

# Elizabeth Drive East Upgrade

## Submissions Report

October 2024



# Acknowledgement of Country

Transport acknowledges the Dharug, the traditional custodians of the land on which the Elizabeth Drive East Upgrade is proposed.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.



Prepared by AECOM on behalf of Transport for NSW.

*Cover: Photograph of Elizabeth Drive supplied by Transport for NSW (2023).*

# Executive summary

## The proposal

Transport for NSW ('Transport') proposes to upgrade about 7.8 kilometres of Elizabeth Drive between Badgerys Creek Road at Badgerys Creek and about 600 metres east of Duff Road at Cecil Hills (the proposal).

The key features of the proposal include:

- Upgrade of Elizabeth Drive from a two-lane rural road, to a four-lane road (two lanes in each direction) with provision of a central median to allow for future upgrade to six lanes
- Signalisation of intersections along Elizabeth Drive: Martin Road, Western Road, Devonshire Road/ Salisbury Ave, Mamre Road, Range Road and Duff Road
- Construction of three twin bridges along Elizabeth Drive over Badgerys Creek, South Creek and Kemps Creek and removal of the existing bridges at these locations
- Active transport provision along the full corridor with the inclusion of shared paths along both sides of the Elizabeth Drive corridor
- Inclusion of public transport infrastructure with bus priority at intersections and bus stop facilities
- New stormwater drainage infrastructure
- Property acquisitions and adjustments on both sides of Elizabeth Drive and some side roads
- Relocation/adjustment of existing utilities.

The proposal is one of two planned upgrades of Elizabeth Drive between The Northern Road, Luddenham and Duff Road, Cecil Hills (referred to collectively as the Elizabeth Drive Upgrades):

- Elizabeth Drive East Upgrade (the proposal), which is the subject of this Submissions Report
- Elizabeth Drive West Upgrade which would include the upgrade of about 3.6 kilometres of Elizabeth Drive between The Northern Road at Luddenham and the M12 Motorway at Badgerys Creek. This project does not form part of the proposal. A separate Review of Environmental Factors (REF) was prepared for the Elizabeth Drive West Upgrade.

## Display of the Review of Environmental Factors (REF)

Transport prepared a REF for the Elizabeth Drive East Upgrade. The REF was publicly displayed for 40 days from 21 September 2023 until 31 October 2023 on Transport's project website and made available for download through the following link: <https://www.transport.nsw.gov.au/projects/current-projects/elizabeth-drive-upgrade>. No physical copies of the REF were displayed.

The REF was displayed concurrently with the REF for the Elizabeth Drive West Upgrade. As such, consultation activities were carried out to inform the community and seek feedback on both upgrades.

The REF display period was advertised through the following activities:

- A Community Update about the proposal was letterbox dropped to about 8,500 properties within the local area. A copy of the community update is included in Appendix A (Community consultation)
- During the consultation period, three emails were sent to all stakeholders registered on the project's communications database (about 210 recipients)
- A newspaper advertisement was placed in two local newspapers (Western Weekender and The District Reporter) on Friday 13 October 2023. A copy of the newspaper advertisement is provided in Appendix A
- Advertising campaign on Transport's Facebook page, comprising of three Facebook posts. A copy of these Facebook posts is provided in Appendix A. There was a total of 289 reactions and 19 comments across each of these posts. Most reactions (270) and comments (16) were made in response to the most recent Facebook post

- The Personal Relationship Managers Acquisitions (PRMAs) and project team representatives door-knocked about 69 privately owned residential properties and small businesses. The door knock was carried out to inform directly affected landowners about the proposal and encourage these stakeholders to make a submission. The door-knocking was undertaken over a four-day period. Where a landowner was not present, PRMAs left a Community Update and a "Sorry We Missed You" flyer asking for a call back.
- Affected property owner letters were posted out informing the owners of the REF display and asking them to contact Transport to discuss property impacts
- Briefings with representatives from Penrith City Council (held on Tuesday 3 October 2023), Liverpool City Council (held on Monday 9 October 2023) and Fairfield City Council (held on Friday 13 October 2023) about the proposal.

During the public display of the REF, Transport encouraged stakeholders and the community to provide feedback on the proposal.

Three face-to-face community consultation sessions were held in the local area at the following times and locations:

- Saturday 23 September (10am – 1pm) – Bringelly Community Centre, 5 Greendale Road, Bringelly. The Elizabeth Drive Upgrade project team attended as part of the Western Sydney Aerotropolis Community Day
- Wednesday 11 October 2023 (5pm – 7pm) – Workers Hubertus Country Club, 205 Adams Road, Luddenham. This session was attended by 25 people
- Saturday 21 October 2023 (10am – 12pm) – Bringelly Community Centre, 5 Greendale Road, Bringelly. This session was attended by 34 people.

One online community session was also held by Transport via Microsoft Teams on Tuesday 17 October 2023 (12pm – 1pm) to provide further information on the proposal, answer questions from the community and encourage the community to provide a formal submission on the REF. This online session was attended by 17 people and the recording of the session is available on the Elizabeth Drive upgrade project website.

## Summary of issues and responses

Transport received 35 submissions, of which 29 were from the community and six were from NSW government agencies and local councils (Sydney Water, Water NSW, Greater Sydney Parklands, Fairfield City Council, Liverpool City Council and Penrith City Council).

Of the community submissions received, three were in support of the proposal and one objected. The remaining 25 submissions offered no position on whether they supported or objected to the proposal.

The main issues raised and Transport's responses to those issues are summarised below.

### Proposal design

Respondents raised concerns regarding the proposal design presented in the REF. These primarily related to:

- Property access during operation, particularly around required adjustments to driveway access, and the potential for the proposal to change existing access to residences and businesses due to the introduction of a central median on Elizabeth Drive limiting right turn movements.
- Design of the proposed one-way eastbound service road adjacent to shops at Kemps Creek, including requests to remove or alter the design to improve access to businesses.
- Drainage design, including the queries around the location of proposed basins, and alternative design suggestions.

Elizabeth Drive is a major arterial road, which carries a high volume of traffic, where transport safety is critical as is the efficient movement of through traffic. The central median proposed along Elizabeth Drive is an important feature of the proposal to manage road safety risk, including the potential for head on vehicle crashes.

The introduction of a central median as part of the proposal would result in left-in, left-out movements only at properties along Elizabeth Drive. Several existing and proposed U-turn facilities would be available along the length of the proposal to

enable vehicles to change their direction of travel, including at Martin Road, Western Road, Salisbury Avenue and Range Road.

Sites subject to partial acquisition may require property adjustments, for example to reinstate access to the site. Transport will complete all property adjustments, including reinstatement of driveway access where required, in consultation with affected property owners. When considering the design of replacement driveway access, Transport aims to reinstate property access on a like-for-like basis wherever feasible, including allowance for the same width as the existing driveway where possible.

Transport would carry out further design review at the next stage of design development to investigate site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue, and including those which would be accessed by the proposed service road), based on the feedback received during the REF display period and further consultation. This has been reflected in an additional environmental safeguard for the proposal.

The drainage design (including proposed basins) presented in the REF is based on a concept design, which has been developed based on the interfaces with a number of infrastructure, land and environmental constraints. The project team has considered a number of options in the development of the drainage design and layout which have, where possible, minimised the impact on these constraints. Further design development would be carried out during the next stage of design (detailed design), which would refer to detailed topographical survey, subsurface and utility surveys, and would give due consideration to community and stakeholder feedback. All proposed basin locations would be reviewed in the next stage of design (detailed design), based on these inputs.

## Property and land use impacts

A number of submissions from community members raised issues relating to partial and full property acquisition for the proposal and the impact that this would have on landowners. Some respondents requested avoidance of land acquisition or a reduction in the extent of land to be acquired. Others expressed concern at their changed ability to subdivide their property due to decrease in property size following the proposed partial acquisition, or the ability to proceed with proposed developments adjacent to Elizabeth Drive.

The design of the proposal has sought to minimise the need for private property acquisition where possible. Some full property acquisitions have been avoided or would be considered further in the next stage of proposal development, following a review of the design and concerns raised in submissions. This has included:

- A change to the proposed property acquisition of Lot 8 / DP 1266422 to partial rather than full acquisition
- Environmental safeguard PL4 has been added to investigate opportunities to reduce the extent of property acquisition required at Lot 8 / DP 1014394 (address withheld) and at Lot 31 / DP 867457, to avoid the need for their full acquisition
- Environmental safeguard GEN5 has been added committing to a review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road with the aim to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal)
- Environmental safeguard GEN6 has been added committing to the relocation of the proposed construction ancillary facility 2 (identified in Figure 3-21 of the REF) to reduce the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club.

Despite this, some partial and full property acquisition would be unavoidable. Final property adjustments and the extent of acquisition would be confirmed in detailed design and in consultation with landowners, taking into account the outcomes of planned topographical survey, detailed design development, and the feedback received in response to the REF.

All property acquisition would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (the Just Terms Act) and other relevant guidelines outlined in Section 3.4 of the REF. These requirements ensure consistent and equitable dealings with all landowners whose lots are to be acquired. Information, guides and support about acquisitions under the Just Terms Act can be viewed online at the [Centre for Property Acquisition website](#).

Compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other things, provisions for market value (also refer to Section 56 of the Act), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs (i.e. fees associated with the discharge of mortgages and creation of a new mortgage where relocation is required)) and disadvantage resulting from relocation.

Transport notes that subdivisions of properties are a matter for the relevant local councils.

As the proposal progresses to the detailed design stage, Transport would consult with proponents/applicants of development adjoining the proposal area. Transport has started consultation with several of these proponents/applicants and will continue this engagement as the proposal progresses.

## Socio-economic

Respondents raised concerns around the potential of the proposal to impact upon them socially or economically. In particular, respondents were concerned about business impacts (including loss of revenue, redirection of traffic past businesses, and reduced access to business due to road design changes) and direct impacts on social infrastructure, including Bill Anderson Reserve, the Kemps Creek United Soccer Club and Animal Welfare League NSW.

Transport acknowledges that some businesses along Elizabeth Drive rely on passing trade and may be affected by changes to property access during construction and operation of the proposal. The proposed central median and one way service road at Kemps Creek, while required to improve road safety, may result in changes to the number of customers visiting certain businesses as they would be required to change their direction of travel owing to the central median. The U-turning facilities would be in place to enable site access for vehicles travelling in the opposite direction. Transport also acknowledges that the proposed design and associated property acquisition required for the proposal have the potential to impact the business operations.

To manage potential business impacts, in accordance with environmental safeguard SE12, specific consultation will be carried out with businesses that may be impacted during construction. Based on this consultation, specific feasible and reasonable measures to maintain business operations, access, signage and parking, and address other potential impacts as they arise through the consultation process, will be identified and implemented.

Transport acknowledges concerns raised about the proposal's impact to Bill Anderson Reserve, the Kemps Creek United Soccer Club and Animal Welfare League NSW.

Transport is committed to reducing the proposal's impact on Bill Anderson Reserve and the Kemps Creek United Soccer Club by relocating construction ancillary facility 2 (identified in Figure 3-21 of the REF) and investigating opportunities to further reduce the area of land that is proposed to be permanently acquired by the proposal. These commitments have been included as additional environmental safeguards for the proposal.

Since display of the REF, additional socio-economic assessment of impacts to Animal Welfare League NSW, Kemps Creek (as social infrastructure) has been carried out, with an additional environmental safeguard proposed to review opportunities to minimise the extent of land to be acquired in consultation with Animal Welfare League NSW.

Several environmental safeguards have been added/amended to the list of safeguards in the REF to manage potential impacts to these facilities, including the following:

- Environmental safeguard SE9 has been amended to clarify that Transport would consult with Christadelphian Heritage College Sydney and review opportunities to avoid impacts to school infrastructure
- Environmental safeguard SE15 has been added to clarify that construction of the proposal would avoid the need to access parking areas associated with the Christadelphian Heritage College Sydney during construction
- Environmental safeguard SE16 has been added, to consult further with Animal Welfare League NSW, Kemps Creek and to review opportunities to minimise impacts to its facilities, acknowledging its role as social infrastructure
- Environmental safeguard SE17 has been added to consult further with Irfan College during detailed design, with a focus on ensuring access to the College is maintained throughout construction and operation
- Environmental safeguard SE1 has also been amended to clarify some of the information that would be included in the Communication Plan for the construction of the proposal – including consultation processes with relevant stakeholders and a complaint handling process
- Environmental safeguard GEN5 has been added committing to a review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road with the aim to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal)
- Environmental safeguard GEN6 has been added committing to the relocation of the proposed construction ancillary facility 2 (identified in Figure 3-21 of the REF) to reduce the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club.

Further information on the safeguards that would be implemented to manage potential socio-economic impacts is included in Section 6.

## Consultation

Respondents from the community raised concerns about the consultation process prior to REF display and requested that further consultation is carried out. Several government agencies made requests and recommendations to consult with the agencies further, as well as community members and relevant stakeholders.

Transport started early engagement with interested and potentially affected communities and stakeholders via the access strategy for the Elizabeth Drive Upgrades in 2019. This was followed by a community consultation for the strategic design in 2020. Over this time a range of communication and engagement tools have been implemented by Transport, including face-to-face and online community information sessions, in-person meetings with impacted property owners, distribution of community updates to households in the area, print and social media advertisements.

Community feedback received during the REF display and continued consultation would be considered in preparing the detailed design for the proposal, and throughout the construction period.

Transport would also continue to engage directly with stakeholders such as local councils, Sydney Water, Greater Sydney Parklands, Water NSW, Western Sydney International Airport and Western Parkland City Authority during further design development and construction.

## Clarifications and changes to the proposal

Since the preparation and display of the REF, some elements of the proposal have been refined, or identified as requiring further design development to respond to stakeholder and community feedback. The proposal would continue to be refined during the next stage of design development, to minimise environmental and social impacts, and taking into account the outcomes of community and stakeholder consultation where feasible and reasonable.

Key clarifications to the proposal since the display of the REF include the following:

- Transport is committed to carrying out further design review to investigate alternative site access options for businesses at Kemps Creek, (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. Design refinements resulting from this review would be confirmed prior to the construction of the proposal in this area. This has been included as an additional environmental safeguard for the proposal
- Transport is committed to reducing the proposal's impact on Bill Anderson Reserve and the Kemps Creek United Soccer Club by relocating construction ancillary facility 2 (identified in Figure 3-21 of the REF) and investigating opportunities to further reduce the amount of land that is proposed to be permanently acquired by the proposal. These commitments have been included as additional environmental safeguards for the proposal
- Transport is committed to further reduce the proposal's impact on 'Existing Native Vegetation' (ENV) that is subject to Relevant Biodiversity Measure (RBM) 12 of the *Order to confer biodiversity certification on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (the biodiversity certification order). This commitment has been made in response to feedback received during consultation with Biodiversity, Conservation and Science (BCS), part of the Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Further opportunities to minimise impacts to ENV subject to RBM 12 would be investigated during detailed design in consultation with BCS.
- Clarification that the operational footprint for the proposal includes a portion of a privately owned access road within Lot 5 / DP 255566, and that partial acquisition of this property would be required
- Clarification that full acquisition of Lot 8 / DP 1266422 would not be required, and that the property would instead be subject to partial acquisition (of the parcel which fronts Elizabeth Drive)
- Clarification that construction work would avoid access to the car park at Christadelphian Heritage College Sydney, and that Transport would also consult with Christadelphian Heritage College Sydney to avoid impacts to school infrastructure where feasible
- Other refinements to several environmental safeguards to address the potential impacts of the proposal and clarify the intent of some of the safeguards in the REF. These include further environmental safeguards to review the extent of acquisition at some properties; manage noise impacts to animals; to review opportunities to collect viable native seeds from areas of vegetation; and to engage further with schools and social infrastructure providers, among others.

Other minor clarifications and factual corrections to the REF are also identified in Section 5 of this Submissions Report.

No substantial changes or clarifications have been made to the proposal since the REF was placed on public display; therefore, these changes or clarifications do not need to be re-exhibited for public comment.

## Additional environmental assessment

Additional biodiversity, socio-economic and property and land use assessments were carried out for the proposal after the REF was placed on public display. The outcomes of these additional assessments are summarised below.

### Biodiversity

A biodiversity assessment report (BAR) was published as Appendix G to the REF. Land access constraints during preparation of the REF meant that detailed targeted threatened species surveys which complied with the *Biodiversity Assessment Method* (BAM) (DPIE, 2020) were unable to be carried out. A revised BAR has since been prepared to address biodiversity mitigation measures B7 and B8, documented in Table 7-1 of the REF, which required further biodiversity surveys to be carried out prior to Transport determining whether to proceed with the proposal.

The revised BAR provides further biodiversity assessment that incorporates the results of biodiversity assessment method (BAM) compliant targeted surveys carried out in October and November 2023. The BAM surveys identified the biodiversity values and constraints associated with the proposal in areas that were previously inaccessible during preparation of the REF.

The revised BAR identified that the proposal would result in the removal of 14.57 hectares of native vegetation. Of this vegetation:

- 14.57 hectares requires assessment under the *Biodiversity Conservation Act 2016* (BC Act), which is a decrease of 3.76 hectares compared to that documented in the REF (18.32 hectares of clearing was documented in the REF)
- 12.63 hectares of native vegetation requires assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) which is a decrease of 6.13 hectares compared to that documented in the REF (18.75 hectares of clearing was documented in the REF)
- Seven Threatened Ecological Communities (TECs) subject to assessment under the BC Act and five TECs subject to assessment under the EPBC Act would be impacted. No new TECs have been identified since the preparation of the REF.

One threatened flora and five threatened fauna species were identified during the field surveys in October and November 2023. Several other species were assumed to be present for the purposes of preparing the September 2023 BAR. However, they were not recorded during targeted survey efforts in October and November 2023 for the revised BAR, and are no longer considered to have a 'moderate' or 'higher' likelihood of occurring within the study area. Therefore, these species have not been assessed as part of the impact assessment within the revised BAR.

Acoustic detection (as part of the targeted surveys) and visual inspection of the eastern bridge at South Creek found evidence of roosting microbats in gaps between concrete spans, presumed to be Southern Myotis (listed as a vulnerable fauna species under the BC Act). By comparison, other bridges within the proposal area (including the western bridge at South Creek, and bridges at Badgerys and Kemps Creek) are an older style construction (cast in-situ) and were observed to contain limited opportunities for roosting bats in the form of metal scuppers. The removal of artificial structures (such as concrete spans) at the eastern bridge at South Creek, therefore, has the potential to impact threatened microbats utilising them for roosting and possibly breeding. A Microbat Management Plan would be prepared and implemented to manage potential impacts to threatened bats that may occur.

Cumberland Plain Land Snail (listed as a vulnerable fauna species under the BC Act) was found to have patchily distributed habitat across the study area that would be impacted by the proposal. Cumberland Plain Land Snail shells were found in five different locations within the surveyed area. The findings confirmed assumptions made in the REF, which assumed presence of this species within the study area.

Other threatened fauna species identified through targeted survey included Little Lorikeet, Eastern Coastal Free-tailed Bat and Greater Broad-nosed Bat.

The proposal would lead to direct loss of 13 *Dillwynia tenuifolia* (an endangered flora species under the BC Act) located in bushland west of Bill Anderson Reserve, which is less than the number of individuals documented as being impacted in the REF (which predicted impacts to about 40 individuals).

Updated tests of significance were completed for the threatened species identified through the October and November 2023 surveys. The revised BAR concluded that the proposal would not have a significant impact on any BC Act or EPBC Act

listed threatened species or ecological communities with the implementation of environmental safeguards, which is consistent with the conclusions presented in the REF.

As a result of the revised BAR, several changed and additional environmental safeguards have been identified. These measures require preparation of a Microbat Management Plan, pre-clearance surveys and translocation of the Cumberland Plain Land Snail. Requirements for targeted surveys (documented in environmental safeguards B7 and B8 in the REF) have also been removed as the required biodiversity surveys have now been completed.

The revised BAR identified that 251 ecosystem credits and 436 species credits would be required to offset the impacts of the proposal, compared to the 353 ecosystem credits and 1,109 species credits documented in the REF.

#### Socio-economic

A socio-economic impact assessment was published as Appendix J to the REF. An additional socio-economic assessment has been carried out as part of this Submissions Report to investigate the proposal's impact on the Animal Welfare League NSW at Kemps Creek. This additional assessment was carried out to address concerns raised by this stakeholder about the adequacy of the REF's socio-economic assessment (the REF incorrectly identified Animal Welfare League NSW's property as a business, rather than a social infrastructure facility).

Animal Welfare League NSW at Kemps Creek houses, rehabilitates, cares for and rehomes surrendered animals, with a veterinary clinic, shelter, inspectorate, headquarters and recently built animal adoption centre located on the site. While Animal Welfare League NSW operates multiple branches across NSW, there are limited facilities of a comparable scale within surrounding suburbs. As such, the sensitivity of community members who utilise services of Animal Welfare League NSW at Kemps Creek is considered to be high.

The additional socio-economic assessment identified that the construction and operation of the proposal would require partial acquisition of about 2.47 hectares of land from the Animal Welfare League NSW property at Kemps Creek (Lot 1 / DP 255566) to accommodate the proposed road infrastructure. Areas of the Animal Welfare League NSW property which would be directly affected would include the driveway, some of the parking spaces on the property (15), water recycling facilities, landscaping and vegetation, and outdoor areas. Use of these areas by the proposal may impact upon the Animal Welfare League NSW's ability to carry out some of the existing uses on their site, such as dog walking in impacted outdoor areas, and upon the availability of parking on site. Reinstatement of impacted areas would be carried out by Transport, in accordance with the property adjustment plan and in consultation with Animal Welfare League NSW.

Construction work with increased noise and dust emissions, and noise from construction traffic may temporarily reduce amenity for users of the Animal Welfare League NSW site, including those using open space areas. Construction noise may present a 'new' noise source for animals located at the site and may, at times, reach levels which could adversely affect the animals, particularly when animals are outside, close to the road.

Once the proposal is operational, buildings within the Animal Welfare League NSW property would be in closer proximity to the widened road corridor compared to the existing road corridor. This may give rise to amenity impacts such as road traffic noise and visual impacts. However, road traffic noise levels at the existing property are predicted to increase by less than 1 dB(A) as a result of the proposal. As such, increases in road traffic noise levels are expected to be minor and imperceptible to humans, dogs and cats.

The additional socio-economic assessment found that the proposal has the potential to result in an overall impact of high-moderate significance to Animal Welfare League NSW during both construction and operation. This is primarily associated with the potential for amenity impacts (such as construction noise and vibration) to cause temporary disruption to animals, as well as longer term reductions in the availability of open space on the site. The impact rating also takes into account the sensitivity of the Animal Welfare League NSW, noting there are limited facilities of a comparable scale within surrounding suburbs.

Transport is committed to further consultation with Animal Welfare League NSW during detailed design development, to identify opportunities to reduce the impact of the proposal on its facilities. Additional environmental safeguards relating to Animal Welfare League NSW have been proposed, including the following:

- Environmental safeguard SE16, which includes a commitment to consult further with Animal Welfare League NSW and to review opportunities to minimise impacts to its facilities, acknowledging its role as social infrastructure. This would include:
  - Consultation with Animal Welfare League NSW to identify options to maintain existing operations and uses on site (for example, dog walking on site and parking facilities)

- Consideration of feasible and reasonable refinements to the proposed design to minimise the required extent of property acquisition of the Animal Welfare League NSW property (subject to topographical survey and further design development)
- Environmental safeguard NV14, which outlines measures that would be implemented to manage potential construction noise impacts to animals at Animal Welfare League NSW.

The management of other environmental impacts (such as noise and vibration, traffic and other amenity-related impacts) would also contribute to the management of social impacts to Animal Welfare League NSW, due to their interrelated nature.

#### Property and land use

Since the finalisation of the REF, it has been identified that the operational footprint for the proposal would include a portion of a privately owned access road within Lot 5 / DP 255566 (located to the north of Western Road) not previously included in the property acquisition schedule in Appendix C of the REF. As such, partial acquisition of Lot 5 / DP 255566 is also required to carry out the proposal. Property acquisition would change ownership of the road from a private road to a public road, and property access for properties that use the existing road would be maintained. As such the impact of the changed land use is considered minor.

## Additional statutory consultation

Transport carried out statutory consultation with the following government agencies:

- Western Parkland City Authority (under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*)
- NSW Department of Planning, Housing and Infrastructure (DPHI) (under section 3.24 of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*)
- Biodiversity, Conservation and Science, part of the Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water (Transport was requested to carry out this consultation by the Department of Planning, Housing and Infrastructure).

The outcomes of this additional consultation are summarised below.

#### Western Parkland City Authority

Transport carried out statutory consultation with Western Parkland City Authority in August and September 2023 under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*. This consultation was required as the proposal would be carried out within a Western City operational area specified in the *Western Parkland City Authority Act 2018*, Schedule 2 and would have a capital investment value of more than \$30 million.

Feedback was received from Western Parkland City Authority on 4 September 2023. Western Parkland City Authority generally noted its support for the proposed upgrades (both the proposal and the Elizabeth Drive West Upgrade), delivery of the proposal in a timely manner, and recommendations to consider the future Airport fuel line in the REF to determine if future proofing would be required. Responses to the matters raised by Western Parkland City Authority are documented in Section 5.4 of this Submissions Report.

#### Department of Planning, Housing and Infrastructure

Transport carried out statutory consultation with the Department of Planning, Housing and Infrastructure in February 2024 under section 3.24 of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*. This consultation was required as the proposal would result in the clearing of native vegetation (within the meaning of the *Native Vegetation Act 2003*) on land that is not 'subject land' (within the meaning of clause 17 of Schedule 7 of the *Threatened Species Conservation Act 1995* (TSC Act)). While the TSC Act has been repealed by the *Biodiversity Conservation Act 2016*, the Biodiversity Conservation (Savings and Transitional) Regulation 2017 applies. Section 43 of the Regulation states that the repeal does not affect the operation of Part 7 or 8 of Schedule 7 of the TSC Act.

The Department of Planning, Housing and Infrastructure's response was received on 16 February 2024 requesting clarification of how Transport intends to meet its offsetting obligations specified under Relevant Biodiversity Measures (RBM) 8 and 11 of the *Order to confer biodiversity certification on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (the biodiversity certification order). The Department also requested that Transport provide it with spatial data showing the extent of vegetation removal and details of the offsets secured for the proposal. The Department also noted that Transport is required to consult with the NSW Environment and Heritage Group of the Department of

Climate Change, Energy, the Environment and Water about any proposed impacts to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order.

Transport confirms that it will meet its offsetting obligations specified under RBM 8 and 11 of the biodiversity certification order. The approach that Transport will take to meet this obligation will be documented in the Biodiversity Offset Strategy that will be prepared for the proposal prior to construction. Transport will provide the Department of Planning, Housing and Infrastructure with spatial data showing the extent of vegetation removal on non-certified land. Transport will also provide the Department with details of offsets that it has secured for the proposal.

Transport also confirms that it has consulted with Biodiversity, Conservation and Science, part of the Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water about any proposed impacts to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order. This consultation is discussed in the section below.

Biodiversity, Conservation and Science – Department of Climate Change, Energy, the Environment and Water

Transport consulted Biodiversity, Conservation and Science (BCS), part of the Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in March 2024 about the proposal's impact to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order.

BCS responded in May 2024 advising that it did not support the proposal's impact to existing native vegetation (ENV) on non-certified land that is subject to RBM 12 of the biodiversity certification order, and that Transport should design to avoid this impact.

Transport carried out further consultation with BCS in July 2024, advising that land subject to RBM 12 at Kemps Creek is mapped within the existing Elizabeth Drive road corridor and immediately surrounding land. For this reason, avoiding the impact is not possible at this location. Notwithstanding, in accordance with Transport's Biodiversity Policy, opportunities to minimise impacts to biodiversity, including ENV subject to RBM 12, would be investigated during detailed design in consultation with BCS.

In response to feedback received from BCS in May 2024, Transport investigated an alternative design that would fully avoid the impact to ENV subject to RBM 12 at this location.

The alternative design would involve relocating the road alignment and the Western Road intersection further to the north. While this option would avoid impacts to ENV on land subject to RBM 12, it would have major adverse impacts to businesses and properties in the area. These impacts would include:

- The full acquisition of four residential properties (these properties were subject to partial acquisition based on the design presented in the REF).
- The full acquisition of up to six commercial lots, which would require the closure of the Kemps Creek Shops, resulting in multiple business impacts.
- A much larger impact to three commercial properties, which include Mitre 10, Hi-Quality Group and Andreasens Green Wholesale Nurseries.

Considering all the potential impacts, including biodiversity, economic and social impacts, the development criteria and project objectives, Transport has determined that the design presented in the REF remains the preferred alignment. However, as part of developing the alternative design, Transport has identified a number of potential design refinements that would reduce the proposal's impact on ENV on land subject to RBM 12. This includes reducing the road height, which would reduce the width of embankments and reduce the extent of drainage infrastructure within the land. Further opportunities to minimise impacts to ENV subject to RBM 12 would be investigated during detailed design in consultation with BCS.

Transport proposes the following additional environmental safeguards to manage the proposal's impact to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order:

- Environmental safeguard B30: Transport will reduce the Elizabeth Drive East Upgrade's impact on ENV on land subject to RBM 12 in consultation with BCS.
- Environmental safeguard B31: Transport will develop a Biodiversity Offset Package for the Elizabeth Drive East Upgrade, with specific measures to offset impacts to ENV on land subject to RBM 12 developed to the satisfaction of BCS.

- Environmental safeguard B32: Transport will not proceed with construction of the project unless it has received the agreement of BCS to impact ENV on land subject to RBM 12.

## Revised safeguards and management measures

The REF identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts of the proposal. These measures were documented in Section 7.2 of the REF.

After consideration of the issues raised in the public submissions (documented in Chapter 2 and Chapter 3 of this report), changes made to the proposal (documented in Chapter 4 of this report) and the outcomes of additional environmental assessments prepared for the proposal after the REF was placed on public display (documented in Chapter 5 of this report), the environmental management measures for the proposal have been amended.

Should the proposal proceed, the environmental management measures will guide the subsequent phases of the proposal.

## Next steps

Transport as the determining authority will consider the information in the REF and this submissions report and make a decision whether or not to proceed with the proposal.

Transport will inform the community and stakeholders of this decision and where a decision is made to proceed will continue to consult with the community and stakeholders prior to and during the construction phase.

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# 1. Introduction and background

## 1.1 The proposal

Transport for NSW ('Transport') proposes to upgrade about 7.8 kilometres of Elizabeth Drive between Badgerys Creek Road at Badgerys Creek and about 600 metres east of Duff Road at Cecil Hills (the proposal).

The key features of the proposal include:

- Upgrade of Elizabeth Drive from a two-lane rural road to a four-lane road (two lanes in each direction) with provision of a central median to allow for future upgrade to six lanes
- Signalisation of intersections along Elizabeth Drive: Martin Road, Western Road, Devonshire Road/, Salisbury Avenue, Mamre Road, Range Road and Duff Road
- Construction of three twin bridges along Elizabeth Drive over Badgerys Creek, South Creek, and Kemps Creek and removal of the existing bridges at these locations
- Active transport provision along the full corridor with the inclusion of shared paths along both sides of the Elizabeth Drive corridor
- Inclusion of public transport infrastructure with bus priority at intersections and bus stop facilities
- New stormwater drainage infrastructure
- Property acquisitions and adjustments on both sides of Elizabeth Drive and some side roads
- Relocation/adjustment of existing utilities.

The proposal is one of two planned upgrades of Elizabeth Drive between The Northern Road, Luddenham and Duff Road, Cecil Hills (referred to collectively as the Elizabeth Drive Upgrades):

- Elizabeth Drive East Upgrade (the proposal), which is the subject of this Submissions Report
- Elizabeth Drive West Upgrade which would include the upgrade of about 3.6 kilometres of Elizabeth Drive between The Northern Road at Luddenham and the M12 Motorway at Badgerys Creek. This project does not form part of the proposal. A separate Review of Environmental Factors (REF) has been prepared for the Elizabeth Drive West Upgrade.

A more detailed description of the proposal is found in the Elizabeth Drive East Upgrade Review of Environmental Factors (REF) published by Transport in September 2023.

## 1.2 REF display

Transport prepared a REF to assess the potential environmental impacts of the proposal. The REF was publicly displayed for 40 days from 21 September 2023 until 31 October 2023 on Transport's project website and made available for download through the following link: <https://www.transport.nsw.gov.au/projects/current-projects/elizabeth-drive-upgrade>. No physical copies of the REF were displayed.

The REF was displayed concurrently with the REF for the Elizabeth Drive West Upgrade. As such, consultation activities were carried out to inform the community and seek feedback on both adjacent upgrades.

The REF display period was advertised through the following activities:

- A Community Update about the proposal was letterbox dropped to about 8,500 properties within the local area. A copy of the community update is included in Appendix A
- During the consultation period, three email campaigns were sent to all stakeholders registered on the project's communications database (about 210 recipients)
- A newspaper advertisement was placed in two local newspapers (Western Weekender and The District Reporter) on Friday 13 October 2023. A copy of the newspaper advertisement is provided in Appendix A

- Advertising campaign on Transport's Facebook page, comprising of three Facebook posts. A copy of these Facebook posts is provided in Appendix A. There were 289 reactions and 19 comments made across all Facebook posts. Most reactions (270) and comments (16) were made in response to the last Facebook post
- Affected property owner letters were posted out informing the owners of the REF display and asking them to contact Transport to discuss property impacts
- Briefing representatives from Penrith City Council (briefing held on Tuesday 3 October 2023), Liverpool City Council (briefing held on Monday 9 October 2023) and Fairfield City Council (briefing held on Friday 13 October 2023) about the proposal.

In addition to the REF display activities above, Personal Relationship Managers Acquisitions (PRMAs) and project team representatives door-knocked about 69 privately owned residential properties and small businesses. The door knock was carried out to inform directly affected landowners about the proposal and encourage these stakeholders to make a submission. The door-knocking was completed over a four-day period.

Where a landowner was not present, PRMAs left a Community Update and a "Sorry We Missed You" flyer asking for a call back. In addition to the material left at premises, affected property owner letters were posted out informing the owners of the REF display and asking them to contact Transport to discuss property impacts. Follow up door knocks were not required as the majority of the residents responded to the "Sorry We Missed You" flyer, or attended the community consultation sessions. The landowners that could not be reached via the door-knocking were reached during the information sessions (described further below), via phone, letter sent in the post and/or email.

During the public display of the REF, Transport encouraged project stakeholders and the community to provide feedback on the proposal. Three face-to-face community consultation sessions were held in the local area at the following times and locations:

- Saturday 23 September (10am – 1pm) – Bringelly Community Centre, 5 Greendale Road, Bringelly. The Elizabeth Drive Upgrade project team attended as part of the Aerotropolis Community Day.
- Wednesday 11 October 2023 (5pm – 7pm) – Workers Hubertus Country Club, 205 Adams Road, Luddenham. This session was attended by 25 people.
- Saturday 21 October 2023 (10am – 12pm) – Bringelly Community Centre, 5 Greendale Road, Bringelly. This session was attended by 34 people.

One online community session was also held by Transport via Microsoft Teams on Tuesday 17 October 2023 (12pm – 1pm) to provide further information on the proposal, answer questions from the community and encourage the community to provide a formal submission on the REF. This online session was attended by 17 people and is available on the Elizabeth Drive upgrade project website.

Transport carried out statutory consultation with the following government agencies:

- Western Parkland City Authority (under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*)
- NSW Department of Planning, Housing and Infrastructure (DPHI) (under section 3.24 of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*)
- Biodiversity, Conservation and Science, part of the Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water (Transport was requested to carry out this consultation by the Department of Planning, Housing and Infrastructure).

This is described further in Section 5.4.

Community contact and information channels established for the Elizabeth Drive upgrades were in place during the display of the REF. The current community contact and information points for the proposal are outlined in Table 1-1, which will remain in place for the remainder of the REF determination process, design development and construction.

Table 1-1: Community contact and information points

Location	Address
Community information line (toll free)	1800 684 490 (for all Transport projects in the Western Sydney Airport Precinct)
Community email address	<a href="mailto:projects@transport.nsw.gov.au">projects@transport.nsw.gov.au</a> (for all Transport projects in the Western Sydney Airport Precinct)
Project website	nswroads.work/elizabethdrive
Postal address	Elizabeth Drive upgrade, Transport for NSW, PO Box 973, Parramatta NSW 2124

### 1.3 Purpose of this report

This submissions report relates to the REF prepared for the Elizabeth Drive East Upgrade and should be read in conjunction with that document.

The REF was placed on public display and submissions relating to the proposal and the REF were received by Transport. This submissions report summarises the issues raised and provides Transport’s responses to each issue. It details responses to community issues (Section 2), responses to government agency issues (Section 3) and describes changes made to the proposal in response to feedback (Section 3.7.1). This submissions report also documents additional environmental assessments that were carried out for the proposal after public display of the REF (Section 5), the outcomes of additional statutory consultation (Section 5.3) and any new or revised environmental safeguards and management measures for the proposal (Section 6.2).

## 2. Response to community issues

### 2.1 Overview of issues raised

#### 2.1.1 Issues raised in formal submissions

Transport received 29 submissions from the community, accepted up until 31 October 2023.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted and collated, and corresponding responses to the issues have been provided. Where similar issues have been raised in different submissions, only one response has been provided. The issues raised and Transport's response to these issues forms the basis of this chapter.

Figure 2-1 provides a summary of key issue categories raised by the community, including the number of times an issue was raised relating to each category.

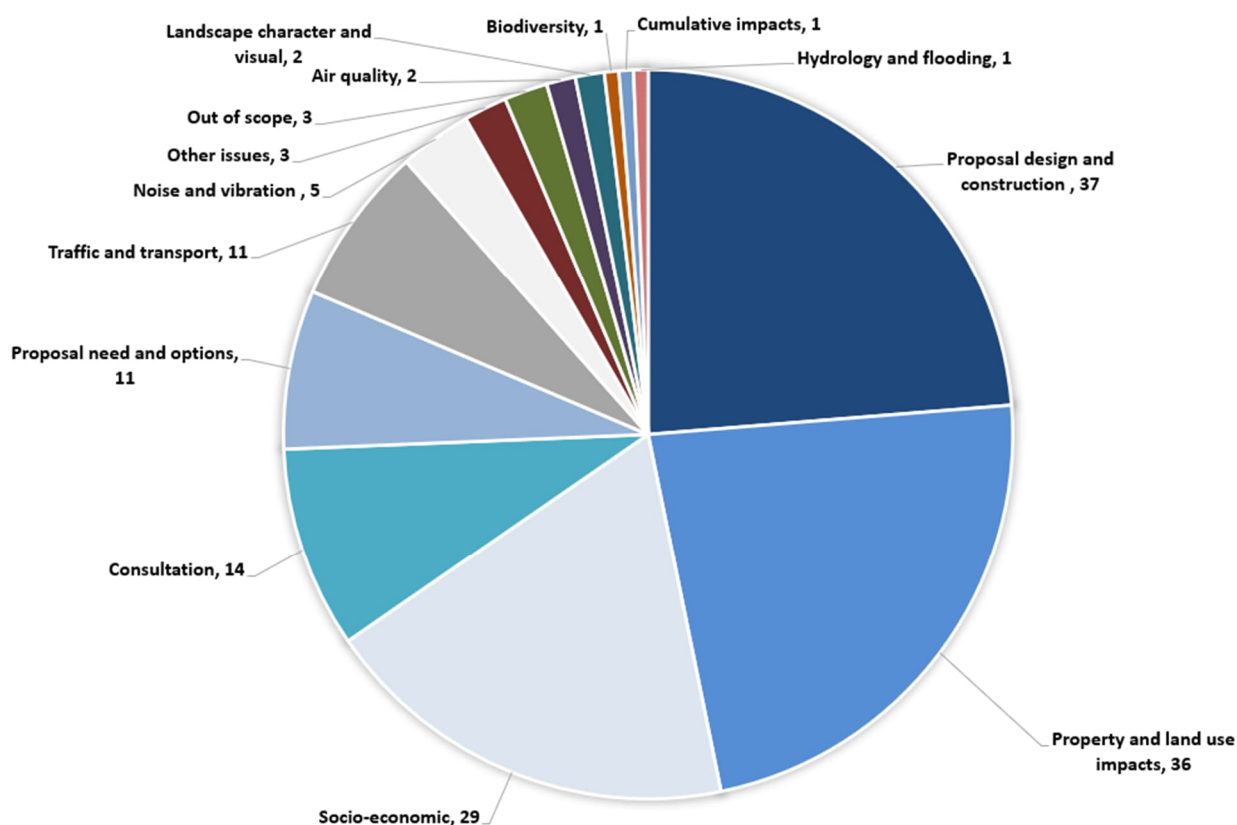


Figure 2-1: Summary of the number of times the key issue categories were raised by the community

Figure 2-1 shows that community submissions raised a diverse range of issues. Issue categories of greatest interest to the community included:

- Proposal design and construction – submissions relating to changes to property access during construction and operation, including due to the introduction of a central median on Elizabeth Drive
- Property and land use – requests to avoid and minimise land acquisition of private properties
- Socio-economic – submissions regarding the potential for the proposal to impact upon businesses and social infrastructure
- Proposal need and options – requests to consider various alternate design suggestions

- Consultation – requests for further consultation or issues with the consultation process that was conducted.

Table 2-1 lists the respondents who made a submission about the proposal and each respondent's allocated submission number. The table also indicates where the issues raised in each submission have been addressed in this report.

Table 2-1: Respondents and where issues are addressed

Submission No.	Section number where issues are addressed
1	2.2.1, 2.2.3, 2.2.7, 2.2.8, 2.5.1
2	2.2.6, 2.5.2
3	2.2.6, 2.2.8, 2.5.3, 2.10.1
4	2.2.9, 2.3.2, 2.4.2, 2.5.3
5	2.2.6
6	2.2.6, 2.3.3, 2.4.1, 2.5.2, 2.7.3, 2.10.4, 2.10.6, 2.14.1, 2.15.2
7	2.2.6, 2.2.10, 2.3.2, 2.4.1, 2.4.2, 2.5.1, 2.6.3, 2.6.4, 2.10.1
8	2.5.1
9	2.2.6, 2.2.7, 2.2.9, 2.3.3, 2.4.1, 2.4.2, 2.5.1, 2.10.1, 2.15.1
10	2.5.3
11	2.2.6, 2.2.10, 2.6.1, 2.10.1
12	2.2.1, 2.2.11, 2.3.2, 2.6.3, 2.10.1, 2.11.1
13	2.5.1
14	2.4.1, 2.4.2, 2.5.1, 2.12.1
15	2.2.2, 2.5.1, 2.8.1, 2.10.1, 2.10.3, 2.10.6
16	2.5.1
17	2.2.6, 2.3.1, 2.3.2, 2.4.1, 2.4.2, 2.5.1, 2.5.3, 2.6.2, 2.6.4, 2.7.4, 2.10.1, 2.10.5
18	2.5.1, 2.10.2, 2.10.3
19	2.2.10, 2.6.3
20	2.2.7, 2.5.1, 2.10.1
21	2.3.2, 2.5.1, 2.5.3, 2.7.2, 2.10.3, 2.11.1
22	2.2.1, 2.2.11, 2.3.2, 2.6.3
23	2.5.1
24	2.2.4, 2.2.5, 2.10.5
25	2.2.6
26	2.2.8, 2.5.1
27	2.7.1, 2.7.2, 2.9.1, 2.13.1, 2.14.1, 2.14.2
28	2.2.5, 2.5.1, 2.6.1, 2.6.3, 2.10.5, 2.15.1
29	2.2.6, 2.2.10, 2.5.1

## 2.1.2 Issues raised during the online community information session

The Elizabeth Drive East Upgrade project team responded to several issues and questions raised by the community during the online project information session. The online project information session was held during the public display period on Tuesday 17 October 2023. There were 17 attendees in the session.

During the session, attendees were encouraged to ask questions of the project team about the proposal and assessment contained within the REF. The issues and questions raised were verbally responded to by the project team during the session and, as such, are not directly addressed within this report.

Attendees were also encouraged to read the REF for more detailed information on the proposal and the environmental assessment, and to provide written submissions and feedback on the proposal.

## 2.1.3 Comments made on Transport's Facebook posts

Transport responded to several comments made by the community in response to Transport's Facebook advertising campaign (consisting of three Facebook posts). There were 289 reactions and 19 comments made across all Facebook posts. Most reactions (270) and comments (16) were made in response to the last Facebook post (refer to Appendix A).

The comments raised were not considered formal submissions and, as such, have not been directly addressed within this report.

## 2.2 Issue 1: Proposal design and construction

### 2.2.1 General support for the proposal

Submission number(s)

1, 12, 22

Issue description

Respondents offered:

- General support for the proposal as a whole
- General support for specific aspects of the proposal including widening of Section Three – Badgerys Creek Road to Western Road, creation of left in/left out access at Lawson Road, a separated median, and limited right-turn access arrangements at some intersections.

Response

Transport acknowledges the respondents' support for the proposal.

### 2.2.2 General objection to the proposal

Submission number(s)

15

Issue description

The respondent strongly objected to the proposal, and is seeking legal representation and contacting the Fairfield Council mayor to oppose it.

## Response

The proposal is required to support expected growth in the area, improve road safety, reduce congestion, and improve travel times. Specifically, the proposal objectives are to:

- Provide a defined road corridor adequate to accommodate future growth
- Maintain the primary function of a movement corridor east-west
- Support key motorway travel routes (e.g. M12 Motorway and M7 Motorway) and future road network connections in the Aerotropolis, such as Eastern Ring Road and Devonshire Link Road
- Improve road safety for all road users
- Provide active transport, bus priority and vehicle access to assist in key connections to:
  - Western Sydney International Airport, business and technology park
  - Western Sydney Airport Precinct
  - Centres identified in the Western Parkland City and Western Sydney Parklands
- Provide an efficient, resilient freight network
- Contribute to the desired future character and connectivity of the Western Parkland City and Western Sydney Parklands.

Transport acknowledges there may be potential adverse environmental and social impacts associated with the construction and operation of the proposal. These have been identified and assessed in the REF and would be managed through the environmental safeguards outlined in Section 6.

Transport has consulted with Fairfield City Council in relation to the proposal, including a briefing held during the REF display period on Friday 13 October 2023. Transport would continue this consultation as design and construction of the proposal progresses.

### 2.2.3 Road cross section

#### Submission number(s)

1

#### Issue description

The respondent:

- Suggested that the design adopt a smaller batter (of 2:1 as opposed to the 4:1 and 3:1 horizontal to vertical ratio proposed for the majority of the alignment) so as to limit the extent of the operational footprint
- Requested to work with Transport to minimise the property acquisition requirements for the proposal and subsequent impacts on proposed future development at (address withheld).

## Response

Batter slopes along the length of the proposal are generally of a 4:1 to 3:1 horizontal to vertical ratio. A batter slope of 2:1 along the majority of the alignment would not be preferred as it may pose potential stability issues and does not allow for the efficient maintenance of planting and landscaping.

The proposed development referred to in the submission is subject to a separate consultation process with Transport and the applicant of the development. However, the detailed design of the proposal would seek to minimise impacts to future

development where feasible and reasonable, while maintaining the ability to provide two traffic lanes and safeguard for a third in each direction along Elizabeth Drive.

## 2.2.4 Construction timing

Submission number(s)

24

Issue description

The respondent queried when construction of the proposal is anticipated to commence.

Response

Construction timing would be further refined during detailed design and communicated to impacted stakeholders.

## 2.2.5 Site compound location

Submission number(s)

24, 28

Issue description

Respondents:

- Queried whether areas adjacent to the nearby fire station could be utilised for construction in lieu of Bill Anderson Reserve and its car park (in relation to construction ancillary facility 2 proposed in the REF)
- Requested consideration of alternative options to locate the site compound to avoid impacts to the Christadelphian Heritage College Sydney (Heritage College Sydney), Kemps Creek.

Response

Transport acknowledges concerns raised about the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club and has committed to relocate the proposed construction ancillary facility 2 (identified in Figure 3-21 of the REF) to reduce this impact. The alternative location of this facility will be determined during detailed design. This has been addressed as a clarification to the REF in Section 4.1 and reflected in additional environmental safeguard GEN6 for the proposal. An appropriate level of environmental impact assessment will be carried out for the alternative location of the construction ancillary facility, consistent with the requirements of the EP&A Act.

Areas surrounding the existing fire station present limited space for an alternate construction ancillary facility. Use of this area as a construction ancillary facility may also pose challenges for maintaining property access for emergency services while managing construction haulage movements to and from the site.

In regard to permanent impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club, Transport is committed to investigate opportunities to further reduce the amount of land that is proposed to be permanently acquired by the proposal. This has been addressed as a clarification to the REF in Section 4.1 and reflected in additional environmental safeguard GEN5 for the proposal. Any required adjustments to the proposed property acquisition boundary to reduce permanent impacts to the reserve and carpark would be investigated in the detailed design stage in consultation with the Kemps Creek United Soccer Club and other relevant stakeholders (in accordance with environmental safeguard SE6 (refer to Section 6).

The REF does not propose a construction ancillary facility (compound) within the Heritage College Sydney. Periodic access to the frontage of the property would be required to complete drainage work and footpath improvements. Construction work for the proposal would avoid the need to access parking areas associated with the Christadelphian Heritage College Sydney. This has been included as an additional environmental safeguard (SE15) in Section 6.

Transport understands that the area within the operational footprint primarily includes the rear driveway on Devonshire Road and a section of a car park. The respondent has noted that this driveway to the school acts as an emergency entrance and exit

for the fire brigade, ambulance, and transport of students off-site in the event of a bushfire and provides access during events held at the school.

Transport is committed to consulting with Christadelphian Heritage College Sydney in the next stage of design development to minimise this impact of the work and maintain appropriate access to the school. Environmental safeguard SE9 for the proposal has been amended to clarify that Transport would consult with the school to review opportunities to avoid impacts to school infrastructure (refer to Section 6).

## 2.2.6 Property access – operation

Submission number(s)

2, 3, 5, 6, 7, 9, 11, 17, 20, 25, 29

Issue description

Respondents:

- Commented that one of two driveways at Elizabeth Drive, Mount Vernon (address withheld) require heavy vehicle access to enable future subdivision of the property
- Noted that proposed property acquisition would limit vehicular access to properties at Elizabeth Drive, Cecil Park from Elizabeth Drive and Range Road, and effectively 'landlock' land (where future development of the Western Sydney Town Centre is planned)
- Commented that the proposed intersection configuration at Martin Road / Elizabeth Drive would not allow for vehicles travelling from either the east or the west of the intersection to return in that direction as there is no southern U-turn facility
- Provided suggestions for the following access arrangements to be provided for (address withheld) Martin Road:
  - A continuous two-way service road, which would travel alongside Elizabeth Drive to serve (address withheld) Martin Road and neighbouring properties to allow vehicles from the east to return in that direction
  - A left-in left-out driveway on Martin Road southbound to access (address withheld) Martin Road
  - A roundabout or U-turn facility at the southern extend of the proposal area on Martin Road
- Queried how the proposal would affect a secondary driveway at (address withheld) Elizabeth Drive, Mount Vernon
- Commented that the proposal design removes an existing easement access to the neighbouring property from Salisbury Avenue, impacting upon access to Apex Petroleum. The respondent requested that access to the easement is maintained unless Transport plans to terminate the easement and compensate the affected owners
- Requested that driveway access to United Petroleum, Kemps Creek from Elizabeth Drive is maintained
- Commented that the proposed northern extension of the Western Road appears to impact access to a recently developed Trademart (part of Andreasens Green Wholesale Plant Nursery in Kemps Creek) which caters to wholesale customers
- Commented that it was unclear if the 'culvert shaped' figures on the plans in the REF represent the location of the property access (e.g. Figures 3-1 to 3-6 of the REF). The respondent provided a figure showing the existing operational access point servicing the site and the approved secondary access point, and requested that these access points remain as the property's primary access to Elizabeth Drive
- Expressed concern that site access to Animal Welfare League NSW at Kemps Creek would be adversely impacted by the proposal. Commented that the restriction of right turn access to Elizabeth Drive would impact upon Animal Welfare League NSW's ability to respond to emergencies, and a U-turn facility at Luddenham Road would not be sufficient
- Expressed concern the proposed median strip on Duff Road would limit driveway access to a business at (address withheld) Duff Road, Cecil Park, noting it requires 24 hours access for staff and delivery trucks
- The respondent requested clarification on the impact of the proposal on the right of carriageway on the road (opposite Western Road, which is proposed to form a northern leg of Western Road).

## Response

All sites subject to partial acquisition would require property adjustments, for example to reinstate access to the site. Transport will complete all property adjustments, including reinstatement of driveway access where required, in consultation with affected property owners, in accordance with environmental safeguard PL1 (refer to Section 6). This would include reinstatement of driveway access in consultation with the landowner and efforts to ensure access to the site is maintained. When considering the design of replacement driveway access, Transport aims to provide like-for-like access, including allowance for the same width as the existing driveway where possible. If applicable, Transport would prepare a property adjustment plan that shows adjustments to the land (such as letterboxes, fences, driveways) that would be implemented by the construction team, in consultation with the landowner.

Elizabeth Drive is a major arterial road, which carries a high volume of traffic, where transport safety and efficiency of through traffic is of great importance. It is Transport's current practice to limit the number of vehicular conflict points along the arterial road network to maintain network safety and efficiency. This current practice is reflected in Section 6.2.1 of Transport's current publication of the Guide to Traffic Generating Developments, which states that 'access across the boundary with a major road is to be avoided wherever possible'.

While Transport would reinstate existing driveway accesses to properties affected by the proposal, vehicular access for future developments would generally be required to be provided on intersecting roads to Elizabeth Drive which do not form part of the arterial and classified road network (for example, Range Road), where possible.

In response to the specific comments raised by respondents:

- *Request for provision of heavy vehicle access at driveways:* As noted above, property adjustments, including reinstatement of driveway access where required, in consultation with affected property owners, in accordance with environmental safeguard PL1 (refer to Section 6)
- *Future development at Elizabeth Drive, Cecil Park:* Transport have provided preliminary comments to Liverpool City Council regarding the planned development application for the Western Sydney Town Centre, and will continue to provide comments and consult with the applicant (as required) through the development application referral process. As identified above, it is noted that Transport's current practice to limit the number of vehicular conflict points along the arterial road network (including Elizabeth Drive) to maintain network safety and efficiency
- *(Address withheld) Martin Road and other properties at the intersection of Elizabeth Drive and Martin Road:* The proposed northern leg of the Martin Drive and Elizabeth Drive intersection would allow for U-turn movements (including for B-double vehicles) to support property access. Transport acknowledges the respondent's suggestions and will continue the consultation process as the proposal progresses. However, Martin Road (to the south of Elizabeth Drive) is planned to be a main road corridor in the Western Sydney International Airport Precinct Road Network, forming part of the future Eastern Ring Road. The State Environmental Planning Policy (SEPP) for the Western Sydney Aerotropolis released in 2021 established the major transport corridors servicing the Western Sydney Airport Precinct, including Elizabeth Drive, The Northern Road, and Eastern Ring Road. Provision of a roundabout at the southern leg of Martin Road would not be considered as part of this proposal, taking into account its future use as a main road corridor
- *Secondary driveway at (address withheld) Elizabeth Drive, Mount Vernon:* The concept design presented in the REF includes an indented bus bay in front of to what appears to be the secondary driveway of this property. Reinstatement of the secondary driveway in this location would be considered unsafe as there would be potential for vehicles to conflict with merging/exiting buses. Transport would consult with the property owner to confirm the existing driveway accesses and proposed property adjustments at this location, in accordance with environmental safeguard PL1 (refer to Section 6)
- *Access to Apex Petroleum:* Transport would carry out further design review at the next stage of design development to investigate site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. This has been reflected in an additional environmental safeguard for the proposal and is discussed further in Section 4.2. Where property acquisition is required (including over easements), appropriate guidelines would be implemented to ensure consistent and equitable dealings with all landowners whose lots are to be acquired. Information about acquisitions under the *Land Acquisition (Just Terms Compensation) Act 1991* (the Just Terms Act) can be viewed online at the [Centre for Property Acquisition website](#)
- *Access to United Petroleum:* The next stage of proposal development would involve review of opportunities to reinstate access to United Petroleum, either from Elizabeth Drive or an alternative entry location. Currently, the proposal design

removes direct access to United Petroleum from Elizabeth Drive, due to the presence of a service road in this location. Full acquisition of the property is currently proposed in the REF due to the removal of this access. Design refinements resulting from this review would be confirmed prior to the construction of the proposal in this area. The planned design review for the next stage of the proposal is discussed further in Section 4.2.

- *Western Road:* The proposal would be reviewed and confirmed during detailed design in consultation with the property owner. Transport would reinstate property access on a like-for-like basis wherever feasible
- *Figures 3-1 to 3-6 of the REF:* Figures in the REF are indicative only and do not precisely reflect the property adjustments that would be carried out for the proposal. The REF was based upon a concept design and included preliminary consideration of driveway locations requiring reinstatement. Driveway locations would be confirmed and required property adjustments would be carried out in consultation with the landowner, in accordance with environmental safeguard PL1 (refer to Section 6). It is noted that access points to properties along Elizabeth Drive within the proposal area would become left-in / left-out only due to the introduction of a central median
- *Animal Welfare League NSW at Kemps Creek:* The introduction of a central median as part of the proposal would result in left-in, left-out movements only being possible at the property. Property owners would need to use existing U-turn facilities, and proposed provisions for a U-turn function to access properties in the opposite direction of travel which would slightly increase travel time. The nearest provision for U-turn movements would be at the proposed northern leg of Western Road, about 680 metres to the east of Animal Welfare League NSW, which would have a minimal impact upon travel time. Transport would consult further with Animal Welfare League NSW during the next stage of design development, including to confirm its requirements for property access (including emergency services). Since display of the REF, an additional assessment of the proposal's socio-economic impacts to Animal Welfare League NSW, Kemps Creek (as social infrastructure) has been carried out, with an additional environmental safeguard proposed to review opportunities to minimise these impacts in consultation with Animal Welfare League NSW. This is detailed further in Section 5.2
- *(Address withheld) Duff Road, Cecil Park:* The proposed median strip currently ends over 100 metres to the south of the property and, therefore, is not expected to directly impact upon vehicular access at this location. All businesses that require B-double access to their property would also need to obtain a relevant permit (refer to <https://www.nhvr.gov.au/road-access/access-management/applications/b-double-permit>). If there is a requirement for frequent heavy vehicle access to the driveway, Transport would consider investigating access impacts and turn path checks for this property in the next stage of design development to manage potential road safety risks.
- *Impact on right of carriageway opposite Western Road:* The road referred to by the respondent is proposed to be realigned and widened to form a signalised intersection with Elizabeth Drive. The road would effectively become the northern leg of an intersection with Elizabeth Drive and Western Road. This northern leg of the intersection is currently on privately owned land, which would require partial acquisition to carry out the proposal. This has been addressed as a clarification to the REF in Section 4.1. Access to affected properties would be reinstated. The proposal would seek to reinstate existing driveway access on a like-for-like basis, wherever feasible. The approach to reinstating impacted accesses would be further investigated in the detailed design stage following detailed topographic survey and consultation with impacted landowners and businesses.

## 2.2.7 Design clarification/discrepancies

Submission number(s)

1, 9, 20

Issue description

Respondents:

- Queried inconsistencies with the batter the batter slope on Figure 3-7 within the REF with the batter slopes presented in Table 3-1
- Queried around why Lot 5 / DP255566 (which includes a private access road) was not identified as requiring acquisition
- Requested a formal letter of apology for not including a business in the REF report.

## Response

Figure 3-7 in the REF shows a 4:1 batter slope (on the southern side of Elizabeth Drive). This figure provides an example indicative cross section and would be subject to further detailed design development. While the majority of the southern side of the alignment in the concept design (presented in the REF) is at a slope of 3:1, in some instances 4:1 has been adopted, taking into account relevant council requirements.

Lot 5 / DP255566 was incorrectly identified as a public road for the purposes of the REF. The operational footprint for the proposal includes a portion of a privately owned access road within Lot 5 / DP 255566 (located to the north of Western Road). As such, partial acquisition of Lot 5 / DP 255566 is also required to carry out the proposal (in addition to the property acquisition requirements described in Section 3.4 and Appendix C of the REF). This has been addressed as a correction to the REF in Section 4. A summary of the anticipated property and land use impacts of the proposed acquisition is provided in Section 5.3.

The proposal involves realignment of the access road to form a newly signalised intersection with Western Road, as well as widening and provision of a U-turn facility at the northern leg of the new intersection. The proposed work at the intersection is described further in Section 6.2.3 of the REF. The proposal would ensure that access to businesses and properties at the northern leg of the intersection is maintained.

All property acquisition would be carried out in accordance with the Just Terms Act and other guidelines identified in Section 3.4 of the REF. Information about acquisitions under the Just Terms Act can be viewed online at the [Centre for Property Acquisition website](#).

Transport acknowledges the presence of Fresh Pick Farm Fresh along Elizabeth Drive and apologises for the omission of the business name from the REF. This has been acknowledged as a clarification to the REF in Section 4.3.

It is anticipated that construction of the proposal may impact upon access and amenity for some businesses along Elizabeth Drive, including Fresh Pick Farm Fresh. Changes to traffic arrangements during construction have the potential to result in minor delays to customers or deliveries accessing the business. Construction noise, air quality and visual impacts may also temporarily impact amenity at the property. Once the proposal is constructed, the increase in traffic capacity along Elizabeth Drive may support improved access to businesses. U-turn facilities would be provided to allow vehicles to change their direction of travel along Elizabeth Drive, to manage the changed property access impacts of the central median. Further information on the likely impacts to businesses from the proposal is included in Appendix J (Socio-economic Impact Assessment) of the REF.

## 2.2.8 Drainage design

### Submission number(s)

1, 3, 26

### Issue description

#### Respondents:

- Queried why the open drainage swale does not appear to be at the bottom of the batter, and suggested a piped drainage solution as opposed to a swale where possible
- Requested that drainage basins for the proposal are located within land already acquired for the M12 Motorway project, to minimise further acquisition of private property
- Raised concern around the proposal's drainage plans based on a creek illegally constructed by a previous owner.

## Response

Swales are sometimes proposed at the top of the batter, as opposed to the bottom of the batter. Grassed swales have generally been proposed based on the following considerations:

- To avoid low points in the terrain, particularly along the bottom of the batter
- To drain external runoff away from Elizabeth Drive

- To receive and drain the runoff from road drainage towards a proposed basin for treatment
- To avoid a mixing swale that conveys treated runoff compared to un-treated runoff.

Grassed swales have been proposed as these are considered to provide better water quality outcomes relative to piped solutions.

The drainage design (including basins) presented in the REF is based upon a concept design, which has been developed based on the interfaces with a number of infrastructure, land and environmental constraints. The project team has considered a number of options in the development of the drainage design and layout which have, where possible, minimised the impact on these constraints. The concept drainage design is based on limited survey investigations outside the existing road corridors and aims to manage surface water as efficiently as possible.

Further design development would be carried out during the next stage of design (detailed design), which would refer to detailed topographical and subsurface survey (which would verify the watercourses present) as well as utility surveys and would give due consideration to community and stakeholder feedback. Transport will also consult with the applicants of future development (as required) and landowners as the proposal progresses to detailed design stage.

Detailed design would include further review and modelling of basin locations based on the topographical, subsurface and utility surveys.

There is limited land within areas acquired for the M12 Motorway that is adjacent to the Elizabeth Drive alignment and would be suitable for a basin location. Basins are, therefore, required outside of the M12 acquisition footprint to allow proximity to Elizabeth Drive.

## 2.2.9 Detention basins

Submission number(s)

4, 9

Issue description

Respondents:

- Suggested the relocation of a proposed detention basin within (address withheld) Elizabeth Drive, Badgerys Creek to correspond with the general location of an existing dam that is formed within a natural depression that drains to Wianamatta-South Creek
- Requested that if a basin must be located at (address withheld) Elizabeth Drive, Kemps Creek, that it is positioned at the corner of the property rather than its current location
- Requested clarification around reasoning for the location of a basin at (address withheld) Elizabeth Drive, Kemps Creek and suggested alternative approaches/locations for the basin.

Response

The REF is based upon a concept design, which has been developed based on the interfaces with a number of infrastructure, land and environmental constraints. The project team have considered a number of options in the development of this design and layout which have, where possible, minimised the impact on these constraints.

All proposed basin locations would be reviewed in the next stage of design (detailed design), based on additional inputs such as detailed topographical, subsurface and utility surveys. The detailed design would include further review and modelling of basin locations based on detailed topographical survey. Final selection of basin locations would also give due consideration to community and stakeholder feedback.

Transport notes the respondents' suggestions for alternative basin locations and would consider these further during detailed design. The site selection of the proposed basin at (address withheld) Elizabeth Drive, Kemps Creek relates to its location downstream of an existing watercourse (to the west).

## 2.2.10 Service road design

Submission number(s)

7, 11, 19, 29

Issue description

Respondents made the following comments on the proposed service road design at Kemps Creek:

- Commented that the proposed one-way service road across the frontage of Kemps Creek shops would hinder future operation of the Apex Petroleum site, as it:
  - Removes two-way directional flow and access from Elizabeth Drive and Salisbury Avenue
  - Requires property acquisition which would impact current site infrastructure
  - Requires all traffic, including heavy vehicle who presently utilise separate access and egress from Salisbury Avenue, to use the service road where they will adversely conflict with cars and other light vehicles
- Requested to retain existing dedicated truck access/egress driveways to Apex Petroleum from Salisbury Avenue. As an alternative, the respondent suggested removal of the existing northern driveway on Salisbury Avenue and replacing this with dedicated truck access into the service station from the proposed roundabout on Salisbury Avenue
- Suggested to remove the proposed one-way service road across the frontage of Kemps Creek shops from the proposed design and instead maintain existing private driveway access from Elizabeth Drive
- Made suggestions for alternative designs for the proposed one-way service road across the frontage of Kemps Creek shops, such as inclusion of a dedicated right-turn lane on the service road, or redesign of the service road as a two-way access road positioned further east toward Salisbury Road
- Suggestion for an access road to be constructed at the rear of the United Petroleum property from Clifton Avenue to Salisbury Avenue, to ensure westbound vehicles can access the site
- Suggested an existing service lane (at (address withheld) Elizabeth Drive Kemps Creek, which currently provides access to/from Clifton Avenue) be widened to continue through to Salisbury Avenue, to provide rear access to Kemps Creek shops and adjoining lots
- Requested provision of westbound access from the proposed Devonshire Road and Salisbury Avenue intersection into the existing Kemps Creek Shopping Precinct via Salisbury Avenue and road at the rear
- Recommended a two-way service road in Kemps Creek with a U-turn facility to service commercial / industrial properties within a section of Elizabeth Drive (between Lot 1/ DP1212980 and Clifton Avenue).

Response

The proposal currently includes a one-way eastbound service road adjacent to shops at Kemps Creek. This service road would continue onto Salisbury Avenue (left turn only), from which vehicles would travel northbound to a new roundabout. Vehicles would be able to use the roundabout to continue northbound, or to travel southbound toward Elizabeth Drive. This service road has been proposed to provide safe access to the shops and considers Transport's practice of minimising potential vehicular conflict points along the arterial road network (including Elizabeth Drive) to maintain network safety and efficiency.

Transport is committed to maintaining safe access to all businesses including Apex Petroleum, however this is likely to involve some changes to existing site access arrangements. Transport would carry out further design review at the next stage of design development to investigate site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. This has been reflected in an additional environmental safeguard for the proposal and is discussed further in Section 4.2. Design refinements resulting from this review would be confirmed prior to the construction of the proposal in this area.

As part of the next stage of design, a detailed road safety audit will be prepared. This will include monitoring the effectiveness of access arrangements to Apex Petroleum and suggest measures to eliminate or manage safety risks identified where necessary. Transport acknowledges the suggestion for an existing service lane be widened to continue through to Salisbury

Avenue, and for westbound access from the proposed Devonshire Road and Salisbury Avenue intersection into the existing Kemps Creek Shopping Precinct.

In regard to the suggestion for an access road from Clifton Avenue to Salisbury Avenue at the rear of properties – the next phase of the design would investigate options to reinstate access to United Petroleum, either from Elizabeth Drive or an alternative entry location. Currently, the proposal design removes direct access to United Petroleum from Elizabeth Drive, due to the presence of a service road in this location. Full acquisition of the property is currently proposed in the REF due to the removal of this access. Design refinements resulting from review of the design would be confirmed prior to the construction of the proposal in this area. The planned design review for the next stage of the proposal is discussed further in Section 4.2.

It is noted that the suggestion for a two-way service road at Kemps Creek would be likely to increase property impacts for the proposal. Transport would maintain access to properties along the length of the proposal. Property adjustments (including to site access) would be confirmed in detailed design in consultation with landowners.

### 2.2.11 Turning facilities

Submission number(s)

12, 22

Issue description

Respondents requested that all proposed turning facilities be designed to accommodate vehicles up to and including B-Doubles.

Response

The turning facilities would allow for large vehicle movements, and have been designed to comply with relevant design standards as well as taking into consideration the range of uses along Elizabeth Drive. The concept design presented in the REF has considered varying vehicles at the proposed turning facilities as 'checking vehicles' (meaning that the design has been checked that the road can physically cater for these vehicles turning if required) as follows:

- The turning facility on Martin Road has been checked to be able to accommodate a 26-metre B-Double
- The turning facility on Western Road has been checked to be able to accommodate a 26-metre B-Double
- The turning facility on Salisbury Avenue has been checked to be able to accommodate a 26-metre B-Double
- The turning facility at the northern leg of Range Road has been checked to be able to accommodate a 19-metre semi-trailer
- The property access cul-de-sac accessible from Range Road has been checked to be able to accommodate 19-metre semi-trailer.

All businesses that require B-double access would need to obtain a relevant permit (refer to <https://www.nhvr.gov.au/road-access/access-management/applications/b-double-permit>).

The road referred to by the respondent is proposed to be realigned and widened to form a signalised intersection with Elizabeth Drive. The road would effectively become the northern leg of an intersection with Elizabeth Drive and Western Road.

This northern leg of the intersection is currently on privately owned land, which would require partial acquisition to carry out the proposal. This has been addressed as a clarification to the REF in Section 4.1.

Access to affected properties would be reinstated. The proposal would seek to reinstate existing driveway access on a like-for-like basis, wherever feasible. The approach to reinstating impacted accesses would be further investigated in the detailed design stage following detailed topographic survey and consultation with impacted landowners and businesses.

## 2.3 Issue 2: Proposal need and options

### 2.3.1 Alternate alignment/proposal suggestions

Submission number(s)

17

Issue description

The respondent commented that only two strategic options were considered for the project (a 'do nothing' approach and proceeding with the upgrade) and commented that this approach limited landowner input into the design development process.

Response

The design of the widened road corridor has taken into account a range of factors and constraints, including road geometry, environmental constraints, the M12 Motorway design and Western Sydney International Airport.

Options to 'do nothing' and to upgrade Elizabeth Drive were considered at the strategic level to inform the proposal. Following selection of the option to upgrade Elizabeth Drive, several design options were considered across different sections of the road, generally focused on the approach to widening (e.g. whether this would occur primarily to the north of the existing road corridor, to the south or a mix of both). This process is detailed further in Section 2.4 of the REF.

Transport started early engagement with interested and potentially affected communities and stakeholders via the access strategy for the Elizabeth Drive upgrades in 2019. This was followed by a community consultation for the strategic design in 2020. Feedback received from the community during this session was considered and used to refine and prepare the strategic design and environmental assessment of the proposal.

Community feedback received during the REF display and continued consultation would be considered in preparing the detailed design for the proposal.

### 2.3.2 Other design suggestions

Submission number(s)

4, 7, 12, 17, 21, 22

Issue description

Respondents:

- Provided alternative design suggestions for the proposal where it interfaces with a planned state significant development application
- Suggested that Salisbury Avenue be realigned eastward to align with Devonshire Road as part of the signalised intersection upgrade, to reduce impacts to Apex Petroleum
- Recommended a three-way signalised T-intersection arrangement at Clifton Avenue and Elizabeth Drive (which is proposed to be unsignalised) to address traffic volumes and manage safety
- Commented that there would be sufficient separation of the Clifton Avenue intersection between Western Road and Devonshire Road to enable signals, based on other examples of road projects with a comparable number of signalised intersections over a similar distance
- Requested improved access to the Animal Welfare League NSW property with a relief bay to allow vehicles (including emergency vehicles) to turn right into and out of the site
- Requested the proposed walking and cycling path on the Animal Welfare League NSW side of the Elizabeth Drive be removed

- Suggested a more direct/straightened realignment of Elizabeth Drive near the Ampol IGA X-press would decrease impacts to properties on the opposite (southern) side of the road corridor. The respondent felt the extent of impact to their property may have been due to a decision to avoid impact to the Ampol IGA X-press Kemps Creek service station
- Requested maintenance of the right turn exit out of Lawson Road onto Elizabeth Drive. This could be an temporary solution (by adding in a turning facility at the new airport access road intersection located in the vicinity of the current roundabout), or could be the permanent solution of extending Pitt Street between Lawson Road and Martin Road.

#### Response

The REF has been prepared based on the concept design for the Elizabeth Drive East Upgrade. Further design development would be carried out during the next stage of design (detailed design), which would involve consideration of community and stakeholder feedback. Transport acknowledges that a range of feedback and design suggestions have been provided by the community and would continue to review these as part of detailed design development.

In response to the specific design suggestions raised by respondents:

- *Adjustments to the design where it interfaces with planned state significant development:* Transport is involved in ongoing consultation with the applicant of the development and would work with the proponent to coordinate design, where feasible and reasonable, in the next stage of design development for the proposal
- *Adjustments to Salisbury Avenue alignment:* Salisbury Avenue and Devonshire Road would be aligned to form one signalised intersection with Elizabeth Drive as part of the proposal, with Salisbury Avenue realigned slightly eastward to achieve this. At the next stage of the design, the design of the proposal in this location would be reviewed as discussed in Section 2.2.10
- *Signalisation of Clifton Avenue and Elizabeth Drive intersection:* Intersections to be signalised as part of the proposal have been selected to provide safe and efficient access and considering the distance to other intersections. Clifton Avenue is proposed to become left-in / left-out as part of the proposal, primarily due to its proximity to the Devonshire Road intersection. Transport would ensure property access is maintained for properties accessed via Clifton Avenue
- *Relief bay at Animal Welfare League NSW, Kemps Creek:* The central median proposed along Elizabeth Drive is an important feature of the proposal to manage road safety risk, including the potential for head on vehicle crashes. Provision of breaks or relief bays in the median could potentially give rise to road safety risks associated with vehicles turning across multiple traffic lanes in a high-speed environment (with Elizabeth Drive planned to have a posted speed limit of 80 kilometres per hour). U-turn facilities would be provided as part of the proposal. The closest U-turn facility would be at the northern extension leg of the Elizabeth Drive and Western Road intersection, about 800 metres east of the Animal Welfare League NSW property, which would facilitate travel in the opposite direction. An assessment of the potential increase in travel time associated with changes to property access was carried out as part of the REF, and is summarised in Section 6.2 and Appendix F of the REF. The results indicate that in general, with the central median restricting access via a right hand turn to properties from the opposite side of Elizabeth Drive, the proposal would increase travel time needed to access those properties in 2030 and 2040 conditions. A maximum increase of about 104 seconds is estimated for property access between Western Road and Martin Road when travelling in the westbound direction in 2040 scenarios. Transport would consult with Animal Welfare League NSW during detailed design development to ensure access and egress for emergency vehicles is provided
- *Removal of the proposed walking and cycling path:* The shared walking and cycling pathway is required to provide a safer path of travel for pedestrians and cyclists, particularly next to a high-speed environment (with Elizabeth Drive planned to have a posted speed limit of 80 kilometres per hour) where there are no existing formal footpaths. The pathway would also be clearly delineated over driveways to manage potential safety risk. Detailed design of the path would be carried out with reference to relevant guidelines including Transport's Cycleway Design Toolbox which includes safety related considerations. As part of the next stage of design, a detailed road safety audit will be prepared. This will include monitoring the walking and cycling paths, and other components of the proposal, and suggest measures to eliminate or manage safety risks identified where necessary
- *Request for more direct/straightened realignment:* The design of the road widening is influenced by a number of factors, including road geometry, topography and environmental constraints (such as creeks), and physical constraints (such as Western Sydney International Airport, and piers associated with the future M12 Motorway bridge over Elizabeth Drive). These factors can limit the opportunity to widen the proposal equally on either side
- *Request to maintain the right turn exit out of Lawson Road onto Elizabeth Drive:* Due to the proposed central median, right turn movements into Lawson Road, and out onto Elizabeth Drive, would be restricted. Permitting right turn

vehicles in and out of Lawson Road (which would continue to form an unsignalised intersection with Elizabeth Drive) would present a road safety hazard given that the Elizabeth Drive would be upgraded to a four lane, high speed (80 kilometre per hour) main road with a wide median as part of this proposal, and ultimately a six lane road in the future. During the options selection process for the proposal, consideration was given as to whether Martin Road or Lawson Road would be the preferred location for a signalised intersection with Elizabeth Drive. Martin Road was selected as it was further distanced from the realigned and signalised Badgerys Creek Road intersection (being delivered as part of the M12 Motorway project; about 600 metres to the east). This would provide sufficient distance between signalised intersections to maintain appropriate traffic flow. Martin Road (to the south of Elizabeth Drive) is also planned to be a main road corridor in the Western Sydney International Airport Precinct Road Network, forming part of the future Eastern Ring Road. Separately to this proposal, Transport is exploring opportunities to open Cuthel Road as part of the short-term safety opportunities across the Precinct, in association with broader Aerotropolis Road Network Planning.

### 2.3.3 Clarification on proposal need

Submission number(s)

6, 9

Issue description

Respondents:

- Queried the rationale for the proposal (including the increase in capacity of Elizabeth Drive, associated service road/s and walking and cycling paths) given that the M12 Motorway would provide for increased traffic in the area
- Wondered why the privately owned access road that runs predominantly along the boundary of (address withheld) Elizabeth Drive would be realigned to form a signalised intersection with Western Road, rather than continuing Western Road directly north which would take it through less productive land
- Questioned why the aforementioned access road forms part of the proposal as it connects to a limited number of properties and ends in a turning circle
- Queried whether the REF considers work currently underway on behalf of Sydney Water relating to the Water Recycling Facility (in particular the proposed northern extension of Western Road).

Response

The Western Sydney International Airport and the transformational nature of planned development in the Western Sydney Aerotropolis precincts is expected to generate significant traffic volumes and place substantial pressure on Elizabeth Drive. Currently, to the west of the M7 Motorway, Elizabeth Drive experiences frequent congestion during peak times. Traffic modelling carried out for the proposal (discussed in Section 6.2 of the REF), indicates that without the proposal, Elizabeth Drive would operate at maximum capacity by 2030. This would result in unsatisfactory congestion levels and increased travel time for motorists. The modelling assumes that the M12 Motorway would be operational during this period. The need and rationale for the proposal is further discussed in Section 2.1 of the REF.

Walking and cycling paths are proposed to improve safety for cyclists and pedestrians and facilitate connections to employment opportunities in the Western Sydney Aerotropolis. The proposed walking and cycling paths would tie into the shared walking and cycling path at the M12 Motorway.

A four-way signalised intersection at Western Road was selected as part of the proposal due to its location at nearly half way between Devonshire Road and Martin Road signalised intersections. The upgrade of the access road to form a northern leg of Western Road would allow it to accommodate a U-turn facility. This would enable motorists to use the facility to travel in the opposite direction along Elizabeth Drive, noting that properties on Elizabeth Drive would be left in / left out access only due to the proposed central median.

At this point in time Transport does not plan to further extend the northern leg of Western Road; however, this may be reconsidered if required in future, with reference to updated traffic modelling once the proposal is operational.

As noted in Section 2.2.7, partial acquisition of Lot 5 / DP 255566 is required to carry out the proposed works to the northern leg of Western Road (in addition to the property acquisition requirements described in Section 3.4 and Appendix C of the REF). This has been addressed as a correction to the REF in Section 4.

Transport has consulted with Sydney Water during the development of the proposal design and would continue to do so as the proposal progresses to the detailed design stage.

## 2.4 Issue 3: Consultation

### 2.4.1 Issues with consultation process

Submission number(s)

6, 7, 9, 14, 17

Issue description

Respondents felt:

- Consultation with affected residents, landowners and businesses prior to the REF display period has not been sufficient in outreach or duration
- Accessible language has not been utilised in the consultation process leading to a lack of understanding of the impacts
- The REF display period was not sufficient to review information and provide feedback
- Staff at project information sessions could only provide limited explanation of plans presented in the REF
- There has been limited landowner input in the options selection, design, and property acquisition process to date
- Transport should conduct door to door consultation and record resident concerns and feedback
- Consultation to date has included limited consideration of impacts to businesses; however, noted it is positive that Transport have now been responsive and willing to meet and discuss the proposed work with businesses
- Noted there is also ongoing consultation being carried out by Transport regarding upcoming temporary work to the roundabout intersection of Devonshire Road and Elizabeth Drive and planned diversion for trucks (separate to this proposal)
- Commented that demographic of the area and aspirations for a rural lifestyle have not been well understood.

Response

Transport started early engagement with interested and potentially affected communities and stakeholders via the access strategy for the Elizabeth Drive upgrades in 2019. This was followed by a community consultation for the strategic design in 2020. In 2022, Transport reached out to the community via a doorknock and socio-economic survey. In late 2023, Transport undertook community consultation for the REF display. The REF display period occurred over a period of 40 days, which is longer than the standard 28-day period set out in Part 1, Division 2 of the *Environmental Planning and Assessment Act 1979*.

Over this time a range of engagement tools have been implemented by Transport, including three face-to face community information sessions, an online session via MS Teams, doorknocks, in-person meetings with impacted property owners, letters to impacted property owners, distribution of community updates to households in the area, emails to our stakeholder database, print and geo-targeted social media advertisements.

To allow the community to ask questions and assist in understanding information presented in the REF and consultation materials, Transport has provided opportunities to speak directly to the project team via information sessions. A toll-free project hotline (1800 865 303) was also available prior to and during the REF display period for questions and information requests, and is still available to the community. Going forward the community will be able to contact the project team via the toll-free infoline 1800 684 490 or via email at [projects@transport.nsw.gov.au](mailto:projects@transport.nsw.gov.au). A 24-hour construction line would also be made available during construction.

Consultation activities during the REF display period are described further in Section 1.2. A summary of the communication and engagement tools which have been made available to the public and stakeholders for the duration of the REF proposal is provided in Table 1-1.

Community feedback received during the REF display and continued consultation would be considered in preparing the detailed design for the proposal. Transport would also continue to engage directly with businesses throughout the detailed design stage.

Transport acknowledges the feedback regarding the temporary works to the roundabout intersection of Devonshire Road and Elizabeth Drive, however, notes that the temporary works on Elizabeth Drive are being carried out as part of the M12 Motorway project. The M12 Motorway project works are separate to the works being assessed under this REF and Submissions Report.

The socio-economic assessment in Appendix J of the REF has been informed by the social context of the suburbs in which the proposal is located. This included review of ABS Census data and community strategic plan, and consideration of the existing semi-rural context of part of the proposal area, as well as planned growth and development of the region as part of the Western Sydney Aerotropolis.

## 2.4.2 Request for further updates/consultation

Submission number(s)

4, 7, 9, 11, 14, 17, 24

Issue description

Respondents:

- Made specific requests for further, immediate ongoing and direct consultation with Transport regarding various concerns such as impacts to residential properties, businesses, social infrastructure and planned developments
- Requested that Transport and Sydney Water continue to consult and coordinate the location of planned infrastructure.

Response

As described in Section 2.4.1, a range of engagement tools have been implemented by Transport to consult with the community and stakeholders regarding the proposal since 2019.

Transport will continue to engage directly with affected landowners and businesses during the next stage of proposal development, including in regard to potential impacts on properties and future development proposals being considered. Transport has commenced a direct consultation process with several respondents.

During the construction of the proposal, a Communication Plan would be implemented as part of the Construction Environmental Management Plan to provide timely and accurate information. This would include, at a minimum, mechanisms to provide detail and timing of proposed activities to affected residents, including changed traffic and access conditions, and a contact number for complaints and feedback. Consultation would also be carried out with directly affected landowners (i.e. where property acquisition or adjustments are proposed) and impacted businesses throughout the construction period, in accordance with the safeguards and management measures in Section 6.

Community feedback received during the REF display and continued consultation would be considered in preparing the detailed design for the proposal.

Transport has consulted with Sydney Water during concept design development and would continue to do so as the proposal progresses to the detailed design stage. Sydney Water has made a separate submission to the REF which has been responded to in Section 3.4.

## 2.5 Issue 4: Property and land use impacts

### 2.5.1 Property acquisition

Submission number(s)

1, 7, 8, 9, 13, 14, 15, 16, 17, 18, 20, 21, 23, 26, 28, 29

Issue description

Respondents:

- Made several requests to minimise the extent of proposed property acquisition, to minimise impacts to businesses (including United Petroleum, Apex Petroleum, Andreasens Green, E Vecchio and Co Pty Ltd.), residential properties or future/planned development
- Requested that Transport reconsider the need for full acquisition of some properties, including some suggestions for partial acquisition as an alternative
- Commented that the extent of proposed property acquisition is greater than anticipated, appears excessive, and affects productive and well utilised land
- Commented on unequal distribution of road widening across lands on both sides of Elizabeth Drive, and raised concern that it would unfairly impact their property. The respondent requested that the road widening be shared equally between the southern and northern sides of Elizabeth Drive
- Felt that the proposed property acquisition along Duff Road does not equally impact properties on either side of the Duff Road corridor
- Requested adjustments to the road widening alignment or extent of property acquisition to avoid particular properties
- Raised concern that acquisition would impact people's homes, including recently built and long-term residences
- Queried why some lots are proposed to be fully acquired (rather than partially acquired), when the proposal design only appears to partially impact the property
- Were concerned that acquisition may require upgrades to homes and infrastructure, potentially resulting in financial burden to the landowner
- Requested that valuations of property acquisition consider the adverse impacts to the existing residence
- Raised concern that the extent of the proposal would not leave usable land free for development at Lot 8 / DP1266422, noting the property has been impacted by other Transport projects
- Requested clarification as to why land acquisition / the proposed extent of land acquisition is required at particular properties, including properties near the northern extension of Western Road, and on the western side of Duff Road
- Queried whether the proposed acquisition on the western side of Duff Road is part of a broader scheme that relates to the future upgrade and widening of Duff Road
- Raised concern that the proposal impacts upon land used for animal care and dog walking, and environmental water recycling facilities as part of Animal Welfare League NSW, Kemps Creek
- Voiced opposition to any land acquisition at Christadelphian Heritage College Sydney due to existing space constraints the school faces. The respondent noted that land acquisition would hinder the ability to further develop the school to meet future need, and would impact upon a septic tank (which is regularly pumped out), skip bins and adjacent substation which are located within the proposed acquisition area. The respondent noted that relocating these services would have a financial impact on the school
- Identified an error in the property address listed for Lot 10 / DP860338 in Appendix C of the REF.

## Response

The design of the proposal has sought to minimise the need for private property acquisition where possible. Despite this, some partial and full property acquisition as part of the proposal would be unavoidable.

Transport has commenced direct consultation with properties which are proposed to be partially or fully acquired. As discussed in Section 1.2, Personal Relationship Managers Acquisitions (PRMAs) and project team representatives door-knocked about 69 privately owned residential properties and small businesses during the REF display period. The door knock was carried out to inform directly affected landowners about the proposal and encourage these stakeholders to make a submission. The door-knocking was completed over a four-day period. Where a landowner was not present, PRMAs left a Community Update and a "Sorry We Missed You" flyer asking for a call back. In addition to the material left at premises, affected property owner letters were posted out informing the owners of the REF display and asking them to contact Transport to discuss property impacts. Follow up door knocks were not required as majority of the residents responded to the "Sorry We Missed You" flyer, or attended the community consultation sessions. The landowners that could not be reached via the door-knocking were reached during the information sessions (see below for details), via phone, letter sent in the post and/or email.

Final property adjustments and the extent of acquisition as part of the proposal would be confirmed in detailed design and in consultation with landowners, taking into account the outcomes of planned topographical survey, detailed design development, and the feedback received in response to the REF. If applicable, Transport would prepare a property adjustment plan that shows adjustments to the land (such as letterboxes, fences, driveways) that would be implemented by the construction team, in consultation with the landowner.

The design of the road widening is influenced by a number of factors, including road geometry, topography and environmental constraints (such as creeks), and physical constraints (such as Western Sydney International Airport, and piers associated with the future M12 Motorway bridge over Elizabeth Drive). These factors can limit the opportunity to widen equally on either side of the proposal. For example, in areas where the road corridor is adjacent to Western Sydney International Airport, the proposed widening is primarily on the northern side of the road corridor so as to avoid impacts to the future operations of the airport and impacts on Commonwealth land.

Transport has proposed full acquisition of properties where the proposed design would require the removal/demolition of a residence on the property. As a result, some properties are proposed to be fully acquired where the proposed design only encroaches into part of the property. The extent of acquisition as part of the proposal would be confirmed in detailed design and in consultation with landowners.

Transport acknowledges that property acquisition has the potential to bring about stress and financial concern for landowners. All property acquisition would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (the Just Terms Act). Compensation is determined in accordance with Section 55 of the Just Terms Act and includes support during the process from a Personal Manager (for residential owners and small business owners). Further information, guides and support can be found on the Centre for Property Acquisition website <https://www.nsw.gov.au/housing-and-construction/property-acquisition>.

Compensation is determined in accordance with Section 55 of the Just Terms Act. Compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other matters, provisions for market value (also refer to Section 56), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs (i.e. fees associated with the discharge of mortgages and creation of a new mortgage where relocation is required)) and disadvantage resulting from relocation (for residents).

Depending on the individual circumstances of each lot and the potential impacts of the proposal, compensation may take the form of compensation or land/work, as agreed by the parties.

Regarding comments on specific areas:

- *Areas near the northern extension of Western Road:* Some of the area on Lot 1 / DP 716403 (east of the access road which would be upgraded to form a northern leg of Western Road) would be subject to increased flood afflux and, therefore, is proposed to be acquired. The proposed basin design (within Lot 4 / DP 255566) is also indicative only, and would be subject to further review and refinement upon receipt of topographical survey during the detailed design stage. As such, property acquisition extents would be confirmed in detailed design, in consultation with landowners and taking into account topographical survey, which may result in refinements to the design
- *Areas to the west of Duff Road:* The proposed acquisition includes land required for the Elizabeth Drive East Upgrade only. To safely tie into the existing Duff Road corridor, land to the west of Duff Road is required to provide the

appropriate lane merge length. Acquisition of land to the west of Duff Road is also required to accommodate a footpath, batter and drainage swale. The drainage swale is to drain external water runoff away from the proposed road to reduce flooding over the road. A key constraint in this location is the Irfan College on the opposite side of Duff Road. Based on a review of the design and stakeholder feedback, environmental safeguard PL4 has been added to clarify that Transport would review opportunities to reduce the extent of acquisition required at this property, to avoid the need for full acquisition (refer to Section 6). Property acquisition extents would be confirmed in detailed design, in consultation with landowners and taking into account topographical survey, which may result in refinements to the design

- **Lot 8 / DP1266422:** This property is located across two distinct parcels, one fronting Elizabeth Drive and one fronting Mamre Road. The parcel fronting Mamre Road was proposed to be fully acquired given the potential impacts to some buildings due to a proposed drainage channel. Following further design review, Transport confirms that it would be possible to avoid full acquisition of the property, and instead only acquire the parcel fronting Elizabeth Drive. This has been included as a clarification to the proposal in Section 4.1.

Since display of the REF, additional socio-economic assessment of impacts to Animal Welfare League NSW, Kemps Creek (as social infrastructure) has been carried out, with an additional environmental safeguard proposed to review opportunities to minimise the extent of land to be acquired in consultation with Animal Welfare League NSW. This is detailed further in Section 5.2.

Transport will consult with the Christadelphian Heritage College Sydney and review opportunities to avoid impacts to school infrastructure during the next stage of design development. This will include efforts to avoid or reduce the extent of impact to the property's frontage, driveway and parking area and other potentially affected infrastructure such as the septic tank and substation. This has been included as a revised environmental safeguard SE9 in Section 6. Transport acknowledges there is an error in the address listed for Lot 10 / DP860338 in Appendix C of the REF. This has been corrected as a clarification to the REF in Section 4.1.

## 2.5.2 Impacts on subdivision

Submission number(s)

2, 6

Issue description

Respondents:

- Commented partial acquisition of property would impact potential to subdivide their property, and queried what consultation had been carried out in relation to this matter
- Requested that Transport seek approval for subdivision of the property
- Commented that they would seek full acquisition from Transport should they not be able to subdivide their property.

Response

Transport notes that subdivisions of properties are a matter for the relevant local councils. Transport will continue to consult directly with landowners impacted by property acquisition as the proposal progresses.

All property acquisition would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (the Just Terms Act). Compensation is determined in accordance with Section 55 of the Just Terms Act. Further information, guides and support can be found on the Centre for Property Acquisition website <https://www.nsw.gov.au/housing-and-construction/property-acquisition>.

Where Transport proposes partial purchase, but an owner requests total purchase, relevant circumstances will be considered. This may include whether the current owner purchased the property prior to Transport formally indicating that the property is to be directly affected. The decision as to whether Transport will agree to a total purchase is at Transport's sole discretion having regard to all the relevant circumstances. If a mutual agreement cannot be reached on the conditions of total purchase, Transport may proceed with the acquisition of only the land required for roadwork.

### 2.5.3 Impacts on future land use and/or proposed development

Submission number(s)

3, 4, 10, 17, 21

Issue description

Respondents:

- Commented that the proposal limits the ability to proceed with a commercial/business development application at (address withheld) Elizabeth Drive
- Requested that previous comments provided to Transport (separately to the REF display period and submissions process) are considered by Transport
- Raised concern that the proposal extends outside of areas zoned SP2 – Infrastructure into areas which could be used for other development. The respondent requested that Transport remove any infrastructure on 'developable land' outside of areas zoned SP2 – Infrastructure, and avoid creation of irregular land parcels by acquiring 'developable land'
- Suggested that a portion of land adjacent to the proposal retains its zoning as ENT – Enterprise as this aligns with their plans to develop the land
- Commented that property acquisition would impact upon a proposed location for a mobile phone base station
- Commented that the proposal design and associated property acquisition requirements presented in the REF may not have considered existing land use rights
- Raised concern that dwellings on their property would have limited setback from the road corridor, and in some instances would no longer be compliant with minimum setback requirements for the LGA
- Requested that the proposal incorporate a slip lane to provide access to a proposed service station at (address withheld) Elizabeth Drive, Cecil Park.

Response

The proposal is based on a concept design and would be subject to further development in the detailed design stage. As the proposal progresses to the detailed design stage, Transport would consult with proponents/applicants of development adjoining the proposal area, and seek to coordinate designs where feasible and reasonable. Transport has commenced consultation with several of these proponents and would continue to do so as the proposal progresses.

The proposal is permissible outside of areas zoned SP2 – Infrastructure. Clause 2.109 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* permits development on any land (regardless of its land use zoning) for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

The proposed extent of property acquisition is primarily determined by the road corridor and operational requirements rather than land use zoning of the adjoining sites. Changes to land use zoning are not proposed and are not required to carry out the proposal.

In regard to the proposed mobile phone base, Transport would consult with the respondent as more information becomes available on the matter.

Impacts on property setbacks and their compliance with local controls are a matter for the relevant local council and are outside the scope of this proposal.

The proposal would seek to reinstate existing driveway accesses in a like-for-like manner, where it is safe and practicable to do so. Transport have provided preliminary comments to Liverpool City Council regarding the planned development application at (address withheld) Elizabeth Drive, Cecil Park, and will continue to provide comments and consult with the applicant (as required) through the development application referral process.

## 2.6 Issue 5: Traffic and transport

### 2.6.1 Construction impacts – property access

Submission number(s)

11, 28

Issue description

Respondents:

- Sought uninterrupted access to Elizabeth Drive from the Hi-Quality group facility during the construction phase of the proposal
- Commentary around the importance for the rear driveway to Christadelphian Heritage College Sydney as it is used for emergency access, mustering points during a fire, access during key events, drop-off point and loading dock.

Response

Property access to each property would be maintained as far as practicable during the construction period; however, temporary disruptions to private property access would be required to facilitate some construction activities. Planned disruptions to property access would be subject to engagement with the affected property owner, with alternative access arrangements provided where possible.

A Traffic Management Plan would be prepared prior to construction and implemented to manage impacts, in accordance with environmental safeguard TT1 (refer to Section 6). It would cover the requirements for maintaining adjacent access, including emergency access, and traffic flow during peak periods. In accordance with environmental safeguard TT2 (refer to Section 6), disruptions to property access and traffic would be notified to property owners at least five days prior in accordance with the relevant community consultation processes outlined in the Traffic Management Plan. Where access is not feasible, temporary alternative access arrangements would be provided following consultation with affected landowners and the relevant local council.

### 2.6.2 Parking impacts

Submission number(s)

17, 24

Issue description

Respondents:

- Pointed out an error in the number of parking spaces impacted by proposed acquisition at Animal Welfare League NSW, Kemps Creek
- Raised concern regarding that construction of the proposal would impact parking areas used by the Kemps Creek United Soccer Club, impacting members of the club and other users of Bill Anderson Reserve.

Response

Section 6.2.3 of the REF provided an indicative estimate of the number of parking spaces estimated to be impacted by the proposal at Animal Welfare League NSW, Kemps Creek ('13 marked parking spaces and one accessible parking space'), noting that the exact number would be subject to detailed design. Feedback received from Animal Welfare League NSW indicates that 15 hard stand car spaces and one accessible space would be impacted. This has been updated as a minor clarification to the REF in Section 4.2. Notwithstanding, reinstatement of one row of angled parking after construction (with provision for accessible parking) would be carried out by Transport, prior to operation of the proposal.

Since display of the REF, additional socio-economic assessment of impacts to Animal Welfare League NSW, Kemps Creek (as social infrastructure) has been carried out, with an additional environmental safeguard proposed to review opportunities to minimise these impacts in consultation with Animal Welfare League NSW. This is detailed further in Section 5.2.

Transport acknowledges that the construction and operation of the proposal has the potential to cause disruption to the range of users of Bill Anderson Reserve, including the Kemps Creek United Soccer Club. Transport is committed to reducing the proposal's impact on Bill Anderson Reserve and the Kemps Creek United Soccer Club by relocating construction ancillary facility 2 (identified in Figure 3-21 of the REF) and investigating opportunities to further reduce the amount of land that is proposed to be permanently acquired by the proposal. These commitments have been included as additional environmental safeguard GEN5 and GEN6 for the proposal.

Transport is committed to carrying out further consultation with the Kemps Creek United Soccer Club during detailed design development to manage potential impacts to the club and its range of users. Specific measures proposed to manage potential impacts to Bill Anderson Reserve are identified in Section 6 and include the following:

- Environmental safeguard SE6, which includes a commitment to review and minimise the extent of permanent impact on public open space areas and their associated parking facilities during detailed design development, where feasible and reasonable. This review will be carried out in consultation with the landowner/s (including Liverpool City Council and the NSW Government), and other relevant stakeholders (such as the Kemps Creek United Soccer Club) to determine a suitable layout/configuration for these facilities. All efforts will be made during design development to provide comparable facilities to their current facilities, including car parking. Parks, open space and sport and recreation facilities temporarily impacted by construction will also be reinstated and rehabilitated, in consultation with relevant stakeholders.
- Environmental safeguard GEN5 has been added committing to a review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road with the aim to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal)
- Environmental safeguard GEN6, has been added committing to the relocation of the proposed construction ancillary facility 2 (identified in Figure 3-21 of the REF) to reduce the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club.

### 2.6.3 Operational impacts

Submission number(s)

7, 12, 19, 22, 28

Issue description

Respondents:

- Raised concern regarding traffic related impacts of vehicles accessing sites along Clifton Avenue via proposed turning arrangements. In particular, the respondent commented that given the heavy vehicle traffic demands along Clifton Avenue, it is not considered adequate to rely on turnaround arrangements which could require an up to 1.2 kilometre round trip
- Raised concern about the proposed access to Kemps Creek shops (via a one-way eastbound access road). This would require travelling westbound to the nearest intersection (at Western Road) to turn around to head eastbound, increasing travel times for those travelling to Kemps Creek Shops
- Commented that no traffic arrangement to maintain right-turn access is proposed for Lawson Road (which would be left-in/left-out only) and raised concern about travel time implications of this. Currently there is an existing round-about at the intersection of airport access road and Elizabeth Drive, which permits a U-turn movements for vehicles to depart Lawson Road to the east. The respondent noted that the airport access road roundabout is scheduled to be removed as part of the M12 Motorway project
- Requests for a more comprehensive assessment of the long-term impact near Christadelphian Heritage College Sydney and neighbouring substation

- The respondent provided information on the nature and uses of the Apex Petroleum business at Kemps Creek including main vehicular access, features on site, estimated vehicle movements and customer movements.

#### Response

Intersections to be signalised have been selected to provide safe and efficient access, and taking into account the distance to other intersections. Clifton Avenue is proposed to become left in / left out as part of the proposal, primarily due to its proximity to the Devonshire Road intersection. Transport would ensure safe property access is maintained for properties accessed via Clifton Avenue. An assessment of travel time impacts associated with the proposed U-turn facilities and proposed turning arrangements is provided in Appendix F of the REF. The travel time assessment carried out provides high level information on the potential impacts of the proposal on the travel time needed for local access.

The results indicate that in general, with the central median restricting access via a right hand turn to properties from the opposite side of Elizabeth Drive, the proposal would increase travel time needed to access those properties in Year 2030 and Year 2040 conditions. A maximum increase of about 104 seconds is estimated for property access between Western Road and Martin Road (Section 1) when travelling in the westbound direction in Year 2040 scenarios. This would present a minor increase in travel time for vehicles travelling westbound to access Kemps Creek shops.

Transport acknowledges that, while the introduction of a central median on Elizabeth Drive would result in changes to property access, the central median is a key safety feature of the proposal that is required to reduce risk of head on crashes in a high-speed road environment. Several existing and proposed U-turn facilities would be available along the length of the proposal to enable vehicles to change their direction of traffic. On this basis, Transport considers the impacts associated with changes to travel time during operation of the proposal to be acceptable.

Transport will carry out further design review at the next stage of design development of the service road design at Kemps Creek shops, taking into account community and stakeholder feedback. This is discussed further in Section 4.2.

Transport is continuing to plan the ultimate road network for the Western Sydney Airport Precinct, working closely with other NSW Government agencies and local councils.

The Heritage College Sydney has access points on Devonshire Road (which intersects with Elizabeth Drive) and Cross Street. Intersection performance modelling carried out for the proposal indicates that the intersection of Elizabeth Drive with Devonshire Road / Salisbury Avenue would operate at Level of Service (LoS) C in 2030 in the AM and PM peak periods (indicating satisfactory performance) with the proposal. In 2040, intersection performance with the proposal is expected to reduce to LoS D (near capacity) in the AM peak, and LoS E (at capacity) to the PM peak. However, without the proposal, this intersection would operate at LoS F (extra capacity required) in AM and PM peak periods in both 2030 and 2040.

LoS D or better is generally considered to be an acceptable LoS. AM and PM peak periods (defined as 7am to 9am and 4pm to 6pm respectively) are selected to provide an indication of when traffic demand would be at its peak. Transport acknowledges that vehicles may access the school outside of these peak periods, particularly the PM peak period.

It is anticipated that real time signal coordination and Intelligent Transport Systems (ITS) would further reduce the congestion on the road network when those systems are fully deployed. The proposal also provides a wider median to allow for a third lane in both directions to increase the capacity in the future if needed.

Transport is committed to consult further with Christadelphian Heritage College Sydney during the next phase of design development and will investigate alternatives to minimise impact to the school and the adjacent substation.

Further detail on operational transport impacts is provided in Section 6.2 and Appendix F of the REF.

Transport acknowledges the information provided by the respondent. At the next stage of design development, Transport will investigate site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. This has been reflected in an additional environmental safeguard for the proposal, and is discussed further in Section 4.2.

## 2.6.4 Road safety

Submission number(s)

7, 17

#### Issue description

##### Respondents:

- Expressed concern with potential safety issues associated with both trucks and light vehicles using the proposed service road to access the Apex Petroleum, Kemps Creek service station
- Were concerned with a walking/cycling path in front of the Animal Welfare League NSW property, due to increased potential for conflicts between active transport users and vehicles turning into properties
- Felt road batters may impact on motorist visibility.

##### Response

Safety is a key driver of the proposal. The current design complies with Transport's approach on roads and has been checked through road safety audits at the concept design stage. The proposal has been designed to NSW and Australian engineering, road safety, environmental and transport planning standards developed by Transport, Austroads and Standards Australia. Further road safety audit would be carried out at the next stage of design which would review road safety and provide measures to manage potential safety risks – including those associated with heavy vehicles, driver visibility, pedestrian and cyclist safety, and any other potential issues.

The shared walking and cycling path is required to provide safer access for pedestrians and cyclists, given that there is no formal footpath along Elizabeth Drive in this location, and there is a proposed increase in speed limit on the road from 60 to 80 kilometres per hour. The pathway would be clearly delineated over driveways, and include signage as required, to manage potential safety risk. Detailed design of the path would be carried out with reference to relevant guidelines including Transport's Cycleway Design toolbox which includes safety related considerations.

Transport acknowledges the information provided by the respondent. At the next stage of design development, Transport will investigate site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. This has been reflected in an additional environmental safeguard for the proposal, and is discussed further in Section 4.2.

## 2.7 Issue 6: Noise and vibration

### 2.7.1 Construction impacts

#### Submission number(s)

27

#### Issue description

Respondents requested that Transport consider the noise impact of the Elizabeth Drive widening upon residents of Elizabeth Drive.

##### Response

A noise and vibration assessment was carried for the proposal and is provided in Appendix E of the REF and summarised in Section 6.1 of the REF. During construction, a variety of proposed activities and equipment used would have the potential to adversely affect local noise and vibration levels. The main findings of the noise and vibration impact assessment for the construction phase are outlined below:

- Construction of the proposal has the potential to affect residential receivers by producing noise levels above applicable noise management levels. Of the range of representative construction scenarios assessed for the proposal, the vegetation clearing scenario is predicted to result in the greatest number of exceedances of the daytime construction noise management levels. During this scenario, about 145 receivers during work in standard construction hours may experience noise levels above the noise management levels. Noise levels would be 'moderately intrusive' (11-20 dB(A) above the noise management levels) at up to 28 receivers and 'highly intrusive' at up to 43 receivers (>20 dB(A) above

the noise management levels) across the construction area during standard construction hours. The magnitude of these impacts is consistent with other major road projects

- The 'site establishment and enabling work' scenario is considered to represent a reasonable worst-case assessment of the types of activities which are likely to take place outside of standard construction work hours. About 422 residential receivers are predicted to experience exceedances of construction noise management levels during work outside of standard construction hours for this scenario. Of these receivers, 289 receivers would experience exceedances ranging from greater than 10 dB ('clearly audible') to greater than 25 dB ('highly intrusive'). These receivers would require the implementation of night-time noise mitigation measures. All 422 receivers would receive notification of the night-time work
- Noise management levels are predicted to exceed the sleep disturbance screening level at about 200 residential receivers during the site establishment and enabling work scenario. As the work is expected to be staged, the number of affected residential receivers at any one time would be limited
- Where minimum working distances are complied with, no adverse impacts from vibration intensive work are likely in terms of human response or cosmetic damage. Should work be required within these minimum working distances, safeguards and management measures to control excessive vibration and to notify potential receivers would be implemented.

In accordance with the environmental safeguards documented in the REF (refer to Section 6), effective noise mitigation and management measures would be developed by the construction contractor to minimise the potential noise impacts from the work. Specific noise measures would be detailed in the contractor's Construction Noise and Vibration Management Plan (CNVMP), prepared as part of the Construction Environmental Management Plan (CEMP). The CNVMP would consider the following measures:

- Effective community consultation
- Training of construction site workers
- Use of noise barriers
- Noise monitoring
- Appropriate selection and maintenance of equipment
- Scheduling of work for less sensitive time periods
- Situating plant in less noise sensitive locations
- Construction traffic management
- Respite periods
- Minimum working distances for vibration intensive construction work.

### 2.7.2 Operational impacts

Submission number(s)

21, 27

Issue description

Respondents:

- Raised concern about the noise and vibration impacts, including the potential for sleep disturbance impact, considering existing background road traffic noise
- Requested that Transport consider impact of the widened Elizabeth Drive road corridor upon residents of Elizabeth Drive.

#### Response

A noise and vibration assessment was carried for the proposal and is provided in Appendix E of the REF and summarised in Section 6.1 of the REF. The assessment found that during operation, road traffic noise levels are predicted to exceed the Road Noise Policy (DCCEEW, 2011)  $L_{Aeq}$  noise criteria at a total of 245 residential receivers. Generally, these exceedances would occur at receivers directly adjacent to the Elizabeth Drive road corridor. A total of 59 residential receivers and three non-residential receivers, have been identified as experiencing road traffic noise at a level requiring noise mitigation measures (at-property acoustic treatments).

Reasonable and feasible noise mitigation would be considered further and implemented for both residential and non-residential receivers in accordance with the Road Noise Policy and Transport procedures.

Transport would review a range of measures to manage operational road traffic noise, such as road design and traffic management measures, and, and the use of quieter pavements. If these measures cannot be designed to meet the noise criteria, the use of 'in corridor' mitigation measures would be considered, which are generally noise barriers and mounds. Finally, if the applicable noise criteria cannot be met by using a combination of all these methods, at-receiver mitigation measures would be considered such as architectural treatments and property boundary walls.

To confirm that the noise levels targets are achieved once the proposal is operational, a post-construction noise monitoring program will be carried out in accordance with environmental safeguard NV13 (refer to Section 6).

### 2.7.3 Cumulative noise and vibration impacts

#### Submission number(s)

6

#### Issue description

A respondent queried the cumulative noise impacts from the operation of the M12 Motorway and the proposal.

#### Response

The operational road noise impact assessment for the proposal has included modelled traffic volumes from several approved major projects within the vicinity of the proposal – including the M12 Motorway. The operational noise outcomes documented in Section 6.1 and Appendix E of the REF, therefore, accounts for the operation of the M12 Motorway.

Cumulative noise impacts of the proposal and other projects are discussed further in Appendix E of the REF and Section 6.16 of the REF.

### 2.7.4 Impacts to animals

#### Submission number(s)

17

#### Issue description

The respondent:

- Raised concern regarding potential noise impacts during construction and operation on the health and wellbeing of animals at the Animal Welfare League NSW animal shelter at Kemps Creek, in particular cats which are sensitive to noise disturbance (as the road corridor would be close to a new animal adoption centre where cats are housed)
- Requested that additional assessment is carried out to identify noise disturbances on animals.

## Response

It is noted that there is relatively little literature available specifically about the effects of road traffic and construction noise on domestic pets. Therefore, information regarding other animals and transportation types has also been considered in this response.

Research shows that animal boarding facilities are inherently noisy environments, with most noise in dog kennels produced by dogs. The bark of a single dog can reach 100 A-weighted decibels (dB(A)), and measured noise levels range between 85 and 122 dB(A) in kennels. Generally, when dogs were not 'vocalising' the noise levels were around 50-60 dB(A). Areas housing large dogs are typically the loudest (Coppola, Enns, & Grandin, 1996; Sales, Hubrecht, Peyvandi, Milligan, & Shield, 1997). Barking by one dog may become a self-reinforcing behaviour and may also stimulate other individuals to vocalise further. Additionally, dogs housed in kennels may bark as a territorial behaviour or from excitement generated by people passing by pens (Sales, Hubrecht, Peyvandi, Milligan, & Shield, 1997).

Other sources of noise within kennels are from husbandry procedures and equipment, for example high pressure water hoses, fridges and ventilation systems. Routine husbandry may also have some effect on barking. For example, dogs that anticipate activities such as the daily arrival of staff may begin to bark around the same time each day in an attempt to solicit food or attention from caregivers (Garvey M, Stella, & Croney, 2016).

One study shows that auditory stress for kennelled dogs is a serious welfare concern. An unpleasantly noisy environment can result in altered immune function, disturbed sleep-wake cycles, and possibly, hearing damage or loss to dogs (Garvey et al. 2016). It can result in reduced reproductive and cardiovascular function, disturbed sleep-wake cycles, or a limited ability to communicate with other dogs (Wells, 2009). Another study found that excessive noise contributes to adverse behavioural and physiological responses (Spreng, 2000).

Studies have found that cats exposed to noise levels of 115 dB(A) experienced hearing loss indicated by threshold shift (Manci et al, 1988). The Slovak Research Institute for Animal Production noted several studies which defined non-noise affected background noise levels of between 55-65 dB(A), similar to the dog kennel research noted above (Brouček, 2014). Another study found that high levels of background noise elicit physiological stress responses in cats (Furgala, Moody, Flint, Gowland, & Niel, 2022). Other research concluded that shelter cats vary greatly in their responses and suggested that sound in shelter environments can substantially affect their behaviour. Lowering sound levels in shelters may help improve cat welfare (Eagan, Gordon, & Fraser, 2021). However, the level of noise alone cannot be solely attributed to the cause of stress in cats in shelters as a previous study found no significant relationship between noise level in the shelter and stress level in cats. They found that cats with high dog-exposure levels had significantly higher stress levels than those with low exposure (Sales, Hubrecht, Peyvandi, Milligan, & Shield, 1997).

The noise and vibration assessment included as Appendix E of the REF presents future road traffic noise levels and noise contours for the daytime and night-time periods for the extent of the proposal.

Daytime noise levels are predicted to be around  $L_{Aeq,15hr}$  68 dB(A) at the southern façade of nearest building to the road corridor (about 40 metres from the road corridor) and around 60 dB(A) at the southern façade of the farthest building on the site. Night-time noise levels are predicted to be around 3 dB(A) lower. Once the proposal is operational, road traffic noise levels at the existing property are predicted to increase by less than 1 dB(A) as a result of the proposal. This change would be imperceptible to humans, dogs and cats.

The research suggests that adverse impacts to dogs and cats as a result of road traffic noise at the animal shelter are unlikely given the noise levels. Given that road traffic noise levels would increase by such a small margin, no adverse impacts would be experienced by the animals as a result of the operation of the proposal.

Appendix E of the REF also presents predicted construction noise level contours for a number of construction scenarios for the extent of the proposed construction footprint. Daytime noise levels are predicted to typically be above  $L_{Aeq,15 minute}$  75 dB(A) within 100 metres from the road corridor, depending on the road elevation and surrounding terrain. Based on the construction noise contours, buildings/structures within the site are predicted to experience noise levels above 75 dB(A).

As noted above it is likely that animals within the shelter may already experience noise levels above this level. However, construction noise would be a 'new' noise and may, at times, reach levels which could adversely affect the animals, particularly when animals are outside, close to the road.

It is important to consider that the construction noise levels presented in the Appendix E of the REF are representative of the worst case 15-minute period of construction activity, while construction equipment is at the nearest location to each sensitive receiver location. The assessed scenario does not represent the noise impact at noise sensitive receivers for an extended

period on any given day. In reality, separation distances would vary between plant and sensitive receivers. For linear work (work that moves along the road alignment, rather than work located at a construction ancillary facility), noise exposure at receivers would reduce due to increases in distance as the work progresses along the alignment. There would frequently be periods when construction noise levels are much lower than the worst-case levels predicted as well as times when no equipment is in use.

As such, the assessed construction noise levels do not represent the likely noise impact at noise sensitive such as the Animal Welfare League for an extended period, as construction activities will progress along the road upgrade further from the animal shelter. Construction noise impacts would be temporary in nature and are not likely to cause ongoing adverse impacts to the animals.

In accordance with the environmental safeguards documented in the REF (refer to Section 6), effective noise mitigation and management measures would be developed by the construction contractor to minimise the potential noise impacts from the work. Specific noise measures would be detailed in the contractor's CNVMP, prepared as part of the CEMP. The CNVMP would consider the following mitigation and management measures:

- Effective community consultation
- Training of construction site workers
- Use of noise barriers
- Noise monitoring
- Appropriate selection and maintenance of equipment
- Scheduling of work for less sensitive time periods
- Situating plant in less noise sensitive locations
- Construction traffic management
- Respite periods
- Minimum working distances for vibration intensive construction work.

Specifically for the animal shelter the following recommendations, where feasible and reasonable, are made:

- Notification of the work, particularly night-time work or 'noisy work', to allow steps to be taken by Animal Welfare League NSW to minimise impact of noise on the animals. These steps, where considered reasonable and feasible, would be determined in consultation with Animal Welfare League NSW
- Use of temporary noise barriers to reduce noise impact on building facades and outdoor areas
- Consultation with Animal Welfare League NSW personnel, including notification and complaint handling procedures.

These recommendations have been included as an additional environmental safeguard for the proposal (NV14) in Section 6.

In conclusion, animal shelters can be innately noisy; however, it is acknowledged that construction work associated with the proposal would introduce 'new' noise sources to the animals. Noise mitigation and management measures would be identified within the CNVMP and this document outlines a number of measures which could be carried out to minimise the impact of construction noise.

## 2.8 Issue 7: Biodiversity

### 2.8.1 Vegetation removal

Submission number(s)

15

Issue description

Respondent commented that the proposal is harming the environment by impacting trees on the property.

## Response

While the proposal design has sought to minimise vegetation removal where practicable, the removal of several trees along Elizabeth Drive is unavoidable for construction of the proposal. The adherence to the environmental safeguards outlined in the REF and Section 6 would manage potential biodiversity impacts and ensure that biological diversity and ecological integrity of receiving environments would be retained. Biodiversity impacts would be offset in accordance with Transport's No Net Loss Guidelines (Transport, 2022) and any other relevant offsetting requirements for the proposal.

Landscaping would be carried out along the length of the proposal within the central median and the nature strip separating traffic lanes from the shared walking and cycling paths. Landscaping would be subject to detailed design and would aim to maximise the use of locally endemic native species.

## 2.9 Issue 8: Landscape character and visual

### 2.9.1 Operational impacts

#### Submission number(s)

27

#### Issue description

The respondent requested:

- Consideration of the visual impact of the proposal, including road widening, planting, barriers, and signage
- Provision of a safe and visually pleasing Business Precinct in Kemps Creek.

## Response

A landscape and visual impact assessment has been carried out as part of the REF. The assessment indicated that Elizabeth Drive would change from a rural road to an upgraded transport corridor with formalised kerb and gutters, and a shared path for walking and cycling. These changes are considered to be appropriate given the ongoing development of the surrounding landscape in response to the construction of the Western Sydney International Airport and Western Sydney Airport Precinct. Further detail on the outcomes of the assessment is provided in Section 6.8 and Appendix K of the REF.

Landscaping would be carried out along the length of the proposal within the central median and the nature strip separating traffic lanes from the shared walking and cycling paths. Landscaping would be subject to detailed design and would aim to maximise the use of locally endemic native species and minimise risk of bird strike. Landscaping is expected to contribute to an improved visual environment along Elizabeth Drive (including in areas adjoining businesses in Kemps Creek).

Landscaping within the business precinct itself would be out of scope of the proposal.

## 2.10 Issue 9: Socio-economic

### 2.10.1 Business impacts

#### Submission number(s)

3, 7, 9, 11, 12, 15, 17, 20

## Issue description

### Respondents:

- Commented on the potential loss of passing trade due to the proposal. This included comments that planned businesses along Elizabeth Drive will be reliant on having a frontage to Elizabeth Drive (to enable exposure of their businesses), and comments that service stations benefit from traffic in both directions along Elizabeth Drive
- Requested that the design of the proposal take into consideration impacts to day-to-day business operations
- Commented that the proposal design and extent of acquisition would impact upon areas of properties and/or infrastructure on properties which are required to operate businesses
- Addressed the potential financial impacts of the proposal on businesses, both in relation to changes to access and direct impacts to business infrastructure/operational areas requiring reconfiguration of the business to remain in operation. Some respondents noted that this could lead to a loss of local jobs
- Were concerned the proposed one-way service road across the frontage of Kemps Creek shops, and the introduction of a central median, would result in a substantial reduction in customers
- Commented that the design of the proposal would remove dedicated truck access from Salisbury Avenue to Apex Petroleum, and necessitate the relocation / removal of service station infrastructure
- Felt that changed access to Clifton Avenue would impact upon access to businesses in this area, noting that these businesses generate heavy vehicle traffic which would likely increase in future
- Expressed concern the proposal would limit public access to important services in a rural area (such as service stations for heavy vehicles, animal health care services, supply of services for construction of Transport projects)
- Noted that an approved fruit shop at Kemps Creek was not included in the list of directly impacted businesses in the socio-economic assessment in the REF.

### Response

Transport acknowledges that several businesses along Elizabeth Drive are reliant on passing trade, and may be affected by changes to property access during construction and operation of the proposal. The proposed central median and one way service road at Kemps Creek, while required to improve road safety, has potential to impact the number of customers visiting certain businesses as they would be required to change their direction of travel owing to the central median. U- turning facilities would be in place to enable site access for vehicles travelling in the opposite direction.

The socio-economic assessment in Appendix J of the REF assessed the types of impacts businesses would be likely to experience due to the proposal. To manage this potential impact, in accordance with environmental safeguard SE12 (refer to Section 6), specific consultation will be carried out with businesses potentially impacted during construction. Based on this consultation, specific feasible and reasonable measures to maintain business access, signage and parking, and address other potential impacts as they arise through the consultation process, will be identified and implemented.

Transport acknowledges that the proposal design and associated property acquisition required for the proposal has the potential to result in disruptions to business operations, which could result in potential costs for the business for example, to reconfigure the business/site layout within the site (where land is partially acquired). Consultation with all business owners impacted by property acquisition would occur throughout detailed design and construction planning, to understand how the business uses the land and to identify opportunities to minimise impacts to viable aspects of the businesses (refer to environmental safeguard SE12 in Section 6).

Where properties are proposed to be acquired, compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other things, provisions for market value (as described in Section 56 of the Just Terms Act), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs (i.e. fees associated with the discharge of mortgages and creation of a new mortgage where relocation is required)) and disadvantage resulting from relocation.

Transport will carry out further design review at the next stage of design development to investigate site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. This has been reflected in an additional environmental safeguard for the proposal, and is discussed further in Section 4.2.

Issues relating to the proposed service road design at Kemps Creek are also discussed further in Section 2.2.10.

The proposal would provide U-turn facilities and other proposed turning arrangements, and affected property accesses would be reinstated (where safe to do so). As such the proposal is not expected to substantially limit public access to businesses and services.

The list of directly impacted businesses in Table 6-48 of the REF was primarily based on desktop review, and subject to further landowner consultation. An additional business has been added to this list as clarification to the proposal in Section 4.3. Despite the omission of the business from Table 6-48, the assessment of partial property acquisition of businesses in the REF accounts for the property.

It is anticipated that construction of the proposal may impact upon access and amenity for businesses along Elizabeth Drive, including Fresh Pick Farm Fresh. Changes to traffic arrangements during construction have the potential to result in minor delays to customers or deliveries accessing the business. Construction noise, air quality and visual impacts may also temporarily impact amenity at the property. Once the proposal is constructed, the increase in capacity along Elizabeth Drive may support improved access to the business. U-turn facilities would be provided to allow vehicles to change their direction of travel along Elizabeth Drive, to manage the changed property access impacts of the central median. Further information on the likely impacts to businesses from the proposal is included in Appendix J (Socio-economic Impact Assessment) of the REF.

## 2.10.2 Construction impacts

Submission number(s)

18

Issue description

The respondent commented that property acquisition would impact upon a mulberry tree which is of high personal value to the property owners.

Response

Property adjustments required for the proposal would be confirmed in consultation with landowners during the detailed design stage. Detailed design and construction planning would review opportunities to avoid removal of this tree, where possible, noting its importance to the landowner.

## 2.10.3 Operational impacts

Submission number(s)

15, 18, 21

Issue description

Respondents:

- Felt the proposal would impact upon homes on the property of long-term residents, adversely impacting upon them
- Raised concern over potential stress from road noise associated with the proposal, noting that existing road noise levels are noticeable
- Expressed concern regarding health and safety impacts from noise and air pollution given the proximity of the operational road corridor to residential properties.

Response

Transport understands that there are many issues which may be of concern to residents regarding the proposal and that these can impact on the emotional health of those affected. Communication and consultation would be carried out with the community throughout detailed design development and construction planning to ensure that landowners and business owners are aware of the proposal and that their issues have been considered.

Potential road noise impacts during operation of the proposal have been assessed in the REF (refer to Section 6.1 and Appendix E of the REF). The assessment found that during operation, road traffic noise levels are predicted to exceed the Road Noise Policy (DCCEEW, 2011)  $L_{Aeq}$  noise criteria at a total of 245 residential receivers. Generally, these exceedances would occur at receivers directly adjacent to the Elizabeth Drive corridor. A total of 59 residential receivers and three non-residential receivers, have been identified as experiencing road traffic noise at a level requiring noise mitigation measures (at-property acoustic treatments). Reasonable and feasible noise mitigation would be considered further and implemented for both residential and non-residential receivers in accordance with the Road Noise Policy and Transport procedures.

Potential air quality impacts during operation of the proposal have also been assessed in the REF (refer to Section 6.10 and Appendix N of the REF). The assessment found that future increases in traffic along Elizabeth Drive would give rise to a small increase in pollutant concentrations at sensitive receptors (despite an increase in vehicle speed and efficiency) as a result of traffic numbers queuing on Elizabeth Drive and the associated vehicle emissions close to these receptor locations. While there decrease in air quality conditions as a result of a general increase in vehicle numbers for the proposal, compared to the existing environment, is minor and is unlikely to affect residents and businesses along the construction footprint.

The modelled air quality results do not include the potentially beneficial changes in road traffic volumes on the surrounding road network which may be influenced by the proposal. The proposal would facilitate infrastructure that would allow for the smoother movement of traffic around the road network. With a decrease in heavy breaking and stand still traffic, it is likely that emissions may be reduced. Additionally, emissions may be reduced due to the anticipated changes in vehicle fleets, with expected increased uptake in vehicles with no emissions (electric vehicles), and reduced number of aging vehicles with lower emission standards.

#### 2.10.4 Cumulative socio-economic impacts

Submission number(s)

6

Issue description

The respondent:

- Queried whether cumulative noise impacts from the M12 Motorway project on the physical health of nearby residents from fumes were considered
- Queried what the mental health implications of road traffic noise would be for nearby residents, from the combined operation of the proposal and the M12 Motorway.

Response

The socio-economic assessment carried out for the REF (refer to Appendix J of the REF) included consideration of the impacts of the proposal on the wellbeing of the community. Cumulative impacts are also assessed in the socio-economic assessment and Section 6.16 of the REF.

Construction of the M12 Motorway and the proposal is not expected to occur concurrently. However, the consecutive construction of the projects as well as other developments in the surrounding area may give rise to construction fatigue. Construction fatigue relates to receivers that experience construction impacts from a variety of projects over an extended period of time with few or no breaks between construction periods.

In regard to the operation of the proposal, the operational noise, traffic and air quality assessments carried out for the proposal have included modelled traffic volumes from several approved major projects within the vicinity of the proposal – including the M12 Motorway. The outcomes documented from these assessments in the REF, therefore, accounts for the operation of the M12 Motorway.

Environmental safeguards would be implemented to manage the potential for cumulative impacts of the proposal and other projects. This would include coordination and consultation to manage overlapping construction activities, coordinate construction programs, and develop management strategies to address potential conflicts.

Consultation would be carried out with nearby/adjoining project teams and key stakeholders during the detailed design and construction phase, to review potential cumulative impacts and integrate designs and construction methodologies (including traffic impacts and noise management) to minimise cumulative impacts.

## 2.10.5 Impacts to social infrastructure

Submission number(s)

17, 24, 28

Issue description

Respondents:

- Expressed concern regarding the impact of the proposal on Animal Welfare League NSW, Kemps Creek, noting its proximity to the widened road corridor. The respondent commented that the proposal may impact upon the operation of Animal Welfare League NSW and pose risks to animals at the facility
- Commented that there has been no impact assessment of the social infrastructure provided by Animal Welfare League NSW at Kemps Creek
- Requested that Transport quantify the economic impact of the proposal on Animal Welfare League NSW
- Expressed concern about the impact of the proposal on the Kemps Creek United Soccer Club at Bill Anderson Reserve during construction of the proposal. Specific concern was expressed regarding direct impact to/use of the main field and a portion of the car park which would impact the existing club, visiting clubs, school groups and other stakeholders that rely on the facility for sporting events
- Expressed concern about the longer term, permanent impacts of the proposal on the Kemps Creek United Soccer Club and Bill Anderson Reserve, noting that several infrastructure upgrades have been provided at the reserve over recent years and regular maintenance occurs at the facility, and the importance of the facility to community health and wellbeing
- Queried where the participants/users of Bill Anderson Reserve would be relocated, and what other measures Transport is proposing for the Kemps Creek United Soccer Club to accommodate its members, visitors and competitions both in the construction phase and post construction
- Requested consideration of opportunities to reduce/minimise the impact of the proposal to Bill Anderson Reserve and the Kemps Creek United Soccer Club
- Raised concern about impacts of the proposal on the Christadelphian Heritage College Sydney, Kemps Creek, commenting that the proposed acquisition of land at the rear of the school could impact its ability to continue operations and have implications for the entire eastern side of the school.

Response

*Animal Welfare League NSW, Kemps Creek*

The additional socio-economic assessment identified that the construction and operation of the proposal would require partial acquisition of about 2.47 hectares of land from the Animal Welfare League NSW property at Kemps Creek (Lot 1 / DP 255566) to accommodate the proposed road infrastructure, including the shared walking and cycling path, as well as drainage elements and a basin at the western end of the property (within the operational footprint of the proposal). Transport acknowledges that the proposal would change how the site is accessed (due to the introduction of a central median), and has the potential to impact upon parking spaces, water recycling facilities, landscaping and vegetation, and outdoor areas (which Animal Welfare League NSW has indicated is used for dog walking).

The socio-economic assessment in Appendix J and Section 6.7 of the REF incorrectly identified Animal Welfare League NSW as a business. Transport acknowledges that Animal Welfare League NSW is also a provider of social infrastructure in the community.

Further socio-economic assessment has been carried out as part of this submissions report with consideration of the Animal Welfare League as social infrastructure. This is included in Section 5.2. The assessment found that the proposal has the

potential to result in an overall high-moderate impact to Animal Welfare League NSW during both construction and operation. This is primarily associated with the potential for amenity impacts (such as construction noise and vibration) to cause temporary disruption to animals, as well as longer term reductions in the availability of open space on the site.

Further detail on the likely noise impacts to animals during both construction and operation is also included in Section 2.7.4. Review of relevant literature on the likely impacts of the proposal found that construction noise may present a 'new' noise source which may temporarily disrupt animals (dogs and cats), noting that these animals likely already experience similar noise levels from the current operation of Elizabeth Drive. Once the proposal is operational, road traffic noise levels at the existing property are predicted to increase by less than 1 dB(A) as a result of the proposal. This change would be imperceptible to humans, dogs and cats.

Transport is committed to further consultation with Animal Welfare League NSW during detailed design development, to identify opportunities to reduce the impact of the proposal on its facilities. Additional environmental safeguards relating to Animal Welfare League NSW have been proposed in Section 6, including the following:

- Environmental safeguard NV14, which outlines measures that would be implemented to manage potential construction noise impacts to animals at Animal Welfare League NSW
- Environmental safeguard SE16, which includes a commitment to consult further with Animal Welfare League NSW and to review opportunities to minimise impacts to its facilities, acknowledging its role as social infrastructure.

It is not within the scope of the proposal or the socio-economic impact assessment to quantify economic impacts of the proposal on social infrastructure or businesses. Economic impacts can be influenced by a broad range of factors beyond the proposal, such as the broader ongoing growth of the region, business location, and a person's ability to operate a business. Notwithstanding, compensation for partial acquisition of the property would be determined in accordance with the Just Terms Act. Compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other things, provisions for market value (also refer to Section 56), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs (i.e. fees associated with the discharge of mortgages and creation of a new mortgage where relocation is required)) and disadvantage resulting from relocation.

#### *Bill Anderson Reserve and the Kemps Creek United Soccer Club*

Transport acknowledges that the construction and operation of the proposal has the potential to cause disruption to the range of users of Bill Anderson Reserve, including the Kemps Creek United Soccer Club. The socio-economic assessment in Appendix J and Section 6.7 of the REF identified the likely impacts to Bill Anderson Reserve, noting that these would be of high-moderate significance during construction, and moderate significance during operation.

Transport is committed to reducing the proposal's impact on the Kemps Creek United Soccer Club by relocating construction ancillary facility 2 (identified in Figure 3-21 of the REF) and investigating opportunities to further reduce the amount of land that is proposed to be permanently acquired by the proposal. These commitments have been included as additional environmental safeguards for the proposal.

Transport is committed to carrying out further consultation with the Kemps Creek United Soccer Club during detailed design development to manage potential impacts to the club and its range of users. Specific measures proposed to manage potential impacts to Bill Anderson Reserve are identified in Section 6 and include the following:

- Environmental safeguard SE6, which includes a commitment to review and minimise the extent of permanent impact on public open space areas and their associated parking facilities during detailed design development, where feasible and reasonable. This review in consultation with the landowner/s (including Liverpool City Council and the NSW Government), and other relevant stakeholders (such as the Kemps Creek United Soccer Club) to determine a suitable layout/configuration for these facilities. All efforts will be made during design development to provide comparable facilities to their current facilities, including car parking. Parks, open space and sport and recreation facilities temporarily impacted by construction will be also reinstated and rehabilitated, in consultation with relevant stakeholders.
- Environmental safeguard GEN5 has been added committing to a review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road with the aim to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal)
- Environmental safeguard GEN6 has been added committing to the relocation of the proposed construction ancillary facility 2 (identified in Figure 3-21 of the REF) to reduce the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club.

### *Christadelphian Heritage College Sydney Incorporated*

Based on the concept design for the proposal, partial acquisition of about 0.7 hectares of school property would be required to accommodate an open channel drain and footpath improvements along Devonshire Road, up to about 280 metres south of its intersection with Elizabeth Drive. Impacts to school buildings and the majority of the frontage along Devonshire Road have been avoided.

During the next stage of design development detailed design, Transport will consult with the Christadelphian Heritage College Sydney and review opportunities to avoid impacts on school infrastructure.

The socio-economic assessment in Appendix J and Section 6.7 of the REF identified the likely impacts to the Heritage College Sydney (referred to in the assessment as the 'Christadelphian Heritage College Sydney'), noting that these would be of high-moderate significance during construction, and moderate significance during operation. Specific measures proposed to manage potential impacts to Christadelphian Heritage College Sydney are identified in Section 6 and include the following:

- Environmental safeguard SE8, which commits to ongoing consultation with affected schools (including the Heritage College Sydney) during detailed design, construction and operation of the proposal, to investigate and implement feasible and reasonable measures to mitigate potential impacts to schools
- Environmental safeguard SE9, which commits to consulting with Christadelphian Heritage College Sydney and reviewing opportunities to avoid impacts to school infrastructure. Environmental safeguard SE9 has also been amended to clarify this
- Environmental safeguard SE15, which has been added to clarify that construction of the proposal would avoid the need to access parking areas associated with the Christadelphian Heritage College Sydney.

## 2.10.6 Property acquisition

Submission number(s)

6, 15

Issue description

Respondents:

- Commented that proposed acquisition is causing high levels of stress, and that the landowners are unable to relocate
- Commented on the mental/emotional stress from the proposal, with the respondent noting that they had previously understood that property acquisition would only be required on the southern side of Elizabeth Drive (within the Liverpool LGA boundary), rather than the northern side of Elizabeth Drive.

Response

Transport acknowledges that the acquisition of residential property may be stressful to affected owners and occupants. Transport would engage in consistent and equitable dealings with all landowners whose lots are to be acquired. Information about acquisitions under the Just Terms Act is included in Section 3.4 of the REF.

Compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other things, provisions for market value (also refer to Section 56 of the Just Terms Act), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs (i.e. fees associated with the discharge of mortgages and creation of a new mortgage where relocation is required)) and disadvantage resulting from relocation.

Transport understands that there are some issues which may be of concern to residents regarding the proposal. Communication and consultation would be carried out with the community throughout detailed design development and construction planning to ensure that landowners and business owners are aware of the proposal and that their issues are considered.

A Personal Manager (also known as a Personal Relationship Manager Acquisitions) will be appointed to all residential and small business owners to help them through the acquisition process. The Personal Manager acts as a primary point of contact

and provides a personalised service to meet the owner's needs. They provide all relevant information in a timely, easy to understand and transparent manner at all steps in the process.

The NSW Government also offers free and confidential mental and emotional support through the Property Acquisition Support Line (1300 089 551). This service is available to all property owners, their families, tenants, commercial property and business owners, and employees affected by property acquisition. Counselling sessions are strictly confidential, operated by qualified psychologists and social workers, independently of the project team or acquiring agency. More information is also available from the Centre for Property Acquisition, <https://www.nsw.gov.au/housing-and-construction/property-acquisition>.

The design of the road widening is influenced by a number of factors, including road geometry, topography and environmental constraints (such as creeks), and physical constraints (such as Western Sydney International Airport, and piers associated with the future M12 Motorway bridge over Elizabeth Drive). These factors can limit the opportunity to widen equally on either side of the proposal, or to widen on a single side of the road corridor. Property acquisition is discussed further in Section 2.5.1.

## 2.11 Issue 10: Air quality

### 2.11.1 Operational impacts

Submission number(s)

12, 21

Issue description

Respondents:

- Expressed concern regarding increased emission of air pollutants and greenhouse gas emissions from vehicles accessing sites along Clifton Avenue
- Concern about air pollution impacts to properties given the proximity of the operational road corridor.

Response

An air quality assessment has been carried out for the proposal and is provided as Appendix N to the REF. The assessment found that the largest potential source of dust impacts would be in relation to earthworks and construction activities. Combustion emission impacts during construction are likely to be generated by light and heavy vehicles travelling to and from the construction footprint and from onsite mobile construction equipment and stationary equipment.

Safeguards would be implemented to manage dust and greenhouse gas emissions during construction and documented in an Air Quality Management Plan, as described in environmental safeguard AQ1 (refer to Section 6). The plan would include air quality management objectives consistent with any relevant published NSW Environment Protection Authority and other guidelines. Measures to manage air quality impacts would include avoiding diesel powered generators where possible, site inspections to assess air quality and dust issues and low speed limits within construction sites to minimise dust disturbance. Furthermore, due to existing traffic volumes, combustion emissions on Elizabeth Drive and the adjacent road network are unlikely to result in a notable reduction in ambient air quality at nearby sensitive receptors.

Once the proposal is operational, small increases in pollutant concentrations at sensitive receptors are predicted due to increased traffic numbers and queuing on Elizabeth Drive (including adjoining intersections) and the increased proximity of some receptors to the widened road corridor. This effect could also occur at intersecting roads within the proposal area, such as Clifton Avenue. However, traffic modelling for 2030 and 2040 scenarios indicates that traffic congestion and vehicle queuing would be substantially higher without the proposal, increasing greenhouse gas concentrations on Elizabeth Drive compared to a scenario without the proposal. The proposal would enable traffic to continue at a more consistent speed rather than slowing and increasing speed when travelling along Elizabeth Drive, helping to reduce vehicle emissions compared to scenarios without the proposal. Additionally, vehicular emissions may be reduced over time due to the anticipated changes in vehicle fleets, with expected increased uptake in vehicles with no emissions (electric vehicles), and reduced number of aging vehicles with lower emission standards. Overall air quality impacts during operation of the proposal were found to be within acceptable or tolerable levels to manage health risk.

## 2.12 Issue 11: Hydrology and flooding

### 2.12.1 Operational impacts

Submission number(s)

14

Issue description

The respondent commented that the assessment of flooding does not reflect a true understanding of the land at Lot 74 / DP 1277011, and that the potential for an increase in flood affectation on the property has not been properly considered.

Response

The flooding assessment in the REF was prepared for the concept design for the proposal, and utilises limited topographical survey, including LIDAR survey outside the existing road corridor. Further assessment would be carried out in the detailed design stage, informed by topographical survey and floor level surveys.

Flood assessment carried out for the REF included a desktop-based, lot-by-lot property impact assessment to identify potential property areas that may experience increase in flood levels (afflux) during a one per cent AEP flood event, with the proposal. This assessment indicated that the majority of the property would not experience an increase in flood levels (afflux) due to the proposal. A maximum afflux of 113 millimetres was shown to occur on the property; however, this would be limited to a small portion of the property (about 2.5 square metres). The area which experiences this afflux is contained to the operational footprint of the proposal and is proposed to be partially acquired. A detailed tabulated summary of these modelled results is provided in the Hydraulic Impact and Flooding Assessment (included in Appendix L of the REF).

## 2.13 Issue 12: Cumulative impacts

### 2.13.1 Construction

Submission number(s)

27

Issue description

The respondent commented that there has previously been disruption for residents along Elizabeth Drive due to the construction of the M12 Motorway project.

Response

Transport acknowledges the potential for cumulative impacts and construction fatigue for residents along Elizabeth Drive associated with the consecutive construction of the M12 Motorway and the proposal. However, construction of the two projects is not expected to occur concurrently. The potential for cumulative impacts with the M12 Motorway project, as well as other construction projects in the area was assessed in Section 6.16 of the REF.

Environmental safeguards would be implemented to manage the potential for cumulative impacts of the proposal and other projects. Regular consultation would be carried out with nearby/adjoining project teams and key stakeholders during the detailed design and construction phase to review potential cumulative impacts and integrate designs and construction methodologies (including traffic impacts and noise management), as far as practicable to minimise cumulative impacts.

This would also include coordination of construction programs, consultation to manage overlapping construction activities and development of management strategies to address potential conflicts.

## 2.14 Issue 13: Other issues

### 2.14.1 Other

Submission number(s)

6, 27

Issue description

Respondents:

- Advised the lack of a report in Appendix J (Socio-economic impact assessment) of the REF
- Requested the proposal acknowledge local names and features of the area, for example The Judge's Hill (between Duff Road and Range Road) and Judge John Wylde (Judge Advocate to Governor Macquarie and historic owner of land in Cecil Park)

Response

Appendix J (Socio-economic impact assessment) of the REF was made available on the Transport project website ([nswroads.work/elizabethdrive](https://nswroads.work/elizabethdrive)) during the REF display period, and is still available on the project website.

The REF has provided information on historical features of the area, where relevant to the description of the proposal and environmental assessment. The non-Aboriginal heritage assessment in Appendix E of the REF provides a detailed historical context of the area with respect to non-Aboriginal heritage. This includes a history of land grants in the area, including lands granted to John and Thomas Wylde in Cecil Park. Appendix I of the REF also provides the ethnohistoric context of the area to inform the Aboriginal cultural heritage assessment for the proposal.

### 2.14.2 Proposal funding/costs

Submission number(s)

27

Issue description

The respondent commented on the urgency of funding for the proposal, particularly for the section between Duff Road and Clifton Avenue, to respond to the increase in traffic demand.

Response

The proposal received funding commitments from the NSW and Australian Governments in mid 2024, with a section of the proposal being prioritised to proceed to delivery. Construction timing would be further refined during the next stage of the design and communicated to impacted stakeholders.

## 2.15 Issue 14: Out of scope

### 2.15.1 Queries on other surrounding roads

Submission number(s)

9, 28

#### Issue description

#### Respondents:

- Queried whether Western Road will be extended to the north in future
- Commented that the potential future further development on Devonshire Road would conflict with the school's recently constructed primary wing and substation.

#### Response

Upgrades and extensions to other roads (beyond the construction footprint) are outside the scope of this proposal.

The proposal has been designed to tie into the existing Western Road. At this point in time, there is no plan to extend Western Road further north.

While further upgrade to Devonshire Road (outside of the proposal area) may occur in future, this is beyond the scope of this proposal. Notwithstanding, Transport will continue to consult with Christadelphian Heritage College Sydney and use the feedback received from the school to inform the next stage of design development. In accordance with environmental safeguard SE9, Transport will consult with the Christadelphian Heritage College Sydney to review opportunities to avoid impacts to school infrastructure (refer to Section 6).

### 2.15.2 Other

#### Submission number(s)

6

#### Issue description

The respondent requested Transport liaise with Penrith City Council to amend zoning of sites along the proposal to an industrial or light industrial land use zone.

#### Response

Rezoning of land to an industrial or light industrial land use zone is not within the scope of the proposal.

## 3. Response to government agency issues

### 3.1 Overview of issues raised

Transport received six submissions from government agencies. These submissions were received from:

- Fairfield City Council (responded to in Section 3.2)
- Liverpool City Council (responded to in Section 3.3)
- Penrith City Council (responded to in Section 3.4)
- Sydney Water (responded to in Section 3.5)
- Water NSW (responded to in Section 3.6)
- Greater Sydney Parklands (responded to in Section 3.7).

The key issues raised by agencies included:

- Proposal design and construction – matters relating to the proposed construction methodology, urban design and landscaping, and property access
- Traffic and transport – requests for further investigation into potential operational traffic impacts, and further clarification on how traffic impacts and queuing would be managed
- Biodiversity – issues regarding apparent uncertainty around potential impacts to biodiversity
- Consultation – requests for further clarification and updates on the proposal.

Issues raised by agencies are described further in the following sections, with responses from Transport provided.

### 3.2 Fairfield City Council

#### 3.2.1 Traffic and transport

##### Operational impacts

##### Issue description

Fairfield City Council commented that it is unclear whether the Elizabeth Drive Upgrade will be able accommodate the traffic generation associated with the future urban development that forms part of the Fairfield Urban Investigation Area (UIA). Council noted that the UIA has capacity for up to 20,000 dwellings in Horsley Park/Cecil Park with medium to higher density housing being located to the south of the Western Sydney International Airport 20-25 ANEF in Cecil Park. Council noted that the preparation of the Draft UIA structure plan was a direct result of Action 79 of the current Western City District Plan. The Plan was overseen by the UIA steering committee which included representatives from various state agencies including Transport. Council noted that the Greater Cities Commission has previously acknowledged the function of the UIA structure plan in facilitating future urban development in Horsley Park and Cecil Park and it is understood that this will be factored into the new District Plan currently being prepared.

Council also attached advice provided by Department of Planning and Environment (now Department of Planning, Housing and Infrastructure) regarding Council's Local Housing Strategy (LHS) which stated that "The LHS has demonstrated Fairfield's capacity to contribute to the Western City's longer term housing supply through the Horsley Park and Cecil Park Urban Investigation Area".

Fairfield City Council requested that the concept design ensures that the proposed arrangement would be able to accommodate the future traffic flows to service the surrounding area envisaged for the UIA. Council commented that project will impact on Council's major road network to service north and south directions of Horsley Park/ Cecil Park to the Western Sydney International Airport and Western Sydney Employment Lands precincts.

Fairfield City Council requested that the REF provides confirmation that post upgrade the intersection of Duff Road and Elizabeth Drive will have sufficient capacity to accommodate the level of urban development identified under the UIA draft structure plan.

#### Response

The proposal has been designed to support future planned growth and address potential future capacity constraints on the surrounding road network. The REF takes into account future regional land use, population growth and traffic growth. Section 2.1.5 of the REF outlines how the proposal aligns with the Greater Sydney Region Plan – A Metropolis of Three Cities (Greater Sydney Commission, 2018a) and Western City District Plan (Greater Sydney Commission, 2018b) (the former of which is the conceptual origin of the Fairfield UIA).

The Fairfield UIA is a draft (not yet approved) strategic land use plan and does not contain any approved projects. Subsequently it has not been assessed in terms of potential cumulative impacts with the proposal, or in terms of specific traffic impacts arising from the UIA.

A key objective of the traffic assessment in the REF is to assess the proposed upgrades to Elizabeth Drive in future years, ensuring they can effectively manage anticipated traffic increases and overcome potential capacity constraints along the Elizabeth Drive corridor.

The forecasts for future traffic volumes are based on data from the Sydney Strategic Motorway Planning Model (SMPM). The SMPM is a strategic traffic model that covers the Greater Sydney road network. The SMPM traffic demands served as a foundational input for the detailed microsimulation traffic models which were used in the assessment.

The SMPM models projected the traffic growth along Elizabeth Drive, with an expected average increase of 4.6 per cent annually from 2018 to 2030 and 2040. The SMPM model incorporates the demographic growths and prospective land use changes within the Sydney Metropolitan area. The model also incorporates major road upgrades planned for the metropolitan network.

According to the operational traffic assessment, the additional capacity offered by proposal would generally improve traffic conditions along Elizabeth Drive in both 2030 and 2040, particularly in the PM peak hour. The upgrades are expected to reduce delays, increase the average speed across Elizabeth Drive and accommodate the majority of the future traffic demands.

Modelled performance of the Elizabeth Drive / Duff Road intersection indicates that, with the proposed upgrades to Elizabeth Drive, the intersection would operate:

- At Level of Service (LoS) B during both AM and PM peak periods in 2030, indicating good operation with acceptable delays and spare capacity
- At LoS C (indicating satisfactory performance) during the AM peak period, and LoS B during the PM peak period in 2040.

Without the proposed upgrades in both 2030 and 2040, the intersection would operate at LoS F and experience substantially increased delays (ranging from 160 to >250 seconds) in the same peak periods. Intersection performance modelling results for other modelled intersections are presented in Table 6-22 of the REF.

It is anticipated that real time signal coordination and Intelligent Transport Systems (ITS) would further reduce the congestion on the road network when those systems are fully deployed. The proposal also provides a wider median to allow for a third lane in both directions to increase the capacity in the future if needed.

Transport will continue to consult with Fairfield Council as the proposal progresses, including in relation to future land use and the intersection of Elizabeth Drive and Duff Road.

#### Issue description

Fairfield City Council questions the suitability and safety of a painted median shown on the REF plans. Council notes that there is currently a high percentage of vehicles entering Irfan College from the south along Duff Road and requests clarification why a formal right turn lane from Duff Road into Irfan College was not considered an appropriate way to mitigate traffic queuing onto Elizabeth Drive.

#### Response

The proposed new median along Duff Road would provide an opening to allow for northbound vehicles turning right from Duff Road into the Irfan College Primary School. 'Keep clear' signage would also be provided to prevent southbound vehicles along Duff Road blocking the right turn into Irfan College Primary School. The provision of a signalised intersection as part of the proposal would also provide safer access to Duff Road.

The modelled performance of the Elizabeth Drive / Duff Road intersection indicates that, with the proposed upgrades to Elizabeth Drive, the intersection would operate:

- At Level of Service (LoS) B during both AM and PM peak periods in 2030, indicating good operation with acceptable delays and spare capacity
- At LoS C (indicating satisfactory performance) during the AM peak period, and LoS B during the PM peak period in 2040.

Transport notes that a dedicated right turn lane would increase property impacts to the College compared to the current concept design. The design has sought to minimise property acquisition where possible.

As part of the next stage of design, a detailed road safety audit will be prepared. This will include monitoring the effectiveness of the access through the median to enable access to Irfan College and suggest measures to eliminate or manage safety risks identified where necessary.

Transport would consult with Fairfield City Council and Irfan College as the proposal progresses, in relation to access arrangements for the school.

#### Issue description

Fairfield City Council requests that the operational needs of Irfan College be satisfactorily considered when designing the intersection of Elizabeth Drive and Duff Road.

Council requested investigations into the number of students attending college by private vehicle as well as directional trip distribution analysis to and from Irfan College. This would be to understand if the current design can accommodate the existing traffic generation of Irfan College without creating vehicular conflict and queuing from Irfan College's Duff Road access onto Elizabeth Drive.

#### Response

Transport understands that Irfan College plans to increase the capacity of the college, which may include alterations and additions to the existing site and its arrangement. The development application for expansion of the college is subject to a separate referral and consultation process with Transport. Preliminary comments were provided from Transport at the pre-development application stage in 2022. The development application, once lodged, is anticipated to be formally referred to Transport for review and comment.

Transport would also consult with Irfan College as part of the detailed design stage for the proposal in regard to transport and access impacts. Issue description

Fairfield City Council requested that post COVID data (2022/2023) for the traffic assessment for the REF be developed and assessed. Council commented that the baseline data utilised (from 2017/2018) is outdated and may not appropriately inform the concept design.

Council commented that it is not clear what checks have or will be carried out to ensure the modelling work carried out using this data is representative of current and future scenarios.

#### Response

During preparation of the REF and concept design, post-COVID data from 2022/2023 was not available to inform the traffic assessment. As such, baseline data from 2018 was used to inform the traffic assessment. Transport will consider the need for further traffic assessment during the next stage of the design.

## Property access – operation

### Issue description

Fairfield City Council noted that Irfan College (located at 2089-2109 Elizabeth Drive, Cecil Park) is subject to a masterplan and future expansion of the site is planned. Council expressed the importance of maintaining access to the College noting its planned expansion, which is estimated to include an increase in student numbers from approximately 280 to 330 students with 40 full time staff and 67 car parking spaces.

### Response

Transport understands that Irfan College plans to increase the capacity of the college, which may include alterations and additions to the existing site and its arrangement. The development application for expansion of the college is subject to a separate referral and consultation process with Transport. Preliminary comments were provided from Transport at the pre-development application stage in 2022. The development application, once lodged, is anticipated to be formally referred to Transport for review and comment.

It is noted that the expansion to Irfan College is within the feasibility and planning stage and would be subject to environmental assessment and obtaining the relevant approvals, should it prove feasible. The project timeline is, therefore, subject to some uncertainty. With this in mind, Transport will continue to consult, and where necessary coordinate, with Irfan College to ensure any potential cumulative impacts of the proposal and the expansion of Irfan College are managed appropriately.

An additional environmental safeguard has been included in Section 6 (refer to SE17) to consult with Irfan College during detailed design with a focus on maintaining access to the College throughout construction and operation.

## Road safety

### Issue description

Fairfield City Council noted that Irfan College is required to implement a Traffic Management Plan for managing the arrival and departure of staff and students onto the college property. Council noted that the design does not demonstrate that the traffic management plan for Irfan College is not compromised and that safe and convenient access to the college is provided to parents and staff.

### Response

The proposed new median along Duff Road would provide an opening to allow for northbound vehicles turning right from Duff Road into the Irfan College Primary School. 'Keep clear' signage would also be provided to prevent southbound vehicles along Duff Road blocking the right turn into Irfan College Primary School. The provision of a signalised intersection would provide safer access to Duff Road.

Transport would consult with Irfan College regarding the potential impacts of the proposal during detailed design and construction planning and would consider its traffic management plan in construction traffic management.

An additional environmental safeguard has been included in Section 6 (refer to SE17) to consult with Irfan College during detailed design with a focus on maintaining access to the College throughout construction and operation.

## Construction impacts

### Issue description

Fairfield City Council raised concerns that the assessment does not consider the potential for 'rat-runs' that may occur (particularly during construction) between The Horsley Drive and Elizabeth Drive via Cecil Road or Duff Road and the impact this would have on local road conditions and safety.

#### Response

Temporary reduced speed limits and lane closures on the existing Elizabeth Drive would be required during construction. Final construction methods and sequencing would be refined to minimise traffic and transport impacts during detailed design; however, traffic restrictions would be unavoidable during some construction activities.

The REF has included an assessment of potential construction traffic impacts in Section 6 and Appendix F of the REF. Temporary detours from Elizabeth Drive would be available via the new toll free M12 Motorway, which is anticipated to be open prior to the commencement of construction of the proposal. However, drivers may choose to use other alternate routes beyond this to avoid using sections of Elizabeth Drive during construction work.

During operation of the proposal, the upgrades are expected to reduce delays and increase average speeds on Elizabeth Drive, as such the potential for 'rat running' would be limited.

#### Issue description

Fairfield City Council requested that local roads (including Duff Road, Selkirk Avenue, Cecil Road, Lincoln Road) are included in pre-construction and post construction road condition reports.

Council noted traffic counts showing the volume and breakdown of vehicles using the roads before, during and after construction should be carried out. Council noted that this will ensure any damage caused by 'rat-runs', related to construction on Elizabeth Drive is required and or managed in a timely manner.

#### Response

Pre-construction and post construction road condition reports for local roads likely to be used by heavy vehicles during construction will be prepared. Any damage resulting from construction (not normal wear and tear) will be repaired unless alternative arrangements are made with the relevant road authority. Copies of road condition reports will be provided to Council.

At this stage, Duff Road, Selkirk Avenue, Cecil Road, Lincoln Road are not planned to be included in pre- and post-construction road condition reports.

Indicative construction haulage routes are identified in Section 3.3.16 of the REF and primarily include arterial roads managed by Transport. Duff Road, Selkirk Avenue, Cecil Road, Lincoln Road are not proposed as haulage routes. Designated haulage routes for heavy vehicles would be set out in the Traffic Management Plan for the proposal, which would include driver protocols to ensure use of these designated routes.

While there would be some unavoidable traffic restrictions would be unavoidable during some construction activities, the additional construction vehicle movements (10 light vehicles and 15 heavy vehicles) generated by the proposal during the AM and PM peak hours would represent an increase to peak hourly traffic volumes along Elizabeth Drive of about one percent. These traffic volume increases are minor and expected to be manageable given that they are within the realm of daily traffic variations typically experienced across Sydney's road network including Elizabeth Drive.

Temporary detours from Elizabeth Drive would also be available via the new toll free M12 Motorway, which is anticipated to be open prior to the commencement of construction of the proposal.

### 3.2.2 Proposal design and construction

#### Construction methodology

##### Issue description

Fairfield City Council requested construction occur during the hours of 7am to 5pm, Monday to Friday.

## Response

Construction of the proposal would largely be carried out during standard construction working hours in accordance with the Interim Construction Noise Guideline (DECC, 2009):

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sundays and public holidays: No work.

Construction activities that involve impulsive or tonal noise emissions would be limited to the following hours in accordance with the Construction Noise and Vibration Guideline (RMS, 2016a):

- Monday to Friday: 8am to 5pm
- Saturday: 9am to 1pm
- Sundays and public holidays: no work.

Some work outside of standard hours is necessary to improve safety reduce, overall construction timeframes, and minimise disruption to daily traffic and disturbance to surrounding landowners and businesses. The following activities are likely to take place outside standard construction working hours:

- Delivery of construction materials and equipment
- Delivery of large components such as precast bridge components/girders
- Intersection work and tie-in activities with existing roads
- Switching of traffic, including traffic management work
- Installation and adjustment of barriers and construction signage
- Operation of construction ancillary facilities to support the above work.

Noise and vibration mitigation measures (NV1 to NV14, refer Section 6) have been proposed to minimise noise emissions and/or mitigate potential noise impacts, including out of hours noise impacts.

A Construction Noise and Vibration Management Plan will be prepared by the relevant contractor and implemented for the proposal. This will detail an out of hours work procedure, including approval process and proposed mitigation measures. Council and affected landowners, residents, businesses, and other relevant stakeholders will be notified of out of hours work.

Transport will further assess noise impacts during the detailed design and construction planning stages and consult with councils and the community on noise mitigations where relevant.

## Lighting

### Issue description

Fairfield City Council requests that the lighting design proposed, and lighting standards are to be approved by Council.

### Response

Lighting for the proposal has been designed in accordance with AS/NZS 1158 Lighting Subcategory V3. Lighting design would be further developed in the detail design stage. The lighting design would be provided to Council, if requested, for Council's information.

## Property access – operation

### Issue description

Fairfield City Council raised concern with the impact of the proposal on site access arrangements at Irfan College. Council noted the following:

The College has existing vehicular access via Duff Road with current traffic conditions allowing for vehicles to turn right in across the south-east bound lane using a dedicated turn bay for vehicles travelling north-west on Duff Road. Concern is raised that the proposed road upgrade and construction of a median strip that removes the ability for vehicles to turn right into the premises will result in adverse impacts to traffic flow and result in safety impacts for vehicles as Duff Road does not provide any opportunity for vehicles to turn around safely at a round-a-bout or other mechanism.

In addition to the above, the REF as publicly exhibited shows that the Duff Road upgrade would facilitate a painted median strip at the ingress/egress point to the college. A briefing provided to Fairfield Council officers by Transport on 13 October 2023 indicated that the painted median would allow maintenance of existing access arrangements. It is noted that the wording in the Traffic Impact Assessment (TIA) notes a left in left out only arrangement for the college. In this respect Council requests further clarification on access arrangements for Irfan College.

### Response

There are existing two access points to Irfan College on Duff Road – including a northern access point (providing entry/exit to Irfan College) and a southern access point (exit only, with no right turn permitted due to double line markings).

Right and left turn movements at the northern access point would be maintained over the proposed painted median. 'Keep clear' signage pavement markings would be installed to avoid obstruction of Irfan College access by the southbound traffic queue.

The prohibited right turn movement in and out of the southern access point would also be maintained by the proposed raised median on approach to the signalised intersection at Elizabeth Drive. Overall, changes to access arrangements would not impact school access.

The traffic assessment in Appendix F of the REF notes that the access point closer to the Duff Road and Elizabeth Drive intersection would be changed into left in and left out only. This is referring to the southern access point (exit only) where no right turn is currently permitted due to double line markings.

Transport understands that Irfan College plans to increase the capacity of the college, which may include alterations and additions to the existing site and its arrangement. The development application for expansion of the college is subject to a separate referral and consultation process with Transport. Preliminary comments were provided from Transport at the pre-development application stage in 2022. The development application, once lodged, is anticipated to be formally referred to Transport for review and comment.

Transport would also consult with Irfan College as part of the detailed design stage for the proposal in regard to transport and access impacts.

An additional environmental safeguard has been included in Section 6 (refer to SE17) to consult with Irfan College during detailed design with a focus on ensuring access to the College is maintained throughout construction and operation.

### Issue description

Council recommended that Transport improve the whole section of private driveways where effected, not just partial improvement. After driveway improvement work is completed, driveways should be handed back to the respective owners who will be responsible for maintenance.

### Response

Property adjustments to affected properties (including driveways) would be confirmed in consultation with individual landowners.

The approach to reinstating impacted accesses would be further investigated in the detailed design stage following detailed topographic survey and consultation with impacted landowners and businesses. The proposal would seek to reinstate existing driveway accesses (where impacted) in a like-for-like manner, where it is safe and practicable to do so.

## Urban design and landscaping

### Issue description

Council requested that the nature strip be regraded to uniform slope after improvement of Elizabeth Drive.

### Response

In the concept design for the proposal, the nature strip is proposed to have a crossfall that is uniform with the shared walking and cycling path (nominally two per cent) where possible.

## Provisions for public transport

### Issue description

Council noted that Stage 1 of the Liverpool to Western Sydney International Airport Rapid Bus Route will travel from the Liverpool CBD along the existing Liverpool to Parramatta Bus Transit Way to Bonnyrigg and then continue west along Elizabeth Drive to the Western Sydney International Airport and Bradfield City Centre. Council expressed the importance of this route.

Council commented that Elizabeth Drive must be designed to adequately accommodate standalone rapid bus lanes or at the very minimum bus priority signalisation at intersections, high service bus stops, pedestrian and cycle paths connecting into existing and future active transport networks.

### Response

Transport acknowledges the importance of future rapid bus routes which would utilise Elizabeth Drive. The proposal has been designed to include bus priority infrastructure including queue jump lanes at intersections and active transport connections, to support future bus routes along Elizabeth Drive. At this stage standalone bus lanes are not proposed along Elizabeth Drive.

Bus stop infrastructure is not within the scope of this proposal and would be provided separately in consultation with the relevant local council.

## 3.2.3 Property and land use impacts

### Property acquisition

#### Issue description

Council sought clarity as to the reason behind full property acquisition of 1-7 Duff Road.

In addition, as per the Just Terms Act, Transport dealings with landholders must include a fair market rate offer for all land to be acquired to facilitate the Elizabeth Drive East and West upgrades.

#### Response

Full acquisition is currently proposed at 1-7 Duff Road as the existing residence on the property would be directly impacted by permanent work (requiring its removal). Property acquisition requirements would be further refined during detailed design, and consultation would be carried out with affected landowners regarding proposed changes to the property.

Transport acknowledges that, subject to further design development and landowner consultation, it may be possible to reduce the required extent of acquisition at the property. A new environmental safeguard PL4 has been proposed to investigate opportunities to reduce the extent of property acquisition required at 1-7 Duff Road, Cecil Park (refer to Section 6).

All property acquisition would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (the Just Terms Act). Compensation is determined in accordance with Section 55 of the Just Terms Act. Further information,

guides and support can be found on the Centre for Property Acquisition website <https://www.nsw.gov.au/housing-and-construction/property-acquisition>.

### 3.2.4 Aboriginal heritage

#### Existing environment

##### Issue description

Council queried why 11 archaeological artefacts are located within the study area and there are 14 Aboriginal Heritage Information Management System (AHIMS) registrations. Council sought clarification as to why not all sites are registered as AHIMS sites.

##### Response

The Aboriginal sites within the study area are registered on AHIMS. There are 15 individual AHIMS registrations, which make up 11 archaeological sites. This is because some of the individual AHIMS listings were duplicate registrations of the same site/overall archaeological deposit. For example:

- Badgerys West B (BWB) / Elizabeth Drive AFT 2 – AHIMS 45-5-5298 / 45-5-5240, comprises one site which incorporates three individual AHIMS registrations
- Elizabeth Drive AFT 1 (includes Elizabeth Precinct Isolated Find 04 & Elizabeth Precinct PAD 01) (AHIMS 45-5-5259 / 45-5-5330 / 45-5-5236), comprises one site which incorporates three individual AHIMS registrations.

Appendix I of the REF documents where sites have been combined, or where duplicate registrations have been identified.

### 3.2.5 Consultation

#### Request for further updates/consultation

##### Issue description

Council requested further immediate and meaningful engagement to be carried out with Irfan College.

Council requested that the REF submissions report demonstrate that meaningful consultation with Irfan College has been carried out, including details of any meeting and written correspondence directly with the college.

Council commented that proposed access arrangements as intended under the REF must be communicated directly with the college and any response from the college is to be detailed in the report including any ameliorative/mitigation measures proposed to address concerns raised.

##### Response

Transport is committed to continuing consultation with Irfan College during detailed design and construction of the proposal.

In accordance with environmental safeguard SE8, engagement will be carried out with affected schools to investigate and implement feasible and reasonable measures to mitigate potential impacts to schools, including Irfan College. Mitigation measures could include:

- Traffic management measures near schools during construction
- Carrying out required construction work within the boundaries of a school property outside of school hours, where feasible
- Maintenance of access to schools at all times
- Other relevant measures related to traffic, pedestrian safety, and noise and vibration.

There are two existing access points to Irfan College on Duff Road – including a northern access point (providing entry/exit to Irfan College) and a southern access point (exit only, with no right turn permitted due to double line markings).

Right and left turn movements at the northern access point would be maintained over the proposed painted median. 'Keep clear' signage pavement markings would be installed to avoid obstruction of Irfan College access by the southbound traffic queue.

An additional environmental safeguard has been included in Section 6 (refer to SE17) to consult with Irfan College during detailed design with a focus on ensuring access to the College is maintained throughout construction and operation.

#### Issue description

Council requested that the following consultation activities should be carried out by Transport:

- Door knocking to directly affected residences in the Fairfield local government area
- Project hotline that is clearly advertised on the project website
- Translation services available at the hotline
- Issue of written correspondence to residences in multiple languages.

#### Response

During the REF display period, door knocking was carried out by the project team at directly affected residences. Personal Relationship Managers Acquisitions (PRMAs) and project team representatives door-knocked about 69 privately owned residential properties and small businesses. The door knock was carried out to inform directly affected landowners about the proposal and encourage these stakeholders to make a submission. The door-knocking was completed over a four-day period. Where a landowner was not present, PRMAs left a Community Update and a "Sorry We Missed You" flyer asking for a call back. In addition to the material left at premises, affected property owner letters were posted out informing the owners of the REF display and asking them to contact Transport to discuss property impacts. Follow up door knocks were not required as majority of the residents responded to the "Sorry We Missed You" flyer, or attended the community consultation sessions. The landowners that could not be reached via the door-knocking were reached during the information sessions (see below for details), via phone, letter sent in the post and/or email.

A toll free phone line has been established for the proposed Elizabeth Drive upgrades and is included on the project website ([nswroads.work/elizabethdrive](https://nswroads.work/elizabethdrive)) and, along with other contact details such as an email and mailing address. The phone line would continue to be available during the detailed design and construction phases of the proposal. All project updates issued to the community included contact details for a Translating and Interpreting Service (131 450) to assist with translation.

Further information on consultation activities carried out during the REF display period is included in Section 1.2.

### 3.2.6 Hydrology and flooding

#### Operational impacts

##### Issue description

Council advised that residents located in the downstream end of Duff Road will be affected with an increase of stormwater run-off and that this needs to be addressed carefully in consultation with Council and respective residents.

##### Response

Drainage infrastructure for the proposal has been designed with appropriate capacity of manage stormwater.

Flood assessment carried out for the REF (refer to Section 6.8 of the REF) indicates increases in flood levels during the one per cent AEP event with the proposal in some areas downstream (generally to the north-east) of Duff Road. This includes minor localised areas of increases in flood depth, by up to about 50 millimetres.

This flooding assessment was prepared for the concept design for the proposal, and utilises limited topographical survey, including LIDAR survey outside the existing road corridor. Further assessment would be carried out in the detailed design stage, informed by topographical survey and floor level surveys, which would verify the assessment of impacts at these properties.

In accordance with environmental safeguard FH1, further design refinement will be carried in the next stage of design development to minimise potential increases in the afflux where possible (for example, refining the sizing of culverts and drainage infrastructure) (refer to Section 6).

Detailed design would continue to consider this matter and involve further consultation with Council.

#### Issue description

Council noted that there are areas shown in the water quality impact assessment that show that there will be detrimental flood effects because of the proposal. Council requested these issues be resolved as part of the detailed design where flood afflux must be kept to a maximum of 0.01m.

Council noted that the stream erosion index (SEI) for the downstream receiving waters should also be kept to a maximum of 2.0.

#### Response

Further detailed flooding assessment would be carried out during the detailed design stage of the proposal, which would take into account the feedback received in Council's submission.

The hydraulic impact and flooding assessment carried out for the proposal (refer to Section 6.8 of the REF) identified buildings potentially impacted by above floor flooding in a one per cent AEP design flood event in the 'future base case' (without the proposal), and in the 'design case' (with the proposal). The depth of this predicted above floor flooding is estimated to increase at 20 buildings in the 'design case' conditions. These modelled results are indicative, and floor level and property survey are required during detailed design at buildings within the modelled area, to ascertain ground floor heights and property types (e.g. residential or commercial). Transport would consult with landowners subject to above floor flooding throughout detailed design to identify opportunities to avoid impacts, where possible.

Further design refinement will be carried out during the design stage, generally within the vicinity of creeks which traverse the proposal, to minimise potential increases in the afflux where possible (for example, refining the sizing of culverts and drainage infrastructure). This would be carried out in accordance with environmental safeguard FH1 (refer to Section 6).

Stream erosion index (SEI) would be also reviewed at the detailed design stage, however, preliminary SEI calculations were carried out at the concept design stage. Model for Urban Stormwater Improvement Conceptualisation (MUSIC) modelling carried out for the concept design was used to provide an understanding of the SEI for the proposal. The *Draft NSW MUSIC Modelling Guide (August 2010)* and the method for calculating SEI documented in the *Water sensitive urban design developer handbook – MUSIC modelling and design guide* (Blacktown City Council, 2020) were used for the assessment of SEI.

As part of this assessment, generic nodes were included at the final junction of pre-development and post-development MUSIC models to simulate the flow transfer and estimate the annual volume of flow above the 25 per cent of the two-year Average Recurrence Interval (ARI) natural flows for both scenarios. Following this method, the post-development duration of stream forming flows was 1.3 times greater than the pre-developed duration of stream forming flows. This was calculated as the output mean annual flow at the junction node for the post-developed model, divided by the corresponding value for the pre-development model.

This SEI of 1.3 meets the requirements of Blacktown Council's guidelines (which are referred to in Fairfield City Council's *Stormwater Management Policy* (Fairfield City Council, 2017). The guidelines state that the SEI should be no greater than 3.5.

### Impacts associated with farm dams

#### Issue description

Council queried the need to reconstruct the farm dam located on the western side of Duff Road. Council requested clarification of the need for this and potential risks to Duff Road and the college from the farm dam.

#### Response

The farm dam on Duff Road has been identified on Figure 3-6 of the REF as requiring adjustment as it is likely to be directly impacted by the embankment required in the operational footprint of the proposal (which is based upon a concept design).

Further design development would be carried out during the next stage of design, which would be based upon receipt of additional inputs such as detailed topographical and utility surveys and involve consideration of community and stakeholder feedback.

The need for and extent of reconfiguration of the farm dam would be reconsidered at the next stage of design development based on these additional inputs (including detailed topographical survey).

The final design of the farm dam would appropriately minimise the potential risk for farm dam failure and any potential subsequent risks to the Irfan College.

### 3.2.7 Maintenance

#### Issue description

Council commented that they understood that a shared pedestrian cycle way would be constructed between the M7 Motorway and Duff Road as part of the proposal and would be dedicated to Council.

While supportive of the proposed walking and cycling connection, Council raised concern about being responsible for managing this asset. Council requested that Transport engage further with Councils Assets, Open Space and Design Services Team to address concerns raised by Council including access arrangements, maintenance funding and design detail.

Council also made the following requests and recommendations in relation to maintenance:

- Recommendation that Transport carries out maintenance responsibility for proposed safety barriers
- Comment there is no provision of maintenance vehicle parking facilities for the purpose of roadside maintenance along Elizabeth Drive. Council requested maintenance access facilities be provided between property boundaries and the cycleway where possible
- Commented that the retaining walls, soil, nail walls and concrete barriers which are proposed to be constructed under the proposal are to be owned and maintained by Transport.

#### Response

The proposal includes shared walking and cycling paths with its operational footprint, as shown on Figure 3-1 to Figure 3-6 of the REF, which would tie into the shared walking and cycling path at the M12 Motorway.

Any assets requiring to be handed over to Council will be identified during detailed design. The approach to accessing Elizabeth Drive for maintenance vehicles will also be reviewed and confirmed during detailed design.

Transport will be responsible for the maintenance of the assets between the kerbs (back of kerb to back of kerb) of the upgraded Elizabeth Drive (back of kerb to back of kerb).

#### Issue description

Council strongly recommended that the batter slopes on fill or cut be a minimum of 4(H):1(V) for maintenance purposes as Councils maintenance responsibilities extend from back of kerb to private property boundaries. If this batter slope is not achievable as recommended by Council, then a better slope of 1(H):6(V) must be achievable.

#### Response

The concept design for the proposal generally includes batter slopes of 4(H):1(V) on the northern side of Elizabeth Drive and 3:1 on the southern side. In some localised areas, where the proposal is heavily constrained due to engineering, environmental and property constraints, steeper batters (of a 2(H):1(V) ratio) are required, to limit the extent of the operational footprint.

The batter steepness has already been optimised during the concept design stage of the proposal and is in line with other recent Transport projects in the area such as The Northern Road upgrade.

Batter slopes would be considered further during detailed design, taking into the constraints described above and in consideration of the need for safe and manageable maintenance access.

### 3.2.8 Proposal funding/costs

#### Issue description

Council requested that all capital costs associated with the proposal are borne by the applicant (Transport).

#### Response

Construction of the proposal would be subject to NSW and Australian Government funding.

## 3.3 Liverpool City Council

Liverpool City Council submitted a consolidated submission for both the Elizabeth Drive East Upgrade and the Elizabeth Drive West Upgrade. Matters that specifically refer to Elizabeth Drive East Upgrade, or both proposals generally, are addressed below. Matters specific to the Elizabeth Drive West Upgrade have been responded to in the Elizabeth Drive West Upgrade Submissions Report (Transport, 2024).

### 3.3.1 Biodiversity

#### Assessment methodology

##### Issue description

Liverpool City Council noted that a Biodiversity Development Assessment Report (BDAR) was not prepared for the proposal as it was considered that there would be no significant impacts to threatened entities.

##### Response

Transport acknowledges Council's comment. Appropriate significant impact assessments were carried out for threatened species and ecological communities either recorded or considered as having a moderate or higher likelihood of occurring. These assessments concluded that the proposal is unlikely to have a significant impact on any NSW or nationally listed entities. The assessments have been updated and verified based on further survey effort carried out in October and November 2023, which is described further below.

#### Biodiversity impacts

##### Issue description

Council raised concern that there is a large degree of uncertainty of the impacts to threatened entities in the assessment. Council commented that the degree of uncertainty in the assessment could warrant the assumption that a significant impact may occur (and subsequent preparation of a BDAR or SIS).

##### Response

The Biodiversity Assessment Report (BAR) was originally published in September 2023 alongside the Elizabeth Drive East Upgrade REF. Land access constraints during preparation of the REF meant that Biodiversity Assessment Method (BAM) compliant detailed targeted threatened species survey was unable to be carried out. The BAR acknowledged this as a limitation and included commitment to carry out targeted surveys as part of detailed design, if not sooner.

Since the display of the REF, a revised BAR has been prepared to provide further biodiversity assessment that incorporates the results of BAM compliant targeted surveys. This revised BAR is provided as Appendix B (Revised Biodiversity Assessment Report) and is summarised in Section 5.1.

For the September 2023 revision of the BAR, BAM plot data and threatened species habitat modelling (species polygons) carried out and prepared by Biosis for the Cumberland Plain Conservation Plan (CPCP) were utilised. The intended purpose of habitat modelling for the CPCP was to create species polygons for the BAM Calculations which were used for the Biodiversity Certification Assessment Report (BCAR) component of the CPCP approval. The vegetation mapping within the study area for

the assessment was considered to be consistent with the CPCP and as such, species habitat polygons created as part of the CPCP were considered suitable for determining the species that required survey (candidate species credit species) within the study area. Habitat was modelled based on a scientific method accepted by DPE (now Department of Planning, Housing and Infrastructure), and as part of BAM species expert reports, which was also ground-truthed where land access was available.

For the purposes of the revised BAR (Appendix B), these species polygons were then subject to BAM compliant targeted flora and fauna surveys during October and November 2023, to the extent that approved access permitted (noting that a small number of properties required visual inspection from a vantage point). Areas of species polygons prepared for the CPCP, that were previously unable to be surveyed, have been used to inform the impact assessment of the revised BAR. Further detail on the methodology adopted for the targeted surveys is provided in Section 2.4 of the revised BAR (Appendix B).

In addition to the targeted surveys, Transport representatives carried out inspections of bridges within the study area to review the potential for microbat habitat on 20 February 2024. Microbats were observed roosting in the outer span joins of the eastern bridge over South Creek on Elizabeth Drive, which are presumed to be Southern Myotis. A Microbat Management Plan would be prepared and implemented to manage potential impacts to microbats.

Appropriate significant impact assessments were carried out for threatened species and ecological communities either recorded or considered as having a moderate or higher likelihood of occurring. These assessments were updated and verified for the revised BAR based on the survey efforts and visual inspections. The revised significant impact assessments concluded that the proposal is unlikely to have a significant impact on any NSW or nationally listed entities. This finding is underpinned by the effective application of environmental safeguards described in Section 6. Therefore, the revised BAR concluded that Transport is not required to prepare a Species Impact Statement (SIS) or Biodiversity Development Assessment Report (BDAR).

#### Issue description

Council raised concern about that lack of current field data. Council noted that Section 2.4.2 and 2.4.3 of the BAR indicate that no targeted surveys or detailed plot data collection were carried out, and coverage of the field survey was largely limited to the existing road corridor due to limited property access. Council also noted that plot data and threatened species habitat modelling (species polygons) from the CPCP is relied upon which likely contains information from approximately five years ago. Council advised that this is a significant limitation, with little reliable information available to understand the extent of impacts to local populations and occurrences of threatened entities.

#### Response

Transport acknowledges Council's concern. As described above, to address the lack of field data, targeted flora and fauna surveys were carried out in October and November 2023 across a substantially larger area. The survey and assessment approach were compliant with the BAM, and provide an appropriate level of detail and confidence to inform the assessment of biodiversity impacts.

BAM plots will be carried out within the subject land (construction footprint) to confirm the biodiversity credits required for the proposal during the detailed design phase (refer to the environmental safeguards in Section 6).

#### Issue description

Council raised concern about the lack of information regarding the extent and size of local populations of threatened species and impacts to each population. Council noted that the identification of potential local populations is generally reliant on CPCP habitat polygons. Council advised that it appears that it has been assumed that if present, the local population of a threatened species would extend throughout the habitat polygon and that the potential population size (i.e. number of individuals present) is reflected by the habitat polygon size. However, particularly for threatened plants, it is more likely that if present, it would only occupy a portion of the potential habitat, it may comprise multiple discrete local populations, and would occur at largely unknown densities.

Council noted that assessing impacts within the context of local populations is a fundamental consideration of the test of significance. Council recommended that, if multiple populations occur in a study area, each population should be assessed separately as noted in the Threatened Species Test of Significance Guidelines.

#### Response

Transport acknowledges Council's comments. BAM plot data and threatened species habitat modelling (species polygons) carried out and prepared by Biosis for the Cumberland Plain Conservation Plan (CPCP) were utilised in the BAR. The intended

purpose of habitat modelling for the CPCP was to create species polygons for the BAM Calculations which were used for the BCAR component of the CPCP approval. The vegetation mapping within the study area for the assessment was considered to be consistent with the CPCP and, as such, species habitat polygons created as part of the CPCP were considered suitable for determining the species that required survey (candidate species credit species) within the study area. Habitat was modelled based on a scientific method accepted by DPE (now Department of Planning, Housing and Infrastructure), and as part of BAM species expert reports, which was also ground-truthed where land access was available.

As described above, to address the lack of field data, targeted flora and fauna surveys were carried out in October and November 2023 across a substantially larger area. The survey and assessment were compliant with the BAM, and provide an appropriate level of detail and confidence to inform the assessment of biodiversity impacts.

*Biodiversity Conservation Act 2016* (BC Act) Tests of Significance and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Significant Impact Criteria assessments were carried out for all relevant threatened entities recorded or considered to have a moderate or higher likelihood of occurrence within the construction footprint. These assessments have been updated and verified based on further survey effort carried out in October and November 2023, which is described further below.

The Tests of Significance were conducted in accordance with Section 7.2 of the BC Act and Threatened Species Test of Significance Guidelines (OEH, 2018). There are no instances where multiple populations of a threatened species have been identified in the study area for the biodiversity assessment.

BAM plots will be carried out within the subject land (construction footprint) to confirm the biodiversity credits required for the proposal during the detailed design phase (refer to the environmental safeguards in Section 6).

#### Issue description

Council raised concerns on the significance of impacts to *Dillwynia tenuifolia*. Council noted that the BAR states that 30-40 individuals would be impacted, but this estimate is based on a survey using the existing corridor as vantage which would have a large influence on the accuracy of the count.

Council advised limited details are included regarding the distribution of other *Dillwynia tenuifolia* individuals in relation to the individuals to be impacted.

Council noted that the test of significance for the species in Appendix D of the REF assumes that there's a local population of thousands, but no source for this information is supplied and the distribution of individuals is unspecified. Council suggested that if the other individuals are greater than 120 metres from the impacted individuals, they are likely to be an isolated population.

Council advised that in the absence of further information such as targeted site surveys and local population details, it's considered that the removal of at least 40 individuals may cause a significant impact.

#### Response

Following display of the REF, targeted flora survey for *Dillwynia tenuifolia* was carried out in October and November 2023, in accordance with the methodology described in Section 2.4 of Appendix B. The survey determined that fewer individuals than anticipated in the REF (which provided a conservative assessment given the limitations posed by lack of targeted survey) are present in the bushland west of Bill Anderson Reserve. Fifteen individuals were recorded, 13 of which are likely to require removal for the proposal, as opposed to the 30-40 individuals predicted to be impacted in the REF.

Appendix D of the revised BAR (Appendix B) includes an updated BC Act Tests of Significance for impacts to *Dillwynia tenuifolia*. This concluded that proposal is not likely to significantly impact *Dillwynia tenuifolia* as:

- The proposal would remove 13 *Dillwynia tenuifolia* individuals within the study area, and remove 2.58 hectares of potential habitat which are currently exposed to a number of disturbances which are unlikely to be further exacerbated by the proposal
- The proposal is unlikely to significantly alter the extent of the population to the point where it becomes locally extinct
- The removal of approximately 2.58 hectares area of vegetation would not result in the isolation or fragmentation of locally occurring habitat within the study area and as such is unlikely to affect its long-term survival in the locality
- The localised nature of the proposed work would not significantly trigger or exacerbate any key threatening processes.

The endangered population of *Dillwynia tenuifolia* has been described based on BioNET records and contains thousands of individuals within 100 metres of the subject site. This has been clarified in Appendix D of the revised BAR (Appendix B).

#### Issue description

Council raised concerns on the significance of impacts to *Grevillea parviflora* subsp. *parviflora*. The test of significance for this species states that a population of approximately 277 individuals is known to occur within Bill Anderson Reserve. Council noted that the source of this information isn't identified, and the count is vastly higher than what Council has previously recorded within the reserve. Council noted that the Environmental Impact Assessment Guidelines for the species indicate that even minimal clearing can act as a barrier for a population due to the limited seed dispersal distance.

#### Response

Following display of the REF, BAM compliant targeted survey flora surveys were completed, including for *Grevillea parviflora* subsp. *parviflora*, across accessible areas of the species polygon in November 2023.

A small number of properties were unable to be accessed during targeted flora surveys. Generally, coverage was greater than 95 per cent but in areas of a species' polygon that were not surveyed in detail, visual habitat assessment was carried out from nearest vantage.

*Grevillea parviflora* subsp. *parviflora* was not identified during the targeted surveys and, therefore, is no longer anticipated to require removal for the proposal. As such, there is no potential for a significant impact to the species, and the test of significance has been removed from the revised BAR.

#### Issue description

Council raised concerns with regard to the limited consideration of fragmentation and isolation. The assessments of significance only include a generic discussion of potential fragmentation and isolation impacts, stating that vegetation within the study area exists in an already highly fragmented landscape. Council requested that the increased gap that would be caused by the road upgrade should be quantified and discussed with reference to the characteristics of the individual species (e.g., gene flow and dispersal vectors).

#### Response

The Tests of Significance were conducted in accordance with Section 7.2 of the BC Act and Threatened Species Test of Significance Guidelines (OEH, 2018) and are considered to include a sufficient level of detail to determine whether a significant impact would occur. The Tests of Significance have been updated to reflect the results of targeted surveys carried out in October and November 2023.

Where relevant, the Tests of Significance have identified where ecological communities occur in patchy, fragmented and edge effected states, and have provided an overview of whether the proposal would exacerbate these effects. Generally, remaining areas of ecological communities within the study area are highly fragmented, and the proposed removal of predominantly roadside vegetation across Elizabeth Drive is considered unlikely to exacerbate this. Additional vegetation outside of the proposal area may be indirectly impacted through increased edge effects, however, following implementation of the environmental safeguards such as the implementation of exclusion zones at the limits of clearing (refer to Section 6), these additional impacts are not expected to be substantial.

#### Issue description

Council noted that threatened species maps were not included. Figure 3-4 only includes a single map which shows the species polygon for *Acacia bynoeana* and maps for all other threatened species have not been included. Council advised that this missing information adds to the difficulty of understanding the potential distribution and impacts to threatened species.

#### Response

The revised BAR (Appendix B) includes an updated version of Figure 3-4 which presents the location of recorded threatened species during targeted surveys carried out in October and November 2023. This includes the following species:

- Southern Myotis
- Cumberland Plain Land Snail

- *Dillwynia tenuifolia*.

#### Issue description

Council questioned the assumption that impacts can be avoided or minimised if threatened species are recorded during future targeted surveys and that the conclusion of many of the tests of significance rely upon this assumption. Council noted that the feasibility of avoiding or minimising impacts to a local population of unknown parameters is highly uncertain. Council advised that certain impacts are likely to be considered unavoidable.

#### Response

To provide greater certainty in the conclusions of the BAR, significant impact assessments have been updated and verified based on targeted flora and fauna surveys carried out in October and November 2023. No additional threatened species were identified through this process compared to those assessed in the previous BAR. However, several species assumed to be present for the purposes of preparing the September 2023 BAR were not recorded during targeted survey efforts in October and November for the revised BAR, and are no longer considered to have a 'moderate' or 'higher' likelihood of occurring within the study area. These species are identified in Section 5.1.3.

The revised significant impact assessments concluded that the proposal is unlikely to have a significant impact on any NSW or nationally listed entities, with the implementation of environmental safeguards identified in Section 6.

### Mitigation measures

#### Issue description

Council noted the biodiversity values within the intact vegetation zones between Western Road and Devonshire Road and recommended priority is given to reducing impacts to this area during the detailed design phase.

#### Response

Transport acknowledges Council's recommendation. Measures to further avoid and minimise native vegetation or habitat removal will be investigated during detailed design and implemented where practicable and feasible, in accordance with environmental safeguard B1 (refer to Section 6), including in these areas. However, some level of impact would be unavoidable.

#### Issue description

Council recommended that the mitigation measures for both biodiversity assessments include the collection of viable native seeds from trees, shrubs and groundcovers that are proposed to be cleared. Council recommended these seeds be donated to nurseries that are within a 20-kilometre radius of the collection site, or other specialist native nurseries.

#### Response

Transport acknowledges this suggestion and would consider opportunities to collect viable native seeds from areas of vegetation (trees, shrubs and groundcovers) that would be removed as part of the proposal and to repurpose these, for example, through donation to nurseries. This has been incorporated as an additional environmental safeguard for the proposal in Section 6 (refer to safeguard B28).

### 3.3.2 Consultation

#### Request for further updates/consultation

#### Issue description

Council requested the 80 per cent concept and detailed design are submitted to Council for review.

#### Response

Council has been given opportunity to provide feedback to the 50 per cent and 100 per cent concept designs for the proposal. An 80 per cent concept design was not prepared for the proposal. Transport would continue to consult with Council as the proposal progresses to the detailed design stage.

#### Issue description

Council requested meetings with Transport to discuss details about the following items prior to the determination report being finalised:

- Transport network
- Flooding models
- Stormwater management
- Heritage assessment.

#### Response

Transport would continue to consult and meet with Council as the proposal progresses to the detailed design stage, including in relation to these matters.

#### Issue description

Council requested a Community Consultation Strategy (CCS) is to be prepared and include (but not being limited):

- A project specific Communications Management Plan for construction activities should be submitted to Council for approval. The plan is to outline community consultation methodologies, approaches and timeline of consultation process and complaint handling process
- Where not already identified, consultation measures like advertisement in the local newspapers, Variable Message Sign (VMS) notification, local community and interest group consultation meetings should be considered
- Consultation processes should be established for key stakeholders such as Councils, Transport for NSW, CJP, Transport Management Centre, NSW Police and emergency services where not already established
- It is recommended a project traffic control workshop be established to provide regular project upgrades, approval requirements and major construction traffic disruption events within the surrounding area.

#### Response

In accordance with environmental safeguard SE1 (refer to Section 6) a Communication Plan would also be prepared by the contractor and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The CP would include:

- Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions. These mechanisms could include advertisement in local newspapers, VMS sign notification, consultation meetings, and others
- A complaint handling process, email and number for complaints
- Consultation processes for key stakeholders such as Council, emergency services and other relevant stakeholders, as required.

Environmental safeguard SE1 has been updated to clarify that the information above would be addressed in the Communication Plan.

The Traffic Management Plan would also include measures to manage potential traffic disruptions, including consideration of mechanisms to notify the community and stakeholders, and consideration of other developments that may be under construction.

### 3.3.3 Noise and vibration

#### Assessment methodology

##### Issue description

Council requested an independent consultant review the construction and operational noise assessment reports with the proposed noise mitigation measures with a copy of the review report being submitted to Council.

##### Response

The construction and operational noise assessments have been carried out using best practice methodologies which have been utilised on other nearby road projects. The reports were prepared by experienced consultants and were reviewed by Transport's own subject matter experts during their preparation.

### 3.3.4 Property and land use impacts

#### Impacts on future land use and/or proposed development

##### Issue description

Council noted that it received a mixed-use development application for 1400 to 1480 Elizabeth Drive Cecil Park, which shows a proposed deceleration lane off Elizabeth Drive as well as a service road running in parallel to Elizabeth Drive which may be affected by the proposed upgrade. Council advised that consultation is required with the landowners regarding the upgrade and associated access arrangement.

##### Response

A submission to the REF has been received from this landowner relating to this development application.

Transport have provided preliminary comments to Liverpool City Council regarding the planned development application, and will continue to provide comments and consult with the applicant (as required) through the development application referral process, and as this proposal progresses.

##### Issue description

Council noted that it is considering a planning proposal to rezone land to Heavy Industrial (E5) zone south of Range Road in Cecil Park. Council advised that this requires the upgrading of Range Road and the intersection of Range Road and Elizabeth Drive. Council recommended that the intersection design considers future upgrading requirements to facilitate the heavy industrial traffic generating from this zone.

##### Response

Transport would consult further with Council on this matter during the detailed design stage, given that the planning proposal is currently being considered by Council.

The concept design has considered the following design vehicles at and near the intersection of Elizabeth Drive and Range Road:

- The intersection has been designed with a 12.5-metre truck as the design vehicle, and checked to be able to accommodate a 19-metre semi-trailer
- The turning facility at the northern leg of Range Road has been checked to be able to accommodate a 19-metre semi-trailer
- The property access cul-de-sac accessible from Range Road has been checked to be able to accommodate 19-metre semi-trailer.

#### Issue description

Council noted that Martin Road is to be upgraded and forms part of the Eastern Bypass Road and the existing northern access road will serve the proposed mix-used developments. Council advised consultation is required with Penrith City Council regarding the future northern road connection to the Eastern Bypass Road/Martin Road intersection.

Additionally, Council requests a traffic demand analysis be carried out to determine the proposed intersection layout of the Eastern Bypass Road (i.e., Martin Road)/Elizabeth Drive.

#### Response

Martin Road (to the south of Elizabeth Drive) is planned to be a main road corridor in the Western Sydney International Airport Precinct Road Network, forming part of the future Eastern Ring Road. Eastern Ring Road is intended to provide a north-south freight, heavy vehicle and construction route between Elizabeth Drive and The Northern Road as well as a ring road for Western Sydney International Airport. The State Environmental Planning Policy (SEPP) for the Western Sydney Aerotropolis was released in 2021 which established the major transport corridors.

The proposal includes a new northern leg to Martin Road which extends Martin Road for about 100 metres. The new northern leg of Martin Road provides a connection to an existing access road (located on the northern side of Elizabeth Drive, to the west of Martin Road), as shown on Figure 3-14 of the REF.

Upgrade to Martin Road to form part of the future Eastern Ring Road does not form part of this proposal.

Penrith City Council would continue to be consulted during detailed design development of the proposal.

### 3.3.5 Proposal design and construction

#### Construction environmental management

#### Issue description

Council recommended that site, stage and event specific Construction Traffic Management plans (CTMPs) should be submitted to Council online via the e-planning portal for review prior to the commencement of any construction work. This should include but not be limited to CTMPs, Traffic Staging Plans (TSPs), Traffic Guidance Scheme (TGS), Vehicle Movements Plans (VMPs), VMS, detour plans and Pedestrian management plans.

Council advised work within the road reserve should not commence until the relevant TMPs, and associated TCP and VMPs have been endorsed.

The contractor should obtain Road Occupancy, Road Opening Permits, and work zone approval from Council for work/closure within local and regional roads prior commencing work.

#### Response

A Traffic Management Plan for the proposal will be prepared prior to construction as part of the CEMP, in accordance with environmental safeguard TT1 (refer to Section 6). The Traffic Management Plan will be prepared in accordance with Transport's (2022) *Traffic control at work sites Technical Manual* and *QA Specification G10 Control of Traffic* (Transport, 2020b).

The Traffic Management Plan would include:

- Confirmation of haulage routes
- Measures to maintain access to local roads and properties
- Site specific traffic control measures (including signage) to manage and regulate traffic movement
- Measures to maintain pedestrian and cyclist access
- Requirements and methods to consult and inform the local community of impacts on the local road network
- Access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads

- A response plan for any construction traffic incident
- Consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic
- Monitoring, review and amendment mechanisms.

The Traffic Management Plan would be prepared by the construction contractor and submitted to Council for information. Transport would take into account feedback received from Council as part of this process.

The construction contractor would obtain the required permits from Council prior to carrying out work on roads managed by Council.

#### Issue description

Council noted that final access arrangements for the project site have yet to be confirmed by the Construction Contractor and because of this the CTMP should be updated to include the following:

- Access arrangements for the construction compound, construction site and zone
- On-site construction car parking arrangement and traffic circulation
- Details regarding the need for a Road Occupancy Permit issued by Council or Road Occupancy Licence issued by Transport.

#### Response

A Traffic Management Plan for the proposal would be prepared prior to construction as part of the CEMP, in accordance with environmental safeguard TT1 (as outlined in Section 6), and would address these matters. The Traffic Management Plan will be prepared in accordance with Transport's (2022) *Traffic control at work sites Technical Manual* and *QA Specification G10 Control of Traffic* (Transport, 2020b).

#### Issue description

Council noted that the Driver Code of Conduct is to be prepared and included in the relevant CTMPs and vehicle movement plan (VMP) and traffic guidance scheme (TGS). Council noted that drivers should use the approved haulage routes and comply with the proposed access arrangements as per the approved CTMP, site specific CTMPs and TGS. Council advised that noise mitigation measures are required for drivers travelling along any local roads.

#### Response

Drivers are expected to use (and Transport would monitor compliance with the use of) approved haulage routes for the proposal (i.e. those outlined in the REF) and access arrangements for the proposal. These would be documented in the Traffic Management Plan and would seek to minimise the use of local roads where possible.

Noise and vibration environmental safeguards for the proposal are documented in Section 6. These include measures to manage noise from construction vehicles, such as the use of non-tonal reversing beepers (or an equivalent mechanism) on construction vehicles, measures to load and unload deliveries in a manner that minimise impact to sensitive receivers, and haulage routes would limit use of local roads, where possible.

#### Issue description

Council recommended that Construction Road Safety Audits be carried out for staging construction work and submitted to Council and Customer Journey Planning (CJP) for review prior to the commencement of the relevant construction work. Consideration is given to restrict some right turn movements into the construction compounds.

#### Response

Construction road safety audits would be prepared for staged construction works, as required, and submitted to Council for information where requested.

Indicative construction haulage routes are identified in Section 3.3.16 of the REF and have been designed to minimise use of local roads where possible. The Traffic Management Plan will detail a safe method to access to each construction ancillary facility.

## Construction methodology

### Issue description

Council noted that on-street assets such as footpaths should be always protected and noted that damages to Council's assets, if any, must be reported immediately to Council's Field Inspector on 1300 36 2170 and repairs must be carried out to Council's satisfaction at the applicant's cost.

### Response

Council's on street assets would be considered during construction planning by the construction contractor with the intention to avoid assets where feasible. Any damage would be reported to Council as requested, and appropriate repairs would be carried out.

### Issue description

Council requested a copy of Transport's road occupancy licences at least 10 days prior to any major traffic change events including partial or full road closures along state roads.

### Response

Transport's contractor would obtain road occupancy licences as required to carry out the proposal. These would be submitted to Council for information within at least 10 days prior to the work, subject to the licence being carried out.

### Issue description

Council requested consultation between Council, Transport for NSW and bus operators for affected bus routes and relocated bus stops.

### Response

Transport would carry out the requested consultation with Council, bus operators and other relevant parts of Transport to inform the detailed design stage and construction planning for the proposal. This would include consultation in relation to existing routes which operate on Elizabeth Drive (Route 801, 813 and school bus services).

### Issue description

Council requested consultation for any temporary construction speed limit changes with Liverpool Local Government Area.

### Response

Council would be consulted with and advised of temporary speed limit changes during construction.

### Issue description

Council requested a copy of the Traffic Incident Management Plan.

### Response

A Traffic Incident Management Plan would be prepared by Transport as part of the detailed design stage and can be submitted to Council for information.

### Issue description

Council requested to be informed of any complaints received and requested details of responses provided by the Transport project team and/or relevant contractors.

#### Response

A Communication Plan would be prepared for the proposal and implemented as part of the CEMP, which would include detail on the complaint handling process. The Communication Plan would be submitted to Council for information. Complaints during the construction period would be managed by the relevant contractor in accordance with the Communication Plan.

### Design clarification/discrepancies

#### Issue description

In regard to Figure 3-3 in the REF, Council requested that the proposed Elizabeth Drive/Devonshire Road/Salisbury Avenue and its northern extension consider the proposed future connection to the M12 Motorway and its interchange with Salisbury Avenue/Mamre Road.

#### Response

Consultation and coordination with the M12 Motorway project design has occurred throughout the development of the concept design for the proposal and would continue during the detailed design stage. The detailed design of the proposal would factor in the M12 Motorway project design.

Separately to the proposal, a Devonshire Link project is currently under investigation by Transport. This project would provide a key north-south connection for the Western Sydney International Airport Precinct, connecting Bringelly Road, Fifteenth Avenue, Mamre Road and Elizabeth Drive.

#### Issue description

Regarding Figure 3-6 in the REF, Council commented that the section of Elizabeth Drive is located within the M12/M7/Elizabeth Drive interchange. The design is to show the proposed on/off ramps to/from the M12 Motorway along Elizabeth Drive.

#### Response

At the eastern-most extent of the proposal (shown in Figure 3-6 in the REF), just past Duff Road, Elizabeth Drive would tie into the M12/M7/Elizabeth Drive interchange. The M12/M7/Elizabeth Drive interchange is subject to a separate planning approval (as part of the M12 Motorway project) and as such has not been shown on key features figures in the REF.

Detailed design of the proposal would include further refinement of the tie in to the M12/M7/Elizabeth Drive interchange.

### Lighting

#### Issue description

Council requested that the project assesses and includes potential lighting intensity impact on the airport operation during the construction and operational phase of Elizabeth Drive upgrade.

#### Response

Consultation has been carried out with Western Sydney International Airport throughout design development and would continue as the design progresses. This would include review of lighting impacts during the detailed design phase to ensure there are no adverse impacts to airport operations.

In accordance with environmental safeguard LV5, the location and direction of lighting required during construction would be carefully considered to ensure glare and light spill is minimised (refer to Section 6).

## Property access – operation

### Issue description

Council requested a copy of the access strategy for the proposed Elizabeth Drive upgrade. Council advised that it has a preference that the number of direct access(s) off Elizabeth Drive be minimised with future connections to adjacent local road networks.

### Response

An access strategy was prepared during early design development of the proposal. Community consultation was initially carried out in June 2019 to inform the community of the proposed access strategy for the proposal and invite feedback. The proposal design has since progressed with reference to the access strategy. Design options and criteria considered in the concept design development process are discussed further in Chapter 2 of the REF.

The proposal would seek to reinstate existing driveway access on a like-for-like basis, where it is feasible. The approach to reinstating impacted accesses would be further investigated in the detailed design stage following detailed topographic survey and consultation with impacted landowners and businesses.

Elizabeth Drive is a major arterial road, which carries a high volume of traffic, where transport safety and efficiency of through traffic is of great importance. It is Transport's current practice to limit the number of vehicular conflict points along the arterial road network to maintain network safety and efficiency. This current practice is reflected in Section 6.2.1 of Transport's current publication of the Guide to Traffic Generating Developments, which states 'access across the boundary with a major road is to be avoided wherever possible'.

Further consultation would be carried out with Council as the proposal progresses to the detailed design stage, including in regard to property access.

## Proposed utility scope

### Issue description

Council advised consultation is required with utility service stakeholders. A multi-utility service plan has been prepared for Western Sydney Aerotropolis precinct and some utility services will continue along Elizabeth Drive.

### Response

Transport notes the ongoing consultation with utility providers currently in place. Utility design and coordination would continue with various utility providers during detailed design.

## Provisions for public transport

### Issue description

Council requested that the bus bay is located on the departure side of the signalised intersection of Elizabeth Drive/Western Road.

### Response

Bus bays (with provisioning for a future bus stop) are proposed on the departure sides of both the eastern and western legs of the Elizabeth Drive / Western Road intersection.

Table 3-3 of the REF provides a description of the lane configuration for vehicles entering and leaving the Elizabeth Drive / Western Road intersection.

### Issue description

Council requested that the types of bus infrastructure (i.e., travel lane width, bus stop facilities and priority treatments) are to be reviewed based on its functions within the Western Parkland City.

#### Response

Separately to the proposal, Transport is planning new bus services to connect local communities to the Western Sydney International Airport and Bradfield City Centre, which would include additional services along Elizabeth Drive.

The proposal has been designed to include provision for future bus services along Elizabeth Drive. This includes priority treatments at signalised intersections and allowing space for future bus stops.

The next stage of design development would involve further consultation with relevant stakeholders, including local councils. The proposal would seek to ensure that upgrades to Elizabeth Drive continue to cater for planned bus services (separate to the proposal) along its alignment.

#### Issue description

Council requested consideration be given to identify the future bus routes within the area for any proposed bus priority treatments at intersections.

#### Response

While future bus routes are beyond the scope of the proposal, the design has included bus priority measures to support the provision of these routes.

The next stage of design development would involve further consultation with relevant stakeholders, including local councils, in relation to planned future bus routes. This consultation would seek to ensure that upgrades to Elizabeth Drive continue to cater for planned bus services along its alignment.

### Road cross section

#### Issue description

Council advised that a shoulder lane should not be provided at intersections as typical sections (Figures 3-7 to 3-9 of the REF) show that through lane width varies between 3.5 and 3.7 metres.

#### Response

The typical section of the proposal at chainage 3800 (Figure 3-8 of the REF) is taken around a curve. In this location, a curve widening of 0.2 metres is required to accommodate for the design vehicle (26-metre B-double) for a radius of 400 to 500 metres, resulting in a lane width increase from 3.5 to 3.7 metres. This is in accordance with relevant Austroads standards.

The 2.5 metre shown on this figure develops into a left turn lane approaching the intersection. A road shoulder is not provided at intersections.

#### Issue description

Council recommended that the Elizabeth Drive carriageway varies between 49.5 metres and 54.2 metres, which will require two-stage pedestrian crossing. Council advised that consideration should be given to reduce the carriageway width and footprint of Elizabeth Drive to improve the north-south active transport connectivity across Elizabeth Drive. Council recommended that the intersections be redesigned to decrease the crossing length, and thereby provide for a single stage crossing.

#### Response

The design has sought to balance provisions for both vehicular and pedestrian movements. The proposed width of the carriageway is driven by a need to safeguard for an additional third lane, noting that Elizabeth Drive serves as a major east-west road corridor, and a key driver for the proposal is to accommodate for an increase in traffic demand along the corridor. As such, there is limited opportunity to reduce the carriageway width further. Transport plans to adopt two stage pedestrian crossings to enable safe pedestrian movement across the road corridor, taking into account the width of the road corridor and vehicle speed.

## Shared path design

### Issue description

Council recommended that crossing treatments are provided for cyclists at signalised intersections. Council noted that 4.5 metre shared paths are provided along both sides of Elizabeth Drive and consideration should be given to provide separate pedestrian and cycling paths by installing either a median or level difference between two of them.

### Response

Crossing treatments would be included in detailed design, taking into account Council's comments.

The concept design for the proposal includes a shared walking and cycling path with separate lanes for pedestrians and cyclists, which would be delineated by line marking. Detailed design would continue to ensure that appropriate separation is provided between pedestrians and cyclists.

## Signage

### Issue description

Council requested a copy of the proposed signage strategy and plans including advice signage and CTMP signage should be submitted.

### Response

A detailed signage plan would be prepared as part of the detailed design for the proposal. Once prepared, a copy of the plan can be provided to Council for information.

The Traffic Management Plan for the proposal would include specific traffic control measures (including signage) to manage and regulate traffic movement. The Traffic Management Plan would be prepared by the construction contractor and submitted to Council for information.

## Speed limits

### Issue description

Council requested that some posted speed limits along local streets are reviewed in consultation with the relevant councils.

### Response

Transport will investigate the need to amend the speed limits during the next stage of the design development.

## Urban design and landscaping

### Issue description

Council recommended that the project include measures to mitigate the risk of urban heat. Council noted that, to achieve the objectives of the Greater Sydney Region Plan for 'a cool and green Parkland City in the South Creek corridor' and 'to increase urban tree canopy cover', tree canopy is to be provided to achieve a minimum of 40 per cent tree canopy cover at maturity, measured as a percentage of the area of the road reserve. Council recommended to retain and supplement trees (as practicable) along the road corridor so that they provide green linkages and contribute to tree canopy cover.

### Response

Transport acknowledges that urban heat is an ongoing risk in Western Sydney. The detailed design of the proposal would continue to examine opportunities to increase tree canopy in the corridor, including between the kerb and shared path, that address safety sight distances, utility requirements and clear zones requirements.

#### Issue description

Council advised that the project should consider appropriate landscaping species in the context of aircraft safety and to minimise risk of attracting wildlife close to the Airport. Appropriate landscape species selection and design are to be adopted to manage the risk associated with wildlife.

Council recommended that trees and medium height shrubs should be placed between the footpath / cycleway and traffic lanes to increase pedestrian / cyclists' comfort (being located close to fast-moving traffic). Consideration should still be given to sight lines from vehicles exiting driveways, and side-streets.

#### Response

Initial landscaping species for the proposal have been selected with reference to the Western Sydney Aerotropolis Development Control Plan (DPIE, 2022). Landscaping would be subject to further detailed design development including consideration of the matters raised by Council. Species would be selected which minimise risk of bird strike (including endemic species where possible) as well as to provide shade along the shared path where possible.

#### Issue description

Council advised that to minimise impervious surface coverage and contribution to urban heat, it supports the use of low growing native grasses in place of pavement / concrete for raised medians and traffic islands. Council suggested that this mix replaces additional concrete paving in areas up to the path of travel that pedestrians would utilise in crossing medians and left-turn traffic islands. Council also noted that concreted areas should only be utilised on non-vehicular areas where low lying shrubs will have a low survival rate, or where pedestrian circulation is being facilitated.

#### Response

Landscaping would be carried out along the length of the proposal within the central median and the nature strip separating traffic lanes from the shared walking and cycling paths. Landscaping would be subject to detailed design and would aim to maximise the use of locally endemic native species and minimise risk of bird strike.

Detailed design would include review of further opportunities for the use of landscaping (such as low growing native grasses) in place of pavement/concrete for raised medians and traffic islands, taking into account Council's comments.

#### Issue description

Council advised that the landscape plan should show areas of paving extending to the kerb at locations where bus stops are present. Council recommends that consideration be given to stormwater drainage to ensure buses do not spray water at by standing pedestrians.

#### Response

Landscape plans presented in the REF are indicative only and subject to detailed design development. Council's recommendations would be reviewed and adopted where feasible at the detailed design stage; however, the design of bus stops is not within the scope of this proposal.

#### Issue description

Council requested clear trunked trees should be planted in any median or traffic island greater than 1.5m in width to provide shade and further reduce urban heat emissions (particularly within the proximity of intersections where pedestrians will be waiting at signals).

#### Response

This requirement would be reviewed during further design development, taking into account Transport's standards/guidelines for median planting and noting that tree selection in the median must also consider road safety constraints.

The detailed design of the proposal would continue to examine opportunities to increase tree canopy in the corridor, including between the kerb and shared path, that address safety sight distances and clear zones requirements.

### 3.3.6 Socio-economic

#### Impacts on recreational space

##### Issue description

Council recommended that the project is to include impact assessment of the loss of recreational land and sports facility on local community. Community recommended that alternative recreation and sports facilities are to be made available for the community and the relevant sports associations during the construction and operational phase of the road.

##### Response

Socio-economic impacts associated with the use of Bill Anderson Reserve during the construction and operation of the proposal, as well as impacts to the Kemps Creek Sporting and Bowling Club are assessed in Section 6.7 and Appendix J of the REF.

Transport acknowledges concerns raised about the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club. Transport is committed to reducing the proposal's impact on Bill Anderson Reserve and the Kemps Creek United Soccer Club by relocating construction ancillary facility 2 (identified in Figure 3-21 of the REF) and investigating opportunities to further reduce the amount of land that is proposed to be permanently acquired by the proposal. These commitments have been included as additional environmental safeguards GEN5 and GEN6 for the proposal.

### 3.3.7 Soils and contamination

#### Mitigation measures

##### Issue description

Council recommended that the Phase 2 site investigation be carried out such that preliminary work safeguards are satisfied before work commences.

Council advised that the Phase 2 investigation must include chemical/physical assessment of erodibility conditions (sodicity) and soil aggressivity.

Import of materials to meet negative cut/fill balance is expected. Section 3.3.20 of the REF mentions materials meeting quality requirements; however, Council requests that the REF advise the need for validation of all material imported to site from a contamination perspective.

Council also advised that the safeguards identified in the REF in relation to soils and contamination must be satisfied.

##### Response

A Phase 2 Contamination Assessment (detailed site investigation) will be carried out during detailed design prior to the commencement of construction work in potentially contaminated land. In accordance with environmental safeguard GSC1 (refer to Section 6), the Phase 2 Contamination Assessment will include the collection of samples of fill material, fly tipped waste (if present) and soil from areas of current and former agricultural land. It will be carried out via test pitting along the alignment and at areas known to be construction staging areas or ancillary facilities to characterise the material. Given the length of the alignment, samples collected are to focus on any areas that may indicate signs of potential contamination as well as area coverage.

Appropriate assessment of the properties/condition of soil within the construction footprint would be carried out by the contractor during geotechnical investigations for the proposal, taking in account Council's comments. This would be necessary to inform the construction of the proposal.

Validation of material imported to site is anticipated to be managed via a Fill Importation Protocol, which would be reflected in the CEMP. The management of validation of material imported to site would be confirmed by the construction contractor for the proposal.

Transport is committed to implementing all environmental safeguards identified for the proposal in Section 6.

### 3.3.8 Traffic and transport

#### Parking impacts

##### Issue description

Council advised that any removals of on-street parking must be approved by Council prior to the implementation. Council noted that community consultation and notification are required for the on-street parking removals

##### Response

The proposal does not include removal of on street parking as there is no formal on street parking currently provided in the proposal area. Council would, however, be notified of public parking removal (should this be required) in the Liverpool City Council LGA in accordance with the Traffic Management Plan which would be developed for the proposal. The relevant landowner would also be notified of any temporary parking removal in accordance with the Traffic Management Plan.

#### Operational impacts

##### Issue description

Council requested that a copy of the traffic modelling analysis report be submitted to Council for review which demonstrates that wide road network connections and planned land uses are considered as part of traffic modelling analysis for the Elizabeth Drive upgrade.

##### Response

The proposal has been designed to support future planned growth and address potential future capacity constraints on the surrounding road network. The REF takes into account future regional land use, population growth and traffic growth. Section 2.1.5 of the REF outlines how the proposal aligns with the Greater Sydney Region Plan – A Metropolis of Three Cities (Greater Sydney Commission, 2018a) and Western City District Plan (Greater Sydney Commission, 2018b).

Transport considers the traffic assessment carried out for the REF to be sufficient for the assessment of environmental impacts in the REF. A key objective of the traffic assessment in the REF is to assess the proposed upgrades to Elizabeth Drive in future years, ensuring they can effectively manage anticipated traffic increases and overcome potential capacity constraints along the Elizabeth Drive corridor. The traffic modelling methodology was developed with regard to the likely impacts of the proposal as well as the proposal's objectives as set out in Section 2.3.1 of the REF.

The forecasts for future traffic volumes are based on data from the SMPM. The SMPM is a strategic traffic model that covers the Greater Sydney road network. The SMPM traffic demands served as a foundational input for the detailed microsimulation traffic models which were used in the assessment. The SMPM models projected the traffic growth along Elizabeth Drive, with an expected average increase of 4.6 per cent annually from 2018 to 2030 and 2040. The SMPM model incorporates the demographic growths and prospective land use changes within the Sydney Metropolitan area. The model also incorporates major road upgrades planned for the metropolitan network.

The outputs of the model are documented in the traffic assessment in Appendix F of the REF. Transport will assess the need to further review the traffic model as the proposal progresses to the detailed design stage, taking into account proposal timeframes. Further consultation would be carried out with Council as the proposal progresses including in relation to traffic.

### 3.4 Penrith City Council

While Penrith City Council did not make a formal submission to the REF, comments provided to Transport via email on 5 December 2023 as part of ongoing consultation have been addressed as part of this Submissions Report for completeness. Council have since confirmed to Transport that a number of issues raised via email have been addressed. These have not been reproduced below.

Penrith City Council provided comments relating to both the Elizabeth Drive East Upgrade and the Elizabeth Drive West Upgrade. Matters that specifically refer to Elizabeth Drive East Upgrade, or both proposals generally, are addressed below.

Matters specific to the Elizabeth Drive West Upgrade have been responded to in the Elizabeth Drive West Upgrade Submissions Report (Transport, 2024).

### 3.4.1 Proposal design and construction

#### Property access – operation

##### Issue description

Council commented that several properties along Elizabeth Drive will be impacted by the proposed median which will impose a left-in/left-out arrangement. This impacts the amenity of these properties which currently feature unrestricted access.

Council commented that these properties need to be consulted, with supporting evidence of consultation and subsequent responses provided by Transport. Council also noted that the existing turning bays delivered with The Northern Road upgrade near its intersection with Elizabeth Drive are at too great a distance to appropriately address property access.

Council noted that additional U-turn facilities may be required post consultation as there are limited U-turn opportunities with the current proposal.

##### Response

Transport acknowledges that, while the introduction of a central median on Elizabeth Drive would result in changes to property access, the central median is a key safety feature of the proposal that is required to reduce risk of head on crashes in a high-speed road environment.

During the REF display period, door knocking was carried out by the project team at directly affected residences. Personal Relationship Managers Acquisitions (PRMAs) and project team representatives, door-knocked about 69 privately owned residential properties and small businesses. The door knocking was carried out to inform directly affected landowners about the proposal and encourage these stakeholders to make a submission. The door-knocking was completed over a four-day period. Where a landowner was not present, PRMAs left a Community Update and a "Sorry We Missed You" flyer asking for a call back. In addition to the material left at premises, affected property owner letters were posted out informing the owners of the REF display and asking them to contact Transport to discuss property impacts. Follow up door knocks were not required as the majority of the residents responded to the "Sorry We Missed You" flyer, or attended the community consultation sessions. The landowners that could not be reached via the door-knocking were reached during the information sessions (see below for details), via phone, letter sent in the post and/or email.

Other consultation carried out during the REF display period are included in Section 1.2 and Appendix A (Consultation). Transport would continue to consult with property owners during detailed design regarding property access.

Several existing and proposed U-turn facilities would be available along the length of the proposal to enable vehicles to change their direction of traffic. An assessment of travel time impacts associated with the proposed U-turn facilities and proposed turning arrangements is provided in Appendix F of the REF. The travel time assessment carried out provides high level information on the potential impacts of the proposal on the travel time needed for local access.

The results indicate that in general, with the central median restricting access to properties via a right hand turn from the opposite side of Elizabeth Drive, the proposal would increase travel time needed to access those properties in Year 2030 and Year 2040 conditions. A maximum increase of about 104 seconds is estimated for property access between Western Road and Martin Road (Section 1) when travelling in the westbound direction in Year 2040 scenarios. This would present a minor increase in travel time for vehicles travelling westbound to access Kemps Creek shops. On this basis, Transport considers the impacts associated with changes to travel time during operation of the proposal to be acceptable.

#### Provisions for public transport

##### Issue description

Council commented that a dedicated bus lane for the rapid bus service should be provided along Elizabeth Drive in each direction as an interim measure until the delivery of the M12 Motorway. Council suggested that this would allow the bus lane to be converted to a traffic lane post M12 Motorway delivery, thus enabling Elizabeth Drive's expansion to a six-lane roadway without the removal of the central median.

Council notes that while there is no existing rapid bus service on Elizabeth Drive, the strategies presented in Section 2.1.5 of the REF identify Elizabeth Drive as a key public transport link for Western Parkland Cities, Western Sydney International Airport and Aerotropolis. The Western Sydney Aerotropolis Precinct Plan also identifies Elizabeth Drive as a rapid bus corridor. Council commented that the current proposal for a four-lane roadway with no dedicated bus lane is not consistent with the objectives of the strategies referred to in the REF.

Council commented that delivery of six lanes (including two dedicated bus lanes) at the initial stage rather than the proposal of four-lanes with provision for future widening within the median will improve future public transport serviceability upfront which will then encourage public transport uptake, reduce private car use and eventually take away potential need for further additional traffic lanes for increased traffic.

#### Response

The proposal would upgrade Elizabeth Drive road from two lanes to four lanes increasing its capacity and ability to support additional traffic volumes. A wide central median would allow for future expansion to six lanes if required in future.

The operational traffic assessment in Appendix F of the REF indicates that the proposed upgrades of Elizabeth Drive (within the proposal area) to four lanes are expected to generally improve traffic conditions in the study area in both 2030 and 2040, particularly in the PM peak hour. The upgrades would reduce delays, increase the average speed across the network and accommodate the majority of the future traffic demands. As such, expansion to six lanes (including two dedicated bus lanes) is not considered to be required at this point in time to meet the current forecast traffic growth. Subject to future design development and assessment, the potential future expansion to six lanes is not anticipated to require the complete removal of the central median. The concept design has safeguarded the third lanes with sufficient width to operate as bus lanes, if required based on demand in the future.

Transport acknowledges the importance of future rapid bus routes which would utilise Elizabeth Drive. The proposal has been designed to include bus priority infrastructure including queue jump lanes at intersections and active transport connections, to support future bus routes along Elizabeth Drive. At this stage standalone bus lanes are not proposed along Elizabeth Drive. Operational requirements of the road will continue to be considered in future as the proposal becomes operational.

Bus stop infrastructure is not within the scope of this proposal and would be provided separately in consultation with the relevant local council(s).

### Shared path design

#### Issue description

Council in its email presented the following recommendations regarding the design of shared paths along Elizabeth Drive:

- Future upgrades should provide separated bike lanes and walking paths to enhance commuting by bike and provide separation between road users (pedestrians, bikes, vehicles)
- The design should comply with the current Transport specification and Cycleway Design Toolbox
- The proposed shared paths need to merge appropriately with the existing shared path at The Northern Road intersection
- The detailed design should include adequate buffer (landscaping etc.) between the shared path and adjacent travel lane, considering the travel speed of 80 kilometres per hour along Elizabeth Drive
- A shade/canopy should be provided along the walking/cycling paths, and landscaping (including trees) provided on the outer side of the active transport along the route
- Detailed design should consider locations for rest stops with ancillary facilities for pedestrians/cyclists.

#### Response

The proposal would include walking and cycling paths to provide a safer path of travel for pedestrians and cyclists, particularly next to a high-speed environment where there are no existing formal footpaths. Separated sections on these paths would be provided for cyclists and pedestrians. The walking and cycling paths for the Elizabeth Drive upgrades would tie in and complement existing/planned shared paths on adjacent roads, including The Northern Road and the M12 Motorway.

Detailed design of the path would be carried out with reference to relevant specifications and guidelines including Transport's Cycleway Design Toolbox, which includes safety related considerations. As part of the next stage of design, a detailed road safety audit will be prepared. This will include monitoring the walking and cycling paths, and other components of the proposal, and will suggest measures to eliminate or manage safety risks identified where necessary.

The shared paths planned as part of the Elizabeth Drive West Upgrade would tie into the shared paths at The Northern Road. Detailed design for the Elizabeth Drive West Upgrade would seek to ensure the paths tie in appropriately.

A landscaped nature strip would be provided to separate users of the pedestrian and cyclist paths from the road corridor. The landscaping proposed would not include shade or canopy structures. Landscaping provided as part of the proposal is subject to further detailed design development, which would include consideration of Council's comments. Landscaping for the proposal would take into account a range of factors such as amenity, road safety, and proximity to the Western Sydney International Airport. The landscaping for the proposal would need to comply with relevant requirements for planting in proximity to the Western Sydney International Airport. While landscaping would be provided along the shared paths, shade or canopy structures are not proposed.

Rest stops for pedestrians and cyclists are not currently included as part of this proposal.

Transport will continue to consult with Council during detailed design development, including in relation to landscaping and active transport.

## Road cross section

### Issue description

Council commented that in situations where pedestrians cross three sets of traffic control signals (or more), this provides poor pedestrian amenity and priority that can result in people failing to wait to observe the green pedestrian symbol (crossing against the red). It is requested that Transport review pedestrian design including but not limited to, slip lane traffic symbols, and pedestrian green time phasing.

### Response

All signalised crossings would be compliant with current design guidelines and standards. As part of the next stage of design, a detailed road safety audit will be prepared. This will include review of the proposed pedestrian crossings, and other components of the proposal, and suggest measures to eliminate or manage safety risks identified where necessary.

### Issue description

Council commented that the proposed intersections layouts will require pedestrians to cross up to five to seven traffic lanes in a single phase which is a considerable crossing time.

Council commented that there is no evidence presented in the Traffic and Transport Assessment Report that the required crossing time (at signalised pedestrian crossings) has been reflected in the model. Council noted that changing the pedestrian phase times could impact the traffic modelling results.

### Response

The design has sought to balance provisions for both vehicular and pedestrian movements. The proposed width of the carriageway is driven by a need to safeguard for an additional third lane of traffic.

Transport plans to adopt two stage pedestrian crossings across Elizabeth Drive to enable safe pedestrian movement across the road corridor, taking into account the width of the road corridor and vehicle speed. Pedestrians would not be required to cross the entire length of the road corridor in a single phase.

It is noted that the Elizabeth Drive corridor (within and around the proposal area) is presently surrounded by greenfield, semi-rural and low-density land uses. While growth is anticipated along the corridor, Elizabeth Drive is still anticipated to be a key movement corridor for vehicles in future, providing access to the future Western Sydney International Airport and Western Sydney Airport Precinct. Given the nature of current and anticipated developments along the corridor, it was presumed that pedestrian movements at intersections would be limited, and the activation of pedestrian crossing phases during peak traffic periods would be infrequent. Consequently, any delays to vehicular traffic caused by pedestrian protection measures during these times are anticipated to have minimum impacts on the overall performance outcomes for intersections within the

corridor. Signal timings reflected in the traffic models are preliminary and have been formulated to guide infrastructure planning based on the information available during the concept design preparation and model development.

Detailed design development will continue to consider pedestrian movements and provide for safe pedestrian crossing opportunities. As part of the next stage of design, a detailed road safety audit will be prepared. This monitor components of the proposal such as pedestrian crossing infrastructure, and will suggest measures to eliminate or manage safety risks identified where necessary.

Transport will continue to consult with Penrith City Council as the proposal progresses.

## Other issues

### Issue description

Council commented that while Transport's general response to issues previously raised by Council is that those will be addressed in detailed design, some key concerns including consideration to pedestrians/cyclists crossing and facilities and further details on the traffic modelling to assess impacts to local roads should be addressed prior to detailed design as addressing these issues could require significant changes to the proposed design.

### Response

The REF has been prepared based on a concept design and would be subject to further refinement in the next stage of design development (detailed design), based on additional inputs such as detailed topographical survey, and community and stakeholder feedback.

Design refinements may be identified during detailed design development, based on the additional inputs available in this stage and community and stakeholder feedback. If required, refinements to the proposal would be subject to further environmental assessment and consultation with relevant stakeholders. Transport considers this approach to be appropriate.

## 3.4.2 Traffic and transport

### Operational impacts

#### Issue description

The Traffic and Transport Assessment Report does not include modelled layout of intersections and road network to verify if the proposed design is consistent with the traffic model. The report also does not present the queuing results to determine what the impacts of the proposal will be particularly on local roads and functioning of proposed travel lanes.

#### Response

Traffic modelling carried out for the proposal incorporates the intersection layouts along Elizabeth Drive as per the concept design (on which the REF is based). Transport will continue to consult with Council during the next stage of design development, including in relation to traffic impacts of the proposal.

#### Issue description

The Traffic and Transport Assessment report does not provide adequate information on how the traffic volumes in the future traffic modelling scenarios were forecasted. It is noted that based on the comparison of 2015 and 2018 traffic volume surveys presented in the report, the traffic growth on Elizabeth Drive reached up to 18%.

#### Response

The proposal has been designed to support future planned growth and address potential future capacity constraints on the surrounding road network. The REF considers future regional land use, population growth and traffic growth.

A key objective of the traffic assessment in the REF is to assess the proposed upgrades to Elizabeth Drive in future years, ensuring they can effectively manage anticipated traffic increases and overcome potential capacity constraints along the Elizabeth Drive corridor.

The forecasts for future traffic volumes are based on data from the Sydney Strategic Motorway Planning Model (SMPM). The SMPM is a strategic traffic model that covers the Greater Sydney road network. The SMPM traffic demands served as a foundational input for the detailed microsimulation traffic models which were used in the assessment.

The SMPM models projected the traffic growth along Elizabeth Drive, with an expected average increase of 4.6 per cent annually from 2018 to 2030 and 2040. The SMPM model incorporates the demographic growths and prospective land use changes within the Sydney Metropolitan area. The model also incorporates major road upgrades planned for the metropolitan network.

According to the operational traffic assessment, the additional capacity offered by proposal would generally improve traffic conditions along Elizabeth Drive in both 2030 and 2040, particularly in the PM peak hour. The upgrades are expected to reduce delays, increase the average speed across Elizabeth Drive and accommodate the majority of the future traffic demands.

## Construction impacts

### Issue description

It is estimated that the proposal will generate up to 200 light vehicles and 70 heavy vehicles one way in each construction peak period. It is also assumed that only 25 construction vehicles will be generated during the road network peak hours (7am-8am and 4pm-5pm) as the peak construction movements (6am-7am and 6pm-7pm) are outside these periods. This estimate seems to be too low in comparison to the total construction traffic (25 vehicles vs 270 vehicles) and there is no evidence to support this assumption.

A more detailed CTMP must be prepared to assess construction impacts on surrounding road network with consideration of proposed construction staging, speed limit reductions etc

### Response

Construction traffic volumes have been estimated based on the scale of the proposal and the likely materials and earthworks required, however the exact volumes would be subject to detailed construction planning. Construction traffic would be distributed across different times of the day, across the construction ancillary facilities and along the proposal alignment, depending on the stage of construction and progression of construction activities.

It is estimated that construction of the proposal would generate 200 light vehicles per day (generally associated with workers) and 70 heavy vehicles per day. The majority of light vehicle movements are expected to arrive and/or depart the construction sites outside the AM and PM peak hours and during the hours of 6-7am and 6-7pm.

A detailed Traffic Management Plan would be prepared and implemented to manage traffic impacts of the proposal, in accordance with environmental safeguard TT1 (refer to Section 6). This would include relevant measures to minimise construction traffic during peak periods.

Transport will continue to consult with Penrith City Council as the proposal progresses, including in relation to construction traffic management.

## Parking impacts

### Issue description

Council requested that Transport that loss of parking spaces associated with construction activities are minimised, and there is no loss of parking spaces once the construction is completed.

### Response

The proposal does not include removal of on street parking as there is no formal on street parking currently provided in the proposal area. Indicative impacts to off-street parking are summarised in Section 6.2.3 of the REF and include removal of parking spaces where the proposal area extends into properties.

It is anticipated that these parking impacts would be temporary in nature and would be reinstated where feasible, or alternative parking arrangements made in consultation with landowners, after the completion of construction. During detailed design, Transport would carry out a detailed parking assessment, which would include consultation with affected businesses

and property owners to identify suitable alternative parking arrangements (refer to environmental safeguard TT6 in Section 6). Alternative parking arrangements would include the provision of accessible parking where required.

## 3.5 Sydney Water

Sydney Water submitted a consolidated submission for both the Elizabeth Drive East Upgrade and the Elizabeth Drive West Upgrade. Matters that specifically refer to Elizabeth Drive East Upgrade, or both proposals generally, are addressed below. Matters specific to the Elizabeth Drive West Upgrade have been responded to in the Elizabeth Drive West Upgrade Submissions Report (Transport, 2024).

### 3.5.1 Consultation

#### Issue description

Sydney Water raised the following issues relating to further consultation:

- Transport should continue to consult with Sydney Water (as the Regional Stormwater Manager) and NSW Department of Planning and Environment (now the Department of Planning, Housing and Infrastructure) during detailed design about maintenance access it requires to permanent stormwater infrastructure and connections from Elizabeth Drive
- Transport is to consult with Department of Planning and Environment (now Department of Planning, Housing and Infrastructure) and Sydney Water about the proposal's ability to meet NSW Government waterway health targets. This consultation should occur before detailed design commences
- Transport is to consult with the Western Sydney Aerotropolis integrated water team about the proposal's surface water management. There are new stormwater quality targets that are being established for the proposal area that the project would need to be designed to achieve.

#### Response

Transport has consulted with Sydney Water during concept design development for the proposal, which included providing Sydney Water the opportunity to comment on the 50 per cent and 100 per cent concept designs for the proposal. Transport acknowledges the need to continue the consultation process and advises Sydney Water to consult with the Elizabeth Drive Upgrade project directly to discuss any planned work that may impact the project.

Transport would continue to consult with Sydney Water and the Department of Planning, Housing and Infrastructure throughout detailed design development. This would include consultation in relation to water quality targets for the proposal.

The detailed design stage will also involve consultation with Sydney Water, the Western Sydney Aerotropolis integrated water team and the Department of Planning, Housing and Infrastructure regarding water quality targets, as required.

Further detail on Transport's response to issues raised regarding water quality targets is provided in Section 3.5.4.

### 3.5.2 Hydrology and flooding

#### Assessment methodology

#### Issue description

Sydney Water raised the following issues related to the hydrology and flooding assessment:

- Sydney Water noted that current wastewater pipe designs are coordinated closely with 1% Annual Exceedance Probability (AEP) flood boundaries. Sydney Water advised that any changes to the 1% AEP flood boundary as a result of the upgrade need to be highlighted to Sydney Water as they may affect the design of four wastewater pipelines which cross Elizabeth Drive
- Sydney Water noted that flood modelling should be validated against the INSW Wianamatta South Creek Catchment Flood Study Existing Condition (INSW, 2022) to ensure that the flood impacts align with those adopted by Department

of Planning and Environment (now Department of Planning, Housing and Infrastructure) in planning for the Aerotropolis.

#### Response

The flooding assessment in the REF was prepared for the concept design for the proposal, and utilised limited topographical survey, including LIDAR survey outside the existing road corridor. In accordance with environmental safeguard FH2, floor level surveys will be carried out at buildings within the modelled area, to ascertain ground floor heights, during the detailed design stage. Topographical survey will also be carried out during detailed design. Based on receipt of this additional survey information, further flood assessment would be carried out to consider the impact of the detailed design of the proposal.

Transport is committed to consulting with Sydney Water as the design of the proposal progresses, including in relation to any further flooding assessment associated with the detailed design. Sydney Water would be informed of further flood assessment for the proposal which could result in changes to flood assessment boundaries.

The INSW Wianamatta South Creek Catchment Flood Study differs in extent from the flood assessment carried out for the concept design of the proposal, which is primarily focused on the Elizabeth Drive Road corridor. The flood model for the proposal has not been validated against the flood study, as they are catered for different areas. The Wianamatta South Creek Catchment Flood Study is a wider regional investigation whereas the flood study included as part of the REF is catered around the Elizabeth Drive East Upgrade.

The proposal area interfaces with the study area for the INSW Wianamatta South Creek Catchment Flood Study around Badgerys Creek. The results of flooding assessment for the proposal show immunity of the road corridor (in the existing and design case) around Badgerys Creek for events up to the 1 in 2,000 AEP flood event, where it interfaces with the study area for the INSW Wianamatta South Creek Catchment Flood Study. Given the flood immunity and limited flood extents predicted in this location, the introduction of the proposal in the area is not anticipated to substantially affect the results of the INSW Wianamatta South Creek Catchment Flood Study.

As noted above, further assessment would be carried out in the detailed design stage, informed by topographical survey and floor level surveys. Where additional assessment is prepared in the detailed design stage, Transport would review the need to validate this assessment against other flood studies.

### 3.5.3 Proposal design and construction

#### Interface with utilities

##### Issue description

Sydney Water made the following comments relating to the interface of the proposal with utilities:

- Advised that, depending on the timing of construction, enveloper pipes under the road corridor may be required at four locations. Sydney Water advised that this would only be required if Elizabeth Drive upgrade work was to occur before Sydney Water pipeline installation
- Advised that bridge pile locations will need to be coordinated with pipeline locations
- Advised that at a number of locations there are conflicts with the stormwater infrastructure as mapped in the DPE planning instruments. These should be discussed between Transport and Sydney Water.

##### Response

Transport provided updates to Sydney Water on the concept design throughout its development, which has included sharing the 50 per cent and 100 per cent concept design with Sydney Water.

Transport would continue to consult with Sydney Water throughout detailed design development and construction planning. This would include updates on the likely timing of construction of the proposal, and potential implications for Sydney Water assets and infrastructure (including future pipelines under the road corridor).

The proposed location of bridge piers would be as per the 100 per cent concept design.

Transport would continue the consultation process throughout the next stage of design development, to coordinate future planned pipelines, discuss the potential conflict of infrastructure and agree on a resolution to each potential conflict. However, Transport notes that at this stage in the design, there is limited opportunity to substantially change the alignment of the proposed upgrade and hence highlights the need for Sydney Water to avoid potential conflict with the proposed upgrade.

### 3.5.4 Water quality and soils

#### Assessment methodology

##### Issue description

Sydney Water raised the following issues relating to the water quality assessment methodology:

- Sydney Water advised that water quality assessment should be updated to align with the Department of Planning and Environment (now Department of Planning, Housing and Infrastructure) targets specified in *Technical guidance for achieving Wianamatta–South Creek stormwater management targets* (DPE, 2022)
- Transport is to consult with the Western Sydney Aerotropolis integrated water team about the proposal's surface water management. There are new stormwater quality targets that are being established for the proposal area that the project would need to be designed to achieve
- Transport is to consult with Department of Planning and Environment (now Department of Planning, Housing and Infrastructure) and Sydney Water about the proposal's ability to meet NSW Government waterway health targets. This consultation should occur before detailed design commences.

##### Response

The water quality assessment in the REF has been prepared with reference to Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2018) water quality guidelines. Transport would review the need for further water quality assessment as the proposal progresses to detailed design.

MUSIC modelling was carried out for the REF to quantify the effectiveness of the proposed stormwater treatment measures on water quality. The results are summarised in Section 6.9 and Appendix L of the REF. This assessment showed that the proposal would likely result in a substantial reduction of total suspended solids (60 per cent) and total phosphorus (38 per cent), with minor reductions in total nitrogen (six per cent) pollutants in comparison to the existing condition and, therefore, would be of overall benefit to the receiving environment.

The following pollutant reduction targets were adopted at the concept design stage for the proposal:

- Total Suspended Solids: 85 per cent
- Total Phosphorus: 60 per cent
- Total Nitrogen: 45 per cent
- Gross Pollutants: 90 per cent.

These targets were adopted based on a review of a number of specifications, documents and policies including Council water sensitive urban design policies, Greater Sydney Commission targets and Transport pollutant reduction targets. The treatment targets would be applied to the extent where practicable and feasible, taking into account the environmental constraints and the need for the proposal to minimise private property acquisition.

Transport considers the water quality targets adopted for the concept design to be appropriate. However, the detailed design stage would involve review of recent NSW Government water quality targets and consider the need to adopt these as appropriate.

The detailed design stage will also involve consultation with Sydney Water, the Western Sydney Aerotropolis integrated water team and the Department of Planning, Housing and Infrastructure regarding water quality targets, as required.

Transport has consulted with Sydney Water during concept design development and would continue to do so as the design progresses. Transport acknowledges the need to continue the consultation process and advises Sydney Water to consult with the Elizabeth Drive Upgrade project directly to discuss any planned work that may impact the project.

## Surface water impacts – construction

### Issue description

Sydney Water advised that if there are no other discharge options – approval and discharge criteria from Sydney Water must occur prior to discharge of water to the wastewater system. Sydney Water noted that otherwise, a tanker by a licensed waste contractor and disposal off-site to an appropriately licensed facility (with permission) would be required.

### Response

Transport acknowledges Sydney Water's comments. Processes to manage construction and operational water discharges would be documented in the Soil and Water Management Plan (which would form part of the CEMP) and relevant operational management procedures for the proposal.

## 3.6 Water NSW

### 3.6.1 Proposal design and construction

#### Property access

##### Issue description

Water NSW noted that, due to the work not directly impacting its lands or assets, it has no particular comment to make about the proposal at this point in time.

Water NSW noted the improved access at Range Road, and appreciates this inclusion, as it will ensure adequate access is maintained for Water NSW to the Upper Canal Corridor. Water NSW advised that maintaining access to their lands and assets from Elizabeth Drive is essential for Water NSW to be able to continue to deliver water resources to the residents of greater Sydney. Water NSW advised that ongoing access will also be required throughout the construction period.

##### Response

Transport acknowledges Water NSW's comments and general support of the proposal. Transport confirms that it would maintain access along Range Road during construction and operation and would notify landowners of any proposed changes to property access. This would be reflected in the Traffic Management Plan for the proposal.

## 3.7 Greater Sydney Parklands

### 3.7.1 Socio-economic

#### Impacts to social infrastructure

##### Issue description

Greater Sydney Parklands noted that its key objectives are to ensure that road construction (M12 Motorway and Elizabeth Drive Upgrade) minimises impacts on the amenity of the Parklands and does not inhibit access to the future major recreation, entertainment and tourism destinations identified for the southern Western Sydney Parklands which are expected to receive over 10 million visits per annum once developed.

##### Response

Transport acknowledges these key objectives and would continue to consult with Greater Sydney Parklands throughout design development and construction planning, to support continued access to the Western Sydney Parklands where possible.

## 3.7.2 Proposal design and construction

### Urban design and landscaping

#### Issue description

Greater Sydney Parklands requested that the Parklands section of the Elizabeth Drive Upgrade reflect the planting within Western Sydney Parklands, consistent with the Western Sydney Parklands Design Manual.

#### Response

Landscaping provided as part of the proposal is subject to further detailed design development. Landscaping for the proposal would comply with relevant requirements for planting in proximity to the Western Sydney International Airport. Where possible, Transport intends to provide landscaping which reflects the planting within Western Sydney Parklands (where the proposal adjoins the parklands), with reference to the Western Sydney Parklands Design Manual.

### Signage

#### Issue description

Greater Sydney Parklands requested that the Elizabeth Drive Upgrade should include identification/directional signage for Western Sydney Parklands. Greater Sydney Parklands requested this is planned in consultation with them.

#### Response

A detailed signage plan would be prepared at the detailed design stage for the proposal. This request would be addressed during this stage, in consultation with Greater Sydney Parklands.

### Shared path design

#### Issue description

Greater Sydney Parklands advised that further consideration and coordination of pedestrian and cycle paths is required to ensure that a continuous network is provided. Greater Sydney Parklands requested that this should include consideration of connections to both existing and future paths associated with the M12 Motorway and Western Sydney Parklands and should particularly consider links to Wylde Mountain Bike and BMX trails, Mirror Dam Cycleway and the Western Sydney Parklands access road identified as 'M12 water facility tie in'.

#### Response

The scope of this proposal includes shared paths along Elizabeth Drive, adjacent to the parklands. This does not preclude future active transport connections into the parklands.

### Property access

#### Issue description

Greater Sydney Parklands advised that it does not support the restriction of access to Western Sydney Parklands to left-in and left-out at a future major public access to the Parklands. Greater Sydney Parklands advised that the current access road east of Range Road (labelled on the figure in the REF as 'M12 water facility tie in') will be a main public access point in the future for this area of the Parklands and will, therefore, need to facilitate access from all directions.

Greater Sydney Parklands commented that the exhibited M12 Motorway Environmental Impact Statement proposed a four-way intersection at Duff Road, that provided access to the Southern Western Sydney Parkland, which was supported by Greater Sydney Parklands.

The M12 Motorway design has since been modified, to provide access into the Southern Parklands further west of Duff Road. Greater Sydney Parklands commented that the M12 Motorway Submissions Report (Transport, 2020) noted that the intersection of the future access points with Elizabeth Drive would not be signalised, as the access is not designed for public

vehicular access into the Western Sydney Parklands. The M12 Motorway Submissions Report noted that the current design does not preclude signalisation.

#### Response

Transport notes that there has been consultation between the M12 Motorway project team and Greater Sydney Parklands in regard to access arrangements to the Western Sydney Parklands. Several options for access to the Parklands have been considered as part of this consultation including a four-way intersection at Duff Road; however, this was not geometrically feasible.

The design of the Elizabeth Drive Upgrade has, and would continue to be, coordinated with the design of the M12 Motorway. This includes maintaining the unsignalised access point into the Parklands to the west of the Elizabeth Drive / Duff Road intersection, to maintain access to utilities in the Western Sydney Parklands, including the Cecil Hills water reservoir and radio and mobile communications towers.

The proposal would maintain the existing entry to the Western Sydney Parklands via Range Road. A U-turn facility would be provided at the northern leg of the Range Road / Elizabeth Drive intersection to enable access for vehicles travelling in either direction along Elizabeth Drive.

Transport acknowledges Greater Sydney Parklands concerns regarding access to the Parklands. Transport would continue to consult with Greater Sydney Parklands about the design of the proposal.

### Fencing

#### Issue description

Greater Sydney Parklands commented that provision of fencing along the Western Sydney Parklands' Elizabeth Drive and Range Road frontages is appropriate as it is consistent with the Parklands Boundary Fence in section 5.2.1 of the Western Sydney Parklands Design Manual 2020.

#### Response

Transport acknowledges Greater Sydney Parklands' comment. Fencing for the proposal would be considered further during the detailed design stage.

### Vertical road alignment

#### Issue description

Greater Sydney Parklands noted that it seeks to deliver naturalised landforms within Western Sydney Parklands and, therefore, requested that levels and any necessary batters are coordinated between the Elizabeth Drive East Upgrade and the M12 Motorway to ensure this outcome within the Parklands.

#### Response

Coordination of levels and batters with the M12 Motorway project would be carried out during the detailed design stage for the proposal. This would include consideration of Greater Sydney Parklands' feedback.

## 4. Clarifications and changes to the proposal

The purpose of this section is to clarify some of the information presented in the proposal and include an overview of minor changes to the proposal.

Since the preparation and display of the REF, some elements of the proposal have been refined, or identified as requiring further design development to respond to stakeholder and community feedback. The proposal would continue to be refined during the next stage of design development, with a view to minimise environmental and social impacts, and taking into account the outcomes of community and stakeholder consultation.

### 4.1 Property acquisition

Section 3.4 of the REF identified the proposed property acquisition requirements to carry out the proposal. Based on the concept design and subject to negotiations, this was anticipated to include full acquisition of 13 lots, partial acquisition of 84 lots, and the temporary lease of four lots to accommodate construction ancillary facilities (three of which would also be subject to partial acquisition). Following review of design and community and stakeholder feedback, acquisition requirements for the proposal are now anticipated to include full acquisition of 12 lots and partial acquisition of 86 lots.

Since the finalisation of the REF, the following changes have been identified:

- One additional property would require partial acquisition (Lot 5 / DP 255566)
- One property would no longer require full acquisition, and would instead be partially acquired (Lot 8 / DP 1266422).

The operational footprint for the proposal includes a portion of a privately owned access road within Lot 5 / DP 255566 (located to the north of Western Road). As such, partial acquisition of Lot 5 / DP 255566 is also required to carry out the proposal (in addition to the property acquisition requirements described in Section 3.4 and Appendix C of the REF). The proposal involves realignment of the access road to form a newly signalised intersection with Western Road, as well as widening and provision of a U-turn facility at the northern leg of the new intersection. The proposed work at the intersection is described further in Section 6.2.3 of the REF. The proposal would ensure that access to businesses and properties at the northern leg of the intersection is maintained. Assessment of the potential property and land use impacts associated with the partial acquisition of this property is provided in Section 5.3.

Lot 8 / DP 1266422 is located across two distinct parcels, one fronting Elizabeth Drive and one fronting Mamre Road. The parcel fronting Mamre Road was proposed to be fully acquired given the potential impacts to some buildings due to a proposed drainage channel. Following further design review, Transport confirms that it would be possible to avoid full acquisition of the property, and instead only acquire the parcel fronting Elizabeth Drive.

Details of the changes to proposed property acquisition since the finalisation of the REF are provided in Table 4-1. Figures 3-25 to 3-28 of the REF have been reproduced as Figure 4-1 to Figure 4-4, inclusive of the changes to property acquisition. These figures have also been updated to include cadastral information (property boundaries) from 2024.

Property acquisition extents shown on Figure 4-1 to Figure 4-4 are based on the concept design for the proposal. Prior to acquisition of these properties, their cadastral boundaries would be reviewed and confirmed, including via survey.

In addition to these changes, an additional environmental safeguard (PL4, refer to Section 6) has been proposed to investigate opportunities to reduce the extent of property acquisition required at the following properties:

- Lot 8 / DP 1014394 (1-7 Duff Road, Cecil Park)
- Lot 31 / DP 867457 (1640 Elizabeth Drive, Kemps Creek).

These properties were proposed to be fully acquired in the REF. Subject to design review and consultation with the landowners, Transport would seek opportunities to avoid full acquisition of these properties. Partial acquisition of the properties is likely to be required to accommodate the surface operational infrastructure for the proposal.

Environmental safeguard GEN5 has also been added committing to a review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road with the aim to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal).

Consultation would continue to be carried out with affected landowners regarding proposed changes to the property (including any adjustments and acquisition). Property acquisition requirements would be further refined during detailed design, taking into account design development and feedback from affected landowners during the REF display period and any further consultation.

All property acquisition would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (the Just Terms Act). Compensation is determined in accordance with Section 55 of the Just Terms Act. Further information, guides and support can be found on the Centre for Property Acquisition website <https://www.nsw.gov.au/housing-and-construction/property-acquisition>.

Transport's preference is to acquire land by negotiated agreement; however, a compulsory acquisition process may be required if agreement cannot be reached or is otherwise necessary.

Compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other things, provisions for market value (refer also to Section 56 of the Just Terms Act), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs (i.e. fees associated with the discharge of mortgages and creation of a new mortgage where relocation is required)) and disadvantage resulting from relocation.

Depending on the individual circumstances of each lot and the potential impacts of the proposal, compensation may take the form of compensation or land/work, as agreed by the parties.

Table 4-1: Details of the changes to proposed property acquisition

Address	Lot and plan	Existing land use zone	Ownership	LGA	Acquisition type	Approx total property area	Indicative area to be acquired	Summary of change
Additional properties to be acquired								
Kemps Creek NSW	Lot 5 / DP 255566	RU2 Rural Landscape	Private property	Penrith	Partial acquisition	10.01 hectares	0.54 hectares (5.4%)	Partial acquisition of an access road to properties required to carry out the proposed works to the northern leg of Western Road. This property was not identified in Appendix C of the REF. The proposed acquisition area is shown on Figure 4-2.
Other changes to property acquisition								
1293-1297 Mamre Road, Kemps Creek	Lot 8 / DP 1266422	RU4 Primary Production Small Lots	Private property	Penrith	Partial acquisition (previously proposed to be fully acquired)	1.22 hectares	0.50 hectares (41%)	This property is located across two distinct parcels, one fronting Elizabeth Drive and one fronting Mamre Road. The REF identified that the property would be fully acquired (including acquisition of both parcels). Based on review of the design and stakeholder feedback, Transport no longer proposes to acquire the parcel fronting Mamre Road. The parcel fronting Elizabeth Drive is proposed to be acquired. The proposed acquisition area is shown on Figure 4-3.

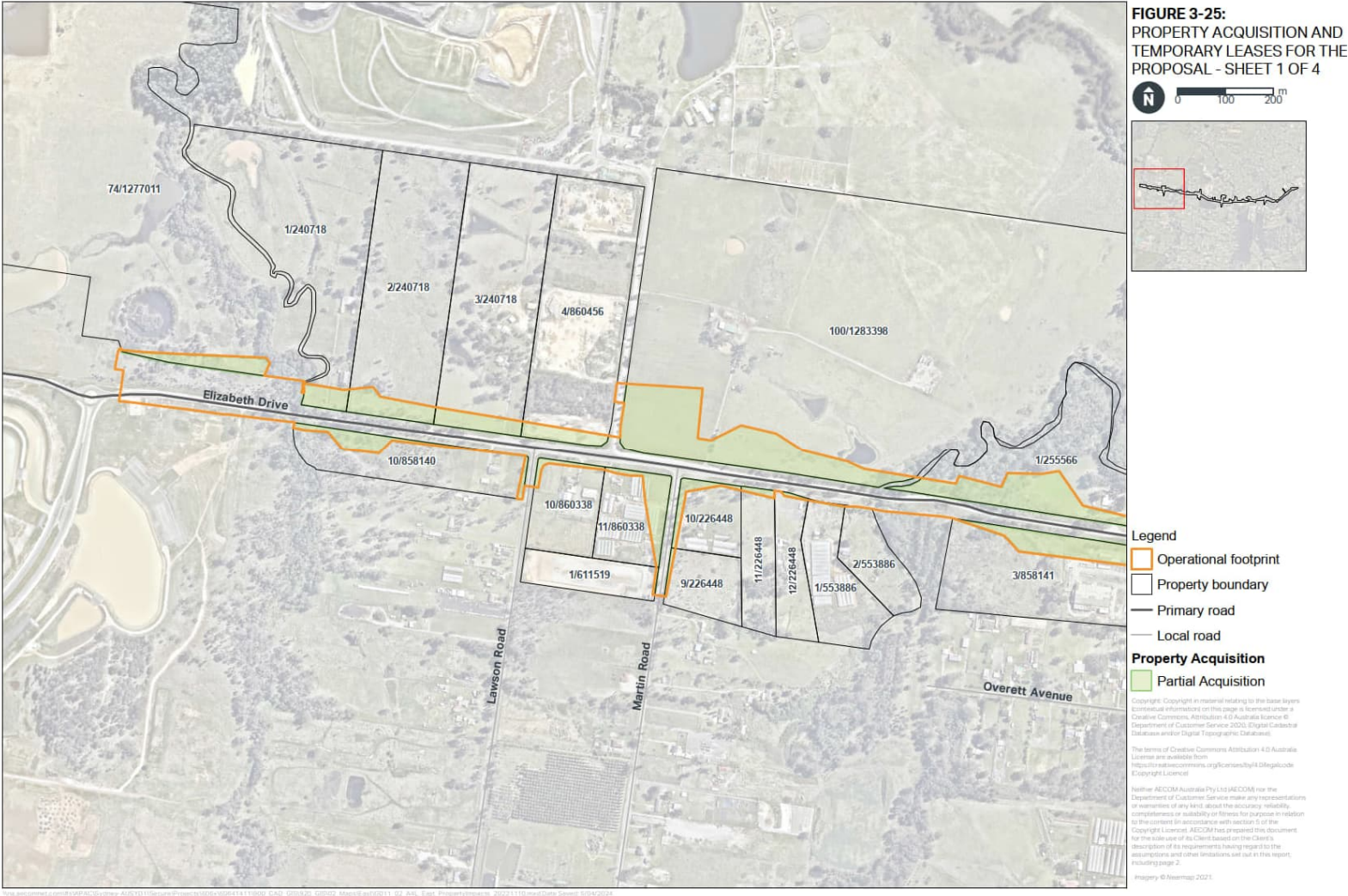


Figure 4-1: Property acquisition and temporary leases for the proposal – sheet 1 of 4 (Figure 3-25 of the REF)

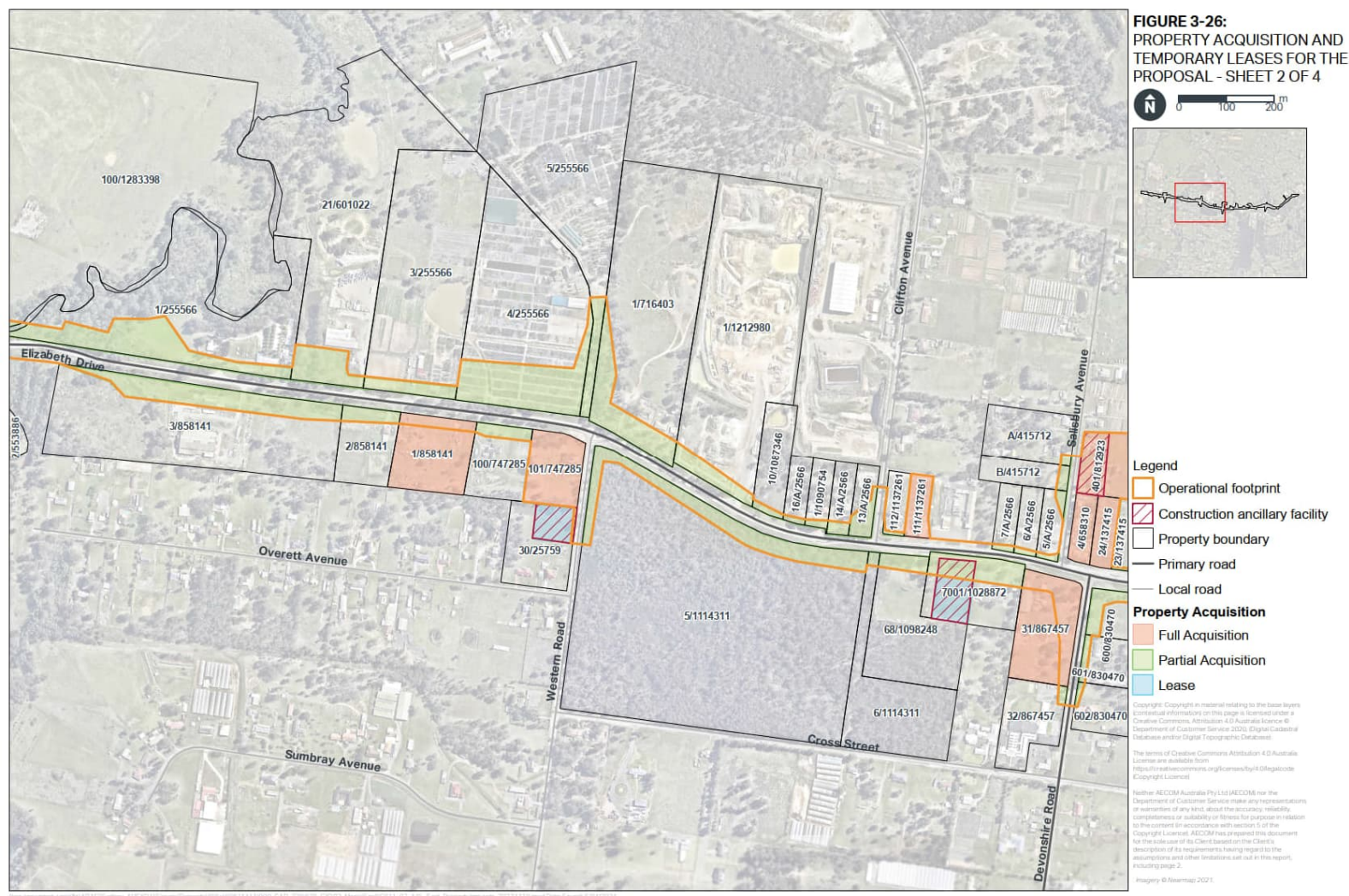


Figure 4-2: Property acquisition and temporary leases for the proposal – sheet 2 of 4 (update to Figure 3-26 of the REF)



Figure 4-3: Property acquisition and temporary leases for the proposal – sheet 3 of 4 (Figure 3-27 of the REF)

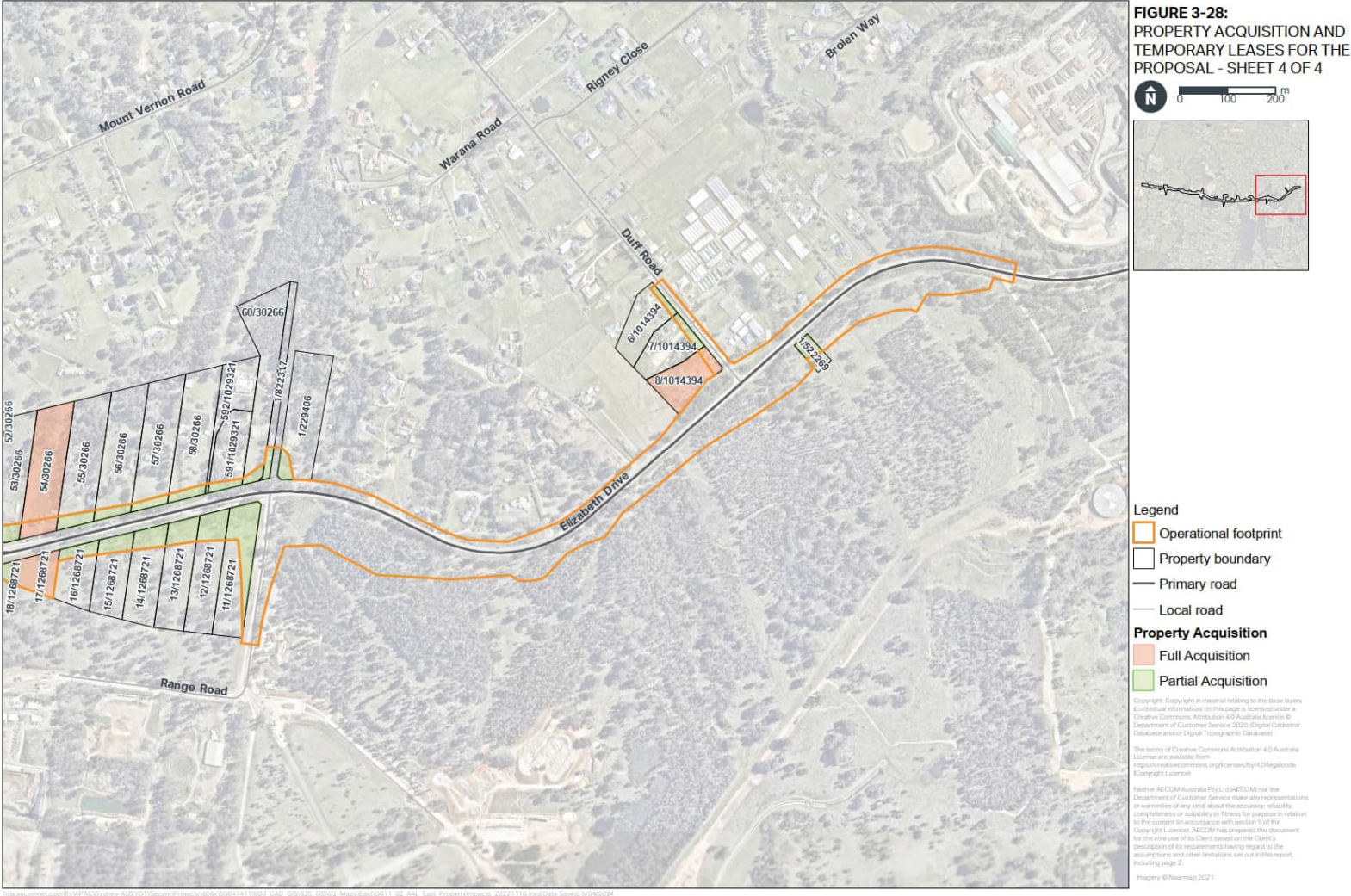


Figure 4-4: Property acquisition and temporary leases for the proposal – sheet 4 of 4 (Figure 3-28 of the REF)

## 4.2 Design review

The REF has been prepared based on a concept design and would be subject to further refinement in the next stage of design development (detailed design), based on detailed topographical survey, and community and stakeholder feedback. Following the REF display period, some areas requiring further refinement in the next stage of design have been identified. These are outlined in the following sections.

### 4.2.1 Kemps Creek shops and Bill Anderson Reserve

As identified in the REF, direct access from Elizabeth Drive into the Kemps Creek shops would also be altered, due to the construction of a new one-way service road to provide safer off-road access into the Kemps Creek shops. The new service road would be accessed from the eastbound side of Elizabeth Drive between Clifton Avenue and Salisbury Avenue, with an exit onto Salisbury Avenue. Salisbury Avenue would also be widened by the proposal, with a U-turn facility provided at its northern leg. Several businesses in this area have provided feedback that these proposed access arrangements would result in an adverse impact to their business.

Transport will maintain access to businesses in Kemps Creek. Transport would carry out further design review at the next stage of design development to investigate alternative site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue), based on the feedback received during the REF display period and further consultation. This review would also address concerns raised by the Kemps Creek United Soccer Club regarding the proposal's impact on Bill Anderson Reserve. This has been reflected in additional environmental safeguards for the proposal, which are presented in Table 4-2.

Design refinements resulting from this review would be confirmed prior to the construction of the proposal in this area. Other design refinements (including in other areas and to other aspects of the proposal) may also be identified during detailed design development, based on the additional inputs available in this stage and community and stakeholder feedback. Where required, refinements to the proposal would be subject to further environmental assessment and consultation with relevant stakeholders.

### 4.2.2 Impacts to ENV subject to RBM12

As discussed in sections 5.1 and 5.4.3, the proposal would impact two land parcels subject to Relevant Biodiversity Measure (RBM) 12 of the biodiversity certification order, as shown in Figure 1-1 of the Revised Biodiversity Assessment Report (Appendix B of this Submissions Report). One of the parcels is mapped across the road corridor at Kemps Creek, the other is located on Lot 5 / DP 1114311 (property located on southern side of Elizabeth Drive between Western Road and Devonshire Road).

Transport consulted Biodiversity, Conservation and Science (BCS), part of the Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in March 2024 about the proposal's impact to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order.

BCS responded in May 2024 advising that it did not support the proposal's impact to existing native vegetation (ENV) on non-certified land that is subject to RBM 12 of the biodiversity certification order, and that Transport should design to avoid this impact.

Transport carried out further consultation with BCS in July 2024, advising that land subject to RBM 12 at Kemps Creek is mapped within the existing Elizabeth Drive road corridor and immediate surrounding land. For this reason, avoiding the impact is not possible at this location. Notwithstanding, in accordance with Transport's Biodiversity Policy, opportunities to minimise impacts to biodiversity, including ENV subject to RBM 12, would be investigated during detailed design in consultation with BCS.

In response to feedback received from BCS in May 2024, Transport investigated an alternative design that would fully avoid the impact to ENV subject to RBM 12 at this location.

The alternative design would involve relocating the road alignment and the Western Road intersection further to the north. While this option would avoid impacts to ENV on land subject to RBM 12, it would have major adverse impacts to businesses and properties in the area. These impacts include:

- The full acquisition of four residential properties (these properties were subject to partial acquisition based on the design presented in the REF).

- The full acquisition of up to six commercial lots, which will require the closure of the Kemps Creek Shops, resulting in multiple business impacts.
- A much larger impact to three commercial properties, which include Mitre 10, Hi-Quality Group and Andreasens Green Wholesale Nurseries.

Considering all the potential impacts, including biodiversity, economic and social impacts, the development criteria and project objectives, Transport has determined that the design presented in the REF remains the preferred alignment. However, as part of developing the alternative design, Transport has identified a number of potential design refinements that would reduce the proposal's impact on ENV on land subject to RBM 12. This includes reducing the road height, which would reduce the width of embankments and reducing the extent of drainage infrastructure within the land. Further opportunities to minimise impacts to ENV subject to RBM 12 would be investigated during detailed design in consultation with BCS. This has been reflected in additional environmental safeguards for the proposal, which are presented in Table 4-2.

### 4.2.3 Additional environmental safeguards

Table 4-2 summarises the additional environmental safeguards that Transport proposes to address design related concerns raised during public display of the REF.

Table 4-2: Additional environmental safeguard – design review

Impact	Environmental safeguards and management measures	Responsibility	Timing
Design review – proposal design between Clifton Avenue and Salisbury Road	<p>A detailed review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road will be carried out. The aim of this review will be to identify refinements to the design and other opportunities to improve access to businesses in Kemps Creek and to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal) and incorporate these into the detailed design where feasible and reasonable.</p> <p>The review will consider the following:</p> <ul style="list-style-type: none"> <li>• Alternatives to the proposed one-way service road at Kemps Creek shops</li> <li>• Opportunities to reduce property acquisition requirements for businesses in Kemps Creek as well as Bill Anderson Reserve</li> <li>• Review of options to reinstate access to businesses, including from adjoining roads to Elizabeth Drive, Clifton Avenue and Salisbury Avenue</li> </ul> <p>The review will be informed by the feedback received to the REF display and further consultation with affected businesses and relevant stakeholders, as well as further topographical survey.</p>	Contractor	Detailed design
Design review – proposed construction ancillary facility 2	Construction ancillary facility 2 (identified in Figure 3-21 of the REF) will be relocated to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club. The alternative location of this facility will be determined during detailed design. An appropriate level of environmental impact assessment will be carried out for the alternative location of the construction ancillary facility, consistent with the requirements of the EP&A Act.	Contractor	Detailed design
Biodiversity	Transport will reduce the Elizabeth Drive East Upgrade's impact on ENV on land subject to RBM 12 in consultation with Biodiversity, Conservation and Science.	Transport / Contractor	Detailed design
Biodiversity	Transport will develop a Biodiversity Offset Package for the Elizabeth Drive East Upgrade, with specific measures to offset impacts to ENV on land subject to RBM 12 developed to the satisfaction of Biodiversity, Conservation and Science.	Transport / Contractor	Detailed design

Impact	Environmental safeguards and management measures	Responsibility	Timing
Biodiversity	Transport will not proceed with construction of the project unless it has received the agreement of Biodiversity, Conservation and Science to impact ENV on land subject to RBM 12.	Transport / Contractor	Detailed design

### 4.3 Other minor clarifications

The need for some minor text changes and factual corrections to information presented in the REF has been identified based on feedback received during REF display. These include the following:

- Section 6.2.3 of the REF provided an indicative estimate of the number of parking spaces estimated to be impacted by the proposal at Animal Welfare League NSW, Kemps Creek (13 marked parking spaces and one accessible parking space), noting that the exact number would be confirmed in consultation with property owner. Feedback received from the Animal Welfare League indicates that 15 hard stand car spaces and one accessible space would be impacted. Transport is committed to further consultation with Animal Welfare League NSW during detailed design development, to identify opportunities to reduce the impact of the proposal on its facilities. Additional environmental safeguards relating to Animal Welfare League NSW have been proposed in Section 6 of this Submissions Report
- Table 6-48 of the REF provided an overview of businesses which may potentially be impacted by partial or full property acquisition required for the proposal (subject to detailed design). Community feedback received during the REF display period indicated that a recently constructed retail business 'Fresh Pick Farm Fresh' is partially located within the operational footprint for the proposal. This business was omitted from Table 6-48 in the REF. The business is located at 1569-1587 Elizabeth Drive Kemps Creek within Lot 3 / DP 255566. Proposed acquisition of this property is outlined in Appendix C of the REF, and indicatively includes acquisition of about 0.53 hectares of the property (about 5.3 per cent of the total land area). Despite the omission of the business from Table 6-48, the assessment of partial property acquisition of businesses in the REF accounts for the property. Consultation with all business owners impacted by property acquisition would occur throughout detailed design and construction planning, to understand how the business uses the land and to identify opportunities to minimise impacts to viable aspects of the businesses
- Page 16 of Appendix C in the REF incorrectly lists the address for Lot 10 / DP860338 as 1190 Elizabeth Drive, Badgerys Creek. The address should be '1990 Elizabeth Drive, Badgerys Creek'.

### 4.4 Summary of changes to or additional environmental safeguards

Additions and updates have been made to the environmental safeguards proposed, in response to feedback and submissions received. These include the following:

#### General and design development

- Environmental safeguard GEN1 has been amended to clarify that the CEMP would address stakeholder engagement requirements for the construction period
- Environmental safeguard GEN5 has been added, to review the proposed design and investigate alternative site access options for businesses at Kemps Creek (generally between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue) and to reduce the proposal's impact on Bill Anderson Reserve and the Kemps Creek United Soccer Club. This is described further in Section 4.2.
- Environmental safeguard GEN6 has been added committing to the relocation of the proposed construction ancillary facility 2 (identified in Figure 3-21 of the REF) to reduce the proposal's impact to Bill Anderson Reserve and the Kemps Creek United Soccer Club.

#### Noise and vibration

- Environmental safeguard NV14 has been added, which outlines measures that would be implemented to manage potential construction noise impacts to animals at Animal Welfare League NSW, Kemps Creek.

#### Landscape and visual

- Environmental safeguard LV6 has been added to confirm that Transport would engage an aviation ecologist to review the landscape design for the proposal.

#### Biodiversity

- Environmental safeguard B6, which relates to the implementation of a Flora and Fauna Management Plan during construction, has been amended and clarified to remove reference to guidelines which relate to operational design
- Environmental safeguard B7 to carry out targeted surveys has been deleted, as these surveys have now been carried out to inform the revised BAR
- A new environmental safeguard B7 has been added, to clarify that *Biodiversity Assessment Method* (BAM) (DPIE, 2020) plots would be carried out within the construction footprint to confirm the biodiversity credits required for the proposal
- Environmental safeguard B8 has been amended following further targeted biodiversity survey to include commitment to preparing and implementing a Microbat Management Plan. This is described further in Section 5.1
- Environmental safeguard B14 has been added, to carry out pre-clearance surveys in accordance with a Cumberland Plain Land Snail Translocation Plan prior to vegetation removal for the proposal
- Environmental safeguard B27 has been added, to retain large trees with a diameter greater than or equal to 50-centimetres at breast height, where possible
- Environmental safeguard B28 has been added based on feedback from Liverpool City Council, to review opportunities to collect viable native seeds from areas of vegetation (trees, shrubs and groundcovers) that would be removed as part of the proposal and to repurpose these, for example, through donation to nurseries
- Environmental safeguard B29 has been added based on feedback from the Department of Planning, Housing and Infrastructure, to clarify that Transport would provide the Department with spatial data showing the extent of vegetation removal on non-certified land (as identified in the *Order to confer biodiversity certification on the State Environment Planning Policy (Sydney Region Growth Centres) 2006*). Transport will also provide the Department with details of offsets that it has secured for the proposal
- Other biodiversity measure IDs have been renumbered accordingly to reflect the above changes (for example, B17 has been renumbered to B15, B21 has been renumbered to B19, etc.), as shown in Table 6-1.
- Environmental safeguards B30 to B32 have been added to address concerns raised by Biodiversity, Conservation and Science during statutory consultation. This is discussed further in Section 5.4.1.

#### Property and land use

- Environmental safeguard PL4 has been added to investigate opportunities to reduce the extent of property acquisition required at Lot 8 / DP 1014394 (1-7 Duff Road, Cecil Park) and Lot 31 / DP 867457 (1640 Elizabeth Drive, Kemps Creek), to avoid the need for their full acquisition.

#### Socio-economic

- Environmental safeguard SE1 has been amended to clarify some of the information that would be included in the Communication Plan for the construction of the proposal – including consultation processes with relevant stakeholders and a complaint handling process
- Environmental safeguard SE5 has been removed as Transport has committed to reducing the proposal's impact on Bill Anderson Reserve and the Kemps Creek United Soccer Club by relocating construction ancillary facility 2 and investigating opportunities to further reduce the amount of land that is proposed to be permanently acquired by the proposal. These commitments have been included as additional environmental safeguards GEN5 and GEN6.
- Environmental safeguard SE9 has been amended to clarify that Transport would consult with Christadelphian Heritage College Sydney and review opportunities to avoid impacts to school infrastructure
- Environmental safeguard SE15 has been added to clarify that construction of the proposal would avoid the need to access parking areas associated with the Christadelphian Heritage College Sydney where feasible

- Environmental safeguard SE16 has been added, to consult further with Animal Welfare League NSW, Kemps Creek and to review opportunities to minimise impacts to its facilities, acknowledging its role as social infrastructure. This is described further in Section 5.2
- Environmental safeguard SE17 has been added to consult further with Irfan College during detailed design, with a focus on ensuring access to the College is maintained throughout construction and operation.

A complete list of environmental safeguards for the proposal, including where these have been added or revised, is provided in Section 6.

## 5. Environmental assessment and statutory consultation

This chapter documents the outcomes of additional environmental assessment that has been carried out since the finalisation of the REF. The outcomes of statutory consultation with the Western Parkland City Authority, the Department of Planning, Housing and Infrastructure, and Biodiversity, Conservation and Science – Department of Climate Change, Energy, the Environment and Water are also summarised in this chapter.

### 5.1 Biodiversity

#### 5.1.1 Overview

A biodiversity assessment report (BAR) was published in September 2023 as Appendix G to the REF (referred to as the 'September 2023 BAR'). Land access constraints during preparation of the REF meant that detailed targeted threatened species surveys which complied with the *Biodiversity Assessment Method* (BAM) (DPIE, 2020) were unable to be carried out.

A revised BAR has since been prepared to address biodiversity environmental safeguard B7 and B8, documented in Table 7-1 of the REF and summarised as follows:

- Environmental safeguard B7 (which has since been removed): Targeted surveys will be carried out prior to Transport determining whether to proceed with the proposal. The results will guide the avoidance and minimisation of threatened fauna and flora habitat removal where it is identified.
- Environmental safeguard B8 (which has since been amended as shown in Section 5.1.5): Targeted surveys to determine the presence of threatened microbats in culvert/bridge etc structures to be removed are to be carried out prior to Transport determining whether to proceed with the proposal. These surveys are required to confirm that direct impacts to important roosting habitat is not likely to occur as a result of the proposal, and to identify the need for mitigation measures to prevent direct impacts to individuals when the structures are to be removed. Should roosting threatened microbats be recorded, Tests of Significance will need to be updated to re-assess the significance of the impacts of the proposal. Preparation of a Microbat Management Plan would also be considered.

The revised BAR provides further biodiversity assessment that incorporates the results of biodiversity assessment method (BAM) compliant targeted surveys carried out in October and November 2023. The BAM surveys identified the biodiversity values and constraints associated with the proposal in areas that were previously inaccessible during preparation of the REF.

The revised BAR is provided as Appendix B (Revised BAR) to this Submissions Report and is summarised in the following sections.

#### 5.1.2 Methodology

The overall methodology for the revised BAR is consistent with the methodology for the September 2023 BAR, and is described in Section 2 of Appendix B. The study area for both the September 2023 BAR and revised BAR comprises the construction footprint for the proposal (Figure 4-2 in the REF) and a 20-metre buffer to capture land which may be indirectly impacted.

The methodology for additional assessment carried out for the revised BAR involved:

- Carrying out BAM-compliant targeted flora and fauna surveys in October and November 2023 to identify the biodiversity values and constraints associated with the proposal in areas that were previously inaccessible during preparation of the REF
- Refining and updating vegetation mapping carried out for the September 2023 BAR based on the results of the additional survey, and mapping some habitat features such as hollow bearing trees
- Carrying out visual inspections at four bridges within the study area to check for microbat habitat including at Kemps Creek bridge, Badgerys Creek bridge, and two bridges over South Creek
- Updating of potential construction and operational impacts to flora and fauna based on the surveys, including assessments against BC Act Tests of Significance and EPBC Act Significant Impact Criteria assessments

- Review of safeguards and management measures to manage the identified impacts including biodiversity offsets, and updating these as required.

The additional survey methodology is described further below.

#### Targeted flora and fauna surveys

Targeted flora and fauna surveys were carried out in October and November 2023. A total area of 33.76 hectares was accessed during the additional surveys. The additional areas surveyed included areas of avoided land and excluded land mapped under the *Cumberland Plain Conservation Plan* (CPCP (DPE, 2022)); as well as existing non-certified land identified as part of the South West Growth Centre in the *State Environmental Planning Policy (Precincts—Western Parkland City) 2021* (refer to key terms below). These surveys provided sufficient coverage to confirm the presence or absence of threatened species assessed in the BAR.

Targeted flora and fauna surveys were carried out for threatened species with a CPCP polygon intersecting the study area. The flora survey methodology followed that of *Surveying threatened plants and their habitats NSW survey guide for the Biodiversity Assessment Method* (DPIE 2020), whereby parallel field traverses of a maximum 10 metres width were walked. The fauna surveys were carried out with reference to relevant guidelines including *Species credit threatened bats and their habitats: NSW survey guide for the Biodiversity Assessment Method* (OEH 2018) and *Threatened biodiversity survey and assessment – Guidelines for developments and activities (2004 working draft)* (DEC 2004). Following the targeted fauna surveys, visual inspections were carried out at the four bridges listed above on 20 February 2024, to check for microbat habitat.

#### Key terms

The following key terms are used in the September 2023 BAR and revised BAR:

- The biodiversity assessment describes land with reference to land categories that are defined in the CPCP. These include:
  - Avoided land: This category identifies land with high biodiversity values that would be protected and is, therefore, not certified for future urban development. The development is not considered ‘essential infrastructure’ as defined in the infrastructure guidelines (and therefore will not be accessing the CPCP Part 10 approval under the EPBC Act). Therefore, the proposal must be assessed against the BC Act, and approval sought under the EPBC Act if required.
  - Certified – urban capable land: This category identifies land where future urban development can occur, subject to other development approvals. Development in these areas does not require further site by site biodiversity assessment under the EPBC Act and BC Act, if consistent with the CPCP’s biodiversity approvals, which includes application of the CPCP’s mitigation measures.
  - Excluded land: This category identifies land that has been excluded from the CPCP and for which NSW strategic biodiversity certification and approval through the federal strategic assessment process would not be sought. The construction footprint largely resides within this land category, within the existing Elizabeth Drive road corridor as outlined in Figure 4-2 of the REF.

### 5.1.3 Description of existing environment

#### Plant community types and threatened ecological communities

As per the September 2023 BAR, a total of seven plant community types (PCTs) were identified within the study area, including:

- Broad-leaved Ironbark – Grey Box – Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion (PCT 724)
- Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion (PCT 725)
- Coastal freshwater wetland (PCT 781)
- Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)

- Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 849)
- Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin Bioregion (PCT 883)
- Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley (PCT 1800).

These PCTs were summarised into 14 vegetation zones based on their condition (for example, intact, scattered trees, thinned, disturbed).

Based on the additional survey for the revised BAR, the areas of each PCT identified within the study area and construction footprint have been updated. Table 5-1 includes a comparison of the area of each PCT that was identified in the September 2023 BAR, and the area that has been identified in the revised BAR (which is based on the October and November 2023 survey).

The patch size class and vegetation integrity score of each vegetation zone is unchanged since the September BAR, and is identified in Section 3.1 of Appendix B.

Table 5-1: Comparison of plant community type and vegetation zone area between the September 2023 BAR and the revised BAR

Vegetation zone and broad condition class	PCT	Relevant TEC under the BC Act / EPBC Act	Area (ha) – September 2023 BAR		Area (ha) – Revised BAR	
			Construction footprint	Study area	Construction footprint	Study area
Zone 1 (Intact)	724: Broad-leaved Ironbark – Grey Box – Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – Shale Gravel Transition Forest in the Sydney Basin Bioregion EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	0.45	0.99	0.55	0.82
Zone 2 (Scattered trees)	724: Broad-leaved Ironbark – Grey Box – Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – Shale Gravel Transition Forest in the Sydney Basin Bioregion EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	0.65	3.08	2.14	2.39
Zone 3 (Thinned)	724: Broad-leaved Ironbark – Grey Box – Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – Shale Gravel Transition Forest in the Sydney Basin Bioregion EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	0.42	1.20	1.16	1.20

Vegetation zone and broad condition class	PCT	Relevant TEC under the BC Act / EPBC Act	Area (ha) – September 2023 BAR		Area (ha) – Revised BAR	
			Construction footprint	Study area	Construction footprint	Study area
Zone 4 (Intact)	725: Broad-leaved Ironbark – Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion. EPBC Act, Critically Endangered – Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion	1.76	2.91	2.25	3.33
Zone 5 (Disturbed)	781: Coastal freshwater wetland	BC Act, Endangered – Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	0.10	0.11	0.10	0.13
Zone 6 (Intact)	835: Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions EPBC Act, Critically Endangered – River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	0.68	3.19	2.02	2.73
Zone 7 (Scattered Trees)	835: Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions EPBC Act, Critically Endangered – River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	1.98	5.17	3.90	4.31
Zone 8 (Thinned)	835: Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Endangered – River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions EPBC Act, Critically Endangered – River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	1.90	3.01	1.44	1.86

Vegetation zone and broad condition class	PCT	Relevant TEC under the BC Act / EPBC Act	Area (ha) – September 2023 BAR		Area (ha) – Revised BAR	
			Construction footprint	Study area	Construction footprint	Study area
Zone 9 (Intact)	849: Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Critically Endangered – Cumberland Plain Woodland in the Sydney Basin Bioregion EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	3.3	4.10	2.79	3.76
Zone 10 (Scattered trees)	849: Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Critically Endangered – Cumberland Plain Woodland in the Sydney Basin Bioregion EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	2.63	10.90	8.87	9.99
Zone 11 (Thinned)	849: Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Critically Endangered – Cumberland Plain Woodland in the Sydney Basin Bioregion EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	1.81	4.77	4.14	4.79
Zone 12 (Intact)	883: Hard-leaved Scribbly Gum – Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin Bioregion	BC Act, Vulnerable – Castlereagh Scribbly Gum Woodland in the Sydney Basin Bioregion EPBC Act, Endangered – Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion	0.82	1.48	1.01	1.63
Zone 13 (Intact)	1800: Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	BC Act, Endangered – Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions EPBC Act, Endangered – Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	0.84	2.84	1.49	2.60

Vegetation zone and broad condition class	PCT	Relevant TEC under the BC Act / EPBC Act	Area (ha) – September 2023 BAR		Area (ha) – Revised BAR	
			Construction footprint	Study area	Construction footprint	Study area
Zone 14 (Thinned)	1800: Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	BC Act, Endangered – Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions EPBC Act, Endangered – Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	0.97	1.72	1.14	1.93

#### Threatened species

A summary of the threatened species considered to have a ‘moderate’ or ‘higher’ likelihood of occurring within the study area following targeted surveys carried out in October and November 2023 is provided in Table 5-2. These species were recorded during the surveys. The recorded threatened species are also shown in Figure 5-1 to Figure 5-6.

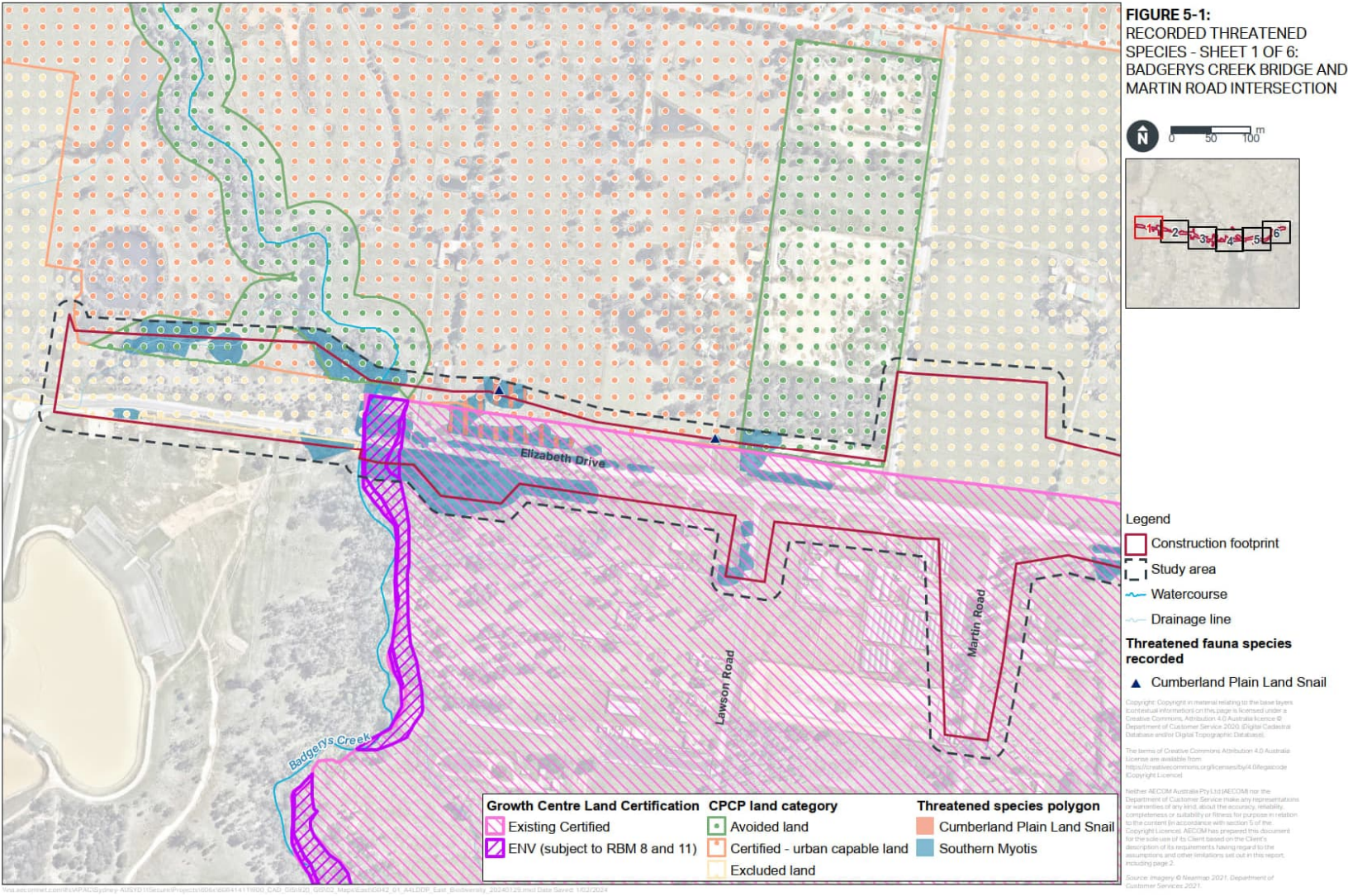
Table 5-2: Threatened species recorded in October/November 2023

Species name	EPBC Act status	BC Act status	Identification method	Survey results
<i>Dillwynia tenuifolia</i>	-	Endangered population	Recorded – 15 individuals	Fifteen individuals recorded in bushland west of Bill Anderson Reserve. Species polygon covers all habitat present in this area (4.58 hectares)
Cumberland Plain Land Snail ( <i>Meridolum corneovirens</i> )	-	Endangered	Recorded	Species was recorded via shell detection at five locations within the study area during surveys. Species polygon covers 3.78 hectares
Eastern Coastal Free-tailed Bat ( <i>Micronomus norfolkensis</i> )	-	Vulnerable	Recorded	Recorded via acoustic detection. No species polygon prepared for ecosystem credit species
Southern Myotis ( <i>Myotis macropus</i> )	-	Vulnerable	Recorded	Recorded via acoustic detection near South Creek. Subsequent visual inspection by Transport observed an estimate of about 100-150 microbats roosting in the eastern bridge at South Creek in gaps between concrete spans, presumed to be Southern Myotis. Species polygon covers 34.11 hectares across the subject land (construction footprint)
Greater Broad-nosed Bat ( <i>Scoteanax rueppellii</i> )	-	Vulnerable	Recorded	Recorded via acoustic detection. No species polygon prepared for ecosystem credit species

Several other species were assumed to be present for the purposes of preparing the September 2023 BAR. However, they were not recorded during targeted survey efforts in October and November 2023 for the revised BAR and are no longer considered to have a ‘moderate’ or ‘higher’ likelihood of occurring within the study area. As a consequence, these species

have not been assessed as part of the impact assessment within the revised BAR and have not been considered further in revised BAR or this section. These species include:

- Flora
  - Bynoe's Wattle (*Acacia bynoeana*)
  - Downy Wattle (*Acacia pubescens*)
  - Juniper-leaved Grevillea (*Grevillea juniperina* subsp. *juniperina*)
  - Small-flower Grevillea (*Grevillea parviflora* subsp. *parviflora*)
  - *Marsdenia viridiflora* subsp. *viridiflora*
  - Nodding Geebung (*Persoonia nutans*)
  - Spiked Rice-flower (*Pimelea spicata*)
  - *Pultenaea parviflora*
  - Matted Bush-pea (*Pultenaea pedunculata*)
  - *Maundia triglochinoides*
  - *Micromyrtus minutiflora*
  - *Hibbertia fumana*
  - *Hibbertia puberula*
- Fauna
  - Little Lorikeet (*Glossopsitta pusilla*)
  - Little Eagle (*Hieraaetus morphnoides*)
  - Eastern False Pipistrelle (*Falsistrellus tasmaniensis*)
  - Yellow-bellied Sheath-tail-bat (*Saccolaimus flaviventris*)
  - Little Bent-winged Bat (*Miniopterus australis*)
  - Large Bent-winged Bat (*Miniopterus orianae oceanensis*).



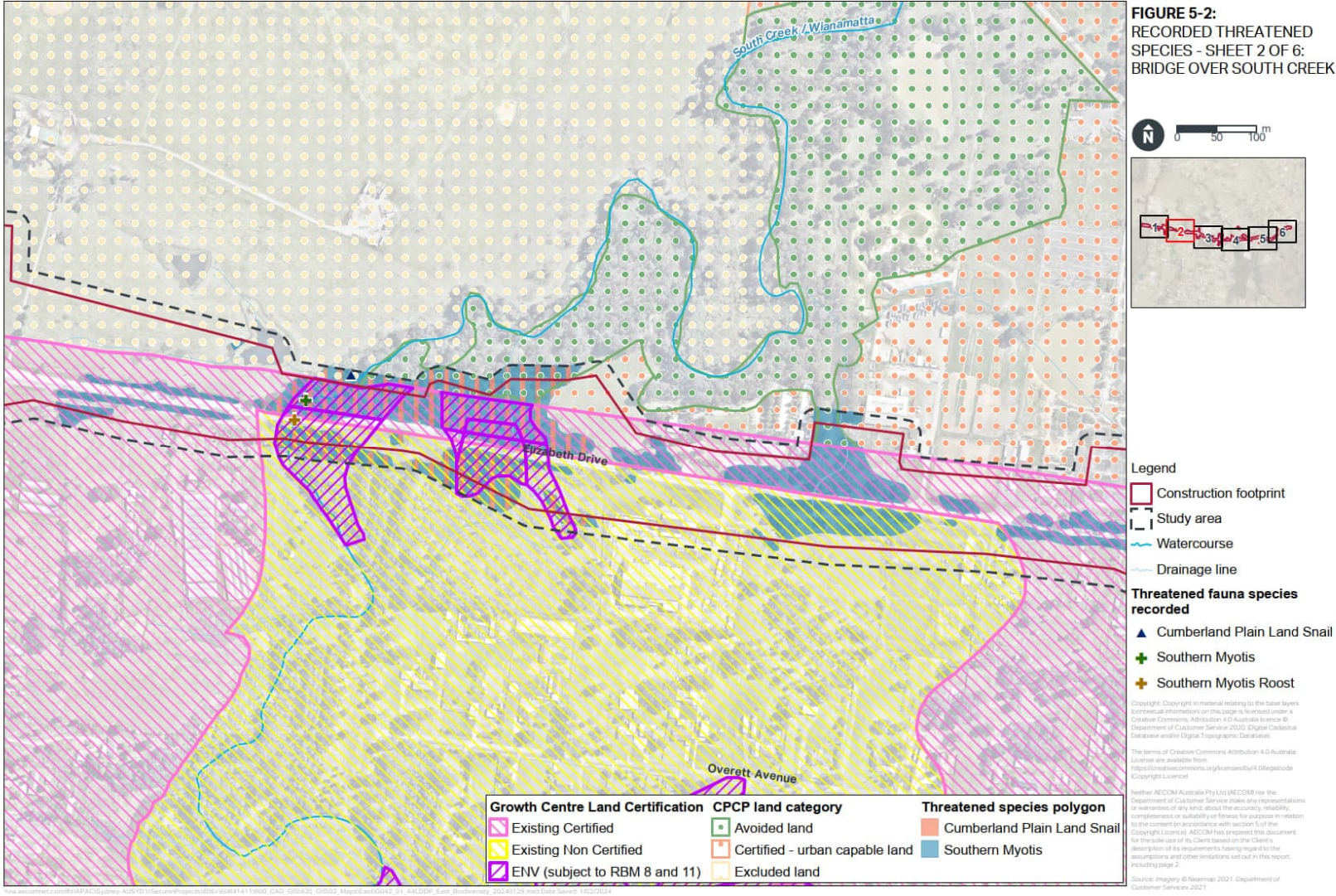


Figure 5-2: Recorded threatened species – Sheet 2 of 6

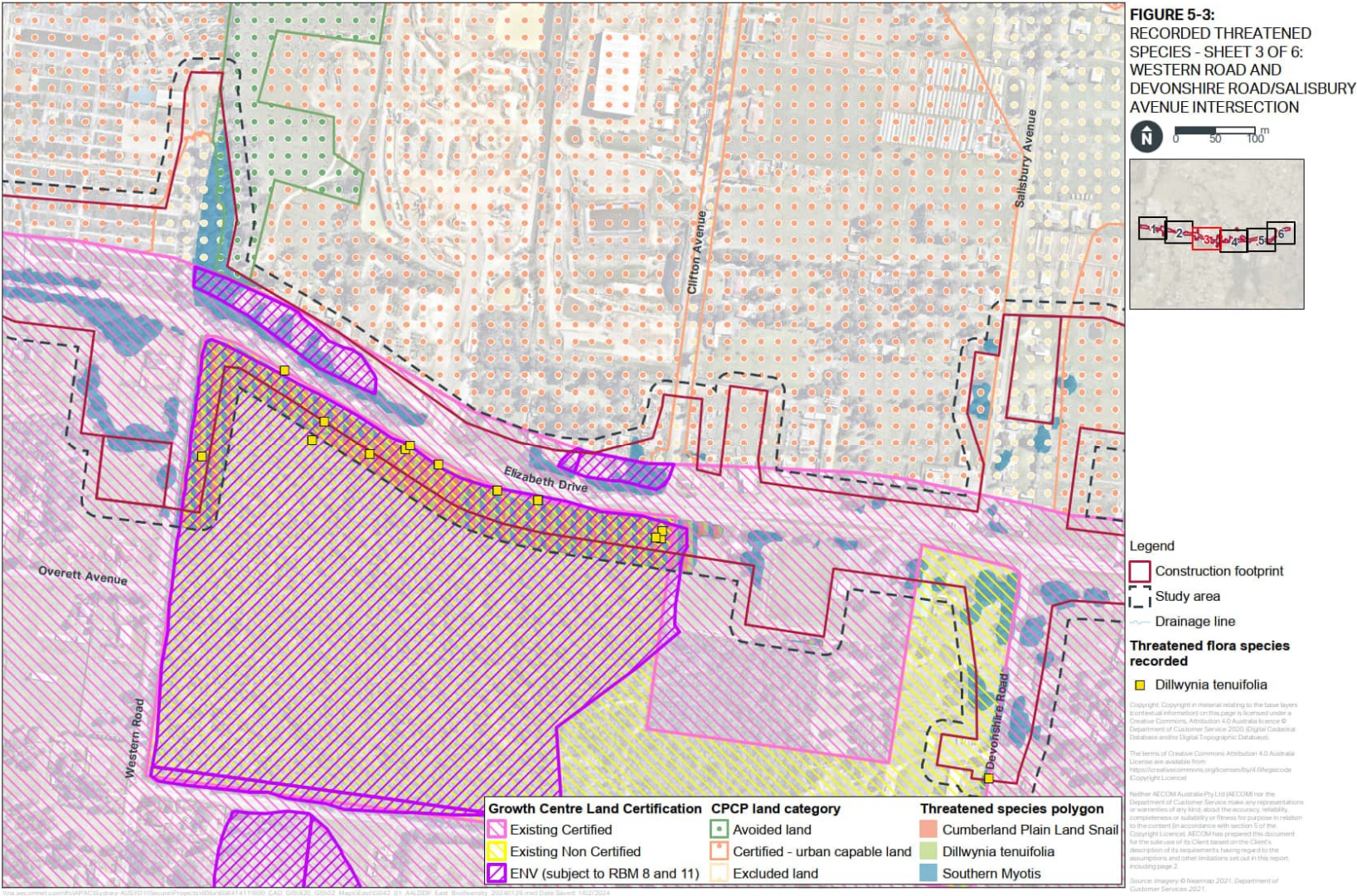


Figure 5-3: Recorded threatened species – Sheet 3 of 6

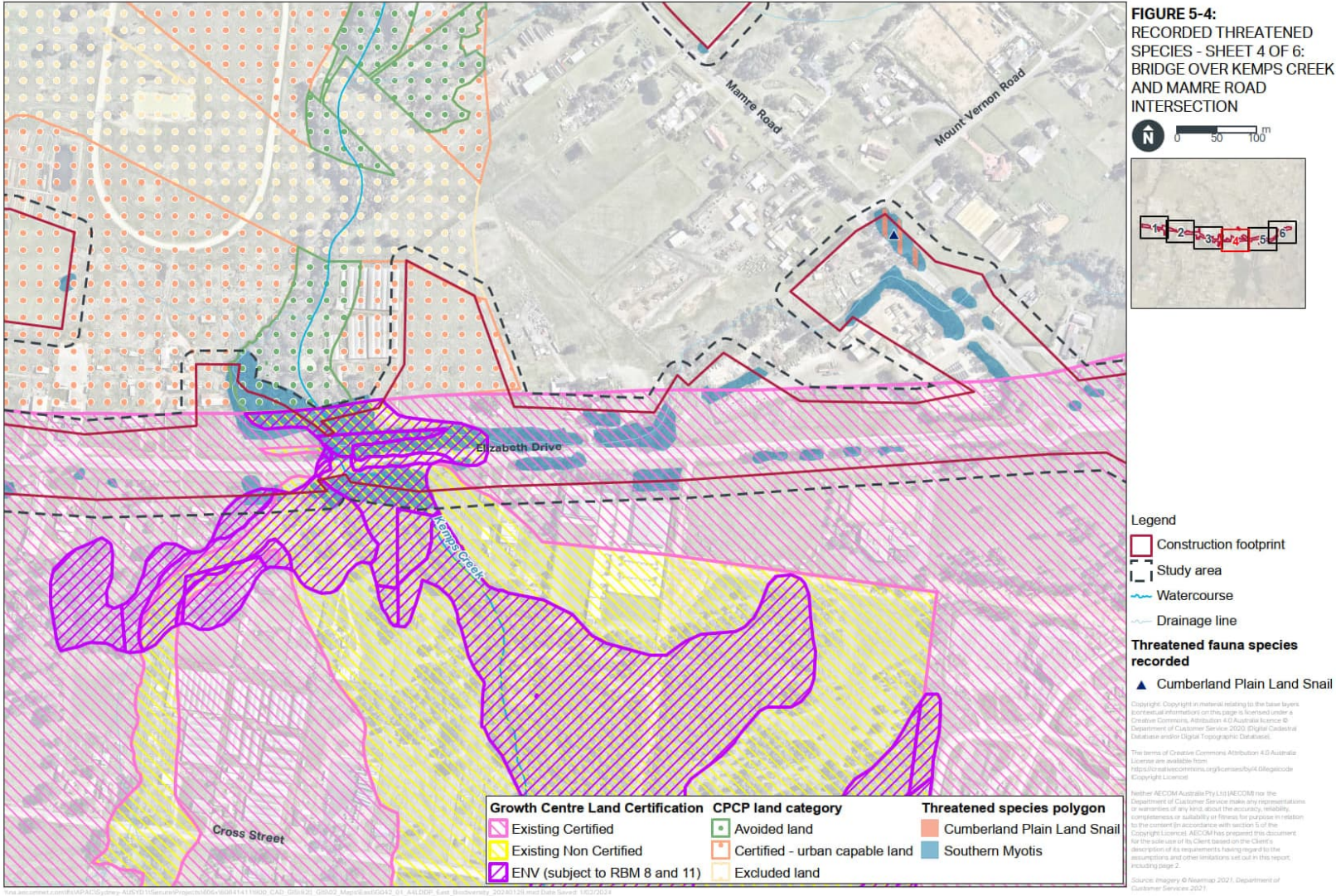


Figure 5-4: Recorded threatened species – Sheet 4 of 6

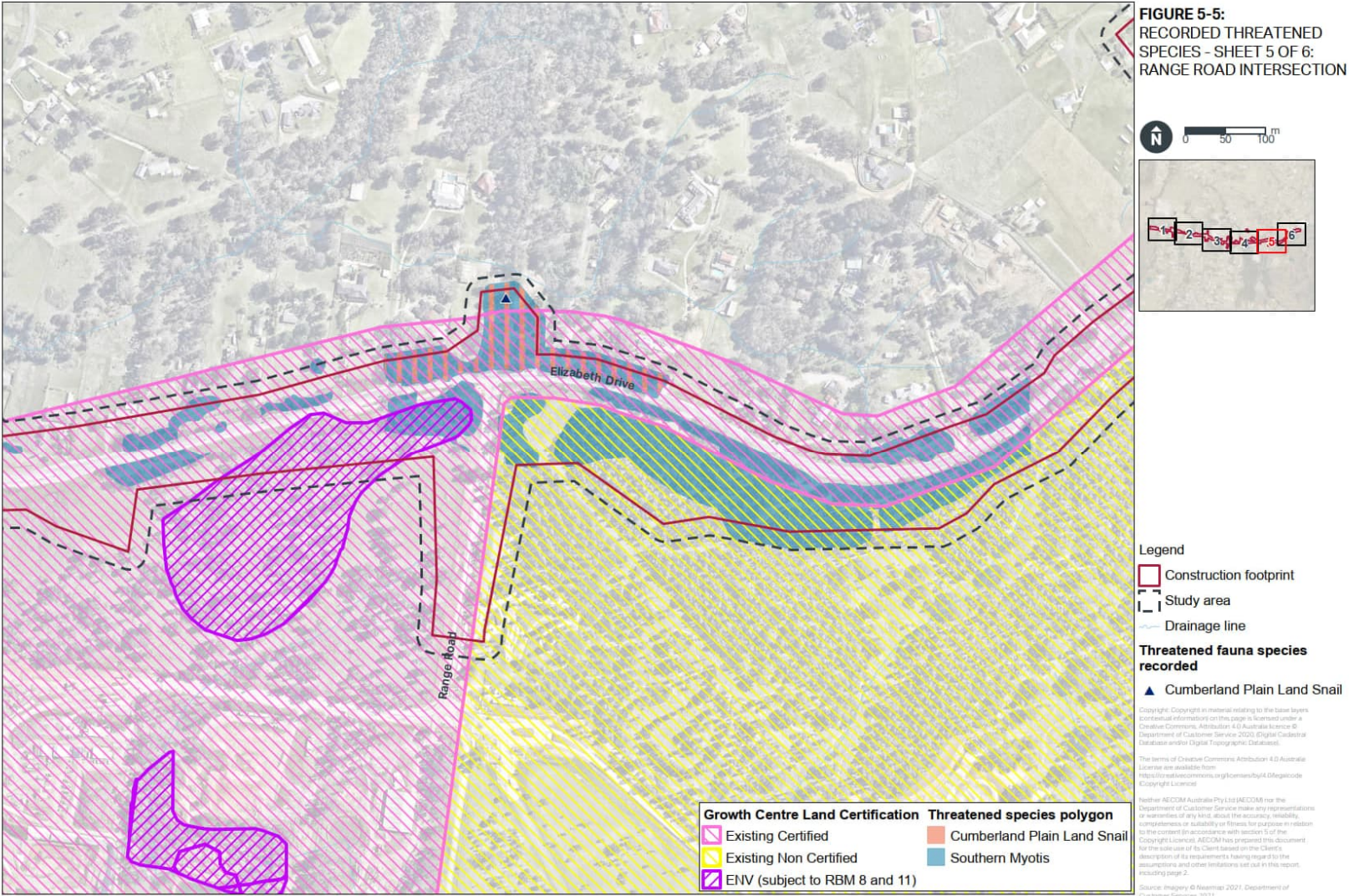


Figure 5-5: Recorded threatened species – Sheet 5 of 6

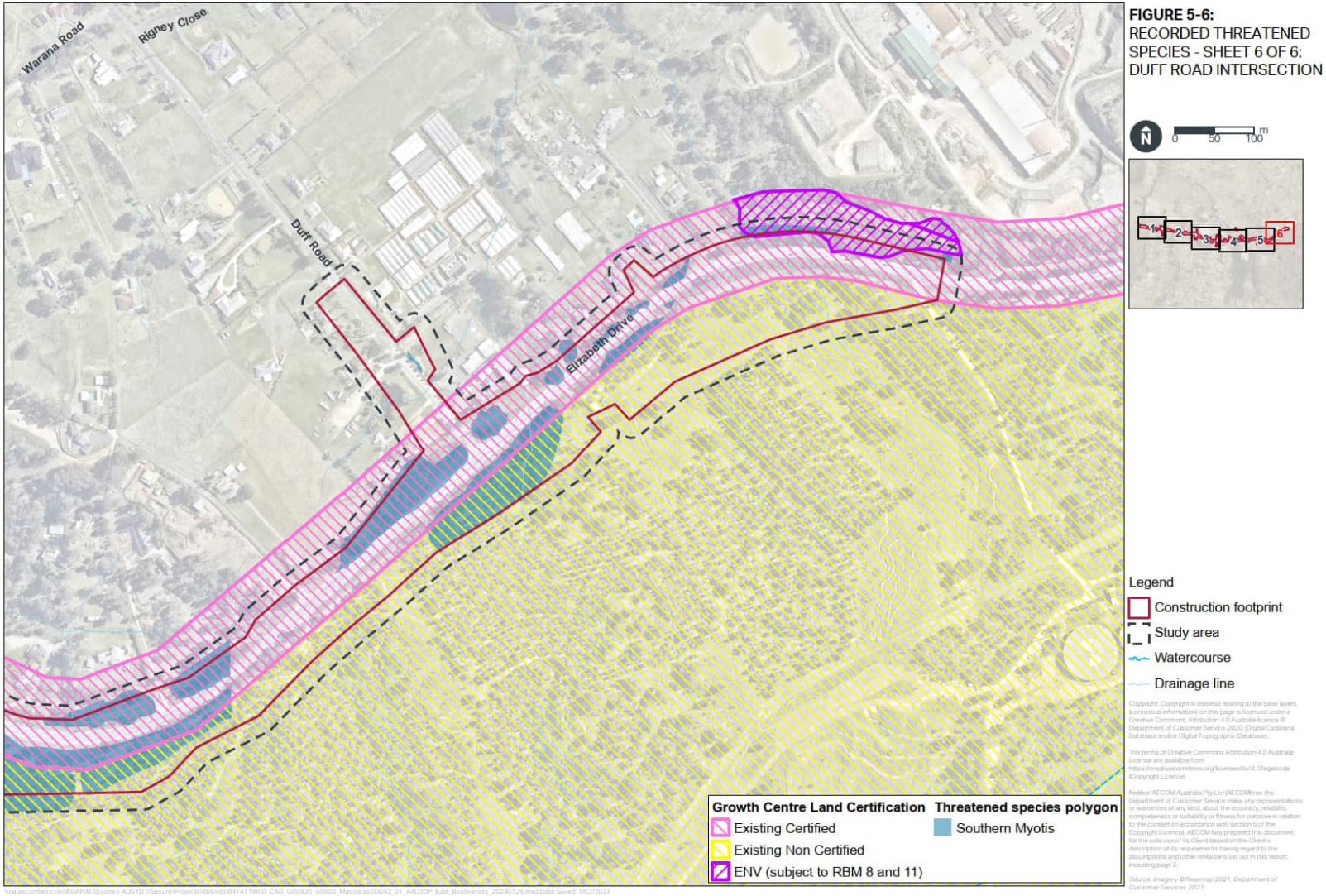


Figure 5-6: Recorded threatened species – Sheet 6 of 6

### Matters of national environmental significance

Patch size analysis was carried out for all PCTs within the study area with an associated EPBC Act listed TEC, based on the October and November 2023 field surveys. The purpose of this analysis was to determine if the TEC meets the criteria for listing under the EPBC Act (for example, to review if a patch of potential EPBC Act TEC meets minimum size requirements and that the understory is greater or equal to a certain per cent native). This process revealed the following EPBC Act listed TECs within the study area:

- PCT 724: EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (1.26 hectares in the study area)
- PCT 725: EPBC Act, Critically Endangered – Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion (2.95 hectares in the study area)
- PCT 835: EPBC Act, Critically Endangered – River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria (5.76 hectares in the study area)
- PCT 849: EPBC Act, Critically Endangered – Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest, with the exception PCT 849 within Western Sydney Parklands (13.15 hectares in the study area)
- PCT 883: EPBC Act, Endangered – Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion (1.54 hectares in the study area)
- PCT 1800: EPBC Act, Endangered – Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community (4.11 hectares in the study area).

The PCT identified above are consistent with those identified in the September 2023 BAR.

EPBC act listed TECs are shown on Figure 3-6 of Appendix A.

No nationally listed threatened or migratory species have been identified within the study area.

### Other biodiversity values

The existing environment for the following biodiversity values has not changed since the September 2023 BAR:

- Groundwater dependent ecosystems
- Aquatic biodiversity
- Areas of outstanding biodiversity value
- Wildlife connectivity corridors.

The existing environment in relation to these values is described in Section 6.3 of the REF.

## 5.1.4 Potential impacts

### Construction

#### *Removal of native vegetation*

The proposal would result in the direct loss of 14.57 hectares of native vegetation in intact, thinned, scattered and disturbed condition classes, including 14.57 hectares comprising seven BC Act listed and 12.63 hectares comprising five EPBC Act listed TECs, as summarised in Table 5-3. Significant impact assessments were carried out for all TECs listed in Table 5-3. In all cases, a significant impact is not considered likely with the effective implementation of environmental safeguards (refer to Section 5.4 of the revised BAR in Appendix B).

The extent of vegetation loss as a result of the proposal between the September 2023 BAR and the revised BAR is shown in bold text, with outdated vegetation loss shown in ~~strikeout text~~. Where there has been no change in assessed native vegetation loss, this is shown in standard text.

Table 5-3 Summary of direct impacts on native vegetation

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
Zone 1 (Intact)	724: Broad-leaved Ironbark-- Grey Box-- Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion	Intact	BC Act, Endangered -- Shale Gravel Transition Forest in the Sydney Basin Bioregion, AND EPBC Act, Critically Endangered-- Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest.	0.07	<del>0.22</del> 0.14	0	<del>0.15</del> 0.12	<del>&lt;0.01</del> 0	<del>0.23</del> 0.22	<del>Intact 0.45</del> <del>Scattered Trees 0.65</del> <del>Thinned 0.42</del> <del>TOTAL 1.52 ha</del>	<del>Intact 0.45</del> <del>Scattered Trees 0.84</del> <del>Thinned 0.45</del> <del>TOTAL: 01.74 ha</del>
Zone 2 (Scattered trees)	724: Broad-leaved Ironbark-- Grey Box-- Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion	Scattered Trees	BC Act, Endangered-- Shale Gravel Transition Forest in the Sydney Basin Bioregion. (Not EPBC Act listed)	<del>0.04</del> 0.41	<del>2.01</del> 1.45	0	<del>0.04</del> 0	<del>0.18</del> 0.16	<del>0.20</del> 0.13		

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
Zone 3 (Thinned)	724: Broad-leaved Ironbark-- Grey Box-- Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion	Thinned	BC Act, Endangered-- Shale Gravel Transition Forest in the Sydney Basin Bioregion, AND EPBC Act, Critically Endangered-- Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest.	0	0.73	0	0.23	0.03	0.19		
Zone 4 (Intact)	725: Broad-leaved Ironbark-- Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion	Intact	BC Act, Endangered-- Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion, AND EPBC Act, Critically Endangered-- Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion.	1.76	0.45	<del>1.65</del> 1.72	0	<del>0</del> 0.04	0	Intact 1.76 TOTAL: 1.76	Intact 1.76 TOTAL: 1.76

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
Zone 5 (Disturbed)	781: Coastal freshwater wetland	Disturbed	BC Act, Endangered-- Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions.	0	0	0	0.10	0	0	Disturbed 0.10 TOTAL: 0.10	Disturbed 0 TOTAL: 0
Zone 6 (Intact)	835: Forest Red Gum-- Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	Intact	BC Act, Endangered-- River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions, AND	<del>0.04</del> 0	<del>1.77</del> 1.59	<del>0.04</del> <0.01	<del>0.37</del> 0.35	0.04	<del>0.26</del> 0.04	<del>Intact 0.68</del> <del>Scattered Trees 1.98</del> <del>Thinned 1.90</del> <del>TOTAL: 4.56</del>	<del>Intact 0.72</del> <del>Scattered Trees 2.09</del> <del>Thinned 1.90</del> <del>TOTAL: 4.56</del>
Zone 7 (Scattered Trees)	835: Forest Red Gum-- Rough-barked Apple grassy woodland on	Scattered Trees	EPBC Act, Critically Endangered-- River-flat eucalypt forest on coastal	0.81	<del>2.83</del> 2.11	<del>0.04</del> 0.05	0.11	0.11	<del>0.08</del> 0.05	Intact 0.38 Scattered Trees 1.68 Thinned 0.75 TOTAL: 2.81	Intact 0.26 Scattered Trees 0.86 Thinned 0.74 TOTAL: 1.86

Transport  
for NSW

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
	alluvial flats of the Cumberland Plain, Sydney Basin Bioregion		floodplains of southern New South Wales and eastern Victoria								
Zone 8 (Thinned)	835: Forest Red Gum-- Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion	Thinned		<del>0.82</del> 0.75	<del>0.84</del> 0.69	<del>0.65</del> 0.61	<del>0.01</del> 0	0	<del>0.89</del> 0		
Zone 9 (Intact)	849: Grey Box-- Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	Intact	BC Act, Critically Endangered-- Cumberland Plain Woodland in the Sydney Basin Bioregion, AND EPBC Act, Critically Endangered-- Cumberland Plain	<del>3.29</del> 2.33	<del>0.46</del> 0.45	0	0	0	0	<del>Intact 3.29</del> <del>Scattered Trees 2.63</del> <del>Thinned 1.81</del> <del>TOTAL: 7.73</del>  Intact 2.33	<del>Intact 3.29</del> <del>Scattered Trees 2.63</del> <del>Thinned 1.81</del> <del>TOTAL: 7.73</del>  Intact 2.33

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
Zone 10 (Scattered trees)	849: Grey Box-- Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	Scattered Trees	Shale Woodlands and Shale-Gravel Transition Forest.	<del>2.45</del> 2.21	<del>7.37</del> 6.48	0.03	0	<del>&lt;0.01</del> 0	0.02	Scattered Trees 2.28 Thinned 1.51 TOTAL: 6.22	Scattered Trees 2.25 Thinned 1.51 TOTAL: 6.09
Zone 11 (Thinned)	849: Grey Box-- Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion	Thinned		<del>1.81</del> 1.51	<del>2.31</del> 2.63	0	0	0	0		
Zone 12 (Intact)	883: Hard-leaved Scribbly Gum-- Parramatta Red Gum heathy woodland of the Cumberland	Intact	BC Act, Vulnerable-- Castlereagh Scribbly Gum Woodland in the Sydney Basin Bioregion, AND EPBC Act, Endangered-- Castlereagh	0.82	0.19	<del>0.77</del> 0.78	0	0	0	Intact 0.82 TOTAL: 0.82	Intact 0.82 TOTAL: 0.82

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
	Plain, Sydney Basin Bioregion		Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion. EPBC Act, Endangered– - Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion								
Zone 13 (Intact)	1800: Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	Intact	BC Act, Endangered-- Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions, AND EPBC Act, Endangered-- Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland	0.18	<del>0.96</del> 0.97	<del>0.15</del> 0.16	<del>0.14</del> 0.13	0.01	<del>0.44</del> 0.12	<del>Intact 0.84</del> <del>Thinned 0.97</del> <del>TOTAL: 1.81</del>	<del>Intact 0.86</del> <del>Thinned 0.98</del> <del>TOTAL: 1.84</del>
Zone 14 (Thinned)	1800: Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	Thinned		<del>0.84</del> 0.83	<del>0.03</del> 0.13	0.82	<del>0.13</del> 0.14	<del>0.01</del> 0.04	0	Intact 0.51 Thinned 0.97 TOTAL: 1.48	Intact 0.34 Thinned 1.02 TOTAL: 1.36

Veg. zone and condition class	Plant community type (PCT)	Broad condition class	TEC	SEPP (Precincts – Western Parkland City) 2021			CPCP			Impacts to be assessed under BC Act <sup>2</sup>	Impacts to be assessed under EPBC Act <sup>3</sup>
				Existing Non Certified	Existing Certified	ENV <sup>1</sup> within non certified areas <sup>1</sup>	Avoided land	Certified Urban Capable Land	Excluded Land		
			ecological community.								
	Urban Native/Exotic	-	-	<del>0.16</del> 0.20	<del>2.07</del> 0.84	-	0.01	<del>0.02</del> 0	<del>0.32</del> 0.28	-	-
Total				<del>13.48</del> 11.88	<del>20.08</del> 18.85	<del>1.31</del> 4.16	<del>0.42</del> 1.18	<del>2.64</del> 0.44	<del>4.15</del> 1.06	<del>18.32</del> 14.57	<del>18.75</del> 12.63

Notes:

1. ENV refers to land mapped as part of the South West Growth Area under the NSW State Environmental Planning Policy (SEPP) (Precincts - Western Parkland City) 2021 (which incorporates the former SEPP (Sydney Region Growth Centres) 2006)
2. Impacts to be assessed under the BC Act refers to native vegetation listed under the BC Act within the subject land (construction footprint) that is mapped as Existing Non Certified, Excluded Land, Avoided Land and any additional small areas not covered by either the SEPP (Precincts – Western Parkland City) 2021 or CPCP
3. Impacts to be assessed under the EPBC Act refers to native vegetation listed under the EPBC Act within the subject land (construction footprint) that is mapped as Existing Non Certified, Excluded Land, Avoided Land and any additional small areas not covered the SEPP (Precincts – Western Parkland City) 2021, as well as land mapped as Certified – Urban Capable Land under the CPCP
4. The totals included in this table are based on calculations using the raw impact data which includes more decimal places than what is expressed in the table above. As such, small rounding errors occur between these totals and the summed totals of the vegetation zones that comprise them when values are expressed in two decimal places.

### Removal of threatened fauna habitat

A summary of impacts to potential habitat for those threatened species either recorded or assessed as having a 'moderate' or 'higher' likelihood of occurrence within the study area is presented below. The range of species identified that may be impacted is based on a combination of desktop assessment and targeted survey for select species suggested to occur from CPCP habitat modelling.

The fauna species habitat previously assumed in the September 2023 BAR to have a moderate or higher likelihood of occurrence, but which were not identified during the targeted surveys for the revised BAR, have not been assessed in the revised BAR. This includes habitat for the following species which would not be impacted by the proposal:

- Little Eagle *Hieraaetus morphnoides*
- Eastern False Pipistrelle *Falsistrellus tasmaniensis*
- Yellow-bellied Sheath-tail-bat *Saccolaimus flaviventris*
- Little Bent-winged Bat *Miniopterus australis*
- Large Bent-winged Bat *Miniopterus orianae oceanensis*.

Significance assessments were carried out for all the threatened fauna with a moderate or higher likelihood of occurring listed in Table 5-4. In all cases, a significant impact is not considered likely (refer further to Section 5.4 of the revised BAR in Appendix B).

Table 5-4: Revised summary of direct impacts on threatened fauna and habitat

Species name	EPBC Act	BC Act	Credit type <sup>1</sup>	Potential occurrence (Moderate, High, Recorded)	Associated habitat in subject land (construction footprint)	Impact (ha)
Little Lorikeet <i>Glossopsitta pusilla</i>	-	Vulnerable	Ecosystem	Moderate	All zones	14.57
Cumberland Plain Land Snail <i>Meridolum corneovirens</i>	-	Endangered	Species	Recorded	All connective habitat in the locations where shells were found	3.78
Eastern Coastal Free-tailed Bat <i>Micronomus norfolkensis</i>	-	Vulnerable	Ecosystem	Recorded	All zones	14.57
Southern Myotis <i>Myotis macropus</i>	-	Vulnerable	Species	Moderate	All zones within 200m of waterbodies containing pools or stretches 3m wide or greater that intersect CPCP species polygon, PCT 724 (Zone 1 and 2), PCT 781 (Zone 5) PCT 835 (Zone 6, 7 and 8) and PCT 1800 (Zone 13 and 14)	11.17

Species name	EPBC Act	BC Act	Credit type <sup>1</sup>	Potential occurrence (Moderate, High, Recorded)	Associated habitat in subject land (construction footprint)	Impact (ha)
Greater Broad-nosed Bat <i>Scoteanax rueppellii</i>	-	Vulnerable	Ecosystem	Moderate	All zones	14.57

Removal of existing bridges and construction of new bridge structures over Badgerys Creek, South Creek and Kemps Creek would impact the associated waterways and surrounding vegetation directly. Visual inspection of the bridges at Badgerys Creek, Kemps Creek and South Creek (western bridge), did not find any evidence of roosting microbats. These bridges are an older style construction, cast in-situ, and limited opportunities for roosting bats in the form of metal scuppers. The outer span of the eastern bridge at South Creek, however, did contain evidence of roosting microbats (including urine staining and guano deposits). An estimate of about 100-150 individuals were observed roosting in the gaps between the concrete spans. It is likely that this bridge represents a breeding colony of Southern Myotis and it is possible that other artificial structures may also be used within the study area by these individuals for seasonal or temporary roosting. The removal of artificial structures, therefore, has the potential to impact threatened microbats utilising them for roosting and possibly breeding. A Microbat Management Plan would be prepared and implemented to manage potential impacts to threatened bats that may occur (refer to Section 5.1.5).

Cumberland Plain Land Snail is considered to have patchy habitat distribution across the study area, of which 3.78 hectares would be directly impacted by the proposal. Shells for the Cumberland Plain Land Snail shells were found in five different locations within the surveyed area. In the locations where shells were found, all connective habitat suitable for the species in the area, including leaf litter at the base of trees, coarse woody debris, stones and detritus in the study area, was used to determine the species polygon for Cumberland Plain Land Snail and therefore, the area directly impacted by the proposal.

#### Removal of threatened flora

The proposal would lead to direct loss of 13 *Dillwynia tenuifolia* (BC Act, endangered population (2.58 hectares) located in bushland west of Bill Anderson Reserve as summarised in Table 5-5. There are a total of 15 individuals recorded in this area, however, two individuals recorded are located outside the construction footprint for the proposal. A population of *Pultenaea parviflora* was assumed to occur in bushland west of Bill Anderson Reserve from background research in the September 2023 BAR. No individuals were recorded during targeted survey for the revised BAR.

Threatened flora species recorded in the subject land (construction footprint) during targeted survey are listed in Table 5-5.

A test of significance carried out for *Dillwynia tenuifolia* found a significant impact to the species as a result of the proposal is not considered likely (refer to Section 5.4 of the revised BAR in Appendix B).

Table 5-5: Summary of direct impacts on threatened flora

Species name	EPBC Act	BC Act	Potential occurrence (Moderate, High, Recorded)	Associated habitat in subject land (construction footprint)	BC Act Impact (ha)	EPBC Impact (ha)
<i>Dillwynia tenuifolia</i>	-	Endangered population	Recorded, 15 individuals (13 to be removed)	PCT 725 and 883	2.58	N/A

#### Other biodiversity values

The findings of the revised BAR were unchanged from the September 2023 BAR, with regard to the following impacts during construction of the proposal:

- Impacts to vegetation identified in Western Sydney Growth Area – South West Growth Area
- Aquatic impacts

- Injury and mortality
- Groundwater dependent ecosystems
- Invasion and spread of pests, pathogens, and disease
- Noise, light and vibration.

#### Operation

##### *Wildlife connectivity and habitat fragmentation*

An additional environmental safeguard is included in the revised BAR and Section 5.1.5 to maintain connectivity where possible. It seeks retention of large trees that are greater than or equal to 50 centimetres in diameter at breast height (including dead trees but excluding noxious weeds) where possible and the application of tree protection measures for all vegetation to be retained.

##### *Other biodiversity values*

The findings of the revised BAR were unchanged from the September 2023 BAR, with regard to the following impacts during operation of the proposal:

- Edge effects on adjacent native vegetation and habitat
- Injury and mortality
- Changes to hydrology
- Noise, light, dust and vibration.

### 5.1.5 Revised safeguards and management measures

Environmental safeguards have been updated since the September 2023 revision of the BAR to reflect the assessment findings of the revised BAR. Additions to existing environmental safeguards are shown in underlined and bolded text, with deletions shown with a ~~strike through~~.

A complete list of safeguards and management measures proposed to manage potential biodiversity impacts is provided in Section 6.

Table 5-6: Revised environmental safeguards

Impact	Environmental safeguard	Responsibility	Timing	Reference
Biodiversity – Removal of native vegetation	<p>Flora and Fauna Management Plan will be prepared in accordance with Transport for NSW's <i>Biodiversity Guidelines: Protecting and Managing Biodiversity on Projects</i> (RTA 2011) and implemented as part of the CEMP. It will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>Plans showing areas to be cleared and areas to be protected, including exclusion zones, protected habitat features and revegetation areas</li> <li><del>Requirements set out in the Landscape Design Guideline (TfNSW, 2023)</del></li> <li>Pre-clearing survey requirements</li> <li>Procedures for unexpected threatened species finds and fauna handling.</li> <li>Procedures addressing relevant matters specified in the DPI Policy and guidelines for fish habitat conservation and management (2013).</li> <li>Protocols to manage weeds, pathogens and pest species</li> </ul>	Transport / Contractor	Construction	Additional safeguard
<u>Biodiversity – Survey effort</u>	<u>BAM Plots will be carried out within the subject land to confirm the biodiversity credits required for the proposal</u>	<u>Transport / Contractor</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
<u>Removal of threatened fauna habitat</u>	<u>Targeted surveys will be undertaken as part of detailed design, if not sooner. The results will guide the avoidance and minimisation of threatened fauna habitat removal where it is identified.</u>	<u>Transport / Contractor</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
Biodiversity – Removal of threatened habitat	<p><del>Targeted surveys to determine the presence of threatened microbats in culvert/bridge etc structures to be removed are to be undertaken as soon as access becomes available.</del></p> <p><del>These surveys are required to confirm that direct impacts to important roosting habitat is not likely to occur as a result of the proposal, and to identify the need for mitigation measures to prevent direct impacts to individuals when the structures are to be removed.</del></p> <p><del>Should roosting threatened microbats be recorded, Tests of Significance will need to be updated to re-assess the significance of the impacts of the proposal.</del></p> <p><u>As a roosting population of Southern Myotis was recorded in the eastern bridge above South Creek, a Microbat Management Plan will be prepared and implemented for the proposal. The plan will incorporate recommendations to avoid significant impacts to Southern Myotis including:</u></p> <ul style="list-style-type: none"> <li><u>Installation of temporary habitat alternatives and/or permanent supplementary habitat (bat boxes, roosting opportunities within new bridges)</u></li> </ul>	Transport / Contractor	<u>Pre-construction Detailed design, pre-construction and construction</u>	Additional safeguard

Impact	Environmental safeguard	Responsibility	Timing	Reference
	<ul style="list-style-type: none"> <li><u>Mitigation measures to minimise impacts of construction noise on roosting bats (noise dampening, containment of bats)</u></li> <li><u>Exclusion measures to be implement prior to the bridge removal prevent microbats returning to a bridge</u></li> <li><u>Ongoing monitoring measures pre, during and post construction to assess impacts</u></li> <li><u>Requirements to conduct works on roosting habitat or implement any exclusion measures outside of breeding season</u></li> <li><u>Recommendations for construction staging and methods to avoid impacts to microbats.</u></li> </ul> <p><u>In addition to the above, the new bridge design will incorporate similar long-term roosting opportunities (for example, suitable roosting gaps in the underside of the bridge)</u></p>			
<u>Pre-clearing survey</u>	<u>Pre-clearance surveys for Cumberland Plain Land Snail will be carried out, in accordance with an approved Cumberland Plain Land Snail Translocation Plan, prior to removal of vegetation to ensure any individuals are translocated and not impacted by the proposed works</u>	<u>Transport / Contractor</u>	<u>Pre-construction and construction</u>	<u>Additional safeguard</u>
<u>Wildlife connectivity and habitat fragmentation</u>	<u>Large trees that are greater than or equal to 50-centimetre diameter at breast height (including dead trees but excluding noxious weeds) will be retained where possible</u>	<u>Transport / Contractor</u>	<u>Detailed design, pre-construction and construction</u>	<u>Additional safeguard</u>
<u>Biodiversity</u>	<u>Where possible, viable native seeds would be collected from trees, shrubs and groundcovers during the vegetation clearing process for the proposal, and repurposed (for example, through donation to nurseries)</u>	<u>Transport / Contractor</u>	<u>Pre-construction and construction</u>	<u>Additional safeguard</u>
<u>Biodiversity</u>	<u>Transport will provide the Department of Planning, Housing and Infrastructure with spatial data showing the extent of vegetation removal on non-certified land (as identified in the <i>Order to confer biodiversity certification on the State Environment Planning Policy (Sydney Region Growth Centres) 2006</i>). Transport will also provide the Department with details of offsets that it has secured for the proposal</u>	<u>Transport / Contractor</u>	<u>Pre-construction and construction</u>	<u>Additional safeguard</u>

### 5.1.6 Biodiversity offsets

As biodiversity offsetting thresholds would be reached as a result of the proposal, offsets or conservation measures would be required under Transport's No Net Loss Guidelines (Transport for NSW, 2022). The proposal's biodiversity offset obligation for impacts on biodiversity values were determined using the BAM Calculator. The methodology for the offset calculations is described further in Section 7 of Appendix B.

A total of 251 ecosystem credits and 436 species credits would be required for the proposal. This would include:

- 25 ecosystem credits for Broad-leaved Ironbark – Grey Box – Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion (PCT 724)
- 61 ecosystem credits for Broad-leaved Ironbark - Melaleuca decora shrubby open forest on clay soils of the Cumberland Plain, Sydney Basin Bioregion (PCT 725)
- 56 ecosystem credits for Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)
- 109 ecosystem credits for Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 849)
- 83 species credits for *Dillwynia tenuifolia* – endangered population
- 122 species credits for Cumberland Plain Land Snail (*Meridolum corneovirens*)
- 231 species credits for Southern Myotis (*Myotis macropus*).

The September 2023 BAR provided a conservative assessment of required biodiversity offsets, given that targeted surveys were not carried out. It was assumed that a total of 353 ecosystem credits and 1,109 species credits would be required for the proposal, which has now been revised as described above.

Other offsetting requirements for the proposal were identified in the REF and would include the following:

- A Tree and Hollow Replacement Plan would be prepared to address the impacts prior to the commencement of construction work. Where tree and hollow replacement cannot be accommodated locally or can only be partially accommodated, payment must be made to the Transport Conservation Fund prior to the commencement of works in accordance with the Transport's Tree and hollow replacement guidelines (2022)
- The proposal would involve direct impact to native vegetation subject to RBMs identified in the Order to confer biodiversity certification on the SEPP (Sydney Region Growth Centres) 2006 (DECCW, 2007). RBM 8 and RBM 11 relate to the removal of 'existing native vegetation' from Existing Non-Certified land and provide details on offsetting requirements for any impacts that may occur. Transport is committed to securing offsets for this residual impact to existing native vegetation as defined in the Biodiversity Certification Order, in accordance with RBM 8 and RBM 11. Preliminary offset calculations have been provided in Section 7.2 of Appendix B.

## 5.2 Socio-economic impacts

### 5.2.1 Overview

Following the receipt of feedback as part of the submissions report, additional socio-economic assessment has been carried out to investigate impacts on Animal Welfare League NSW, Kemps Creek. The socio-economic assessment in Appendix J and Section 6.7 of the REF previously identified Animal Welfare League NSW as a business; however, Transport acknowledges that Animal Welfare League NSW is also a provider of social infrastructure in the community.

As discussed in Section 4.1, a portion of privately owned access road within Lot 5 / DP 255566 has been identified as requiring partial acquisition since the finalisation of the REF. The potential property and land use impacts related to the proposed acquisition of the private road is provided in Section 5.3. Socio-economic impacts relating to property acquisition are consistent with those identified in the REF.

The additional assessment is summarised in the following sections.

### 5.2.2 Methodology

The methodology adopted for this assessment is consistent with the methodology described in Section 3 of Appendix J of the REF.

### 5.2.3 Existing environment

Animal Welfare League NSW is an animal welfare organisation located at 1605 – 1667 Elizabeth Drive, Kemps Creek, immediately adjacent to the proposal.

Animal Welfare League NSW at Kemps Creek houses, rehabilitates, cares for and rehomes surrendered animals, with a veterinary clinic, shelter, inspectorate, headquarters and recently built animal adoption centre located on the site. Animal Welfare League's submission to the REF notes that it typically has over 350 animals on the site. The Animal Care Truck (a mobile veterinary clinic) and inspector vehicles (generally for the purpose of enforcing animal welfare legislation) are also located on the site.

Other social infrastructure within two kilometres of the proposal area is identified in Section 4 of Appendix J of the REF.

## 5.2.4 Potential impacts

### Construction

Social infrastructure – including Animal Welfare League NSW at Kemps Creek – would be directly impacted through partial property acquisition for surface operational infrastructure and the use of the proposal area for construction activities.

The proposal would require partial acquisition of about 2.47 hectares of land from the Animal Welfare League NSW property at Kemps Creek (Lot 1 / DP 255566) to accommodate the proposed road infrastructure, including the shared walking and cycling path, as well as drainage elements and a basin at the western end of the property (within the operational footprint of the proposal). Longer term impacts associated with the acquisition of this area are discussed in the operational impact assessment below.

Areas of the Animal Welfare League NSW property which are within the construction footprint of the proposal include driveway access to the site, parking spaces, water recycling facilities, landscaping and vegetation, and outdoor areas (which Animal Welfare League NSW has indicated is used for dog walking). Use of this area during construction may impact upon access to areas of the Animal Welfare League NSW property, as well as parking and the availability of these facilities.

A Traffic Management Plan would be in place to manage potential access impacts. Transport would consult with Animal Welfare League NSW to ensure that access for emergency services delivered by the Animal Welfare League NSW are maintained during the construction period. This would be reflected in the Traffic Management Plan for the proposal.

Removal of some of the parking spaces on the property (15) is likely to be required to carry out the construction of the proposal, which would also impact upon the ability to access the site. Transport would work Animal Welfare League NSW to identify suitable temporary parking arrangements to manage this impact. Reinstatement of improvements would be carried out by Transport, in accordance with the property adjustment plan and in consultation with the Animal Welfare League NSW.

Construction work with increased noise and dust emissions, and noise from construction traffic would temporarily reduce amenity for users of the Animal Welfare League NSW site, including those using open space areas. This has the potential to impact personnel at the facility as well as animals on site. It is likely that animals within the shelter may already experience noise levels at or above the levels predicted from the construction of the proposal. While this is the case, construction noise would present a 'new' noise source for animals and may, at times, reach levels which could adversely affect the animals, particularly when animals are outside, close to the road. Further detail on the potential noise and vibration impacts at Animal Welfare League NSW has been provided in response to community submissions in Section 2.7.4. Noise and vibration impacts are also discussed in Appendix E and Section 6.1 of the REF.

The changes in amenity and reduced availability of space within the facility would be moderate in magnitude. Design development would seek to minimise this impact, in consultation with Animal Welfare League NSW (refer to Section 5.2.5). While Animal Welfare League NSW operates multiple branches across NSW, there are limited facilities of a comparable scale within surrounding suburbs. As such, the sensitivity of community members who utilise services of Animal Welfare League NSW at Kemps Creek is considered to be high, resulting in an impact of high-moderate significance (negative).

### Operation

As stated above, the proposal would require partial acquisition of about 2.47 hectares of land at the Animal Welfare League NSW property at Kemps Creek (Lot 1 / DP 255566) to accommodate surface operational infrastructure. Areas of the Animal Welfare League NSW property which are within this area includes driveway access to the site, parking spaces, water recycling facilities, landscaping and vegetation, and outdoor areas (which the Animal Welfare League has indicated are used for dog walking).

Compensation for partial property acquisition would be determined in accordance with Section 55 of the Just Terms Act. Compensation payable pursuant to Section 55 of the Just Terms Act generally includes, among other matters, provisions for market value (also refer to Section 56), special value, severance, disturbance items (such as reasonable legal costs, valuation fees, relocation and removal expenses, and mortgage costs) and disadvantage resulting from relocation.

Reinstatement of impacted areas would be carried out by Transport, in accordance with the property adjustment plan and in consultation with the Animal Welfare League NSW. The exact number of spaces and reconfiguration of parking would be confirmed in consultation with Animal Welfare League NSW.

Once the proposal is operational, buildings within the Animal Welfare League NSW property would be in closer proximity to the widened road corridor compared to the existing road corridor. This may give rise to amenity impacts such as road traffic noise and visual impacts. However, once the proposal is operational, road traffic noise levels at the existing property are predicted to increase by less than 1 dB(A) as a result of the proposal. This change would be imperceptible to humans, dogs and cats. Given that road traffic noise levels would increase by such a small margin, and based on existing research into noise impacts on cats and dogs, no adverse impacts would be experienced by the animals as a result of the operation of the proposal (refer to Section 2.7.4 for further detail). Visual impacts would also generally reduce over time as landscaping and trees are planted along the shared walking and cycling path of Elizabeth Drive.

The proposed central median on Elizabeth Drive would result in vehicular site access being changed to left in / left out only, which may impact travel times for emergency response vehicles at Animal Welfare League NSW. U-turn facilities would be provided as part of the proposal. The closest U-turn facility would be at the northern extension leg of the Elizabeth Drive and Western Road intersection, about 800 metres east of Animal Welfare League NSW, which would facilitate travel in the opposite direction. An assessment of the potential increase in travel time associated with changes to property access was carried out as part of the REF, and is summarised in Section 6.2 and Appendix F of the REF. The results indicate that in general, with the central median restricting access to properties via a right hand turn from the opposite side of Elizabeth Drive, the proposal would increase travel time needed to access those properties in Year 2030 and Year 2040 conditions. A maximum increase of about 104 seconds is estimated for property access between Western Road and Martin Road when travelling in the westbound direction in 2040 scenarios. Transport would consult with Animal Welfare League NSW during detailed design development to ensure access and egress for emergency vehicles is provided.

The reduced availability of space within the facility and impact on the current day to day operation of the facility would be moderate in magnitude. Design development would seek to minimise this impact, in consultation with Animal Welfare League NSW (refer to Section 5.2.5). While Animal Welfare League NSW operates multiple branches across NSW, there are limited facilities of a comparable scale within surrounding suburbs. As such, the sensitivity of community members who utilise services of Animal Welfare League NSW, Kemps Creek is considered to be high, resulting in an impact of high-moderate significance (negative).

## 5.2.5 Revised safeguards and management measures

Based on the socio-economic impact assessment of the impact of the proposal on Animal Welfare League NSW, an additional environmental safeguard has been identified in Table 5-7.

A complete list of safeguards and management measures proposed to manage potential socio-economic impacts of the proposal is provided in Section 6.

The management of other environmental impacts (such as noise and vibration, traffic and other amenity-related impacts) would contribute to the management of social impacts, due to their interrelated nature. Other safeguards and management measures identified in the REF which are relevant to the management of potential social impacts are included in Section 6. In particular, environmental safeguard NV14 includes measures to manage the impacts of construction noise on the operation of Animal Welfare League NSW.

Table 5-7: Additional environmental safeguard – socio-economic

Impact	Environmental safeguard	Responsibility	Timing	Reference
Impacts on social infrastructure – Animal Welfare League NSW, Kemps Creek	<p>Transport would review opportunities to minimise and manage the direct impacts of the proposal on Animal Welfare League NSW, Kemps Creek. This would include:</p> <ul style="list-style-type: none"> <li>Consultation with Animal Welfare League NSW to identify options to maintain existing operations and uses on site (for example, dog walking on site and parking facilities)</li> </ul>	Transport	Detailed design	N/A

Impact	Environmental safeguard	Responsibility	Timing	Reference
	<ul style="list-style-type: none"> <li>Consideration of feasible and reasonable refinements to the proposed design to minimise the required extent of property acquisition of the Animal Welfare League NSW property (subject to topographical survey and further design development)</li> </ul>			

### 5.3 Property and land use

As discussed in Section 4.1, since the finalisation of the REF, it has been identified that the operational footprint for the proposal would include a portion of a privately owned access road within Lot 5 / DP 255566 (located to the north of Western Road). As such, partial acquisition of Lot 5 / DP 255566 is also required to carry out the proposal (in addition to the property acquisition requirements described in Section 3.4 and Appendix C of the REF).

The proposal involves realignment of the access road to form a newly signalised intersection with Western Road, as well as widening and provision of a U-turn facility at the northern leg of the new intersection. The proposed acquisition would change the private ownership of the access road to a public access road, as shown on Figure 3-15 of the REF.

The proposal would retain property access, meaning property owners which currently use the access road would still be able to use the northern leg of the Western Road to access their properties. The change in ownership would enable public use of the road, particularly the proposed U-turn facility.

As property access would be maintained, the property and land use impact of partial acquisition of the access road located to the north of Western Road is considered minor.

### 5.4 Additional statutory consultation

Transport carried out statutory consultation with the following government agencies:

- Western Parkland City Authority (under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*)
- NSW Department of Planning, Housing and Infrastructure (DPHI) (under section 3.24 of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*)
- Biodiversity, Conservation and Science of the Department of Climate Change, Energy, the Environment and Water (Transport was requested to carry out this consultation by Department of Planning, Housing and Infrastructure).

The outcomes of this additional consultation are summarised below.

#### 5.4.1 Western Parkland City Authority

Transport carried out statutory consultation with Western Parkland City Authority in August and September 2023 under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*. This consultation was required as the proposal would be carried out within a Western City operational area specified in the *Western Parkland City Authority Act 2018*, Schedule 2 and would have a capital investment value of more than \$30 million. Consultation included formal notification of the proposal (as well as the adjacent Elizabeth Drive West Upgrade) and invitation to provide feedback.

Feedback was received from Western Parkland City Authority on 4 September 2023. Comments raised through this consultation, as well as responses from Transport, are documented in Table 5-8.

Table 5-8: Feedback received from Western Parkland City Authority

Issue raised	Response
Western Parkland City Authority supports the upgrades proposed as it will enable economic development and jobs growth to occur within the Aerotropolis through improved servicing within the precinct. The proposed work will also support the opening of the Western Sydney International airport in 2026	Transport acknowledges the support expressed for the proposal.
Western Parkland City Authority aims to ensure that delivery of infrastructure occurs in a coordinated manner (where possible) and, therefore, recommends that the Elizabeth Drive upgrade work be coordinated with the delivery of the supporting infrastructure for the Sydney Water Upper South Creek Advanced Water Recycling Facility pipe system as well as any other associated utility work to reduce overall costs of delivering required utilities and minimise 'sacrificial' work.	Transport similarly seeks to deliver infrastructure in a coordinated manner where possible. Transport has consulted with Sydney Water throughout design development for the proposal and would continue to do so, to coordinate delivery of work where possible.
Western Parkland City Authority recommends that the future Airport fuel line also be considered in the REF preparation (if relevant) to determine whether this would need to be future proofed as part of the Elizabeth Drive upgrade work. Consultation within Transport should be carried out on the matter.	This matter has been responded to in the Elizabeth Drive West Upgrade Submissions Report (Transport, 2024).

#### 5.4.2 Department of Planning, Housing and Infrastructure

Transport carried out statutory consultation with Department of Planning, Housing and Infrastructure in February 2024 under section 3.24 of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*. This consultation was required as the proposal would result in the clearing of native vegetation (within the meaning of the *Native Vegetation Act 2003*) on land that is not 'subject land' (within the meaning of clause 17 of Schedule 7 of the *Threatened Species Conservation Act 1995* (TSC Act)). While the TSC Act has been repealed by the *Biodiversity Conservation Act 2016*, the Biodiversity Conservation (Savings and Transitional) Regulation 2017 applies. Section 43 of the Regulation states that the repeal does not affect the operation of Part 7 or 8 of Schedule 7 of the TSC Act.

The Department of Planning, Housing and Infrastructure's response was received on 16 February 2024 requesting clarification of how Transport intends to meet its offsetting obligations specified under Relevant Biodiversity Measures (RBM) 8 and 11 of the *Order to confer biodiversity certification on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (the biodiversity certification order). The Department also requested that Transport provide it with spatial data showing the extent of vegetation removal and details of the offsets secured for the proposal. The Department also noted that Transport is required to consult with NSW Environment and Heritage Group of the Department of Climate Change, Energy, the Environment and Water about any proposed impacts to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order.

Transport confirms that it will meet its offsetting obligations specified under RBM 8 and 11 of the biodiversity certification order. The approach that Transport will take to meet this obligation will be documented in the Biodiversity Offset Strategy that will be prepared for the proposal prior to construction. Transport will provide the Department of Planning, Housing and Infrastructure with spatial data showing the extent of vegetation removal on non-certified land. Transport will also provide the Department with details of offsets that it has secured for the proposal. This commitment has been reflected in environmental safeguard B29 for the proposal (refer to Section 6).

Transport also confirms that it has consulted with Biodiversity, Conservation and Science (part of the Environment and Heritage Group) of the Department of Climate Change, Energy, the Environment and Water about any proposed impacts to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order. This consultation is discussed in the following section.

#### 5.4.3 Biodiversity, Conservation and Science – Department of Climate Change, Energy, the Environment and Water

The Elizabeth Drive East Upgrade would impact two land parcels subject to Relevant Biodiversity Measure (RBM) 12 of the biodiversity certification order, as shown in Figure 1-1 of the Revised Biodiversity Assessment Report (Appendix B of this

Submissions Report . One of the parcels is mapped across the road corridor at Kemps Creek, the other is located on Lot 5 / DP 1114311 (property located on southern side of Elizabeth Drive between Western Road and Devonshire Road).

Transport consulted Biodiversity, Conservation and Science (BCS) of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in March 2024 about the proposal's impact to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order.

BCS responded in May 2024 advising that it did not support the proposal's impact to existing native vegetation (ENV) on non-certified land that is subject to RBM 12 of the biodiversity certification order, and that Transport should design to avoid this impact.

Transport carried out further consultation with BCS in July 2024, advising that land subject to RBM 12 at Kemps Creek is mapped within the existing Elizabeth Drive road corridor and immediate surrounding land. For this reason, avoiding the impact is not possible at this location. Notwithstanding, in accordance with Transport's Biodiversity Policy, opportunities to minimise impacts to biodiversity, including ENV subject to RBM 12, would be investigated during detailed design in consultation with BCS.

Options to minimise impacts to the land subject to RBM 12 on Lot 5 / DP 1114311 were investigated during the strategic and concept design stages. These options – as well as the development criteria for assessing and selecting the preferred option – are described in more detail in Sections 2.4.7 and 2.3.4 of the Elizabeth Drive East Upgrade REF, and comprise:

- Option 1: Do nothing
- Option 2: Widen to the south
- Option 3: Widen to the north
- Option 4: Widen to the north from Western Road to Clifton Avenue; widen to the south from Clifton Avenue to Kemps Creek; widen to the north from Kemps Creek to Mamre Road.

Option 4 was selected as the preferred option for this section of Elizabeth Drive as it would, on balance, minimise impacts to businesses and reduce property impacts, relative to other options considered. During development of the concept design and REF, Transport considered the biodiversity impacts associated with removing ENV subject to RBM 12. This includes clearing of threatened ecological communities and threatened species habitat listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Biodiversity Assessment Report identified these impacts would not be significant. In addition, the social and economic impacts to residents and businesses located on the northern side of Elizabeth Drive is minimised.

In response to feedback received from BCS in May 2024, Transport investigated an alternative design that would fully avoid the impact to ENV subject to RBM 12 at this location.

The alternative design would involve relocating the road alignment and the Western Road intersection further to the north. While this option would avoid impacts to ENV on land subject to RBM 12, it would have major adverse impacts to businesses and properties in the area. These impacts include:

- The full acquisition of four residential properties (these properties were subject to partial acquisition based on the design presented in the REF).
- The full acquisition of up to six commercial lots, which will require the closure of the Kemps Creek Shops, resulting in multiple business impacts.
- A much larger impact to three commercial properties, which include Mitre 10, Hi-Quality Group and Andreasens Green Wholesale Nurseries.

Considering all the potential impacts, including biodiversity, economic and social impacts, the development criteria and project objectives, Transport has determined that Option 4 remains the preferred alignment. However, as part of developing the alternative design, Transport has identified a number of potential design refinements that would reduce the proposal's impact on ENV on land subject to RBM 12. This includes reducing the road height, which would reduce the width of embankments and reducing the extent of drainage infrastructure within the land. Further opportunities to minimise impacts to ENV subject to RBM 12 would be investigated during detailed design in consultation with BCS.

Transport proposes the following additional environmental safeguards to manage the proposal's impact to native vegetation on non-certified land that is subject to RBM 12 of the biodiversity certification order:

- Environmental safeguard B30: Transport will reduce the Elizabeth Drive East Upgrade's impact on ENV on land subject to RBM 12 in consultation with BCS

- Environmental safeguard B31: Transport will develop a Biodiversity Offset Package for the Elizabeth Drive East Upgrade, with specific measures to offset impacts to ENV on land subject to RBM 12 developed to the satisfaction of BCS
- Environmental safeguard B32: Transport will not proceed with construction of the project unless it has received the agreement of BCS to impact ENV on land subject to RBM 12.

## 6. Environmental management

The REF for the Elizabeth Drive East Upgrade identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (Section 7 of the REF).

After consideration of the issues raised in the public submissions and changes to the proposal, the safeguards and management measures have been revised. These include revisions to clarify Transport's approach to reviewing and managing impacts during the detailed design and construction of the proposal, and revisions to noise and vibration, biodiversity and safeguards, as outlined in Section 4.4.

Should the proposal proceed, environmental management will be guided by the framework and measures outlined below.

### 6.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed, these management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

A Project Environmental Management Plan (PEMP) and a CEMP would be prepared to describe the safeguards and management measures identified. During detailed design, the PEMP would be the overarching document in the environmental management system for the proposal that includes a number of management documents. During construction, the CEMP would provide a framework for establishing how these measures would be implemented and who would be responsible for their implementation.

The CEMP would be prepared prior to construction of the proposal and must be reviewed and certified by the Transport Environment Officer prior to the commencement of any on-site work. The CEMP would be a working document, subject to ongoing change and updated as necessary to respond to specific requirements. The CEMP would be developed in accordance with the specifications set out in the QA Specification G36 – Environmental Protection (Management System), QA Specification G38 – Soil and Water Management (Soil and Water Plan), QA Specification G40 – Clearing and Grubbing, and QA Specification G10 – Traffic Management.

### 6.2 Summary of safeguards and management measures

The REF for the proposal identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

After consideration of the issues raised in the public submissions, the environmental management measures for the proposal (refer to Section 7 of the REF) have been revised. Should the proposal proceed, the environmental management measures in Table 6-1 will guide the subsequent phases of the proposal. Additions to and/or modified environmental safeguards and management measures to those presented in the REF have been underlined and bolded and deleted measures, or parts of measures, have been ~~struck out~~.

Table 6-1: Summary of environmental safeguards and management measures

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
GEN1	General – minimise environmental impacts during detailed design	A Project Environmental Management Plan (PEMP) will be prepared to outline and describe the key environmental issues associated with the proposal. The PEMP will be the overarching document in the environmental management system for the proposal that includes a number of management documents. It will be applicable to all staff and contractors associated with the development, design and construction of the proposal. The PEMP will be prepared and implemented with the Environmental Management System (EMS) which has been prepared in accordance with ISO14001:2016	Contractor / Transport	Detailed design / Pre-construction	Additional safeguard
GEN2	General - minimise environmental impacts during construction	<p>A CEMP will be prepared and submitted for review and endorsement of the Transport Environment Officer prior to commencement of the activity. As a minimum, the CEMP will address the following:</p> <ul style="list-style-type: none"> <li>Any requirements associated with statutory approvals</li> <li>Details of how the project will implement the identified safeguards outlined in the REF</li> <li>Issue-specific environmental management plans</li> <li>Roles and responsibilities</li> <li>Communication <u>and stakeholder engagement</u> requirements</li> <li>Induction and training requirements</li> <li>Procedures for monitoring and evaluating environmental performance, and for corrective action</li> <li>Reporting requirements and record-keeping</li> <li>Procedures for emergency and incident management</li> <li>Procedures for audit and review</li> </ul> <p>The endorsed CEMP will be implemented during construction of the proposal</p>	Contractor / Transport	Detailed design / Pre-construction	Additional safeguard
GEN3	General - notification	Notifications will be sent to residential properties and other key stakeholders affected by a construction activity at least five working days prior to work activities starting	Contractor / Transport	Pre-construction <u>and Construction</u>	Additional safeguard
GEN4	General - environmental awareness	<p>All personnel working on site will receive training to ensure awareness of environmental protection requirements to be implemented during the proposal. This will include up-front site induction and regular “toolbox” style briefings. Site specific training will be provided to personnel engaged in activities or areas of higher risk. These include:</p> <ul style="list-style-type: none"> <li>Areas of Aboriginal heritage</li> <li>Threatened species habitats</li> <li>Adjoining residential areas requiring noise management measures</li> </ul>	Contractor / Transport	Pre-construction <u>and Construction</u>	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
<u>GEN5</u>	<u>Design review – proposal design between Clifton Avenue and Salisbury Road</u>	<p>A detailed review of the proposal design between the intersections of Elizabeth Drive with Clifton Avenue and Salisbury Avenue/Devonshire Road will be carried out. The aim of this review is to identify refinements to the design and other opportunities to improve access to businesses in Kemps Creek and reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club (relative to the current proposal), and incorporate these into the detailed design where feasible and reasonable.</p> <p>The review will consider the following:</p> <ul style="list-style-type: none"> <li>• <u>Alternatives to the proposed one-way service road at Kemps Creek shops</u></li> <li>• <u>Opportunities to reduce property acquisition requirements for businesses in Kemps Creek as well as Bill Anderson Reserve</u></li> <li>• <u>Review of options to reinstate access to businesses, including from adjoining roads to Elizabeth Drive, Clifton Avenue and Salisbury Avenue</u></li> </ul> <p>The review will be informed by the feedback received to the REF display and further consultation with affected businesses and relevant stakeholders, as well as further topographical survey</p>	<u>Contractor</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
<u>GEN6</u>	<u>Design review – proposed construction ancillary facility 2</u>	<p>Construction ancillary facility 2 (identified in Figure 3-21 of the REF) will be relocated to reduce impacts to Bill Anderson Reserve and the Kemps Creek United Soccer Club. The alternative location of this facility will be determined during detailed design. An appropriate level of environmental impact assessment will be carried out for the alternative location of the construction ancillary facility, consistent with the requirements of the EP&amp;A Act.</p>	<u>Contractor</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
NV1	Noise and vibration	<p>A Construction Noise and Vibration Management Plan will be prepared as part of the CEMP. The Construction Noise and Vibration Management Plan will identify:</p> <ul style="list-style-type: none"> <li>• The location of noise and vibration sensitive receivers</li> <li>• Potential significant noise and vibration generating activities</li> <li>• Feasible and reasonable mitigation measures to be implemented during construction to minimise noise and vibration impacts, such as restrictions on working hours, staging, placement and operation of work compounds, parking and storage areas, temporary noise barriers, construction haulage route road maintenance and controlling the location and use of vibration generating equipment</li> <li>• A monitoring program to assess performance against relevant noise and vibration criteria</li> <li>• Arrangements for consultation with affected neighbours and sensitive receivers, including notification and complaint handling procedures</li> <li>• An out of hours work procedure, including approval process and proposed mitigation measures</li> </ul>	Contractor	Pre-construction and construction	Section 4.6 of QA G36 Environment Protection

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
NV2	Noise and vibration	<p>All sensitive receivers (eg schools, local residents) likely to be affected will be notified at least five days prior to the start of any work associated with the modelled scenario that may have an adverse noise or vibration impact (eg moderately intrusive during the day and clearly audible at night). The notification will include the following details:</p> <ul style="list-style-type: none"> <li>• Description of the work</li> <li>• Management of any disruption (e.g noise mitigation measures)</li> <li>• Construction period and construction hours</li> <li>• Contact information for project management staff</li> <li>• Complaint and incident reporting and how to obtain further information</li> </ul>	Contractor	Pre-construction and construction	Additional safeguard
NV3	Noise and vibration	<p>Where reasonable and feasible, construction will be carried out during the standard daytime working hours. Work generating high noise and/or vibration levels will be scheduled during less sensitive time periods, where possible. Any variations to the standard construction hours will follow the approach in <u>Transport's Construction Noise and Vibration Guideline (Roads) (July 2023)</u> <del>RTA Environmental Fact Sheets – Noise Management and Night Work</del>, including consultation with the affected local community</p>	Contractor	Construction	Additional safeguard
NV4	Noise and vibration	<p>Where properties have been identified for architectural treatment and are likely to be impacted by noise from construction work, Transport will consult with those property owners on the early installation of treatments to provide noise mitigation during the construction of the proposal</p>	Contractor / Transport	Pre-construction	Additional safeguard
NV5	Noise and vibration	<p>Where feasible and reasonable, high noise generating activities (75 dB(A) <math>L_{Aeq}</math> at receiver) will be carried out during standard construction hours and in continuous blocks of no more than three hours with at least one hour respite between each block of work generating high noise impact, where the location of the work is likely to impact the same receiver</p>	Contractor	Construction	Additional safeguard
NV6	Noise and vibration	<p>The following will be implemented for deliveries to and from the proposal:</p> <ul style="list-style-type: none"> <li>• Loading and unloading of materials/deliveries as far as possible from sensitive receivers</li> <li>• Dedicated loading/unloading areas will be shielded if close to sensitive receivers</li> <li>• Delivery vehicles will be fitted with straps rather than chains for unloading, wherever possible</li> <li>• The construction site will be arranged to limit the need for reversing associated with regular/repeatable movements</li> </ul>	Contractor	Construction	Additional safeguard
NV7	Noise and vibration	<p>Non-tonal reversing beepers (or an equivalent mechanism) will be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work</p>	Contractor	Construction	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
NV8	Noise and vibration	Where practicable, work will be scheduled to avoid major student examination periods such as before or during the Higher School Certificate and at the end of higher education semesters	Contractor	Construction	Additional safeguard
NV9	Noise and vibration	In circumstances where the noise levels are predicted to exceed construction noise management levels after implementation of the standard actions listed in Transport's <i>Construction Noise and Vibration Guideline</i> (Roads) (July 2023), additional mitigation measures will be implemented, such as the following: <ul style="list-style-type: none"> <li>• Monitoring</li> <li>• Notification (letterbox drop or equivalent)</li> <li>• Specific notifications</li> <li>• Phone calls</li> <li>• Individual briefings</li> <li>• Respite offers and periods</li> <li>• Alternative accommodation</li> </ul>	Contractor	Construction	Additional safeguard
NV10	Vibration	Attended vibration measurements will be carried out at the work site where plant machinery operations occur within minimum working distances and have the potential to result in cosmetic damage to the remains of the former South Creek bridge. These vibration measurements will be taken progressively outside the minimum working distances to monitor and ensure no structure damage occurs to the remains. This will provide information regarding the transmission of vibration to allow site specific safe working distances to be determined	Contractor	Pre-construction and construction	Additional safeguard
NV11	Noise and vibration	Vibration intensive equipment size will be selected to avoid working within the structural damage minimum working distances. The use of less vibration intensive methods of construction or equipment will be considered where feasible and reasonable	Contractor	Construction	Additional safeguard
NV12	Noise and vibration	Where the use of vibration intensive equipment within the relevant minimum working distances cannot be avoided, prior to the commencement of vibration intensive work, a detailed inspection will be carried out and a written and photographic report prepared to document the condition of buildings and structures within the minimum working distances. A copy of the report will be provided to the relevant land owner or land manager	Contractor	Pre-construction	Additional safeguard
NV13	Noise and vibration	To confirm that the noise levels targets are achieved, a post-construction noise monitoring program will be carried out in accordance with the Road Noise Mitigation Guideline	Transport	Operation	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
<u>NV14</u>	<u>Noise and vibration – Animal Welfare League NSW, Kemps Creek</u>	<p><u>The following measures would be implemented to manage potential impacts to animals at Animal Welfare League NSW, Kemps Creek, where feasible and reasonable:</u></p> <ul style="list-style-type: none"> <li><u>Notification of the work, particularly night-time work or ‘noisy work’, to allow steps to be taken by Animal Welfare League NSW to minimise impact of noise on the animals</u></li> <li><u>Use of temporary noise barriers to reduce noise impact on building facades and outdoor areas</u></li> <li><u>Consultation with Animal Welfare League NSW personnel, including notification and establishment of complaint handling procedures</u></li> </ul>	<u>Contractor</u>	<u>Construction</u>	<u>Additional safeguard</u>
TT1	Traffic and transport	<p>A Traffic Management Plan (TMP) will be prepared and implemented as part of the CEMP. The TMP will be prepared in accordance with the Transport’s Traffic Control at Work Sites Technical Manual (<a href="#">Transport, 2022</a>) and QA Specification G10 Control of Traffic (Transport, 2020b). The TMP will include:</p> <ul style="list-style-type: none"> <li>Confirmation of haulage routes</li> <li>Measures to maintain access to local roads and properties</li> <li>Site specific traffic control measures (including signage) to manage and regulate traffic movement</li> <li>Measures to maintain pedestrian and cyclist access</li> <li>Requirements and methods to consult and inform the local community of impacts on the local road network</li> <li>Access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads</li> <li>A response plan for any construction traffic incident</li> <li>Consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic</li> <li>Monitoring, review and amendment mechanisms</li> </ul>	Contractor	Detailed design / Pre-construction	Additional safeguard
TT2	Traffic and transport	Disruptions to property access and traffic will be notified to landowners at least five days prior in accordance with the relevant community consultation processes outlined in the TMP. Where access is not feasible, temporary alternative access arrangements will be provided following consultation with affected landowners and the relevant local council	Contractor / Transport	Detailed design	Additional safeguard
TT3	Traffic and transport	Pre-construction and post construction road condition reports for local roads likely to be used during construction will be prepared. Any damage resulting from construction (not normal wear and tear) will be repaired unless alternative arrangements are made with the relevant road authority. Copies of road condition reports will be provided to the local council	Contractor	Pre and post construction	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
TT4	Traffic and transport	Pedestrian and cyclist access will be maintained during construction. Where that is not feasible or necessary, temporary alternative access arrangements will be provided following consultation with affected landowners and the local Council	Contractor	Construction	Additional safeguard
TT5	Traffic and transport	The community, including public transport operators, will be informed of upcoming activities that may affect the operation of public transport	Contractor	Pre and post construction	Additional safeguard
TT6	Traffic and transport	A detailed parking assessment will be carried out during detailed design. This will include consultation with affected businesses, <u>sporting facilities and other social infrastructure facilities</u> and property owners to identify suitable alternative parking arrangements	Contractor	Detailed design	Additional safeguard
<u>TT7</u>	Impacts on bus services or routes	<u>If any potential direct impacts on bus stops or routes (including school bus routes) are identified, Transport for NSW and its Contractor will consult with the relevant bus operator to identify alternative arrangements.</u>	<u>Transport / Contractor</u>	<u>Detailed design / Construction</u>	<u>Additional safeguard</u>
B1	Biodiversity – Removal of native vegetation	Measures to further avoid and minimise native vegetation or habitat removal will be investigated during detailed design and implemented where practicable and feasible	Transport / Contractor	Detailed design	Additional safeguard
B2	Biodiversity – Removal of native vegetation and threatened fauna and flora habitat	Pre-clearing surveys will be carried out in accordance with <u>Guide 1: Pre-clearing process of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</u> (Transport for NSW, 2024). <del>Guide 1: Pre-clearing process of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del> (RTA, 2011)	Transport / Contractor	Pre-construction	Additional safeguard
B3	Biodiversity – Removal of native vegetation and threatened fauna habitat	Native vegetation and flora and fauna habitat removal will be carried out in accordance with <u>Guide 4: Clearing of vegetation and removal of bushrock of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</u> (Transport for NSW, 2024). <del>Guide 4: Clearing of vegetation and removal of bushrock of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del> (RTA, 2011)	Transport / Contractor	Construction	Additional safeguard
B4	Biodiversity – Removal of native vegetation	Native vegetation will be re-established in accordance with <u>Guide 3: Re-establishment of native vegetation of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</u> (Transport for NSW, 2024). <del>Guide 3: Re-establishment of native vegetation of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del> (RTA, 2011)	Transport / Contractor	Post construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
B5	Biodiversity – Removal of native vegetation and threatened fauna and flora habitat	The unexpected species find procedure is to be followed under <i>Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport for NSW, 2024). <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA, 2011) if threatened ecological communities, fauna and/or flora not assessed in the biodiversity assessment, are identified in the proposal site	Transport / Contractor	Construction	Additional safeguard
B6	Biodiversity – Removal of native vegetation	A Flora and Fauna Management Plan will be prepared in accordance with Transport for NSW's <i>Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport for NSW, 2024). <i>Biodiversity Guidelines: Protecting and Managing Biodiversity on Projects</i> (RTA, 2011) and implemented as part of the CEMP. It will include, but not be limited to: <ul style="list-style-type: none"> <li>Plans showing areas to be cleared and areas to be protected, including exclusion zones, protected habitat features and revegetation areas</li> <li><del>Requirements set out in the Landscape Guideline</del> (RMS, 2008)</li> <li>Pre-clearing survey requirements</li> <li>Procedures for unexpected threatened species finds and fauna handling</li> <li>Procedures addressing relevant matters specified in the DPI Policy and guidelines for fish habitat conservation and management (DPI, 2013)</li> <li>Protocols to manage weeds, pathogens and pest species</li> </ul>	Transport / Contractor	Construction	Section 4.8 of QA G36 Environment Protection
<u>B7</u>	<u>Survey effort</u>	<u>BAM Plots will be carried out within the subject land (construction footprint) to confirm the biodiversity credits required for the proposal</u>	<u>Transport / Contractor</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
<del>B7</del>	<del>Biodiversity – Removal of threatened fauna and flora habitat</del>	<del>Targeted surveys will be carried out prior to Transport determining whether to proceed with the proposal. The results will guide the avoidance and minimisation of threatened fauna and flora habitat removal where it is identified</del>	<del>Transport / Contractor</del>	<del>Detailed design</del>	<del>Additional safeguard</del>
B8	Biodiversity – Removal of threatened fauna habitat	Targeted surveys to determine the presence of threatened microbats in culvert/bridge etc structures to be removed are to be carried out prior to Transport determining whether to proceed with the proposal. These surveys are required to confirm that direct impacts to important roosting habitat is not likely to occur as a result of the proposal, and to identify the need for mitigation measures to prevent direct impacts to individuals when the structures are to be removed. Should roosting threatened microbats be recorded, Tests of Significance will need to be updated to re-assess the significance of the impacts of the proposal. Preparation of a Microbat Management Plan would also be considered <u>As a roosting population of Southern Myotis was recorded in the eastern bridge above South Creek, a Microbat Management Plan will be prepared and</u>	Transport / Contractor	<u>Pre construction</u> <u>Detailed design, pre-construction and construction</u>	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		<p><u>implemented for the proposal. The plan will incorporate recommendations to avoid significant impacts to Southern Myotis including:</u></p> <ul style="list-style-type: none"> <li><u>Installation of temporary habitat alternatives and/or permanent supplementary habitat (bat boxes, roosting opportunities within new bridges)</u></li> <li><u>Mitigation measures to minimise impacts of construction noise on roosting bats (noise dampening, containment of bats)</u></li> <li><u>Exclusion measures to prevent microbats returning to a bridge to roost during its removal</u></li> <li><u>Ongoing monitoring measures pre, during and post construction to assess impacts</u></li> <li><u>Requirements to conduct works on roosting habitat or implement any exclusion measures outside of breeding season</u></li> <li><u>Recommendations for construction staging and methods to avoid impacts to microbats.</u></li> </ul> <p><u>In addition to the above, the new bridge design will incorporate similar long-term roosting opportunities (for example, suitable roosting gaps in the underside of the bridge)</u></p>			
B9	Biodiversity – Removal of threatened fauna habitat and management of injury and mortality of fauna	<p>Fauna will be managed in accordance with <u>Guide 9: Fauna handling of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</u> (Transport for NSW, 2024) <u>Guide 9: Fauna handling of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</u> (RTA, 2011)</p>	Transport / Contractor	Construction	Additional safeguard
B10	Biodiversity – Removal of threatened fauna habitat	<p>Habitat removal will be undertaken in accordance with <u>Guide 4: Clearing of vegetation and removal of bushrock of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</u> (Transport for NSW, 2024) <u>Guide 4: Clearing of vegetation and removal of bushrock of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</u> (RTA, 2011):-</p>	Transport / Contractor	Construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
B11	Biodiversity – Removal of threatened fauna habitat	Habitat will be replaced or re-instated in accordance with <i>Guide 5: Re-use of woody debris and bushrock</i> and <i>Guide 8: Artificial Hollows</i> <del>Nest boxes</del> of the <i>Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del>	Transport / Contractor	Detailed design	Additional safeguard
B12	Biodiversity – Unexpected findings procedure	The unexpected species find procedure is to be followed under Guide 1: Pre-clearing process of the <i>Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del> (RTA 2011) if threatened fauna, not assessed in the biodiversity assessment, are identified in the proposal site.	Transport / Contractor	Construction	Additional safeguard
B13	Biodiversity – Pre-clearing survey	Pre-clearing surveys will be undertaken in accordance with Guide 1: Pre-clearing process of the <i>Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del> (RTA 2011).	Transport / Contractor	Construction	Additional safeguard
<del>B14</del>	<del>Biodiversity – Pre-clearing survey</del>	<del>Pre-clearance surveys for Cumberland Plain Land Snail will be carried out, in accordance with an approved Cumberland Plain Land Snail Translocation Plan, prior to removal of vegetation to ensure any individuals are translocated and not impacted by the proposed works</del>	<del>Transport / Contractor</del>	<del>Pre-construction and construction</del>	<del>Additional safeguard</del>
<del>B17</del> B15	Biodiversity – Aquatic impacts	Impacts to aquatic habitat will be minimised through detailed design	Transport / Contractor	Detailed design	Additional safeguard
<del>B19</del> B16	Biodiversity – Aquatic impacts	Aquatic habitat will be protected in accordance with <i>Guide 10: Aquatic habitats and riparian zones</i> of the <i>Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</del> (RTA 2011) and Section 3.3.2 <i>Standard precautions and mitigation measures of the Policy and guidelines for fish habitat conservation and management Update 2013</i> (DPI (Fisheries NSW) 2013)	Transport / Contractor	Construction	Additional safeguard
<del>B19</del> B17	Biodiversity – Aquatic impacts	Instream silt curtains will be implemented and maintained for construction in Badgerys Creek, South Creek and Kemps Creek. Silt curtains will be installed such that they do not block fish passage	Transport / Contractor	Construction	Additional safeguard
<del>B20</del> B18	Biodiversity – Groundwater dependent ecosystems	Interruptions to water flows associated with groundwater dependent ecosystems will be minimised through detailed design	Transport / Contractor	Construction	Additional safeguard
<del>B24</del> B19	Biodiversity – Changes to hydrology	Changes to existing surface water flows will be minimised through detailed design	Transport / Contractor	Construction	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
<del>B22</del> B20	Biodiversity – Edge effects on adjacent native vegetation and habitat	Exclusion zones will be set up at the limit of clearing in accordance with <i>Guide 2: Exclusion zones of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del><i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA 2011)</del>	Transport / Contractor	Construction	Additional safeguard
<del>B23</del> B21	Biodiversity – Injury and mortality of fauna	Fauna will be managed in accordance with <i>Guide 9: Fauna handling of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del><i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA 2011)</del>	Transport / Contractor	Construction	Additional safeguard
<del>B24</del> B22	Biodiversity – Invasion and spread of weeds	Weed species will be managed in accordance with <i>Guide 6: Weed management of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del><i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA 2011)</del>	Transport / Contractor	Construction	Additional safeguard
<del>B25</del> B23	Biodiversity – Invasion and spread of pathogens and disease	Pathogens will be managed in accordance with <i>Guide 2: Exclusion zones of the Biodiversity Management Guideline: Protecting and managing biodiversity of Transport for NSW projects</i> (Transport, 2024) <del><i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects</i> (RTA 2011)</del>	Transport / Contractor	Construction	Additional safeguard
<del>B26</del> B24	Biodiversity – Noise, light, dust and vibration	Shading and artificial light impacts will be minimised through detailed design	Transport / Contractor	Detailed design	Additional safeguard
<del>B27</del> B25	Biodiversity – Residual impacts to native flora and fauna	A Biodiversity Offset Strategy will be developed and implemented to facilitate offsetting of impacts that exceed the thresholds within the No Net Loss Guidelines (Transport for NSW, 2022)	Transport	Pre-construction and construction	Additional safeguard
<del>B28</del> B26	Biodiversity – Residual impacts to native flora and fauna	The requirement to replace trees and hollows will be calculated in accordance with the Tree and Hollow Replacement Guidelines (Transport 2022b). If onsite replacement is sought, a Tree and Hollow Replacement Plan will be prepared and/or equivalent payment to the Transport Conservation Fund will be made	Transport/ Contractor	Pre-construction and construction	Additional safeguard
<u>B27</u>	<u>Biodiversity – Wildlife connectivity and habitat fragmentation</u>	<u>Large trees that are greater than or equal to 50-centimetre diameter at breast height (including dead trees but excluding noxious weeds) will be retained possible</u>	<u>Transport / Contractor</u>	<u>Detailed design, pre-construction and construction</u>	<u>Additional safeguard</u>

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
<a href="#">B28</a>	<a href="#">Biodiversity</a>	<u>Where possible, viable native seeds would be collected from trees, shrubs and groundcovers during the vegetation clearing process for the proposal, and repurposed (for example, through donation to nurseries)</u>	<a href="#">Transport / Contractor</a>	<a href="#">Pre-construction and construction</a>	<a href="#">Additional safeguard</a>
<a href="#">B29</a>	<a href="#">Biodiversity</a>	<u>Transport will provide the Department of Planning, Housing and Infrastructure with spatial data showing the extent of vegetation removal on non-certified land (as identified in the <i>Order to confer biodiversity certification on the State Environment Planning Policy (Sydney Region Growth Centres) 2006</i>). Transport will also provide the Department with details of offsets that it has secured for the proposal</u>	<a href="#">Transport / Contractor</a>	<a href="#">Pre-construction and construction</a>	<a href="#">Additional safeguard</a>
<a href="#">B30</a>	<a href="#">Biodiversity</a>	<u>Transport will reduce the Elizabeth Drive East Upgrade's impact on ENV on land subject to RBM 12 in consultation with Biodiversity, Conservation and Science</u>	<a href="#">Transport / Contractor</a>	<a href="#">Detailed design</a>	<a href="#">Additional safeguard</a>
<a href="#">B31</a>	<a href="#">Biodiversity</a>	<u>Transport will develop a Biodiversity Offset Package for the Elizabeth Drive East Upgrade, with specific measures to offset impacts to ENV on land subject to RBM 12 developed to the satisfaction of Biodiversity, Conservation and Science</u>	<a href="#">Transport / Contractor</a>	<a href="#">Detailed design</a>	<a href="#">Additional safeguard</a>
<a href="#">B32</a>	<a href="#">Biodiversity</a>	<u>Transport will not proceed with construction of the project unless it has received the agreement of Biodiversity, Conservation and Science to impact ENV on land subject to RBM 12</u>	<a href="#">Transport / Contractor</a>	<a href="#">Detailed design</a>	<a href="#">Additional safeguard</a>
NAH1	Non-Aboriginal heritage	A Non-Aboriginal Heritage Management Plan will be prepared and implemented as part of the CEMP. It will provide specific guidance on measures and controls to be implemented to avoid and mitigate impacts to McGarvie Smith Farm and the remains of the former South Creek bridge	Contractor	Detailed design / pre-construction	Section 4.10 of QA G36 <i>Environment Protection</i>
NAH2	Non-Aboriginal heritage	Detailed design will avoid direct encroachment and impact to the remains of the former South Creek bridge. If impacts to these remains cannot be avoided, further assessment and approvals will be obtained	Transport / Contractor	Detailed design	Additional safeguard
NAH3	Non-Aboriginal heritage	If detailed design results in direct impact and encroachment to the remains of the former South Creek bridge, recording of the bridge remains will be conducted by heritage specialists prior to removal. Extensive photographic recording will be included with photos lodged with the local council library	Heritage specialist / contractor	Pre-construction	Additional safeguard
NAH4	Non-Aboriginal heritage	Attended vibration measurements will be carried out at the work site where plant machinery operations occur within minimum working distances (as per Appendix D) and have the potential to result in cosmetic damage to the remains of the former South Creek bridge. These vibration measurements will be taken progressively outside the minimum working distances to monitor and ensure no structure damage occurs to the remains. This will provide information regarding the transmission of vibration to allow site specific safe working distances to be determined	Contractor	Construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
NAH5	Non-Aboriginal heritage	Any unexpected heritage finds identified during construction will be governed by Transport's EMF-HE-PR-0076 Unexpected Heritage Items Procedure (Transport, 2020c). Work will only resume once the requirements of the procedure have been satisfied	Contractor	Construction	Additional safeguard
ACH1	Aboriginal cultural heritage – Salvage excavation	Archaeological salvage excavation will be carried out within the impacted portions of sites Badgerys West B (BWB) / Elizabeth Drive AFT 2, Elizabeth Drive AFT 1 (includes Elizabeth Precinct Isolated Find 04 & Elizabeth Precinct PAD 01), EDU South Creek AFT 1 and EDU Kemps Creek AFT 1. Salvage excavation will be completed prior to any activities (including pre-construction activities) which may harm Aboriginal objects at these locations. Salvage excavation activities will be undertaken in accordance with the methodology attached as Appendix D of Appendix H (Aboriginal Cultural Heritage Assessment Report)	Transport / Contractor	Detailed design	Additional safeguard
ACH2	Aboriginal cultural heritage – Community collection	Community collection of surface artefacts will be carried out at sites Badgerys West B (BWB) / Elizabeth Drive AFT 2, Elizabeth Precinct Artefact Scatter 05 (EP AS 05), Elizabeth Drive AFT 1 (includes Elizabeth Precinct Isolated Find 04 & Elizabeth Precinct PAD 01), Mamre Road Kemps Creek AFT 1, KC/ED2 and CP AS1 / P-CP9. Community collection will be completed prior to any activities (including pre-construction activities) which may harm Aboriginal objects at these locations. Community collection activities will be undertaken in accordance with the methodology attached as Appendix D of Appendix H (Aboriginal Cultural Heritage Assessment Report)	Transport / Contractor	Detailed design	Additional safeguard
ACH3	Aboriginal cultural heritage – Site protection	The boundary of the area subject to an Aboriginal Heritage Impact Permit, adjacent to the non-impacted portion of sites Badgerys West B (BWB) / Elizabeth Drive AFT 2, Elizabeth Drive AFT 1 (includes Elizabeth Precinct Isolated Find 04 & Elizabeth Precinct PAD 01) and Mamre Road Kemps Creek AFT 1 will be demarcated with protective fencing. These areas will be identified as "no-go zones" in the CEMP for the proposal. Construction workers will be inducted as to appropriate protection measures and requirements to comply with conditions in the adjacent Aboriginal Heritage Impact Permit	Contractor	Pre-construction / construction	Additional safeguard
ACH4	Aboriginal cultural heritage – Overlapping projects	Activities carried out as part of the proposal undertaken within existing approval areas of other projects (including the M12 Motorway (SSI-9364), Upper South Creek Advanced Water Recycling Centre (SSI-8609189) and the Western Sydney International Airport) would comply with all relevant conditions relating to Aboriginal heritage management for these projects. Where required, consultation will be undertaken with these projects to confirm the relevant conditions and requirements for these areas	Transport / Contractor	Pre-construction / construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
ACH5	Aboriginal cultural heritage – Unexpected finds	Transport's EMF-HE-PR-0076 Unexpected Heritage Items Procedure 2022 (Transport, 2020c) will be followed in the event that an unknown or potential Aboriginal object/s, including skeletal remains, is found during construction. Work will only re-commence once the requirements of that Unexpected Heritage Items Procedure have been satisfied	Contractor	Pre-construction / construction	Section 4.9 of QA G36 Environment Protection
PL1	Property and land use	Transport will complete property adjustments including fencing, driveways/access and adjustments to other property infrastructure impacted by the proposal in consultation with affected property owners	Transport	Detailed design / construction	Additional safeguard
PL2	Property and land use	All property acquisition will be carried out in accordance with the Property Acquisition Policy (Transport, 2021) and the Just Terms Act	Transport	Pre-construction and construction	Additional safeguard
PL3	Property and land use	Transport will consult with airport operators to avoid direct impacts to airport operations from the construction of the proposal. This will include obtaining any necessary permits required to enable construction to occur in the vicinity of Western Sydney International Airport	Transport	Pre-construction and construction	Additional safeguard
<u>PL4</u>	<u>Property and land use</u>	<u>Transport will investigate opportunities to reduce the extent of property acquisition required at the following properties, in order to avoid the need for their full acquisition:</u> <ul style="list-style-type: none"> <li><u>Lot 8 / DP 1014394 (1-7 Duff Road, Cecil Park)</u></li> <li><u>Lot 31 / DP 867457 (1640 Elizabeth Drive, Kemps Creek):</u></li> </ul>	<u>Transport</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
SE1	Socio-economic impacts – Community consultation	A Communication Plan (CP) will be prepared (RTA, 2008) and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The CP will include (as a minimum): <ul style="list-style-type: none"> <li>Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions. <u>These mechanisms could include advertisement in local newspapers, VMS sign notification, consultation meetings, and others</u></li> <li><u>A complaint handling process, contact name and number for complaints</u></li> <li><u>Consultation processes for key stakeholders such as councils, emergency services and other relevant stakeholders, as required</u></li> </ul>	Contractor	Detailed design, pre-construction and construction	Additional safeguard
SE2	Socio-economic impacts – Community consultation	Consultation with stakeholders and any further community and stakeholder engagement feedback received during the REF exhibition period will be responded to in a submissions report to support the REF. Where relevant, this feedback will also inform detailed design and construction planning	Transport	Detailed design	Additional safeguard
SE3	Socio-economic impacts – Aboriginal cultural heritage	Consultation with Aboriginal stakeholders is ongoing, and will inform design development so that Aboriginal culture and heritage is respected and integrated into the design where possible. This may include investigation of opportunities to incorporate Aboriginal heritage and artwork interpretation into the design of the proposal in consultation with Aboriginal stakeholders	Transport	Detailed design	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
SE4	Socio-economic impacts – Property acquisition	<p>Consultation will occur with directly affected landowners (i.e. where property acquisition or adjustments are proposed) during the REF exhibition period, throughout the development of the detailed design and during construction. Consultation will include:</p> <ul style="list-style-type: none"> <li>• Sharing information on relevant impacts during construction and operation</li> <li>• Identification of opportunities to avoid direct impacts to buildings (such as dwellings or business premises) or parking areas</li> <li>• Consultation with affected landowners regarding proposed changes to the property (including adjustments and acquisition) in consultation with the relevant landowner/s</li> </ul>	Transport	Detailed design and construction	Additional safeguard
SE5	Socio-economic impacts – Recreation	<del>A study will be carried out of sporting fields and recreational facilities in the surrounding areas to determine capacity to absorb active recreational pursuits temporarily and permanently disrupted by construction activities. As part of the study consultation will be carried out with the managers of social infrastructure facilities including Bill Anderson Reserve and the Kemps Creek Sporting and Bowling Club</del>	Transport	<del>Detailed design</del>	<del>Additional safeguard</del>
SE6	Socio-economic impacts – Open space	<p>Where feasible and reasonable, the extent of permanent impact on public open space areas and their associated parking facilities will be minimised in detailed design development in consultation with the landowner/s (including Liverpool City Council and the NSW Government), and other relevant stakeholders (such as the Kemps Creek United Soccer Club) to determine a suitable layout/configuration for these facilities. All efforts will be made during design development to provide comparable facilities to their current facilities, including car parking.</p> <p>Parks, open space and sport and recreation facilities temporarily impacted by construction will be also reinstated and rehabilitated, in consultation with relevant stakeholders</p>	Transport	Detailed design, construction and operation	Additional safeguard
SE7	Socio-economic impacts – Martial arts facility	Transport will consult with the IMC Kemps Creek Martial Arts facility to manage potential impacts to the facility. This will include supporting the relocation of the facility (where feasible and reasonable), if the removal of the facility cannot be avoided through design development	Transport	Detailed design	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
SE8	Socio-economic impacts – Schools	<p>Ongoing engagement will be carried out with affected schools to investigate and implement feasible and reasonable measures to mitigate potential impacts to schools. This could include:</p> <ul style="list-style-type: none"> <li>Traffic management measures near schools during construction (e.g. on Devonshire Road and Duff Road)</li> <li>Carrying out required construction work within the boundaries of a school property outside of school hours, where feasible</li> <li>Maintenance of access to schools at all times</li> <li>Other relevant measures related to traffic, pedestrian safety, and noise and vibration</li> </ul>	Transport / contractor	Detailed design, construction and operation	Additional safeguard
SE9	Socio-economic impacts – Schools	<p><u>Transport would consult with the Christadelphian Heritage College Sydney and review opportunities to avoid impacts to school infrastructure during the next stage of design development, including the property's frontage, driveway, parking area and other potentially affected infrastructure where feasible</u></p> <p><u>The impacted driveway, access gate and parking area off Devonshire Road will be reinstated in consultation with the Christadelphian Heritage College</u></p>	Transport / contractor	Detailed design	Additional safeguard
SE10	Socio-economic impacts – Rural Fire Brigade	Transport and the construction contractor will work with the operators of the Kemps Creek Rural Fire Brigade to maintain access to and from the facility at all times. This will involve consideration of design requirements to enable the driveway to be used by emergency service vehicles	Transport / contractor	Detailed design and construction	Additional safeguard
SE11	Socio-economic impacts – Recreation	Landowners and managers of social infrastructure located adjacent to the construction footprint will be notified of the timing and duration of planned construction work prior to the work commencing. This will include information regarding measures to minimise potential impacts, with the aim of minimising potential disruptions to the use of the social infrastructure from construction activities	Transport / contractor	Construction	Additional safeguard
SE12	Socio-economic impacts – Business impacts	Specific consultation will be carried out with businesses potentially impacted during construction. Consultation will aim to identify potential construction impacts to individual businesses. Based on this consultation, specific feasible and reasonable measures to maintain business access, signage and parking, and address other potential impacts as they arise through the consultation process, will be identified and implemented	Transport / contractor	Detailed design and construction	Additional safeguard
SE13	Socio-economic impacts – Business impacts	Regular engagement will be carried out with affected businesses regarding the progress of the proposal to allow businesses time to prepare for changed local conditions through the area	Transport / contractor	Construction	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
SE14	Socio-economic impacts – Business impacts	Construction workers, materials and equipment hire will be sourced from the local area where feasible	Contractor	Construction	Additional safeguard
<u>SE15</u>	<u>Socio-economic impacts – Schools</u>	<u>Construction of the proposal would avoid the need to access parking areas associated with the Christadelphian Heritage College Sydney, where feasible</u>	<u>Contractor</u>	<u>Construction</u>	<u>Additional safeguard</u>
<u>SE16</u>	<u>Impacts on social infrastructure – Animal Welfare League NSW</u>	<p><u>Transport would review opportunities to minimise and manage the direct impacts of the proposal on Animal Welfare League NSW, Kemps Creek. This would include:</u></p> <ul style="list-style-type: none"> <li><u>Consultation with Animal Welfare League NSW to identify options to maintain existing operations and uses on site (for example, dog walking on site and parking facilities)</u></li> <li><u>Consideration of feasible and reasonable refinements to the proposed design to minimise the required extent of property acquisition of the Animal Welfare League NSW property (subject to topographical survey and further design development)</u></li> </ul>	<u>Transport</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
<u>SE17</u>	Socio-economic impacts – Schools	<u>Transport will consult with Irfan College during detailed design, with a focus on ensuring access to the College is maintained throughout construction and operation</u>	<u>Transport / Contractor</u>	<u>Detailed design / construction</u>	<u>Additional safeguard</u>
LV1	Landscape and visual	Where the existing view to the road corridor from residential properties will be impacted, community consultation will be carried out to discuss suitable landscaping measures. This could include the provision of formal planting (hedges or screen planting) along boundaries within private residential properties in consultation with landowners	Transport	Detailed design	Additional safeguard
LV2	Landscape and visual	Tree species for the landscape design will be selected from the Western Sydney Aerotropolis Development Control Plan 2021, where possible, taking into consideration the relevant aviation safeguarding controls	Transport	Detailed design	Additional safeguard
LV3	Landscape and visual	Tree protection zones will be established around trees to be retained. Tree protection will be carried out in keeping with AS4970-2009 Protection of Trees on Development Sites and will include exclusion fencing of tree protection zones	Contractor	Detailed design / Pre-construction	Additional safeguard
LV4	Landscape and visual	Shade cloth or construction hoarding (or similar material) (where necessary) will be installed to minimise visual impacts. Construction sites will be kept clean and tidy and refuse will be placed in appropriate receptacles. Hoardings and site fencing will be removed once construction is complete	Contractor	Construction	Additional safeguard

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No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
LV5	Landscape and visual	Cut-off or directed lighting will be provided within and outside of the construction site, with lighting location and direction considered to ensure glare and light spill is minimised	Contractor	Construction	Additional safeguard
<u>LV6</u>	<u>Landscape and visual</u>	<u>An aviation ecologist will be engaged to review landscape designs for the proposal</u>	<u>Transport</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
SW1	Surface water and groundwater - Sydney Water stormwater scheme	Transport will liaise with Sydney Water regarding the Western Sydney Aerotropolis integrated water system scheme at the detailed design phase of the proposal, as relevant. Consultation will be carried out in regard to the stormwater network, drinking water, wastewater and recycled water networks	Transport	Detailed design	Additional safeguard
SW2	Surface water and groundwater	A Soil and Water Management Plan will be prepared in accordance with QA Specification G38 and implemented as part of the CEMP. The Soil and Water Management Plan will identify all reasonably foreseeable risks relating to surface water and groundwater quality, and water pollution associated with carrying out the activity. It will describe how these risks would be managed and minimised during construction. This will include arrangements for managing pollution risks associated with spillage or contamination on the site and adjoining areas. Monitoring of surface water and groundwater quality will be carried out prior to, during and after construction. This will include key watercourses, and farm dams potentially impacted by the proposal.	Contractor	Pre -construction / Construction	Section 2.1 of QA G38 Soil and Water Management
SW3	Surface water and groundwater	The anticipated water discharge from sediment basins will be assessed in line with the Guideline for Assessing the Impacts of Treated Water Discharge from Water Quality Treatment Controls (Transport, 2020d). The results of such assessment will inform design of sediment basins to adhere to EPL discharge requirements	Contractor	Pre-construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
SW4	Surface water and groundwater	<p>A site-specific Erosion and Sediment Control Plan (the plan) will be prepared and implemented and included in the Soil and Water Management Plan (part of the CEMP). The plan will identify detailed measures and controls to be applied to minimise erosion and sediment control risks including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Runoff, diversion, and drainage points</li> <li>• Sediment basins and sumps</li> <li>• Scour protection</li> <li>• Stabilising disturbed areas as soon as possible</li> <li>• Check dams, fencing and swales</li> <li>• Installation of measures at work entry and exit points to minimise movement of material onto adjoining roads at entry and exit points</li> <li>• Staged implementation arrangements</li> <li>• Appropriate location and storage of construction materials, fuels, and chemicals, including bunding where appropriate.</li> <li>• Arrangements for managing wet weather events, including monitoring of potential high-risk events (such as storms) and specific controls and follow-up measures to be applied in the event of wet weather</li> </ul>	Contractor	Pre-construction / construction	Additional safeguard
SW5	Surface water and groundwater	Stockpiles will be designed, established, operated, and decommissioned in accordance with the Stockpile Site Management Guideline (RMS, 2015a)	Contractor	Pre-construction / construction	Additional safeguard
SW6	Surface water and groundwater	<p>The rehabilitation of disturbed areas will be carried out progressively as construction stages are completed, and in accordance with:</p> <ul style="list-style-type: none"> <li>• Landcom's Managing Urban Stormwater: Soils and Construction series (Landcom, 2004)</li> <li>• <u>Transport's Landscape design guideline (June, 2023)</u></li> <li>• <del>RMS Landscape design guideline (RMS, 2008)</del></li> <li>• RMS Guideline for Batter Stabilisation using Vegetation (RMS, 2015b)</li> </ul>	Contractor	Construction	Additional safeguard
SW7	Surface water and groundwater	The proposed bioretention basins will be established as construction sediment basins during the construction stage of the proposal to capture sediment and other pollutants mobilised during construction	Contractor	Pre-construction/Construction	Additional safeguard
SW8	Surface water and groundwater	Road drainage will be treated by sediment basins. The requirements for sediment basins (ie number, location, and size) will be determined during the proposal detailed design phase	Contractor	Pre-construction/Construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
SW9	Surface water and groundwater	A site-specific emergency spill plan will include spill management measures in accordance with Transport's <i>Code of Practice for Water Management</i> (RTA, 1999) and relevant EPA guidelines. The plan will address measures to be implemented in the event of a spill, including initial response and containment, notification of emergency services and relevant authorities (including Transport and EPA officers), regular inspections and maintenance of equipment and spill-control structures such as hardstand areas and containment	Contractor	Pre-construction	Section 4.3 of QA G36 Environment Protection
SW10	Surface water and groundwater	Waste recovered during maintenance will be disposed of at a suitable recycling facility or licensed landfill site. The proposed bioretention basins will undergo regular scheduled maintenance to ensure the ongoing treatment efficiency during the road's operational life	Transport	Operation	Additional safeguard
SW11	Surface water and groundwater	Any dewatering activities will be carried out in accordance with the 'Technical Guideline – Environmental Management of Construction Site Dewatering' (RMS, 2011) in a manner that prevents pollution of waters	Contractor	Construction	Additional safeguard
SW12	Surface water and groundwater	Construction within areas of moderate to very high-risk saline soils will be managed in accordance with the Soil and Water Management Plan and procedures set out in the Salinity Training Handbook (DPI, 2014). Specific measures will also include (but not be limited to): <ul style="list-style-type: none"> <li>• Identification and management of saline discharge sites, for example seepage from cuts</li> <li>• Testing to confirm the presence of saline soils in areas of high salinity potential prior to disturbance</li> <li>• Progressive stabilisation and revegetation of exposed areas following disturbance as soon as is practicable</li> <li>• Groundwater quality monitoring carried out prior to and throughout construction</li> </ul>	Contractor	Construction	Additional safeguard
SW13	Surface water and groundwater	Prior to ground disturbance in areas of potential acid sulfate soil occurrence, testing will be carried out to determine the actual presence of acid sulfate soils. If acid sulfate soils are encountered, they will be managed in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998) and the Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze (NSW Roads and Traffic Authority, 2005)	Contractor	Pre-construction / construction	Additional safeguard
SW14	Surface water and groundwater	Sediment and erosion controls are to be used for in-stream works to avoid impacts on water quality and fish passage e.g. erosion fencing, stockpile covers and silt curtains. Clean rock is to be used for any instream temporary rock platforms	Contractor	Construction	Additional safeguard
FH1	Flooding and hydrology	Further design refinement will be carried out generally within the vicinity of creeks which traverse the proposal, to minimise potential increases in the afflux where possible (for example, refining the sizing of culverts and drainage infrastructure)	Transport	Detailed design	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
FH2	Flooding and hydrology	Floor level surveys will be carried out at buildings within the modelled area, to ascertain ground floor heights	Transport	Detailed design	Additional safeguard
FH3	Flooding and hydrology	<p>A Flood Response Management Plan will be prepared as part of the CEMP. The Flood Response Management Plan will address, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>Processes for monitoring and mitigation flood risk</li> <li>Steps to be taken in the event of a flood warning including removal or securing of loose material, equipment, fuels and chemicals</li> <li>Monitoring long term rainfall forecasts and scheduling high risk work activities around these forecasts</li> <li>Identifying contingency locations for the temporary flood storage of equipment and materials outside of potential inundation areas</li> <li>Contingency measures to secure and stabilise work areas and compound sites prior to flooding</li> </ul>	Contractor	Construction	Additional safeguard
GSC1	Geology, soils and contamination	A Phase 2 Contamination Assessment (detailed site investigation) will be completed and will include the collection of samples of fill material, fly tipped waste (if present) and soil from areas of current and former agricultural land. It will be carried out via test pitting along the alignment and at areas known to be construction staging areas or ancillary facilities to characterise the material. Given the length of the alignment, samples collected are to focus on any areas that may indicate signs of potential contamination as well as area coverage	Contractor	<del>Detailed design</del> Pre-construction/ Construction	Section 4.2 of QA G36 Environment Protection
GSC2	Geology, soils and contamination	The CEMP will include an unexpected finds protocol for potentially contaminated material encountered during construction work	Contractor	Construction	Section 4.2 of QA G36 Environment Protection
GSC3	Geology, soils and contamination	<p>An Asbestos Management Plan will be developed and implemented to manage asbestos and asbestos containing material if encountered during the construction. The plan will include:</p> <ul style="list-style-type: none"> <li>Identification of potential asbestos on site</li> <li>Procedures to manage and handle any asbestos</li> <li>Mitigation measures if asbestos is encountered during construction</li> </ul> <p>Procedures for disposal of asbestos in accordance with the NSW EPA guidelines, Australian Standards and relevant industry codes of practice</p>	<del>Contractor</del> Transport	Pre-construction	Additional safeguard
GSC4	Geology, soils and contamination	Batters and bridge structures will be designed and constructed to minimise risk of exposure, instability and erosion, and to support long-term, on-going best practice management, in accordance with Transport's 'Guideline for Batter Surface Stabilisation using Vegetation' (RMS, 2015b)	Contractor / Transport	Construction / operation	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
AQ1	Air quality	<p>An Air Quality Management Plan (AQMP) will be prepared and implemented as part of the CEMP. The AQMP will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>Potential sources of air pollution</li> <li>Air quality management objectives consistent with any relevant published EPA and/DPE guidelines</li> <li>Mitigation and suppression measures to be implemented including: <ul style="list-style-type: none"> <li>Use of water-assisted dust sweeper(s)</li> <li>Covering of vehicles</li> <li>Provision of vehicle clean down areas</li> <li>Methods to manage work during strong winds or other adverse weather conditions</li> </ul> </li> </ul> <p>A progressive rehabilitation strategy for exposed surfaces</p>	Contractor	Detailed design / Pre-construction	Section 4.4 of QA G36 Environment Protection
AQ2	Air quality - Combustion emissions	Use of diesel or petrol-powered generators will be avoided where practicable and mains electricity or battery powered equipment will be used where practicable	Contractor	Construction	Additional safeguard
AQ3	Air quality - Combustion emissions	Vehicles and plant will be switched off when engines are stationary. Idling vehicles will be avoided where practicable	Contractor	Construction	Additional safeguard
AQ4	Air quality - Dust emissions	During periods of high potential for increased air quality impacts and/or prolonged dry or windy conditions, the frequency of site inspections will be increased by the construction contractor's environmental representative or accountable personnel for air quality and dust issues	Contractor	Construction	Additional safeguard
AQ5	Air quality - Dust emissions	At each construction zone, the site arrangement will be planned so that dust generating activities are carried out to minimise dust at nearby receptors. Measures may include stockpiles located as far away from receptors as possible; dust barriers being erected around dusty activities/site boundary, or similar	Contractor	Construction	Additional safeguard
AQ6	Air quality - Dust emissions	A maximum speed limit of 15 kilometres per hour on unsurfaced roads and construction work areas will be imposed and signposted	Contractor	Construction	Additional safeguard
AQ7	Air quality - Dust emissions	Adequate water supply will be provided on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate	Contractor	Construction	Additional safeguard
CC1	Climate change	Construction equipment, plant and vehicles will be appropriately sized for the task, serviced frequently and will not be left idling when not in use	Contractor	Construction	Additional safeguard
CC2	Climate change	Opportunities to use low emission construction materials, such as recycled aggregates in road pavement and surfacing, and cement replacement materials will be investigated and incorporated where feasible and cost-effective	Contractor	Construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
CC3	Climate change	Raw materials will be managed to reduce energy requirements for their processing. For example, stockpiled materials will be stored undercover where possible to reduce moisture content of materials and, therefore, the process and handling requirements	Contractor	Construction	Additional safeguard
CC4	Climate change	Materials with lower emissions intensity will be specified in the selection of maintenance materials	Transport	<u>Detailed design Operation</u>	Additional safeguard
CC5	Climate change	The most energy efficient street lighting appropriate for proposal needs will be specified	Transport	<u>Detailed design Operation</u>	Additional safeguard
RU1	Resource use and waste	Use of recycled-content materials will be considered during the detailed design	Transport	Detailed design	Additional safeguard
RU2	Resource use and waste	<p>A Waste Management Plan will be prepared and implemented as part of the CEMP. The Waste Management Plan will provide specific guidance on measures and controls to be implemented to support minimising the amount of waste produced and appropriate handling and disposal of unavoidable waste.</p> <p>The Waste Management Plan will include, but will not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>Measures to avoid and minimise waste associated with the proposal</li> <li>Classification of wastes generated by the proposal and management options (re-use, recycle, stockpile, disposal)</li> <li>Classification of wastes received from off-site for use in the proposal and management options</li> <li>identification of any statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions</li> <li>Procedures for storage, transport and disposal</li> <li>Monitoring, record keeping and reporting, including any documentation management obligations arising from resource recovery exemptions</li> </ul> <p>The Waste Management Plan will be prepared taking into account the Roads and Maritime Environmental Procedure – Management of Wastes on Roads and Maritime Services Land and relevant Transport Waste Fact Sheets</p>	Contractor	Pre-construction/ construction	Section 4.2 of <i>QA G36 Environment Protection</i>
RU3	Resource use and waste	<p>The following resource management hierarchy principles will be followed:</p> <ul style="list-style-type: none"> <li>Avoid unnecessary resource consumption as a priority</li> <li>Avoidance would be followed by resource recovery (including reuse of materials, reprocessing, and recycling and energy recovery)</li> </ul> <p>Disposal would be a last resort (in accordance with the WARR Act 2001)</p>	Contractor	Pre-construction / construction	Additional safeguard
HR1	Hazard and risk	Transport will consult with Transgrid and implement appropriate measures to protect the existing transmission tower to the north of Elizabeth Drive, such as a potential safety barrier	Transport	Detailed design	Additional safeguard

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for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
HR2	Hazard and risk	Construction activities within the exclusion zone of the existing transmission tower will be minimised where possible, and the exclusion zone will not be used for laydown or storage of materials	Contractor	Detailed design / <u>construction</u>	Additional safeguard
HR3	Hazard and risk	<p>A Hazard and Risk Management Plan will be prepared and implemented as part of the CEMP. The Plan will identify:</p> <ul style="list-style-type: none"> <li>Hazards and risks associated with the activity and measures to minimise these risks</li> <li>Record keeping arrangements to manage materials on site</li> </ul> <p>Contingency measures to be implemented in the event of unexpected hazards or risks arising, including emergency situations</p>	Contractor	Pre-construction / construction	Additional safeguard
HR4	Hazard and risk	<p>A Bushfire Management Plan will be prepared and included as part of the CEMP. The Plan will identify:</p> <ul style="list-style-type: none"> <li>Asset protection zone locations and management details</li> <li>Landscaping requirements including indicative design layout and vegetation density thresholds</li> <li>Access provisions such as locations, passing bays and alternate emergency access</li> <li>Water supplies and bush fire suppression systems</li> </ul> <p>Details regarding the Bush Fire Emergency Management and Evacuation Plan and any other essential bush fire safety requirements</p>	Contractor	Pre-construction / construction	Additional safeguard
HR5	Hazard and risk	Construction activities involving flammable materials and ignition sources (for example, welding) will be proactively managed to ensure that the potential for fire is effectively minimised. High risk construction activities, such as welding and metal work, will be subject to a risk assessment on total fire ban days and restricted or ceased as appropriate. Construction personnel will be inducted into the requirement to safely dispose of cigarette butts	Contractor	Pre-construction / construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
C1	Cumulative impacts – construction	<p>Co-ordination and consultation with the following stakeholders will occur where required to manage the interface of the Western Sydney International Airport, Sydney Metro Western Sydney International Airport and Elizabeth Drive West Upgrade projects during overlapping construction activities:</p> <ul style="list-style-type: none"> <li>• Transport</li> <li>• <u>Utility authorities</u></li> <li>• Construction contractors</li> <li>• Other relevant stakeholders</li> </ul> <p>Consultation and co-ordination with these stakeholders will include:</p> <ul style="list-style-type: none"> <li>• Provision of regular updates to the detailed construction program, construction sites and haul routes</li> <li>• Identification of key potential overlap points and activities</li> </ul> <p>Development of mitigation and management strategies to manage these conflicts and potential impacts, for example, co-ordination of respite periods</p>	Transport / contractor	Construction	Additional safeguard

## 6.3 Licensing and approvals

Table 6-2 summarises the licensing and approvals that would be required for the proposal.

Table 6-2: Summary of licensing and approvals required

Instrument	Requirement	Timing
<i>Protection of the Environment Operations Act 1997 (s43)</i>	EPL for scheduled activities (road construction)	Prior to start of the activity
<i>Fisheries Management Act 1994 (s199)</i>	Notification to the Minister for Agriculture prior to any dredging or reclamation work.  <i>While it is likely that impacts to aquatic environments associated with the proposed work would be negligible, Transport may be required to provide formal notification to the Department of Primary Industries under Section 199 of the FM Act as the study area is mapped as containing Key Fish Habitat. Nonetheless, requirements for work adjacent to Key Fish Habitat is determined on a case by case basis, and would be determined by consultation with a local fisheries officer</i>	A minimum of 28 days prior to the start of work
<i>Fisheries Management Act 1994 (s219)</i>	Permit to obstruct the free passage of fish (temporary or permanent) from the Minister for Agriculture.	Prior to start of the activity
<i>National Parks and Wildlife Act 1974 (s90)</i>	AHIP from DPE- Heritage NSW for the disturbance of the Aboriginal sites that would be impacted by the proposal	Prior to start of the activity
<i>Crown Land Management Act 2016 (Division 3.4, 5.5 and 5.6)</i>	Lease or licence to occupy areas of Crown land	Prior to start of the activity
<i>Roads Act 1993 (s138)</i>	A Road Occupancy Licence would need to be obtained from the relevant roads authority by the contractor	Prior to start of the activity
<i>Airports Act 1996</i>	Transport to seek approval under the <i>Airports Act 1996</i> and obtain consent from Western Sydney International Airport due to direct impacts and partial acquisition of two land parcels (Lot 9 DP 226448 and Lot 11 DP 226448)	Prior to start of the activity

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## Appendix A: Community Consultation

## Community update

### Transport for NSW

Have your say – Review of Environmental Factors | September 2023

# Elizabeth Drive Upgrade

Between the M7 Motorway at Cecil Hills and  
The Northern Road at Luddenham



Elizabeth Drive (at Mamre Road intersection looking west)

## Project background

The Western Sydney International Airport and development of the 11,200-hectare airport precinct that will evolve around it is one of Australia's largest infrastructure and city-shaping programs. The Western Sydney Airport Precinct will transform into a thriving cultural, social and economic hub underpinned by a safe, reliable and integrated transport network for local communities and industry.

To address this growth and increase in traffic we are planning to upgrade Elizabeth Drive. It will provide direct access to Western Sydney International Airport, access to employment lands with the Western Sydney Airport Precinct and connect to north-south corridors that are enabling growth of nearby precincts. Almost double the number of vehicles will use the road each day in 2040 compared to the 28,000 cars using the road daily now.

Today the road is mostly a two-lane undivided road, with no footpaths, no median and a speed limit of 80km/h.

The proposed Elizabeth Drive upgrade would provide two lanes in each direction together with a median island, landscaping and paths to improve safety and congestion for neighbouring communities.

## Have your say on the proposed Elizabeth Drive Upgrade

After the public display of our access strategy in 2019 and strategic design in 2020, we are now seeking feedback on the Review of Environmental Factors (REF). The REFs outline the features of the concept design and assess a range of potential environmental impacts expected when the road is in construction and operation. The REFs include measures on how we plan to minimise these impacts to our customers and the community.

The community is invited to provide feedback on the REFs until **31 October 2023**. We have prepared separate REFs for the Elizabeth Drive East and West upgrades.

Community feedback will help us understand what is important to customers and the community.

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[roads-maritime.transport.nsw.gov.au](https://roads-maritime.transport.nsw.gov.au)

## Elizabeth Drive Upgrade

### Key features of the upgrade

- Upgrade the existing two-lane road to a four-lane road with central median to allow for future widening to six lanes
- Seven new traffic light intersections to improve journey reliability and safety
- Four new twin bridges
- Pedestrian/bicycle user separated path on each side of the road
- Adjustments to utilities along the corridor
- Landscaping, signage and lighting.

### Key benefits of the upgrade

- Increased road capacity to meet future growth and development and reduce congestion impacts on the community
- Enhanced traffic safety for road users
- Improved access and safer and more reliable journeys to and from the Western Sydney International Airport and surrounding precincts
- Improved freight movement to key commercial centres
- Provide bicycle user, pedestrian and public transport facilities.

We have divided this upgrade in to two distinct parts – Elizabeth Drive West and Elizabeth Drive East:

- Elizabeth Drive West upgrade (ED West) is about 3.6km from The Northern Road to near where Elizabeth Drive crosses over the future M12 Motorway at Badgerys Creek.
- Elizabeth Drive East upgrade (ED East) is about 7.8km in length from near where Elizabeth Drive crosses over the future M12 Motorway at Badgerys Creek to 600 metres east of Duff Road at Cecil Park.

### Future property acquisitions

If the proposal receives funding to progress to future stages, there will be a need for Transport to acquire property along Elizabeth Drive. This would consist of full or partial property acquisitions.

A Personal Relationship Manager will be in contact with potentially affected property owners and provide these owners with updates as the project progresses.

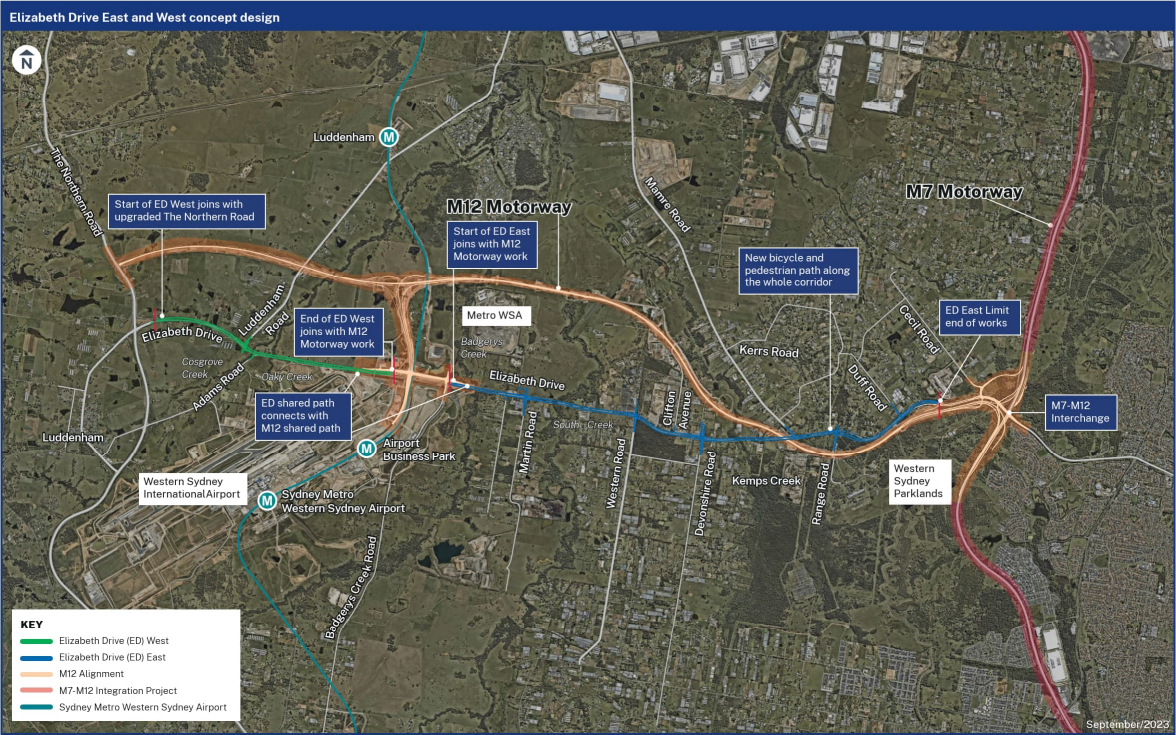
More information about the property acquisition process is available at [www.propertyacquisition.nsw.gov.au](http://www.propertyacquisition.nsw.gov.au)



Artist's impression of upgraded Elizabeth Drive West

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[roads-maritime.transport.nsw.gov.au](http://roads-maritime.transport.nsw.gov.au)

Elizabeth Drive Upgrade



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## Western Sydney projects

The Western Sydney International Airport and the development of surrounding precincts is driving growth in the region. This growth includes industrial and commercial precincts, land releases for residential precincts and employment zones in the area.

The **M12 Motorway** linking the M7 Motorway to the Western Sydney International Airport, is under construction and expected to open in 2026. Transport is currently constructing a roundabout at the intersection of Elizabeth Drive and Devonshire Road in Kemps Creek to improve safety within the area.

**Sydney Metro – Western Sydney International Airport** project is under construction, with services expected to commence in 2026.

Construction of the first stage of the **Mamre Road upgrade** between the M4 Motorway and Erskine Park Road will begin in 2024, with planning underway for the second stage of the upgrade between Erskine Park Road and Kerrs Road.

Planning is also underway for **rapid and local bus services** that will connect the Aerotropolis with surrounding metropolitan areas and support customer and community access to the Western Sydney International Airport.

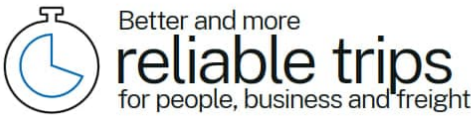
The **Western Sydney Airport Precinct Roads Network** is a proposed program of seven road corridors for development in the Western Sydney International Airport Precinct.

The corridors will support traffic movement including public transport and freight, and to provide connections to the Western Sydney Parklands, Sydney Metro Western Sydney Airport and the Western Sydney International (Nancy-Bird Walton) Airport with any local communities.

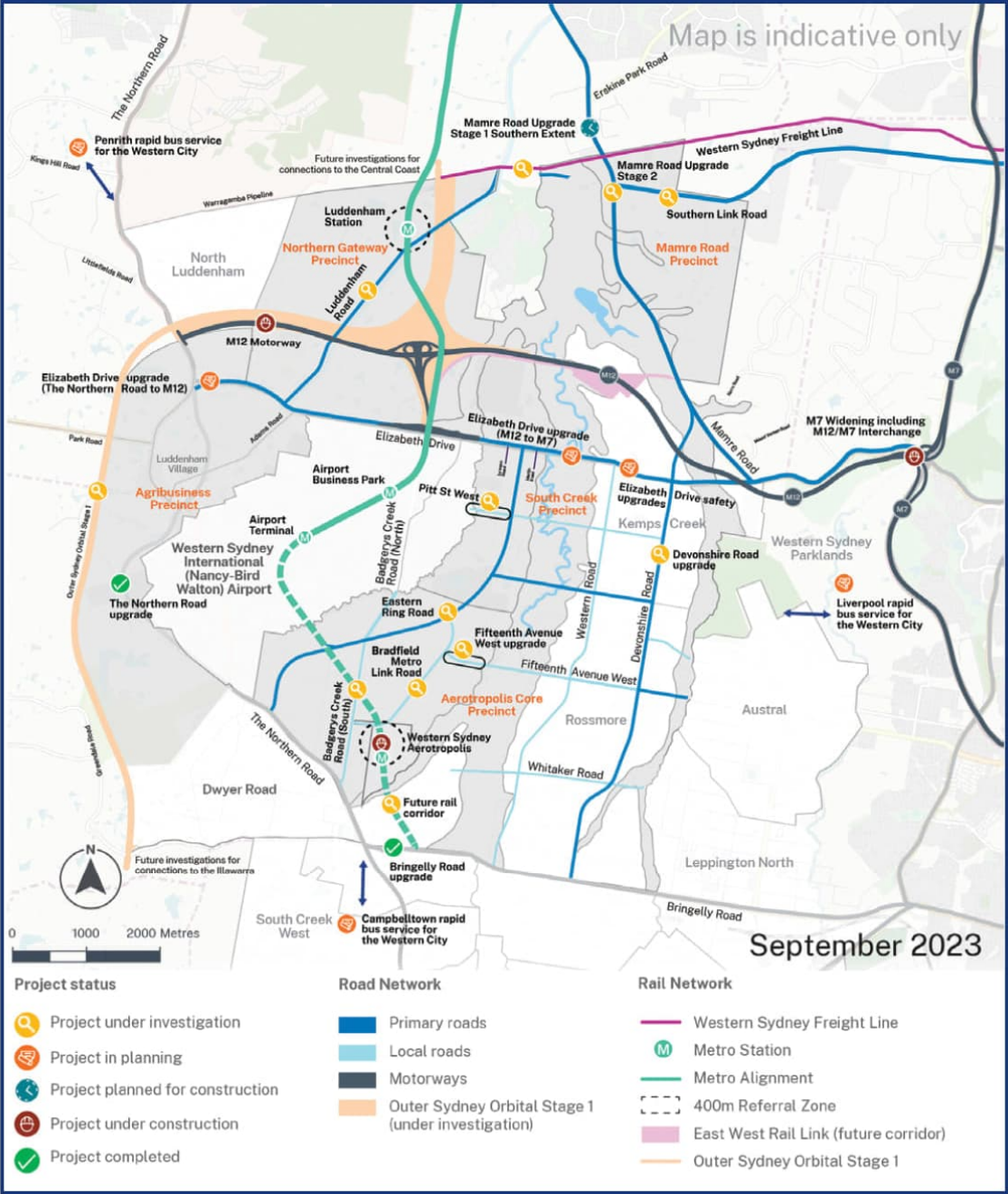
The seven road corridors are:

- Devonshire Road upgrade (including extension to Mamre Road)
- Fifteenth Avenue (west)
- Eastern Ring Road
- Badgerys Creek Road (south)
- Bradfield Metro Link Road
- Pitt Street (west)
- Luddenham Road upgrade.

Transport is currently engaging with the community and stakeholders. Contact Transport on [corridors@transport.nsw.gov.au](mailto:corridors@transport.nsw.gov.au) for information and register for updates.



Western Sydney Aerotropolis



## Elizabeth Drive Upgrade

### Project impacts

#### Work hours and construction

If the proposal receives funding to progress to future stages, our standard work hours would be between **7am and 6pm Monday to Friday** and between **8am and 1pm on Saturday**.

At times, we may need to carry out some out of hours or night work. The community would be notified in advance.

#### Noise and vibration

Construction work would be noisy at times. Where possible, we would put measures in place to reduce noise and vibration.

During construction, this would include preparing and implementing a Noise and Vibration Management Plan.

The plan would identify noisy activities and their impacts, and determine when noisy activities should take place to minimise those impacts. The plan would also set out an ongoing noise monitoring program, outline respite processes and describe how the local community would be informed about noisy activities.

#### Property access and traffic management

Private property access would be maintained during construction unless otherwise agreed with the property owner. Minor property adjustments would be made to some properties as part of the proposal. We would discuss these with the property owners before construction. Emergency services and pedestrian access to properties would be maintained at all times.

Temporary traffic restrictions such as lane closures and lower speed limits would be put in place for the safety of road users and our workers. A Traffic Management Plan will be developed to minimise delays to road users.

#### Air quality and dust

Some construction activities typically result in dust. Where possible, we would look at ways to reduce the movement of dust. Some of these measures would include covering materials, using designated routes, driving at low speeds while on and around our sites and visually monitoring our sites daily. We would also implement our Air Quality Management Plan, which would detail further mitigation controls.

#### Biodiversity

We understand the importance of protecting the environment and take environmental conservation seriously.

The design has been refined to minimise impact. However, the proposal would require removal of some native vegetation, street trees and plantings.

We would make sure we protect fauna and flora during construction. We have carried out assessments for threatened ecological communities and species in the proposal area. The proposed upgrade is unlikely to have a significant impact on any threatened species, populations or ecological communities.



Artist's impression of Elizabeth Drive East, approximately 300m south west of Duff Road

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## Elizabeth Drive Upgrade



### Have your say

The Review of Environmental Factors REF is on public display until 31 October 2023, and community feedback is invited during this time. To view the REFs, please scan the QR code or visit [nswroads.work/elizabethdrive](https://nswroads.work/elizabethdrive). Feedback can be submitted by:



1800 865 303



[elizabethdrive@transport.nsw.gov.au](mailto:elizabethdrive@transport.nsw.gov.au)



[nswroads.work/elizabethdrive](https://nswroads.work/elizabethdrive)



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NSW 2124



If you need help understanding this information, please contact the Translating and Interpreting Service on 131 450 and ask them to call us on 1800 865 303. The interpreter will then assist you with translation.

### Next steps

At the end of the REF display period, we will publish a submissions report on the project website. The report will include a summary of the community feedback received on the project and our responses.

We will continue to keep the community up-to-date as the project progresses. We encourage you to register for updates, so that we can get the latest information to you via email.

### Talk to the team

The project team will be available to answer your questions during the display period. You can join us at one of the community sessions below. We will also be at the Aerotropolis Community Day on **23 September** at Bringelly Community Centre from 10am to 1pm.

Date: Wednesday 11 October (face-to-face)

Location: Workers Hubertus Country Club,  
205 Adams Road, Luddenham

Time: 5–7pm

Date: Tuesday 17 October (online session)

Location: MS Teams – Register for this session by sending us an email at

[elizabethdrive@transport.nsw.gov.au](mailto:elizabethdrive@transport.nsw.gov.au)

Time: 12 noon–1pm

Date: Saturday 21 October (face-to-face)

Location: Bringelly Community Centre  
5 Greendale Road, Bringelly


Time: 10am–12 noon


September 2023



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 Register for our online community session on 17 October via emailing us at [elizabethdrive@transport.nsw.gov.au](mailto:elizabethdrive@transport.nsw.gov.au)



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 We invite you to our informative community sessions on Wednesday 11 and Saturday 21 October.


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for more information 

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Provide your feedback by 31st October



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For more details about the upgrades 

Learn more

## Newspaper advertisements

Advertisement in *The District Reporter* and *Western Weekender*, Friday 13 October 2023:



### Elizabeth Drive Upgrade

The Review of Environmental Factors (REF) for the Elizabeth Drive Upgrade is now available for public viewing. We value your input and encourage you to participate in shaping the future of this important project.

**Review the REF**

Review the REF for the Elizabeth Drive Upgrade by visiting our website: **[nswroads.work/elizabethdrive](https://nswroads.work/elizabethdrive)**. Your valuable feedback will play a crucial role in making this project a success.

**Community information sessions**

**Date:** Tuesday 17 October 2023  
(Online session)

**Location:** MS Teams – Register for this session by sending us an email at **[elizabethdrive@transport.nsw.gov.au](mailto:elizabethdrive@transport.nsw.gov.au)**

**Time:** 12 noon–1pm

**Date:** Saturday 21 October 2023  
(Face-to-Face)

**Location:** Bringelly Community Centre  
5 Greendale Road, Bringelly

**Time:** 10am–12 noon

We kindly request that you submit your feedback by 31 October 2023 to ensure your ideas are considered.

For any further enquiries, contact us at **1800 865 303** or **[elizabethdrive@transport.nsw.gov.au](mailto:elizabethdrive@transport.nsw.gov.au)**

Elizabeth Drive Upgrade project team  
Transport for NSW

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## Appendix B: Revised Biodiversity Assessment Report

