

# Elizabeth Drive West Upgrade

## Submissions Report

October 2024



## Acknowledgement of Country

Transport for NSW acknowledges the Dharug, the traditional custodians of the land on which the Elizabeth Drive West 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 for NSW 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 3.6 kilometres of Elizabeth Drive between The Northern Road at Luddenham, to near Badgerys Creek Road at Badgerys Creek, where it would connect with the future M12 Motorway (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
- Construction of a new twin bridge over Cosgroves Creek
- Upgrades to two intersections along Elizabeth Drive: Luddenham Road and Adams Road
- Active transport provision along the full corridor with the inclusion of shared paths along both sides of Elizabeth Drive corridor
- Inclusion of public transport infrastructure with bus priority at intersection 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 West Upgrade (the proposal), which is the subject of this Submissions Report
- Elizabeth Drive East Upgrade which would include the upgrade of 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. A separate Review of Environmental Factors (REF) has been prepared for the Elizabeth Drive East Upgrade.

## Display of the review of environmental factors (REF)

Transport prepared a Review of Environmental Factors (REF) for the Elizabeth Drive West 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 East 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 (Community consultation)
- 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

An 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 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 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

- 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) and Liverpool City Council (held on Monday 9 October 2023) about the proposal.

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 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 18 submissions, of which 13 were from the community, and five were from government agencies (Western Sydney Airport, Sydney Water, Water NSW, Liverpool City Council and Penrith City Council).

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

### 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 also requested clarification of the need for and timing of property acquisition, and sought further detail about the property acquisition process.

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 fully acquired. 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.

The acquisition timeframe has yet to be determined as final property adjustments and the extent of acquisition as part of the proposal would be confirmed in detailed design and in consultation with landowners. Once detailed design is complete, Transport would prepare a property adjustment plan where necessary that shows adjustments to the land (such as letterboxes, fences, driveways) that would be implemented by the construction contractor, in consultation with the landowner.

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 may include, 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.



In response to community feedback regarding property impacts, Transport have reviewed the need for construction ancillary facility 1 and associated lease area within Lot 8 / DP 1240511. This construction ancillary facility (and associated lease area) has been removed from the proposal, which is discussed further in this Submissions Report.

## Proposal design

Respondents raised concerns regarding various aspects of the proposal design presented in the REF, such as:

- Interface of the proposal design with utilities, including queries around coordination with utility providers such as Sydney Water
- Design of detention basins, including the queries around the location of proposed basins, and alternative design suggestions
- Requests to clarify how the proposal would change access at properties.

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.

Transport has been involved in ongoing consultation with utility providers during concept design development, including Sydney Water. Utility design and coordination would continue with various utility providers during detailed design. A utility survey would be carried out and a detailed utilities plan would be developed during detailed design. This would confirm the impact of the proposal on existing utilities, and the approach to managing each potential impact. This could include installing protection or temporarily relocating the impacted utility.

Regarding detention basins, all proposed basin locations would be reviewed and modelled in the next stage of design (detailed design), based on additional inputs such as detailed topographical, subsurface and utility surveys.

In relation to property access, the construction of a central median on Elizabeth Drive would result in a loss of access via a right hand turn to properties along Elizabeth Drive. To mitigate this loss the proposal would provide two U-turn facilities to be used primarily for local property access. The U-turn facilities are proposed at Luddenham Road which would facilitate travel westbound on Elizabeth Drive, and at Martin Road, to facilitate travel eastbound on Elizabeth Drive.

Transport would reinstate property accesses affected by the proposal. The approach to reinstating impacted accesses would be further investigated in the detailed design stage following detailed topographic survey and consultation with impacted stakeholders.

## Proposal funding

Several community members made comments and requests for clarification regarding the funding and timing for delivery of the proposal, with some noting its urgency.

The proposal would be subject to funding. Construction timing would be further refined during detailed design and communicated to impacted stakeholders. Funding for the proposal would be based on the final business case, which includes appropriate consideration of the costs and benefits of the proposal to provide value for money for the local and wider community.

## Consultation

Some 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.

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, Western Sydney 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.

Following receipt of landowner feedback received during the REF display period, Transport has reviewed the need for construction ancillary facility 1 at the north-eastern corner of the Elizabeth Drive and The Northern Road intersection.

Based on this review, construction ancillary facility 1 has been removed from the proposal. The remaining construction facilities (construction ancillary facility 2 at the north-western corner of the Elizabeth Drive, and construction ancillary facility 3 at the M12 Motorway tie in) would be utilised to support the construction of the proposal.

Appendix C of the REF identified that a temporary lease area of about 1.14 hectares within Lot 8 / DP 1240511 would be required during construction to establish and use construction ancillary facility 1. This temporary lease area would no longer be required. However, partial acquisition of 0.22 hectares of the frontage of the property (as stated in Appendix C of the REF) would continue to be required for the upgraded road corridor. Consultation would be carried out with the affected landowner regarding the proposed partial acquisition. All property acquisition would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*.

Potential changes to the environmental assessment in the REF associated with the removal of construction ancillary facility 1 from the proposal are outlined in this Submissions Report. These include the following:

- Construction noise and vibration – noise generating construction activities would no longer be carried out within the proposed temporary lease area within Lot 8 / DP 1240511 (construction ancillary facility 1). As such, there is a potential for a minor reduction in construction noise impacts at receivers nearest to the facility, compared to the assessment presented in the REF
- Construction traffic, transport and access – With the removal of construction ancillary facility 1 at The Northern Road, construction traffic would be distributed across the remaining two facilities (at the north-western corner of the Elizabeth Drive and Luddenham Road intersection, and the M12 Motorway tie in), as well as the proposal alignment. This may result in a higher volume of construction vehicles travelling on Elizabeth Drive between Luddenham Road and Badgerys Creek Road, compared to that assessed in the REF. Measures to manage construction traffic impacts would be documented in the Traffic Management Plan for the proposal
- Construction visual impacts – some motorists and a small number of residences directly north of construction ancillary facility 1 would no longer experience visual impacts associated with the facility (e.g. the presence of hoarding, stockpiling and material storage, construction equipment). However, these residences would continue to experience visual impacts from linear construction activities along Elizabeth Drive (for example, road widening works), which would be transitional in nature as work progresses along the road corridor.

Operational impacts and other environmental impacts would be generally consistent with those described in the REF, including with the removal of the facility. Impacts would continue to be managed through the environmental management frameworks and safeguards described in the REF and this Submissions Report.

Other minor clarifications since the display of the REF include the following:

- Minor factual corrections to information presented in the REF
- 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 manage the interface of the proposal with the Western Sydney International Airport, to review opportunities to collect viable native seeds from areas of vegetation; and to engage further with a poultry farm business in Luddenham, among others.

The proposal would continue to be refined during the next stage of design development, to minimise environmental and social impacts, and consider the outcomes of community and stakeholder consultation where feasible and reasonable.

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 statutory consultation

Transport carried out statutory consultation with the Western Parkland City Authority (under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*) in August and September 2023. 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 East 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. Environmental safeguard GEN5 has been included to review and consider the design of the future airport fuel line throughout detailed design development of the proposal. Responses to the matters raised by Western Parkland City Authority are documented in Section 5 of this Submissions Report.

## 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 submissions (documented in Chapter 2 and Chapter 3 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.



# Table of contents

<b>Executive summary .....</b>	<b>4</b>
 <b>1. Introduction and background .....</b>	 <b>11</b>
1.1 The proposal .....	11
1.2 REF display .....	11
1.3 Purpose of this report .....	12
 <b>2. Response to community issues .....</b>	 <b>14</b>
2.1 Overview of issues raised .....	14
2.2 Issue 1: Proposal design and construction .....	16
2.3 Issue 2: Proposal need and options .....	21
2.4 Issue 3: Consultation .....	22
2.5 Issue 4: Property and land use impacts .....	23
2.6 Issue 5: Traffic and transport .....	27
2.7 Issue 6: Noise and vibration .....	28
2.8 Issue 7: Water quality and soil .....	29
2.9 Issue 8: Socio-economic .....	30
2.10 Issue 9: Hydrology and flooding .....	31
2.11 Issue 10: Other issues .....	32
2.12 Issue 11: Out of scope .....	33
 <b>3. Response to government agency issues .....</b>	 <b>35</b>
3.1 Overview of issues raised .....	35
3.2 Western Sydney Airport .....	35
3.3 Sydney Water .....	40
3.4 Water NSW .....	43
3.5 Liverpool City Council .....	43
3.6 Penrith City Council .....	54
 <b>4. Changes to the proposal .....</b>	 <b>60</b>
4.1 Removal of construction ancillary facility 1 .....	60
4.2 Minor corrections and clarifications .....	61
4.3 Summary of changes to or additional environmental safeguards .....	61
 <b>5. Additional environmental assessment and statutory consultation .....</b>	 <b>63</b>
5.1 Additional environmental assessment .....	63
5.2 Additional statutory consultation .....	64
 <b>6. Environmental management .....</b>	 <b>66</b>
6.1 Environmental management plans (or system) .....	66
6.2 Summary of safeguards and management measures .....	66
6.3 Licensing and approvals .....	87

<b>7. References.....</b>	<b>88</b>
---------------------------	-----------

<b>Appendix A: Community Consultation .....</b>	<b>90</b>
---	-----------

## Tables

Table 1-1: Community contact and information points .....	12
---	----

Table 2-1: Respondents and where issues are addressed .....	15
---	----

Table 5-1: Additional assessment – removal of construction ancillary facility 1 .....	63
---	----

Table 5-2: Feedback received from Western Parkland City Authority .....	65
---	----

Table 6-1: Summary of environmental safeguards and management measures .....	67
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Table 6-2: Summary of licensing and approval required .....	87
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# 1. Introduction and background

## 1.1 The proposal

Transport for NSW (Transport) proposes to upgrade about 3.6 kilometres of Elizabeth Drive between The Northern Road at Luddenham, to near Badgerys Creek Road at Badgerys Creek, where it would connect with the future M12 Motorway (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 (three lanes in each direction)
- Construction of a new twin bridge over Cosgroves Creek
- Upgrades to two intersections along Elizabeth Drive: Luddenham Road and Adams Road
- Active transport provision along the full corridor with the inclusion of shared paths along both sides of Elizabeth Drive corridor
- Inclusion of public transport infrastructure with bus priority at intersection 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 West Upgrade (the proposal), which is the subject of this Submissions Report
- Elizabeth Drive East Upgrade which would include the upgrade of 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. A separate Review of Environmental Factors (REF) was prepared for the Elizabeth Drive East Upgrade.

A more detailed description of the proposal is found in the Elizabeth Drive West Upgrade 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 (Community Consultation)
- 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

- An 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
- Briefing representatives from Penrith City Council (briefing held on Tuesday 3 October 2023) and Liverpool City Council (briefing held on Monday 9 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. 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 Western Parkland City Authority (under section 2.15(2)(h) of *State Environmental Planning Policy (Transport and Infrastructure) 2021*). This is described further in Section 5.

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 West 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 responses to each issue. It details responses to community issues (Section 2), responses to government agency issues (Section 3) and describes minor changes and clarifications made to the proposal in response to feedback (Section 4). This Submissions Report also documents the outcomes of additional statutory consultation (Section 5) 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 13 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.

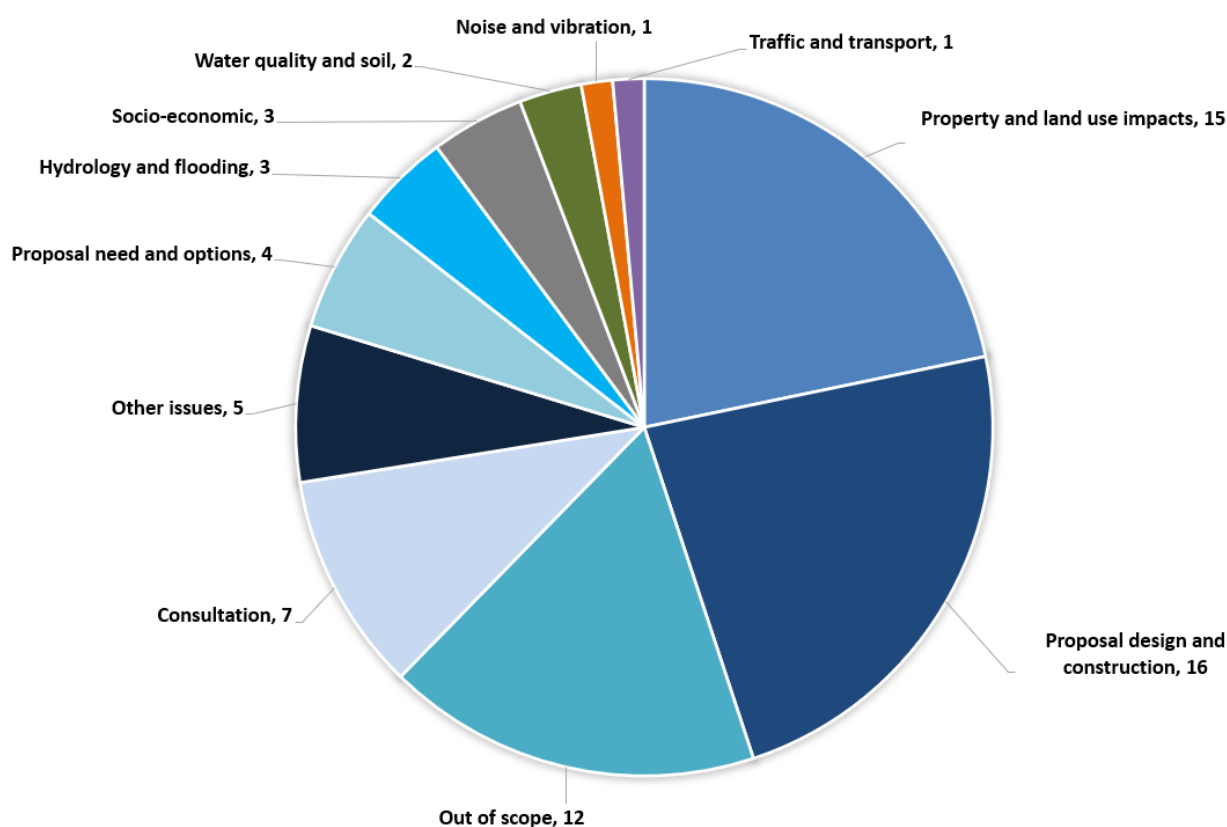


Figure 2-1: Summary of the number of times the key issue categories were raised by the community

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

- Property and land use – requests to clarify the need for and timing of property acquisition, as well as to provide further detail about the property acquisition process
- Proposal design and construction – submissions covering a range of issues relating to the design and construction of the proposal, including comments on landscaping, utility impacts and proposed basins
- Issues beyond the scope of the proposal – generally including requests for other road upgrades within the vicinity of the proposal
- Other issues – comments and requests for clarification regarding the funding and timing of the proposal
- Consultation – requests for further consultation or issues raised in relation to the consultation process.



Table 2-1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in the following sections of this report.

Table 2-1: Respondents and where issues are addressed

Respondent	Submission No.	Section number where issues are addressed
Individual	1	2.2.7, 2.5.1, 2.5.2, 2.7.1, 2.8.1, 2.9.1
Individual	2	2.4.2, 2.9.1, 2.12.1
Individual	3	0, 2.2.4, 2.5.1, 2.5.2
Individual	4	0, 2.12.1
Individual	5	2.2.5, 2.2.8, 2.3.1, 2.4.2, 2.5.3, 2.11.1
Individual	6	2.2.4, 2.11.1, 2.12.1, 2.12.2
Individual	7	2.12.1
Individual	8	2.2.4, 2.2.5, 2.4.1, 2.4.2, 2.5.1, 2.10.1, 2.10.2, 2.12.1
Individual	9	2.2.3, 2.4.1, 2.11.1, 2.11.2
Individual	10	2.5.1
Individual	11	2.2.2
Individual	12	2.3.1
Individual	13	2.2.6, 2.5.1, 2.5.3, 2.6.1, 2.12.1, 2.12.2

### 2.1.2 Issues raised during the online community information session

The Elizabeth Drive West 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 matters raised 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.

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

### General support for the proposal

#### Submission number(s)

3, 4

#### Issue description

Respondents noted that the concept design is generally well considered given future needs and expressed general support for the proposal.

#### Response

Transport acknowledges the support for the need for the proposal.

### 2.2.2 Urban design and landscaping

#### Submission number(s)

11

#### Issue description

The respondent submitted a suggestion to provide a rainforest and/or waterfall alongside Elizabeth Drive.

#### Response

Transport acknowledges the respondent's suggestion. A rainforest and/or waterfall would likely not be feasible or suited to the natural environment of the proposal. Landscaping would be provided along the length of the proposal, including within the central median and nature strip separating traffic lanes from the shared walking and cycling paths. 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. Landscaping would be developed further during detailed design.

### 2.2.3 Construction timing

#### Submission number(s)

9

#### Issue description

The respondent requested that the:

- Delivery of the proposal is prioritised due to the planned opening of Western Sydney International Airport in 2026, and requested that construction of the proposal commence in the first half of 2024
- Standard work hours are increased/amended to facilitate a shorter construction program
- Submissions Report for the proposal is published in mid-November 2023
- Proposal is determined in 2023, or early 2024 at the latest, given its urgency
- Detailed design work for the proposal is completed by the end of the 2023-24 financial year.

## Response

Road and rail transport options are planned to be available at the commencement of operations of the Western Sydney International Airport, including the M12 Motorway and Sydney Metro Western Sydney Airport. The delivery of upgrades to Elizabeth Drive would support traffic growth arising from the anticipated growth in population and jobs resulting from the development of the Western Sydney International Airport and Western Sydney Airport Precinct.

The timeframe for delivery of the proposal considers a range of factors, including planning approvals, detailed design development and review, procurement, appointment, and mobilisation of contractors. Transport is committed to delivering the proposal efficiently, while balancing the need to allow sufficient time for these key steps in the delivery process. Construction timing of the proposal would be further refined during detailed design and communicated to impacted stakeholders.

The standard work hours in the REF are as defined in the Interim Construction Noise Guideline (DECC, 2006). Work outside standard construction hours is proposed to support timely completion of construction. Hours outside of standard construction hours have also been proposed to minimise disruption to daily traffic and disturbance to surrounding landowners and businesses.

Several factors influence the timing of Submissions Report publication, such as the number and complexity of submissions, reviewing the need for additional environmental assessment, consideration of changes to the proposal and other steps in the assessment and REF determination process. Transport also intends to publish the Submissions Report for the Elizabeth Drive West and East upgrades concurrently due to their geographic proximity, hence the timeframe for publication has allowed for preparation of both reports.

The delivery of the proposal would also be subject to funding. Construction timing would be further refined during detailed design and communicated to impacted stakeholders.

Transport is committed to delivering the proposal and the required upgrades to Elizabeth Drive to support planned growth in the Western Sydney Airport Precinct.

The next stage of design will be focussed on carrying out detailed survey (such as topographical survey) and consulting with the key stakeholders and affected landowners to confirm property acquisition and adjustments.

Overall, the timeframe for delivery of the proposal will consider a range of factors, such as relevant statutory processes and timeframes for planning approvals, detailed design development and review, procurement, appointment, and mobilisation of contractors. Transport is committed to delivering the proposal efficiently, while balancing the need to allow sufficient time for these key steps in the delivery process.

## 2.2.4 Design clarification/discrepancies

### Submission number(s)

3, 6, 8

### Issue description

Respondents:

- Requested clarification as to whether the proposal would block access to an existing sealed bay on Elizabeth Drive (delivered as part of previous works) requiring users to use Luddenham Road instead. The respondent did not support this
- Indicated that there were errors throughout the REF, including identification of the local government area (LGA) where properties are located (in Appendix C of the REF), and instances where stream locations and livestock dams within properties have not been correctly identified
- Requested confirmation on the timing of the 100 per cent design
- Requested for the REF to include detailed diagrams for every part of proposal.

## Response

There is an existing sealed turning bay on the southern side of Elizabeth Drive, between the Northern Road and Luddenham Road. Once the proposal is operational this facility would not be functional due to introduction of a central median on Elizabeth Drive. The turning bay would be removed by the proposal.

To mitigate this loss, the proposal would provide two U-turn facilities to be used primarily for local property access. The U-turn facilities are proposed at Luddenham Road which would facilitate travel westbound on Elizabeth Drive, and at Martin Road, to facilitate travel eastbound on Elizabeth Drive.

Appendix C of the REF incorrectly identifies that Lot 2 / DP 220176 is located in the Penrith City Council LGA. This property is in the Liverpool City Council LGA. Other details provided regarding this property and its proposed partial acquisition are correct. This has been addressed as a clarification to the REF in Section 4.1.

The concept drainage design presented in the REF is based on limited survey investigations outside the existing road corridor. During the next stage of design development (detailed design), topographical and subsurface survey would be carried out which would verify all watercourses present.

A 100 per cent concept design has been completed for the proposal. Further development of the proposal (including detailed design development, property acquisition and construction) would be subject to funding. Construction timing would be further refined during detailed design and communicated to impacted stakeholders.

Figures 3-1 to 3-4 in the REF provide images showing the proposed design. Figures are also provided of key intersections in Chapter 3 of the REF. The figures presented in the REF are based on the concept design for the proposal which would be subject to further development during the detailed design stage. The level of detail shown in figures in the REF is comparable with the level of detail shown in environmental assessments for similar road projects.

## 2.2.5 Proposed utilities scope

### Submission number(s)

5, 8

### Issue description

Respondents:

- Commented that the proposal design has not been coordinated with adjacent major services and future utility corridors, including a series of new infrastructure and utilities planned in the vicinity of Elizabeth Drive (including Sydney Water infrastructure)
- Encouraged coordination between Transport and Sydney Water to minimise inefficiency, land sterilisation and avoid additional land acquisition costs for delivering the proposal and Sydney Water projects (including an Advanced Water Recycling Centre on Elizabeth Drive)
- Commented the REF should explain how water supply, sewer provisions and electricity would be coordinated with the construction of the proposal
- Noted that the southern side of Elizabeth Drive is provided with a high voltage connector power line and fibre optic line which would be impacted upon by the design of the proposal.

## Response

Transport has been involved in ongoing consultation with utility providers during concept design development. Utility design and coordination would continue with various utility providers during detailed design.

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, so that respective projects can be coordinated where possible.

Transport welcomes the continuation of cross agency consultation and coordination of proposed utilities during further development and delivery of the proposal.

Utility survey would be carried out and a detailed utilities plan would be developed during the detailed design stage of the proposal. This would confirm the impact of the proposal on utilities, and the approach to managing each potential impact. This could include installing protection or temporarily relocating the impacted utility.

## 2.2.6 Detention basins

### Submission number(s)

13

### Issue description

The respondent:

- Raised concern that the proposed basin location on the south-west portion of (address withheld) Elizabeth Drive (near Luddenham Road) had been selected due to the land use zoning rather than the environmental condition of the property
- Commented that a mapped unnamed third order tributary stream of Cosgroves Creek traversing the southern end of the property does not exist on the site, and the flooding assessment in the REF does not show an increase in flood levels at the unnamed tributary
- Commented that the need for a basin in the proposal location is not clear based on the results of flood studies in the area
- Requested that the need for a basin in this location be reconsidered, as the submitter commented the property has the potential to provide substantial development (employment and residential). Alternatively, the respondent requested that the proposed basin be relocated to the eastern side of Luddenham Road.

### 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.

Water quality basins collect and filter runoff from the road discharge pipe network before the treated water is discharged to the environment. This is to meet pollutant reduction targets for the proposal which have been developed with reference to Council and NSW government guidelines. Land use zoning was not a key consideration in the selection of proposed basin locations. Existing farm dams in the area are only useable for spill capture, but generally not suitable for water quality treatment purposes.

The proposed basin at the property referred to by the respondent is designed to capture runoff from about 21.7 hectares of road (i.e. catchment area), excluding external flows. The adjacent swale is proposed to divert the external catchment including the existing farm dam safely around the road to the streams and other cross drainage structures. Water quality basins typically require a filter media area sized at two per cent of the contributing catchment. For the purposes of concept design a space allocation of four per cent of the contributing road catchment has been used to accommodate batters, sediment control and access facilities.

All proposed basin locations would be reviewed and modelled in the next stage of design (detailed design), based on additional inputs such as detailed topographical, subsurface and utility surveys. This additional survey would verify all watercourses present. 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.

Final selection of basin locations would also give due consideration to community and stakeholder feedback.

## 2.2.7 Construction environmental management

### Submission number(s)

1

### Issue description

The respondent requested that Transport ensure the construction contractor is aware of the significance of any disruption in the supply of water to the business and to ensure that deliveries and drop offs to the property during the construction period are not impacted.

### Response

Transport acknowledges the importance of continuous supply of water and maintaining property access for businesses near the proposal.

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. Relevant measures would be incorporated in the Construction Environmental Management Plan and Construction Traffic Management Plan for the proposal to consult with and manage traffic and access impacts.

In accordance with environmental safeguard SE5, specific consultation will be carried out with businesses potentially impacted during construction. Based on this consultation, specific feasible and reasonable measures to address potential impacts as they arise through the consultation process, will be identified and implemented.

An additional environmental safeguard has also been included in Section 6 (refer to SE8) to consult with a poultry farm business in Luddenham to limit the potential for disruptions to water supply and quality during the construction period.

## 2.2.8 Access strategy and road function

### Submission number(s)

5

### Issue description

The respondent:

- Commented that the proposal design has not considered the need to maintain and enhance local access, particularly with regard to the future land uses and transport network identified through the finalisation of the Aerotropolis Precinct Plan
- Commented that the design has been predicated on the existing rural land uses, rather than longer term land uses
- Commented that the design does not appropriately address its frontage with Western Sydney International Airport
- Raised concern with the design speed and lack of intersections / the implications of this for local access.

### Response

A key objective of the proposal is to accommodate future growth in the use of Elizabeth Drive, including in response to the opening of Western Sydney International Airport. The proposal to upgrade Elizabeth Drive is one of a number of road and transport connections that will form a key part of the transport network providing connections to the Western Sydney International Airport.

Transport has also contributed to the transport network of Western Sydney Aerotropolis Precinct Plan through its partnership with the Department of Planning, Housing and Infrastructure (formerly the Department of Environment and Planning). The future context of the Western Sydney Aerotropolis and the potential for significant land use changes in the area have been considered in the design and environmental assessment in the REF and would continue to be a key consideration in the next stage of design development.



Transport acknowledges that the construction of a central median on Elizabeth Drive would result in a loss of access via a right hand turn to properties along Elizabeth Drive. To mitigate this loss the proposal would provide two U-turn facilities to be used primarily for local property access. The U-turn facilities are proposed at Luddenham Road which would facilitate travel westbound on Elizabeth Drive, and at Martin Road, to facilitate travel eastbound on Elizabeth Drive.

The design of the proposal has maintained the identified access points to Western Sydney International Airport, and has included appropriate design measures to address the airport and minimise the potential to impact its operations (for example, selection of landscaping species and lighting).

Transport is actively consulting with Western Sydney Airport in relation to the proposal design and delivery, and will continue this process during the detailed design stage.

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

## 2.3 Issue 2: Proposal need and options

### 2.3.1 Other design options

#### Submission number(s)

5, 12

#### Issue description

Other design options were provided by respondents including:

- A respondent provided an indicative layout of a future development site, with suggested minimum requirements for accesses from Elizabeth Drive to the site
- Requested that full capacity of the proposal (three lanes in either direction) is constructed as part of the proposal to address growing traffic demands and minimise potential future disruptions
- Suggested that one of the three lanes in either direction could be used for public transport and/or emergency services
- Suggested that traffic lights be minimised and longer on/off ramps are provided to allow people to enter/exit Elizabeth Drive without causing congestion.

#### Response

The proposed development referred to in the submission is subject to a separate consultation process with Transport and the applicant of the development. This consultation process will continue as the proposal progresses.

The proposal would upgrade Elizabeth Drive (within the proposal area) 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 is not considered to be required at this point in time. 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.

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 or emergency service lanes are not proposed along Elizabeth Drive. Operational requirements of the road will continue to be considered in future as the proposal becomes operational.

Signalised intersections are considered appropriate for the predicted traffic volumes on Elizabeth Drive and would provide access to the surrounding road network. On/off ramps are not proposed for Elizabeth Drive.

## 2.4 Issue 3: Consultation

### 2.4.1 Issues with consultation process

#### Submission number(s)

8, 9

#### Issue description

Respondents:

- Indicated that consultation to date has been unsatisfactory, leading to surprise from community members upon display of the REF
- Expressed concern regarding inconsistencies in the REF, online sessions, and community consultation during 2021 in relation to property acquisition
- Noted that the design seemed to have changed to include widening on the southern side of Elizabeth Drive, compared to what had been previously communicated in 2021
- Requested for Transport to consider impacts of the proposal on properties and landowners more carefully.

#### 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 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 a 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. 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 Appendix A.

Transport acknowledges concern over the apparent changes to the proposal design since consultation during earlier phases of the proposal, including that carried out at the strategic design stage. Strategic design did not define properties that would be subject to acquisition. The REF was prepared based on a 100 per cent concept design, which is a more developed version of the proposal design and included potential acquisition requirements. The design of the proposal is subject to refinement over time in response to further investigation and community and stakeholder feedback. The next stage of development will be detailed design, which will continue to take into account community and stakeholder feedback.

Community feedback received during the REF display, or as a result of ongoing future 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.

## 2.4.2 Requests for further updates/consultation

### Submission number(s)

2, 5, 8

### Issue description

Respondents:

- Requested for Transport to develop a concierge system to directly manage issues with landowners
- Requested or encouraged further consultation and discussion with Transport on various issues including opportunities to improve the proposal design, coordinate with current and future land uses, and maintain property access
- Requested design coordination efforts between the proposal concept design, other proposed development, and Sydney Water Projects, to encourage better design and cost outcomes.

### 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 appoints Personal Relationship Managers Acquisitions (PRMAs) for landowners affected by property acquisition.

PRMAs and project team representatives door-knocked about 69 privately owned residential properties and small businesses during display of the REF. 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.

Transport will continue to engage directly with affected landowners and businesses during the next stage of proposal development, including i potential impacts on properties and future development proposals being considered.

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. Transport has also been engaged in ongoing consultation with Sydney Water since the concept design stage of the proposal.

## 2.5 Issue 4: Property and land use impacts

### 2.5.1 Property acquisition

#### Submission number(s)

1, 3, 8, 10, 13

#### Issue description

Respondents raised the following:

- Concern around uncertainty regarding the extent of the road alignment and any acquisition required of their property
- Concern around lack of specifics around acquisition timeframe, particularly for properties currently on market for sale
- Queried whether acquisition of land is funded in the current FY24 NSW budget, or would be included in future budgets
- Queried whether property acquisitions and associated property adjustment work would be completed in time for the Western Sydney International Airport opening
- Queried whether Transport would cover the costs of landowner infrastructure modifications required due to the proposal (such as fence replacement, and mailbox replacement)
- Requested replacement of property infrastructure (including fencing and agricultural facilities) with landowner input, including landowner choice of contractors

- Queried whether Transport would fund property valuations for properties affected by acquisition
- Commented that it is not clear why large portions of private land are proposed to be acquired based on the design of the proposal, and why impacts disproportionately affect properties along the length of the proposal area
- Suggested that the land categories in the Cumberland Plain Conservation Plan (CPCP; DPE, 2022) and lack of flexibility has contributed to the extent of property acquisition which will have implications for future development on the property
- Commented that Sydney Water and Transport works have not been coordinated which has resulted in further stress and impact to property owners affected by acquisition
- Commented that they have experienced previous property impacts associated with The Northern Road Upgrade including impacts to their residence, business and fragmentation of their property, and requested that Transport review whether the proposal can be carried out without the need to further acquire land from their property
- The respondent requested Transport pay legal costs associated with reviewing the proposed lease/contract for their property
- Expressed concern that there is no coordination in the design and development of concurrent road upgrades in the area.

### 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, 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.

The acquisition timeframe has yet to be determined as 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. During the next phase of the design, Transport would prepare a property adjustment plan for each affected property 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 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. Support during the process is available from a Personal Manager (for residential owners). Further information and guides can be found on the Centre for Property Acquisition website <https://www.nsw.gov.au/housing-and-construction/property-acquisition>.

Compensation payable pursuant to Section 55 of the Just Terms Act generally may include, 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.

Transport is continuing to work with relevant stakeholders (including Sydney Water, Western Sydney International Airport, the Department of Planning, Housing and Infrastructure and other stakeholders) to coordinate the delivery of transport infrastructure in the Western Sydney Airport Precinct to reduce potential impacts and inconveniences where feasible. In accordance with environmental safeguard C1 (refer to Section 6), co-ordination and consultation with these stakeholders will occur where required to manage the interface of the proposal and other projects within the area during overlapping construction activities. Transport also notes that there are a range of factors that influence the timing of construction of projects, such as availability of resources, funding and the need for the proposal. Further information on planning projects in the area can be found on the NSW Government Western Sydney Airport Precinct interactive map: <https://caportal.com.au/tfns/western-sydney-airport-precinct/map>.

Regarding other specific queries raised:

**CPCP land categories:** While the land categories identified in the CPCP have been considered in the assessment of biodiversity impacts in the REF, they have not been a driver in the extent of acquisition proposed (which is instead based on the design of the proposal)

**Timing and funding for further proposal development and property acquisition:** A 100 per cent concept design has been completed for the proposal, which the REF is based upon. Further development of the proposal (including detailed design development, property acquisition and construction) would be subject to funding. The timing of property acquisition and construction would be further refined during detailed design and communicated to impacted stakeholders. Transport has commenced direct consultation with affected landowners as described in Section 1.2. Separately to this proposal, funding has also been allocated as part of the NSW 2023-24 budget to Elizabeth Drive safety initiatives and corridor enabling work

**Coordination with Sydney Water:** Transport has also been engaged in ongoing consultation with Sydney Water during the concept design stage of the proposal. Consultation included providing Sydney Water the opportunity to comment on the 50 per cent and 100 per cent concept designs for the proposal. Transport would continue to consult with Sydney Water during detailed design, including in relation to water quality targets for the proposal. While Transport seeks to coordinate work with Sydney Water where feasible, Transport acknowledges this is not always possible where projects are at different stages of design development, delivery and funding. 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 proposal

**Previous property impacts from the Northern Road Upgrade:** Transport acknowledges that the area in which the proposal is located has been subject to several transport and infrastructure projects, resulting in cumulative impacts for community members. At the property referred to by the respondent, partial acquisition is proposed along the frontage of the property (where the proposal design would encroach into the property). In the REF, a temporary lease was also proposed on the property for construction ancillary facility 1 (refer further to Appendix C of the REF). Use of this site as an ancillary facility was proposed for several reasons including to minimise the need for vegetation removal and clearing, as the site has previously been impacted by the Northern Road Upgrade project. Following display of the REF and receipt of landowner feedback, Transport has removed construction ancillary facility 1 from the proposal, and would no longer require a temporary lease within the property to accommodate the facility. This change to the proposal is discussed further in Section 4.1. A summary of changes to the environmental assessment as a consequence of the removal of the construction ancillary facility is provided in Section 5.1.

## 2.5.2 Property value

### Submission number(s)

1, 3

### Issue description

Respondents:

- Queried the potential for the proposal to reduce property land values, including due to changes in property access (with the introduction of a central median)
- Queried whether compensation would be provided for restrictive access arrangements resulting from the proposal.

## Response

Property values are influenced by several complex factors including demand and supply at a certain point in time, economic climate, general location, accessibility, traffic, noise, and proximity to transport infrastructure and other services. The proposal is intended to increase capacity of Elizabeth Drive, which may encourage and support economic growth and accessibility to the area and local businesses.

While the construction of a central median on Elizabeth Drive would result in a loss of access via a right hand turn to properties along Elizabeth Drive, it is not expected that this would result in a substantial increase to trip duration. The traffic assessment in Appendix F of the REF found that a maximum increase of about 104 seconds is estimated for property access between Western Road and Martin Road in 2040 scenarios. The traffic assessment also indicates that the proposed upgrades of Elizabeth Drive (within the proposal area) to four lanes are expected to generally improve traffic conditions, journey times and reliability in both 2030 and 2040, particularly in the PM peak hour. Furthermore, the proposal is expected to improve road safety conditions and journey times along Elizabeth Drive.

Compensation to landowners would not be payable for changes to property access. Where properties are proposed to be acquired, compensation payable pursuant to Section 55 of the Just Terms Act generally may include, 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. 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>.

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

### Submission number(s)

5, 13

### Issue description

Respondents raised the following:

- Noted that the design of their proposed development for an industrial and logistics precinct has sought to account for the planned upgrade of Elizabeth Drive
- Requested efficiencies with this planned development to minimise earthworks required, and to resolve the location of the new intersections proposed
- Suggested that the avoidance of additional earthworks could be achieved through retaining walls or ideally by coordinating the finished levels of Elizabeth Drive and the planned development to avoid level differences between the projects
- Commented that the design of the proposal has not been prepared with a full consideration of the various adjacent projects
- Commented that the ability for their property to support enterprise and employment-generating uses has not been properly investigated
- Landowners adjacent to the proposal and within the Airport Precinct have strong interest in ongoing land use planning matters within the Precinct.

## Response

### *Impacts on planned 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. Transport has provided preliminary comments on the development application referred to by the respondent, noting that the Department of Planning, Housing and Infrastructure will formally refer the state significant development applications to Transport.

Transport acknowledges that design of the development application has sought to account for the planned upgrade of Elizabeth Drive.



The impact of the proposal and adjacent projects has been assessed using the cumulative impact assessment methodology described in Section 6.16 of the REF. The cumulative impact assessment considers with sufficient publicly available information and an adequate level of detail to assess the potential cumulative impacts. At the time of the preparing the REF, the planned development referred to by the respondent did not have sufficient available information and certainty to be assessed as part of the cumulative impact assessment. Furthermore, the REF primarily assesses impacts on the existing environment. While the design of the proposal should be cognisant of surrounding future development, the cumulative impact assessment does not assess impacts on proposed development that has not yet been approved as there is not sufficient certainty of the cumulative impacts and timing of the proposed development.

Transport would continue to consult with the applicants of future development as required, including coordination of design outcomes where feasible and reasonable, as the proposal progresses to the detailed design stage.

#### *Other land use impacts and zoning matters*

The proposal does not propose any changes to land use zoning and has sought not to preclude future land uses (such as employment generating uses) on sites wherever feasible and reasonable. Land use zoning in the Western Sydney Airport Precinct is a matter for the Department of Planning, Housing and Infrastructure in consultation with councils. 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).

Additionally, Transport would continue consultation with adjoining landowners and government stakeholders to achieve positive design outcomes during detailed design development.

Transport acknowledges the respondent's interest in ongoing land use planning. Transport would consult with affected landowners as the proposal progresses.

## 2.6 Issue 5: Traffic and transport

### 2.6.1 Operational impacts

#### **Submission number(s)**

13

#### **Issue description**

The respondent commented that the proposal would hinder travel to and from Adams Road and would require road users to use substantially longer alternative routes.

#### **Response**

Transport acknowledges that the construction of a central median on Elizabeth Drive would result in a loss of access via a right hand turn to properties along Elizabeth Drive. The proposed median is also expected to reduce the likelihood of rear-end and head-on crashes between vehicles attempting to cross Elizabeth Drive for property access, and traffic travelling in the opposite direction.

Existing and proposed U-turn facilities would be available along the length of the proposal to enable vehicles to change their direction of traffic (including an existing U-turn facility west of the intersection of Elizabeth Drive/Willmington Road and The Northern Road, and a proposed provision for a U-turn function at Luddenham Road).

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 direct access 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. Modelled results estimate there would be a maximum increase of 32 seconds for residents to access properties between The Northern Road and Luddenham Road in 2040 with the proposal, and of 47 seconds for residents to access properties between the Northern Road and Martin Road. This would present a minor increase in travel time for vehicles. On this basis, Transport considers the impacts associated with changes to travel time during operation of the proposal to be acceptable.

## 2.7 Issue 6: Noise and vibration

### 2.7.1 Impacts to animals

#### Submission number(s)

1

#### Issue description

The respondent expressed concern regarding noise and vibration from increased traffic and during construction and operation impacting on the health, wellbeing and production of poultry/ducks at a poultry farm along Elizabeth Drive in Luddenham. The respondent requested Transport to treat the aforementioned property as a sensitive receptor for the purposes of the noise and vibration assessment.

#### Response

To clarify the potential noise and vibration impacts to poultry/ducks, a literature review and further interpretation of the noise and vibration assessment results from the REF has been carried out, as described below.

##### *Literature review*

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

The literature review completed for the United Kingdom (UK) High Speed Rail 2 project (2017) to consider the noise effects used a definition of 'livestock' from *The Agriculture Act 1968* as: "any creature kept for the production of food, wool, skin or fur or for use in the farming of land or for such purpose as the Minister may by order specify" and, therefore, included ducks within the definition of livestock. The literature review concluded that there is not strong evidence of long-term effects of environmental noise on the health of poultry and other livestock.

A study completed by the State College of Washington found that  $L_{Aeq,12hr}$  noise levels between 75 to 110 A-weighted decibels (dB(A)) have no impact on weight gain, feeding efficiency, meat tenderness or yield, or mortality for chickens (Stadelman, WJ, 1957). It is worth noting that this used a control sound level of 65 dB(A) to represent an environment without excess noise. The Research Institute for Animal Production noted several studies which defined non-noise affected background  $L_{Aeq}$  noise levels of between 55-65 dB(A) (Brouček, 2014).

More recent research from Kyushu University found that  $L_{Aeq}$  noise levels between 70 and 90 dB(A) and vibration levels below 10 millimetres per second had no impact on the productivity (feed intake and egg production) and egg quality (shell thickness, shell stiffness, weight of egg) (Oh, Take-Keun et al, 2011).

The North Carolina Cooperative Fish and Wildlife research Unit found that certain species of wild ducks became accustomed to noise levels of aircraft in excess of 80 dB(A) within a period of two to 16 days and that the reaction to noise was influenced by the sharp onset of noise (Conomy, J.T., J. A. Dubovsky, A. Collazo, and W. J. Fleming, 1998). Farm equipment is often very noisy, and the trucks, ploughs, tractors, generators and related equipment, would cause an animal to become habituated to noise (Pepper, CB, Nascarella, MA, Kendall, RJ, 2003). Generally, the sources of harmful noise in animal housings are various: feeding 104-115 dB(A), mating 94-115 dB(A), high-pressure cleaning 105 dB(A), feed mixing 88-93 dB(A) (Venglovský et al, 2007). Due to habituation, noise may not affect farm animals as much as wildlife (Espmark, Y et al, 1974).

One study suggested that one of a few possible causes of disturbance for animals will be impulsive type noises such as blasting and pile driving (Knight, R and Gutzwiller, 1995). Livestock have been found to not be affected by "normal" levels of noise—below about 80-90 dB(A) (Knight, R and Gutzwiller, 1995).

British Standard BS5502; Part 32: 1990 Buildings and structures for agriculture Part 32: Guide to noise attenuation recommends that the maximum duration of daily exposure should be an  $L_{Aeq,24hr}$  noise level of 90 dB(A). The High Speed Rail 2 project in the United Kingdom used conservative screening criteria of  $L_{Aeq,15h}$  70 dB(A) and  $L_{Aeq,9h}$  60dB(A).

Although it is possible that ducks may be wholly contained within the naturally ventilated sheds onsite and, therefore, shielded from external noise sources, to be conservative in the consideration of potential impacts, it has been assumed that ducks may access outdoor areas adjacent to the sheds.

### *Road traffic noise*

The noise and vibration assessment in Appendix E of the REF presents future road traffic noise level contours for the daytime and night-time periods for the extent of proposal, including pastoral land nearby. Daytime noise levels are predicted to typically be over  $L_{Aeq,15hr}$  70 dB(A) within 40 metres from the road corridor, dropping to below 60 dB(A) beyond 90 metres, depending on the road elevation and surrounding terrain. Night-time noise levels are around 3 dB(A) lower. It is noted that the road traffic noise levels at the existing property are predicted to increase by less than 1 dB as a result of the operation of the proposal.

From the information presented above it is noted that road traffic noise levels would be less than these screening levels at around 40 metres from the road boundary. Based on the road traffic noise contours, most of the existing sheds within the property are not predicted to receive noise levels above 60 dB(A). Where noise levels are higher than 60 dB(A) in the yards adjacent to the sheds, ducks would be able to move away from the sound source to an area where noise levels are lower. As noted above, noise levels would increase by about 1 dB due to the proposal. This would be a minor change from existing background noise levels, and as such the proposal would likely not result in impact to poultry.

### *Construction noise and vibration*

Appendix E of the REF also presents predicted construction noise level contours for a number of construction scenarios for the extent of the proposal area. Daytime noise levels are predicted to typically be around  $L_{Aeq,15hr}$  75 dB(A) within 80 metres from the road corridor, depending on the road elevation and surrounding terrain.

Based on the construction noise contours, the majority of the existing sheds within the property are not predicted to experience noise levels above 80 dB(A). Given the temporary nature of construction, and the recommendations of *British Standard 5502 Buildings and structures for agriculture*, this is considered acceptable.

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 individual receivers, as construction activities will progress along the road upgrade further from the poultry farm. Construction noise impacts would be temporary in nature and are not likely to cause ongoing adverse impacts to the poultry.

Given the distance between the existing sheds and the construction works, it is unlikely vibration levels will be significant or exceed 10 millimetres per second and are, therefore, unlikely to impact the ducks.

### *Conclusion*

In conclusion, the response of poultry to noise depends on the character and duration of the sound. Given the steady nature of road traffic and the predicted levels at the site, it is considered unlikely that the proposal would result in adverse impacts on poultry on the site.

## 2.8 Issue 7: Water quality and soil

### 2.8.1 Impacts on water supply

#### Submission number(s)

1

#### Issue description

The respondent:

- Raised concern regarding the potential for the proposal to impact private water mains resulting in reduction or change to water flow, impacting upon business operations of a poultry farm business
- Commented on the risk of contamination to the quality of water supply due to construction activities

- Noted that an existing dam on the eastern end of the property is used as a supplementary water supply source for the property, however, cannot be used in the long term (i.e. in the event that water supply is impacted by the proposal)
- Requested a formal agreement with Transport to ensure that the water supply is not impacted, which would impact local businesses.

#### Response

The next stage of design development (detailed design) would involve carrying out utility survey to determine the location of utilities, such as the water supply main. Potential impacts and the proposed treatment options (for example, any protection to be applied to the water main) would be determined in the next stage of design following utility survey, and taking into account community and stakeholder feedback.

Environmental safeguards would be implemented during construction to manage the potential for impacts to both water supply and quality. These are documented in Section 6.

In accordance with these safeguards, a Soil and Water Management Plan would be prepared and implemented during construction, which would identify all reasonably foreseeable risks relating to surface and groundwater quality and water pollution related to construction of the proposal. The plan would include arrangements for avoiding those risks and managing pollution risks. Monitoring of surface water and groundwater quality would also be carried out prior to, during and after construction. This will include farm dams potentially impacted by the proposal.

The construction and operational footprint adopted for the proposal has sought to avoid direct impact to the farm dam on the property, which would continue to be considered during the detailed design (in which further topographical survey would be carried out to confirm the exact location of the dam).

In accordance with environmental safeguard SE5, specific consultation will be carried out with businesses potentially impacted during construction, including the poultry farm. Based on this consultation, specific feasible and reasonable measures to maintain address potential impacts as they arise through the consultation process, will be identified and implemented.

An additional environmental safeguard has also been included in Section 6 (refer to SE8) to consult with the poultry farm business to limit the potential for disruptions to water supply and quality during the construction period.

## 2.9 Issue 8: Socio-economic

### 2.9.1 Business impacts

#### Submission number(s)

1, 2

#### Issue description

Respondents:

- Raised concern about the impact of the proposal on business operations for a poultry farm at (address withheld) Elizabeth Drive, Luddenham, including stock delivery, infrastructure (such as duck sheds), collection of waste, and their ability to comply with animal welfare regulations during transportation of stock due to roadblocks and traffic congestion
- The proposed termination of Adams Road without delivering connection to Luddenham Road would limit existing access to Hubertus Country Club and reduce passing trade.

#### Response

Transport acknowledges concerns around the proposal's potential to impact upon local businesses. Transport will work with directly affected businesses to manage impacts where possible. In accordance with environmental safeguard SE5 (refer to Section 6), specific consultation will be undertaken with businesses potentially impacted by construction, including the poultry business in Luddenham. Consultation will aim to identify potential construction impacts to individual businesses. Based on consultation, specific and feasible measures to maintain business operations and address other potential impacts will be identified and implemented.

Regarding concerns around congestion, Transport notes that traffic congestion and delays are influenced by several factors which are not entirely under the control of the proposal. Where practicable, construction heavy vehicle movements would be outside the traffic peak hours to minimise impacts on the existing road network during construction. Property access would be maintained as far as practicable throughout construction. Once operational the proposal would generally reduce congestion in morning and afternoon peak periods on Elizabeth Drive.

Adams Road is not proposed to be terminated by the proposal. It would be upgraded to a left-in only access route with a new turning bay within the extent of the proposal area shown in the REF. This intersection arrangement has been proposed to allow for road design requirements and safety considerations associated with the proximity to the proposed Luddenham Road signalised intersection and new bridge over Cosgroves Creek.

## 2.10 Issue 9: Hydrology and flooding

### 2.10.1 Flooding impacts

#### Submission number(s)

8

#### Issue description

The respondent:

- Commented that their property is not flood prone, as stated in the REF
- Requested more detail regarding areas of property that have been identified as 'was dry now wet' in the flooding assessment, particularly in relation to its impact on property values.

#### Response

The baseline condition used for the flood assessment assumes that construction of the M12 Motorway and Western Sydney International Airport has been completed, which may result in changes to the current flooding conditions in the area (while these projects are currently under construction). The flooding assessment in the REF has also been 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 wider topographical survey and floor level surveys. This would confirm the potential for flooding impacts at properties along the length of the proposal.

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).

Transport's response to queries regarding property values is provided in Section 2.5.2.

### 2.10.2 Impacts associated with farm dams

#### Submission number(s)

8

#### Issue description

The respondent:

- Noted that the proposal would involve removal of two dams and the alteration of the larger dam at the corner of Lot 1 / DP 220176
- Commented that the REF did not adequately acknowledge the importance of dam infrastructure and maintaining existing dam water infrastructure

- Requested further consideration of impacts on the integrity of the dams, including confirmation that removal of the smaller dam, which has been integral to the larger dam's infrastructure, would not impact on the water retention and effectiveness of the larger dam
- Requested consideration for spillway construction of the larger dam
- Requested clarification on the value of dam infrastructure and compensation for the loss of this infrastructure
- Suggested that the removal of the dam should be accompanied by an overall design to rectify the associated overflow channel, which should include landowner input
- Commented that the removal of one other small dam to the east of the site is not identified or noted in the REF.

#### Response

Transport acknowledges the importance of farm dam infrastructure in the area surrounding the proposal.

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

Proposed road batters would spill into two existing dams on the property referred to by the respondent. The final extent of impacts and treatment would be confirmed in the next stage of design, following detailed topographic survey and geotechnical investigations as well as consultation with the impacted landowner.

The design would ensure that the integrity of retained farm dams is not compromised.

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. Compensation payable pursuant to Section 55 of the Just Terms Act generally may include, 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.

## 2.11 Issue 10: Other issues

### 2.11.1 Proposal funding/costs

#### Submission number(s)

5, 6, 9

#### Issue description

Respondents:

- Expressed concern that funding for progressing the upgrade of Elizabeth Drive is not confirmed
- Commented that a lack of funding and delays in delivery of the proposal has implications for the planned development of the Aerotropolis, and that the proposal would be delivered after Western Sydney International Airport
- Commented on the impact of uncertainty around proposal funding, noting this is affecting the broader development industry for industrial and logistics precincts
- Commented that some elements of the proposal would not provide value for money for taxpayers
- Requested for the NSW Government to provide the funding required for the Elizabeth Drive upgrade in the financial years 2024-25 and 2025-26.

#### Response

The proposal would be subject to funding. Construction timing would be further refined during detailed design and communicated to impacted stakeholders.



Funding for the proposal would be based on the final business case, which includes appropriate consideration of the costs and benefits of the proposal to provide value for money for the local and wider community.

## 2.11.2 Cumulative impacts

### Submission number(s)

9

### Issue description

The respondent expressed concern about the apparent 'doubling up' of construction/reconstruction of roads in the area, including the area of Elizabeth Drive that was reconstructed as part of The Northern Road upgrade.

### Response

Transport acknowledges the potential inconvenience and cumulative impact of multiple road projects occurring in the same area. Transport is continuing to work with relevant stakeholders (including Sydney Water, Western Sydney Airport, the Department of Planning, Housing and Infrastructure and other stakeholders) to plan the delivery of transport infrastructure in the Western Sydney Airport Precinct to reduce potential impacts and inconveniences where feasible. In accordance with environmental safeguard C1 (refer to Section 6), co-ordination and consultation with these stakeholders will occur where required to manage the interface of the proposal and other projects within the area during overlapping construction activities. Transport also notes that there are a range of factors that influence the timing of construction of projects, such as availability of resources, funding and the need for the proposal. Further information on planning projects in the area can be found on the NSW Government Western Sydney Airport Precinct interactive map: <https://caportal.com.au/tfnsw/western-sydney-airport-precinct/map>.

## 2.12 Issue 11: Out of scope

### 2.12.1 Need for other road upgrades

### Submission number(s)

2, 4, 6, 7, 8, 13

### Issue description

Respondents:

- Made numerous requests for the Anton Road North signalised intersection with Elizabeth Drive to be constructed and included as part of the proposal (or alternatively that the proposal make substantial provisions for its future construction) given its importance in providing connection to the Western Sydney International Airport's western boundary, and as a key intersection in the Aerotropolis Precinct Plan
- Requested for a realignment of Luddenham Road and Adams Road be carried out at the same time as the proposal to provide access to the Northern Gateway and Agribusiness Precincts
- Requested the southern extension of Luddenham Road be continued to Adams Road and Adams Road be upgraded to meet this connection
- Requested consideration of staging of upgrades to Elizabeth Drive beyond the current proposal, including a recommendation to undertake an urgent assessment of the feasibility of a multi-stage upgrade to Elizabeth Drive.

### Response

Transport acknowledges these suggestions however notes they are not within the scope of this proposal, which is focussed on increasing road network capacity on the Elizabeth Drive corridor.

A key objective of the proposal is to accommodate future growth in the use of Elizabeth Drive. As such, the proposal seeks to provide for additional capacity on Elizabeth Drive by providing additional traffic lanes and the signalisation of intersections.

Transport has contributed to the transport network of Western Sydney Aerotropolis Precinct Plan through its partnership with the Department of Planning, Housing and Infrastructure (formerly the Department of Environment and Planning).

While a future connecting road between Luddenham Road and Adams Road is not within the scope of this proposal, the works to be carried out as part of the proposal would not preclude this from being delivered in future.

The final location of a future connecting road between Luddenham Road and Adams Road would be subject to further investigation, separate to this proposal. In the next phase of the design, Transport would review the need for the addition of a signalised intersection between Luddenham Road and The Northern Road to support this future road. This would take into account the current status of broader planning for the Western Sydney Airport Precinct transport network.

Staging of future upgrades to Elizabeth Drive is beyond the scope of the current proposal. Construction timing of the planned upgrades of Elizabeth Drive (the proposal and the Elizabeth Drive East Upgrade) would be further refined during detailed design and communicated to the community and stakeholders. Separately to this proposal, funding has also been allocated to investigate interim safety improvements to Elizabeth Drive between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham.

Information on planning projects in the area can be found on the NSW Government Western Sydney Airport Precinct interactive map: <https://caportal.com.au/tfnsw/western-sydney-airport-precinct/map>.

## 2.12.2 Other

### Submission number(s)

6, 13

### Issue description

Respondents:

- Suggested that Transport should engage with the Department of Planning and the Environment (now the Department of Planning, Housing and Infrastructure / Department of Climate Change, Energy, the Environment and Water) to further investigate and amend the land categories shown as 'excluded land' in the CPCP
- Requested a sealed stopping bay on the southern side of Elizabeth Drive that was constructed as part of a previous upgrade and is sign posted with 'no stopping' signs to be replaced with tree planting

### Response

Figure 4-2 of the REF depicts the CPCP land categories within the construction footprint of the proposal. These land categories are defined by the CPCP. Amendments to the CPCP are not within the scope of this proposal and are a matter for the Department of Planning, Housing and Infrastructure. Transport consults with Department as required to understand the implications of the CPCP on Transport projects, however the proposal is not considered to warrant amendments to these land categories.

The acquisition proposed is based on the extent of the proposal design. While the land categories have been considered in the assessment of biodiversity impacts in the REF, they have not been the primary driver in the extent of acquisition proposed.

The proposal would seek to reinstate property accesses on a like-for-like basis, where it is feasible. Landscaping would be provided along the length of the proposal, including within the central median and nature strip separating traffic lanes from the shared walking and cycling paths.

## 3. Response to government agency issues

### 3.1 Overview of issues raised

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

- Western Sydney Airport (responded to in Section 3.2)
- Sydney Water (responded to in Section 3.3)
- Water NSW (responded to in Section 3.4)
- Liverpool City Council (responded to in Section 3.5)
- Penrith City Council (responded to in Section 3.6)

The issue categories most frequently cited by the agencies included:

- Proposal design and construction – matters relating to construction environmental management, urban design, construction methodology, timing, and property access
- Consultation – requests for further consultation with agencies, as well as active consultation with the community
- Traffic and transport – requests for further clarification on how traffic impacts and queuing have been considered.
- Issues raised by agencies are described further in the following sections, with responses from Transport provided.

### 3.2 Western Sydney Airport

#### 3.2.1 Consultation

##### Requests for further consultation

###### Issue description

Western Sydney Airport wished to acknowledge and welcome further ongoing consultation during the detailed design phases.

Western Sydney Airport suggested that consultation also be undertaken with the Commonwealth and relevant agencies to ensure the National Airport Safeguarding Framework (NASF) is addressed under the *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*.

###### Response

Transport welcomes further ongoing consultation with Western Sydney Airport and is committed to consulting with the Commonwealth and other relevant agencies and stakeholders as the proposal progresses.

Section 3.2.5 of the REF includes a summary of how NASF guidelines have been considered in the concept design for the proposal. Detailed analysis of compliance with these guidelines would be carried out during detailed design, which would include consultation with the Commonwealth as relevant.

##### Issues with consultation process

###### Issue description

Western Sydney Airport acknowledged that given Western Sydney International is adjacent to the proposal that the community may perceive that the proposal and associated construction activities are attributed to Western Sydney Airport rather than Transport.

Western Sydney Airport recommended that Transport continues to actively consult with the community and recognise that the local community is experiencing both construction and consultation fatigue.

## Response

Transport acknowledges the risk the community may attribute the proposal and associated construction to Western Sydney Airport. The construction footprint has been planned to avoid encroachment into the Western Sydney Airport site. Transport acknowledges the importance of continued engagement with stakeholders and will ensure the proposal is clearly described in ongoing communication. A clearly defined construction footprint for the proposal would also be communicated to the community.

Transport also commits to coordinating consultation with Western Sydney Airport to manage the risk of consultation fatigue.

Potential cumulative impacts would be managed in accordance with environmental safeguard C1 (refer to Section 6), which commits to co-ordination and consultation with Western Sydney Airport to manage the interface of the proposal and other projects during overlapping construction activities.

## 3.2.2 Hydrology and flooding

### Water quality

#### Issue description

Western Sydney Airport advised that it wishes to be consulted in relation to the migration of stormwater runoff and discharge into Badgerys Creek. Discharge is not to impact Western Sydney Airport monitoring systems which are located downstream.

#### Response

Transport acknowledges Western Sydney Airport's concern regarding stormwater discharging into Badgerys Creek. Transport commits to consulting with Western Sydney Airport during detailed design, to develop management and mitigation measures for stormwater run-off discharging into Badgerys Creek. An additional environmental safeguard (SW15) has been included in Table 6-1 to reflect this commitment.

## 3.2.3 Proposal design and consultation

### Construction environmental management

#### Issue description

Western Sydney Airport noted the importance of risk management regarding minimising the potential for stationary traffic for prolonged periods of time and safety risks to the public.

#### Response

Transport would coordinate with Western Sydney Airport regarding the importance of minimising the potential for stationary traffic, during construction planning and construction.

#### Issue description

Western Sydney Airport advised that a Construction Traffic Management Plan will need to specifically address the following phases of the Western Sydney International project:

- Construction
- Operational testing, commissioning, and readiness
- Airport opening and commencement of operations.

#### Response

The phases of the Western Sydney International project would be considered by the selected construction contractor, during preparation of the Construction Traffic Management Plan. Transport would consult with Western Sydney Airport to confirm timing of the identified phases during construction planning.

## Construction methodology

### Issue description

Western Sydney Airport noted the construction requirements, such as crane locations, duration of operation and process for temporary controlled activity approvals (if required) so as to not intrude into the Obstacle Limitation Surface (OLS) for Western Sydney International.

### Response

Transport would coordinate with Western Sydney Airport on construction requirements so as not to intrude into the OLS for Western Sydney Airport during construction.

As noted in Section 3.2.4 of the REF, Transport would consult with Western Sydney Airport in relation to potential impacts on airport operations during construction of the proposal, to determine if a permit is required for works within the OLS under the *Airport Act 1996*.

## Construction timing

### Issue description

Western Sydney Airport requested clarification regarding the staging and timing of delivery of the proposal given the cumulative impact the M12 Motorway project, Airport and Aerotropolis development will have on the road network. This information will assist with aligning Western Sydney Airport's staging and integration with ground transport planning, which is currently under development.

### Response

Construction timing would be further refined during detailed design and communicated to stakeholders, including Western Sydney Airport. Transport would engage with Western Sydney Airport on this matter as the design progresses.

## Drainage design

### Issue description

Western Sydney Airport requested that all bioretention basins are constructed to ensure drainage within 48 hours. Western Sydney Airport requested drainage and swale design to minimise ponding and wildlife attraction.

### Response

Transport would develop drainage design further during detailed design development. The design of bioretention basins would be developed further using detailed topographic survey and water quality modelling. Furthermore, landscaping is proposed that would minimise wildlife attraction to swales and basins. The proposed landscape designs would be reviewed by an aviation ecologist. Environmental safeguard LV6 has been added to Table 6-1 to capture this requirement.

## General support for the proposal

### Issue description

Western Sydney Airport noted that it supports the upgrade of Elizabeth Drive as it will improve the movement, performance, and travel times in the road network. More specifically, the upgrade will tie in to the new M12 Motorway which will be the main access point to Western Sydney International (Nancy-Bird Walton) Airport.

### Response

Transport acknowledges Western Sydney Airport's support for the proposal.

## Lighting

### Issue description

Western Sydney Airport requested lighting details proposed for use during construction and any street lighting proposed along the road corridor.

### Response

Lighting for the proposal has been designed in accordance with AS/NZS 1158 Lighting Subcategory V3.

Transport would coordinate with Western Sydney Airport and provide lighting information for both the construction and operation of the proposal during detailed design and construction planning. This would include review of lighting impacts and relevant NASF guidelines 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

### Issue description

Western Sydney Airport noted that there are three access points into Western Sydney International Airport, which are located at the intersection with Badgerys Creek Road (roundabout), M12 Motorway site office access road (roundabout) and Endeavour Energy Substation (around 500 metres east of the Adams Road intersection). Western Sydney Airport requested maintenance of access to each of these points throughout the duration of Western Sydney International Airport's construction.

Western Sydney Airport also requested permanent driveway access into the Endeavour Energy substation be provided (the draft plans do not appear to allow for access into the Endeavour Energy site). Western Sydney Airport requested that Transport engages with Western Sydney Airport to ensure that during the detailed design all interfaces with Western Sydney International Airport are appropriately accounted for and, where necessary protected.

### Response

Transport will consult with Western Sydney Airport during detailed design and construction planning to maintain appropriate access to areas being used for construction. Construction timing for the proposal would be further refined during detailed design and communicated to impacted stakeholders.

It is noted that the final location of the substation was not communicated to Transport during preparation of the concept design. During detailed design, Transport would seek to accommodate left-in / left out access to the Endeavour Energy substation on Elizabeth Drive. Environmental safeguard GEN6 has been added to Table 6-1 to capture this requirement.

## Proposed utility scope

### Issue description

Western Sydney Airport noted that there are several existing utilities buried beneath the existing Elizabeth Drive Road pavement that supply Western Sydney International. Western Sydney Airport requested that these utilities should be identified and protected where possible and that Western Sydney Airport is notified should they require relocation.

### Response

In the next stage of design, Transport would undertake utility surveys to understand the scope of utilities beneath Elizabeth Drive. Transport would develop a detailed utilities strategy which would identify a range of options for utilities management including to do nothing; permanently or temporarily protect; relocate; or provide sleeving; for each utility identified underneath Elizabeth Drive.

## Urban design and landscaping

### Issue description

Western Sydney Airport requested that a suitability qualified person such as aviation ecologist review the proposed landscaping design and planting schedule to assess the suitability of the design and the plant species proposed to be used to minimise bird attraction.

### Response

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. The landscape design would be subject to review from an aviation ecologist during detailed design. This has been included as an additional environmental safeguard for the proposal in Section 6.

### Issue description

Western Sydney Airport noted that landscaping details will need to include information on the mature height of tree species and the potential impact on protected airspace.

### Response

The height of mature tree species and the potential impact on protected airspace would be considered during detailed design, and amendments would be made to the selected tree species as required.

## Proposal need and options

### Clarification on project need

#### Issue description

Western Sydney Airport supported the upgrade and signalisation of the Luddenham Road and Elizabeth Drive intersection. Western Sydney Airport is interested to understand the traffic modelling resulting in the reconfiguration of the Adams Road intersection to left-in from Elizabeth Drive only as it appears the proposed design at each intersection allows for the future realignment of Luddenham Road and Adams Road, which would benefit the surrounding road network. Western Sydney Airport seeks to be involved in the planning and design of the future staging of the road realignment as it progresses.

#### Response

The decision to convert Adams Road to a left-in only arrangement was not based on traffic modelling. The realigned intersection would remove left-out turns from Adams Road into Elizabeth Drive. This left-in only arrangement was selected as the proximity of this location to the new bridge over Cosgroves Creek and signalised Elizabeth Drive / Luddenham Road intersection, and multi-lane high speed road, would create a potentially unsafe environment for left-out turns onto Elizabeth Drive.

The realignment of Luddenham Road and Adams Road was not considered further due to the potential adverse impact on farm dams in the area and possible associated socio-economic impact.

Transport will consult with Western Sydney Airport regarding the detailed design and construction planning for the proposal, including its interface with Western Sydney Airport.

## 3.2.4 Traffic and transport

### Cumulative impacts

#### Issue description

Western Sydney Airport noted that the construction traffic that will be generated by the proposal will be in addition to the existing traffic movements attributed to the ongoing construction activities occurring on Western Sydney Airport land, Metro Rail, and the adjacent M12 Motorway project. Western Sydney Airport noted that construction activity is likely to continue

beyond the opening of Western Sydney International Airport in 2026 and should be regularly reviewed and updated as necessary to minimise congestion and impact to the condition of the road.

#### **Response**

Based on available information at the time, the cumulative impact assessment carried out for the REF assumed that the Western Sydney International Airport would be operational by 2026, and that peak construction of the airport and the proposal would be unlikely to overlap.

Environmental safeguard C1 would be implemented to coordinate and consult with stakeholders, including Western Sydney Airport to manage overlapping construction activities. Coordination and consultation would include provision of regular updates on the construction program, haul routes, and development of mitigation and management strategies to manage potential conflicts. This process would enable appropriate safeguards to be implemented should assumptions around construction periods change following determination of the REF.

### **3.3 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 West Upgrade, or both proposals generally, are addressed below. Matters specific to the Elizabeth Drive East Upgrade have been responded to in the Elizabeth Drive East Upgrade Submissions Report (Transport, 2024).

#### **3.3.1 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 3.3.4.



### 3.3.2 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 one per cent Annual Exceedance Probability (AEP) flood boundaries. Sydney Water advised that any changes to the one per cent 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 Infrastructure NSW (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.

Sydney Water noted that current wastewater pipe designs are coordinated closely with one per cent AEP flood boundaries. Sydney Water advised that any changes to the one per cent 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.

##### Response

The flooding assessment in the REF was prepared for the concept design for the proposal and utilised survey investigations 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 apply to 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 centred around the Elizabeth Drive West 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.

### 3.3.3 Proposal design and construction

#### Interface with utilities

##### Issue description

Sydney Water commented as follows regarding 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 Department of Planning and Environment (now Department of Planning, Housing and Infrastructure) 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 with 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.

### 3.3.4 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, 2022a)

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 (50 per cent) and total phosphorus (29 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

### 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 construction environmental management plan (CEMP)) and relevant operational management procedures for the proposal.

## 3.4 Water NSW

### 3.4.1 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 its 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.

## 3.5 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 West Upgrade, or both proposals generally, are addressed

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

### 3.5.1 Biodiversity

#### Mitigation measures

##### Issue description

Council recommended that the mitigation measures for both biodiversity assessments (i.e. the proposal and the Elizabeth Drive East Upgrade) 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 B14).

### 3.5.2 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) to be prepared and include (but not being limited):

- A proposal 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, 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 Communication Plan 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, variable message sign (VMS) 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.

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.

### 3.5.3 Noise and vibration

#### Assessment methodology

##### Issue description

Council requested an independent consultant review the construction and operational noise assessment reports and proposed noise mitigation measures and that a copy of the review report be 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.

### 3.5.4 Out of scope

#### Queries on other surrounding roads

##### Issue description

Council noted that the Elizabeth Drive/Adams Road will be restricted to left in only. Council requested that the project include an extension of the southern leg of Luddenham Road and the east-west link road to Adams Road as shown in the Aerotropolis Precinct Road Network Plan.

##### Response

Transport acknowledges the strategic need for a connecting road between Luddenham Road and Adams Road, as identified in Figure 8 of the Western Sydney Aerotropolis Precinct Plan (NSW Government, 2023). Transport has contributed to the

transport network of Western Sydney Aerotropolis Precinct Plan through its partnership with the Department of Planning, Housing and Infrastructure (formerly the Department of Environment and Planning).

A key objective of the proposal is to accommodate future growth in the use of Elizabeth Drive. As such, the proposal seeks to provide for additional capacity on Elizabeth Drive through additional traffic lanes and signalisation of intersections.

While a future connecting road between Luddenham Road and Adams Road is not within the scope of this proposal, the works to be carried out as part of the proposal would not preclude this from being delivered in future.

The final location of a future connecting road between Luddenham Road and Adams Road would be subject to further investigation, separate to this proposal. In the next phase of the design, Transport would review the need for the addition of a signalised intersection between Luddenham Road and The Northern Road to support this future road. This would take into account the current status of broader planning for the Western Sydney Airport Precinct transport network.

### 3.5.5 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 would be prepared prior to construction as part of the CEMP as stated in environmental safeguard TT1 (refer to Section 6). The Traffic Management Plan will be prepared in accordance with the Transport *Traffic Control at Work Sites Manual* (Transport, 2020a) 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
- Information on 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 Traffic Management Plan would include consideration of the different stages of the construction period as relevant.

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 (refer to Section 6) and would address these matters. The Traffic Management Plan would be prepared in accordance with the Roads and Maritime *Traffic Control at Work Sites Manual* (Transport, 2020a) 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 and measures to load and unload deliveries in a manner that minimise impact to sensitive receivers. As drivers would use haulage routes where possible, there would be limited impact from construction vehicle noise on local roads.

#### 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 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 LGA.

#### **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.

### **Lighting**

#### **Issue description**

Council requested that the proposal 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 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 is critical as is the efficient movement of through traffic. 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 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 potential provision of future 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 noted that typical sections in the REF show through lane width that varies between 3.5 and 3.7 metres. In addition, a shoulder lane should not be provided at intersections.

#### **Response**

A road shoulder lane has not been provided at intersections.

In some road cross sections along the length of the proposal, 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.

#### **Issue description**

Council recommended that Elizabeth Drive carriageway varies between 49.5 metres and 54.2 metres, which will require a 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 in each direction, 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 the detailed design for the proposal, 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, noting that when selecting trees Transport must also consider safety sight distances and clear zones requirements.

### Issue description

Council advised that the proposal 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 (DPE, 2022b). 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 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, noting that when selecting trees Transport must also consider safety sight distances and clear zones requirements.

### **3.5.6 Socio-economic**

#### **Impacts on recreational space**

##### **Issue description**

Council recommended that the project is to include an impact assessment of the loss of recreational land and sports facility on the 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**

The Elizabeth Drive West Upgrade would not result in the loss of recreational land.

This matter has been responded to in the Elizabeth Drive East Upgrade Submissions Report (Transport, 2024). Transport would consult directly with the operators of affected recreational facilities during further detailed design development and construction and would implement safeguards to manage potential impacts.

### 3.5.7 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 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.

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.

### 3.5.8 Traffic and transport

#### Parking impacts

##### Issue description

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

##### 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 aim 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 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 potential 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.

## 3.6 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 West Upgrade, or both proposals generally, are addressed below.

### 3.6.1 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 solutions 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 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 (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 (Community consultation). Transport would continue to consult with property owners during detailed design regarding property access.

Existing and proposed U-turn facilities would be available along the length of the proposal to enable vehicles to change their direction of traffic (including an existing U-turn facility west of the intersection of Elizabeth Drive and Willmington Road, and a proposed provision for a U-turn function at Luddenham Road).

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 direct access 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. Modelled results estimate there would be a maximum increase of 32 seconds for residents to access properties between The Northern Road and Luddenham Road in 2040 with the proposal, and of 47 seconds for residents to access properties between the Northern Road and Martin Road. This would present a minor increase in travel time for vehicles. 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, WSA and Aerotropolis. The Western Sydney Aerotropolis 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 proposal would tie into the shared paths at the Northern Road. Detailed design for the proposal 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 suitable 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 will 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.

## Issue description

Council commented that it was not clear from the proposal design in the REF whether the left turn slip lanes at Elizabeth Drive-Luddenham Road intersection will have one or two lanes. Council noted that a single lane slip lane with a priority unsignalised crossing would be preferable for pedestrians and cyclists to reduce crossing waiting time.

Council also commented that the Elizabeth Drive-Luddenham Road intersection is proposed to have two eastbound right turn lanes onto the U-turn bay and four approach lanes on the south leg (U-turn bay) which seems to be unnecessary.

## Response

The concept design includes a single left turn slip lane (in both directions) allowing for vehicles travelling along Elizabeth Drive to turn left into Luddenham Road. These would be signalised. The proposed intersection arrangements are described further in Table 3-2 of the REF.

Two eastbound right turn lanes onto the U-turn bay and four approach lanes on the south leg (U-turn bay) are proposed to safeguard for a potential future southbound extension of Luddenham Road (separate to the proposal).

## 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 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.

## 3.6.2 Traffic and transport

### Operational impacts

#### Issue description

The Traffic and Transport Assessment Report does not include the 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.

As an example, Council noted that the proposed layout of Elizabeth Drive-Luddenham Road north approach is a single through lane branching out to five turning lanes. Council comments that the presented traffic modelling results are not sufficient to demonstrate that the proposed lane arrangements are workable.

#### 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 aim of the traffic assessment in the REF was 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 the 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 the 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 6.2). 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. Additionally, no off-street parking locations have been identified within the construction footprint.

Should on-street parking be identified within the construction footprint during detailed design and construction planning, Transport would include consultation with affected businesses and property owners to identify suitable alternative parking arrangements. Any temporary impacts to parking would be managed in accordance with the Traffic Management Plan.

## 4. Changes to the proposal

The purpose of this section is to provide an overview of minor clarifications to information presented in the REF and changes to the proposal. These changes include refinements to the environmental safeguards proposed in response to community and stakeholder feedback.

### 4.1 Removal of construction ancillary facility 1

Section 3.3.2 and Figure 3-10 of the REF identified three temporary ancillary facilities proposed to be established to support construction of the proposal. These included the following:

- The Northern Road (construction ancillary facility 1) – located at the north-eastern corner of the Elizabeth Drive and The Northern Road intersection within Lot 8 / DP 1240511
- Luddenham Road (construction ancillary facility 2) – located at the north-western corner of the Elizabeth Drive and Luddenham Road intersection
- M12 Motorway tie in (construction ancillary facility 3) – located west of Badgerys Creek Road on the northern side of Elizabeth Drive. Subject to detailed design and construction planning, it is anticipated that this construction ancillary facility would operate as the main site office during construction of the proposal.

Following receipt of landowner feedback received during the REF display period, Transport have reviewed the need for construction ancillary facility 1 at the north-eastern corner of the Elizabeth Drive and The Northern Road intersection.

Based on this review, construction ancillary facility 1 has been removed from the proposal. The remaining construction facilities (construction ancillary facilities 2 and 3) described above would be utilised to support the construction of the proposal.

Appendix C of the REF identified that a temporary lease area of about 1.14 hectares within Lot 8 / DP 1240511 would be required during construction to establish and use construction ancillary facility 1. This temporary lease area would no longer be required. However, partial acquisition of 0.22 hectares of the frontage of the property (as stated in Appendix C of the REF) would continue to be required for the upgraded road corridor.

Consultation would be carried out with the affected landowner regarding the proposed partial acquisition. All property acquisition would be carried out in accordance with the Just Terms Act.

Changes to the environmental assessment in the REF associated with the removal of construction ancillary facility 1 from the proposal are outlined in Section 5.1.

## 4.2 Minor corrections and clarifications

Since finalisation of the REF, the following text changes and factual corrections to information presented in the REF have been identified:

Section 6.2.3 and the Executive Summary of the REF identified that there was estimated to be a maximum increase of 17 seconds for vehicles to access properties between The Northern Road and Luddenham Road in 2040 with the proposal, based on modelled assessment of changes to travel times resulting from introduction of a central median on Elizabeth Drive. This should instead state that modelled results estimate there would be a maximum increase of 32 seconds for residents to access properties between The Northern Road and Luddenham Road in 2040 with the proposal, and of 47 seconds for residents to access properties between the Northern Road and Martin Road. This would present a minor increase in travel time for vehicles. The correct modelled results of this assessment are presented in Section 6.3 of Appendix F of the REF

Appendix C of the REF incorrectly identifies that Lot 2 / DP 220176 (address withheld) is located in the Penrith City Council LGA. This property is in the Liverpool City Council LGA. Other details provided regarding this property and its proposed partial acquisition are correct.

## 4.3 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 GEN2 has been amended to clarify that the CEMP would address stakeholder engagement requirements for the construction period
- Environmental safeguard GEN5 has been added to confirm that Transport would review and consider the design of the future airport fuel line throughout detailed design development of the proposal, in response to feedback from the Western Parkland City Authority
- Environmental safeguard GEN6 has been added to confirm that Transport would seek to accommodate left-in / left out access to the Endeavour Energy substation on Elizabeth Drive, in response to feedback from Western Sydney International Airport requesting driveway access into the Endeavor Energy substation is maintained.

### Surface water quality

- Environmental safeguard SW15 has been added based on feedback from Western Sydney Airport, to confirm that . Transport would consult with this stakeholder during detailed design regarding management and mitigation measures for stormwater run-off discharging into Badgerys Creek.

### Landscape and visual amenity

- Environmental safeguard LV6 has been added to confirm that Transport would engage an aviation ecologist to review the landscape design for the proposal, in response to feedback from Western Sydney International Airport.

### Biodiversity

- Environmental safeguard B14 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.

### 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 handing process

- Environmental safeguard SE8 has been added to carry out consultation with the poultry farm business at Elizabeth Drive, Luddenham regarding the potential impacts of the proposal. Based on this consultation, feasible and reasonable measures to limit the potential for disruptions to water supply and quality would be identified and implemented

A complete list of environmental safeguards for the proposal, including where these have been added or revised, is provided in Section 6.

## 5. Additional 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 are also summarised in this chapter.

### 5.1 Additional environmental assessment

As identified in Section 4.1, construction ancillary facility 1 has been removed from the proposal in response to landowner feedback. The remaining construction facilities (construction ancillary facilities 2 and 3) described above would be utilised to support the construction of the proposal.

Changes to the environmental assessment in the REF associated with the removal of construction ancillary facility 1 from the proposal are outlined in Table 5-1. This includes potential changes to construction noise and vibration, traffic and visual impacts. Operational impacts and other environmental impacts would be generally consistent with those described in the REF, including with the removal of the facility.

The impacts described in Table 5-1 would be manageable with the existing environmental safeguards proposed in Section 6.

Table 5-1: Additional assessment – removal of construction ancillary facility 1

Environmental assessment	Changes to assessment
Noise and vibration – construction	<p>Noise and vibration impacts of the proposal are outlined in Section 6.1 of the REF. Noise generating construction activities would no longer be carried out within construction ancillary facility 1 due to its removal from the proposal. As such, there is a potential for a reduction in construction noise impacts at receivers nearest to the facility, compared to the assessment presented in the REF.</p> <p>The closest receivers to construction ancillary facility 1 identified in the REF include two residential receivers located around 50 metres to the north (shown within Noise Catchment Area 1 on Figure 6-1A of the REF). Exceedances of noise management levels (NMLs) at these receivers are predicted during some construction scenarios, notably the site establishment, vegetation removal and landscape and finishing works scenario. This includes exceedances up to the 11-20 dB (moderately intrusive). With the removal of construction ancillary facility 1, there may be a minor reduction in noise levels at these receivers, compared to the assessment in the REF as noise levels generated from the operation of the ancillary facility would not be part of the noise environment. However, these residences would continue to experience some level of noise impact from temporary linear construction activities along Elizabeth Drive (for example, road widening works), which would be transitional in nature as work progresses along the road corridor.</p> <p>As noted in the REF, the construction noise assessment is representative of the worst-case 15-minute period of construction activity, while the construction equipment is at the nearest location to each sensitive receiver location. The assessed scenario does not represent the ongoing day to day noise impact at noise sensitive receivers for an extended period of time.</p> <p>Construction noise impacts would be managed through the safeguards in Section 6, which include the implementation of a Construction Noise and Vibration Management Plan with specific management measures.</p>

Environmental assessment	Changes to assessment
Traffic, transport and access – construction	<p>Section 6.2 of the REF identified that, during construction of the proposal, it is anticipated that peak traffic generation would be about 200 light vehicles and 70 heavy vehicles per day. Construction traffic would be distributed across the construction ancillary facilities and along the proposal alignment, depending on the stage of construction and progression of construction activities.</p> <p>With the removal of construction ancillary facility 1 at The Northern Road, construction traffic would be distributed across the remaining two facilities (at the north-western corner of the Elizabeth Drive and Luddenham Road intersection, and the M12 Motorway tie in), as well as the proposal alignment.</p> <p>This may result in a higher volume of construction vehicles on Elizabeth Drive between Luddenham Road and Badgerys Creek Road, compared to that assessment in the REF. This may give rise to temporary minor delays and increases in journey time for local traffic along this section of Elizabeth Drive during construction. However, the overall number of construction vehicles generated by the proposal (up to about 200 light vehicles and 70 heavy vehicles per day), would be unchanged, and impacts would be similar to those predicted in the REF.</p> <p>Overall, it is expected that the road network would have the capacity to accommodate the traffic movements associated with the construction of the proposal. A traffic management plan and other measures outlined in Section 6 would be implemented to manage construction traffic impacts.</p>
Landscape and visual impacts – construction	<p>Landscape and visual impacts of the proposal are assessed in Section 6.8 of the REF. Generally, due to the removal of construction ancillary facility 1 from the proposal, receivers closest to this location (on The Northern Road and Elizabeth Drive) may experience a reduction in adverse impacts due to the reduced visibility of construction activity in this location, compared to the proposal assessed in the REF.</p> <p>The majority of viewpoints assessed in Section 6.8 of the REF do not have a view toward construction ancillary facility 1, and therefore impacts would be consistent with those described in the REF.</p> <p>Viewpoint 1 (The Northern Road) assesses the representative view for receivers and motorists travelling south along The Northern Road with views to the east nearing Elizabeth Drive capturing the changes to the western end of Elizabeth Drive.</p> <p>The REF identified that this viewpoint would experience passing construction vehicles as well as glimpses to construction ancillary facility 1, however these would be mostly screened from view by built form and vegetation, resulting in a low-moderate impact. There would be limited change to the visual impact predicted at this viewpoint, given that the facility would have been largely screened from view.</p> <p>A small number of residences directly north of construction ancillary facility 1 would no longer experience visual impacts associated with the facility (e.g. the presence of hoarding, stockpiling and material storage, construction equipment). However, these residences would continue to experience visual impacts from linear construction activities along Elizabeth Drive (for example, road widening works), which would be transitional in nature as work progresses along the road corridor.</p> <p>Overall, visual impacts associated with construction would continue to be temporary in nature and would be manageable through safeguards identified in Section 6.</p>

## 5.2 Additional statutory consultation

### 5.2.1 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 5-2.



Table 5-2: 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 matter 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.	The project team has and would continue to consider matters which interface with the proposal, including the potential future fuel pipeline corridor to service the Western Parkland City, Western Sydney International Airport and Western Sydney Airport Precinct. Environmental safeguard GEN5 has been included in Table 6-1 to ensure that Transport will review and consider the design of the future airport fuel line throughout detailed design development of the proposal.

## 6. Environmental management

The REF for the Elizabeth Drive – West Upgrade identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (section 7.2 of the REF).

After consideration of the issues raised in the public submissions, the safeguard and management measures proposed in the REF were considered sufficient in addressing anticipated risks, as well as community and agency concerns raised during the REF display period.

Should the proposal proceed, environmental management will be guided by the framework and measures outlined below.

### 6.1 Environmental management plans (or system)

Safeguards and management measures have been identified in the REF to minimise adverse impacts which could potentially arise from the construction or operation of the proposal. Should the proposal proceed, these safeguards and 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. 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 include the safeguards and management measures identified and provide a framework for establishing how these measures would be implemented and who would be responsible for the implementation.

The CEMP would be prepared prior to construction of the proposal and would 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 Elizabeth Drive – West Upgrade 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 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 <b>and stakeholder engagement</b> 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 the work activities starting	Contractor / Transport	Pre-construction	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
GEN4	General - environmental awareness	<p>All personnel working on site will receive training to ensure awareness of environmental protection requirements and procedures 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. Briefings will also identify:</p> <ul style="list-style-type: none"> <li>• Areas of Aboriginal and non-Aboriginal heritage, including areas with potential archaeological deposits</li> <li>• Threatened species habitats</li> <li>• Adjoining residential areas requiring noise management measures.</li> </ul>	Contractor / Transport	Pre-construction	Additional safeguard
<u>GEN5</u>	<u>General – detailed design</u>	<u>Transport will review and consider the design of the future Airport fuel line throughout detailed design development of the proposal.</u>	<u>Transport</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
<u>GEN6</u>	<u>Traffic and transport</u>	<u>During detailed design, Transport will seek to accommodate left-in / left out access to the Endeavour Energy substation on Elizabeth Drive.</u>	<u>Transport</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

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
NV2	Noise and vibration	<p>All sensitive receivers (e.g. 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 (e.g. 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>• The description of 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	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 RTA Environmental Fact Sheets – Noise Management and Night Work, including consultation with the affected local community	Contractor	Construction	Additional safeguard
NV4	Noise and vibration	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	Contractor / Transport	Pre-construction	Additional safeguard
NV5	Noise and vibration	Where feasible and reasonable, high noise generating activities (75 dB(A) $L_{Aeq}$ 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	Contractor	Construction	Additional safeguard

## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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	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	Contractor	Construction	Additional safeguard
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	<p>In circumstances where the noise levels are predicted to exceed construction noise management levels after implementation of the standard actions listed in Transport's Construction Noise and Vibration Guideline, additional mitigation measures will be implemented, such as the following:</p> <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	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

# Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
NV11	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 landowner or land manager	Contractor	Pre-construction	Additional safeguard
NV12	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
TT1	Traffic and transport	<p>A Traffic Management Plan 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 Manual (Transport, 2020a)) 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

## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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
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
B1	Biodiversity – displacement of resident fauna	<p>A Flora and Fauna Management Plan will be prepared in accordance with Transport's <i>Biodiversity Guidelines: Protecting and Managing Biodiversity on <u>Transport for NSW Projects</u></i> (Transport, 2024) (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>Pre-clearing survey requirement</li> <li>Clearing protocols</li> <li>Procedures for unexpected threatened species finds and fauna handling.</li> </ul> <p>Fauna will be managed in accordance with Guide 9: Fauna handling of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on <u>Transport for NSW Projects</u></i> (Transport, 2024) (RTA, 2011)</p>	Transport / Contractor	Pre-construction and construction	Additional safeguard
B2	Biodiversity – displacement of resident fauna	Thorough inspection during higher-activity season (October to March) of all structures that contain potential microbat habitat will be carried out, in accordance with Transport for NSW <i>Microbat Management Guidelines</i> (Transport, 2023). If microbats are detected, advice from a microbat specialist will be sought to determine the need for a Microbat Management Plan	Transport / Contractor	Pre-construction and construction	Additional safeguard
B3	Biodiversity – indirect impacts on native vegetation and habitat	Exclusion zones will be set up at the limit of clearing in accordance with Guide 2: Exclusion zones of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on <u>Transport for NSW Projects</u></i> (Transport, 2024) (RTA, 2011)	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard



## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
B4	Biodiversity – indirect impacts on native vegetation and habitat	Where practicable, native vegetation will be re-established in accordance with Guide 3: Re-establishment of native vegetation of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW Projects</i> (Transport, 2024) (RTA, 2011)	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard
B5	Biodiversity – indirect impacts on native vegetation and habitat	Weed species will be managed in accordance with Guide 6: Weed management of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW Projects</i> (Transport, 2024) (RTA, 2011)	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard
B6	Biodiversity – indirect impacts on native vegetation and habitat	Pathogens will be managed in accordance with Guide 7 Pathogen management of the <i>Biodiversity Guidelines: Protecting and managing biodiversity on Transport for NSW Projects</i> (Transport, 2024) (RTA, 2011)	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard
B7	Biodiversity – indirect impacts on native vegetation and habitat	Shading and artificial light impacts will be minimised through detailed design	Transport / Contractor	Detailed design	Additional safeguard
B8	Biodiversity – prescribed impacts	The requirement to replace trees and hollows within non-native vegetation will be calculated in accordance with the <i>Tree and Hollow Replacement Guidelines</i> (Transport, 2022). Only non-native trees that have amenity value are required to be replaced. 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, construction, and post-construction	Additional safeguard
B9	Biodiversity – prescribed impacts	If microbats are found to be inhabiting the development footprint, habitat removal will be carried out in accordance with Transport for NSW Microbat Management Guidelines (Transport, 2023)	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard
B10	Biodiversity – prescribed impacts	To manage biodiversity impacts to water bodies, water quality and hydrology: <ul style="list-style-type: none"> <li>Changes to existing surface water flows will be minimised through detailed design</li> <li>Interruptions to water flows associated with GDEs will be minimised through detailed design.</li> </ul>	Transport / Contractor	Detailed design	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
B11	Biodiversity – prescribed impacts	To manage risk of vehicle strike: <ul style="list-style-type: none"> <li>Construction fencing will be established to prevent fauna from entering construction zones</li> <li>Construction traffic within construction sites and machinery will be restricted to 30 kilometres per hour and signage erected informing personnel of this restriction.</li> </ul>	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard
B12	Biodiversity – Adaptive management strategies	Adaptive management will include an agreed monitoring, evaluation, reporting and improving cycle, for impacts on biodiversity that are uncertain such as: <ul style="list-style-type: none"> <li>Inadvertent impacts to native vegetation adjacent the construction footprint</li> <li>Introduction of pests, pathogens and weeds to native vegetation adjacent the construction footprint and further afield</li> <li>Degradation of downstream habitats via worsening of water quality or alteration to hydrological processes</li> <li>Vehicle strikes.</li> </ul>	Transport / Contractor	Pre-construction, construction, and post-construction	Additional safeguard
B13	Biodiversity - loss of hollow-bearing and amenity trees	Trees and hollows that require replacement will be identified in accordance with the Tree and Hollow Replacement Guidelines, and prior to the commencement of work: <ul style="list-style-type: none"> <li>A Tree and Hollow Replacement Plan will be prepared, or</li> <li>Payment will be made to the Transport Conservation Fund.</li> </ul>	Transport / Contractor	Pre-construction	Additional safeguard
<b><u>B14</u></b>	<b><u>Biodiversity</u></b>	<b><u>Where possible, viable native seeds will be collected from trees, shrubs and groundcovers during the vegetation clearing process for the proposal, and repurposed (for example, through donation to nurseries)</u></b>	<b><u>Transport / Contractor</u></b>	<b><u>Pre-construction and construction</u></b>	<b><u>Additional safeguard</u></b>
NAH1	Non-Aboriginal heritage	A Non-Aboriginal Heritage Management Plan (NAHMP) 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 non-Aboriginal heritage	Contractor	Detailed design / pre-construction	Section 4.10 of QA G36 Environment Protection
NAH2	Non-Aboriginal heritage	Any unexpected heritage finds identified during construction will be governed by Transport's EMF-HE-PR-0076 Unexpected Heritage Items Procedure 2022 (Transport, 2020c). Work will only resume once the requirements of the procedure have been satisfied	Contractor	Construction	Additional safeguard

## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
ACH1	Aboriginal cultural heritage – Salvage excavation	Archaeological salvage excavation will be carried out within the impacted portions of Elizabeth Drive/Adams Road AFT 1. Salvage excavation will be completed prior to any activities (including pre-construction activities) which may harm Aboriginal objects at this location.  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 Elizabeth Drive/Adams Road AFT 1. 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 Elizabeth Drive/Adams Road 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 <u>International</u> Airport) will 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
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

## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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	Additional safeguard
PL2	Property and land use	All property acquisition will be carried out in accordance with the 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 <b>International</b> Airport	Transport	Pre-construction and construction	Additional safeguard
SE1	Socio-economic impacts – Community consultation	<p>A Communication Plan (CP) will be prepared in accordance with the Community Involvement and Communications Resource Manual (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):</p> <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. <b><u>These mechanisms could include advertisement in local newspapers, VMS sign notification, consultation meetings, and others</u></b></li> <li><b><u>A complaint handling process</u></b>, contact name and number for complaints</li> <li>Consultation processes for key stakeholders such as councils, emergency services, and other relevant stakeholders, as required</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

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 structures (such as sheds)</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 – 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
SE6	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
SE7	Socio-economic impacts – Community consultation	Construction workers, materials and equipment hire will be sourced from the local area where feasible	Contractor	Construction	Additional safeguard
<b><u>SE8</u></b>	<b><u>Socio-economic impacts – Business impacts</u></b>	<b><u>Consultation will be carried out with the existing poultry farm business at Elizabeth Drive, Luddenham regarding the potential impacts of the proposal. Based on this consultation, feasible and reasonable measures to limit the potential for disruptions to water supply and quality will be identified and implemented</u></b>	<b><u>Contractor</u></b>	<b><u>Detailed design, pre-construction and construction</u></b>	<b><u>Additional safeguard</u></b>
LV1	Landscape and visual	<p>Where the existing view to the road corridor from residential properties will be impacted, community consultation will be carried out to determine appropriate planting measures.</p> <p>This could include the provision of formal planting (hedges or screen planting) along boundaries within private residential properties (in consultation with landowners), to be considered during detailed design</p>	Transport	Detailed design	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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
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
<b><u>LV6</u></b>	<b><u>Landscape and visual</u></b>	<b><u>An aviation ecologist will be engaged to review landscape designs for the proposal</u></b>	<b><u>Transport</u></b>	<b><u>Detailed design</u></b>	<b><u>Additional safeguard</u></b>
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

# Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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
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>• <b><u>Transport's Landscape design guideline (June, 2023)</u></b></li> <li>• <del>RMS Landscape design guideline (RMS, 2018)</del></li> <li>• RMS Guideline for Batter Stabilisation using Vegetation (RMS, 2015b)</li> </ul>	Contractor	Construction	Additional safeguard

## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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) would be determined during the proposal detailed design phase	Contractor	Pre-construction/Construction	Additional safeguard
SW9	Surface water and groundwater	A site-specific emergency spill plan will include spill management measures in accordance with the Transport for NSW Code of Practice for Water Management (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 correctly. 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



No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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 (RTA, 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
SW15	Surface water and groundwater	<u>Transport will consult with Western Sydney International Airport during detailed design, to confirm appropriate management and mitigation measures for stormwater run-off discharging into Badgerys Creek</u>	<u>Transport</u>	<u>Detailed design</u>	<u>Additional safeguard</u>
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
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	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: <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

# Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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	Transport	Pre-construction	Additional safeguard
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	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: <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> <li>• Procedures for disposal of asbestos in accordance with the NSW EPA guidelines, Australian Standards and relevant industry codes of practice.</li> </ul>	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 RMS 'Guideline for Batter Surface Stabilisation using Vegetation' (RMS, 2015b)	Contractor / Transport	Construction / operation	Additional safeguard
AQ1	Air quality	An Air Quality Management Plan will be prepared and implemented as part of the CEMP. The Air Quality Management Plan will include, but not be limited to: <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</li> <li>• Methods to manage work during strong winds or other adverse weather conditions</li> <li>• A progressive rehabilitation strategy for exposed surfaces.</li> </ul>	Contractor	Detailed design / Pre-construction	Section 4.4 of QA G36 Environment Protection

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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
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	Operation	Additional safeguard
CC5	Climate change	The most energy efficient street lighting appropriate for proposal needs will be specified	Transport	Operation	Additional safeguard
RU1	Resource use and waste	Use of recycled-content materials will be considered during the detailed design	Transport	Detailed design	Additional safeguard

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
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 QA G36 <i>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> <li>Disposal would be a last resort (in accordance with the <i>WARR Act 2001</i>).</li> </ul>	Contractor	Pre-construction / construction	Additional safeguard
HR1	Hazard and risk	Encroachment into WSA will be avoided and managed in accordance with criteria for safe airspace outlined in the 'Procedure for Air Navigation Services – Operations (PANS-OPS)' for WSA	Transport	Detailed design	Additional safeguard

## Transport for NSW

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
HR2	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> <li>Contingency measures to be implemented in the event of unexpected hazards or risks arising, including emergency situations.</li> </ul>	Contractor	Pre-construction / construction	Additional safeguard
HR3	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> <li>Details regarding the Bush Fire Emergency Management and Evacuation Plan and any other essential bush fire safety requirements.</li> </ul>	Contractor	Pre-construction / construction	Additional safeguard
HR4	Hazard and risk	<p>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</p>	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 <b>International</b> Airport, Sydney Metro Western Sydney Airport and Elizabeth Drive East Upgrade projects during overlapping construction activities:</p> <ul style="list-style-type: none"> <li>• Transport for NSW</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> <li>• Development of mitigation and management strategies to manage these conflicts and potential impacts, for example, co-ordination of respite periods.</li> </ul>	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 approval 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
Fisheries Management Act 1994 (s199)	Notification to the Minister for Agriculture prior to any dredging or reclamation works.  <i>While it is likely that impacts to aquatic environments associated with the proposed works 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 works 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
Fisheries Management Act 1994 (s219)	Permit to obstruct the free passage of fish (temporary or permanent) from the Minister for Agriculture	Prior to start of the activity
National Parks and Wildlife Act 1974 (s90)	AHIP from Heritage NSW for the disturbance of the Aboriginal sites that would be impacted by the proposal	Prior to start of the activity
Roads Act 1993 (s138)	A Road Occupancy Licence would need to be obtained from the relevant roads authority by the contractor	Prior to start of the activity

## 7. References

- Acid Sulfate Soil Management Advisory Committee. (1998). *Acid Sulfate Soil Manual*.
- ANZECC. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.
- Brouček, J. (2014). Effect of noise on performance, stress, and behaviour of animals: A review. *Slovak Journal of Animal Science*, 111-123.
- Conomy, J.T., J. A. Dubovsky, A. Collazo, and W. J. Fleming. (1998). Do black ducks and wood ducks habituate to aircraft disturbance? *Journal of Wildlife Management*, 1135-1142.
- DECC. (2006). *Interim Construction Noise Guideline*.
- DPE. (2022a). *Technical guidance for achieving Wianamatta–South Creek stormwater management targets*.
- DPE. (2022b). *Western Sydney Aerotropolis Development Control Plan*.
- DPI. (2014). *Soil and Water Management Plan and procedures set out in the Salinity Training Handbook*.
- Espmark, Y et al. (1974). Behavioural responses in cattle and sheep exposed to sonic booms and low altitude subsonic flight noise. *The Veterinary Record*, 106-113.
- Greater Sydney Commission. (2018a). *Greater Sydney Region Plan – A Metropolis of Three Cities*.
- Greater Sydney Commission. (2018b). *Western City District Plan*.
- INSW. (2022). *Wianamatta South Creek Catchment Flood Study Existing Condition*.
- Knight, R and Gutzwiller. (1995). Wildlife and Recreationists: Coexistence through management and research. *The Journal of Wildlife Management*.
- Landcom. (2004). *Managing Urban Stormwater: Soils and Construction series*.
- NSW Government. (2023). *Western Sydney Aerotropolis Precinct Plan*.
- Oh, Take-Keun et al. (2011). The effects of Noise and Vibration Generated by Mechanized equipment in Laying Hen Houses on productivity. *Journal of the Faculty of Agriculture, Kyushu University*, 271-277.
- Pepper, CB, Nascarella, MA, Kendall, RJ. (2003). A review of the effects of aircraft noise on wildlife and humans, current control mechanisms, and the need for further study. *Environ Management*, 418-432.
- RMS. (2011). *Technical Guideline – Environmental Management of Construction Site Dewatering*.
- RMS. (2015a). *Stockpile Site Management Guideline*.
- RMS. (2015b). *Guideline for Batter Stabilisation using Vegetation*.
- RMS. (2018). *Landscape design guideline*.
- RTA. (1999). *Code of Practice for Water Management*.
- RTA. (2005). *Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze*.
- RTA. (2008). *Community Involvement and Communications Resource Manual*.
- RTA. (2011). *Biodiversity Guidelines: Protecting and Managing Biodiversity on Projects*.
- Stadelman, WJ. (1957). Observations with growing chickens on the effects of sounds of varying intensities. *Poultry Science*, 776-779.
- Transport. (2020a). *Traffic Control at Work Sites Manual*.
- Transport. (2020a). *Traffic Control at Work Sites Manual*.
- Transport. (2020b). *QA Specification G10 Control of Traffic*.



Transport. (2020b). *QA Specification G10 Control of Traffic*.

Transport. (2020c). *EMF-HE-PR-0076 Unexpected Heritage Items Procedure 2022*.

Transport. (2020d). *Guideline for Assessing the Impacts of Treated Water Discharge from Water Quality Treatment Controls*.

Transport. (2021). *Property Acquisition Policy*.

Transport. (2022). *Tree and Hollow Replacement Guidelines*.

Transport. (2023). *Microbat Management Guidelines*.

Transport. (2024). *Biodiversity Guidelines: Protecting and Managing Biodiversity on Transport for NSW Projects*.

Transport. (2024). *Elizabeth Drive East Upgrade Submissions Report*.

Venglovský et al. (2007). Noise in the animal housing environment. *ISAH-2007 Tartu, Estonia*, 995-999.

## 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.

Transport for NSW  
[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.

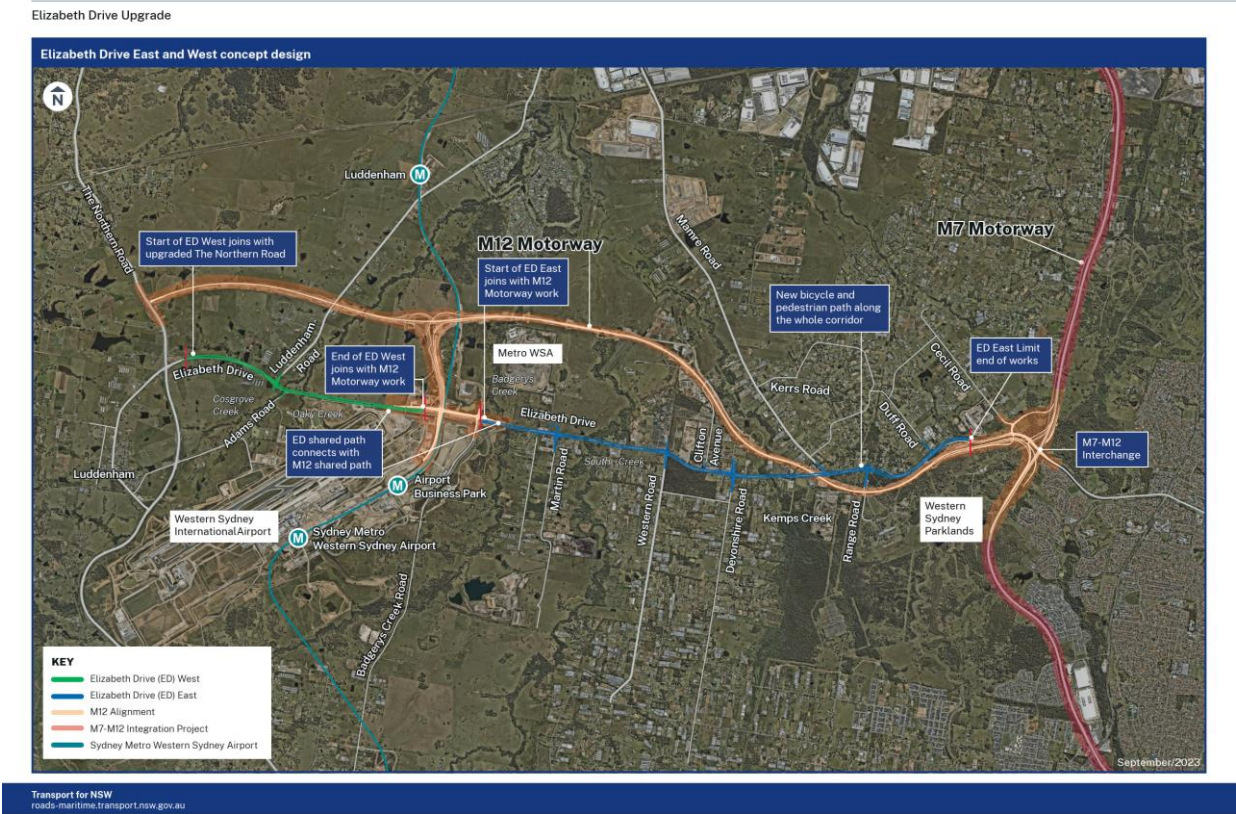
A Personal Relationship Manager will be in contact with potentially affected property owners and provide these owners with updates as the project progresses.

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

Transport for NSW  
[roads-maritime.transport.nsw.gov.au](http://roads-maritime.transport.nsw.gov.au)





## 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.

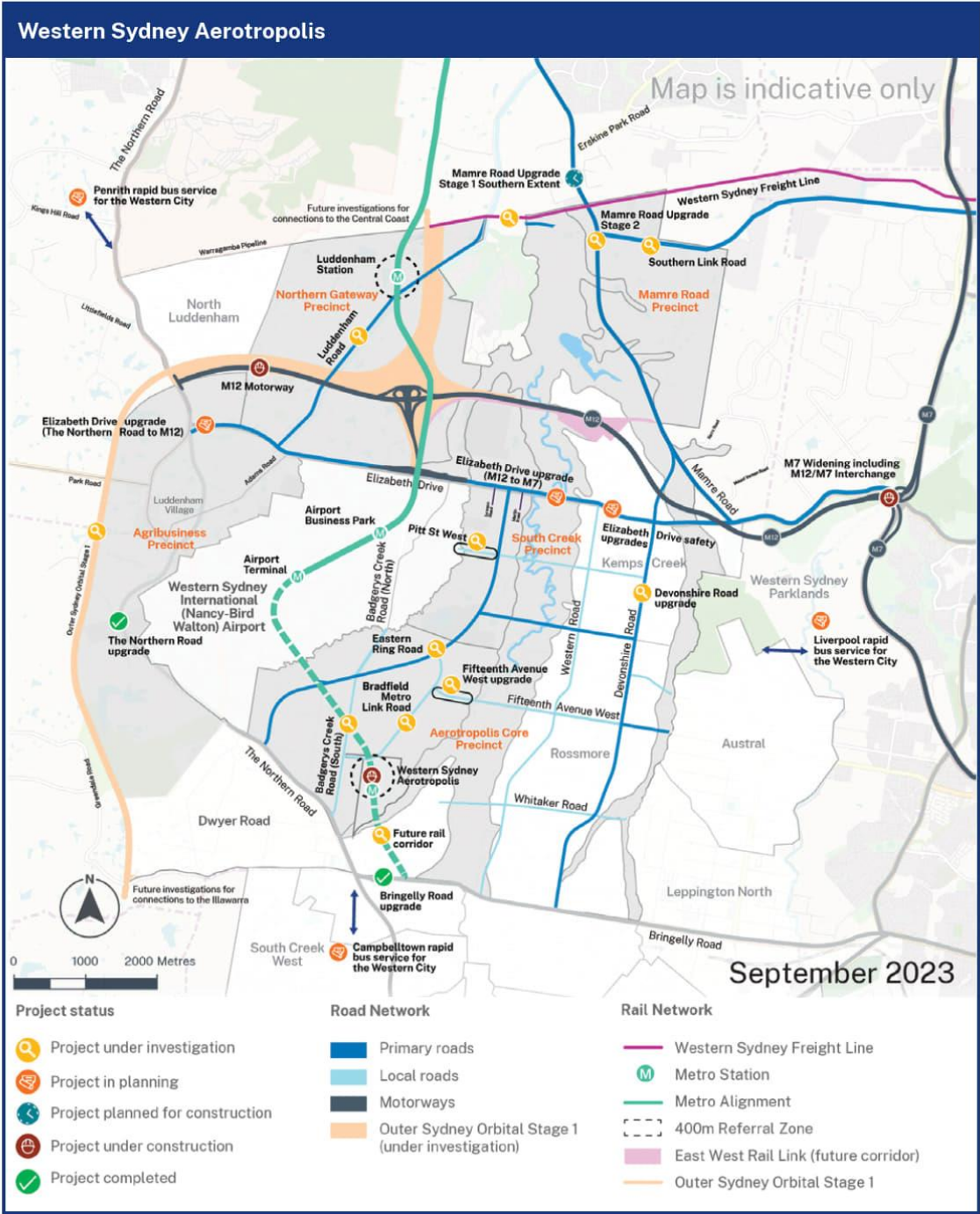
The corridors will support traffic movement including public transport and freight, and to provide connections to the Western Sydney Parklands, Sydney Metro Western Sydney Airport and the Western Sydney International (Nancy-Bird Walton) Airport with any local communities.

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.







## 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)



Transport for NSW  
PO Box 973  
Parramatta CBD  
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

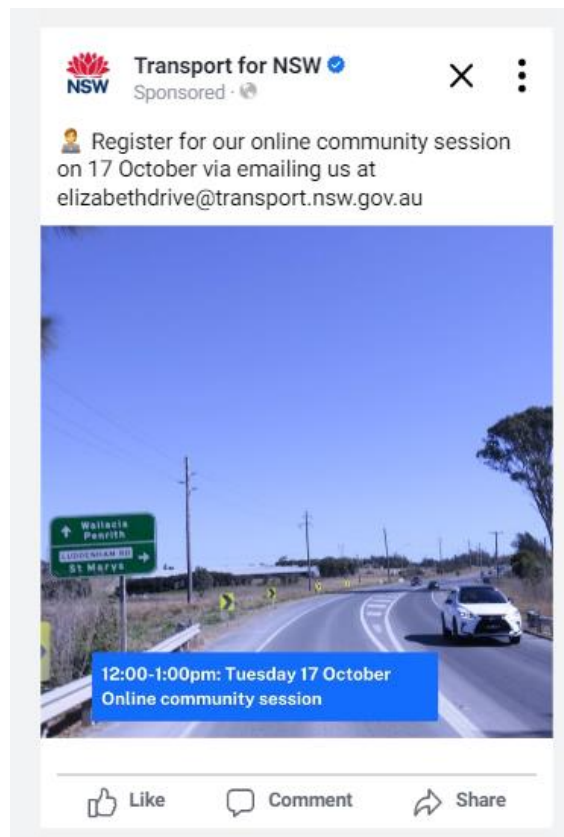
Time: 10am–12 noon



September 2023



**Privacy Transport for NSW ("TfNSW")** is subject to the Privacy and Personal Information Protection Act 1998 ("PPiP Act") which requires that we comply with the Information Privacy Principles set out in the PPiP Act. All information in correspondence is collected for the sole purpose of assisting in the delivery of this project. The information received, including names and addresses of respondents, may be published in subsequent documents unless a clear indication is given in the correspondence that all or part of that information is not to be published. Otherwise TfNSW will only disclose your personal information, without your consent, if authorised by the law. Your personal information will be held by TfNSW at 4PSQ, 12 Darcy Street Parramatta, NSW 2150. You have the right to access and correct the information if you believe that it is incorrect.

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## Social media posts




**Transport for NSW**   
Sponsored · 




We're excited to announce the Review of Environmental Factors for Elizabeth Drive upgrade is now on display.



Provide your feedback by 31st October



[transport.nsw.gov.au](https://transport.nsw.gov.au)  
**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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