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Responses to flora issues raised by the Department of Planning, Parramatta City Council, the Department of Environment and Climate Change

Department of Planning, Parramatta City Council and the Department of Environment and Climate Change have requested further flora related information on the following issues for MP 08_0258 – Early Works Package at 61 Mobbs Lane, Epping. The requested additional information is provided below.

Department of Planning – MP 08 0258 – Early Works Package

Landscaping

- *Further details are to be provided regarding the retention of trees on the site until works occur within a particular area / stage.*

Meriton has addressed the staging issue in the submitted Preferred Project Report.

To minimise risk of damage to soils and root zone of trees to be retained, and of the conservation area:

- o The boundary of the conservation area is to be marked on plan and clearly identified onsite, with sediment control fenced to be installed and sign posted, as required by the onsite Environmental Manager. All workers on the site are to be made aware of the conservation significance of the vegetation during site induction and during the regular Toolbox Talks;
- o For locations close to trees to be retained, the construction area is to be outside the existing canopy of the trees to be retained, where practicable. The construction area is to be fenced to ensure no traffic movements or storage of goods is to occur outside the designated construction area. All workers on the site are to be made aware of the limits of the construction areas during site induction and during the regular Toolbox Talks;

- o For locations close to trees to be retained where the construction area is unavoidably within the existing canopy of the trees to be retained, a combination of special provisions as required by the Environmental Manager, including:
 - Suspended timber platforms for pedestrian and vehicle movements to limit risk of soil compaction within the root zone;
 - Exclusion fencing is to be constructed around the trees to be retained, where practicable;
 - If exclusive fencing is not practicable, then timber protection is to be provided around trunks to minimise risk of bark damage;
 - Monitoring with photographs the trees to be retained monthly or as required by the Environmental Manager
- *Greater retention of existing native and exotic trees on site to assist in screening / softening of the development shall be considered.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Parramatta City Council – MP 08 0257 – Early Works Package

Tree Protection

- *The blanket proposal for the removal of dead and declining trees is not supported as they play an important role in the ecology of a site. Selective tree removal should be carried out in consultation with the project arborist, site ecologist and Council. The selection of trees to be removed should be based on hazard and target area values.*

Removal of trees is dependent on the hazard of dead trees or dead branches dropping and potentially harming/damaging target(s). The targets include people and buildings.

In a forest, dead and declining trees have adjoining trees and hence the risk of wind-driven collapse is lower than that of isolated trees. In a forest, when a branch or tree collapses, it is:

- o generally intercepted by another vegetation layer and
- o unlikely to have a target located under the dead or declining tree.

The selection of trees to be removed should be based on a hazard risk assessment. If there is a high risk of person movement under or near the dead and declining trees, then removal of these trees is a pragmatic solution. The removal allows for re-planting of local native trees in earlier stages of the project.

- *The blanket proposal removal all exotic trees is not supported. It is recommended that the selection of trees proposed to be removed be carried out in consultation with the project arborist, site ecologist and Council.*

Safety risks are paramount. The scheduling of exotic tree removal forms part of the construction planning. In the planning of the construction phases, the team will consider the requirements associated with each of the phases, including:

- o protection of conservation area;

- o conservation and enhancement of conservation area
- o safety of spaces near access ways and within construction areas;
- o opportunities to establish local native trees in earlier stages of the project;
- o erosion risks; and
- o water management issues.

- *A minimum AQF level 5 arborist should be commissioned for the duration of works to consult on any unforeseen impacts to retained trees. The project arborist should prepare a Tree Protection Plan for the site detailing the protection measures, monitoring the maintenance of single trees, groups of trees and trees located within adjoining properties to be retained.*

A tree protection plan is required if the development stage is within the canopy level of the trees to be retained. Most of the onsite trees have been planted in the last 50 years and the understorey predominantly consists of mown lawns with few of conservation significance.

As required by the onsite Environmental Manager, an arborist who specialises in the mitigation of construction impacts would be commissioned. Avoiding areas with overhanging trees to be retained forms an integral part of the phase planning of the access route and of the construction areas.

Trees overhanging or close to the boundary would be assessed and photographed, as directed by the Environmental Manager, as part of the pre-construction phase of the staged development.

Open Space and Natural Resources

Spatial Location of open Space Facilities

- *The private open space facilities and child care centre located in the south west corner of the site intrudes into the public accessible open space area. The buildings and tennis court obstruct and visual surveillance into the larger open space area from Mobbs Lane. This private facility, together with the detention pond, cut the usable open space into smaller parcels reducing usability and cohesiveness.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Child Care Facility

- *Increased screening needs to be provided between the Mobbs Lane Reserve car park and the child care facility with understorey vegetation to increase delineation*

Meriton has addressed this issue in the submitted Preferred Project Report.

- *The childcare centre playground is an inappropriately located next to the proposed detention basin with potential health conflicts created by such impacts as mosquito population / odour etc.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Active open Space

- *There is no provision within the open space areas for publicly accessible active open space. Active open space provision is already lacking in this location within the Parramatta LGA. Council's Sport and Recreation Plan 2005 identifies this locality as lacking active sports facilities and recommended the establishment of a new local sports facility.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Public Usage and Facilities

- *The creation of picnic facilities or exercise stations within the streetscape would unlikely to be used by the general public as part of a walking circuit. These areas are small and located too close to private residents for the public to feel comfortable using them. Such facilities would be better located within the larger 'public' open space area adjacent to Mobs Lane Reserve*

Meriton has addressed this issue in the submitted Preferred Project Report.

- *All pathways within the development should be a minimum of 2.5m wide*

Meriton has addressed this issue in the submitted Preferred Project Report.

- *The use of recycled rubber or synthetic turf softfall under play equipment should be used to reduce regular mulch maintenance and replacement costs.*

Meriton has addressed this issue in the submitted Preferred Project Report.

- *The Golden Rain Tree species should be replaced with other non-invasive species (as identified as a Noxious Weed by the NSW Dept of Primary Industries).*

The potentially invasive *Koelreuteria paniculata* (Golden Rain Tree) and *Pennisetum alopecuroides* (Nafay Fountain Grass) are not be included on the plant selection list nor used for plant substitutions in the landscaping on the site.

In landscaping associated with the buildings, the plant species selection, including landscapers' plant substitutions is to be checked by the onsite Environment Manager, prior to delivery.

Detention Pond

- *If the pond is retained in the current position it will need to be fenced particularly given its location near an unfenced children's playground.*

Meriton has addressed this issue in the submitted Preferred Project Report.

- *There is an opportunity to provide recreational value to the wider community through the design of accessible paths to the perimeter of the detention pond, plantings, decks, picnic facilities, seating walls and possible island (bird sanctuary) to the centre.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Mobbs Lane Reserve

- *It is unclear as to how the boundary with Mobbs Lane Reserve will be defined. In consideration of aesthetics and wider public access, it would be more appropriate to define with bollards to visually integrate as one open public space areas.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Bushland Restoration

- *The restoration of the Endangered Ecological Community (EEC) located in the north western corner of the site should be subject to a Bush Regeneration Restoration Plan developed by a registered ecologist. Given the ecological importance of this area, play elements should not be located within the EEC.*

The Bush Regeneration Restoration Plan will be prepared by a Restoration Ecologist specialising in re-establishing self-sustaining and relative intact functioning ecosystems from degraded remnants. This is to be done in consultation with the relevant authorities.

A conservation area is for the protection and enhancement of the Endangered Ecological Community. Play elements can be located within an Endangered Ecological Community with extreme care taken, for example the walkways and seating at Sydney Coastal Estuary Swamp Forest Complex at the Warriewood wetlands, Eastern Suburbs Banksia Scrub at Jennifer Street, Botany Bay National Park and Mangrove swamp at Towra Point Nature Reserve. The “play element” would be carefully considered and discussed as part of the preparation of the bushland management plan.



Sydney Coastal Estuary Swamp Forest Complex at the Warriewood wetlands



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Sydney Coastal Estuary Swamp Forest Complex at the Warriewood wetlands



Eastern Suburbs Banksia Scrub at Jennifer Street, Botany Bay National Park



Mangrove swamp at Towra Point Nature Reserve



Mangrove swamp at Towra Point Nature Reserve



Mangrove swamp at Towra Point Nature Reserve

Meriton has addressed this play issue in the submitted Preferred Project Report.

- *The landscape plans fail to address the protection and restoration of the Endangered Ecological Community (EEC) that is within the site. The bushland in the north western portion of the site has been mapped by the NSW NPWS; Native Vegetation of the Cumberland Plain, Western Sydney, Conservation and Planning Division, Hurstville, October 2002. The vegetation is listed as turpentine – Ironbark Forest and is Endangered Ecological Community under the NSW Threatened Species Conservation Act 1995*

To ensure the protection and restoration of the EEC on this site the following steps should be undertaken:

- *The forest area of the site listed as 'Woodland' in the landscape plans should be subject to a Bushland Restoration Plan prepared by a registered ecologist.*
- *All landscape works within or adjacent to the EEC should be undertaken by a qualified bush regenerator*
- *To protect the genetic integrity of the remnant EEC, all planting in or adjacent to the EEC should be done with plant stock grown from locally sourced seed.*
- *All built elements should be kept to a minimum within the EEC. The exercise location in the middle of the EEC should be removed from the landscape plan*
- *Plant species used within the site should strengthen and compliment the EEC. The following species listed within the landscape plan should not be used:*

Koelreuteria paniculata (Golden Rain Tree)

Pennisetum alopecuroides (Nafray Fountain Grass)

Clements *et al.* (2009) found that the area onsite that marginally met the criteria listed in the Final Determination for the endangered ecological community Turpentine-Ironbark Forest. This area is located in the north-west of the Site and along the northern fenceline adjoining Grimes Lane. It included nine *Angophora floribunda* (tree

numbers 658, 663 to 668, 700 and 701) with a sparse mown grassy understorey of native and exotic species. These trees are probably post clearing regrowth.

Clements *et al.* (2009) recommended that a restoration plan for a conservation area in the north-west of the Site adjoining Mobbs Lane Reserve be prepared prior to commencement of construction.

The restoration plan should aim to conserve and enhance local native vegetation in the conservation area adjoining the bushland of Mobbs Lane Reserve. In order to re-establish the local native bushland from the highly fragmented component currently existing on site, mostly mown grass and planted trees, this will require:

- o extremely careful weed management around the existing remnant vegetation components on the site (small number of local-native canopy trees and scattered individuals of groundcover species) to increase the vigour and spread of the individual;
- o the seeds and/or cuttings from remnant components of the groundlayer and the canopy trees to be propagated for tubestock planting in the restoration area; and
- o planting the tubestock of shrubs grown from seeds collected at nearby Council managed remnant seed banks as no native shrub component was recorded on the site.

By careful vegetation management of the conservation area, in accordance with the restoration plan, the occurrence of local native species will be increased in number and cover to form a more viable patch of bushland in the long term. With time, the conservation area is to form a seed bank of the local native flora for use in the nearby bush regeneration areas under the control of Council and local bush regeneration groups.

Meriton has addressed this issue in the submitted Preferred Project Report.

- *All indigenous native trees used within the development should be grown in advance from local provenance seed.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Traffic

Proposed Childcare Centre Facility (59 Children)

- *The proposed separate pedestrian access to and from the site to Mobbs Lane as shown on the plan should be 1m wide minimum.*

Meriton has addressed this issue in the submitted Preferred Project Report.

General Design Points

- *Clear Sight lines shall be provided at the property boundary line to ensure adequate visibility between vehicles leaving the carpark and pedestrians along the frontage road footpath (in accordance with Figures 3.3 of AS 2890.1-1-2004). The*

required sightlines to pedestrians or other vehicles in or around the site should not be compromised by the landscaping, signage, fences, walls or display materials.

Meriton has addressed this issue in the submitted Preferred Project Report.

Urban Design

Connection with Surrounding Area

- *It is noted that the street layout is substantially disconnected from the surrounding existing streets, having just 2 entrances from Mobbs Lane. Whilst there is potential for pedestrian connections to cross the site via park connections, these will not be as inviting or as well used by the general public as proper well overlooked streets carrying light traffic and pedestrians could be. The park entrance adjacent to Mobb's Lane Reserve should be better designed to be inviting to the public.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Public Amenity

- *Safe neighbourhoods depend on safe streets. For streets to feel safe both day and night they need to be well overlooked and well lit. The extent of surveillance of the streets is not always ideal and no street lighting is shown. It is stated that public space lighting will be installed but not the type or the quantity. Both the diagram 'Typical Street Section' page 16 and the street elevation for building 7 show the apartments are raised from the streets and that direct overlooking is reduced by the combination of the setback, raised floor level, solid balustrade and dense screen planting, not facilitating much passive surveillance at all. Lighting should be provided at all streets and pedestrian paths to high pedestrian levels.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Retaining Walls

- *Details of any proposed retaining walls have not been provided with the application. As such, an assessment cannot be carried out on the visual appearance of such walls.*

Meriton has addressed this issue in the submitted Preferred Project Report.

Department of Environment and Climate Change – Major Projects 08_0257 – Stage 1 – Residential Development and Major Project 08_0258 – Early Works Package

Flora and Fauna Assessment

- *Two very large trees of Eucalyptus saligna and E. pilularis, which are characteristic species of Blue Gum High Forest (BGHF), were recorded to the north – east of the helipad, within the pre – 1750 BGHF area. The report does not provide any data on whether there is any native understorey here, or examine whether the vegetation in*

this area meets the definition of BGHF. Therefore, the proposal may result in an impact on BGHF that has not adequately been assessed.

Most of the trees on the Site have been planted in the last 50 years and the understorey of the Site predominantly consists of mown lawns. Of the 1019 trees surveyed by Clements et al. (2005), only 11 were considered likely to be remnant:

- o nine *Angophora floribunda* located along the northern fenceline adjoining Grimes Lane (tree numbers 658, 663 to 668, 700 and 701); and
- o two very large trees recorded to the north-east of the helipad: tree number 927, *Eucalyptus pilularis* (Blackbutt) and 928, *Eucalyptus saligna* (Sydney Blue Gum).

The areas surrounding and near the trees to the north-east of the helipad (tree number 927, *Eucalyptus pilularis* (Blackbutt) and tree number 928, *Eucalyptus saligna* (Sydney Blue Gum)) (see Figure 2 of Clements et al. 2009) was re-inspected and photographed by Anne Clements and Tony Rodd on 23 February 2009. There was little or no area of natural soil surrounding the two trees. There was no understorey under these trees. After the removal of the sheds there may be regrowth of flora from the soil seed bank.

	
Looking north at trees behind the sheds to the north-east of helipad. Trees in background on TAFE land.	Looking west from carpark at Tree Number 927 <i>Eucalyptus pilularis</i>. Tree north of the fence are on TAFE land.



Tree Number 927 *Eucalyptus pilularis* located between a shed and a fence with little soil near the tree.



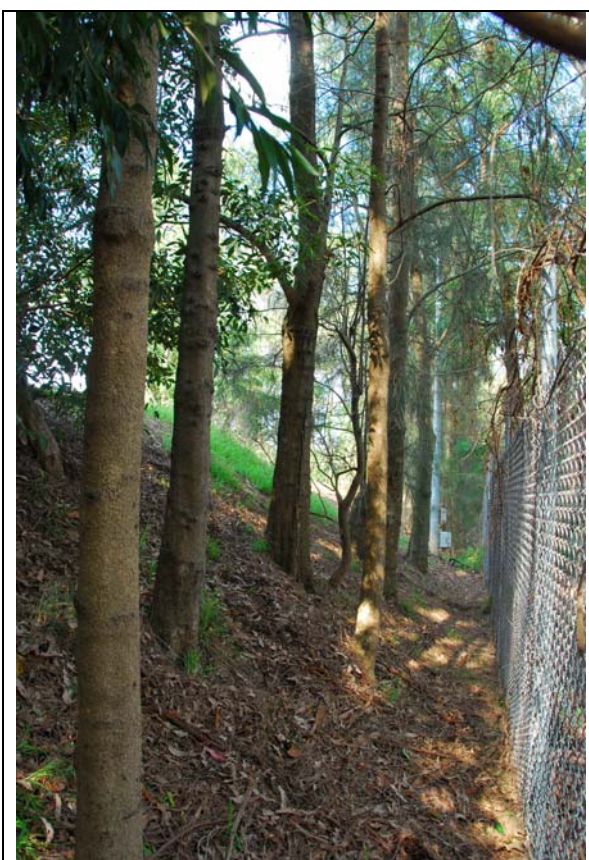
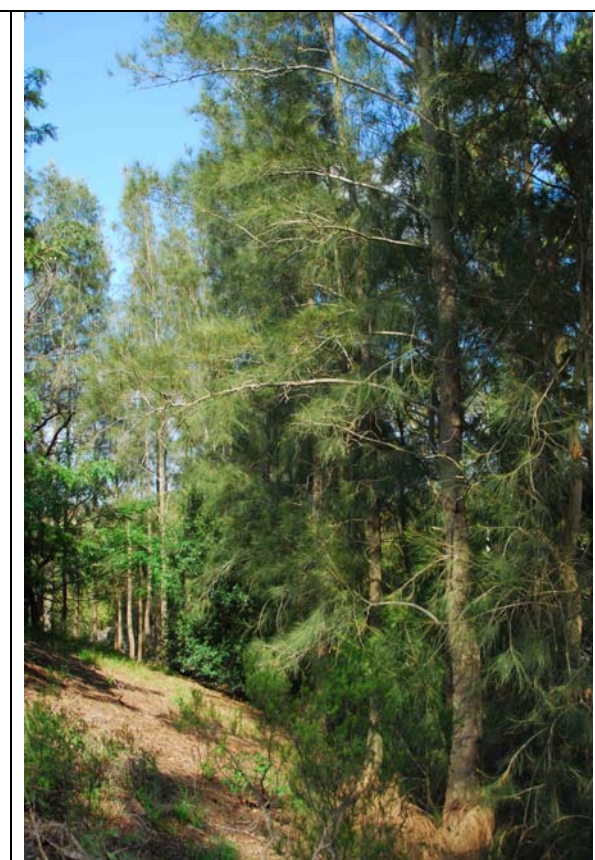
Location of Tree Number 927 *Eucalyptus pilularis*



Tree Number 928, *Eucalyptus saligna*
(Sydney Blue Gum) between shed and fence



Tree Numbers 927, *Eucalyptus pilularis*
(Blackbutt) with Tree Number 928, *Eucalyptus saligna* (Sydney Blue Gum) to west

	
Planted bund to west of Tree Number 928	Planted bund to west of Tree Numbers 927 and 928
	
Constructed mound to the west of the Tree Numbers 927, Eucalyptus pilularis (Blackbutt) and 928, Eucalyptus saligna (Sydney Blue Gum)	Planted constructed mound to the west of Tree Numbers 927 and 928

Public Submissions

Tree removal

Meriton has addressed this issue in the submitted Preferred Project Report.

The extent of remnant vegetation is limited to the north-western proposed conservation areas (includes the nine *Angophora floribunda* located along the northern fenceline adjoining Grimes Lane, tree numbers 658, 663 to 668, 700 and 701) and isolated remnant trees. Most of the trees on the Site have been planted in the last 50 years and the understorey of the Site predominantly consists of mown lawns.