

## **Penrith City Council's Submission for the "Review of Environmental Factors (REF) for Mulgoa Road Upgrade Jeanette Street to Blaikie Road"**

### Planning

All the planned land acquisitions will need to be reflected and enforced through an amendment to the Penrith Local Environmental Plan 2010 so as to identify changes to land use zonings and the addition of Land Reservation Acquisition (LRA) parcels.

### Performance Criteria

Performance Criteria should be based upon RMS typical practise which dictates that when an intersection falls to Level of Service (LoS) D, investigations should be initiated to assess potential remediation measures prior to affected approach roads falling to LoS E or LoS F.

In considering that the industry is rapidly evolving towards the use of longer transport vehicles such as Tandem-tandem B-Doubles (and A-Doubles) at 28.5m, and Super B-Doubles which are often over 30m in length, it is recommended that the design criteria for B-double trucks should be increased up to 28.5 metres.

### Road Widening

The proposed increase to 3 lanes along Mulgoa Road is supported.

### Road Widening – Local Connections

- Factory Road/Mulgoa Road intersection

The proposal to convert the Factory Road/Mulgoa Road intersection from left in/left out to left in only is supported in principle, subject to the intersection improvements being provided at Spencer and Gibbs Streets (see below). Council welcomes the opportunity to be part of the detailed design process and an application must be made to Council's Local Traffic Committee (LTC) for the proposed signage and line marking plans.

- Spencer and Gibbs Streets

In May 2017, Council made a submission to RMS about the Mulgoa Road/Castlereagh Road Corridor Upgrade – Preferred Option in response to the proposed median closure in Mulgoa Road. Construction of a new roundabout at Spencer Street and Gibbes Street is seen as an access and circulation requirement. This will avert motorists from using residential driveways to turn around. The access and circulation requirements should outweigh other warrants. A fully mountable local road roundabout catering for service vehicles should not require property acquisition.

- Jeanette Street – Break in Median

The median break in Mulgoa Road at Jeanette Street is to be retained for emergency vehicles. This is supported.

Staging of works should ensure adequate access to the Regentville Rural Fire Service and NSW Fire and Rescue sites, including the additional fire service vehicles expected to be parked along Jeanette Street.

- Wolseley Street / Mulgoa Road intersection.

In considering Council's submission to the RMS in May 2017, the proposal involves the removal of the existing grade separated access ("mousehole") and replacing it with traffic signals with dual right turn to Wolseley Street. REF acknowledged that the proposal will encourage traffic to use Blaikie Road and then Pattys Place to access the Homemaker Centre. A new roundabout at Blaikie Road and then Pattys Places is seen as an access and circulation requirement. The access and circulation requirements should outweigh other warrants. As such, the removal of the underpass can only be supported with the upgrade (roundabout) to the Blaikie Road / Pattys Place intersection.

- Glenbrook Street / Peter Court.

Council provides in-principle support to the median closure of Glenbrook Street at Peter Court subject to the installation of a roundabout at Glenbrook Street and Warragamba Crescent. Council welcomes the opportunity to be a part of the detailed design process and an application must be made to Council's Local Traffic Committee (LTC) for the proposed signage plans.

In considering Council's submission to the RMS in May 2017, the proposal will eliminate rear-end accident potential for vehicles preparing to access Peter Court. Council strongly supports the installation of a roundabout at Glenbrook Street and Warragamba Crescent in order to facilitate safe access to this residential catchment. This will avert motorists from using residential driveways to turn around. As Peter Court /Huron Place/Hatchinson Crescent will be a traffic calmed/shared road environment, the median on Glenbrook Street and subsequent roundabout are seen as a requirement.

- Hatchinson Crescent, Huron Place and Peter Court

The proposed shared transit zone (low speed) environment and the proposal for the reconstructed Huron Place, Peter Circuit and Hutchinson Circuit is supported. Council welcomes the opportunity to be part of the detailed design process and an application must be made to Council's Local Traffic Committee (LTC) for the proposed shared transit zone signage and line marking plans.

Raised/at-grade threshold treatments shall be provided at the interface of the shared use path and transit zone, as well as at Hatchinson Crescent/ Huron Place, being three locations.

Council recommends marked bays for street parking, "No Stopping" zones along the noise wall, and "mixed traffic" bike logos facing both directions of travel (as existing) would be sufficient. The road shall be built in accordance with Council's design specification. There shall be a minimum of 1.5 metre wide footpath fronting properties.

#### Public Transport

The proposed bus queue jump facilities at three intersections are supported. Any relocated bus shelters/stops shall be comply with current DDA controls.

#### Pedestrian facilities

The proposed pedestrian facilities are generally supported, however, there must be a separate 1.5 metres (minimum) footpath along the Hatchinson Crescent, Huron Place and Peter Court length. A shared transit zone for cyclists and vehicles only is supported.

### Site compound on Council's Reserve

The main temporary construction compound for the project is proposed to be established on the Council Reserve (community land) at 111 Mulgoa Road, Regentville. The RMS' acquisitions team would be required to open discussions with Council's Property Development Department for the agreement. For any occupation, Council would need to resolve to licence the site for this purpose. This process involves community consultation which RMS would be expected to undertake in conjunction with Council (as it has listed below). Certain requirements would be included in the proposed licence including dilapidation reports, remediation etc. The remediation process may afford opportunities for improvement. RMS will be required to pay compensation and all costs in accordance with the Land Acquisition (Just Terms) Compensation Act 1991 for the land use.

### Biodiversity Impact

- It is expected that the proposed road widening will result in the removal of 0.81ha of River Flat Eucalypt Forest (Endangered Ecological Community under the NSW *Biodiversity Conservation Act 2016*). This patch of vegetation located near the Grey Gums hotel is comprised of 50 large, mature Hollow-bearing *Eucalyptus tereticornis* trees and a landscaped understory of grass and some planted *lomandras*, etc. The REF and Biodiversity Assessment Report states that these trees are "likely to have been planted with some trees likely to be over 50 years old". However, 1943 aerial imagery on SIXMaps shows that these trees were present and large in 1943. This indicates that the trees are remnant and likely to be over 100 years old at least. This needs to be considered in the Biodiversity Assessment Report.
- A total of 45 hollow-bearing trees with 239 hollows were recorded within this stand of mature trees. However, 41 of these trees are expected to be removed. Council has not been able to determine how many hollows this equates to, and what size hollows. Appendix D of the Biodiversity Assessment Report needs to include which trees are anticipated to require removal. Further, the Biodiversity Assessment Report states that there are no hollows present over 30cm in diameter. However, Appendix D records 4 hollows greater than 30cm in diameter.
- The impact of the loss of these hollow-bearing trees has not been adequately considered, in view of the rarity, habitat provision and other ecological values of trees of this size and age class and possessing the number of hollows that they do. The BC Act considers the loss of hollows and hollow-bearing trees as a Key Threatening Process to biodiversity and threatened species (*Loss of Hollow-bearing Trees*, Key Threatening Process Determination): "Hollows occur primarily in old eucalypts trees. The presence, abundance and size of hollows is positively correlated with tree trunk diameter, which is an index of age. Hollows with large internal dimensions are the rarest and occur predominantly in large old trees, which are rarely less than 220 years old. Larger, older trees also provide a greater density of hollows per tree. As such, large old hollow-bearing trees are relatively more valuable to hollow-using fauna than younger hollow-bearing trees. The latter are important as a future resource. Mature and old hollow-bearing trees offer other valuable resources. Mature trees provide more flowers, nectar, fruit and seeds than younger trees. The availability of hollows is often a limiting environmental factor. Owing to the slow process of hollow development, and the particular value provided by large old trees, adverse effects from the continuing loss of old hollow-bearing trees will take centuries to fix". It is noted in the Biodiversity Assessment Report that "Nineteen pairs of these common species (Little Corella, Rainbow Lorikeet and Galah) were recorded breeding in 16 hollow-bearing trees in this location".

- Whilst Council agrees with the Report that the trees are found in a highly modified and urbanised context, and are isolated from bushland areas, they still provide important habitat to local fauna, as well as amenity and shading/cooling value.
- One species of threatened fauna was recorded, being the Grey-headed Flying Fox listed as vulnerable under the BC Act and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Habitat was present for a further six threatened microbats, all listed as vulnerable under the BC Act. However, insufficient surveying was undertaken to determine the presence of these species as no ultrasonic detection was undertaken. As such, Council considers that further fauna surveys should be undertaken addressing the above.
- It is considered that the fauna survey effort was insufficient for the amount of habitat present in this stand of trees. The fauna surveys were undertaken in unfavourable weather conditions, particularly for arboreal fauna, as there were extreme wind gusts of up to 74km/h. Further, it does not appear that any nocturnal, dusk or dawn fauna surveying was undertaken. This does not represent a suitable level of survey for this patch of vegetation and habitat. Additionally, no anabat systems (or similar) was used either in the stand of *Eucalyptus tereticornis* trees or in the vicinity of the M4 bridge. As such, Council considers that further fauna surveys should be undertaken addressing the above.
- There are a number of key mitigation measures available to minimise the impact to biodiversity. These include the following and Council requests consideration of the use of all of these:
  - Preparation of Arborist Tree Assessment with a key focus on safe retention of existing mature trees, including preparation of a Tree Protection Plan
  - Construction Environmental Management Plan is prepared (CEMP) – “*A Flora and Fauna Management Plan (FFMP) will be prepared in accordance with Roads and Maritime's Biodiversity Guidelines: Protecting and Managing Biodiversity on RTA Projects (RTA, 2011) and implemented as part of the CEMP*”.
  - Nest Box Strategy – “*The Nest Box Strategy will investigate opportunities to relocate and reuse significant hollow-bearing tree features and hollows. The loss of all hollows observed to be being used will be compensated at a ratio of one nest box for every used hollow lost*”. The reuse of natural hollows is strongly supported and must be a key component of the Strategy. Further, the hollow replacement ratio is to be increased to 2:1.
  - Pre-clearing surveys – including the use of infra-red cameras to inspect all hollows.
  - Minimisation of the removal of vegetation – “*Measures to further avoid and minimise the construction footprint and native vegetation removal will be investigated further during detailed design and implemented where practicable*”. Council strongly request that opportunities to reduce the size of the median and shared path near Wolseley St and the stand of mature *Eucalyptus tereticornis* trees be investigated to enable more trees to be retained. Additionally, look at opportunities to locate the shared path under the trees to enable the road to be shifted east and more of the trees retained.
  - Vegetation clearing procedures.
  - Minimisation of the removal of hollow-bearing trees – see above comment.
  - If practical, removal of hollow-bearing trees to be undertaken outside of May-September which is the main breeding season for hollow dependent fauna – This should be a requirement, not just if practicable.
  - Provide appropriate sediment and erosion controls.

- Revegetate with native species post-construction – this is to be locally native species only.
- Reuse of the large woody debris associate with the tree removal has not been proposed. This is to form a part of the mitigation measures, with the large woody debris to be salvaged and reused for fauna habitat and ecological structure in appropriate locations.

In summary, the landmark stand of mature remanent Forest Red Gums (*Eucalyptus tereticornis*) (colloquially known as Grey Gums) form part of remnant River Flat Eucalypt Forest (*Endangered Ecological Community under the NSW Biodiversity Conservation Act 2016*), are significant in the landscape, have high habitat value and are considered to have high value to the community. As such it is critical that, as a matter of priority, the RMS;

1. Undertake and document a more thorough Biodiversity Assessment Report in line with Council’s observations provided above. In particular we draw your attention to the need to include ultrasonic monitoring (anabat or similar) for six threatened microbats potentially utilising the hollows, and a survey for nocturnal, dusk and dawn fauna;
2. Prepare a detailed Arborist Assessment of each individual tree with an accompanying impact assessment;
3. Document and assess the range of road design options considered as part of the design process; in particular design options developed to eliminate/minimise the impact on the “grey gums”. It is critical that the RMS fully explore all options available and articulate how the final design option was resolved.
4. Council strongly request that opportunities to reduce the size of the median and shared path near Wolseley St and the stand of mature *Eucalyptus tereticornis* trees be investigated to enable more trees to be retained. Additionally, look at opportunities to locate the shared path under the trees to enable the road to be shifted east and more of the trees retained.

### Landscape and Urban Design

From a landscape, urban design and viewscape perspective, Council expresses concern for the loss of amenity, identity and canopy in Stage 1 of the Mulgoa Road upgrade. Careful planning and design is required to retain as many trees as possible and achieve appropriate verge widths to enable and sustain significant tree plantings. This will go some way to ameliorate the impacts over a long term timeframe. It must be acknowledged that the visual impacts of loss of trees, estimated to be over 100 years old, in the short and medium term will be significant.

#### General:

1. To ensure quality and relevant outcomes, consultation between RMS, consultants and Council must involve active two-way dialogue to develop and agree on objectives, concepts and details prior to release of documentation for comment at project milestones
2. The design vision for an attractive green corridor is supported. The design strategy of sensitive integration, a less formal approach, views to the escarpment and gateway to the Penrith CBD is also supported.
3. It is recommended that a design response to Council’s strategies and visions be included e.g. Cooling the City. Provision of shade is an important element.
4. A design response to the State Government’s Greener Places Policy should be included.
5. Land acquisition should accommodate verges that are wide enough to sustain both green and grey infrastructure i.e. non-frangible trees and their rootzones, paths, utilities, services. The proposed width of verge is not provided. RMS and Council

- must co-design verge widths and tree planting locations during the acquisition process to enable the green corridor vision to be realised
6. Risk assessment (Safety in Design) is acknowledged as important however other design objectives need to also be met. It must be considered for each individual situation, as opposed to a generalised response which, for example, removes all possibility of tree planting.
  7. Landscape Character Zone 2 (Urban Green Space) refers to the front setback to Shell and approach to Surveyors Creek pedestrian bridge as areas supporting recreation requires clarification. The setback to Shell is private land. The Forest Red Gums at Grey Gums Hotel area (front setback) also meet this zone description
  8. Panthers land front setback cannot be relied upon alone to provide the green boulevard effect. Adequate planting space must be provided in the road reserve for street trees.

#### Trees:

1. The loss of amenity through tree removal is not considered 'temporary' as stated in the REF, but 'lifetime' as the scale and maturity of the trees lost cannot be regained in a short time. To compensate for the loss, it is considered appropriate for RMS to make a significant contribution to street tree planting in select areas of the LGA as agreed with Council, that is in turn valued by the community to the same magnitude.
2. The landmark stands of mature remnant Forest Red Gums (colloquially known as Grey Gums) are significant in the landscape and are considered to have a significantly high value to the community. They are iconic in the landscape and contribute to the positive entry experience to Penrith (gateway) after leaving the M4. The visual sensitivity rating of 'moderate' requires clarification and a high rating is considered more appropriate. The RMS has produced a community fact sheet about the removal of these trees, which is a primary indicator of the sensitivity placed on these trees. (Refer LCZ4 and Viewpoint 6). It is recommended that RMS reconsider the road design to ensure a maximum possible number of trees are retained without compromising growing conditions. Where standard road elements cannot achieve character and place objectives, non-standard road elements should be considered wherever possible.
3. Council requests a copy of the arborist's report for existing trees in the project area, for information. The arborist's report is to identify the importance associated with the landscape amenity and biodiversity of these 100 year old trees and the assessment of possible areas to replant as proposed.
4. The proposal for ... "potential to replant where space allows" is stated often (Table 6-32) but is not supported. The design at this point should refer to where these replacement trees will be located. It is recommended that designs are to be adjusted so space and soil volume is provided for replanting as well as succession planting.
5. Green and grey infrastructure should be designed together in equal measure. Conflicts between utilities easements (excavation) and trees to be retained is to be identified early in the design to enable relocation of easements to ensure trees (longevity, health and rootzones) are not compromised. Council would welcome the opportunity to co-design these elements.
6. Other impacts (6.10.1) – the impact on heat island effect from tree removal has not been assessed. Council requests a detailed metric documentation of tree removal (quantity of trees, types, area of canopy)
7. Replacement plantings are best located in the road reserve as opposed to private property to ensure the long term viability, they reach maturity and contribute to the corridor effect.
8. Tree protection measures, including construction techniques and methods, have not been identified or mentioned and are necessary for the safeguarding of existing trees to be retained.

9. Proposed planting species should be discussed further with Council during detailed design stage.
10. Further clarification on 'clear zones' is required and appears to be a constraint for tree planting.

#### Urban Design:

11. The design objectives and principles which discuss reinforcing green natural corridors and surrounding landscape as a gateway to Penrith CBD need to be clearly demonstrated. Council would welcome the opportunity to be a part of the co-design process through the detailed design phase of this project.
12. It is recommended that median trees shall be non-frangible (large) to counter the loss of trees in the streetscape and scale (width) of roadway and meet design objectives (strong green corridor). We recommend the use of appropriate elements to enable non-frangible trees in medians.
13. Landscaping has not been provided at Surveyors Creek. Stage 1 plantings in this area can establish ahead of the adjacent future stage works, taking into consideration anticipated road alignment.
14. An increase in quantity of trees is required. There are significant gaps of canopy trees along the roadway and side streets. The quantity of trees in groupings can be increased. There should be an overall continuous yet informal tree canopy to achieve the vision (strong green corridor). Council would welcome the opportunity to be a part of the co-design of these elements.
15. Existing significant trees in Wolseley Street should be investigated for retention through minor road alignment adjustments.
16. Feature planting of shrubs and groundcovers in selected areas should be further discussed with Council's maintenance staff, taking into consideration resourcing and safety requirements. Ensure existing understorey plantings of low shrubs and grasses is continued in Forest Red Gums area.
17. Existing screen tree planting of the RFS site at the M4 off ramp is to be replaced so similar screening effect is achieved.
18. Hatchinson Crescent:
  - a. Street trees are a requirement and species should be negotiated with residents. Where possible provide more than one tree per property frontage
  - b. RMS' vision document (Strategic Urban Design Report, 2015) shows trees planted next to the wall, which reduces visual impact. This is not shown in the design and is a requirement for improved amenity, shading to the shared zone, and contribution to the streetscape.
  - c. Pedestrians should be safely separated from the 5m wide shared transit zone by kerb and gutter
19. Intersections in general should be reinforced with as much tree planting as possible so the streetscape retains integrity and continuity as much as possible where side streets occur and views to the west can be framed by trees
20. Verge planting between kerb and path should reflect that delivered for the Jane Street section, taking into account a review of establishment, maintenance and performance since completion (review should also include RMS' Gipps Street widening project).
21. Localised narrowing of the shared path, no-excavation construction methods and realignment of utilities easements are required to enable retention and retained health of existing trees
22. Engage with Council to ensure street lights fixtures for promotional banners are provided.
23. Plain concrete for paths is preferred in lieu of tinted concrete which is difficult to match with path restorations.

Walls:

24. RMS to engage with PCC regarding urban design solutions for noise walls and retaining walls. We recommend that Council and RMS co-design these elements and agree on the objectives and concepts prior to developing design solutions, including existing patterns, sense of place and local character. Urban Design references to themes representing the Blue Mountains are not preferred. Council has already engaged with RMS regarding graphic art themes and a 'river' theme was for the most part agreed. 'River' concepts were previously prepared by ARUP and are recommended for inclusion in the REF. Suitably experienced and qualified consultants are required to progress the design motifs for wall structures. These are to apply to wall structures in other stages of the corridor, including the railway underpass near Jane Street.
25. Mitigation measures (6.7.4) – urban design treatments to noise walls is not satisfactory to soften their impact. It is recommended that the RMS work with Council to design satisfactory measures such as planting, articulation. Engage with residents to ensure expectations align with the proposals.
26. Wall colours are to be explored beyond the two standard RMS paint colours.

### Environment Factors

The RMS must ensure that all mitigation measures outlined in the REF are incorporated into the Construction Environmental Management Plan (CEMP), so that environmental impacts are managed appropriately.

### Land Contamination

An Unexpected Finds Protocol is to be prepared for implementation during the works period. It is important to note that should any remediation works be needed, these works will require development consent in line with the requirements of SEPP 55 and SREP 20.

### Surface Water and Groundwater

Based on a review of the information, no stormwater treatment for the operational stages of the development has been incorporated into the design or is proposed. This is not consistent with Council's WSUD Policy which requires the following pollutant load reductions for any increase in impervious area greater than 250 m<sup>2</sup>:

- Gross Pollutants 90%
- Total Suspended Solids 85%
- Total Phosphorus 60%, and
- Total Nitrogen 45%.

The REF states that "*runoff quality is likely to largely remain unaffected*" from this proposal. It also states that "*...even if there was a change in road runoff chemistry locally this would not be at a scale to have any material effect on the water quality of the wider catchment.*". While this first stage may be at a smaller scale, it is only the first of multiple stages to upgrade Mulgoa Road and Council is of the opinion that this argument does not hold true. Due to a significant increase in impervious area as a result of the overall project works, the impacts on water quality from each smaller stage will be cumulative and should still be appropriately considered.

The proposed upgrade of the road also presents an opportunity to provide stormwater treatment from Mulgoa Road and mitigate the impacts on the receiving waters which includes the Nepean River. While Council's WSUD Policy does not strictly need to be

complied with due to the nature of the project, it is suggested that some of the principles of the policy should be incorporated into the project.

Council suggests the stormwater treatment should seek to achieve best practice where possible. In this regard, it is recommended that the stormwater treatment be designed to achieve the criteria outlined in Council's WSUD Policy.