and EPA Act, the OEH has issued a series of best practice guidelines and policies. The applicability of these depends upon the approval mechanism for a project. The current project will be assessed and granted approval under Part 4 of the EPA Act. Therefore, the approach to the preparation of this document was based on the following current best practice guidelines:

- NPWS Aboriginal Cultural Heritage. Standards and Guidelines Kit (draft 1997);
- DECC *Guide to Determining and Issuing Aboriginal Heritage Impact Permits (2009)*;
- DECC *Operational Policy: Protecting Aboriginal Cultural Heritage (February 2009)*;
- DECCW *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks and Wildlife Act 1974 (April 2010)*;
- DECCW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (13 September 2010);*
- DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010); and*
- *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 1999* (the Burra Charter).

1.3 Due Diligence Approach

The OEH has issued a code of practice guideline that defines a 'due diligence' approach to Aboriginal heritage: *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (13 September 2010).* This guideline is designed to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects, and/or Aboriginal Places, and to determine whether they should apply for consent in the form of an AHIP.

Goodman has adopted the *Due Diligence Code of Practice* as a best practice management tool for potential Aboriginal heritage objects, place and values which could be associated with the project.

The *Due Diligence Code of Practice* sets out the reasonable and practicable steps which individuals and organisations need to take in order to:

- identify whether or not Aboriginal objects are, or are likely to be, present in an area;
- determine whether or not their activities are likely to harm Aboriginal objects (if present); and
- determine whether an AHIP application is required.

The OEH has defined due diligence thus:

> *Due diligence is a legal concept describing a standard of care. Exercising due diligence means turning your mind to the likely risks of your proposed course of action. It is not enough to perform activities carefully. Due diligence requires consideration of your obligations under, in this case, the NPW Act, and the consideration and adoption of a course of action that is directed towards preventing a breach of the Act.*
>
> *In the context of protecting Aboriginal cultural heritage, due diligence involves taking reasonable and practicable measures to determine whether your actions will harm an Aboriginal object and if so avoiding that harm.*[2]

The steps that are required to follow the due diligence process are:

- searching the Aboriginal Heritage Information Management System (AHIMS);
- checking for landscape features which may indicate the presence of Aboriginal objects;
- strategies to avoid harming Aboriginal objects; and
- desktop assessment and visual inspection to confirm the presence of Aboriginal objects.[3]

In preparing this report, GML complied with the guidelines set out in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (13 September 2010).* The extent of land covered by the due diligence process is described as the study area, see below.

1.4 Description of the Study Area and Context

The study area is located in Eastern Creek, western Sydney; 1.5km southwest of the junction of the M7 and M4 motorways. The study area extends along a portion of Old Wallgrove Road (see Figure 1.1).

The proposed Old Wallgrove Road upgrade extends from the intersection with Milner Avenue (in the south) and ties in with the intersection at the Esrkine Park Link Road (in the north). A concept design of the road upgrade has been prepared. The upgrade is limited to Old Wallgrove Road and excludes Link Road.

1.5 Due Diligence Process

In accordance with Step 1 of the OEH *Due Diligence Code of Practice,* it is identified that the proposed activity will disturb the ground surface of the study area. Therefore, the following due diligence steps are presented in this report:

Step 2a—Aboriginal Heritage Information Management System (AHIMS) database search;

Step 2b—the identification of landscape features that indicate the presence of Aboriginal objects;

Step 3—discussion with respect to the extent of the development footprint;

Step 4—desktop assessment and visual inspection; and

Step 5—further investigation and impact assessment.

Figure 1.1 The study area location. (Source: Nearmap with GML additions)

2.0 AHIMS and Environment Context

2.1 AHIMS Search

A search of the OEH AHIMS database for the study area was undertaken on 21 May 2014. The results of the search are shown in Table 2.1 and Figure 2.1. The search identified 40 recorded Aboriginal sites in an area with approximately a 2km buffer around the study area. Aboriginal sites were mainly stone artefact sites or PAD with potential for stone objects—two scarred trees were identified to the east of the study area. This search indicated that stone objects constitute the predominant remnants recorded in this area.

Table 2.1 Results of AHIMS Search.

Site Feature	Frequency
Stone Artefacts (multiple objects)	4
Stone Artefacts (isolated finds)	30
Modified Trees	2
Potential Archaeological Deposit (PAD)	5
Total	41

No Aboriginal sites are registered within the study area. The nearest registered site is located 300m west of the study area, near Milner Avenue.

The general patterning of Aboriginal sites in the local area shows a strong association with the major watercourses of the region, particularly Ropes Creek and it upslope easterly higher order tributaries. A further complex of sites is found in connection with the margins of Reedy Creek, west of the study area. A few registered sites are located at a distance from the creek systems, and associated with elevated ground, ridgelines and the low hilltops.

2.2 The Local Landscape Context

The purpose of this section is to provide environmental contextual information for use in developing a predictive model of Aboriginal site locations associated with the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora and fauna, and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited; whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.2.1 Geology

The study area is located within a primary geology of a Triassic Wianamatta Group and is a part of the Liverpool sub-group with a structure of Bringelly Shale overlying both Minchinbury Sandstone

and the Ashfield Shale sequences. The Bringelly Shale formation comprises well-bedded shales, carbonaceous and non-carbonaceous claystone, laminates, quartz and occasional beds of fine to medium lithic sandstones.[4] The natural topography of the broader landscape is characterised by the gently undulating rises of the Wianamatta Group Shales (Figure 2.2).

2.2.2 Landforms and Landscape Features

The study area's landscape is principally modified and contained by buildings and services. The former landscape, associated with the route of Old Wallgrove Road, was positioned on the upper slopes and top of a ridgeline extending north to south, parallel to the major creek systems.

The surrounding local relief is up to 30 metres and a modal terrain slope of approximately 1% to 3% exists within the study area. This has resulted in an erosional landform pattern comprising of gently undulating rises sloping towards the drainage lines both to the east and west of the study area.[5]

2.2.3 Soils

The study area's geology is primarily overlain by the Blacktown soil landscape.[6] The soils in the study area range in depth from shallow to moderately deep (less than 100cm) and consist of red and yellow podzolic soils on crests, grading to yellow podzolic soils on lower slopes and drainage lines (Figure 2.3). Numerous excavations across western Sydney on the Blacktown soils have shown that these residual soils are highly bioturbated, and generally do not hold the potential for stratified archaeological sequences.

2.2.4 Hydrology

The availability of water has significant implications for the range of resources available and the suitability of an area for human occupation, both past and present. There are no creeks located within the study area (Figure 2.4).

The closest major (permanent) watercourses are the third order Ropes Creek (to the west) and the third order Reedy Creek (to the east). The study area is located equidistant between these creeks, at approximately 1km. Three first order ephemeral creeks, which drain into Ropes Creek, have their origins ~200m east of the study area. Six of the isolated stone objects, registered under AHIMS, are located within the margins of these ephemeral watercourses.

2.2.5 Fauna and Flora

The Cumberland Plain originally contained a complex of woodland and forest adapted to mostly clayey soils.[7] The vegetation community surrounding the study area includes trees such as the Grey Box (*E. moluccana*), and the Forest Red Gum (*E. tereticornis*). Ironbarks (mainly Red Ironbark or Mugga—*E. sideroxylon*) also survive in stands or in isolation. Blackthorn (*Bursaria spinosa*) and paperbark (*Melaleuca spp*) are also representative of the woodland in the area. Species such as swamp oak (*Casuarina glauca*) continue to dominate the closed woodlands along creek lines.

The variability of soils across the site and the wider region would have provided a resource rich interface with species adapted to the sandstone and shale soils. The study area would have originally comprised of open eucalypt woodland (eg Forest Red Gum) in which trees were widely spaced and the ground cover dominated by grassed understoreys. Closed woodland of paperbark and swamp oak, for example, would have been present along the creek margins.[8]

The whole study area has now been stripped of all original vegetation. Some landforms adjacent to the northeast of the study area are grassed pasture.

2.2.6 Land Use History

The study area is located along the length of Old Wallgrove Road. This road was a major arterial route, constructed in its present form in the middle twentieth century (Figure 2.5). A review of aerial photography from the past 10 years shows that no recent modifications have occurred to the route of the road over this period; whilst landforms either side of the road have been considerably modified through a series of industrial developments.

Construction of the road was undertaken by cutting the natural landforms to a depth of 1m–3m, into basal clay. Landforms adjacent to the road platform have been extensively modified through a variety of developments and service installations.

2.3 Synopsis of the AHIMS Search and Landscape Context

Based upon the AHIMS search, it can be stated that the majority of evidence relating to Aboriginal use and occupation of this region is in the form of stone objects. The spatial distribution of registered sites, as presented in the AHIMS records, suggests that these objects are most likely to be located in proximity to the main watercourses of the region, with some objects located on more elevated ground, near ephemeral creek systems.

The landforms and soils associated with the study area are residual and are neither deep nor hold the potential for stratified archaeological sequences. The land use history of the study area is one of extensive modification, development and impact associated with the construction of Old Wallgrove Road.

Overall, it may be stated that the study area does not contain previously recorded Aboriginal sites or objects. The history and landscape position of the study area is not conducive for the retention of intact Aboriginal objects and/or Aboriginal sites. However, as for all landforms in Western Sydney, this study area has a very low potential to contain Aboriginal objects in a disturbed context. The visual inspection of the study area will determine whether this is likely or not.

Figure 2.1 AHIMS results. (Source: OEH AHIMS and Nearmap with GML additions, 2014)

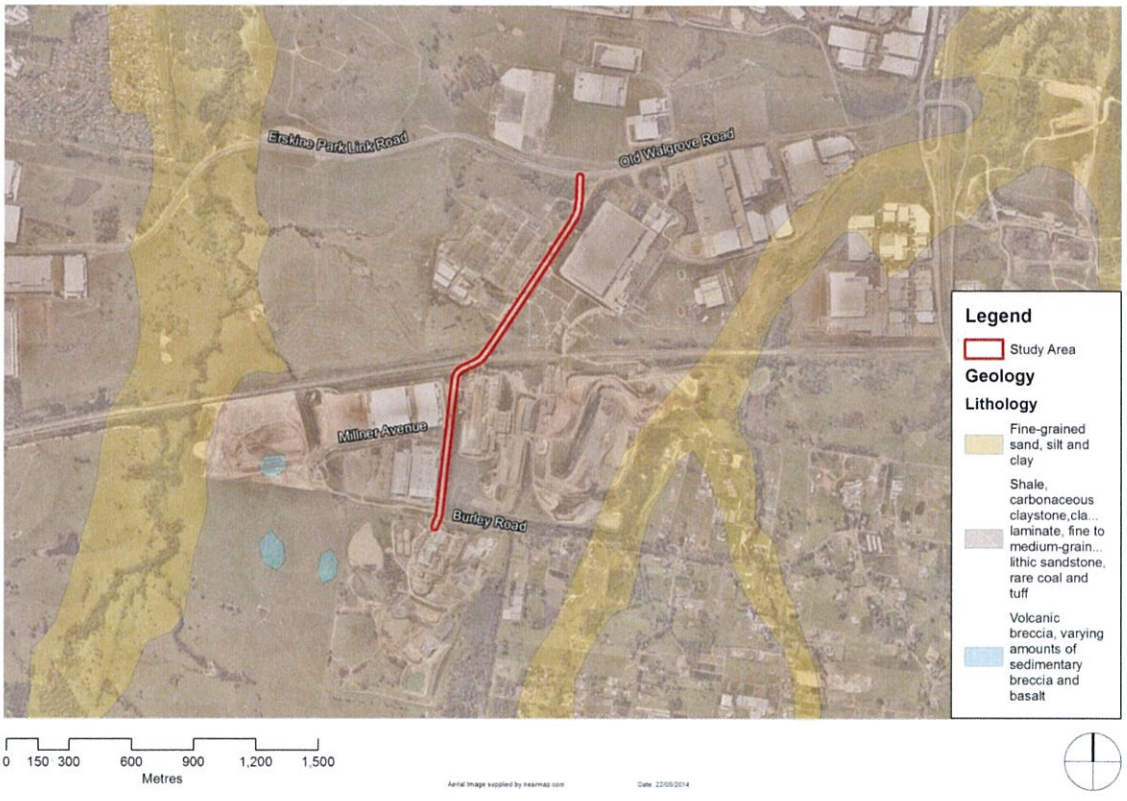

Figure 2.2 Geology of the study area and the local vicinity. (Source: Nearmap with GML additions, 2014)

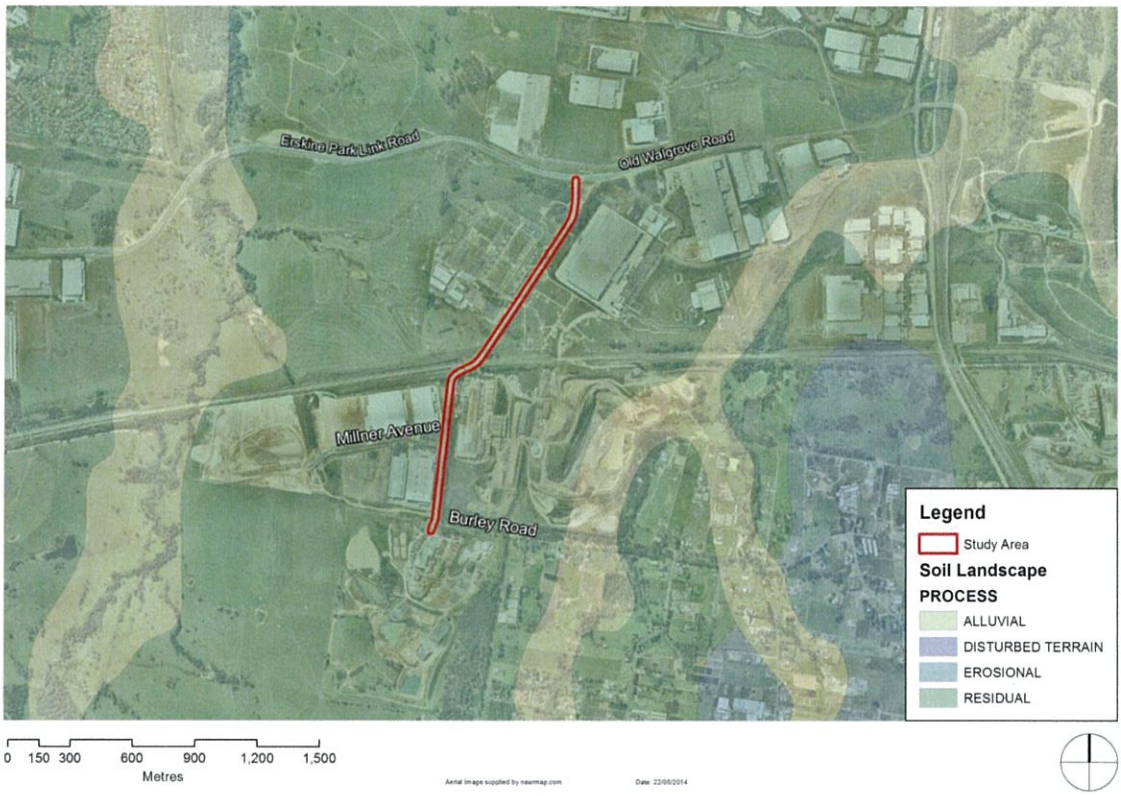

Figure 2.3 Soil landscape of the study area and the local area. (Source: Nearmap with GML additions, 2014)

Figure 2.4 Watercourses within the local area. (Source: Nearmap with GML additions, 2014)

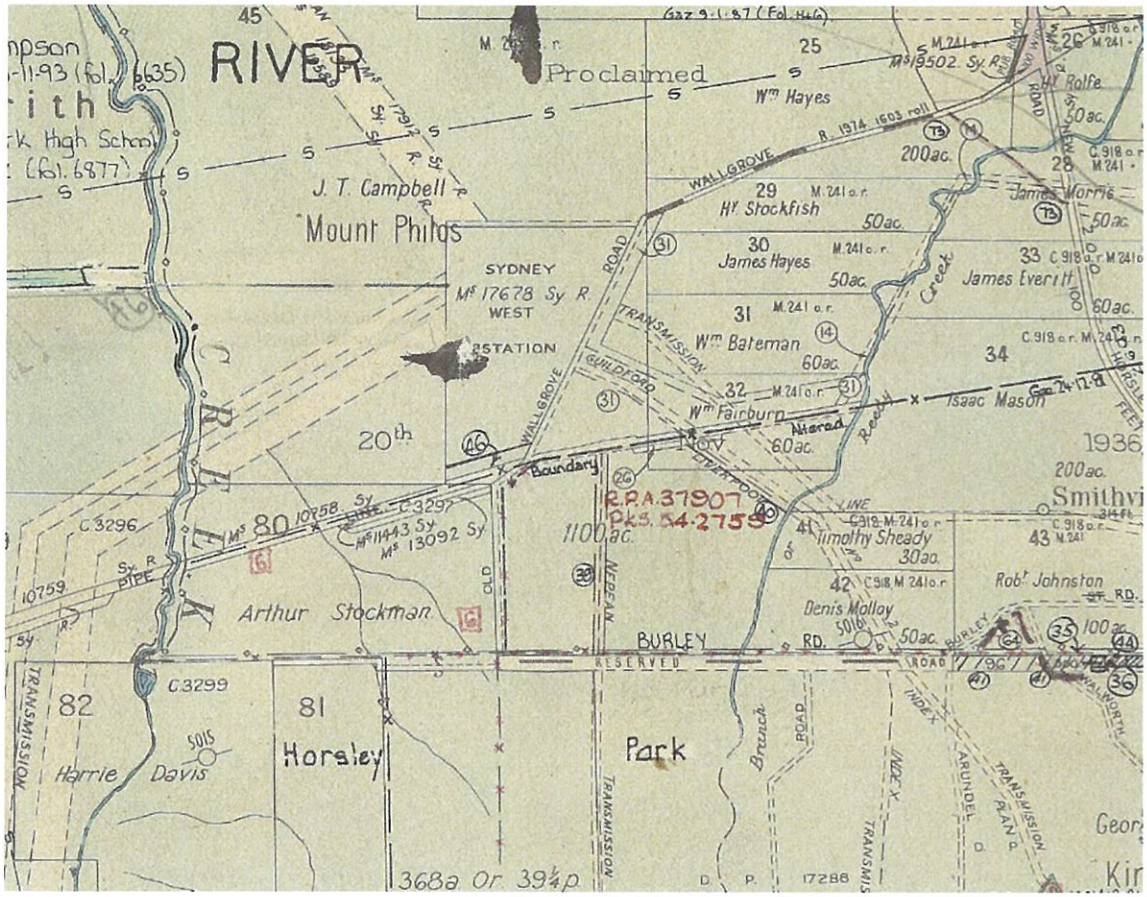

Figure 2.5 1968 Melville Parish Map, showing the route of Old Wallgrove Road, as present in the study area in 2014. (Source: HLRV, DPI, accessed online, 2014)

3.0 Aboriginal Heritage Desktop Assessment and Visual Inspection

3.1 Relevant Local Archaeological Literature

A number of archaeological studies and academic works have been prepared that include the study area. Those works and reports of direct relevance to this due diligence assessment are detailed below. The location of these studies is shown in Figure 3.1.

A literature review of the OEH library (and additional reports held by GML) was undertaken to understand the broader region's archaeological patterning. Key word searches were used to find reports for the locality in AHIMS. A review of key reports is provided, in chronological order, below.

Kohen, 1985[9]

Kohen was commissioned to survey four separate study areas that were (at the time) rezoned for industrial purposes by the Blacktown City Council. The purpose of the study was to identify areas of archaeological potential and assess the significance of associated Aboriginal artefact deposits.

The Cloyton study area was 1.4km² and located approximately 3.5km north of the current study area. Kohen identified five small sites (identified by Kohen as having more than two artefacts but less than 50) within the Cloyton study area, most of which were located along permanent freshwater sources.

The Huntingwood study area covered 1.5km² and was located approximately 6km east-northeast of the current study area. Two small sites and two isolated finds were located within the Huntingwood study area, primarily located on ridge tops. Freshwater courses were not located within or in close proximity to this study area.

Kohen's Arndell study covered an area of 3.8km² and was located approximately 6.5km east-northeast of the current study area. Kohen acknowledged that the visibility during the survey of this study area was poor; however, four small sites and two isolated finds were located during the survey. Kohen noted that the majority of sites and artefacts were indicative of campsites and were all located within 100m of Bungarribee Creek.

The Glendenning study area was 1.6km² and located approximately 7.6km northeast of the current study area. Kohen noted that of the four study areas, Glendenning was the only one to have both a permanent water source and a ridgeline occurring together. One large site (identified by Kohen as containing more than 50 artefacts), five small sites and five isolated finds was recorded during the Glendenning survey.

Kohen concluded that the predictive model, which stated sites will be clustered near permanent freshwater sources and ridgelines, was proved correct in these instances.

Curran, 1997[10]

Curran in 1997 investigated an allotment immediately south of Lot 2 DP102673 for a quarry and landfill development proposal. The area was already in use as a quarry and the land was assessed to be highly disturbed in most portions. Curran identified two isolated stone artefacts and an 'open campsite' consisting of two artefacts in a disturbed context. These were recommended for

destruction under a NPW Act Section 90 permit, although it is not clear whether this was granted and enacted.

Appleton, 2002[11]

Appleton was engaged by RW Corkery & Co. Pty Ltd to investigate the Aboriginal archaeology of Lot 2, DP 120673 for proposed clay and shale extraction within the study area. The current study area is within the western portion of the Appleton study area.

Appleton identified two artefacts during his survey, the first of which was located 50m outside his study area along a slumped section of the bank of Ropes Creek. Both artefacts identified were located outside the boundary of the current study; one approximately 80m to the east and the other approximately 500m to the east of the study area.

Appleton recommended that further archaeological investigation and approval was required before works could proceed.

Navin Officer, 2003[12]

In 2003 Navin Officer was engaged by Integral Energy to conduct an archaeological assessment for a proposed 3.5km 132kV transmission line from the Sydney West Substation to Erskine Park. The Erskine Park study area is located approximately 800m northwest of the current study area.

During the survey two open artefact scatters and one PAD were identified. The PAD (EP PAD 1) was located approximately 1km north of the current study area on the eastern and western banks of Ropes Creek. The two artefact scatters are located approximately 1km (EP2) to 1.2km (EP1) northwest of the study area. EP1 was located within a minor drainage line in an erosional scour. EP2 was located within a backhoe trench adjacent to a minor drainage line.

The report concluded that the study area was similar in both landscape and archaeological potential as previous predictive models.

AHMS, 2005 a[13] and b[14]

An Aboriginal archaeological assessment was undertaken ahead of a proposed extension of aged care facilities known as Emmaus Village at Kemps Creek, immediately to the west of Lot 1 DP 102673 in 2005.[15] The survey was located adjacent to the existing village and included some relatively undisturbed regrowth woodland near a first order tributary of South Creek. The survey resulted in the recording of four open artefact scatters (EV1–4) and a recommendation to undertake a broad scale testing program in the vicinity of sites EV3 and EV4. This testing program involved the bulk mechanical excavation of eighteen 1m x 1m pits at 50m intervals along four transects.[16] The excavations revealed topsoils of between 50mm to 150mm in depth with a moderate level of historical and natural (bioturbation) disturbance. The testing program retrieved 11 stone artefacts in total.[17]

Navin Officer, 2005a

The area known as the Erskine Park Employment Lands is bounded by the suburb of St Clair to the north, Ropes Creek to the east, the Prospect Water Supply Pipeline to the south, and Mamre Road to the west. This area has been the focus of a number of Aboriginal archaeological surveys and cultural heritage assessment projects over the last two decades which have resulted in the identification of a number of low density surface artefact scatters and isolated finds, and areas that

have been recommended for further subsurface archaeological investigation prior to redevelopment.[18]

The eastern portion of the Erskine Park Employment Lands has minor disturbances from historical use and has similar topography and landform features to the current study area. Survey of this area[19] resulted in the identification of two isolated stone artefacts and an open campsite consisting of three artefacts. Areas of archaeological potential in addition to several previously recorded sites were also reported. Archaeological potential was identified primarily in association with the banks and floodplain of Ropes Creek. The study recommended an archaeological testing program to be undertaken to investigate these further. These recommended archaeological test investigations have not occurred to date.

It is noteworthy that although open campsites have been recorded in most topographic contexts (such as floodplain, hill slope, ridge top landforms) within the Erskine Park Employment Lands, the majority have been reported to consist of less than 25 artefacts in total with densities of less than one artefact per square metre.

A number of subsurface investigations of areas across the CSR lands in the central western portion of the Erskine Park Employment Lands, immediately north of Lot 1 DP102673 have been undertaken to date. The first of these examined two areas near Lenore Lane along the northern edge of the CSR lands, with a total of 21, including 17 mechanically excavated test pits being investigated.[20] These works recorded less than 50 artefacts in total across 20 of the 38 test pits, indicating a very low artefact density attributed to low intensity use of the local landscape by Aboriginal people in the past.

Further excavations were undertaken in 11 areas across the CSR lands, sampling different topographic contexts and avoiding existing quarried areas in the western portion of the land. Initially 256 mechanically excavated pits were excavated across the 11 sampled areas, with a total of less than 300 artefacts being recovered from around a third of the test pits.[21] Additional testing in an area referred to as Area 11 involved a further 24 test pits and identified 172 artefacts within these pits.[22] Most pits were found to contain low artefacts numbers (averaging less than five artefacts per square metre but up to almost 30 in some locations).

In summary, the above archaeological excavations have demonstrated a generally low density distribution of Aboriginal archaeological material across similar topographic contexts that are present within the current study area at Oakdale.

Navin Officer, 2005b

The study area examined by Navin Officer was bounded by the Western (M4) Motorway to the north, Wallgrove Road to the east, the Prospect Water Supply Pipeline to the south, and 330kV power lines east of Ropes Creek to the west. Its designation as employment lands under SEPP 59 led to a progressive Aboriginal archaeological planning study being completed for the area over the period spanning 2002 to 2005.[23] These studies summarised previous investigations[24] which had identified archaeological sites in the area and involved additional field survey, resulting in the identification of further sites and areas of archaeological potential.

The 2002 to 2005 studies also involved a detailed landscape/land use and archaeological sensitivity analysis which resulted in the ranking of the SEPP 59 lands into three management zones (1, 2 and 3). Zone 1 was regarded as having the highest level of archaeological sensitivity and thus areas for conservation, while Zone 3 was determined to have the least.

Four Aboriginal archaeological test excavations have been undertaken within this study area in recent years, some of which have been triggered as a result of conservation and investigation policies instigated by the aforementioned studies.

DSCA[25] in 2003 excavated an area containing several previously identified low density surface scatters of artefacts located in the now Wonderland Business Park situated in the central eastern portion of the SEPP 59 lands. These works resulted in the recovery of five additional subsurface artefacts over the twenty excavated pits investigated during the project. The areas assessed during the program were found to have high levels of historical disturbance and erosion. Approximately thirty additional surface artefacts were also located during the project but none of these was in situ.

Two areas within the Austral lands in the southeastern corner of the SEPP 59 lands were test excavated in 2004. The Austral Site (AHIMS #45-5-2986) along Reedy Creek in the southeastern corner of the SEPP59 lands was found to contain densities of 17 artefacts per square metre. This density was still considered relatively low and the site was not recommended for further investigation or preservation.[26] The second excavation involved the Austral 4 site (AHIMS #45-5-3076) which was found to have very low densities of stone artefacts.[27]

The most recent excavations were undertaken at two adjacent areas of archaeological potential (EC3/1, AHIMS #45-5-3201 and EC3/2, AHIMS #45-5-3202) identified during McDonald's original SEPP 59 studies.[28] The areas investigated were located within lands known as 'Wonderland Surplus' in the northeastern portion of the SEPP 59 development study area. The excavations involved archaeological salvage of a number of targeted landforms including hill slopes and a low ridge top landform. Over 1500 artefacts were retrieved during the investigation program from around one hundred 1m x 1m pits. These artefacts represented an average density of less than one artefact per square metre in total, with some areas having a higher density than others.

In summary, with the exception of the Austral site (AHIMS #45-5-2986), all surface Aboriginal archaeological sites and excavated subsurface sites contained within the SEPP 59 lands have to date been found to comprise artefact densities of less than two artefacts per square metre.

Navin Officer, 2007[29]

In 2007 Navin Officer was engaged by FDC Building Services Pty Ltd to undertake a subsurface test excavation program at the previously surveyed Erskine Park Employment Area. The aim of the test excavation was to identify the nature and extent of the three previously identified Aboriginal sites (EP1, EP 2 and EP PAD 1).

The excavation was undertaken by backhoe and mechanical excavation equipment while monitored by archaeologists and Aboriginal stakeholder representatives. The study area was divided into four areas and a total of 112 test units were excavated with a total of 310 stone artefacts identified within 70 of the 112 test units.

It was concluded that average densities were 5.7 artefacts per square metre. The dominating raw material types identified during the excavation were silcrete (70%) and tuff (21.3%). Area 2, a spurline crest along Ropes Creek had the highest densities. Area 3, a valley floor, had the second highest densities while Area 4 and Area 1, adjacent to a first order drainage line, were identified as low potential landforms.

GML 2007[30]

In 2007 GML completed the Oakdale Concept Plan—Aboriginal Heritage Assessment and Impact Statement covering the Central, East, West and South precincts. This assessment informed the Environmental Assessment for the Central Concept Plan and DHL Project, the Concept Plan for which has been approved with certain conditions.

GML undertook a survey as part of this assessment and identified five isolated finds and six 'open campsites' (artefact concentrations). Three of the isolated finds and five of the artefact concentrations were along and/or within 200m of creek lines. The sites were considered to have low artefact densities and it was concluded that the study area would not have been subject to intensive Aboriginal use in the past.

According to the Environmental Assessment, Oakdale Central contained eight previously recorded Aboriginal sites/objects. Four of these sites/objects were destroyed under a Section 90 AHIP (December 2007) as part of the approved Bedford Quarry operations.

GML 2013[31]

Since 2012 GML has been undertaking archaeological investigations, including survey and test excavation, for Goodman across the Oakdale Central precinct, 500m due east of the current study area. The investigations have focused on landforms associated with Ropes Creek, where a series of archaeological test excavations, followed by open salvage excavation uncovered stratified archaeological sequences, contained with South Creek alluvium. Unusually, these deposits also presented evidence for Aboriginal ground ovens and some hearths. Excavations on the slopes above the flat creek terraces, on Blacktown soil, identified some low density concentrations of stone objects.

The outcomes of the investigations have identified that the region does contain a subsurface archaeological record with evidence other than stone objects. The focus for Aboriginal activities was associated with raised terraces adjacent to higher order water courses, with some smaller locations of Aboriginal use (relating to stone object use) on the low hilltops overlooking the creek systems.

The landforms of the current study area are different to those investigated by GML for Oakdale Central.

3.2 Visual Inspection of the Study Area

A visual inspection of the study area was undertaken on 22 May 2014. The inspection sought to observe areas with potential residual soil profiles, which may have held potential for Aboriginal objects. Figures 3.2 to 3.7 provide a visual overview of the study area and the impacts associated with historical development.

It was found that, in general, soil profiles associated with the length of Old Wallgrove Road had been excavated and cut down through the basal clays for the purpose of road and service construction (Figures 3.3 and 3.4). In some places road construction had necessitated a build-up of soils to form a road platform (Figure 3.6).

Land either side of Old Wallgrove Road had also been extensively modified. Most of the road margins have been subject to recent development impacts associated with construction for

transport and logistic facilities. Older development impacts were associated with the Sydney Water Supply Pipelines (Figure 3.6), and the large electricity sub-station facility (Figure 3.5).

Prior to the inspection, analysis of aerial photography indicated that three zones (in the north, centre and south of the study area) appeared to hold some possibility for remnant soils. These locations were inspected in more detail to determine their level of archaeological potential.

The zone in the north (Figure 3.3) on the east side of the road contained vegetation regrowth trees, and had been extensively excavated; this was witnessed by the nearby stockpiles of soil, the cut down landform below the level of the road and the elevated battered banking outside the study area, behind the regrowth vegetation. This zone was found to hold no archaeological potential.

The central zone, opposite the electricity substation, was found to contain scoured topsoils to basal clay associated with the installation of extensive electricity pylons (Figure 3.5). Soil profiles in this area had been modified by excavations and road formation, with the consequence that the zone was found to hold no archaeological potential.

The zone in the south (Figure 3.7) was found to have been extensively excavated and cut for road construction. Basal clays were observed within the study area. This zone was found to hold no archaeological potential.

3.3 Aboriginal Community Consultation

The preparation of the due diligence report has not included Aboriginal community consultation. Community consultation is not a compulsory component of a due diligence assessment.

Therefore, it is not possible to comment on whether the Aboriginal community would determine that the study area possess or has the potential to possess any values connected to Aboriginal aesthetic, historical, social or scientific significance.

3.4 Synopsis of the Desktop Assessment and Visual Inspection

The desktop assessment and visual inspection does not indicate that there are (or are likely to be) Aboriginal objects in the area of the proposed activity. It is recommended that the proponent can proceed with caution without an AHIP application. Details with respect to the mechanism for dealing with the unexpected discovery of an Aboriginal object are established in Chapter 5.

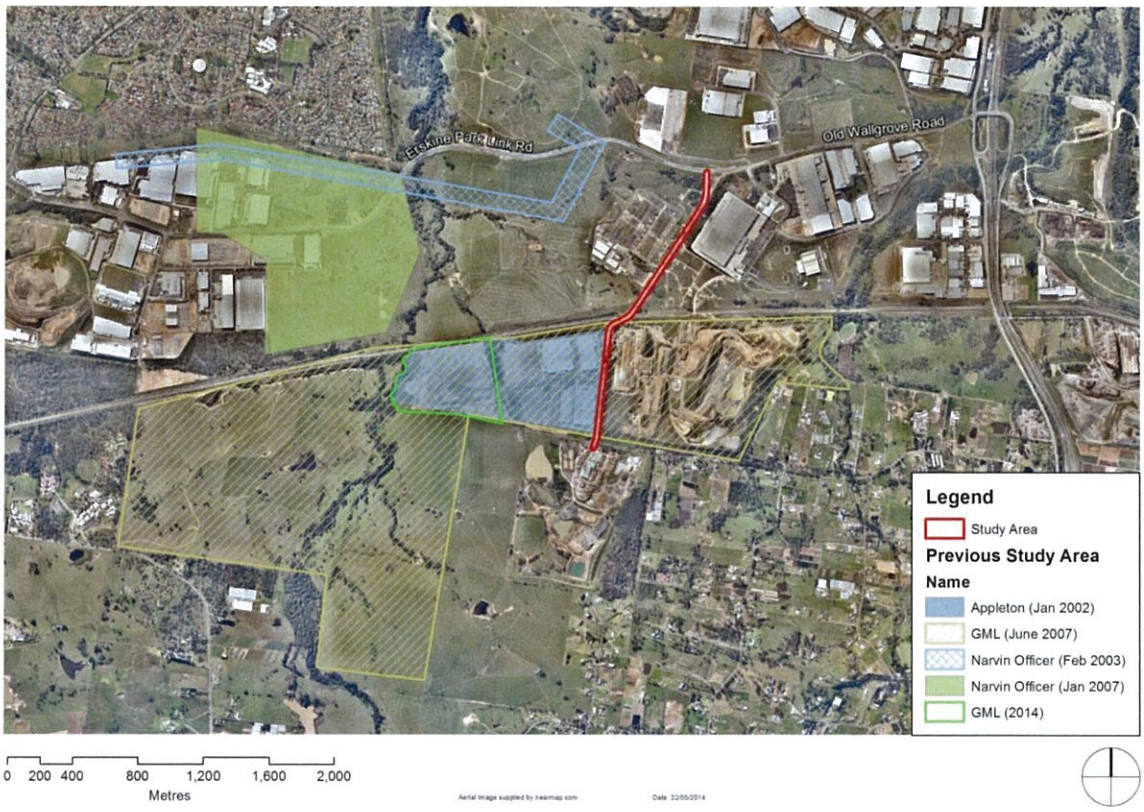

Figure 3.1 The location of previous studies. (Source: Google Maps with GML inclusions, 2014)

Figure 3.2 The location of views A to E. (Source: Google Maps with GML inclusions, 2014)

Figure 3.3 View A. Regrowth vegetation on an excavated and cut landform. (Source: GML 2014)

Figure 3.4 View B. The Old Wallgrove Road construction cut the adjacent landforms. Services are installed in the road verges. (Source: GML 2014)

Figure 3.5 View C. Eroded and modified landforms below the electricity pylons. (Source: GML 2014)

Figure 3.6 View D. Extensive excavations and soil build up to traverse the Sydney Water Supply pipelines. (Source: GML 2014)

Figure 3.7 View E. Excavations have cut the natural landforms for road construction. (Source: GML 2014)

4.0 The Proposed Works and Potential Impacts

4.1 Description of the Proposed Works

The McKenzie Group has defined that the extent of works for the upgrade of Old Wallgrove Road will involve the following works:

- The upgrading and reconstruction of the road for the extent shown on AT&L's drawings—C351 to C358 Issue C (the extent is shown in Figure 4.1). This largely entails utilising the existing road reserve, following the existing road carriageway and upgrading to a four lane, two-way carriageway with kerb and gutter and a centre painted median.
- Provision of road pavement drainage and cross drainage.
- Development and improvement of the horizontal and vertical to cater for an 80kph design speed (to be confirmed with Council/RMS). The road is to be designed in accordance with RMS design standards, including RMS Austroads supplements.
- Upgrading and signalisation of the intersection at Old Wallgrove Road and Millner Avenue along with minor changes to the signals at the EPLR and Old Wallgrove Road.
- Provisions will be made for future signalisation of the access points to SCA and Transgrid. This will include a signal plan design and the installation of conduits. Provision of access to the Sydney Catchment Authority pipelines (CH 670) and Transgrid property (CH 1000 and 1550).
- A tie into the intersection of Old Wallgrove Road and Erskine Park Link Road.

The proposed alignment utilises the existing road reserve with acquisition required along the length of the upgrade to accommodate the new road formation.

4.2 Possible Impacts Arising from the Proposed Works

The proposed works will remove the existing road and expand this road width to include land currently associated with the road verge. This work would necessitate excavation, movement and impact to all soil horizons located within the new road's footprint. The width of potential impact has been determined to be 30m maximum, for the length of the road upgrade.

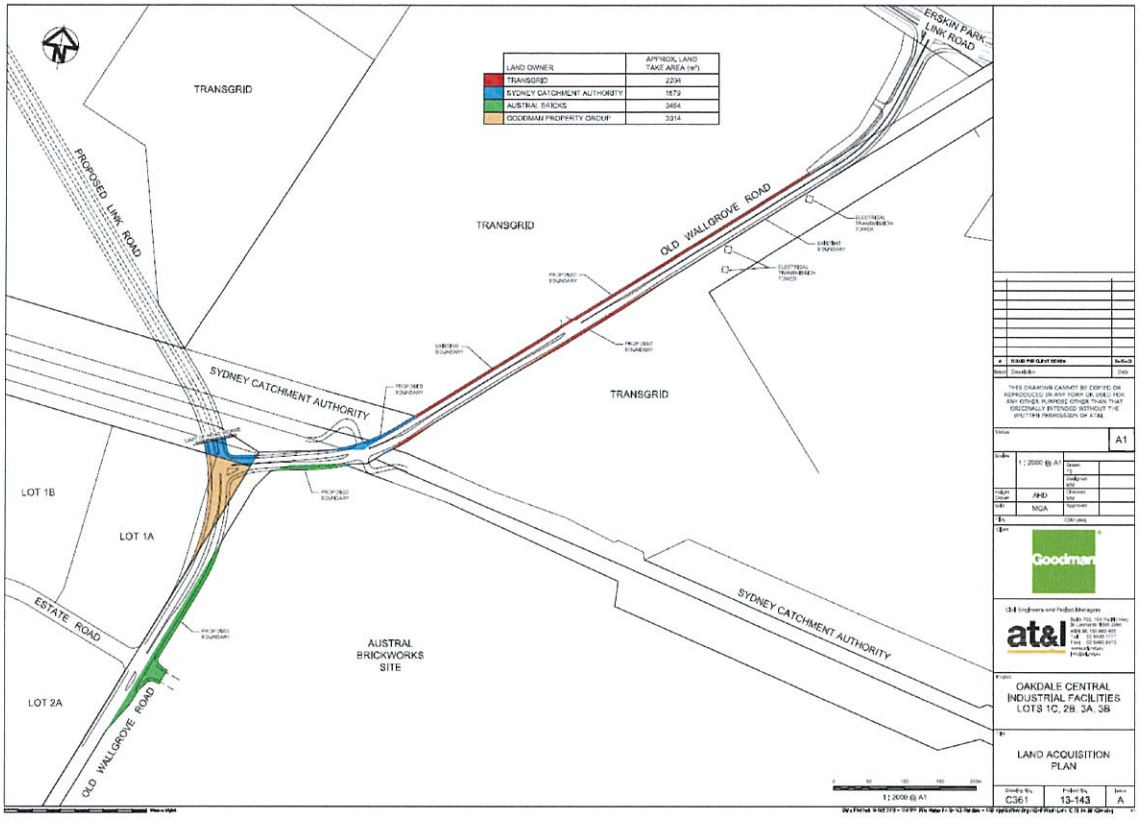

Figure 4.1 The proposed extent of Old Wallgrove Road Upgrade. (Source: McKenzie Group, 2014)

5.0 Recommendations and Conclusions

5.1 Findings of the Due Diligence Process

This due diligence report has identified that there are no known or recorded Aboriginal heritage sites located within the study area. The desktop and visual inspection of the study area has indicated that there is no Aboriginal archaeological potential associated with the study area.

Similar local landforms near the study area are not known and have not previously been recorded as containing Aboriginal sites or Aboriginal objects. Had the study area not been subject to any historical impacts, it is unlikely to have held a high level of archaeological potential.

The study area has been subject to a high level of disturbance, soil impact and soil modification. These impacts arise from historical road construction, installation of services adjacent to the road verges, construction of industrial facilities on land abutting Old Wallgrove Road, and apparent cutting and filling for the above activities, combined with erosion and impacts from land use immediately outside the study area.

The combination of low archaeological potential associated with the landforms present in the study area, and the extent of historical impacts across the study area, determines that it does not hold the potential to contain Aboriginal objects.

Therefore, given the nature and constraints associated with the study area, the following recommendations are made.

5.2 Required Aboriginal Heritage Management

The findings of this Aboriginal heritage due diligence report are that the proposed Old Wallgrove Road upgrade works can proceed, subject to caution. At the current time no further Aboriginal archaeological assessment is required. As there are no Aboriginal objects located within the study area and it does not possess Aboriginal archaeological potential, an Aboriginal Heritage Impact Permit (AHIP), under Section 90 of the NPW Act, is not required.

Should Aboriginal objects (stone artefacts or other possible Aboriginal archaeological material or site) be identified within the study area, then any works in the vicinity of the find should cease. In such a case, the company responsible for works should contact a professional Aboriginal archaeologist to determine whether the material or site is of Aboriginal manufacture or origin.

Should an Aboriginal site or object be identified, the OEH should be notified, and the object and/or site should be recorded in AHIMS (in accordance with Section 89A of the NPW Act); and if the site and/or object cannot be avoided, an AHIP would need to be procured before work can re-commence.

6.0 Endnotes

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7 Benson, D and Howell, J, 1990, *Taken for Granted: The bushland of Sydney and its suburbs*. Kangaroo Press (in association) with the Royal Botanic Gardens, Sydney.

8 See for example Denson and Howell, op cit.

9 Kohen, JL, An Archaeological Survey of Industrial Land in the City of Blacktown, report prepared for the National Parks and Wildlife Service, 1985.

10 Curran, N, 1997, Aboriginal Heritage Assessment. Lot 1 of DP 106143. Horsley Park, NSW, report prepared for CMPS&F Pty Ltd.

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13 AHMS, Emmuas Village, Kemps Creek, NSW. Aboriginal Archaeological Assessment, report prepared for Catholic Health Care Services Ltd, 2005a.

14 AHMS, Emmuas Village, Kemps Creek, NSW. Aboriginal Archaeological Test Excavation Report, report prepared for Catholic Health Care Services Ltd, 2005b.

15 AHMS op cit, 2005a.

16 AHMS, op cit, 2005b.

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18 See for example McIntyre, S, An Archaeological Survey of Proposed Quarry Extensions at Erskine Park, NSW, report prepared for the Readymix Farley Group, NSW, 1984; Jo McDonald Cultural Heritage Management Pty Ltd, Archaeological Survey of CSR Lands, Erskine Park, NSW, report prepared for GHD on behalf of CSR, 1998; Jo McDonald Cultural Heritage Management Pty Ltd, Archaeological Survey for Aboriginal Sites. Proposed Light Industrial Subdivision, 'Austral Site', Mamre Road, Erskine Park, NSW, report prepared for Gunninah Environmental Consultants on behalf of Austral Brick Company (care of the Hanover Property Group) 2000; HLA Envirosciences, Indigenous Heritage Assessment. Erskine Park, report prepared for CGP Management Limited, 2004; Navin Officer Heritage Consultants Pty Ltd, Erskine Park Employment Area. Ropes Creek, Western Sydney. Cultural Heritage Assessment, report prepared for Mullane Planning Consulting Pty Ltd, 2005c.

19 Navin Officer Heritage Consultants Pty Ltd, CSR Lands at Erskine Park—Test Areas 1 and 2. Archaeological Sub-surface Testing Program, report prepared for CGP Management Pty Ltd on behalf of CSR Limited, 2005a.

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21 Navin Officer Heritage Consultants Pty Ltd, CSR Lands at Erskine Park. Archaeological Sub-surface Testing Program, report prepared for CGP Management Pty Ltd on behalf of CSR Limited, 2005b.

22 Navin Officer Heritage Consultants Pty Ltd, Archaeological Sub-surface Testing Program for a Proposed Access Road, Erskine Park, NSW. Addendum to CSR Lands at Erskine Park. Archaeological Sub-surface Testing Program, report prepared for CGP Management Pty Ltd on behalf of CSR Limited, 2005d.

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[29] Navin Officer, Erskine Park Employment Area, Ropes Creek, Western Sydney, NSW, report prepared for FDC Building Services Pty Ltd, 2007.

[30] GML, Oakdale Concept Plan Aboriginal Heritage Assessment and Impact Statement, report prepared for Goodman International Limited, 2007.

[31] GML, Oakdale Central. Aboriginal Archaeological Technical Report, prepared for Goodman Property Services Pty Ltd, 2013.

APPENDIX 6

CORRESPONDENCE FROM LANDOWNERS – IN-PRINCIPAL SUPPORT

SYDNEY CATCHMENT AUTHORITY

PO Box 323 Penrith NSW 2750
Level 4, 2-6 Station Street
Penrith NSW 2750
Tel 1300 722 468 Fax 02 4725 2599
Email info@sca.nsw.gov.au
Website www.sca.nsw.gov.au

Ref: D2013/113817

24 January 2014

Mr Pascal van de Walle
Development Assessment Systems and Approvals
NSW Planning & Infrastructure
GPO Box 39
Sydney, NSW, 2001

Dear Mr van de Walle

Warehouse and Distribution Facilities, Oakdale Central (SSD 6078)

Thank you for the invitation to comment on the Development Application (DA) and Environmental Impact Statement (EIS) for the above proposal.

The twin pipelines from Warragamba to Prospect, which are owned and managed by the Sydney Catchment Authority (SCA), are immediately adjacent to the land covered by the Oakdale Central Project. These pipelines are critical public infrastructure and are potentially affected by the proposed development.

The SCA has a number of overall concerns in regard to developments that may impact on the integrity of the Pipelines and the its ability to manage them. These are:

- **Protection of the Pipelines:** Development, especially major construction projects, potentially can have impacts on the integrity of the Pipelines and service corridor. These impacts include changes in drainage and stormwater that may increase flooding, subsidence and erosion; unauthorised breaches of the corridor; and damage to the actual infrastructure of the Pipelines, particularly during construction activities.
- **Operation and maintenance of the Pipelines:** Development proposals adjacent to, or crossing the Pipelines, may impact on the SCA's ability to safely and effectively access the Pipelines for management and emergency purposes. The SCA needs to be able to maintain vehicle access to the Pipelines and service corridor to undertake operations and maintenance activities.
- **Security and public safety:** In the experience of the SCA, increased commercial, residential and transport development occurring adjacent or near to SCA's infrastructure has a direct correlation with an increased occurrence of security incidents. This includes trespass, malicious damage, rubbish dumping, arson, assault and threatening behaviour. The proximity of development can also have a detrimental impact on our ability to employ security measures of choice due to aesthetic, safety and other considerations. To counter such security risks, the SCA will incur an increase in costs as development encroaches on the Pipelines, through new security works, increased patrolling and response, maintenance of new barriers, repair of damaged barriers, increased signage and lost time due to increased incident investigation.

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SYDNEY CATCHMENT AUTHORITY

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Tel 1300 722 468 Fax 02 4725 2599
Email info@sca.nsw.gov.au
Website www.sca.nsw.gov.au

Our specific concerns about aspects of the proposed development and the assessment of impacts provided in the (EIS) include:

Protection of SCA Infrastructure

There is a risk of accidental damage to the SCA's Pipelines from construction activities close to the SCA's land, such as earthworks and building on Lot 3 or pile driving associated with the upgrade of Old Wallgrove road. Once the project is completed, there will a risk of damage to the Pipelines from vehicle accidents, particularly as the top of the building pad on Lot 3 will be directly adjacent to and higher than No 1 Pipeline, and increased heavy vehicle traffic is expected along the upgraded Old Wallgrove Road.

The SCA requests that any approval of this development includes the following conditions:

- The Proponent shall:
  a) implement all practical measures to prevent damage to the Sydney Catchment Authority's water supply infrastructure that may result from construction or operation of the project;
  b) install temporary traffic barriers during construction wherever construction activities are undertaken immediately adjacent to the Pipelines corridors; and
  c) repair, or pay all reasonable costs associated with repairing Sydney Catchment Authority infrastructure that is damaged by the project.
- The Proponent shall monitor vibration from any pile driving, or similar work, in close proximity of the Sydney Catchment Authority's Pipelines and establish appropriate thresholds to ensure their structural integrity is not compromised.
- The Proponent shall install traffic barriers along the section of Old Wallgrove Road and other trafficable areas that are adjacent to the Sydney Catchment Authority Pipelines corridor, in particular the building platform for Lot 3. These barriers shall be designed to the appropriate standard to restrain B-Double vehicles and in consultation with the Sydney Catchment Authority.

Stormwater Management

The EIS states that stormwater drainage has been designed to comply with the requirement that post development stormwater flows are no greater than pre-development stormwater flows. The SCA supports this approach to minimise flooding within the Pipelines corridor downstream of the project and requests that any approval of this development includes an appropriate condition requiring post development stormwater flows to be no greater than pre-development stormwater flows where such flows enter the SCA's Pipelines corridor.

SYDNEY CATCHMENT AUTHORITY

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Penrith NSW 2750
Tel 1300 722 468 Fax 02 4725 2599
Email info@sca.nsw.gov.au
Website www.sca.nsw.gov.au

Operation and maintenance of the Pipelines

Although there is no development work proposed within the Pipelines corridor, construction activities, in particular associated with the upgrade of Old Wallgrove Road, may impact on the SCA's ability to safely and effectively access the Pipelines corridor for management and emergency purposes. The SCA requests that any approval of this development includes the following condition:

- The Proponent shall ensure development activities associated with the Project are undertaken in a manner that does not restrict the Sydney Catchment Authority from operating and maintaining the Pipelines. This includes not restricting vehicle or machinery access to the Pipelines corridor or along the existing roadway within the corridor.

Security Fencing

The EIS identifies a requirement to construct a security fence along the Pipelines corridor. Security fencing is required to minimise the potential for the public to access the Pipelines and associated corridor. The SCA requests that the following condition be included in any approval of the development:

- Fencing along the common boundaries between the site and the Sydney Catchment Authority (SCA) Pipelines corridor shall be designed in consultation with the SCA and in accordance with AS/NZS 1725:2003 – Chain-link Fabric Security Fencing and Gates, Appendix A, Type 2 T–B/B-.
- Any existing security fencing along the Sydney Catchment Authority (SCA) Pipelines corridor that is damaged or requires replacement as a result of construction or operation of the Project shall be reinstated to the SCA's requirements and with all reasonable costs met by the Proponent.

Incident Notification and Entry into Sydney Catchment Authority Land

In order to ensure appropriate protection and management of the water supply infrastructure and timely response to incidents, the Sydney Catchment Authority requires notification of any accident, spill or fire within, or potentially affecting the Pipelines corridor. Access to SCA lands is strictly prohibited, except as allowed by an access consent issued under clause 9 of the Sydney Water Catchment Management Regulation 2013. The SCA requests that the following conditions be included in any approval of the development:

- Any incident, such as accident, spill or fire, that occurs in, or potentially affects, the Sydney Catchment Authority (SCA) Pipeline corridor shall be reported to the SCA on SCA's Incident Notification Number 1800 061 069 (24 hour service) as a matter of urgency.
- The Proponent, or any of its contractors, may only enter Sydney Catchment Authority land in accordance with an access consent issued under clause 9 of the Sydney Water Catchment Management Regulation 2013.

Old Wallgrove Road upgrade

The SCA has no in-principle objection to the proposed upgrade of Old Wallgrove Road. The SCA's key concerns in relation to the road upgrade are the protection of the Warragamba to Prospect Pipelines and associated infrastructure and safe vehicular access between SCA land and Old Wallgrove Road.

SYDNEY CATCHMENT AUTHORITY

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The SCA requests the Department continue to consult with the SCA to ensure that access and asset protection are appropriately addressed in the final design for the Old Wallgrove Road upgrade.

The SCA is particularly concerned with the design of the access points and driveways into the Pipelines corridor. SCA operational vehicles and contractors traverse the length of the corridor, in both directions, on a daily basis. This means vehicles regularly cross Old Wallgrove Road, in both directions, going from one section of the Pipelines corridor to the other.

The SCA is concerned that neither of the most recent plans provided by AT&L on behalf of Goodman (Drawing C354 dated 21-10-2013) or AECOM on behalf of the Department (60301100-03B-FIG-ST-0007) appears to allow vehicles to safely cross Old Wallgrove Road. The SCA requests the Department undertake a road safety assessment in relation to SCA access to ensure the final design for the road upgrade provides safe access to SCA land and safe vehicle crossing over Old Wallgrove Road.

The SCA would appreciate being involved in further environmental assessment and ongoing consultation and planning for the project. If you wish to discuss any matter raised in this letter please do not hesitate to contact Neil Abraham on ph: 4724 2456 or via e-mail neil.abraham@sca.nsw.gov.au

Yours sincerely

GRAHAM BEGG
General Manager, Catchments

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Blacktown City Council
Growing with Pride

File No.: MC-10-2286

6 December 2013

Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Pascal Van De Walle

Dear Mr Van De Walle,

Re: Warehouse and Distribution Facilities, Oakdale Central (SSD 6078)
Notice of Exhibition

Reference is made to your letter received by Council on 12 November 2013 requesting that Council review the Environmental Impact Statement (EIS) from Goodman Property Services (Aust) Pty Ltd for a State Significant Development (SSD) application for the abovementioned proposal, pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Council has considered the proposal and raises no objection in principle to the proposal, however Council does have traffic and drainage concerns which the Applicant is requested to address; these are listed in Attachment A to this letter. Council would like to see the revised traffic and drainage reports to ensure these concerns have been addressed. However, if this is not possible Council requests that DPI ensure that these critical matters are addressed prior to any development consent being granted by the Minister for Planning & Infrastructure.

Should you require any further information regarding this matter, please contact Council's Team Leader Planning Approvals (South), Pauline Daw, on 9839 6000.

Yours faithfully,

Judith Portelli
MANAGER DEVELOPMENT SERVICES & ADMINISTRATION

Council Chambers • 62 Flushcombe Road • Blacktown NSW 2148
Telephone: (02) 9839 6000 • **Facsimile:** (02) 9831-1961 • DX 8117 Blacktown
Email: council@blacktown.nsw.gov.au • **Website:** www.blacktown.nsw.gov.au
All correspondence to: The General Manager • PO Box 63 • Blacktown NSW 2148

Attachment A

Council's Drainage Comments

The following amendments are requested to the Civil Design Report prepared by at&l report no 13-143-R001 (rev 3):

a) Under section 3.3.4 it is noted that on-site detention has been provided already within a number of lots, but not lot 4. Elsewhere it is noted that detention is used to limit post developed flows to pre developed flows for the 5 year to 100 year events. From Blacktown's view to only reduce the flows to the 5 year ARI event is insufficient and will potentially lead to increased scour of the natural creek systems in Blacktown that lie immediately downstream of the site. From the planning controls within the north west growth centres it has been necessary to limit the post developed flows down to pre developed flows for the 2 year events to avoid significant damage to the creeks. It is appropriate that this should be applied here as well.

b) In table 8 the Bioretention Basin Parameters are set out for the design. It is noted that a Saturated Hydraulic Conductivity of 180 mm/hr is proposed for the basins. This figure needs to represent the long term infiltration rate that can be achieved throughout the life of the filter material. Though filter media can be supplied that initially achieves this result, over time blockages occur over the filter media that make this rate unsuitable for ongoing operation. Consequently a more standard rate of between 100 to 125 mm/hr should be used for hydraulic conductivity and the basins increased slightly in size.

c) Sediment loading is the major problem associated with successful performance of the bioretention systems. Consequently there should be a requirement to defer the installation of the filter media and planting out until the upstream catchment is 90% complete including landscaping.

Council's Traffic Comments

Earlier this year in relation to Goodman's proposal for the upgrading of Old Wallgrove Road (OWR) to undertake further development in the Oakdale Precinct Council provided comments which initiated traffic modelling organised by DP&I. It is to be noted that final modelling results have not communicated to Council as yet. It is not clear to Council whether there will be one or two connections are needed in the north-south direction and what will be the status of the existing OWR in the future. Hence, we are not in a position to determine the future status of OWR. However, the following comments are provided on the proposal:

a) It is acknowledged in the Traffic report prepared by Traffix on behalf of the applicant that the final decision on the north-south link has not been made by DP&I. However, the proposed development in Oakdale is seeking existing OWR to be upgraded to a sub-arterial standard. Whilst Council does not raise objection to the proposal to upgrade OWR to a 4 lane sub-arterial road it should not preclude the number of north-south links in the BWSEA (Broader Western Sydney Employment Area).

b) The traffic report proposed to upgrade OWR in 2 stages in particular stage 2 would only occur subject to funding arrangement with State Government. Our view is that the full upgrade to a 4 lane sub-arterial road to the entire length of

OWR should be undertaken in stage one to ensure that sufficient capacity is provided to handle additional traffic generated by the development.

c) DP&I WSEA Southern Link Road Network Strategic Transport Assessment report (November 2010) indicated realignment of northern portion of this section of OWR to form a T-intersection with Erskine Park Link Road. This needs to be included in the upgrading works.

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Email address: mail@fairfieldcity.nsw.gov.au

In reply please quote: 09/03134
Your Ref: SSD 6078

Contact: Julio Assuncao on 9725 0228

18 December 2013

Mr Chris Ritchie
Manager – Industry
Development Assessment Systems and Approvals
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Attention: Pascal van de Walle

Dear Mr Ritchie,

RE: PUBLIC EXHIBITION OF STATE SIGNIFICANT DEVELOPMENT (SSD) APPLICATION NO. 6078 - WAREHOUSE AND DISTRIBUTION FACILITIES - OAKDALE CENTRAL, HORSLEY PARK

Reference is made to Council's previous advice contained in the correspondence dated 19 September 2013 (**Attachment A**) which raised a number of issues in respect to certain aspects of the proposal. Council officers take this opportunity to reiterate the advice contained therein.

In addition to the above, Council officers have reviewed the Environmental Impact Statement (EIS) dated November 2013 prepared by Mckenzie Group and provide the following comments:

Application of Section 94A under the EP&A Act and Voluntary Planning Agreement

Council's previous correspondence raised issues in respect to Council's ability to levy the applicable Section 94A contributions associated with this proposal as well as its ability to continue to levy Section 94A fees for any future redevelopment of the subject sites.

It is noted that the application is accompanied by a draft Deed of Variation to the associated Voluntary Planning Agreement which does not seek to exclude applicability of Section 94A for proposals on the subject sites. This approach is supported by Council officers.

In respect to the payment of Section 94A fees for this proposal, Council's previous submission stated that it was considered appropriate to seek the imposition of a local 1% Section 94 Levy (in accordance with the Fairfield City Council Indirect S94 Development Contribution Plan 2011) on this proposal

having regard to the following matters:

- In the long term Council is likely to have some responsibility for the maintenance of local roads allocated within the development;
- Although at this stage the proposal is not directly connected into the Fairfield Rural Area, this has potential to change as a result general traffic generation levels associated from the proposal;
- Future investigations by the State Government into regional road network and employment land issues; and
- Despite the above, there is still potential for traffic generated by the development to access and utilize the existing local road network of Horsley Park associated with journeys to work or other industrial traffic movements.

In respect to these issues the EIS provides the following:

> *The provision of Section 94A contributions is noted. Any approval issued for this proposal will require the payment of contributions prior to the issue of a Construction Certificate.*

In this regard, Council officers will raise no further objection to this aspect of the proposal subject to a condition, for any approval that may be issued, that requires the proponent to pay a local 1% Section 94A Levy to Fairfield City Council prior to the issue of a Construction Certificate.

The amount payable is estimated to be AU$888,800 based on the capital investment of AU$88,880,000.00 provided by the EIS.

Upgrading of Old Wallgrove Road

Council's previous correspondence on this matter indicated that the existing conditions of these roads were considered unsatisfactory to accommodate the additional heavy traffic expected to be generated by this proposal and that it was considered that the proposed upgrades should have been completed prior to the commencement of further development in the precinct.

It is noted that the proponent is seeking to upgrade Old Wallgrove Road as part of this proposal.

Council officers raise no objection to this aspect of the proposal but seek clarification in respect to the future required upgrades to the southern section of Old Wallgrove Road.

Clarification is sought that this section of Old Wallgrove Road will be upgraded by the proponent of the Jacfin proposal, which is likely to benefit/require the link, and that any upgrade be completed at no cost to

Council.

Permissibility Issue On-Site Detention on E2 Zoned Land SEPP Western Sydney Employment Area (WSEA)

A meeting was held between Council officers and the proponent on 21 October 2013 to discuss the proposal. Amongst the issues discussed at this meeting was the issue of permissibility of providing an On-Site Detention (OSD) within the bio-diversity lots which, as stated by the EIS, are zoned E2 Environmental Conservation under the SEPP WSEA.

At this meeting, Council officers advised the proponent that amendments may need to be made to the approved Concept Plan and/or the SEPP WSEA in which the proponent advised that they would investigate this aspect of the proposal.

In response to this issue the EIS states the following:

> *The Biodiversity Lots within the estate are zoned E2 - Environmental Conservation under the SEPP, however no work is proposed in the E2 Zone under this application as it will be approved by Fairfield Council under the development applications for the bio-retention works.*

It should be noted that the development applications, referred to in the EIS, considered by Council for the bio-retention works did not include an OSD component. The bio-retention approvals are considered to fall generally with the definition of *'environmental protection works'* which are permitted in the E2 zone under the SEPP WSEA.

Council officers consider that an OSD system, if located on E2 zoned land, does not fall under the definition of *'environmental protection works'* or *'artificial waterbody'* which in the case of the latter, specifically excludes a dry detention basin or other stormwater management construction that is only intended to hold water intermittently.

It is important to note that this advice does not imply that Council officers are supportive of locating the OSD system within the Biodiversity lots as proposed by the proponent. Council officers are of the position that the OSD system should be provided within the lot boundaries of each proposed development.

The Department of Planning and Infrastructure (DP&I) should ensure that any proposals that may seek to undertake development within the E2 zoned land (such as OSD systems) under the SEPP WSEA are permissible. In this regard, Council officers consider that amendments to the SEPP WSEA may be required which may also result in amendments to the Concept Plan.

Note: The DP&I should also be aware that there is an inconsistency within the land use table of the E2 Zone under the SEPP WSEA which uses the term *'artificial waterbodies'* whilst the Dictionary contained therein uses the term *'artificial waterbody'*.

On Site Detention System Issues

The EIS states, in the section titled 'Part E – Consultation', that "the On Site Detention (OSD) system for the proposed allotments shall be provided within the off-lot bio-retention basins as per the basin Development Application drawings approved by Fairfield City Council."

The bio-retention Development Applications 396.1/2013 and 652.1/2013 were approved 14th October and 19th November, 2013 respectively. An OSD system within the Biodiversity lots was not approved for either of the development applications. The applicant has made allowances in volume and capacity of the approved system to accommodate the additional function of the Bio-diversity basin with an OSD component.

Council officers position is that stormwater generated from a development should be managed within its boundaries. The applicant is not proposing on-site detention at lot scale, but rather treating the whole development as one and providing an OSD component within the off-lot bio-retention basins.

Council officers consider that an OSD system is a key component of the overall proposal therefore requiring the issues associated with location and permissibility, referred to earlier, to be addressed at this stage rather than relying on separate approval processes.

This approach allows for a holistic assessment process that addresses and considers all the issues associated with the proposal such as the provision of the OSD system.

Requirements for OSD Systems

The following is information relating to Council's requirements for OSD systems.

- Stormwater detention in accordance with Council's Policies, including Council's Stormwater drainage policy, Urban Area On-Site Detention Handbook and the rural Area On-Site Detention Guidelines
- OSD to be provided to cater for all impervious areas including hardstand and roof areas

In this regard, a list of Council draft conditions in respect to the OSD (**Attachment B**) is included as part of this submission.

Council officers thank you for the opportunity to comment on this proposal and look forward to liaising further with both the DP&I and the proponent in addressing the issues raised in this submission.

Council officers apologise for the late submission and thank the DP&I for the short extension to the submission deadline.

Please contact the undersigned if you have any further enquiries relating to this matter.

Yours sincerely

Julio Assuncao
LAND USE PLANNER

Attachment A – Fairfield City Council Letter dated 19 September 2013-12-17
Attachment B – Draft Fairfield City Council conditions OSD system

ATTACHMENT (A)

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In reply please quote: 09/03134
Your Ref: SSD 6078

Contact: Nelson Mu on 9725 0313

19 September 2013

Major Projects Assessment
NSW Department of Planning & Infrastructure
23-33 Bridge Street
SYDNEY NSW 2000

Attention: Chris Ritchie

Dear Sir,

STATE SIGNIFICANT DEVELOPMENT – OAKDALE CENTRAL, HORSLEY PARK

I refer to the Department's email received on 17 September 2013 in relation to a proposal for the construction of a warehouse and distribution centres logistic hub on the proposed estate allotments 1C, 2B and 3 (Lot 2 in Deposited Plan 120673) within the Oakdale Central Precinct. The proposal, as amended, now proposes the construction of 3 separate warehouses upon 3 separate proposed allotments as well as the upgrading of Old Wallgrove Road to a regional road to service the site and all land south of the Sydney Catchment Authority pipeline.

Your letter advised that the Department has received a request for the Director-General's Requirements from Goodman Ltd for a State Significant Development application and the Department is requesting comments from Council on key planning issues and assessment requirements that may be included in the DGRs for the preparation of an Environmental Impact Statement.

It is advised that Council has reviewed the submitted documentation and provides the following comments with respect to the proposal, which have been separately forwarded to the proponent.

1. **General Planning Issue - Consent Authority**

The then Minister for Planning under Part 3A of the EP&A Act, 1979 approved a Concept Plan and concurrent Stage 1 Project Approval for the establishment of Oakdale Central Precinct Industrial Estate and the construction of warehouse buildings on 2 January 2009. The approved Concept Plan permitted the subdivision of the Oakdale Central Precinct into 8 developable lots, 2 biodiversity lots, a service lot and an estate road. The approved Project Plan allowed the construction of warehouse buildings upon proposed Lot 1A and Lot 2A. The warehouse buildings and part of the estate road, known as Milne Road, have been completed and the new buildings are being occupied.

However, Part 3A of the EP&A Act has since been repealed. Council notes that the subsequent stage of the re-development of the Oakdale Central Precinct Industrial Estate did not fall within a Transitional Major Project, as was the case

with the re-development of Lot 1B. That is, DA 1084.1/2011 for the construction of a warehouse distribution facility at proposed Lot 1B of the subdivision of Lot 2 in DP 120673, which was submitted to Fairfield Council under Part 4 of the Act for the construction of a warehouse/distribution facility upon Lot 1B.

On the basis of the above and pursuant to SEPP (Western Sydney Employment Area), Council should be the consent authority rather than the Department of Planning and Infrastructure in respect to any further re-developments of the Oakdale Central Precinct.

Consequently, it is considered that the proposed grouping of the warehouses into a single application so as to satisfy the threshold requirement for a State Significant Development would be inconsistent with the spirit and intent of the provisions of the EP&A Act.

2. Upgrading of Old Wallgrove Road and the Intersection of Old Wallgrove Road and Wallgrove Road

An area of concern with the proposal relates to the capacity of Old Wallgrove Road and the intersection of Old Wallgrove Road and Wallgrove Road to handle additional trucks associated with the proposed the re-development of the Oakdale Central Precinct. It is noted that the conditions of approval of the Project Approval required the upgrading of Old Wallgrove Road between Roberts Road and the site and the upgrading of the intersection of Old Wallgrove Road and Wallgrove Road prior to the commencement of operation.

It is noted that the approved buildings on Lot 1A and 2A that formed part of Project Approval are completed and being occupied. However, the required upgrading of Old Wallgrove Road and the upgrading of the intersection of Old Wallgrove Road and Wallgrove Road are yet to commence. The existing conditions of these roads are considered unsatisfactory to accommodate the additional heavy vehicles that will be generated by the proposal.

As such, it is unclear as to why additional approval is being sought for the upgrading of Old Wallgrove Road when the Stage 1 Project Approval required such works to be completed prior to the commencement of operation of Stage 1 as conditions of consent, though the required works do not appear to have commence.

3. Site development area and landscaping

It is noted that the proposal includes extensive hard surface areas (more than 90% incorporating building and hard stand), and it appears that this level of site development is not inconsistent with the approvals for Lots 1A, 2A and 1B.

However, notwithstanding the above, Council is concerned that an inadequate, landscape buffer is provided along the property frontage.

Council requests that the landscape buffer along the estate road be increased to a minimum of 10m wide (consistent with landscape buffers for other major road frontages in the industrial areas of the City) to ensure establishment of satisfactory planting on this road frontage.

A detailed landscaped plan shall be prepared and submitted with the application. A minimum of 75% of planting on the site shall be Cumberland Plain Woodland, including a range of mature trees which are capable of establishing 30% canopy cover within the landscape cover on the site.

4. Draft Structure Plan

The proposed development, in particular with respect to the proposed extension of the estate road shall be designed and aligned taking into consideration of the Draft Structure Plan for the Broader Western Sydney Employment Area, notably the alignment of the proposed future link road.

5. Ecological Sustainable Development

Water Reuse

Consideration should be given to incorporate rainwater harvesting, recycling and reuse of sewerage to deliver potable water both within Oakdale Central, subject to approval from Sydney Water, to supplement the Sydney Water Supply.

These measures would assist in promoting sustainable development and offsetting climatic impacts associated with the proposal, subject to necessary technical matters and statutory approvals for these measures being addressed.

Potential Energy Generation

Consideration should be given to reduce reliance on connection to standard electricity and gas supplies for the future operation of the facility. In this regard, it is considered that the potential to provide further offsets against climate impacts (including carbon emissions) that may be associated with the proposal should be fully considered.

Given the large roof area of the warehouses, measures should be incorporated into the proposal to take advantage of the significant roof area associated with the proposal for the purposes of rainwater harvesting. Similarly, Council considers that further consideration should be given in both the current and future stages of the development for the inclusion of solar power and how green power can be returned to the State electricity grid.

The applicant should be required to provide advice on design requirements for future management including access and connection to the individual site grid or state electricity grid. Design loads and space for connections and equipment should be factored into design of warehouses in the development.

6. VPA and s.94A Issues

Council notes the applicant proposes to modify the Deed of Agreement with the Department of Planning & Infrastructure to enter into a voluntary planning agreement in lieu of s.94 contributions under the EP&A Act.

The proposed Deed of Variation to the VPA as proposed by the proponent relates primarily to the provision of regional rather than local infrastructure and to improvements associated with the development that would be required as part of any assessment of the proposal

Council considers it appropriate to seek imposition of a local 1% S.94A levy on the Oakdale proposal having regard to the following matters:

- In the long term Council is likely to have some responsibility for the maintenance of local roads allocated within the development;
- Although at this stage the proposal is not directly connected into the Fairfield Rural Area, this has potential to change as a result general traffic generation levels associated from the proposal;
- Future investigations by the State Government into regional road network and employment land issues; and
- Despite the above, there is still potential for traffic generated by the development to access and utilize the existing local road network of Horsley Park associated with journeys to work or other industrial traffic movements.

7. Statement of Commitments

The proposed development shall be designed and take into consideration of the approved Statement of Commitments that formed part of the approved Concept Plan and Stage 1 Project Approval for the Oakdale Central Precinct.

8. Flooding

A hydrological and hydraulic assessment has previously been undertaken for the site at the concept stage and updated for subsequent approval modifications. This model should be modified to reflect the new site layout and structures. An assessment should then be undertaken to determine:

- The impact of flooding on the proposed development and any flood risk to people and properties for the full range of the floods up to the probable maximum flood (PMF) event including potential long term cumulative impacts from potential development. This assessment should address any relevant provisions of the NSW Floodplain Development Manual (2005) and the Fairfield Citywide DCP (2013) and include mainstream and overland flooding. Flood level difference mapping showing the difference between the existing and proposed flood levels is to be provided.

- The impact of the proposed development on flood behaviour (i.e. levels, velocities and duration of flooding) and the impact of the proposed development on adjacent, downstream and upstream areas.

- The impacts of earthworks and filling of land within the proposed development. This assessment should be based on an understanding of cumulative flood impacts.

- An emergency response plan to manage floods above the flood planning level. This plan should include an assessment of the flood evacuation needs and impacts from the proposed development on the capacity or operation of existing local evacuation routes. Additionally, this plan should include consideration of a flood free access to or from the development site in extreme flood events

9. On Site Detention

On-Site-Detention (OSD) shall be provided at the lot scale and each of the proposed lot development sites. OSD shall not be undertaken outside the serviced lot's boundary (i.e. within Biodiversity lots).

Details of the OSD and associated drainage shall be designed in consultation with Fairfield City Council to our standards and must avoid any adverse impacts on downstream properties.

10. Drainage

Details of the drainage associated with the proposal, including stormwater and drainage infrastructure, which shall be designed in consultation with Fairfield City Council to Fairfield Council's requirements and must avoid any adverse impacts on downstream properties. The proposal shall address the impact of stormwater flows on the site from other catchments than the lots being developed.

11. WSUD

Details of water quality improvement to ensure stormwater leaving the site meets the water quality objectives as outlined in the Western Sydney Growth Centres – Stormwater Guidance for Precinct Planning (DEC, Nov 2006).

Undertake a detailed water balance for the site ensuring that onsite stormwater reuse is maximised

12. Stream Health

Ensure that any stormwater discharge from the lots to be developed do not detrimentally impact the stream health by localised velocity increases introducing scour

13. Natural Resource Management

Need to detail what will be undertaken in areas within the biodiversity lots (adjacent to the lots proposed lots to be developed) that are not within the scope of the vegetation management plan.

14. Traffic and Parking

The following information needs to be addressed in respect to traffic and parking for the proposal:

i. The total daily and peak hour trips generated by the development needs to be undertaken and the impacts of the traffic generated by the development on local road networks, including intersection capacity and level of service needs to be assessed.

ii. Detail access and parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards to be submitted.

iii. Information to be provided in regard to the proposed number of car parking spaces and compliance with appropriate parking codes. If the applicant proposes change of use in the future, the adequacy of parking needs to be reviewed.

iv. The design of service areas shall including provision for the largest design vehicle likely to use the facility.

v. Provision of service bays, insufficient numbers to accommodate the expected peak loading and to the specified dimensions according to the size of vehicle using them.

vi. Sufficient internal roadway widths shall be provided to facilitate service vehicles access into and out of the development.

15. Fairfield Local Environmental Plan 2013

The proposed development shall have regard to the provisions of Fairfield Local Environmental Plan 2013.

16. Fairfield City Wide Development Control Plan 2013

The proposed development shall be designed taking into consideration the provisions of Fairfield City Wide DCP 2013, particularly in respect to Chapter 9 and Chapter 12.

17. Environmental Management

Noise

In consideration of the potential noise impacts of the development, rural residential receivers located in Greenway Place and Burley Road, Horsley Park, should be included in the assessments and modelling conducted for the proposal. Consideration must be given to a range of potential noise impacts, including during the construction phase and then the proposed 24hr/7 day operational phase of the warehousing and distribution facilities (including additional traffic generated).

Contamination

Council notes that a site contamination was considered as part of the Concept Plan approval. The assessment included a Phase 1 Site Contamination Assessment for the entire Oakdale Estate, while Phase 2 Site Contamination Assessment was carried out for Oakdale Central.

The required site contamination assessment should demonstrate that the Oakdale Central precinct is suitable for commercial/industrial land use and the proposed development is consistent with the provisions of SEPP 55.

A Construction Phase Environmental Management Plan (EMP) should also be developed to provide guidance on appropriate measures to be adopted in the event that unusual ground conditions are encountered during site development and the future management of the visual bund material, to determine suitability to remain on-site.

Storage of Dangerous Goods

Details of the types and quantities of dangerous goods that may be stored within the warehouses should be provided, taking into consideration of the provisions of SEPP 33.

Sewerage and recycle Water System

The applicant shall construct all non-Sydney Water sewage and recycled water reticulation mains within private property where possible. If a main must be laid across a public road, the applicant must obtain a written agreement from the relevant road authority concerning access and maintenance arrangements for these mains, and restoration of damaged road pavements and footways prior to the commencement of construction.

Salinity Assessment

A Salinity Assessment & Management Plans should be prepared for the proposal including any affected road and drainage works in addition to building works.

Furthermore, site Salinity Assessment & Management Plans should also address any detrimental impacts resulting from the irrigation of surplus recycled water.

Soil and Water Management

A Soil & Water Management Plan should be prepared for the site. A Construction Environment Management Plan is also to be prepared which will include more detailed management measures.

I trust that the above information is of assistance and Council looks forward to liaising further with both the DP&I and Goodman in addressing the issues raised in this submission.

Please contact the undersigned if you have any further enquires relating to the above.

Yours sincerely

Nelson Mu
Senior Strategic Land Use Planner

ATTACHMENT B

Conditions to be imposed for OSD

1. **Stormwater Drainage Certificate**

Prior to the issue of a Construction Certificate, a certificate shall be submitted to the Certifying Authority certifying that:

a. Satisfactory arrangements have been made for the disposal of stormwater;

b. The proposed development and alterations to the natural surface contours will not impede or divert natural surface water runoff so as to cause a nuisance to adjoining properties;

2. **On-site Detention Design Certificate**

Prior to the issue of a Construction Certificate, a certificate shall be submitted to the Certifying Authority certifying that the drainage system has been designed to comply with:

a) Method 1/ Method 2 of Council's Urban Area On-site Detention Handbook – February 1997:

i) To restrict the total discharge from site to current site discharge for all storms up to and including the 100 year storm events;

ii) To restrict the peak discharge from the site for 100 year 9-hour storm event to 140/1/s/ha..

Note: Where Fairfield City Council is nominated to issue a Construction Certificate for on-site detention, the following details will be required:

a. Full details, as per Council's On Site Detention Handbook, of the proposed stormwater drainage system should be submitted. Details should include a full calculation schedule producing hydrologic and hydraulic grade line analysis (similar to that shown in "Australian Rainfall and runoff", published by the Institution of Engineers, Australia), catchment plan, pipe sizes, discharge points, natural and finished surface levels, invert levels, etc.

b. A plan showing the natural surface and finished surface and finished surface contours to AHD should be submitted. The natural surface contours should be extended into the adjoining properties. The finished surface contours should be of such an interval as to give a true representation of the proposed regrading of the site. If so desired, the finished surface contours may be presented in red ink on a single print of a site plan that shows proposed finished surface spot levels.

ATTACHMENT B

3. **On Site Detention – Works-As-Executed**

On completion of the drainage works and prior to Occupation, Works-As-Executed plans certified by a Registered Surveyor are to be submitted to the Principal Certifying Authority to verify that the drainage works have been completed in accordance with the approved plans. The following details are to be on the Works-As-Executed plans and shall be marked in red on a copy of the original plan approved at the Construction Certificate stage.

b. Sufficient levels and dimensions to verify the On-Site Detention storage volumes.

c. Location and surface levels of all drainage pits, weir levels and dimensions.

d. Invert levels of - the internal drainage lines.
- orifice plates.
- outlet control pit.

e. Finished floor levels of structures such as units and garages.

f. Verification that the orifice plates have been fitted and the diameter of the fitted plates.

g. Verification that a trash screen is installed.

h. Location and levels of any overland flow paths through the site.

i. Details of any variations made from approved plans.

4. **Registration of Restriction and Covenant over OSD System**

Prior to the issue of the Final Occupation Certificate, proof of the creation of a 'Restriction on Use of Land' and 'Positive Covenant' over the on-site detention system in accordance with Council's On-Site Detention Handbook (February 1997) shall be submitted to the Principal Certifying Authority.

5. **On-Site Detention – Certification of Works**

A Certificate shall be issued to the Principal Certifying Authority upon completion of the drainage works and prior to issue of the Occupation Certificate certifying the following:

i. That the on-site detention system will function in accordance with the approved drainage design.
ii. Any variations from the approved drainage design.
iii. That these variations will not impair the performance of the On-Site Detention system, or alternatively provide details of the remedial works required to make the system function according to design control standards.

ATTACHMENT B

6. **OSD – Marker Plate**

Each on-site detention basin shall be indicated by fixing a standard marker plate, details of which are as follows:

Minimum size: 150mm x 100mm

Material: Non Corrosive metal or 4mm thick laminated plastic

Location: Fixed in a prominent position to the nearest concrete or permanent surface and be above the expected water level in the basin. If in doubt, contact Council on 9725-0222.

Wording: A minimum letter height of 5mm is required. The wording is to consist of:-

THIS IS AN ON-SITE DETENTION STRUCTURE
DO NOT TAMPER WITH,
CONTACT FAIRFIELD CITY COUNCIL PRIOR
TO ANY PROPOSED WORKS IN THIS AREA

The marker plate is to be attached prior to occupation of the proposed development.

Conditions being imposed for Road Works

7. **Engineering Works Inspection Fee**

The payment to Council of engineering works inspection fee (if Council is the Principal Certifying Authority). The value of this fee will be determined in accordance with Council's Schedule of Fees and Charges with inspections being carried out in accordance with Council's Specification for Roadwork and Drainage associated with the Development. This fee will need to be paid prior to release of the Construction Certificate.

8. **Maintenance Bond**

The submission to Council of a maintenance bond covering all works constructed in association with the development. The maintenance bond is to be paid in cash or a bank guarantee. The value of the maintenance bond will be determined by Council in accordance with the rates listed in Council's Annual Schedule of Fees and Charges following the submission of "work as executed" plans detailing all works constructed in association with the subdivision.

The maintenance bond will generally be held by Council for a period of twelve (12) months from the date of issue of Subdivision Certificate on the final plan of subdivision. The maintenance bond will be released at the end of the maintenance period subject to satisfactory performance of the works. Council may use the maintenance bond to carry out any rectification works required at

the end of the maintenance period should the applicant fail to comply with any written request from Council to carry out such works.

Council will not accept "work as executed" plans with coloured highlighter markings on the plans. All dimensions and levels are to be handwritten in blue or red pen only.

9. **Alignment of Roadway**

The alignment of Old Wallgrove Road to be in accordance with plans issued with a Construction Certificate (Engineering Approval) by an Accredited Certifier or by Fairfield City Council prior to the commencement of works on site.

10. **Road Shoulder**

The road shoulder and footpath formation shall be regraded, topsoiled and turfed for the length of the upgrade of Old Wallgrove Road. This regrading is to provide an easily maintained surface that will carry stormwater flows generated by the roadway and shall be in accordance with levels issued with a Construction Certificate (Engineering Approval) by an Accredited Certifier or by Fairfield City Council prior to the commencement of works on site.

11. **Road Construction Plans**

Road construction shall not commence until the plans and specifications giving full details of the proposed construction have been issued with a Construction Certificate (Engineering Approval) by an Accredited Certifier or by Fairfield City Council.

12. **Works as Executed Drawings**

Following completion of the works the applicant shall provide a detailed "work as executed" drawing signed by a registered surveyor showing the finished surface levels of the access, road shoulder, driveway, inter-allotment drainage and any lot filling, carried out under this consent.

Council will not accept "work as executed" plans with coloured highlighter markings on the plans. All dimensions and levels are to be handwritten in blue or red pen only.

13. **Easements for all Services**

Easements shall be created over all services and/or stormwater pipelines within private property which service adjacent roads or properties.

14. **Sydney Water Compliance Certificate**

A Section 73 Compliance Certificate under the Sydney Water Act, 1994 must be obtained.

ATTACHMENT B

Application must be made through an authorised Water Servicing Co-ordinator, for details see the Sydney Water web site http://www.sydneywater.com.au/Buildingdeveloping/DevelopingYourLand/GettingaSect73ComplianceCertificate.cfm or telephone 13 20 92.

Following application a "Notice of Requirements" will be forwarded detailing water and sewer extensions to be built and charges to be paid. Please make early contact with the Co-ordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.

The Section 73 Certificate must be submitted to the Principal Certifying Authority prior to release of the linen plan.

15. **Endeavour Energy Notification of Arrangement**

The submission of "Notification of Arrangement" from Endeavour Energy stating that satisfactory arrangements have been made for the provision of underground low voltage electricity installation.

The attached application form should be completed and submitted to Endeavour Energy, Network Connections, PO Box 6366, Blacktown, NSW 2148, together with a set of plans detailing all engineering works to be constructed in association with the subdivision and a plan detailing the proposed lot dimensions.

It is considered that the provision of natural gas services is desirable to new subdivisions and in this regard, the developer is requested to liaise with Jemena, Sydney (www.jemena.com.au).

16. **Telecommunications Compliance Certificate**

The submission of a Compliance Certificate from a Telecommunications carrier as evidence that satisfactory arrangements have been made for all communications plant to be laid underground.

For further enquiries regarding the issue of the Compliance Certificate, contact Telstra on 13 22 00 or complete the online form at http://www.telstra.com.au/smart-community/developers/.

Conditions being imposed for Manoeuvring off road and Access

17. **Driveway and Manoeuvring Areas**

a. The driveways and manoeuvring areas are to be designed in accordance with Australian Standard AS 2890 part 2.

b. The internal driveways and parking areas are to be designed in accordance with AS 2890 part 1.

ATTACHMENT B

18. **Deliveries**

Vehicles servicing the site shall comply with the following requirements:

a. All vehicular entries and exits shall be made in a forward direction.

b. All vehicles awaiting loading, unloading or servicing shall be parked on site and not on adjacent or nearby public roads.

c. All deliveries to the premises shall be made to the loading bay/s provided.

Transport
Roads & Maritime
Services

17 December 2013

RMS Ref: SYD13/01013/02
Your Ref: SSD 6078

Manager –Industry
Development Assessment Systems and Approvals
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Pascal van de Walle

Dear Sir/Madam,

WAREHOUSE AND DISTRIBUTION FACILITIES – OAKDALE CENTRAL
LOT 21 DP1173181 OLD WALLGROVE ROAD, HORSLEY PARK

I refer to your letter dated 12 November 2013 regarding the abovementioned development application which was referred to Roads and Maritime Services (RMS) for comment.

RMS has reviewed the submitted information and notes that as part of this development, the applicant is proposing to upgrade part of Old Wallgrove Road. The upgrade of this section of Old Wallgrove Road does not include any traffic control signal works.

Old Wallgrove Road is a local road under the care and control of Fairfield City Council. Hence, any works on this road should be undertaken in accordance with Council's requirements and standards. RMS requests that any reference to RMS in the Planning Agreement for this development is to be replaced with Fairfield City Council.

Any inquiries in relation to this matter can be directed to the undersigned on 8849 2219.

Yours faithfully

Pahee Rathan
Senior Land Use Planner
Transport Planning, Sydney Region

TransGrid

ABN 19 622 755 774

201 Elizabeth Street (cnr Park St)
PO Box A1000 Sydney South
New South Wales 1235 Australia
Facsimile (02) 9284 3456
Telephone (02) 9284 3000
Web http://www.transgrid.com.au
DX 1122 Sydney

Network Services and Operations
/Property and Services

Telephone: 02 9284 3207
Our reference: D2013/18700
Your Ref:

NSW Department of Planning and Infrastructure

Attention: Major Projects Assessment

Dear Sirs

State Significant development (SSD 13-6078) – Oakdale Central, Horsley Park (Lot 21 in DP 1173181)

We refer to the proposed State Significant Development (SSD 13 -6078). TransGrid's property: Lot 13 in DP 115491 and Lot 6 in DP 229769 abutt either side of part of Old Wallgrove Road subject to the proposed upgrade to a sub arterial four land road included in the application. TransGrid acknowledges that this upgrade of the road is required to facilitate the Oakdale Central development proposals on adjoining land. In this regard cooperation in the proposal from TransGrid is required.

TransGrid has been involved in consultations between Goodman International, Austral, Blacktown Council, the RMS and the Department of Planning and Infrastructure and is satisfied that the road works application portions of the proposal abutting TransGrid land are consistent with those discussions.

TransGrid consents to the carrying out of the road upgrade subject to a formal agreement being established in relation to negotiations to acquisition of TransGrid land at market value and to the following improvement at the detailed design/construction documentation stage: -

- Local widening is provided in the plans at the TransGrid entrance. This will be required to provide sufficient turning circle into the drive to allow for a large truck delivering a transformer without a median strip or lights impeding access;
- Heavy duty concrete design intersection due to single heavy loads such as transformers so as repairs are not necessary after the delivery of the same;
- Bus stop nearby;
- The developer must facilitate TransGrid's vehicular access to its transmission towers. . A layback will be required in an appropriate location to be specified by TransGrid. The layback is to include a 4.5 metre wide gate for facilitating access to the transmission towers to the left of the South bound lane;
- The intersection at the main entry and the proposed road to be lit in accordance to Australian standards;
- The construction of a suitable front fence, replacement of the entranceway and gardens to a suitable standard to be agreed to by TransGrid.
- Relocation of affected underground services;
- Traffic collision guards may also be required, with earthing and isolation measures implemented along the frontage of the site capable of withstanding the impact of a large truck in order to protect existing power line stanchions;
- Drainage must be designed to prevent the base of transmission towers becoming susceptible to flooding and/or soil erosion. The existing substation drainage system is being strained to over capacity by additional drainage from the Goodman development across the road. This needs to be redirected away from the substation. Any road upgrade to the subject development will need to

adequately address the drainage issues and must not discharge into the existing substation drainage system on TransGrid land;
- and
- That appropriate screen planting is provided across the frontage of the site to reduce visibility of the infrastructure from the roadway.

The road works application plans are acceptable to TransGrid subject to the technical issues in terms of proximity to existing TransGrid high voltage towers, the existing location of and future placement of any earth wires emanating from existing high voltage towers adjacent to Old Wallgrove Road and the conditions outlined below.

TransGrid's transmission line within the proximity of the Old Wallgrove Road upgrade is the:

Sydney West to Holroyd 330KV TL

- A perpendicular undercrossing of the transmission line and easement is proposed. The TL and associated easement are subject to both vertical and horizontal clearances. The clearances provided in the design statement report at Appendix 7 of the application refer to a 132kv transmission line but do not relate to the undercrossing of a 330KV transmission line. A copy of TransGrid's standard minimum construction clearances is attached for information. TransGrid requests that detailed plans and specifications be provided for assessment by TransGrid's engineers. The detailed plans and specifications to be provided need to state the design Reduced Levels (RL) using Australian Height Datum. Upon receipt of the abovementioned plans and specifications, TransGrid can appraise whether a proposed undercrossing fulfils the vertical clearance requirements based on the maximum operating temperature of the catenaries;

- Transmission towers possess underground earthing straps that protrude from each leg of a tower. For this reason, it is important to ensure that any development within reasonable vicinity of a transmission tower remains outside of the horizontal clearances around the base of the tower, which may be greater than the width of the easement. These horizontal clearances also serve to ensure that there is a safe working platform around the base of a transmission structure;

- Horizontal distances from stanchions or other transmission structures also need to be specified on the plans (with units of measure stated), to ensure the proposed placement and design of the road does not pose a risk to the transmission line. Vertical and horizontal clearances also apply to any preliminary civil works where mounds of earth, however temporary they may be, can still hazardously alter ground levels within the clearance requirement. TransGrid's prior written approval is required before any works may commence in the clearance zone.

- The developer is to pay for TransGrid to alter any transmission line earthing system required to be altered as a consequence of the proposed road upgrade;

Although outside the scope of this application, it is noted that the future road alignment of the proposed link road to the west through Jacfin appears to be in the SEPP alignment which is consistent with the requirements not to encroach into TransGrid's land in the south western corner of our site.

Should you require further information please contact TransGrid's, Property Planning and Development Manager T: (02) 9284 3207 | M: 0428 248 458

Yours faithfully

15.12.13

TransGrid
encl

Example of Required Working Platform for Transmission Tower Maintenance

330kV Transmission Tower Maintenance

No part of this work may be copied, reproduced or stored in a retrieval system, or transmitted in any form or by any means without the prior permission in writing of TransGrid.

OBJECT BEING CROSSED		DESIGN CODE OR AGREEMENT USED TO DETERMINE CLEARANCE	MINIMUM CLEARANCE (METRES				
			500kV	330kV	220kV	132kV	≤ 66kV
GROUND		TRANSGRID DESIGN CLEARANCE	11.0	9.0	8.0	7.5	7.5
		ELECTRICITY ASSOCIATION OF NSW CODE OF PRACTICE FOR ELECTRICITY TRANSMISSION AND DISTRIBUTION ASSET MANAGEMENT - SEE NOTE 2	(9.0)	(8.0)	(7.5)	(6.7)	(6.7)
		ELECTRICITY ASSOCIATION OF NSW CODE OF PRACTICE FOR ELECTRICITY TRANSMISSION AND DISTRIBUTION ASSET MANAGEMENT - SEE NOTE 3	(7.5)	(6.7)	(6.0)	(5.5)	(5.5)
POWER LINES		TRANSGRID DESIGN CLEARANCE SEE NOTE 4	7.0	5.5	4.5	3.5	2.5
TELEPHONE LINES		TRANSGRID DESIGN CLEARANCE SEE NOTE 4	SEE NOTE 5	5.5	4.5	3.5	2.5
		SAA HB103-1997 (CJC 7) CROSSINGS CODE SEE NOTE 2		(4.6)	(3.7)	(3.0)	(2.1)
RAILWAY LINES		TRANSGRID DESIGN CLEARANCE SEE NOTE 2	15.0	12.0	12.0	12.0	10.0
		NSW STATE RAIL AUTHORITY AGREEMENT SEE NOTE 6	(10.7)	(10.7)	(10.7)	(10.7)	(8.8)
ROADWAYS		TRANSGRID DESIGN CLEARANCE FOR FREEWAYS, MOTORWAYS & MAIN ROADS UNLIKELY TO BE RETICULATED SEE NOTE 7 & 8	15.0	12.0	11.0	10.0	9.0
		TRANSGRID DESIGN CLEARANCE FOR LOCAL COUNCIL ROADS UNLIKELY TO BE RETICULATED SEE NOTE 7 & 8	15.0	10.0	8.5	8.0	8.0
		TRANSGRID DESIGN CLEARANCE FOR ROADWAYS LIKELY TO BE RETICULATED SEE NOTE 7 & 8	16.0	14.0	13.0	12.0	11.0
NAVIGABLE WATERS		TRANSGRID DESIGN CLEARANCE SEE NOTE 9	"SAFE CLEARANCE" PLUS 5.0 SEE NOTE 9				

TABLE 1

SEE NOTE 1

NOTES:

1. THE UNBRACKETED FIGURES SHOWN IN TABLE 1 ARE DESIGN CLEARANCES AND INDICATE THE MINIMUM CLEARANCE FROM CONDUCTOR TO GROUND OR SERVICES THAT SHOULD BE ACHIEVED IN THE DESIGN OF NEW OVERHEAD TRANSMISSION LINES. THE CLEARANCES SHOWN APPLY WHEN THE LOWEST CONDUCTOR OF THE OVERCROSSING SPAN IS AT MAXIMUM DESIGNED OPERATING TEMPERATURE.

2. IN SPECIAL CIRCUMSTANCES, SUBJECT TO APPROVAL BY THE MANAGER / TECHNOLOGY DEVELOPMENT, REDUCED CLEARANCES MAY BE ACCEPTED DUE TO ECONOMIC, ENVIRONMENTAL OR PHYSICAL CONSIDERATIONS. IN NO CIRCUMSTANCES SHALL THESE CLEARANCES BE REDUCED BELOW THE STATUTORY REQUIREMENTS LISTED (IN BRACKETS) IN THE APPROPRIATE CODE OR AGREEMENT DESCRIBED IN TABLE 1.

3. THE ELECTRICITY ASSOCIATION OF NEW SOUTH WALES CODE OF PRACTICE FOR ELECTRICITY TRANSMISSION AND DISTRIBUTION ASSET MANAGEMENT ALLOWS FOR REDUCED STATUTORY MINIMUM CLEARANCES OVER GROUND WHICH DUE TO ITS CONDITION IS NOT TRAVERSABLE BY VEHICLES.

4. FOR CROSSINGS OF EXISTING POWER OR TELEPHONE LINES, THE CLEARANCES SHOWN SHALL BE ACHIEVED WHEN THE LOWEST CONDUCTOR OF THE OVERCROSSING CIRCUIT IS AT DESIGNED MAXIMUM OPERATING TEMPERATURE AND THE HIGHEST CONDUCTOR OR EARTHWIRE OF THE UNDERCROSSING CIRCUIT IS AT MINIMUM DESIGNED OPERATING TEMPERATURE. IN SOME CIRCUMSTANCES, SUBJECT TO APPROVAL BY THE MANAGER / TECHNOLOGY DEVELOPMENT, A CLEARANCE LESS THAN THE DESIGN VALUE SHOWN IN TABLE 1 MAY BE ACCEPTABLE. THERE ARE NO STATUTORY MINIMUM CLEARANCES SPECIFIED IN THE ELECTRICITY ASSOCIATION OF NSW CODE OF PRACTICE APPLICABLE TO THE CROSSING OF OTHER POWER LINES OR TELEPHONE LINES.

5. THE SAA HB103-1997 (CJC 7) CO-ORDINATION OF POWER AND TELECOMMUNICATIONS - CROSSINGS CODE DOES NOT PERMIT CROSSINGS OF OVERHEAD TELEPHONE LINES BY OVERHEAD TRANSMISSION LINES OPERATING AT VOLTAGES GREATER THAN 330kV.

6. THE NSW - SRA AGREEMENT MAKES NO DISTINCTION BETWEEN REQUIRED CLEARANCES WHEN CROSSING RAILWAY LINES WITH TRANSMISSION LINES GREATER THAN 132kV.

7. CLEARANCES OVER ROADS SHOULD BE DETERMINED BY THE TYPE OF ROAD BEING CROSSED AND WHETHER OR NOT IT IS LIKELY TO BE AFFECTED BY LOWER VOLTAGE RETICULATION. TYPES OF ROADS HAVE BEEN BROADLY CLASSIFIED ACCORDING TO THE LIKELY PRESENCE OF RETICULATION AND THE APPROPRIATE DESIGN MINIMUM CLEARANCES ARE LISTED IN TABLE 1. DURING THE DESIGN STAGE OF A TRANSMISSION LINE, THE LOCAL DISTRIBUTION AUTHORITY SHOULD BE CONSULTED TO INDICATE ANY PROPOSALS FOR FUTURE DEVELOPMENT OF THEIR SYSTEM.

8. MINIMUM CLEARANCES ABOVE ROADS AS REQUIRED BY THE ELECTRICITY ASSOCIATION OF NSW CODE OF PRACTICE FOR TRANSMISSION LINES OPERATING AT VOLTAGES OF 66kV AND ABOVE ARE THE SAME AS THE BRACKETED FIGURES SHOWN IN ROW 2 OF TABLE 1, CLEARANCES TO GROUND.

9. CLEARANCES OVER NAVIGABLE WATERS ARE DETERMINED BY THE WATERWAYS AUTHORITY OF NSW. THE MINIMUM "SAFE CLEARANCE" FOR TRANSMISSION LINES ABOVE MAXIMUM HIGH WATER LEVEL AS DETERMINED BY THE AUTHORITY SHALL BE INCREASED BY 5 METRES FOR DESIGN PURPOSES.

TransGrid is the registered business name of the Electricity Transmission Authority

AMENDMENTS

01 — NOTES 2 TO 8 AND TABLE 1 REVISED TO SHOW CURRENT REGULATIONS, CODES, AGREEMENTS, AUTHORITY NAMES AND TITLES. NAVIGABLE WATERS ADDED TO TABLE 1. NO CHANGES MADE TO MINIMUM CLEARANCE REQUIREMENTS IN TABLE 1. — DRN HA; CKD SVH; DATE 25-SEP-98

TransGrid

REFERENCE DRAWINGS

DRAWN HA/PE; DESIGN DG; CHECKED DD RS; ENG SH; PASSED SVH

cad DO NOT AMEND MANUALLY

© TransGrid

KKS CODING 7TD

ORIGINAL DRAWING APPROVED BY B CORDEROY per SWH MANAGER/TPE 25-FEB-1993

APPROVED DRAWING STATUS

SCALE NONE

TransGrid

TRANSMISSION LINES
CONSTRUCTION - DESIGN
STANDARD MINIMUM CONSTRUCTION CLEARANCES FROM GROUND AND OTHER SERVICES CHART

A3 | TL613883 | 01

PREFIX NUMBER SHEET AMDT

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TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

Background

Transmission Line (TL) and cable easements are acquired by TransGrid to provide adequate clearance along the route of a transmission line for construction and maintenance work and also to ensure that no work or other activity is undertaken under or near the TL or cable which could create an unsafe situation either for persons or for the security of the TL or cable. The easement area contributes to the *prudent avoidance* of exposure by persons to EMF (Electric and Magnetic Fields).

The TL or cable easement area and its ongoing maintenance are control measures that cannot be compromised. The easement is established to prevent and mitigate against the following electrical safety risks:

- Infringement of electrical safety clearances e.g. due to an activity or vegetation growth.
- Electrical Induction e.g. due to parallel conducting materials.
- Step and touch potentials under fault conditions e.g. due to lightning or bushfire.
- Failure of structures or line equipment e.g. due to third party vehicle or plant impact.
- Transfer off easement of dangerous voltages, e.g. by services installed within the easement area.
- Blowout of a conductor under high wind (or blow in of vegetation) e.g. into an adjacent structure.

Safety to people and property is of paramount concern. TransGrid is also bound to maintain its infrastructure efficiently and cost effectively. TL and cable easements along with accesses thereto have been designed to facilitate effective operational maintenance.

Development Approval Process

Where the Environmental Planning and Assessment Act 1979 makes Local Councils the consent authority for development applications, proponents to a proposed development on land are to prepare a development application and submit same to the Local Council for development consent.

The *State Environmental Planning Policy (Infrastructure) 2007* (SEPP), which commenced on 1 January 2008, requires local councils to consult with Electricity Network Operators before granting development consent for proposals that might adversely affect:

- existing electricity infrastructure;
- easements for electricity purposes, even if no infrastructure has yet been constructed in the easement.

Local Councils must give written notice to the network operator of any proposals for development:

- within or immediately adjacent to an easement for electricity purposes;
- immediately adjacent to a substation;
- within 5 metres of an exposed overhead power line;
- involving excavation within 2 metres of an underground power line or a pole or within 10 metres of a tower;
- involving a swimming pool within 30m of a transmission tower or within 5m of an overhead line.

Any comments made by the Electricity Network Operator within 21 days of receiving Local Council's written notification must be taken into consideration by the Local Council before it determines the development application.

The *proponent* is required to consult with TransGrid in accordance with the *State Environmental Planning Policy (Infrastructure) 2007* (SEPP); the *NSW Occupational Health and Safety Act 2000,* and; the *NSW WorkCover Code of Practice for Working Near Overhead Power Lines 2006*.

TransGrid Approval

The approving statutory authority will require written approval from TransGrid for all proposed activities within an easement area in accordance with Section 45 of the *State Environmental Planning Policy (Infrastructure) 2007 (SEPP)*.

To assess and respond to an approving statutory authority, TransGrid will require the following information from the development proponent. TransGrid will object to any development where the development proponent has not provided the following information to TransGrid prior to Local Council's notification:

- Detailed specifications and plans drawn to scale and fully dimensioned, showing property boundaries and other relevant information.
- An *Impact Assessment* of the development on TransGrid infrastructure and associated interests (including easements). Further, details as to how any impacts thereto are proposed to be managed, mitigated or resolved (see below – *Impact Assessment*).

Upon receipt of the abovementioned documentation, the proponent's proposed development will be assessed in relation to its impact on TransGrid infrastructure, easements and means of access thereto. The proponent should note that for complicated proposals the consultation process will be iterative and the proponent should allow sufficient time for this process (see *Timeframes* below).

General *Development Proposal* Guidelines

1. Prohibited Activities and Encroachments

A number of activities and encroachments are not permitted within the easement area. These are detailed in the "TransGrid Easement Guide" (see Appendix 1 - *Prohibited Activities*).

Any *Development Proposal* should be designed in such a way that:

- It does not involve these activities, nor introduce these encroachments; and
- Does not to encourage other parties to undertake such activities or introduce such encroachments in the future.

2. Development

The *Development Proposal* should be planned with the adoption of The Right Honourable Harry Gibbs Report (*Inquiry into Community Needs and High Voltage Transmission Line Development*) recommendations, that being a policy of "*prudent avoidance*".

This report placed recommendations on the design of new transmission lines having regard to their proximity to houses, schools, work sites and the like and is equally valid when considering new developments proposed in proximity to existing powerlines and associated easements.

Electric and Magnetic Field (EMF) strength rises from the easement edge to beneath the conductors and the most practical way to achieve the *prudent avoidance* policy is to keep the development entirely outside the easement area.

If it is desired to place any part of a development within an easement the proponent shall, in conjunction with the *Development Proposal*, undertake an *Impact Assessment* to be provided to TransGrid that covers the changes in risk and mitigation measures proposed.

Relocating Infrastructure and Interruption to Transmission

The developer will be liable for any costs involved in having to relocate TransGrid infrastructure as part of any proposed development. Further, the developer will also be liable for any costs and penalties incurred as a consequence of interruptions to TransGrid's transmission operations arising from the development, whether planned or inadvertent.

Impact Assessment

An *Impact Assessment* shall be completed and is to accompany the development proposal when it is submitted to TransGrid for consideration.

The *Impact Assessment* shall cover:

1. Detailed description of the development
2. Health and safety risk assessment and control measures
3. Operational risk to the TL or cable due to the development
4. Maintenance risk to the TL or cable due to the development
5. Design and construction risk to the TL or cable and associated with the proposed development
6. Physical impact risk to the TL (vehicle collision, vegetation or other impact)
7. Risk to TransGrid's rights and entitlements
8. Impact of the proposed development re TransGrid's access to the easement and along the easement.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

Checklist

The following checklist may assist in the completion of the *Impact Assessment.* A template is provided in *Appendix 3*.

Refer also to *Appendix 1* and *Appendix 2* for guidance on prohibited activities and TransGrid's requirements for developments and subdivisions.

1. Detailed Description of the Development

- Street Address;
- Land and Title references;
- Physical proximity of the proposed development to TransGrid's easement boundary (distance dimensions to be provided on a scaled plan); and
- Horizontal and vertical clearances of the proposed development to TransGrid's Infrastructure and associated easements

2. Health and Safety Risk Assessment

- **Safety Risk to General Public**

  i. Have ground levels been changed that would compromise design clearances?
  ii. Has the easement been altered in any way that would encourage prohibited activities to occur within the easement?
  iii. Has the easement or the nature of the land in the vicinity of the easement, been altered in any way that would encourage prohibited encroachments to occur within the easement?
  iv. Is it possible for proposed structures to transfer voltages off easement, or bring remote earths into the easement?
  v. Has development been proposed that increase step and touch potential hazards, or that would encourage people to congregate within the step/touch potential zone of a structure?

- **Safety Risk to Non-electrical Workers and Emergency Service Personnel**

  i. Has infrastructure been proposed that can be climbed compromising design clearances?
  ii. Has infrastructure been proposed that can be accessed by maintenance persons using Elevated Work Platforms (EWPs) compromising design clearances?
  iii. Has infrastructure been proposed that can bring remote earths onto the easement?
  iv. Has infrastructure been proposed that is a fire hazard, or that would encourage the storage or use of flammable material on the easement?
  v. Has infrastructure been proposed that would require emergency workers (such as fire fighters) to come near, or their equipment to come on or near high voltage conductors?

- **Safety Risk to TransGrid Employees & Contractors**

  i. Has access around any TransGrid structure been altered preventing EWPs, crane or other plant access or introduced other risks to maintenance staff?
  ii. Has the proposed development complied with TransGrid's horizontal clearances?
  iii. Has access to the easement been altered that would introduce risks to personnel, including although not limited to asset inspectors or patrol staff?

- **Health Risk to the General Public**

  i. Have public spaces been proposed *within the easement* that would encourage persons to congregate for lengthy periods of time?
  ii. Have facilities been provided outside of the easement but immediately adjacent thereto that would encourage persons to congregate within the easement?

3. **Operational Risk**
   - Have any ground level developments been proposed (including roads, driveways, parking lots and turning bays etc) that would expose TransGrid transmission structures and lines to impact risk?
   - Has change in water flows or drainage been proposed that could impact on the foundations of any TransGrid structure (or guy)?
   - Are excavations or surface activities proposed that would impact a TransGrid structure's foundations, stability or earthing systems?

4. **Maintenance Risk**
   - Have roads, driveways or landscaping been proposed that would prevent or hinder TransGrid maintenance, or increase maintenance costs, for the above or below ground components of the transmission line structure?
   - Has access to the easement or within the easement, been obstructed, restricted or altered?
   - Have access roads, bridges, crossings and the like been designed to cater for the weight and size of TransGrid maintenance plant (EWPs and Cranes)?
   - Does the development encourage the placement of obstructions that would prevent access for routine or emergency works?

5. **Development Design and Construction Risk**
   - Has the development been designed so that during the construction phase TransGrid is not restricted from undertaking normal maintenance and inspection activities?
   - Has the development been designed so that during the construction phase prohibited activities or encroachments are not required in the easement area?
   - Has the design health and safety risk assessment taken into account the requirements of the NSW WorkCover Code of Practice for *Working Near Overhead Powerlines* 2006?

6. TransGrid's Rights

- Have TransGrid's existing rights been preserved?
- Has TransGrid been exposed to new maintenance costs (e.g. landscaping or other development changes impacting easement access, use and maintenance)?
- Does a new deed of easement need to be negotiated?

Post Construction Compliance Statement

The development proposal shall include as-built plans of the final construction that must be provided to TransGrid. The as-built drawings must be accurate, scaled and display distances/measurements, demonstrating compliance to the agreed plans and implementation of agreed control measures.

Timeframes

TransGrid will respond to a Local Council notification of a proposed development within 21 days as required in the SEPP, however that response may not be an approval (or disapproval). If the development proposal does not meet the requirements of these Guidelines, or in the event further detailed engineering analysis is required, TransGrid will require the development proposal to be revised and resubmitted.

Developers are advised to consider TransGrid's requirements early in the process (and not as an afterthought that could result in project delays).

Further Assistance

For any further development enquiry assistance please contact the Development Enquiry Services Coordinator on Telephone (02) 9620 0777.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

APPENDIX 1

Prohibited Encroachments and Activities

TransGrid will use its powers under the Electricity Supply Act, involve WorkCover or take other legal action as required to prevent or halt prohibited activities.

1. Transmission Lines

Activities and encroachments that are **prohibited** within a Transmission Line (TL) Easement include, but are not limited to *(Note 2)*, the following:

- The construction of houses, buildings, substantial structures, or parts thereof.
- The installation of fixed plant or equipment.
- The storage of flammable materials, corrosive or explosive material.
- The placing of garbage, refuse or fallen timber.
- The planting or cultivation of trees or shrubs capable of growing to a height exceeding 4 metres.
- The placing of obstructions other than timber boundary fences within 15 metres of any part of a transmission line structure or supporting guy.
- Camping or the permanent parking of caravans or other camping vehicles.
- The parking or storage of flammable liquid carriers or containers.
- The installation of site construction offices, workshops or storage compounds.
- Flying of kites or wire controlled model aircraft within the easement area.
- Flying of any manned aircraft or balloon within 30m of any structure, guy or conductor.
- Flying of remote controlled or autonomous aerial devices (such as UAVs) within 30m of any structure, guy or conductor.
- Placing any obstructions on access tracks or placed in the easement area that restricts access.
- Any vegetation maintenance (such as felling tall trees) where the vegetation could come within the *Ordinary Persons Zone* – refer to the NSW WorkCover *'Working Near Overhead Powerlines - Code of Practice 2006'.*
- Any substantial excavation within 7 metres of a pole or supporting guy or guy foundation or within 16 metres of a tower
- The climbing of any structure (*any development that encourages or facilitates climbing will not be permitted).*
- Any change in ground levels that reduce clearances below that required in AS7000.
- The attachment of any fence, any signage, posters, or anything else, to a structure, or guy.

  Note: Interference to electricity infrastructure is an offence under the Electricity Supply Act.
- The movement of any vehicle or plant between the tower legs, within 5m of a structure, guy or between a guy and the pole.

  Note: Any damage to electricity infrastructure is an offence under the Electricity Supply Act.
- The storage of anything whatsoever within the tower base or within 5m of any tower leg.

- Any structure whatsoever that during its construction or future maintenance will require an *Accredited* person to access. *Note: The final structure may meet AS7000 clearances, but may be accessible* (e.g. by EWP) by Ordinary Persons within the Ordinary Persons Zone.
- Any work that generates significant amounts of dust or smoke that can compromise the TL high voltage insulation.
- The erection of any structure in a location which could create an unsafe situation work area for TransGrid staff.
- Any activity by persons not *Accredited* or not in accordance with the requirements of the WorkCover *'Working Near Overhead Powerlines - Code of Practice 2006'* that is within *(Note 1)*:
    - 3m of an exposed 132kV overhead power line
    - 6m of an exposed 220kV or 330kV overhead power line
    - 8m of an exposed 500kV overhead power line

  Note: Distances quoted are to the design conductor position (i.e. maximum sag and blowout)

The following activities may be approved with conditions. TransGrid's prior written consent is required. The proponent will have to demonstrate (using the *Impact Assessment* process) that the risks associated with the activity have been satisfactorily mitigated. Guidance on how to achieve this is provided in Appendix 2.

- Burning off or the lighting of fires. Lighting of fires directly under energised conductors will not normally be approved.
- Operation of mobile plant or equipment having a height when fully extended exceeding 4.3 metres.

  Note: Approval would be based on the need to maintain adequate clearance between the equipment and the line, having regard to the particular situation. Note that plant may require trailing earths and supervision by TransGrid staff.

- *Temporary* parking of caravans and other large vehicles in the outer 3m of the easement area, subject to a 4.3 metre height restriction and metallic parts being *earthed*.
- The erection of flagpoles, weather vanes, single post signs, outdoor lighting, subject to a 4.3 metre height restriction and metallic parts being *earthed*.
- The erection of non-electric agricultural fencing, yards and the like.

  Note: Fencing that exceeds 2.5 metres in height or that impedes would not be approved. Metallic fencing may require earthing and will generally not be approved if located within 15 metres of any part of a transmission line structure or supporting guy or within 4 metres of the vertical projection of the overhead conductors.

- The erection of electric fencing provided that the height of the fencing does not exceed 2.5 metres and provided that the fence does not pass beneath the overhead conductors.

  Note: Approval may be given for a portable electric fence to pass underneath the conductors provided that it is supplied from a portable battery-powered energiser that is located remotely

from frequented areas. Where it is necessary for a permanent electric fence to pass beneath the overhead conductors, or where an extensive permanent electric fencing system is installed in proximity to a transmission line certain additional safety requirements may be required.

- The installation or use of irrigation equipment inside the easement.

  NOTE: An irrigation system will not be approved if it is capable of coming within 4 metres of the overhead conductors; exceeds 4.3 metres in height; consists of individual sections of rigid or semi-rigid pipe exceeding 4.3 metres; and/or is capable of projecting a solid jet of water to within 4 metres of any overhead conductors.

- The installation of *low voltage* electricity, telephone, communication, water, sewerage, gas, whether overhead, underground or on the surface.

  Note: Services that do not maintain standard clearances to the overhead conductors that are within 15 metres from the easement centre-line, 16 metres from any part of a transmission line supporting structure or are metallic and within 30 metres of any part of a structure will not be approved. TransGrid may impose additional conditions or restrictions on proposed development.

- The installation of high voltage electricity services, subject to there being no *practicable* alternative and provided the standard clearances are maintained to the supporting structures.

  Note: Where extensive parallels are involved certain additional safety requirements may be imposed by TransGrid, depending on the particular case and engineering advice.

- Swimming pools, subject to TransGrid's strict compliance criteria.

  Note: Above ground pools will not be approved. In-ground pools will not be approved if there is a practicable alternative site clear of the easement area. If there is no practical alternative site, in-ground pools including coping will not be approved if it encroaches more than 4.5 metres, or is less than 30 metres away from a transmission line structure.

- Detached garages, detached carports, detached sheds, detached stables, detached glass houses, caravans, site containers, portable tool sheds, pergolas and unroofed verandahs attached to residences. (Easement encroachments of more than 3m will not be approved).
- Prefabricated metal (garden) sheds. TransGrid approved sheds must be earthed.

  Note: Sheds exceeding 2.5 metres in height, with a floor area exceeding 8 m^2, encroaching more than of up to 3 metres or within 15 metres of any part of a transmission line structure will not be approved. Connection of electric power will not be approved.

- Single tennis courts.

  Note: Tennis courts that hinder access, are for commercial use or do not provide adequate clearances shall not be approved.

- Sporting facilities and open recreational areas.

  Note: Facilities associated with the use of firearms and public sporting venues are discouraged.

- Subdivisions. See ***Appendix 2*** requirements.

- Roads, subject to horizontal and vertical clearances. Restrictions and other conditions on consent may also apply.

  Note: Roads located within 15 metres of any part of a transmission line structure will not be approved.

  Where it is proposed that a road passes within 30 metres of a transmission structure or supporting guy, TransGrid may refuse consent or impose restrictions and other conditions on consent. Where a road passes within 30 metres of a transmission structure or supporting guy, the structure's earthing system may require modification for reasons including, but not limited to, preventing fault currents from entering utility services which may be buried in the road. The option of raising conductors or relocation of structures, at the full cost of the proponent, may be considered.

- Cycleways, walking tracks and footpaths, provided *standard clearances* are maintained and the proposal does not alienate large sections of the easement area.
- Excavation – subject to restriction criteria.

  Note: Substantial excavations located within 7 metres of a general purpose pole structure or supporting guy, or within 15 metres of any part of a steel tower or major pole structure and exceeding a depth 3 metres will not be approved.

- Quarrying activities, earthworks, dam or artificial lake construction.
- Mining. Approval would be based on the merits of the proposal and any related circumstances.
- Use of explosives.
- Vehicle access or parking facilities.

  Note: Vehicle access and/or car parking facilities will not be approved if within 30 metres of a TL structure without adequate precautions provided to protect the structure from any accidental damage.

Note 1: An encroachment or activity that is located outside the prohibited distance of the infrastructure but still within the easement will not necessarily be permitted. It will generally need to be addressed in the Impact Assessment and remains subject to TransGrid prior consent.

Note 2: The above list is not exhaustive and if there is any uncertainty as to whether an activity or encroachment is acceptable within an easement, please contact TransGrid.

2. Cables

The activities listed below are prohibited within cable easements:

- The storage of flammable liquids or explosives.
- The planting or cultivation of trees or shrubs with extensive root systems.
- The construction of houses, buildings or substantial structures.
- The installation of fixed plant or equipment.
- The placing of garbage, refuse or fallen timber.
- Vertical boring directly over the cable lay (eg. the installation of fencing or safety railing).
- The raising or lowering of existing ground surface levels.
- Any excavation within *2m* of an underground cable.

The following activities may be approved with conditions. TransGrid's prior written consent is required. The proponent will have to demonstrate (using the *Impact Assessment* process) that the risks associated with the activity have been satisfactorily mitigated. Guidance on how to achieve this is provided in Appendix 2.

- Parking of vehicles.

  Note: Parking will be prohibited if the surface is not capable of supporting the vehicles likely to be parked, risking the crushing of the cable/ducts or erosion of the ground.

- The operation of mobile plant and equipment.

  Note: Such operations will be prohibited if the surface is not capable of supporting the vehicles likely to be parked, whereby risking the crushing of the cable/ducts or erosion of the ground.

- The erection of structures spanning the easement.
- Excavation.
- Concrete driveways.
- The installation of metal pipes, metal fences, underground or overhead cables.
- Road-boring in the vicinity of a high voltage cable.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

APPENDIX 2

General Requirements for Developments and Subdivisions

The following list of current general requirements is provided for your information. It should be noted that the list is not exhaustive and, where there is any doubt concerning a particular activity within the easement area advice should be sought from TransGrid.

1. Completed Works

The completed works shall provide for the following considerations:

- A safe unobstructed working platform shall be preserved around the transmission line structures for access by EWP, cranes as well as other large plant and equipment. No obstructions of any type shall be placed within 30 metres of any part of a transmission line structure.
- Roads, streets etc (including kerb to property boundaries) and intersections shall not be located within 30 metres of any TL structure.
- Roads crossing the easement require 12 metre clearance between the finished road surface and the conductor at it's maximum operating temperature.
- Roads paralleling the transmission line are not to be within the easement area.
- Proposed roadway locations shall also take into consideration any street lighting requirements to ensure that statutory clearance requirements are followed. The design clearances should include future maintenance safety issues. TL outages will not be provided for street light maintenance.
- Details of the levels of proposed roadways where they cross the easement shall be submitted to TransGrid for written approval prior to construction to ensure that adequate clearances to the TL conductors are maintained. It should be noted that formal approval will not be given to the subdivision if such clearances are not maintained.
- Access to the TL and its structures shall be available at all times for TransGrid plant and personnel. In this regard a continuous and unobstructed access way shall be retained along the easement.
- Where fences are required for security purposes access gates will be installed in an agreed location and a TransGrid lock will be fitted.
- All underground services installed more than 16 metres but within 30 metres of a TL structure shall be non-metallic. Utility services (including street lighting), whether above or below ground, shall not be installed without prior written approval of TransGrid.
- Excavation work or other alterations to existing ground levels shall not be carried out within the easement area without the prior approval of TransGrid. Approval will not normally be granted for such work within 16 metres of any supporting structure.
- Fenced boundaries for all new properties in the subdivision shall not be within 30 metres of any TL structure.
- A "Restriction-as-User" (88B Instrument) shall be placed on the titles of the lots affected by the TL easement. Any proposed activity within an easement area will require the prior written approval of TransGrid (appropriate wording will be advised when required).
- Any proposed development does not impact on TransGrid's costs of inspecting, maintaining or reconstruction the transmission lines.
- Vegetation Control
  In order to comply with its statutory responsibilities to maintain adequate clearance between the conductors and any forms of vegetation. TransGrid maintains its easements as follows:

- Tall growing species likely to infringe safe clearances are to be removed regardless of existing height at time of construction.
- Trees likely to fall onto conductors or towers are also to be removed whether on the easement or off the easement (ref. Sec 48 of the Electricity Supply Act 1995).
- Shrubs and other vegetation of lower mature height within the easement will be reduced and managed, generally by slashing with ground level retained.
- Vegetation management will aim to reduce available fuel and subsequent bushfire risks in accordance with NSW Rural Fire Service Bush Fire Environmental Assessment Code, which sets out requirements for hazard reduction strategies such as Asset Protection Zones and Strategic Fire Advantage Zones
- Removed vegetation will be mulched or chipped and removed from site or retained on site in accordance with owner/stakeholder requirements and
- Other works considered necessary in order to provide a safe working environment for maintenance staff, contractors and for the property owner/manager will be undertaken.

Proposed vegetation plantings, such as Riparian corridors, within the transmission line easements shall be compatible with the above maintenance requirements.

2. Construction

During construction, the development plans shall also provide for the following considerations:

- Vehicles, plant or equipment having a height exceeding 4.3 metres when fully extended shall not be brought onto or used within the easement area without prior TransGrid approval.
- Where temporary vehicular access or parking (during the construction period) is within 16 metres of a transmission line structure, adequate precautions shall be taken to protect the structure from accidental damage. Plans need to be submitted to TransGrid for prior approval.
- The easement area shall not be used for temporary storage of construction spoil, topsoil, gravel or any other construction materials.

3. Costs

The Developer shall bear all costs of any reconstruction or modification of the transmission line, including consultation and design required to maintain clearances due to proposed ground level changes; road crossings within the easement; or due to any damage to the TL arising from the development.

TRANSGRID EASEMENT GUIDELINES FOR THIRD PARTY DEVELOPMENT

APPENDIX 3

Impact Assessment Template

Detailed Description of the Development

Risk Type	Aspect	Drawing Reference	Assessment	Risk Level	Control Measure	Residual Risk
Health and Safety						
Operational						
Maintenance						
Design and Construction						
Rights and Entitlements						

Compliance plan

APPENDIX 7

MEETING MINUTES

SYDNEY CATCHMENT AUTHORITY PIPELINE CROSSING WORKSHOP
STAKEHOLDER WORKSHOP

Meeting Notes

Location: **Sydney Catchment Authority, 2-6 Station Street, Penrith**

Date: **12:45pm to 3pm 3rd September 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Brown's Consulting:	Laurie Rose (LR), Toby Thames (TT)
AT&L:	Anthony Maclandsborough (AM)
Goodman:	Kim Dracopoulos (KD)
SCA:	Neil Abrahams (NA), Greg Greane (GG), Ryan Simmonds (RS), Graham Attenborough (GA)

ITEM	BUSINESS

1. **Introduction & Background**

- The Department, Jacfin and Goodman are committed to the delivery of a regional north-south link connecting the recently opened Erskine Park Link Road (EPLR) with the employment lands south of the Sydney Catchment Authority (SCA) pipeline.
- The road is a vital element of the Southern Link Road Network (SLRN) which will ultimately complete the WSEA regional road network.
- The parties are currently undertaking detailed design of the route to progress delivery.
- A key element of the SLRN is the crossing of the pipeline at the "'central north-west link" and the "western north-west link". The focus of the meeting was on the central link which runs through Jacfin's property.
- The SCA pipeline is a vital piece of infrastructure and the protection of the pipeline during operation and construction as well as the provision of access for maintenance is of key importance in the provision of any pipeline crossing.

2. **Discussion**

- BC thanked attendees and opened the meeting. MC provided background on the process and noted the purpose of the meeting was to confirm a preferred and feasible method of crossing the pipeline with a view to delivering the regional north-south link.
- MC outlined constraints and noted key considerations for the design of the crossing.
- MC outlined the Multi Criteria Analysis and pre-prepared criteria. The group discussed the criteria. It was noted that protection of the pipeline during construction and operation should be considered as a constant within the process. The group discussed further criteria by which to measure the three options.
- MC outlined the three proposed design options for the crossing. Option 1 consists of a high bridge crossing, Option 2 consists of a low bridge crossing with encasement of the pipeline and Option 3 consists of total encasement of the pipeline at grade.
- The group discussed Option 1. The group discussed access arrangements. It was noted that for the maintenance of the pipe access is required for all three parts of the pipeline.
- RS noted that the ability to replace a section of the pipe with heavy vehicles is a significant consideration. He noted that these vehicles require access to all three parts of the pipeline.
- The group discussed Option 2. RS raised issues with regard to drainage and lack of access

ITEM	BUSINESS

to the outside parts of the pipeline.

- The group discussed risks associated the types of vehicles using the crossing.
- The group discussed Option 3. It was noted that drainage issues need to be outlined for each of the options.
- The group discussed the requirements of concrete encasement. It was noted that SCA has in the past hired third party specialist to undertake the design of encasement.
- It was noted that in if the pipeline is encased, requirements for maintenance and access are lessened. RS advised that this does however present other issues with regard to access which need to be mitigated.
- GA raised the potential need for future duplication of the pipeline. It was noted that option 1 provides the most scope to eventually duplicate the pipe; however this is not currently being considered.
- It was noted that while all parties remain committed to the delivery of the north-south link, there may be a funding shortfall. BC advised the Department is committed to delivering the link and will investigate further funding options.
- KD advised that Goodman is seeking to lodge a DA with DP&I next month. The DA will include design specifications for the north-south link as far as Jacfin's property boundary and an upgraded Old Wallgrove Road.
- LR and TT advised that Brown's is currently preparing designs for the north-south link between the bridge and the EPLR.
- It was noted that there is some inconsistencies between the cross sections used by AECOM, AT&L and Brown's. AECOM, AT&L and Brown's to align road specifications prior to lodgement of Goodman and Jacfin's DAs.

3. **Next steps**

- AECOM to undertake further work on costing and design of the crossing.
- AECOM to consolidate cross sections (ie. Road width, median strip, footpaths etc) and alignment with AT&L and Brown's.
- DP&I to meet with RMS regarding requirements for road/crossing design.
- AECOM to prepare a list of assumptions for the design work.
- SCA to internally examine the three proposed options and re-evaluate the Multi Criteria Analysis. SCA to respond to DP&I in the next two weeks.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

SYDNEY CATCHMENT AUTHORITY PIPELINE CROSSING WORKSHOP
STAKEHOLDER WORKSHOP

Meeting Notes

Location: **Sydney Catchment Authority, 2-6 Station Street, Penrith**

Date: **12:45pm to 3pm 3rd September 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Brown's Consulting:	Laurie Rose (LR), Toby Thames (TT)
AT&L:	Anthony Maclandsborough (AM)
Goodman:	Kim Dracopoulos (KD)
SCA:	Neil Abrahams (NA), Greg Greane (GG), Ryan Simmonds (RS), Graham Attenborough (GA)

ITEM	BUSINESS

1. **Introduction & Background**

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- The road is a vital element of the Southern Link Road Network (SLRN) which will ultimately complete the WSEA regional road network.
- The parties are currently undertaking detailed design of the route to progress delivery.
- A key element of the SLRN is the crossing of the pipeline at the "'central north-west link" and the "western north-west link". The focus of the meeting was on the central link which runs through Jacfin's property.
- The SCA pipeline is a vital piece of infrastructure and the protection of the pipeline during operation and construction as well as the provision of access for maintenance is of key importance in the provision of any pipeline crossing.

2. **Discussion**

- BC thanked attendees and opened the meeting. MC provided background on the process and noted the purpose of the meeting was to confirm a preferred and feasible method of crossing the pipeline with a view to delivering the regional north-south link.
- MC outlined constraints and noted key considerations for the design of the crossing.
- MC outlined the Multi Criteria Analysis and pre-prepared criteria. The group discussed the criteria. It was noted that protection of the pipeline during construction and operation should be considered as a constant within the process. The group discussed further criteria by which to measure the three options.
- MC outlined the three proposed design options for the crossing. Option 1 consists of a high bridge crossing, Option 2 consists of a low bridge crossing with encasement of the pipeline and Option 3 consists of total encasement of the pipeline at grade.
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ITEM	BUSINESS

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- It was noted that in if the pipeline is encased, requirements for maintenance and access are lessened. RS advised that this does however present other issues with regard to access which need to be mitigated.
- GA raised the potential need for future duplication of the pipeline. It was noted that option 1 provides the most scope to eventually duplicate the pipe; however this is not currently being considered.
- It was noted that while all parties remain committed to the delivery of the north-south link, there may be a funding shortfall. BC advised the Department is committed to delivering the link and will investigate further funding options.
- KD advised that Goodman is seeking to lodge a DA with DP&I next month. The DA will include design specifications for the north-south link as far as Jacfin's property boundary and an upgraded Old Wallgrove Road.
- LR and TT advised that Brown's is currently preparing designs for the north-south link between the bridge and the EPLR.
- It was noted that there is some inconsistencies between the cross sections used by AECOM, AT&L and Brown's. AECOM, AT&L and Brown's to align road specifications prior to lodgement of Goodman and Jacfin's DAs.

3. **Next steps**

- AECOM to undertake further work on costing and design of the crossing.
- AECOM to consolidate cross sections (ie. Road width, median strip, footpaths etc) and alignment with AT&L and Brown's.
- DP&I to meet with RMS regarding requirements for road/crossing design.
- AECOM to prepare a list of assumptions for the design work.
- SCA to internally examine the three proposed options and re-evaluate the Multi Criteria Analysis. SCA to respond to DP&I in the next two weeks.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

BROADER WSEA STRUCTURE PLAN
STAKEHOLDER MEETING

Meeting Notes

Location: **GHD, 133 Castlereagh Street**

Date: **2:00pm to 3:15pm, 18th April 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Seddon (RS), Kim Dracopoulis (KD)
Traffix:	Andrew Johnson (AJ)
AT&L:	Anthony Maclandsborough (AM)
GHD:	Steven Konstas (SK), Iwan Smith (IS)

ITEM	BUSINESS

1. **Introduction**

- BC outlined the purpose of the meeting and provided background.
- The purpose of the meeting was to discuss parameters and assumptions for the modelling process relating to the upgrade of Old Wallgrove Road (OWR) (between Erskine Park Link Road (EPLR) and Goodman's Oakdale estate) and the regional significance of the road.
- DP&I are preparing a Structure Plan for the Broader WSEA, as part of which GHD is undertaking a regional transport model and identifying a road structure for the area. The preliminary analysis suggests the need for a future link to the M4. The most logical route for this alignment is via Archbold Road.
- DP&I is conducting further work in refining the alignment of the SLRN. The east-west alignment has been established. DP&I have engaged AECOM to undertake further study in relation to the north-south links that make up the regional road network.
- Goodman and Jacfin have industrial estates in the area which require access from OWR. The current condition of OWR is poor. Goodman is seeking a DA to upgrade the road and have in principle support from Blacktown Council. The road will be upgraded to a two or four lane road. The cost of the upgrade is between $16 – 20 million.
- Goodman is seeking SIC credits for the upgrade for regional road contributions. DP&I will coordinate their studies in the area to establish the function of OWR as a regional or local road.
- GHD will be engaged to model the function of OWR. This will incorporate traffic data prepared by Goodman and Jacfin.

2. **Discussion**

- WD advised that the assumptions that drove the route selection process for the SLRN are unclear. He suggested it may be prudent for DP&I to model different road configurations and typologies. BC noted that the SLRN alignments are largely locked in as a result of the route selection study.

ITEM	BUSINESS

- IS outlined the modelling process for the Broader WSEA and the proposed modelling exercise for OWR. It is proposed to use EMME modelling as the AIMSUM model will not be complete at this time. IS noted time constraints for the study.
- BC advised that the link between the regional road network and M4 via Archbold Road will remain a significant corridor, however it may be beyond a 30 year timeframe.
- WD noted two key issues that need to be investigated through this study;
  - Establishing the significance of the link to Archbold Road/M4; and
  - Understanding the special requirements at intersections and interfaces.
- WD enquired about the assumptions underpinning the need for the M4 link. AM advised there are significant structural issues with the existing Archbold Rd bridge crossing the M4.
- WD advised that a cost benefit examination should be applied to the road alignments.
- SK enquired about the horizon years for the modelling process. BC advised that the modelling should project no further than 30 years in order to maintain accuracy.
- The group discussed the SLRN. WD questioned the role of the SLRN in the regional network. It was noted that the SLRN does not provide an intersection to the M7 however it serves an important function for permeability and trips to the south. BC advised that east-west connections within the area are limited. AM enquired about funding for the SLRN. BC advised at this stage the network would be funded through contributions and the private sector.
- The group discussed the assumptions feeding into the modelling process. IS advised that assumptions include cost and the timing of land coming online. RS noted the terms of reference need to be established for the work. WD advised that the assumptions for the modelling will need to be agreed upon. BC advised that GHD will prepare a draft methodology for the study which will then be distributed for comment.
- The group discussed the definition of 'regional road'. RS suggested that the demand generated by Goodman and Jacfin's developments should raise the significance of the road. IS noted the classification of roads is complex and takes into account other factors such as origin and destination of trips. GHD's modelling will identify the significance of OWR to the regional network.
- AM noted Goodman have engaged a number of design studies for road alignments in the area which could be shared with AECOM to assist in their study. BC to set up meeting with Goodman, DP&I and AECOM.

3. **Next steps**

- GHD to prepare draft methodology.
- DP&I to set up meeting at AECOM's offices in two weeks time.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

BROADER WSEA STRUCTURE PLAN
STAKEHOLDER MEETING

Meeting Notes

Location: **GHD, 133 Castlereagh Street**

Date: **2:00pm to 3:15pm, 18th April 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Seddon (RS), Kim Dracopoulis (KD)
Traffix:	Andrew Johnson (AJ)
AT&L:	Anthony Maclandsborough (AM)
GHD:	Steven Konstas (SK), Iwan Smith (IS)

ITEM	BUSINESS

1. Introduction

- BC outlined the purpose of the meeting and provided background.
- The purpose of the meeting was to discuss parameters and assumptions for the modelling process relating to the upgrade of Old Wallgrove Road (OWR) (between Erskine Park Link Road (EPLR) and Goodman's Oakdale estate) and the regional significance of the road.
- DP&I are preparing a Structure Plan for the Broader WSEA, as part of which GHD is undertaking a regional transport model and identifying a road structure for the area. The preliminary analysis suggests the need for a future link to the M4. The most logical route for this alignment is via Archbold Road.
- DP&I is conducting further work in refining the alignment of the SLRN. The east-west alignment has been established. DP&I have engaged AECOM to undertake further study in relation to the north-south links that make up the regional road network.
- Goodman and Jacfin have industrial estates in the area which require access from OWR. The current condition of OWR is poor. Goodman is seeking a DA to upgrade the road and have in principle support from Blacktown Council. The road will be upgraded to a two or four lane road. The cost of the upgrade is between $16 – 20 million.
- Goodman is seeking SIC credits for the upgrade for regional road contributions. DP&I will coordinate their studies in the area to establish the function of OWR as a regional or local road.
- GHD will be engaged to model the function of OWR. This will incorporate traffic data prepared by Goodman and Jacfin.

2. Discussion

- WD advised that the assumptions that drove the route selection process for the SLRN are unclear. He suggested it may be prudent for DP&I to model different road configurations and typologies. BC noted that the SLRN alignments are largely locked in as a result of the route selection study.

ITEM	BUSINESS

- IS outlined the modelling process for the Broader WSEA and the proposed modelling exercise for OWR. It is proposed to use EMME modelling as the AIMSUM model will not be complete at this time. IS noted time constraints for the study.
- BC advised that the link between the regional road network and M4 via Archbold Road will remain a significant corridor, however it may be beyond a 30 year timeframe.
- WD noted two key issues that need to be investigated through this study;
  - Establishing the significance of the link to Archbold Road/M4; and
  - Understanding the special requirements at intersections and interfaces.
- WD enquired about the assumptions underpinning the need for the M4 link. AM advised there are significant structural issues with the existing Archbold Rd bridge crossing the M4.
- WD advised that a cost benefit examination should be applied to the road alignments.
- SK enquired about the horizon years for the modelling process. BC advised that the modelling should project no further than 30 years in order to maintain accuracy.
- The group discussed the SLRN. WD questioned the role of the SLRN in the regional network. It was noted that the SLRN does not provide an intersection to the M7 however it serves an important function for permeability and trips to the south. BC advised that east-west connections within the area are limited. AM enquired about funding for the SLRN. BC advised at this stage the network would be funded through contributions and the private sector.
- The group discussed the assumptions feeding into the modelling process. IS advised that assumptions include cost and the timing of land coming online. RS noted the terms of reference need to be established for the work. WD advised that the assumptions for the modelling will need to be agreed upon. BC advised that GHD will prepare a draft methodology for the study which will then be distributed for comment.
- The group discussed the definition of 'regional road'. RS suggested that the demand generated by Goodman and Jacfin's developments should raise the significance of the road. IS noted the classification of roads is complex and takes into account other factors such as origin and destination of trips. GHD's modelling will identify the significance of OWR to the regional network.
- AM noted Goodman have engaged a number of design studies for road alignments in the area which could be shared with AECOM to assist in their study. BC to set up meeting with Goodman, DP&I and AECOM.

3. **Next steps**

- GHD to prepare draft methodology.
- DP&I to set up meeting at AECOM's offices in two weeks time.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

BROADER WSEA STRUCTURE PLAN
WORKING GROUP MINUTES

Meeting Notes

Location: **Department of Planning & Infrastructure, 22-33 Bridge Street, Sydney**

Date: **2:00pm to 3:30pm 29th April 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Sedden (RD), Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	David Bohm (DB)
TransGrid:	Jenny Seage (JS)
Blacktown Council:	Wint KhinZaw (WK), Nadeem Shaikh (NS)
Brickwords:	Megan Kublins (MK), Adam Davies (AD)

ITEM	BUSINESS

1. **Introduction & Background**

- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA and the Broader WSEA Structure Plan. The purpose of the meeting was to update stakeholders and discuss the upgrade of Old Wallgrove Road and to address the WSEA regional road network.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide either a two or four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- DP&I is in the process of engaging GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrades. GHD's work will identify the need for a two or four lane upgrade and confirm the regional significance (or otherwise) of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I have engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in June 2013.
-

2. **Discussion**

- The group discussed GHD's proposed modelling task. BC advised the modelling will test the upgrade at both two and four lane scenarios. Goodman noted that the DA would be for four lanes with a two lane scenario as an interim measure to allow for access during construction. The GHD task will inform the amount of credits Goodman are able to receive for upgrading the road.

ITEM	BUSINESS

- BC advised that DP&I will collaborate with other landholders.
- The group discussed timeframes for the modelling process. BC noted the modelling task will take approximately six weeks.
- The group discussed the assumptions that feed into the modelling process. JS asked if the modelling takes into account the alternative north-south links. BC noted the model will take into account these links, the model can also be run without the links to determine the traffic impact if the upgraded OWR were to replace the further proposed north-south links. The modelling will further determine how many north-south links are needed. BC noted that AECOM's work will also investigate the feasibility of these links. WD noted that physical constraints need to be determined prior to the modelling process.
- AM outlined constraints associated with the red and blue road options shown on Goodman's diagram. In particular he noted constraints associated with crossing the SCA pipeline. DB noted that the original SLRN study identified two fixed crossing points over the pipeline.
- It was noted that the modelling will not take the scale of intersections into account at this point.
- The group discussed TransGrid's expansion plans. JS noted that expansion is an issue for TransGrid however they currently have enough land to meet demand. JS advised that a six lane upgrade of OWR would be unacceptable for TransGrid.
- NS advised that Blacktown Council will not upgrade the road as it does not account for demand created within the Blacktown LGA. It was noted that RMS may need to take ownership of the road as it does not provide a local function. The group discussed the definition of a regional road. NS advised that Blacktown Council envisages this road as a sub-arterial road (4 lanes).
- MK questioned the role of the Southern Link Road Network (SLRN). BC advised that GHD traffic studies undertaken as part of the Broader WSEA study have indicated the need for a link to the M4 via Archbold Road. This link forms part of the SLRN.
- It was determined that RMS is a critical stakeholder and will need to be involved in the working group.
- The group discussed the lodgement of a DA for the road upgrade with Blacktown Council. RD advised that Goodman would start works as soon as a DA is approved and a funding mechanism is in place. It was noted that Goodman need to further consult with Blacktown Council regarding the lodgement of a DA. Goodman advised that the technical package is almost complete and will soon be able to start work on an REF.
- NS raised concerns over the width of the proposed upgrade.

4. **Next steps**

- Next meeting will be held in Parramatta.

Meeting close

- BC thanked attendees and closed the meeting.

BROADER WSEA STRUCTURE PLAN
WORKING GROUP MINUTES

Meeting Notes

Location: **Department of Planning & Infrastructure, 22-33 Bridge Street, Sydney**

Date: **2:00pm to 3:30pm 29th April 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Sedden (RD), Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	David Bohm (DB)
TransGrid:	Jenny Seage (JS)
Blacktown Council:	Wint KhinZaw (WK), Nadeem Shaikh (NS)
Brickwords:	Megan Kublins (MK), Adam Davies (AD)

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ITEM	BUSINESS

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- The group discussed timeframes for the modelling process. BC noted the modelling task will take approximately six weeks.
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- It was determined that RMS is a critical stakeholder and will need to be involved in the working group.
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- NS raised concerns over the width of the proposed upgrade.

4. **Next steps**

- Next meeting will be held in Parramatta.

Meeting close

- BC thanked attendees and closed the meeting.

BROADER WSEA STRUCTURE PLAN
WORKING GROUP MINUTES

Meeting Notes

Location: **AECOM, Level 21, 420 George Street, Sydney**

Date: **1:00pm to 2:00pm 17th May 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Richard Sedden (RD), Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Stuart Dalziel (SD)
Brickwords:	Megan Kublins (MK)

ITEM	BUSINESS

1. Introduction & Background

- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA and the Broader WSEA Structure Plan. The purpose of the meeting was discuss the upgrade of Old Wallgrove Road.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to come online by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will identify the need for a two or four lane upgrade and confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I have engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in June 2013.

2. Discussion

- The group discussed AECOM's report. The SLRN: Refinement of North-South Options Study will provide a comprehensive overview of the north-south design options, including a concise account of the evolution of options and detailed review of Goodman's proposed designs.
- It was acknowledged that in the original SLRN alignment study the Old Wallgrove north-south option was ruled out due to design restrictions imposed by TransGrid. These restrictions are no longer a constraint.
- RS advised that the DA will be lodged with no major constraints. KD advised Goodman is

ITEM	BUSINESS

yet to receive a response from Sydney Catchment Authority (SCA). Goodman and SCA to continue to liaise regarding road design.

- RS advised Goodman is preparing a letter for Andrew Jackson. BC advised the letter should outline breakdown of costs, liabilities, approval pathway, program and overview of design and constructability.
  - Goodman to prepare and attach a memo outlining SIC liabilities for the estates, including the M7 Hub agreement.
- RS advised that the approval pathway for DA has yet to be determined.
- It was noted that further discussions need to take place with Blacktown Council regarding;
  - Design requirements for the road (width of median strip);
  - Ownership of the road; and
  - Dedication of land to Blacktown Council.
- The group discussed the programme for development. It was noted that the upgraded road would be operating by late 2014. Construction will be staged, allowing two lanes open to traffic to ensure existing access.
- The group discussed design speeds of the alignment options. AM advised the 'green option' has a design speed of 80km/h, but a likely posted speed of 70km/h. Bruce advised that RMS preference is either 60km/h or 80km/h. The EPLR and SLRN will have a posted speed of 80kmh. AM questioned the feasibility of 80km/h on EPLR due to the concentration of intersections along the route.
- It was agreed that a meeting should take place between AECOM and AT&L to discuss design details.

3. Next steps

- Next meeting, Monday 20th May.
- DP&I to meet with Jacfin on Thursday 23rd May.
- Consent authority for DA yet to be determined.
- Goodman to provide letter to Andrew Jackson.
- Meeting to take place between AECOM and AT&L.

4. Meeting close

- BC thanked attendees and closed the meeting.

DRAFT

BROADER WSEA STRUCTURE PLAN
WORKING GROUP MINUTES

Meeting Notes

Location: **AECOM, Level 21, 420 George Street, Sydney**

Date: **1:00pm to 2:00pm 17th May 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Richard Sedden (RD), Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Stuart Dalziel (SD)
Brickwords:	Megan Kublins (MK)

ITEM	BUSINESS

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- DP&I have engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in June 2013.

2. **Discussion**

- The group discussed AECOM's report. The SLRN: Refinement of North-South Options Study will provide a comprehensive overview of the north-south design options, including a concise account of the evolution of options and detailed review of Goodman's proposed designs.
- It was acknowledged that in the original SLRN alignment study the Old Wallgrove north-south option was ruled out due to design restrictions imposed by TransGrid. These restrictions are no longer a constraint.
- RS advised that the DA will be lodged with no major constraints. KD advised Goodman is

ITEM	BUSINESS

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- RS advised Goodman is preparing a letter for Andrew Jackson. BC advised the letter should outline breakdown of costs, liabilities, approval pathway, program and overview of design and constructability.
  - Goodman to prepare and attach a memo outlining SIC liabilities for the estates, including the M7 Hub agreement.
- RS advised that the approval pathway for DA has yet to be determined.
- It was noted that further discussions need to take place with Blacktown Council regarding;
  - Design requirements for the road (width of median strip);
  - Ownership of the road; and
  - Dedication of land to Blacktown Council.
- The group discussed the programme for development. It was noted that the upgraded road would be operating by late 2014. Construction will be staged, allowing two lanes open to traffic to ensure existing access.
- The group discussed design speeds of the alignment options. AM advised the 'green option' has a design speed of 80km/h, but a likely posted speed of 70km/h. Bruce advised that RMS preference is either 60km/h or 80km/h. The EPLR and SLRN will have a posted speed of 80kmh. AM questioned the feasibility of 80km/h on EPLR due to the concentration of intersections along the route.
- It was agreed that a meeting should take place between AECOM and AT&L to discuss design details.

3. Next steps

- Next meeting, Monday 20th May.
- DP&I to meet with Jacfin on Thursday 23rd May.
- Consent authority for DA yet to be determined.
- Goodman to provide letter to Andrew Jackson.
- Meeting to take place between AECOM and AT&L.

4. Meeting close

- BC thanked attendees and closed the meeting.

NSW GOVERNMENT | Planning & Infrastructure

BROADER WSEA STRUCTURE PLAN
WORKING GROUP MINUTES

Meeting Notes

Location: **Level 5, 10 Valentine Avenue, Parramatta**

Date: **1:00pm to 2:00pm 20th May 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), Stuart Dalziel (SD)
Brickwords:	Megan Kublins (MK)
TransGrid:	Jenny Seage (JS) (via telephone)
RMS:	Fiona Chan (FC)
Blacktown Council:	Nadeem Sheikh (NS)

ITEM	BUSINESS

1. Introduction & Background

- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA and the Broader WSEA Structure Plan. The purpose of the meeting was discuss the upgrade of Old Wallgrove Road.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to come online by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will identify the need for a two or four lane upgrade and confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I have engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in June 2013.

2. Discussion

- AM provided an update on civil works undertaken to date on the three options including constraints analysis, value analysis and extent of works. It was noted that there appear to be no significant constraints to lodging a DA for the upgrade of Old Wallgrove Road (pending further consultation with Sydney Catchment Authority).
- BC advised that a meeting would be set up between AECOM and AT&L to discuss detailed design issues.

ITEM	BUSINESS

- BC advised DP&I will meet with Jacfin on Thursday 23rd May. He noted that in a previous meeting with DP&I, Jacfin raised objection to any alternative north-south route.
- GHD propose to undertake a strategic model and operation analysis for the area based on the existing model prepared for the Old Wallgrove Road (Roberts Road to Wallgrove Road) REF. The modelling will;
  - Include localised intersection modelling;
  - Identify how many north-south links and pipeline crossings are required to service the area;
  - Determine wether or not the upgraded Old Wallgrove Road would constitute a regional road.
- GHD to prepare a table of assumptions that will feed the modelling process. This will be distributed and discussed at the next working group meeting.
- GHD will allow Traffix (on behalf of Goodman) and Halcrow (on behalf of Jacfin) to review traffic modelling to ensure consistency with existing work studies.
- The group discussed road ownership. It was noted that if it is determined that the upgrade forms part of a regional road it may be acquired by RMS. FC noted that further consultation with RMS is required on the matter.
- WD advised the group regarding approval pathways. SEPP Infrastructure 2007 notes that consent is not required for roads carried out on behalf of a public authority. WD advised that the approval pathway will be dependant on ownership of the road. Goodman to meet with DP&I's assessment to further discuss approval pathway.
- It was noted that GHD modelling will determine the regional significance of the upgraded road and the need for additional north-south roads. This will determine wether or not the upgrade forms a regional road and therefore wether or not RMS will own it. If it is determined that the road should be owned by the State approval for the upgrade can be sought via SEPP Infrastructure 2007.
- It was noted that a DA should not be lodged until GHD's modelling has been completed and road ownership is determined.
- The group discussed the impact of an upgraded OWR acting as a regional road on the road network. It was noted that the new alignment would funnel further traffic toward Wallgrove Road/M7 interchange rather than toward the M4 via Archbold Road as was the original intention. It was noted that this may impact trip generation.
- MK raised concern over the purpose of the SLRN. IS advised that modelling undertaken on behalf of RMS has shown that the SLRN is required by 2031 to relieve traffic congestion on Old Wallgrove Road by providing an alternate access route to Wallgrove Road and the Horsley Drive/M7 Interchange.
- IS advised that modelling being undertaken as part of the Broader WSEA Structure Plan takes into account the broader area, as well as the impact of any proposed new employment activity on the existing WSEA road network.

3. Next steps

- DP&I to meet with Jacfin on Thursday 23rd May.
- Goodman to meet with DP&I approvals team to determine approval pathway.
- GHD modelling to inform discussions with RMS regarding road ownership.
- Meeting to take place between AECOM and AT&L.

4. Meeting close

- BC thanked attendees and closed the meeting.

ITEM	BUSINESS

DRAFT

BROADER WSEA STRUCTURE PLAN
WORKING GROUP MINUTES

Meeting Notes

Location: **Level 5, 10 Valentine Avenue, Parramatta**

Date: **1:00pm to 2:00pm 20th May 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), Stuart Dalziel (SD)
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ITEM	BUSINESS

1. Introduction & Background

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- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to come online by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will identify the need for a two or four lane upgrade and confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I have engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in June 2013.

2. Discussion

- AM provided an update on civil works undertaken to date on the three options including constraints analysis, value analysis and extent of works. It was noted that there appear to be no significant constraints to lodging a DA for the upgrade of Old Wallgrove Road (pending further consultation with Sydney Catchment Authority).
- BC advised that a meeting would be set up between AECOM and AT&L to discuss detailed design issues.

ITEM	BUSINESS

- BC advised DP&I will meet with Jacfin on Thursday 23rd May. He noted that in a previous meeting with DP&I, Jacfin raised objection to any alternative north-south route.
- GHD propose to undertake a strategic model and operation analysis for the area based on the existing model prepared for the Old Wallgrove Road (Roberts Road to Wallgrove Road) REF. The modelling will;
  - Include localised intersection modelling;
  - Identify how many north-south links and pipeline crossings are required to service the area;
  - Determine wether or not the upgraded Old Wallgrove Road would constitute a regional road.
- GHD to prepare a table of assumptions that will feed the modelling process. This will be distributed and discussed at the next working group meeting.
- GHD will allow Traffix (on behalf of Goodman) and Halcrow (on behalf of Jacfin) to review traffic modelling to ensure consistency with existing work studies.
- The group discussed road ownership. It was noted that if it is determined that the upgrade forms part of a regional road it may be acquired by RMS. FC noted that further consultation with RMS is required on the matter.
- WD advised the group regarding approval pathways. SEPP Infrastructure 2007 notes that consent is not required for roads carried out on behalf of a public authority. WD advised that the approval pathway will be dependant on ownership of the road. Goodman to meet with DP&I's assessment to further discuss approval pathway.
- It was noted that GHD modelling will determine the regional significance of the upgraded road and the need for additional north-south roads. This will determine wether or not the upgrade forms a regional road and therefore wether or not RMS will own it. If it is determined that the road should be owned by the State approval for the upgrade can be sought via SEPP Infrastructure 2007.
- It was noted that a DA should not be lodged until GHD's modelling has been completed and road ownership is determined.
- The group discussed the impact of an upgraded OWR acting as a regional road on the road network. It was noted that the new alignment would funnel further traffic toward Wallgrove Road/M7 interchange rather than toward the M4 via Archbold Road as was the original intention. It was noted that this may impact trip generation.
- MK raised concern over the purpose of the SLRN. IS advised that modelling undertaken on behalf of RMS has shown that the SLRN is required by 2031 to relieve traffic congestion on Old Wallgrove Road by providing an alternate access route to Wallgrove Road and the Horsley Drive/M7 Interchange.
- IS advised that modelling being undertaken as part of the Broader WSEA Structure Plan takes into account the broader area, as well as the impact of any proposed new employment activity on the existing WSEA road network.

3. Next steps

- DP&I to meet with Jacfin on Thursday 23rd May.
- Goodman to meet with DP&I approvals team to determine approval pathway.
- GHD modelling to inform discussions with RMS regarding road ownership.
- Meeting to take place between AECOM and AT&L.

4. Meeting close

- BC thanked attendees and closed the meeting.

ITEM	BUSINESS

DRAFT

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **AECOM, 420 George Street**

Date: **8:00am to 10:00am 3rd June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM) Aaron Nangle (AN)
Jacfin:	Mark Tucker (MT),
Goodman:	Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), David Bohm (DB)
Brickwords:	Megan Kublins (MK)
TransGrid:	Jenny Seage (JS)
RMS:	Suresh Surendran (SS)
GHD:	Iwan Smith (IS)

Apologies:

Blacktown City Council	Nadeem Shiekh (NS)

ITEM	BUSINESS

1. **Introduction & Background**

- BC introduced the meeting and provided background to the technical studies being undertaken by GHD and AECOM.
- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA and the Broader WSEA Structure Plan. The purpose of the meeting was discuss the WSEA regional road network and Goodman's proposed upgrade of Old Wallgrove Road.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to come online by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- Goodman have undertaken strategic costings and constraints studies for the three road alignments and suggest that there are a number of constraints associated with the red route.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will identify the need for a two or four lane upgrade and confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I have engaged AECOM to undertake detailed planning and design refinement of the

ITEM	BUSINESS

preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.

- The Department met with Jacfin to discuss the proposal on 20th May 2013. Jacfin expressed their opposition to the Department seeking alternative alignment's for the regional road network given their existing approval for a Concept Plan with reservation for a regional north-south link. This alignment was achieved through discussions with the Department's assessments and strategic teams.
- Following further discussion with Chris Wilson, Department's Executive Director, Development Assessment, the Department's position is to support the existing route identified in Jacfin's Concept Plan approval.
- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

2. **Discussion**

- IS outlined the modelling task. IS advised that the modelling process will look at both the 'red' and the 'green' alignments, in various design iterations.
- IS outlined land use assumptions. He noted these assumptions are consistent with previous studies undertaken within the WSEA by both AECOM and GHD. He noted that previous studies have identified the need for a link to Archbold Road and the opening of the SLRN.
- The group discussed trip generation for the modelling task. It was noted that Blacktown City Council usually prefer 21 trips per 2 hours. SS suggested undertaking a sensitivity test at 10 per 2 hours.
- MK enquired about traffic generated from the south-west of the existing WSEA. IS advised that the modelling relies on RMS model which will need to be updated with the latest assumptions regarding the Broader WSEA.
- BC noted the outcomes from the meeting with Jacfin on the 20th and advised that the Department's position is to support the route alignment shown in Jacfin's Concept Plan.
- IS advised that the modelling will test a scenario without the red route in order to calibrate the model.
- KD and MK raised concerns over the timing of the delivery of the red route. KD noted that it is likely the green route would serve a regional function in the absence of the red route until it is built.
- The group discussed alternate lane configurations for the green alignment. SS advised that the modelling can test how many lanes are required on the green route.
- Goodman noted that the critical factor is receiving credit for the road upgrade.
- AM outlined the engineering constraints associated with the crossing of the SCA pipeline. MT advised that engineering issues can be overcome.
- The group discussed the joining of the red route to the existing Old Wallgrove Road. AECOM to come up with a design that appropriately connects the red and green routes.
- MT advised that the regional route is entirely owned by Jacfin
- The group discussed the timing of the modelling process.
- KD reiterated Goodman's need for access to Oakdale Central ASAP.
- BC advised that the Department is undertaking full costing of proposed new infrastructure in the WSEA (such as the SLRN, Archbold Road and M4 intersection). This is being undertaken with NSW Treasury with the intention of identifying these infrastructure needs early.
- It was noted that the blue route is not being considered.

4. **Meeting close**

ITEM	BUSINESS

- BC thanked attendees and closed the meeting.

DRAFT

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **AECOM, 420 George Street**

Date: **8:00am to 10:00am 3rd June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM) Aaron Nangle (AN)
Jacfin:	Mark Tucker (MT),
Goodman:	Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), David Bohm (DB)
Brickwords:	Megan Kublins (MK)
TransGrid:	Jenny Seage (JS)
RMS:	Suresh Surendran (SS)
GHD:	Iwan Smith (IS)

Apologies:

Blacktown City Council	Nadeem Shiekh (NS)

ITEM	BUSINESS

1. **Introduction & Background**

- BC introduced the meeting and provided background to the technical studies being undertaken by GHD and AECOM.
- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA and the Broader WSEA Structure Plan. The purpose of the meeting was discuss the WSEA regional road network and Goodman's proposed upgrade of Old Wallgrove Road.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to come online by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- Goodman have undertaken strategic costings and constraints studies for the three road alignments and suggest that there are a number of constraints associated with the red route.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will identify the need for a two or four lane upgrade and confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I have engaged AECOM to undertake detailed planning and design refinement of the

ITEM	BUSINESS

preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.

- The Department met with Jacfin to discuss the proposal on 20th May 2013. Jacfin expressed their opposition to the Department seeking alternative alignment's for the regional road network given their existing approval for a Concept Plan with reservation for a regional north-south link. This alignment was achieved through discussions with the Department's assessments and strategic teams.
- Following further discussion with Chris Wilson, Department's Executive Director, Development Assessment, the Department's position is to support the existing route identified in Jacfin's Concept Plan approval.
- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

2. **Discussion**

- IS outlined the modelling task. IS advised that the modelling process will look at both the 'red' and the 'green' alignments, in various design iterations.
- IS outlined land use assumptions. He noted these assumptions are consistent with previous studies undertaken within the WSEA by both AECOM and GHD. He noted that previous studies have identified the need for a link to Archbold Road and the opening of the SLRN.
- The group discussed trip generation for the modelling task. It was noted that Blacktown City Council usually prefer 21 trips per 2 hours. SS suggested undertaking a sensitivity test at 10 per 2 hours.
- MK enquired about traffic generated from the south-west of the existing WSEA. IS advised that the modelling relies on RMS model which will need to be updated with the latest assumptions regarding the Broader WSEA.
- BC noted the outcomes from the meeting with Jacfin on the 20th and advised that the Department's position is to support the route alignment shown in Jacfin's Concept Plan.
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- KD and MK raised concerns over the timing of the delivery of the red route. KD noted that it is likely the green route would serve a regional function in the absence of the red route until it is built.
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- AM outlined the engineering constraints associated with the crossing of the SCA pipeline. MT advised that engineering issues can be overcome.
- The group discussed the joining of the red route to the existing Old Wallgrove Road. AECOM to come up with a design that appropriately connects the red and green routes.
- MT advised that the regional route is entirely owned by Jacfin
- The group discussed the timing of the modelling process.
- KD reiterated Goodman's need for access to Oakdale Central ASAP.
- BC advised that the Department is undertaking full costing of proposed new infrastructure in the WSEA (such as the SLRN, Archbold Road and M4 intersection). This is being undertaken with NSW Treasury with the intention of identifying these infrastructure needs early.
- It was noted that the blue route is not being considered.

4. **Meeting close**

ITEM	BUSINESS

- BC thanked attendees and closed the meeting.

DRAFT

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Sydney Catchment Authority 2-6 Station Street, Penrith**

Date: **12:00pm to 1:30pmam 24th June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), David Bohm (DB)
SCA:	Neil Abraham (NA), Greg Greene (GG), Ross Wauldross (RW), Stephen McMahon (SM), Matthew Henson (MH), Stephen Waitte (SW)

ITEM	BUSINESS

1. **Introduction & Background**

- The purpose of the meeting was to discuss potential road alignments for the Western Sydney Employment Area in relation to associated crossings of the Sydney Catchment Authority (SCA) pipeline.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to come online by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- Goodman have undertaken strategic costings and constraints studies for the three road alignments and suggest that there are a number of constraints associated with the red route.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will identify the need for a two or four lane upgrade and confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I has engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.
- The Department met with Jacfin to discuss the proposal on 20th May 2013. Jacfin expressed their opposition to the Department seeking alternative alignment's for the regional road network given their existing approval for a Concept Plan with reservation for a regional north-south link. This alignment was achieved through discussions with the

ITEM	BUSINESS

Department's assessments and strategic teams.

- Following further discussion with Chris Wilson, Department's Executive Director, Development Assessment, the Department's position is to support the existing route identified in Jacfin's Concept Plan approval.
- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

2. Discussion

- KD provided an overview of Goodman's activities in the area including Oakdale estate and Oakdale Central (160ha abutting the SCA pipeline) and Oakdale South (140ha). KD outlined existing access arrangements for the site and advised that RMS has advised that they will not consent to any further development within Oakdale until access arrangements have been upgraded to industrial standard to cope with the volume of traffic.
- BC advised that the Department is currently in the process of refining the Southern Link Road Network which forms a vital part of the Western Sydney Employment Area regional road network. He noted difficulties in keeping infrastructure up with the pace of development in the area and the importance of securing a north-south link to complete the regional road network.
- BC advised that Goodman is in favour of the green route which involves the upgrade of the existing entombed crossing. The red route requires a new crossing over the pipeline. Goodman's indicative designs for the red route have identified the red route crossing as a bridge.
- BC advised that Jacfin's preference is for the red route. He noted that the Department's position is to support the alignment approved under Jacfin's concept plan and work with stakeholders towards the delivery of the route.
- BC advised that the Jacfin has noted their objection to the blue route. NA advised that SCA has previously objected to any new crossings over the pipeline however, has expressed preference for the blue route if necessary. KD advised that the blue route can work for Goodman.
- The group discussed Goodman's comparative costings and design for the road alignments. AM noted that the green route is the most cost-effective and has the least constraints. AM advised that the design for the green route includes some acquisition of SCA land.
- The group briefly discussed the westernmost north/south link through Fitzpatrick land. BC advised that the intention is still to deliver this link.
- The group discussed the possibility of ultimately closing the green route.
- NA advised that there are operational issues with both alignments. He noted that the preference is for a straight crossing as this reduces risk for the pipeline.
- KD advised that Goodman prepared structural studies five years ago which show that the existing bridge is structurally adequate.
- The group discussed maintenance arrangements for the pipeline with respect to both alignments. SCA advised that there may be advantage in securing the red route if the green route was discontinued. It was noted that it is possible both alignments will ultimately exist with two separate pipeline crossings. KD advised it is unlikely the green route will closed.
- SCA advised that if the two crossings exist simultaneously there is the possibility of encasing the pipeline between the two.
- AM advised that the green route could be completed by the end of next year.
- The group discussed potential intersections of the red and green routes to the south and north of the pipeline.
- NA advised SCA costs associated with these crossings would need to be met.
- KD noted the potential for a signalised intersection at the green route crossing.

ITEM	BUSINESS
	• The group discussed the location of the Saint Clare carrier. SCA advised that the primary consideration is impacts on the pipeline during construction. This may require geotechnical advice. Goodman advised they have consulted with Sydney Water. Sydney Water and SCA to discuss.
4.	**Meeting close**
	• BC thanked attendees and closed the meeting.

DRAFT

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Sydney Catchment Authority 2-6 Station Street, Penrith**

Date: **12:00pm to 1:30pmam 24th June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Kim Dracopoulis (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), David Bohm (DB)
SCA:	Neil Abraham (NA), Greg Greene (GG), Ross Wauldross (RW), Stephen McMahon (SM), Matthew Henson (MH), Stephen Waitte (SW)

ITEM	BUSINESS

1. **Introduction & Background**

- The purpose of the meeting was to discuss potential road alignments for the Western Sydney Employment Area in relation to associated crossings of the Sydney Catchment Authority (SCA) pipeline.
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- DP&I has engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.
- The Department met with Jacfin to discuss the proposal on 20th May 2013. Jacfin expressed their opposition to the Department seeking alternative alignment's for the regional road network given their existing approval for a Concept Plan with reservation for a regional north-south link. This alignment was achieved through discussions with the

ITEM	BUSINESS

Department's assessments and strategic teams.

- Following further discussion with Chris Wilson, Department's Executive Director, Development Assessment, the Department's position is to support the existing route identified in Jacfin's Concept Plan approval.
- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

2. **Discussion**

- KD provided an overview of Goodman's activities in the area including Oakdale estate and Oakdale Central (160ha abutting the SCA pipeline) and Oakdale South (140ha). KD outlined existing access arrangements for the site and advised that RMS has advised that they will not consent to any further development within Oakdale until access arrangements have been upgraded to industrial standard to cope with the volume of traffic.
- BC advised that the Department is currently in the process of refining the Southern Link Road Network which forms a vital part of the Western Sydney Employment Area regional road network. He noted difficulties in keeping infrastructure up with the pace of development in the area and the importance of securing a north-south link to complete the regional road network.
- BC advised that Goodman is in favour of the green route which involves the upgrade of the existing entombed crossing. The red route requires a new crossing over the pipeline. Goodman's indicative designs for the red route have identified the red route crossing as a bridge.
- BC advised that Jacfin's preference is for the red route. He noted that the Department's position is to support the alignment approved under Jacfin's concept plan and work with stakeholders towards the delivery of the route.
- BC advised that the Jacfin has noted their objection to the blue route. NA advised that SCA has previously objected to any new crossings over the pipeline however, has expressed preference for the blue route if necessary. KD advised that the blue route can work for Goodman.
- The group discussed Goodman's comparative costings and design for the road alignments. AM noted that the green route is the most cost-effective and has the least constraints. AM advised that the design for the green route includes some acquisition of SCA land.
- The group briefly discussed the westernmost north/south link through Fitzpatrick land. BC advised that the intention is still to deliver this link.
- The group discussed the possibility of ultimately closing the green route.
- NA advised that there are operational issues with both alignments. He noted that the preference is for a straight crossing as this reduces risk for the pipeline.
- KD advised that Goodman prepared structural studies five years ago which show that the existing bridge is structurally adequate.
- The group discussed maintenance arrangements for the pipeline with respect to both alignments. SCA advised that there may be advantage in securing the red route if the green route was discontinued. It was noted that it is possible both alignments will ultimately exist with two separate pipeline crossings. KD advised it is unlikely the green route will closed.
- SCA advised that if the two crossings exist simultaneously there is the possibility of encasing the pipeline between the two.
- AM advised that the green route could be completed by the end of next year.
- The group discussed potential intersections of the red and green routes to the south and north of the pipeline.
- NA advised SCA costs associated with these crossings would need to be met.
- KD noted the potential for a signalised intersection at the green route crossing.

ITEM	BUSINESS

- The group discussed the location of the Saint Clare carrier. SCA advised that the primary consideration is impacts on the pipeline during construction. This may require geotechnical advice. Goodman advised they have consulted with Sydney Water. Sydney Water and SCA to discuss.

4. Meeting close

- BC thanked attendees and closed the meeting.

DRAFT

SOUTHERN LINK ROAD NETWORK: NORTH SOUTH CONNECTION

Stakeholder Meeting

Meeting Notes

Location: **Austral Bricks Design Studio, 50 Carrington Street, Sydney 2000**

Date: **20 June 2013, 1:30 pm – 2:30 pm**

Attendees:
Jacfin: Jackie Waterhouse (JW), Ray Waterhouse (RW), Mark Tooker (MT), Toby Tames (TT)
Brickworks: Megan Kublins (MK)
Goodman: Will Dwyer (WD), Richard Seddon (RS), Kym Dracoupolis (KD)
DP&I: Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)

ITEM	BUSINESS	ACTION

1. **Introduction**

WD introduced the meeting and noted that the purpose of the meeting was to discuss the delivery of a north-south link providing access to both Jacfin and Goodman land.

2. **Discussion**

- WD introduced some preliminary work undertaken by Goodman. Modelling work in preparation by the DP&I was also noted.
- WD noted budgetary constraints regarding Government funding for the provision of a North-south link. He noted that Goodman has undertaken rough costings for the green, red and blue routes which suggest that the green route will be substantially cheaper ($20-25 million) while the red route has initial estimates of $50-60 million. WD outlined the work completed to date by Goodman regarding the initial costing and design of the route options. Known engineering constraints associated with the crossing of the Sydney Catchment Authority (SCA) pipeline were also noted.
- WD advised that Goodman has been working with the Department towards the development of the green route as part of a development proposal. The Department's position is to support the further detailed investigation into the suitability of the red route as shown in Jacfin's Concept Approval.
- BC provided background on previous meetings with Jacfin and noted that the Department is committed to resolving the north-south alignment. He noted that the timely delivery red route as a regional road will be investigated to the fullest possible extent before other routes will be considered.
- JW advised that she requires her entire team to be present for a full and productive discussion of these matters. WD clarified that the aim of the meeting was to hold a discussion about the facilitation of the red route. JW advised that the best course of action for Jacfin is to have the Jacfin team review Goodman's costings and other data. This will better inform Jacfin as to the proposals. Further meetings can be held once Jacfin has reviewed the information and data.
- WD advised that Goodman has $19.2 million in credits that can be readily put toward a north-south link. It is understood that Jacfin may be able to provide a contribution toward the red route and the Department may be able to fund the

shortfall.

- Discussion regarding internal local road network links between the Jacfin and Goodman proposals ensued. JW highlighted existing connectivity issues between Oakdale South and Jacfin land. RS proposed to review the existing road network of the Goodman Master Plan for further discussion with Jacfin.
- RS noted the cost benefit of the green route and advised that the significant cost of the red route may become a funding problem.
- JW advised that there is significant value to Jacfin to fund and deliver the red route. JW advised that Jacfin is committed to securing a good outcome for the link.
- BC advised that the delivery of this north-south route is currently the most important unresolved road element in the Western Sydney Employment Area. The link is considered vital to the success of the employment area. BC advised that he should be involved in meetings between stakeholders and Government agencies as he is the lead representative for the department and would be involved in future government funding processes.
- The group discussed the timing of the delivery of a North-South link. BC suggested the group commit to a regular working group convened by the DP&I. JW advised that further meetings can be established after Jacfin has reviewed Goodman's data.
- BC provided an update on GHD's modelling for the regional road network. He advised that GHD has started the modelling process and will test all scenarios. The modelling will inform the evaluation of the Southern Link Road Network North-south options; determine the regional significance of the green route and inform the possible provision of SIC credits. This is being undertaken to allow all information to be available.

3. **Next steps**

- Jacfin to review Goodman's costings information and data regarding north-south link road options.
- Goodman proposed to review existing internal road network options (Oakdale South) to identify options for connectivity with the adjacent Jacfin proposal for further discussions with Jacfin.
- Goodman and Jacfin to meet with SCA separately to discuss engineering issues associated with the crossing of the SCA pipeline. BC to be present at both meetings.
- The Department to convene a series of working groups at DP&I Bridge Street to work through the issues.

Meeting close

- BC thanked attendees and closed the meeting.

SOUTHERN LINK ROAD NETWORK: NORTH SOUTH CONNECTION

Stakeholder Meeting
Meeting Notes

Location: **Austral Bricks Design Studio, 50 Carrington Street, Sydney 2000**

Date: **20 June 2013, 1:30 pm – 2:30 pm**

Attendees:
Jacfin: Jackie Waterhouse (JW), Ray Waterhouse (RW), Mark Tooker (MT), Toby Tames (TT)
Brickworks: Megan Kublins (MK)
Goodman: Will Dwyer (WD), Richard Seddon (RS), Kym Dracoupolis (KD)
DP&I: Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)

ITEM	BUSINESS	ACTION

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2. **Discussion**

- WD introduced some preliminary work undertaken by Goodman. Modelling work in preparation by the DP&I was also noted.
- WD noted budgetary constraints regarding Government funding for the provision of a North-south link. He noted that Goodman has undertaken rough costings for the green, red and blue routes which suggest that the green route will be substantially cheaper ($20-25 million) while the red route has initial estimates of $50-60 million. WD outlined the work completed to date by Goodman regarding the initial costing and design of the route options. Known engineering constraints associated with the crossing of the Sydney Catchment Authority (SCA) pipeline were also noted.
- WD advised that Goodman has been working with the Department towards the development of the green route as part of a development proposal. The Department's position is to support the further detailed investigation into the suitability of the red route as shown in Jacfin's Concept Approval.
- BC provided background on previous meetings with Jacfin and noted that the Department is committed to resolving the north-south alignment. He noted that the timely delivery red route as a regional road will be investigated to the fullest possible extent before other routes will be considered.
- JW advised that she requires her entire team to be present for a full and productive discussion of these matters. WD clarified that the aim of the meeting was to hold a discussion about the facilitation of the red route. JW advised that the best course of action for Jacfin is to have the Jacfin team review Goodman's costings and other data. This will better inform Jacfin as to the proposals. Further meetings can be held once Jacfin has reviewed the information and data.
- WD advised that Goodman has $19.2 million in credits that can be readily put toward a north-south link. It is understood that Jacfin may be able to provide a contribution toward the red route and the Department may be able to fund the

ITEM	BUSINESS	ACTION

shortfall.

- Discussion regarding internal local road network links between the Jacfin and Goodman proposals ensued. JW highlighted existing connectivity issues between Oakdale South and Jacfin land. RS proposed to review the existing road network of the Goodman Master Plan for further discussion with Jacfin.
- RS noted the cost benefit of the green route and advised that the significant cost of the red route may become a funding problem.
- JW advised that there is significant value to Jacfin to fund and deliver the red route. JW advised that Jacfin is committed to securing a good outcome for the link.
- BC advised that the delivery of this north-south route is currently the most important unresolved road element in the Western Sydney Employment Area. The link is considered vital to the success of the employment area. BC advised that he should be involved in meetings between stakeholders and Government agencies as he is the lead representative for the department and would be involved in future government funding processes.
- The group discussed the timing of the delivery of a North-South link. BC suggested the group commit to a regular working group convened by the DP&I. JW advised that further meetings can be established after Jacfin has reviewed Goodman's data.
- BC provided an update on GHD's modelling for the regional road network. He advised that GHD has started the modelling process and will test all scenarios. The modelling will inform the evaluation of the Southern Link Road Network North-south options; determine the regional significance of the green route and inform the possible provision of SIC credits. This is being undertaken to allow all information to be available.

3. **Next steps**

- Jacfin to review Goodman's costings information and data regarding north-south link road options.
- Goodman proposed to review existing internal road network options (Oakdale South) to identify options for connectivity with the adjacent Jacfin proposal for further discussions with Jacfin.
- Goodman and Jacfin to meet with SCA separately to discuss engineering issues associated with the crossing of the SCA pipeline. BC to be present at both meetings.
- The Department to convene a series of working groups at DP&I Bridge Street to work through the issues.

Meeting close

- BC thanked attendees and closed the meeting.

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Sydney Catchment Authority 2-6 Station Street, Penrith**

Date: **12:00pm to 1:30pmam 24th June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Kym Dracopoulos (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), David Bohm (DB)
SCA:	Neil Abraham (NA), Greg Greene (GG), Ross Hawes (RH), Stephen McMahon (SM), Matthew Henson (MH), Stephen Waite (SW)

ITEM	BUSINESS

1. **Introduction & Background**

- The purpose of the meeting was to discuss potential road alignments for the Western Sydney Employment Area and associated crossings of the Sydney Catchment Authority (SCA) pipeline.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to be in operation by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- Goodman has undertaken strategic costings and constraints studies for three north south road alignments.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I has engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.
- The Department met with Jacfin to discuss the green route proposal in May 2013. Jacfin expressed their opposition to the Department seeking alternative alignment's for the regional road network given their existing Concept Plan approval with reservation for a regional north-south link to Archbold Road.
- The Department's position is to support the existing route identified in Jacfin's Concept

Plan approval.

- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

2. **Discussion**

- KD provided an overview of Goodman's activities in the area including Oakdale estate and Oakdale Central (160ha abutting the SCA pipeline) and Oakdale South (140ha). KD outlined existing access arrangements for the site and advised that RMS has advised that they will not consent to any further development within Oakdale until access arrangements have been upgraded to industrial standard to cope with the volume of traffic.
- BC advised that the Department is currently in the process of refining the Southern Link Road Network which forms a vital part of the Western Sydney Employment Area regional road network. He noted difficulties in keeping infrastructure up with the pace of development in the area and the importance of securing a north-south link to complete the regional road network.
- Goodman is in favour of the green route which involves the upgrade of the existing pipe crossing. The red route requires a new crossing over the pipeline. Goodman's indicative designs for the red route have identified the red route crossing as a bridge.
- BC advised that Jacfin's preference is for the red route. He noted that the Department's position is to support the alignment approved under Jacfin's Concept approval and work with stakeholders towards the delivery of the route.
- BC noted that Goodman is seeking a works in kind credit for the green route against the regional road levy.
- BC advised that the Jacfin has noted their objection to the blue route. NA advised that SCA has previously objected to any new crossings over the pipeline however, has expressed preference for the blue route if necessary. KD advised that the blue route can work for Goodman.
- The group discussed Goodman's comparative costings and design for the road alignments. AM noted that the green route is the most cost-effective and has the least constraints. AM advised that the design for the green route includes some acquisition of SCA land.
- The group briefly discussed the westernmost north/south link through Fitzpatrick land. BC advised that the intention is still to deliver this link.
- The group discussed the possibility of ultimately closing the green route.
- NA advised that there are operational issues with both alignments. He noted that the preference is for a straight crossing as this reduces risk for the pipeline.
- KD advised that Goodman (GHD) prepared structural studies five years ago which show that the existing bridge is structurally adequate.
- The group discussed maintenance arrangements for the pipeline with respect to both alignments. SCA advised that there may be advantage in securing the red route if the green route was discontinued. It was noted that it is possible both alignments will ultimately exist with two separate pipeline crossings. KD advised it is unlikely the green route will closed.
- SCA advised that if the two crossings exist, there is the possibility of encasing the pipeline at this location, rather than a new bridge.
- AM advised that the green route could be completed by the end of next year.
- The group discussed potential intersections of the red and green routes to reduce land take.
- NA advised SCA costs associated with these crossings would need to be met.
- KD noted the potential for a signalised intersection at the green route crossing.
- The group discussed the location of the St Claire carrier. SCA advised that the primary consideration is impacts on the pipeline during construction. This may require geotechnical

ITEM	BUSINESS

advice. Goodman advised they have consulted with Sydney Water. Sydney Water and SCA to discuss.

4. Meeting close

- BC thanked attendees and closed the meeting.
- BC noted that Jacfin would like to meet with SCA to discuss the red / green route crossing of the SCA land.

DRAFT

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Sydney Catchment Authority 2-6 Station Street, Penrith**

Date: **12:00pm to 1:30pmam 24th June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Kym Dracopoulos (KD)
AT&L:	Anthony Maclandsborough (AM)
AECOM:	Mark Cure (MC), David Bohm (DB)
SCA:	Neil Abraham (NA), Greg Greene (GG), Ross Hawes (RH), Stephen McMahon (SM), Matthew Henson (MH), Stephen Waite (SW)

ITEM	BUSINESS

1. **Introduction & Background**

- The purpose of the meeting was to discuss potential road alignments for the Western Sydney Employment Area and associated crossings of the Sydney Catchment Authority (SCA) pipeline.
- Previous studies undertaken by AECOM for the Southern Link Road Network (SLRN) have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- RMS studies undertaken as part of the 2012 Old Wallgrove Widening (Roberts Road – Wallgrove Road) REF identified the need for a link to the M4 via Archbold Road by 2021 and for the SLRN to be in operation by 2031 to relieve congestion on Old Wallgrove Road.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $16 – 20 million.
- Goodman has undertaken strategic costings and constraints studies for three north south road alignments.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. GHD's work will confirm the regional contribution of the road. This is part of ongoing transport modelling for the Broader WSEA Structure Plan.
- DP&I has engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.
- The Department met with Jacfin to discuss the green route proposal in May 2013. Jacfin expressed their opposition to the Department seeking alternative alignment's for the regional road network given their existing Concept Plan approval with reservation for a regional north-south link to Archbold Road.
- The Department's position is to support the existing route identified in Jacfin's Concept

ITEM	BUSINESS

Plan approval.

- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

2. **Discussion**

- KD provided an overview of Goodman's activities in the area including Oakdale estate and Oakdale Central (160ha abutting the SCA pipeline) and Oakdale South (140ha). KD outlined existing access arrangements for the site and advised that RMS has advised that they will not consent to any further development within Oakdale until access arrangements have been upgraded to industrial standard to cope with the volume of traffic.
- BC advised that the Department is currently in the process of refining the Southern Link Road Network which forms a vital part of the Western Sydney Employment Area regional road network. He noted difficulties in keeping infrastructure up with the pace of development in the area and the importance of securing a north-south link to complete the regional road network.
- Goodman is in favour of the green route which involves the upgrade of the existing pipe crossing. The red route requires a new crossing over the pipeline. Goodman's indicative designs for the red route have identified the red route crossing as a bridge.
- BC advised that Jacfin's preference is for the red route. He noted that the Department's position is to support the alignment approved under Jacfin's Concept approval and work with stakeholders towards the delivery of the route.
- BC noted that Goodman is seeking a works in kind credit for the green route against the regional road levy.
- BC advised that the Jacfin has noted their objection to the blue route. NA advised that SCA has previously objected to any new crossings over the pipeline however, has expressed preference for the blue route if necessary. KD advised that the blue route can work for Goodman.
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- The group briefly discussed the westernmost north/south link through Fitzpatrick land. BC advised that the intention is still to deliver this link.
- The group discussed the possibility of ultimately closing the green route.
- NA advised that there are operational issues with both alignments. He noted that the preference is for a straight crossing as this reduces risk for the pipeline.
- KD advised that Goodman (GHD) prepared structural studies five years ago which show that the existing bridge is structurally adequate.
- The group discussed maintenance arrangements for the pipeline with respect to both alignments. SCA advised that there may be advantage in securing the red route if the green route was discontinued. It was noted that it is possible both alignments will ultimately exist with two separate pipeline crossings. KD advised it is unlikely the green route will closed.
- SCA advised that if the two crossings exist, there is the possibility of encasing the pipeline at this location, rather than a new bridge.
- AM advised that the green route could be completed by the end of next year.
- The group discussed potential intersections of the red and green routes to reduce land take.
- NA advised SCA costs associated with these crossings would need to be met.
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ITEM	BUSINESS

advice. Goodman advised they have consulted with Sydney Water. Sydney Water and SCA to discuss.

4. Meeting close

- BC thanked attendees and closed the meeting.
- BC noted that Jacfin would like to meet with SCA to discuss the red / green route crossing of the SCA land.

DRAFT

SOUTHERN LINK ROAD NETWORK REFINEMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Level 5, 10 Valentine Avenue, Parramatta, NSW**

Date: **2pm to 3pm, 18th July 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)
AECOM:	David Bohm (DB), Mark Cure (MC)
GHD:	Iwan Smith (IS), Anderson Hui (AH)
Brickworks:	Megan Kublins (MK)
Goodman:	Will Dwyer (WD), Kim Dracopoulis (KD)
AT&L:	Anthony Mclandsborough (AM)
Brown Consulting:	Toby Thames (TT)
RMS:	Fiona Chan (FC)
Apologies:	Nadeem Sheikh (NS), Jacquie Waterhouse (JW)

ITEM	BUSINESS

1. **Introduction & Background**

- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA and the Broader WSEA Structure Plan. The purpose of the meeting was to discuss the results of modelling work undertaken by GHD for the regional road network.
- DP&I has engaged GHD to undertake localised traffic modelling for the existing and proposed road network upgrades incorporating Goodman's proposed upgrade. A preliminary run of the model has been completed. There is now scope to re-run the model pending stakeholder input.
- DP&I has engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.
- Previous studies undertaken by AECOM for the SLRN have identified potential north-south connections for the WSEA regional road network including a connection to the M4 via Archbold Road. These are long-term links of regional significance that will eventually serve to connect the SLRN with the rest of WSEA.
- Goodman is seeking an interim upgrade of the existing portion of Old Wallgrove Road between Erskine Park Link Road connection and their Oakdale Central and Oakdale South estates in order to meet current demand. The upgrade will provide a four lane road to industrial standard. The cost of the upgrade is between $25 million.
- Jacfin has expressed opposition to the investigation of alternate regional routes given Jacfin's Concept Approval which includes reservation for a regional north-south link through the site. The Department's position is to support the existing route identified in the Concept Approval.
- The Department will continue to facilitate discussions between Jacfin, Goodman and other stakeholders regarding the delivery and ultimate alignment of the regional road network.

ITEM	BUSINESS

2. Discussion

- IS provided an overview of the modelling task and stakeholder consultation.
- IS outlined the modelling approach. The model uses EMME strategic model and SIDRA intersection modelling.
- IS outlined the network scenarios considered and the assumptions underpinning the analysis for the 2021 and 2032 horizon years.
- IS noted that once broader strategic modelling for the Broader WSEA Structure Plan is complete the model will be able to take into account the impact of traffic coming from the potential employment lands to the south west. BC advised the Department will engage GHD to undertake further modelling scenarios taking the Broader WSEA into account.
- The group discussed the percentage of trips attributable to each developer for the red and green routes within both horizon years.
- The group discussed the grouping of lands in the model. IS noted that the areas may be grouped differently if required.
- IS advised that the efficiency of the network is heavily reliant upon the final design of the intersection of the green and red routes.
- IS advised that the green route influences the way traffic accesses the M4. Traffic may move along Old Wallgrove Road (green route) to the M7 and onto the M4 rather than using Archbold Road (red route), which may lead to further congestion at the Old Wallgrove Road intersection.
- FC advised that RMS will need to investigate the impact of the proposed road upgrade on the approved Old Wallgrove Road upgrade.
- AM noted that the modelling has not considered a "red route only" scenario. Such a scenario may indicate the level of requirement for the green route.
- The group discussed collaboration of design work for the pipeline crossing. MC noted that the requirements of the pipeline crossing and intersection are dependant on the number of lanes required on each road.
- BC advised that by September the Department intends to have a more refined model and encouraged stakeholder feedback on the results/modelling process.
- WD advised that Goodman is preparing a new DA within Oakdale Central which will likely bring the access issues into focus. The DA will be with the Department in approximately six weeks.

3. Meeting close

- BC thanked attendees and closed the meeting.

SOUTHERN LINK ROAD NETWORK REFINEMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Level 5, 10 Valentine Avenue, Parramatta, NSW**

Date: **2pm to 3pm, 18th July 2013**

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AT&L:	Anthony Mclandsborough (AM)
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- DP&I has engaged AECOM to undertake detailed planning and design refinement of the preferred alignment for the SLRN and selected internal connections. The study will take into account Goodman's proposed upgrade of Old Wallgrove Road. This work is expected to be completed in the third quarter of 2013.
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- The group discussed the grouping of lands in the model. IS noted that the areas may be grouped differently if required.
- IS advised that the efficiency of the network is heavily reliant upon the final design of the intersection of the green and red routes.
- IS advised that the green route influences the way traffic accesses the M4. Traffic may move along Old Wallgrove Road (green route) to the M7 and onto the M4 rather than using Archbold Road (red route), which may lead to further congestion at the Old Wallgrove Road intersection.
- FC advised that RMS will need to investigate the impact of the proposed road upgrade on the approved Old Wallgrove Road upgrade.
- AM noted that the modelling has not considered a "red route only" scenario. Such a scenario may indicate the level of requirement for the green route.
- The group discussed collaboration of design work for the pipeline crossing. MC noted that the requirements of the pipeline crossing and intersection are dependant on the number of lanes required on each road.
- BC advised that by September the Department intends to have a more refined model and encouraged stakeholder feedback on the results/modelling process.
- WD advised that Goodman is preparing a new DA within Oakdale Central which will likely bring the access issues into focus. The DA will be with the Department in approximately six weeks.

3. Meeting close

- BC thanked attendees and closed the meeting.

NSW GOVERNMENT | Planning & Infrastructure

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Sydney Catchment Authority 2-6 Station Street, Penrith**

Date: **11:00am to 12pm 22nd July 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)
Jacfin:	Jacquie Waterhouse (JW), Laurie Rose (LR) Toby Thames (TT), Mark Tucker (MT)
Goodman:	Will Dwyer, Richard Seddon (RS), Kim Dracopoulis (KD), Anthony McLandsborough (AM)
Brickworks:	Megan Kublins (phone)

ITEM	BUSINESS

1. Introduction & Background

- The purpose of the meeting was to discuss the funding and delivery of a regional road forming part of the Southern Link Road Network (SLRN). The route is identified in Jacfin's concept approval for its Ropes Creek site.
- The Department has engaged GHD to undertake localised transport modelling of the red route (regional road) and alternate green route (Old Wallgrove Road upgrade). The model takes into account different scenarios for the two routes.
- The Department has engaged AECOM to undertake further refinement of the Southern Link Road Network and selected internal connections.

2. Discussion

- BC introduced the meeting and provided background on the GHD modelling. He noted that there is now scope to re-run the model taking into account comments from RMS, Goodman and any further comments received by stakeholders.
- BC noted Sydney Catchment Authority (SCA) will host a workshop in the next three weeks to discuss engineering issues associated with the pipeline crossings and come to a preferred outcome.
- LR advised that Jacfin is willing to arrange for dedication of a four lane corridor, between the Erskine Park Link Road (EPLR) and the SCA pipeline. He noted that Jacfin is committed to the delivery of the route.
  Jacfin has undertaken initial costings for the corridor, suggesting it can be delivered at roughly $4,500 per metre.
- The group discussed staging. Jacfin will submit a staged DA for four lanes,

ITEM	BUSINESS

with stage 1 consisting of two lanes and minimum requirements to provide the road in the most cost effective way. Jacfin and the Department will arrange works in kind for the works.

- WD advised that Goodman has $15 million in credits which can be put towards whichever solution provides access. Goodman is willing to put these credits towards the delivery of the pipeline crossing and intersection to meet with Jacfin's corridor.
- WD advised that a two lane road would allow Goodman to develop approximately 70 developable hectares. WD advised that Goodman will lodge its next DA in approximately four weeks. The DA will show both the red and green option. WD advised that Goodman will continue to seek the green route as a fall back option.
- BC advised that the Department is costing all roads in the WSEA and Broader WSEA. If there is a short fall in funding it is possible that in the long term the Government will be able to apply funding to the road network.
- The group discussed the roles of each party;
  - Jacfin to undertake corridor between EPLR and SCA pipeline;
  - Goodman to undertake intersection and Oakdale Estate, including the route to Burley Road.
- BC advised that AECOM is in the process of undertaking detailed design for the pipeline crossing. AECOM will prepare a number of options for the SCA workshop. AECOM will undertake the final design for the crossing.
- BC advised that Brown's Consulting, AT&L and AECOM will form a small working group to prepare a final agreed corridor alignment. BC advised that AECOM will undertake quantity surveying work to cost the corridor.
- The group discussed design requirements for the corridor. AM noted he has had initial discussions with RMS. The Corridor will be built to RMS design requirements. LR advised that the Jacfin concept approval includes existing cross sections indicating corridor width. BC advised that RMS has the expectation to eventually own the road.
- RS advised that it would be beneficial for all parties to agree to a program of works with defined milestones.

3. Next steps

- SCA workshop Tuesday, September 3rd 2013.

4. Meeting close

- BC thanked attendees and closed the meeting.

NSW GOVERNMENT | Planning & Infrastructure

SOUTHERN LINK ROAD DEVELOPMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Sydney Catchment Authority 2-6 Station Street, Penrith**

Date: **11:00am to 12pm 22nd July 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean (BM), Aaron Nangle (AN)
Jacfin:	Jacquie Waterhouse (JW), Laurie Rose (LR) Toby Thames (TT), Mark Tucker (MT)
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ITEM	BUSINESS

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- The Department has engaged AECOM to undertake further refinement of the Southern Link Road Network and selected internal connections.

2. Discussion

- BC introduced the meeting and provided background on the GHD modelling. He noted that there is now scope to re-run the model taking into account comments from RMS, Goodman and any further comments received by stakeholders.
- BC noted Sydney Catchment Authority (SCA) will host a workshop in the next three weeks to discuss engineering issues associated with the pipeline crossings and come to a preferred outcome.
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ITEM	BUSINESS

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- The group discussed design requirements for the corridor. AM noted he has had initial discussions with RMS. The Corridor will be built to RMS design requirements. LR advised that the Jacfin concept approval includes existing cross sections indicating corridor width. BC advised that RMS has the expectation to eventually own the road.
- RS advised that it would be beneficial for all parties to agree to a program of works with defined milestones.

3. Next steps

- SCA workshop Tuesday, September 3rd 2013.

4. Meeting close

- BC thanked attendees and closed the meeting.

SOUTHERN LINK ROAD NETWORK REFINEMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **RMS, Parramatta**

Date: **11am to 12:30pm, 17th September 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
AECOM:	Mark Cure (MC)
Goodman:	Will Dwyer (WD), Richard Seddin (RS)
AT&L:	Peter Hall (PH)
Browns Consulting:	Toby Thames (TT)
RMS:	Matty Mathnivar

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1. **Introduction & Background**

- The Department, Jacfin and Goodman are committed to the delivery of the Archbold Road extension (a regional north-south link connecting the recently opened Erskine Park Link Road (EPLR) with the employment lands south of the Sydney Catchment Authority (SCA) pipeline).
- The Archbold Road extension is a vital element of the Southern Link Road Network (SLRN) which will ultimately complete the WSEA regional road network.
- The parties are currently undertaking detailed design of the route to progress delivery.
- A key element of the SLRN is the crossing of the pipeline. It is estimated this crossing will cost between $10-15 million. The Department is currently investigating internal funding sources to deliver the crossing. The remainder of the road is expected to be delivered by the private sector.
- The purpose of the meeting was to discuss design standards for Archbold Road extension and to discuss potential requirements for the upgrade of Old Wallgrove Road.

2. **Discussion**

- BC noted that the Archbold extension is likely to ultimately be a state-owned RMS road, however this is not yet confirmed.
- MC noted the difference between cross sectional parameters currently being designed by Browns, AT&L and AECOM. MC advised that AECOM's designs are based on the RMS requirements used for the EPLR.
- TT advised that Browns designs to date, including those prepared for the Ropes Creek concept plan, were based on DP&I requirements outlined in a previous Department of Planning document.
- BC advised that the Department will respond to Browns in order to ensure that the regional corridor takes into account RMS requirements and standards.
- MM advised that the regional road must be consistent with the EPLR in terms of cross sectional requirements. MM noted that AECOM's drawings appear consistent with the approved EPLR requirements.
- The group discussed median width. MM advised that the median could be no less than 5 metres, including the bridge crossing.
- The group discussed the design speed of the road, in particular the curve radius of the area

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around the SCA pipeline.

- MC advised that in order to maintain an 80km/h design speed, encroachment is necessary on either Goodman's Lot 1A, or the south western corner of TransGrid's property.
- It was noted that Browns' current drawings are designed to a 70km/h design speed. A third option was proposed for a 70km/h design speed however MM advised that a 70km/h design speed would be unacceptable to RMS.
- BC advised that the Department will discuss possible encroachment with TransGrid. WD advised that he will look into potential encroachment within Lot 1A. WD advised that the implications on construction cost should also be considered.
- The group discussed intersections within the network. It was noted that the intersection of EPLR and Archbold Road is already constructed. It was noted that there is a need to confirm the requirements for this intersection. BC advised that GHD will undertake further modelling on the matter incorporating the regional model that has been recently undertaken for the Broader WSEA Structure Plan. This modelling work will determine any further requirements for this intersection.
- It was noted that the EPLR/Archbold Road intersection is within close proximity to the first internal connection shown in Browns' plans. This may impact on the internal design of the corridor.
- It was noted that roundabouts may not be appropriate to accommodate the regional road. TT advised that RMS has previously indicated support for the signalisation of the internal intersections. The group discussed the cost and feasibility of signalisation.
- The group discussed timing of the road.
- BC advised that there is an emerging maintenance gap for Old Wallgrove Road. He noted that there may be a need to upgrade this road in the future as it will continue to play a role in the network. It was noted that the outcome of GHD modelling will provide greater clarity on this matter.
- The group discussed costing of the road. MC advised that initial costing suggests somewhere in the order of $4-5 million per lane per km.
- MC advised that road widening south of the SCA pipeline is shown as encroaching into Brickworks' site to the east of the road. RS advised there may be some capacity to encroach on Goodman's land to the west as well.
- WD advised that the Goodman DA will include designs for a SLRN underpass. These designs include an assumed height of the SLRN. WD to provide designs to DP&I for AECOM to review.

3. **Actions**

- BC to meet with TransGrid to discuss encroachment into TransGrid's property.
- Goodman to consider encroachment into Lot 1A.
- GHD to undertake further traffic modelling within the network including intersection design requirements.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

SOUTHERN LINK ROAD NETWORK REFINEMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Level 5, 10 Valentine Avenue, Parramatta**

Date: **2:00pm to 3:00pm 16th December 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Richard Seddin (RS)
AT&L:	Anthony Maclandsborough (AM)
Jacfin:	Laurie Rose (LR), Toby Thames (TT), Steve Long (SL)
GHD:	Iwan Smith (IS)
AECOM:	Mark Cure (MC), David Bohm (DB)
RMS:	Matty Mathnivar (MM)
Blacktown Council:	Nadeem Sheikh (NS)

ITEM	BUSINESS

1. Introduction & Background

- BC introduced the meeting and provided a brief update regarding ongoing works within the WSEA. The purpose of the meeting was discuss ongoing works relating to the refinement of the Southern Link Road Network (SLRN).

2. Discussion

- IS outlined modelling work for the project to date. He noted the work incorporates proposed infrastructure such as the SLRN and assumed traffic volumes into the existing mesoscopic traffic model that was prepared to inform the Broader WSEA Structure Plan. The model incorporates further assumptions such as Old Wallgrove Road and new land uses.
- IS noted GHD has completed the first cut of the model incorporating AECOM's current designs and undertaken preliminary intersection assessment. The assessment measures the performance of intersections and considers ways to improve them.
- NS noted that modelling work should be based upon the ultimate road scenarios and lane configurations rather than interim road corridors.
- The group discussed the role of Old Wallgrove Road (between Roberts Road and Goodman estate). IS noted the road will play a function in the ultimate WSEA road network.
- AM outlined Goodman's intention for the upgrade of Old Wallgrove Road.
- BC advised that a VPA to be established between the Department and Goodman will determine the extent of credits available to Goodman for the upgrade of Old Wallgrove Road.
- NS advised that two lanes may be required on Old Wallgrove Road in case Archbold Road Extension project does not happen or is delayed. MM advised that based on RMS modelling Archbold Road extension with east facing ramps is required by 2031. It is included in GHD's 2036 assumptions.
- BC advised that in 2014 the Department will update the regional road map shown in SEPP WSEA 2009.
- MC outlined the latest designs for the Sydney Catchment Authority (SCA) pipeline crossing. He noted that in 2014 AECOM and the Department will present the refined designs to SCA and seek agreement on a crossing option.
- The group discussed the intersection of Old Wallgrove Road and the proposed new SCA

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crossing. LR noted that Jacfin's position is to support the granting of credits to Goodman for any long term works associated with the road network. He noted that Jacfin is supportive of Old Wallgrove Road as a two lane road with quality intersections.

- The group discussed the timing of the Archbold extension.

3.

Next steps

- GHD to continue to refine the model.
- Present pipeline crossing designs to SCA in early 2014.

4.

Meeting close

- BC thanked attendees and closed the meeting.

DRAFT

NSW GOVERNMENT | Planning & Infrastructure

OLD WALLGROVE ROAD UPGRADE
ADJACENT TO TRANSGRID
WORKING GROUP MINUTES

Meeting Notes

Location: **Brickworks, 50 Carrington Street Sydney**

Date: **1:00pm to 2:00pm 20th June 2013**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Brent McLean, Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Seddon, Kim Dracopoulos (KD)
Jacfin:	Jacquie Waterhouse (JW), Ray Waterhouse (RW), Mark Tooker (MT), Toby Thames (TT)

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1. Introduction & Background

- WD introduced the meeting and noted that the purpose of the meeting was to discuss the delivery of a north-south link providing access to both Jacfin and Goodman land.

2. Discussion

- WD noted engineering constraints associated with the crossing of the SCA pipeline.
- WD noted budgetary constraints regarding Government funding for the provision of the link. He noted that Goodman has undertaken rough costings for the green, red and blue routes which suggest that he Green route will be substantially cheaper ($20-25 million) while the red route is limited by cost ($50-60 million). WD outlined the work completed to date regarding costing and design of the route options.
- WD advised that Goodman has been working with the Department towards the development of the green route however the Department's position is now to support the red route as shown in Jacfin's Concept Approval.
- BC provided background on previous meetings with Jacfin and noted that the Department is committed to resolving the north-south alignment. He noted

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that the timely delivery red route as a regional road will be investigated to the fullest possible extent before other routes will be considered.

- JW advised that she requires her entire team to be present for a full and productive discussion of these matters. WD clarified that the meeting the aim of the meeting was to hold a discussion about the facilitation of the red route. JW advised that the best course of action for Jacfin is to have the Jacfin team review Goodman's costings and other data. This will better inform Jacfin as to the situation. Further meetings can be held once Jacfin has reviewed the data.
- WD advised that Goodman has $19.2 million in credits that can be readily put toward the road. It is estimated that Jacfin may be able to provide a contribution toward the red route and the Department may be able to fund the shortfall.
- RS noted the cost benefit of the green route and advised that the significant cost of the red route may become a funding problem.
- JW advised that there is significant value to Jacfin to fund and deliver the red route. JW advised that Jacfin are committed to securing a good outcome for the link.
- BC advised that the delivery of this north-south route is currently the most important aspect of the Western Sydney Employment Area. The link is vital to the success of the employment area. BC advised that he should be involved in meetings between stakeholders and Government agencies.
- The group discussed the timing of the delivery of the north-south link. BC suggested the group commit to a regular working group. JW advised that further meetings can be established after Jacfin has reviewed Goodman's data.
- BC provided an update on GHD's modelling for the regional road network. He advised that GHD are about to start the modelling process and will test all scenarios. The modelling will determine the regional significance of the green route and inform the provision of SIC credits toward the upgrade.

3. Next steps

- Jacfin to review Goodman's data and for the group to subsequently meet.

SOUTHERN LINK ROAD NETWORK REFINEMENT
STAKEHOLDER MEETING

Meeting Notes

Location: **Department of Planning & Infrastructure, Level 5, 10 Valentine Avenue, Parramatta**

Date: **3:00pm to 4:00pm, 7th February 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Kym Dracopoulos (KD)
AT&L:	Anthony McLandsborough (AM)
Brickworks:	Mgean Kublins (MK)
AECOM:	David Bohm (DB), Mark Cure (MC)

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1. Introduction & Background

- Planning & Infrastructure is nearing finalisation of a refined Southern Link Road Network (SLRN) alignment. Planning & Infrastructure will seek to exhibit a SEPP amendment within the coming months.
- Brickworks has previously raised safety concerns regarding the current intersection of the Brickworks access road with Wallgrove Road. This intersection is identified to be upgraded as part of the SLRN.
- Oakdale West is a significant parcel in the WSEA. It is owned by Brickworks in partnership with Goodman. The SLRN traverses the site.

2. Discussion

- BC advised that Planning & Infrastructure will commission AECOM to undertake a road safety audit of the current arrangement at Wallgrove Road/Brickworks access intersection and prepare a recommendations report for RMS.
- The group discussed Oakdale West. It was noted that the site is topographically constrained and the current alignment of the SLRN makes industrial development on the site difficult.
- KD advised that the current SLRN arrangement in this area is a risk to development and a preferable outcome would be for the SLRN to deviate south in order to provide space for large industrial lots.
- BC advised that AECOM is close to finalisation of the refined network and almost ready for exhibition. He noted that if Goodman can provide a suitable solution as soon as possible AECOM may be able to include this in their preferred alignment.

3. Next steps

- Brickworks/Goodman to provide potential design solution on Monday 10th March.
- Attendees to reconvene in the week starting 10th March.

4. Meeting close

- BC thanked attendees and closed the meeting.

ARCHBOLD ROAD EXSTENSION WORKING GROUP
STAKEHOLDER MEETING

Meeting Notes

Location: **Department of Planning & Infrastructure, Level 5, 10 Valentine Avenue, Parramatta**

Date: **2:00pm to 3:00pm, 11th February 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Pascal VanDeWille (PV), Aaron Nangle (AN)
Browns:	Toby Thames (TT), Mark Tucker (MT)
Goodman:	Will Dwyer, Richard Seddon (RS),
AT&L:	Anthony McLandsborough (AM)
RMS:	Matty Mathivanar (MM)
Blacktown Council:	Nadeem Shaikh (NS)
AECOM:	David Bohm (DB), Mark Cure (MC)
GHD:	Iwan Smith (IS)

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1. Introduction & Background

- The purpose of the meeting was to discuss the delivery of the WSEA regional road network.
- AECOM has undertaken strategic level design for the Southern Link Road Network (SLRN). This study is almost complete.
- GHD has undertaken intersection modelling for the SLRN based on refinement of the Broader WSEA Mesoscopic Traffic model using assumptions for 2026 and 2036 horizon years.
- Goodman has lodged an SSDA with the Department for Oakdale Central estate. The SSDA seeks approval for the upgrade of Old Wallgrove Road (OWR) to four lanes.
- An interim, two lane scenario is proposed to immediately service Oakdale Central. The SSDA seeks four lanes ultimately in the case that Archbold Road Extension is not in operation by the time the two lane scenario reaches capacity.
- Goodman is seeking SIC credits for the upgrade and to undertake works in-kind. This would draw upon credits from Oakdale Central and Oakdale South.
- The modelling assumes the Archbold Road Extension will be in place for both model runs. It does not take into account a scenario in which the Archbold Road Extension is not built.

2. Discussion

- IS noted that, based on the modelling results, most intersections will perform at a level of service D or better. He noted some widening of the intersection between EPLR and the Archbold Road Extension may be required. He noted that GHD hasn't modelled a scenario without Archbold Road Extension. There may be capacity to model this further.
- DB advised that it is the Department's intent to exhibit the SLRN around Easter 2014. This would amend the regional roads map shown within SEPP (WSEA) 2009.
- NS enquired about the ultimate road authority for the regional roads. He noted Blacktown Council's standards regarding site access from arterial and sub-arterial

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roads.

- DB advised that recent meetings with TransGRid and SCA indicate in-principle support for the alignment. A workshop with SCA has been postponed; however it appears that this will relate to relatively minor design details.
- BC advised that the Department will be seeking to have the SLRN inserted into TfNSW's Total Asset Management Plan and will go through a separate cabinet process to have the Broader WSEA roads identified and costed.
- The group discussed potential additional modelling. RS noted that additional modelling to test a scenario without the Archbold Road Extension may be necessary. It was noted that additional modelling would allow GHD to identify the point at which the upgraded OWR reaches capacity and additional lanes are required. BC and IS to discuss further modelling.
- BC advised that the SLRN as exhibited will identify OWR (between Roberts Rd and Oakdale Central) as a corridor accommodating up to four lanes.
- PV noted that in order to determine the SSDA he needs clarification on whether two or four lanes is proposed for approval. RS noted the SSDA seeks approval for four lanes, with the intention to deliver two lanes in the interim and additional capacity for two more lanes in the event that the Archbold Road Extension does not come online.
- BC noted the outstanding issue is that of how much credit Goodman should receive for the upgrade.
- TT advised that Jacfin's position is not to take funds away from the Archbold Road Extension as this has historically been the agreed regional route.
- BC advised that the VPA will contain explicit staging provisions which will be publically available during exhibition.
- The group discussed the intersection of OWR and Archbold Road Extension. AM noted that delivering the intersection as part of the OWR upgrade would compromise the ability to construct the pipeline crossing.

3. **Next steps**

- SCA workshop TBA.
- AECOM and AT&L to confirm cross sections and road designs.
- AECOM to confirm Goodman's costings.
- GHD to confirm capacity of two lane scenario.
- DP&I to draft VPA.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

OAKDALE CENTRAL – WESTERN SYDNEY EMPLOYMENT AREA
LANDHOLDER MEETING

Meeting Notes

Location: **Planning & Infrastructure, 23 - 33 Bridge Street, Sydney**

Date: **10:00am – 11:00am, 21st March 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Chris Ritchie (CR), Pip Stenekes (PS), Pascal VanDeWile (PV), Terry Natt (TN), Lisa Chan (LC) Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Seddon (RS), Ben McGilp (BM)

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1. **Introduction & Background**

- Planning & Infrastructure is currently assessing SSDA 6078 (Oakdale Central). The proposal includes an upgrade of Old Wallgrove Road through Works in Kind (WIK) to be agreed via a VPA.
- The purpose of the meeting was to discuss issues relating to the VPA(s) between Goodman and the Minister for the proposal.

2. **Forward funding**

- WD noted that Goodman should be refunded for works which exceed the WIK amount for the road. BC advised that the Minister cannot be compelled to pay cash for any exceeded amount.
- WD noted that Goodman requires certainty that the road can be upgraded to four lanes (in the absence of an alternate regional route). GHD has previously identified a trigger point at which the road will be required for upgrade from two lanes to four. BC advised that Planning & Infrastructure can revisit the matter at this point. BC advised that a credit for the overspend may be possible but would require further confirmation.
- WD enquired about the current status of Archbold Road extension. BC advised that funds have not yet been secured for the pipeline crossing.
- RS advised Goodman requires a solution where the access arrangements are suitable to develop Oakdale Central and Oakdale South as credits are being drawn from both.
- BC noted the outstanding payment for Goodman's Interlink development.

3. **Capping of cost**

- WD advised that Goodman cannot control the timing of consultation with Government Agencies and Council and therefore do not agree to a cap where Goodman does not control the process.
- WD proposed two phases:
  - Pre-commencement phase (100% recoverable); and
  - Construction phase (Goodman's risk).
- Planning & Infrastructure to consider.

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4. **Security**
   - PS advised there is an initial bond and then additional bond for WIK. It was noted the initial bond can be returned prior to the second. No double up of bonds is proposed.

5. **Capacity trigger on Old Wallgrove Road**
   - WD noted the Old Wallgrove Road capacity trigger of 900 vehicles per hour (less than level of service D). He noted that Goodman agrees but proposes that the trigger should include the requirement that a level of service for both the mid block and the intersection needs to be maintained at level of service C or better.

6. **Section 94 levies**
   - WD noted concern over a potential double up of state and Section 94 levies. It was noted that the application of Section 94 is done on a case by case basis.
   - TN to provide further advice on the matter.

7. **Lot 1B payment**
   - PS advised that payments for lot 1B will be included in the agreement.
   - Goodman to pay amount on execution of the VPA.

8. **Separate VPAs**
   - PS noted that Planning & Infrastructure has proposed two agreements in order to allow Goodman to wrap up the Central VPA with the Central application and attach the South VPA to any future applications for that land.
   - Goodman and Planning & Infrastructure to further discuss.

9. **Date for completion of WIK**
   - Planning & Infrastructure requires that works be completed prior to occupation of any new buildings.
   - WD advised that occupation of the shed should only be a penalty where Goodman has not complied with commencement of building works within a reasonable timeframe and has not completed the works within 10 months of the date of approval. He noted possible delays in the approval process, for which Goodman does not have control.
   - Planning & Infrastructure to further investigate the matter and advise Goodman.

10. **Clause 29 satisfactory arrangements**
    - PS advised a satisfactory arrangements letter will be issued for all sites to which the VPA applies.

11. **Additional matters**
    - Goodman agrees that the Minister will be the consent for land acquisition.
    - Goodman agrees to the offset of WIK costs.
    - Goodman agrees to provide $20,000 as security for all monetary

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obligations.

12. **Next steps**
- Planning & Infrastructure to progress with drafting.
- Goodman to provide final offer.

13. **Meeting close**
- CR thanked attendees and closed the meeting.

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ARCHBOLD ROAD EXSTENSION WORKING GROUP
STAKEHOLDER MEETING

Meeting Notes

Location: Department of Planning & Infrastructure, 22-33 Bridge Street, Sydney

Date: 4:00pm to 5:00pm, 10th April 2014

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Pascal VanDeWille (PV), Sally Munk (SM), Aaron Nangle (AN)
Goodman (via phone):	Will Dwyer, Richard Seddon (RS),

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1. Introduction & Background

- The purpose of the meeting was to discuss outstanding matters relating to the finalisation of a Voluntary Planning Agreement (VPA) for Oakdale Central (SSDA currently under assessment) and Oakdale South (future development).

2. Formalisation of letter of offer

- P&I considers that the existing letter and table of issues provided by Goodman allows P&I to move forward with drafting.
- P&I to draft VPA and provide draft to Goodman for review.
- It was noted that the drafting will be undertaken by an external Lawyer, Nick Thomas, from Clayton Utz

3. Application of Section 94

- P&I has undertaken a review of existing VPAs in the area and it is noted that none of these agreements exclude Section 94 and Section 94As. P&I noted that payment of Section 94 to be determined by negotiation between Goodman and Fairfield Council. BC advised that he is able to be present for these negotiations to represent Planning & Infrastructure on the matter.
- Goodman to negotiate payment of Section 94 with Council.

4. Separate VPAs versus a single VPA for Oakdale Central and Oakdale South

- P&I advised that either a single or dual VPAs are acceptable. P&Is legal branch has previously provided advice that a single VPA may be the most administratively simple approach.

5. Offset of Works In Kind

- P&I preference is to allow up to $20 million worth of credit from Oakdale Central and Oakdale South. Any additional funds required to deliver the upgrade would draw upon Goodman's outstanding debt for the Interlink development of $3.4 million.
- P&I legal branch to investigate turning Interlink debt into a credit.
- BC advised that Jason Little has met with Andrew Jackson and Chris Wilson regarding the matter. Following this meeting GHD is preparing a memo for TfNSW outlining the work done to date regarding the interim regional significance of an upgraded Old Wallgrove Road. TfNSW will provide P&I with confirmation of the matter upon receiving GHDs memo.

6. Estimate of costs and capping of costs

- P&I noted Goodman has previously sought 100% recovery of design and approval costs however it was noted that in order to maintain consistency

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between agreements P&I propose the same approach that was adopted for the Jacfin, Ropes Creek VPA.

- P&I propose that Goodman undertake design and approval work in advance. Goodman would then submit a WIK request for the total cost, following agreement from RMS including an additional 15% contingency.
- Goodman noted concerns regarding agency requirements during the design and approval phase prior to agreement of WIK.
- Goodman to review Jacfin, Ropes Creek VPA. PV to send a copy to WD/RS.

7. **Value of credits**
   - As previously discussed, a total of $20 million in credit from Oakdale Central and Oakdale South with additional funds drawn from Interlink debt of $3.4 million.

8. **Cost of acquired land**
   - Goodman advised that it requires reasonable cost and value for acquisition and raised concern about complications in the acquisition process. It was noted that the three parties from which Goodman will be acquiring should be amenable to the proposal.
   - P&I advised that an independent valuation of the acquisition can be undertaken. P&I to further identify a mechanism by which P&I may be able to acquire the land, provided Goodman can prove that reasonable effort was applied to resolve the matter.

9. **Commencement of stage 2 works**
   - BC advised that as P&I has now set a limit of $20 million, including a possible four lane road upgrade he noted that there may now be no need for a trigger point. He advised that the work undertaken to date by GHD will still be relevant for TfNSW, however this may not need to be included in the VPA.
   - Goodman advised that if the four lane road upgrade is approved as part of the SSDA it would assist them with the approvals process prior to WIK agreement and reduces Goodman's risk.

10. **Satisfactory arrangements letter**
    - PV advised that if there is one VPA there will only be a need for one satisfactory arrangements letter for consistency with Clause 29 of SEPP (WSEA) 2009.

11. **Security**
    - Additional information required from Terry Natt/Lisa Chan.

12. **Drafting and execution**
    - Nick Thomas, from Clayton Utz lawyers to draft VPA. It was noted that Goodman has a retainer with Clayton Utz, however Goodman advised that this should not be a problem.

13. **Meeting close**
    - BC thanked attendees and closed the meeting.

OLD WALLGROVE ROAD UPGRADE
STAKEHOLDER MEETING

Meeting Notes

Location: **Department of Planning & Infrastructure, Level 5, 10 Valentine Avenue, Parramatta**

Date: **2:00pm to 3:00pm, 12th May 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Pascal VanDeWille (PV), Aaron Nangle (AN)
Goodman:	Will Dwyer, Richard Seddon (RS), Kim Dracopoulos (KD)
AT&L:	Anthony McLandsborough (AM), Peter Wall (PW)
RMS:	Matty Mathivanar (MM)
Blacktown Council:	Nadeem Shaikh (NS), Graham Gooch (GG)
AECOM:	Mark Cure (MC)
Fairfield Council:	Phillip Severamatu (PS)

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1. Introduction & Background

- The purpose of the meeting was to provide additional detail, and understand the extend of additional information required, for the determination of Goodman's Oakdale Central SSDA, including plan for the upgrade of Old Wallgrove Road.
- As per other Voluntary Planning Agreements (VPAs) in the WSEA, Goodman is required to undertake design and approval prior to entering into a works in kind (WIK) agreement with the Department.
- These approvals will be determined by Blacktown and Fairfield Councils. Goodman is seeking greater certainty for the approvals process prior to entering into the WIK.
- Goodman requires input from Blacktown and Fairfield Council on the matter prior to the Department's approval of the SSDA to achieve greater certainty in order to progress with detailed design and approval of the road.

2. Discussion

- Goodman propose to undertake all designs to RMS standards.
- PV noted that the intention is to approve the road designs at a concept level and condition the requirement for more detailed approvals from Council be undertaken. He noted it will be necessary to confirm if Councils are satisfied with the design as outlined in the SSDA.
- BC advised that by the end of this process all parties will have a better understanding of the cost of the proposed WIK.
- Goodman provided the group with a proposed timetable for construction of the road.
- BC advised that TfNSW is currently preparing a letter, following modelling advice from GHD, noting acceptance of the upgraded Old Wallgrove Road as an interim regional road in the absence of the Archbold Road extension. It was noted that Old Wallgrove Road will remain a Council road.
- The group discussed current and future road ownership within the road

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corridor. AT&L to prepare a diagram showing short term and long term Council/RMS land ownership.

- PS noted the remaining portion of Old Wallgrove Road south of Goodman's estate access point. BC advised that this part of the corridor is currently unfunded however CSR may be interested in WIK in the long term.
- It was noted that additional information regarding drainage and hydrology will be required for the SSDA approval.
- NS noted that Blacktown Council has provided in principle support to the upgrade however noted concerns regarding the width of the proposed median strip. He noted that Blacktown Council will require the full package in order to appropriately respond. RS noted that the package as it stands is almost fully complete. Additional information will be forthcoming.
- Goodman advised it can provide a high level REF, based on desktop level analysis, to Council.
- RS noted VPA scope of works will include all line item costs for the project. He enquired if there is a standard template for this? MC to follow up.
- BC advised MC would be retained throughout the project to undertake peer review of Goodman's work as required.
- RS noted that the existing road designs are available in appendix 7 of the SSDA application which is available on the Department's website. RS suggested Blacktown Council will require about two weeks to review the documentation. Goodman will then present the material to Councils, the Department and RMS and address any additional queries.

3. **Next steps**

- Goodman to submit additional plans.
- MC to follow up on standard template for line item costs associated with the VPA.
- Blacktown and Fairfield Councils to review the road designs currently available on the Department's website and await additional information from Goodman.
- Next meeting two weeks from today.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

OLD WALLGROVE ROAD UPGRADE
STAKEHOLDER MEETING

Meeting Notes

Location: **Department of Planning & Infrastructure, Level 5, 10 Valentine Avenue, Parramatta**

Date: **1:00pm to 2:00pm, 26th May 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Pascal VanDeWille (PV) (part), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Seddon (RS), Kim Dracopoulos (KD)
AT&L:	Anthony McLandsborough (AM), Peter Wark (PW)
AECOM:	Mark Cure (MC)

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1. Introduction & Background

- The purpose of the meeting was to discuss the upgrade of Old Wallgrove Road (OWR) and establish a reporting framework for the project.

2. Discussion

- Goodman advised an external QS has been appointed to work with AECOM for the peer review of costs associated with the delivery of OWR upgrade. A costing methodology is currently being prepared. All documentation and costing will be undertaken to RMS standards.
- Council approved plans, an estimate of expected costs and an estimate of maximum costs will be submitted to the Department for the works in kind agreement.
- RS advised that expenditure to date and associated invoices to be submitted 26/5/2014.
- RS advised that Goodman is seeking to take the letter of offer to Goodman's investment committee while the VPA is being drafted to get initial agreement prior to finalisation of the VPA.
- It was agreed that a monthly reporting system would be established. AECOM will provide a monthly memo outlining expected versus actuals for each month. BC advised that regular working group meetings will be held at which Goodman and other stakeholders can discuss cost and timeline.
- BC advised all QS records will be held on the same file as the SSDA.
- Goodman advised letter of offer amendments will be provided ASAP.
- It was noted that SCA, TransGrid and Austral Bricks are key stakeholders and will be involved in future working group meetings.
- It was noted that construction of the upgrade will take approximately 8-10 months. RS advised Goodman is aiming for June next year for opening of the road.
- WD noted revised clauses for letter of offer to be provided by Wednesday.

3. Next steps

- Goodman to provide comments on letter of offer.
- Department to finalise draft VPA.

ITEM	BUSINESS

- PV to finalise SSDA.
- Goodman to seek in principle support from Blacktown and Fairfield Councils for concept level design, subject to further design and approvals.
- Department to establish regular working group meeting with all necessary stakeholders.
- AECOM and Goodman to continue QS work.

4. Meeting close

- BC thanked attendees and closed the meeting.

DRAFT

OLD WALLGROVE ROAD UPGRADE
STAKEHOLDER MEETING

Meeting Notes

Location: **Department of Planning & Infrastructure, Level 5, 10 Valentine Avenue, Parramatta**

Date: **2:00pm to 3:00pm, 26th May 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Pascal VanDeWille (PV), Aaron Nangle (AN)
Goodman:	Will Dwyer (WD), Richard Seddon (RS), Kim Dracopoulos (KD)
AT&L:	Anthony McLandsborough (AM), Peter Wark (PW)
RMS:	Matty Mathivanar (MM)
Blacktown Council:	Nadeem Shaikh (NS), Graham Gooch (GG)
AECOM:	Mark Cure (MC)
Fairfield Council:	Phillip Severamatu (PS), Nicoleta Diacopololous (ND), Wayne Pope (WP)

ITEM	BUSINESS

1. Introduction & Background

- The purpose of the meeting was for Goodman to provide additional concept level detail regarding the upgrade of Old Wallgrove Road (OWR), to the satisfaction of the Department, RMS, Blacktown Council and Fairfield Council and to confirm in-principle support from both Councils, subject to further detailed design and approval.

2. Discussion

- It is the Department's intention to hold regular working group meetings for the upgrade involving Goodman, RMS, Blacktown Council, Fairfield Council, TransGrid, Austral Bricks and Sydney Catchment Authority. These meetings will provide an opportunity to discuss expenditure, progress and timeline.
- AM outlined the design of OWR, outlining cross sections, designs, acquisitions and proposed construction arrangements.
- WP noted that drainage issues that had been raised previously have now been considered.
- The group discussed design speed. It was noted that an 80km/h design speed may not be achieved however it the final regional route (Archbold Road Extension) will be 80km/h.
- GG noted an error in drawings for the shared path. AM to amend. It was noted that the shared path may be best placed on the eastern side to provide continued bike access to TransGrid employees.
- GG noted Blacktown Council has not considered drainage yet. AM advised that drainage will form part of the detailed analysis.
- AM advised that all documentation for the upgrade will be undertaken to RMS standards.
- BC advised that the Department is awaiting a response from TfNSW regarding the status of the "interim regional road" with regard to works in kind

ITEM	BUSINESS

credits.

- It was noted that provision is made for future traffic lights within the designs.
- AM enquired about expectations with regard to landscaping. Blacktown to provide additional advice.
- PS advised Fairfield traffic committee meets every 2 months, and is generally able to make a decision under delegation.
- NS advised that Blacktown traffic committee meets every month, however the matter will need to be reported to Council as the approving authority.
- No additional matters were raised by Fairfield and Blacktown Council. Both Councils noted in principle support for the concept level plans, subject to further detailed design and approval. PV advised that an email from each Council outlining the above will be required.

3. **Next steps**

- Goodman to reissue documentation.
- Fairfield and Blacktown Council to provide email response noting in principle support for the concept level plans, subject to further detailed planning and approval.
- Fairfield and Blacktown to provide details of upcoming traffic committee meetings and Council meetings.
- Next regular working group meeting to include SCA, TransGrid and Austral Bricks.

4. **Meeting close**

- BC thanked attendees and closed the meeting.

DRAFT

OLD WALLGROVE ROAD UPGRADE
STAKEHOLDER MEETING

Meeting Notes

Location: **RMS, Parramatta**

Date: **3:00pm to 4:00pm, 26th June 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
Goodman:	Richard Seddon (RS), Kim Dracopoulos (KD)
AT&L:	Anthony McLandsborough (AM), Peter Wark (PW)
AECOM:	Mark Cure (MC)
RMS:	Matty Mathivanar (MM), Colin Langford (CL), Shibree Samy (SS)

BUSINESS

Introduction & Background

- The purpose of the meeting was to discuss Goodman's proposed upgrade of Old Wallgrove Road which forms part of its SSDA application for Oakdale Central.
- A meeting was held last week with TfNSW at which it was confirmed that credits could be applied to the upgrade of Old Wallgrove Road as an interim regional road of up to two lanes and up to four lanes if an alternative regional road is not delivered by Government.
- A trigger for the identification of a point at which the additional lanes would be required is currently being developed by GHD using SIDRA modelling.

Discussion

- The group discussed the outcome of last week's meeting with TfNSW.
- CL advised that RMS' role is to ensure that the amount of credits required to build the upgrade is minimised to ensure funding can be applied to the future regional road network. It was noted that RMS will also need to sign off on the scope of works.
- AM advised that all designs have been prepared to RMS standards.
- AM outlined the existing condition of Old Wallgrove Road and outlined designs for the proposed interim and ultimate road configuration.
- The group discussed the design requirements of the interim solution. In particular, there was a discussion regarding the need for shoulder lanes to allow for adequate access in the event of a breakdown.
- RS noted that Goodman needs to ensure that consistent operation of warehouses can be maintained through the road upgrade.
- CL advised that Goodman needs to provide a clear rationale for each element of the interim solution in order to justify the provision of credits. He noted that consideration will be given to the value for money of the scenario.
- RMS to review Goodman's designs and provide feedback, with the potential for a workshop meeting to further discuss any issues.

Next steps

- Goodman to provide interim/ultimate designs to RMS.
- Potential for an additional workshop to discuss these matters.

	BUSINESS

- Department to finalise assessment and VPA.
- Goodman to continue to work on design detail with RMS.

Meeting close

- BC thanked attendees and closed the meeting.

DRAFT

OLD WALLGROVE ROAD UPGRADE
STAKEHOLDER MEETING

Meeting Notes

Location: **Department of Planning & Infrastructure, 10 Valentine Avenue, Parramatta**

Date: **2:00pm to 3pm 6th August 2014**

Attendees:

Department of Planning & Infrastructure:	Bruce Colman (BC), Aaron Nangle (AN)
AT&L:	Anthony McLandsborough (AM)
RMS:	Gordon Trotter (GT), Ahmad Mangal (AM), Shibree Samy (SS)
Blacktown Council:	Nadeem Shaikh (NS)
Fairfield Council:	Roshan Aryal (RA)
AECOM:	Mark Cure (MC)

ITEM	BUSINESS

1. **Introduction & Background**

- The proposed upgrade of Old Wallgrove Road forms part of Goodman's State Significant Development Application for Oakdale Central.
- TfNSW has advised that regional credits may be applied to the upgrade, subject to design rationalisation to be undertaken by RMS in consultation with Goodman and the Department.
- RMS has agreed to a rationalised ultimate solution which encompasses a four lane road with reduced median.
- Goodman and the Department are currently negotiating a Voluntary Planning Agreement which will encompass the agreed works.

2. **Discussion**

- AM advised that Goodman has been working with RMS and the Department to evaluate the extent and cost of the proposed works.
- Goodman has designed and costed a two stage scenario and a rationalised ultimate scenario at the request of RMS.
- AM advised that the staged option is costed at $24.5 million while the rationalised ultimate option is costed at $23.4 million. RMS has advised that the rationalised ultimate option is preferred and will convey this to TfNSW for approval.
- NS raised concern regarding the proposed 0.6m painted median. NS advised that revision of the cross section may allow for a raised median, which would be preferred.
- NS advised that Blacktown Council does not support the painted median at this point however, if a Stage 1 Roads Safety Audit is undertaken then it may be acceptable. AM advised that a Roads Safety Audit will be undertaken as part of the process.
- The group discussed the potential for dual right hand turning lanes onto the Erskine Park Link Road. It was noted that a future "fourth leg" complicates the issue. Goodman's current design does not include plans for dual right lanes.

3. **Next steps**

- Goodman to provide latest designs to Council for review.
- Goodman to undertake Road Safety Audit Stage 1.
- Meeting to be held in two weeks to discuss findings of Road Safety Audit and next steps.

ITEM	BUSINESS
	• Goodman to provide updated SSDA traffic report and designs for determination. • Goodman and the Department to finalise VPA.
4.	**Meeting close** • BC thanked attendees and closed the meeting.

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NSW GOVERNMENT | Planning & Environment

OLD WALLGROVE ROAD UPGRADE
STAKEHOLDER MEETING

Meeting Notes

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ITEM	BUSINESS
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