M12 Motorway
Strategic Route Options Analysis
Land use working paper

November 2016
Executive summary

Roads and Maritime Services (Roads and Maritime) has engaged Aurecon Australasia Pty Ltd to carry out a strategic route options analysis for the M12 Motorway between the M7 Motorway, Cecil Park and The Northern Road, Luddenham (the project).

The purpose of this report is to assess the potential land use impacts of the route options for the M12 Motorway.

Land uses in the study area

Land uses that make up the study area include:

- Residential land use: There are both urban residential and rural residential land uses through the study area, making up around 12 per cent of the study area
- Agricultural land use: including grazing, horticulture and intensive animal production, comprising around 55 per cent of the study area
- Commercial and industrial land use: Concentrated areas of retail activities are associated with the Kemps Creek village shops and other standalone retail activities connected to some agricultural properties. Industrial land uses include waste facilities, quarry sites, brick pit, as well as a number of smaller industrial operations including automotive repairs and upholstery businesses. Combined these land uses comprise four per cent of the study area
- Recreational land use: Notable recreational facilities within the study area include Western Sydney Parklands, Kemps Creek Sporting and Bowling Club and a number of horse riding and stabling facilities and other passive recreation areas. Recreational facilities in the study area comprise eighteen per cent of the study area
- Transport and utilities infrastructure: There are a number of state, regional and local roads, with notable roads being the M7 Motorway, Elizabeth Drive, The Northern Road, Mamre Road and Luddenham Road. Large utilities within the study area include electrical, gas, telecommunications, radar and water facilities. Together, transport and utilities infrastructure comprise around five per cent of the study area
- Community facilities: Few facilities, but include a post office and a rural fire station. In addition, a long established Animal Welfare League NSW is located along Elizabeth Drive
- Educational facilities: Facilities include Kemps Creek Public School, Ifran College, Christadelphian Heritage College and the Science of the Soul Study Centre
- Places of worship: There are no places of worship within the study area, however, two mosques have been approved in the study area.

Key strategic planning arrangements and planned major infrastructure in and near the study area include:

- Planned western Sydney airport at Badgerys Creek
- Western Sydney Priority Growth Area
- Infrastructure projects including Western Sydney Infrastructure Plan, M9 Outer Sydney Orbital Preservation Society and the South West Rail Link Extension Corridor.
Assessment of shortlisted options

Corridor option A1
- Corridor option A1 would pass through the Western Sydney Parklands, bisecting the existing use of the parklands. In terms of future development, this option could impact on the future upgrading and augmenting the existing walking and cyclist tracks.
- Maintaining connectivity through the parklands should be considered in the future design of the corridor.
- West of Mamre Road, this option would pass through the Western Sydney Priority Growth Area (WSPGA). Being, at this location, around 400 metres north of Elizabeth Drive, this has the potential to affect WSPGA zoning, with minimum distance from Elizabeth Drive of at least 600 metres required to provide a viable lot for development.
- The option would also interface with the new road hierarchy for the WSPGA, including the proposed extension of Devonshire Road to Mamre Road.
- The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the majority of the property, and would reduce the development potential and may reduce the feasibility of the proposed business park. As such, alternative development sites within the area would need to be investigated.
- Land uses affected by this option are in ready supply in the study area (within and outside Zone A).

Corridor option A3
- Corridor option A3 would pass through the area of Western Sydney Parklands to the north and south along Elizabeth Drive. To the south of Elizabeth Drive, this would create an edge effect to the parklands and would not create a severance effect.
- The corridor would have a large impact on the existing bike trails in the Wylde Mountain Bike Trail facility that would require some redevelopment to create smaller trails or may require increasing the size of the overall facility across adjoining land.
- In terms of future land use, the corridor would impact on the future development of the Western Sydney Parklands, particularly the proposed locations of the Wallgrove Road and Elizabeth Drive business hubs.
- West of Mamre Road, this option would pass through the WSPGA. Being, at this location, around 400 metres north of Elizabeth Drive, this has the potential to affect WSPGA zoning, with minimum distance from Elizabeth Drive of at least 600 metres required to provide a viable lot for development.
- The option would also interface with the new road hierarchy for WSPGA, including the proposed extension of Devonshire Road to Mamre Road.
- The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the northern extent of the property, reducing its frontage to Elizabeth Drive. While it passes through less of the property than option A1, it could still reduce the developmental yield potential of the property.
- Land uses affected are in ready supply in the study area.

Corridor option B2
- The corridor could constrain some land use development by removing road access to properties. The future development of adjacent land would then be dependent on the construction of new roads to provide access.
An approved development application for a mosque is situated on a property located wholly in the corridor. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area.

This option would pass through the WSPGA. This option would not achieve the minimum distance (600 metres) from Elizabeth Drive to provide a viable lot for development for land along the majority of its length. This could affect the potential for rezoning.

Option B2 would require a shorter access road to the western Sydney airport at Badgerys Creek.

In relation to the connection with the airport, this option would also need to consider the South West Rail Link Extension as it traverses north from the airport site.

The land uses affected by the corridor (above) are in ready supply elsewhere in the study area (within and outside of Zone B) and disturbed land uses could be accommodated in existing land.

**Corridor option B5**

- The corridor could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access.
- This option passes to the north of the Elizabeth Drive landfill site, but south of the Twin Creeks Golf and Country Club residential estate. This provides a beneficial outcome by forming a barrier between the two incompatible land uses.
- The option also passes through land that has been identified as the WSPGA. This option passes in excess of 600 metres north of Elizabeth Drive, which would maximise the opportunities for rezoning.
- Option B5 would require a longer access road to the western Sydney airport at Badgerys Creek.
- In relation to the connection with the airport, this option would need to consider the South West Rail Link Extension as it traverses north from the airport site.
- The land uses affected by the corridor are in ready supply elsewhere in the study area (within and outside of Zone B) and disturbed land uses could be accommodated in existing land.

**Corridor option C3**

- The corridor could also constrain some land use development by potentially removing road access to a number of properties along Elizabeth Drive and by severing some large properties. Maintaining existing land uses at these properties would be dependent on the construction of new roads to provide access.
- An approved development application for a cemetery exists at a property located partially in the corridor, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained.
- Option C3 passes through WSPGA. The corridor joins back into Elizabeth Drive for half of its length, however, it would still have the potential to affect rezoning, as it does not allow for a 600 metre minimum distance from Elizabeth Drive.
- In terms of current and future infrastructure projects in the study area, both options in Zone C would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.
- The land uses affected by the corridor are in ready supply elsewhere in the study area (within and outside of Zone C) and disturbed land uses could be accommodated in existing land.
Corridor option C4

- The corridor could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access.

- An approved development application for a cemetery exists at a property located partially in the corridor, and may affect the northern extent. This is on a property of rural residential land use, which is in ready supply in the study area. Should the site be no longer viable, alternative sites could be present in the surrounding area.

- Option C4 passes through land that has been identified as the WSPGA. This would meet the recommendation of the Department of Planning and Environment of a minimum distance of 600 metres from Elizabeth Drive to provide a viable area for rezoning as part of the WSPGA.

- In terms of current and future infrastructure projects in the study area, both options in Zone C would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.

- The land uses affected by the corridor are in ready supply elsewhere in the study area (within and outside of Zone C) and disturbed land uses could be accommodated in existing land.

Further investigations

Roads and Maritime will continue to carry out investigations to identify environmental constraints and potential impacts during the future stages of the M12 Motorway project.

Roads and Maritime will continue to consult with property owners and stakeholders to discuss progress and status of the project and integration with other developments and infrastructure projects in the area.

Key stakeholders include:

- Western Sydney Parklands Trust
- Commonwealth Department of Infrastructure and Regional Development
- NSW Department of Planning and Environment
- NSW Office of Environment and Heritage
- Transport for NSW
- Liverpool City Council
- Fairfield City Council
- Penrith City Council.
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1 Introduction

1.1 Project background

Roads and Maritime Services (Roads and Maritime) has engaged Aurecon Australasia Pty Ltd to carry out a strategic route options analysis for the M12 Motorway between the M7 Motorway, Cecil Park and The Northern Road, Luddenham (the project).

1.1.1 Western Sydney Infrastructure Plan

The M12 Motorway forms part of the Western Sydney Infrastructure Plan (WSIP). The WSIP is a joint initiative of the Australian and NSW governments to fund a $3.6 billion road investment program for western Sydney. The WSIP will:

- Deliver major road infrastructure upgrades to support an integrated transport solution for the western Sydney region. Road upgrades will improve connections within western Sydney and benefit the region’s growing population, by reducing travel times
- Support and capitalise on the economic benefits of developing the proposed western Sydney airport at Badgerys Creek. The airport will be transformational for western Sydney and be a catalyst for investment, growth and job creation for decades to come. It will need to be supported by a quality surface transport network to ensure the efficient movement of people and freight
- Improve road transport capacity ahead of future traffic demand generated by planned residential and employment development in the Western Sydney Priority Growth Area (WSPGA) (formerly Broader Western Sydney Employment Area and part of the South West Growth Centre) and the South West Priority Land Release Area (formerly South West Growth Centre).

There are five main projects included in the WSIP (refer to Figure 1-1). These are split into a number of stages ranging from early development to construction. The projects include the construction of new roads and significant upgrade of other roads, as follows:

- M12 Motorway between the M7 Motorway and The Northern Road (the subject of this study)
- The Northern Road upgrade between Narellan and Penrith
- Bringelly Road upgrade between The Northern Road and Camden Valley Way
- Werrington Arterial Road
- Additional local road upgrades near the planned western Sydney airport at Badgerys Creek, to be proposed and managed by local councils.

1.2 Need for the project

The M12 Motorway is required to support the opening of the planned western Sydney airport at Badgerys Creek by connecting Sydney’s motorway network to the airport. The M12 Motorway will be a four lane (facilitating a future six lane) motorway between the M7 Motorway and The Northern Road.

The Australian Government announced the site of the western Sydney airport in 2014. The environmental impact statement for the western Sydney airport has been prepared, and was placed on public display at the end of 2015. Over 5000 submissions were received and the Environmental Impact Statement (EIS) is currently being updated and planned to be finalised in mid 2016. If the project is approved, construction is expected to begin in 2016, becoming operational in the mid 2020s.
The M12 Motorway is also required to cater for the increased traffic volumes from future development in areas surrounding the proposed western Sydney airport, which are to be further developed into the Western Sydney Priority Growth Area (WSPGA). Other planned road upgrades in western Sydney would also cater for increased traffic volumes from these future developments.

### 1.3 Study area

The project is required to provide access to the planned western Sydney airport at Badgerys Creek, with the airport layout facilitating access from the north and Elizabeth Drive. As such, the study area for the project has been developed generally around Elizabeth Drive, connecting to The Northern Road and the rest of Sydney via the M7 Motorway (refer to Figure 1-1).

Elizabeth Drive is bounded to the north by the WSPGA and the suburbs of Mount Vernon and Cecil Park, and, to the south, by the proposed western Sydney airport at Badgerys Creek, the WSPGA, the suburbs of Kemps Creek and Badgerys Creek and the Western Sydney Parklands.

The topography in and around the study area is rolling hills and small valleys between generally north–south ridge lines. In the east and west of the study area, topography is gently undulating, flattening out in the middle of the study area, where it passes through the floodplains associated with Cosgroves Creek, Oaky Creek, Badgerys Creek, South Creek and Kemps Creek. There are also numerous farm dams in the area.

The study area is predominantly semi-rural and includes residential, agricultural, recreational, commercial and industrial land uses.

The main population centres are the suburbs of Kemps Creek, Mount Vernon and Horsley Park.

Agricultural land uses include poultry farming, farms producing tomatoes and cucumbers, commercial operations producing Christmas trees and Andreasens Green Wholesale Nurseries.

Recreational and community facilities include schools and social facilities such as the Kemps Creek Sporting and Bowling Club, the Western Sydney Parklands (including the Wylde Mountain Bike Trail), Kemps Creek Nature Reserve and the Sydney International Shooting Centre.

Commercial uses are mainly associated with the Kemps Creek village including service stations, food stores and hardware/maintenance shops.

Industrial uses include the Suez Elizabeth Drive landfill and quarry sites.

There are a number of transport and utilities infrastructure through the study area including the M7 Motorway, Elizabeth Drive, major electrical infrastructure and the Sydney Water Upper Canal system.
Figure 1-1: M12 Motorway study area

Legend
- M12 study area
- Nature Reserve
- Western Sydney Parklands
- Notable facilities
- Creek

Source: Neamap, LPI, Aurecon

M12 Strategic Route Options Analysis

FIGURE 1.1: M12 Motorway Shortlisted route options
1.4 Purpose and structure of the report

The purpose of this report is to assess the potential land use impacts of the shortlisted route options for the M12 Motorway.

The structure and content of this report is:

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<th>Outlines the background for the M12 Motorway project and, the purpose of this report</th>
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<td>Section 2 – Study area existing environment</td>
<td>Describes the land use existing environment in the M12 Motorway study area</td>
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<td>Section 3 – Shortlisted route options</td>
<td>Describes the eight shortlisted route options</td>
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<td>Section 4 – Assessment of shortlisted route options</td>
<td>Provides an assessment of the options through their corridor options components as well as the end-to-end route options</td>
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<td>Section 5 – Conclusions and further investigations required</td>
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The assessment contained in this report would be used in the multi criteria analysis of the shortlisted route options to identify the best performing route option. The multi criteria analysis would consider other technical assessments undertaken for the project.

This report will form an appendix to the Preferred Corridor Route Report, which will identify the process and assessment of the selection for the preferred route for the M12 Motorway project.
2 Study area existing environment

2.1 Introduction

A review of the existing and proposed land use in the study area was undertaken to better understand the constraints of the study area.

2.2 Methodology

The land use and property assessment was a desktop assessment that included:
- Review of existing zoning within the study area (see list of documents below)
- Identification of different land uses within the study area
- Review of future land use planning in the study area
- Assessment of impact against current and future land uses in the study area. The assessment was undertaken on a corridor option basis (ie option A1, option B2), as they combine to form the eight individual shortlisted route options.

The assessment included review of a number of land use planning documents including:
- Penrith Local Environmental Plan 2010
- Penrith Local Environmental Plan (Glenmore Park Stage 2) 2009
- Liverpool Local Environmental Plan 2008
- Fairfield Local Environmental Plan 2013.

In addition, other planning documents and projects were reviewed including:
- Documents, in particular the draft EIS for the planned western Sydney airport at Badgerys Creek (DIRD 2015)
- Structure plans and assessments undertaken for the Broader Western Sydney Employment area and the South West Growth Centre (now part of the WSPGA)
- Western Sydney Parklands Management Plan 2020
- Review of other infrastructure projects in the area.

2.3 Overview of existing land use

The study area is located across three local government areas, including Penrith City, Fairfield City and Liverpool. Land use in the study area is governed through these councils as well as various SEPPs and state and federal government strategies.

The suburbs that fall within the study area are:
- Luddenham
- Badgerys Creek
- Kemps Creek
- Mount Vernon
- Cecil Park.

Census data and council profile areas were used to provide information on these suburbs. Data on the individual suburbs is not available. However, data on the following areas covers suburbs in the study area and information is considered to reflect the suburbs that do fall within the study area.
2.3.1 Luddenham – Wallacia
Luddenham – Wallacia is located within the Penrith City Council area and is located north of Elizabeth Drive (where it is within the study area). Only the suburb of Luddenham falls within the study area. Land use within the suburb is rural and rural – residential. Rural land uses consist of agriculture especially market gardens, hobby farms and poultry farms. Major features in the suburb include Luddenham Showground, Twin Creeks golf course, Sydney Society of Model Engineers Model Park and Luddenham Raceway. There is a low population density (0.54 people per hectare) reflective of the rural and agricultural nature of the suburb.

2.3.2 Mount Vernon- Kemps Creek- Badgerys Creek
This profile area is within the Penrith City Council area and is located north of Elizabeth Drive. The suburbs of Mount Vernon, Kemps Creek and Badgerys Creek all fall within the study area. Land use within the suburb is rural and rural – residential. Rural land uses consist of agriculture especially market gardens, hobby farms and poultry farms. Main features in the suburb include Kemps Creek village, a number of schools and the Elizabeth Drive landfill facility. There is a low population density (0.45 people per hectare) reflective of the rural and agricultural nature of the suburb.

2.3.3 Cecil Hills
This profile area covers the suburb of Cecil Hills, which is within the Liverpool City Council area and straddles across the M7 Motorway. The portion of this area that falls within the study area is south of Elizabeth Drive and encompasses the Western Sydney Parklands, which is the main feature in the profile area. However, outside of the study area, east of the M7 Motorway, there has been intensive residential development. This is why the population density of this area, (there is a higher density than most of the study area), is 11.16 people per hectare.

2.3.4 Cecil Park
This profile area covers the suburb of Cecil Park, within the Fairfield City Council and falls within the study area north of Elizabeth Drive and along the M7 Motorway. Land use within this area is rural and rural – residential, with rural activities mostly agricultural and some extractive industries. Major features of the area include the Western Sydney Parkland and (in the study area) the CSR brick factory. As the majority of the area is residential land, it has the highest population density through the study area, with 1.23 persons per hectare.

2.3.5 Bringelly
This profile area covers a number of different suburbs and is contained to the south of Elizabeth Drive. The extent is from east of the M7 Motorway (incorporating Elizabeth Hills) west to the Nepean River. Suburbs that fall within the study area include Badgerys Creek, Cecil Park, Kemps Creek and Luddenham. The land use is mostly rural, with some rural – residential activities including farms and orchards. Major features that fall within or near the study area include Sydney International Shooting Centre, RAAF telecommunications unit, University of Sydney land and Wolverton Farm, Western Sydney Parklands, Badgerys Creek Oval, Bill Anderson Park, Kemp Creek Nature Reserve, Kemps Creek Sporting and Bowling Club and Overett Park. Due to the rural nature of the area, there is a low population density, with 0.53 people per hectare.
2.4 Existing land use

The study area is located within the Penrith, Liverpool and Fairfield local government areas. The zoning maps for these areas (including Penrith Local Environmental Plan 2010, the Penrith Local Environmental Plan (Glenmore Park Stage 2) 2009, the Liverpool Local Environmental Plan 2008 and the Fairfield Local Environmental Plan 2013) identify a range of existing zonings. The majority of land is zoned:

- RU1 primary production
- RU4 primary production small lots
- RU2 rural landscape
- E2 Environmental conservation
- E4 Environmental living
- RE1 Public recreation
- Western Sydney Parklands.

Zoning across the study area from all the local environmental plan are shown in Figure 2-1. However, there is a wide array of land uses in these zones. Land uses are described below and shown in Figure 2-2.

2.4.1 Residential land use

There are both urban residential and rural residential land uses through the study area. The urban residential land uses are confined to the east of the M7 Motorway, being Cecil Hills.

The main rural residential precincts in the study area are associated with the suburbs of Kemps Creek, Mount Vernon and Cecil Park. However, there are rural residential properties located throughout the remainder of the study area and residences located on some agricultural/hoobby farm properties.

Overall, both urban and rural residential land uses comprise around 12 per cent of the study area.

The WSPGA is mostly located north of Elizabeth Drive and west of Mamre Road. This would limit future residential development, while increasing industrial and commercial development in the study area.

2.4.2 Agricultural land use

Agricultural land uses through the study area are grazing, horticulture and intensive animal production. These include hobby and commercial farms predominantly crops (such as vegetables), poultry, Christmas trees and Andreasens Nursery.

An Industry & Investment NSW report (Analysis of Population Census and Agriculture Census data in Sydney Statistical Division, July 2010) identifies the importance of agricultural activities in the Penrith and Liverpool local government areas. Vegetable farming in these areas resulted in almost $16 million of produce, while poultry farming was valued at over $17 million in Penrith City Council and $19 million in Liverpool City Council.

There are a number of lots of land owned by the University of Sydney that contain agricultural land uses. This land is a strategic asset for the University (as per the University of Sydney submission to the shortlisted options report) but was historically used as teaching facilities. This land is proposed to be developed to non-agricultural uses in the future.

Overall, agricultural land use comprises around 55 per cent of the study area.
2.4.3 Commercial land use
Concentrated areas of retail activities are associated with the suburb of Kemps Creek (Kemps Creek village shops). This includes activities such as service stations, hardware stores, machinery and automotive repairs, ducting and supply stores, cafes and groceries and liquor stores. Other standalone individual retail activities are connected to some of the agricultural properties mentioned above including farms onselling produce.

Combined with industrial land uses, commercial land uses comprise four per cent of the study area.

2.4.4 Industrial land use
There are a number of industrial developments through the study area. These include a number of waste facilities, the largest being the Elizabeth Drive landfill site. There are also a number of quarry sites and a brick pit. These are located in the more populous areas to the east of the study area.

There are also a number of smaller industrial operations including automotive repairs and upholstery businesses in Kemps Creek.

Combined with commercial land uses, industrial land uses comprise four per cent of the study area.

2.4.5 Recreational land use
There are a number of recreational facilities within the study area. While there are a number of opportunities and facilities in the Western Sydney Parklands (see section 2.4.6), there are a number of other recreational facilities in the study area. These include:

- Reserves/parks including Bill Anderson Park and, Overett Reserve. Kemps Creek Nature Reserve
- Luddenham Raceway
- Sydney Society of Model Engineers Model Park
- Kemps Creek Sporting and Bowling Club
- Martial Arts and yoga centre in Kemps Creek
- A number of horse riding and stabling facilities.

Together with the Western Sydney Parklands, recreational facilities in the study area comprise eighteen per cent of the study area.

2.4.6 Western Sydney Parklands
Western Sydney Parklands is on the eastern extent of the study area, to the south of Elizabeth Drive. The idea of a ‘green girdle’ through Western Sydney was identified in the Cumberland County Plan of 1949. However, the Western Sydney Parklands were originally identified in the 1968 Sydney Region Outline Plan to provide for infrastructure and future regional open space needs for a growing Western Sydney.

Since that time, revegetation activities has taken place to further develop the vegetation within the parklands. While the parklands were only officially established in 2006, the area of open space and remnant native vegetation within Western Sydney has been under increasing pressure from urban growth and development. Next to the study area, the M7 Motorway has passed through the parklands, bisecting the parklands in two.

The parklands are now managed under the Western Sydney Parklands Act 2006 by the Western Sydney Parklands Trust. Strategic direction for the use of the parklands is provided under the State Environmental Planning Policy (Western Sydney Parklands) and the Western Sydney Parklands Plan of Management 2020. The Western Sydney Parklands Trust is mostly self-funded, with the lease of land for facilities across the parklands providing a steady income stream to assist in the management of the parklands.
The parklands comprise 5,280 hectares and stretch 27 kilometres from Blacktown in the north to Leppington in the south. The parklands are in the Blacktown, Fairfield and Liverpool local government areas.

When developed, the parklands will become the largest urban parkland system in Australia and one of the largest in the world. Much of the land is still to be developed for its long-term purpose. The parklands have recreational space as well as conservation, infrastructure, agriculture, water supply and other essential community facilities.

The Parklands Plan of Management 2020 Supplement, indicates the area of parkland south of Elizabeth Drive will continue to contain a range of mixed uses. This includes:

- Sydney International Shooting Centre (existing)
- Wylde Mountain Bike Trail (existing)
- Water supply canal (existing)
- Development of a bushland corridor to connect Kemps Creek Nature Reserve to the bushland corridor that runs north–south through the parklands.

There are also a number of biobanking agreement sites (including M7 West and Cecil Park SE) made under the Threatened Species Conservation Act 1995 and a carbon credit site (carbon sequestration) within the parkland extents in the study area. The Biodiversity Banking and Offsets Scheme, 'BioBanking' is designed to address the loss of biodiversity values from habitat degradation. BioBanking enables 'biodiversity credits' to be generated by landowners and developers who commit to enhance and protect biodiversity values on their land through a biobanking agreement.

A business hub (Elizabeth Drive business hub) has also been identified that spans Elizabeth Drive. The hub will form part of a broader sports and active recreation hub in the Parklands. Potential land uses include warehouse, storage and distribution premises, transport related services, tourist and visitor accommodation, business premises and office premises.

To the north of Elizabeth Drive, the Western Sydney Parklands currently consists of environmental bushland corridor or vacant land. As well as a site identified for the Elizabeth Drive business hub, another hub along Wallgrove Road (known as the Wallgrove Road business hub) has been identified in the Parklands Plan of Management 2020 Supplement. The Wallgrove Road hub has been designated for uses such as industrial and transport related services, which will complement existing local businesses. Potential land uses include warehouse, storage and distribution premises, transport related services, tourist and visitor accommodation, business premises, office premises.

A view of the current and future development of the parklands is shown in Figure 2-3.

Together with recreational facilities, the Western Sydney Parklands in the study area comprise 18 per cent of the study area.
Figure 2.1: Zoning within the study area

Legend
- M12 study area
- Western Sydney Priority Growth Area
- Western Sydney airport at Badgers Creek
- Notable facilities
- Creek

Land Zoning
- R1
- RU2
- DM
- R2
- RU4
- E2
- R3
- SP1
- E3
- RE1
- SP2
- E4
- RU1

Source: Nesmap, LR, Aurecon

Projection: GDA 1994 MGA Zone 56

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FIGURE 2.1: Zoning within the study area
Figure 2.2: Land use within the study area
Figure 2.3 Western Sydney Parklands
2.4.7 Community facilities
There are limited community facilities in the study area. In Kemps Creek, there are a few facilities including a post office and a rural fire station. In addition, a long established Animal Welfare League NSW is located along Elizabeth Drive.

2.4.8 Educational facilities
There are few educational facilities within or adjacent to the study area. Facilities that are within the study area include Kemps Creek Public School, Ifran College and Christadelphian Heritage College. In addition, along Elizabeth Drive, there is the Science of the Soul Study Centre and Badgerys Creek Public School which closed in 2014.

2.4.9 Places of worship
There are no religious institutions within the study area (with the exception of those educational facilities above). However, two mosques have been approved in the Kemps Creek area.

2.4.10 Transport and utilities infrastructure
Through the study area, there are a number of state, regional and local roads. The main roads within the study area include the M7 Motorway, Elizabeth Drive, The Northern Road, Mamre Road and Luddenham Road.

There are a number of utility infrastructure/ installations within the study area. Large facilities include a number of substations, mobile telecommunications towers and a radar installation. Other utilities include gas pipelines and electrical transmission lines. Sydney Water facilities through the study area include the Upper Canal system located in the east of the study area.

Together, transport and utilities infrastructure comprise around five per cent of the study area.

2.4.11 Planned western Sydney airport at Badgerys Creek
While this is not a current land use within the study area, land has been allocated and reserved for the airport. The western Sydney airport is located south of Elizabeth Drive in the western side of the study area. The draft EIS for the proposed western Sydney airport at Badgerys Creek was released at the end of 2015.

The draft EIS identifies the initial development (Stage 1) and foreshadowing the long term development of the airport. Approval is being sought for Stage 1 only.

The stages of development for the airport are:

- **Stage 1**: establish the proposed airport with a single 3,700m runway on a north-east/south-west orientation and aviation support facilities to provide an operational capacity of 10 million passengers annually as well as freight traffic. This is designed to cater for this demand, which would be for the first five years of operation (from 2025 to 2030)

- **Long term development**: to cater for when the number of passengers annually increase beyond 10 million. This will also include additional aviation infrastructure and aviation support precincts. Incremental development of the proposed airport would continue as additional taxiways, aprons, terminals and support facilities are developed. The need for a second runway is when the operational capacity of the airport approaches 37 million passengers annually. This is anticipated in 2050.

The first runway (to be built as part of Stage 1) is to be built on the north-western side of the airport site, south of Elizabeth Drive. However, due to the closeness of the runway end to Elizabeth Drive, there are a number of areas which fall over and to the north of Elizabeth Drive. Of importance is the HIAL (High Intensity Approach Lighting), Obstacle Limitation Surface (OLS) and the Glide Slope Building Restriction Area.
Due to the presence of these safety areas through and to the north of Elizabeth Drive, the road may need to be realigned outside of these areas.

The M12 Motorway is identified as being the main access point to the airport.

2.5 Land development activity

Future land use would be different to the current land use in and around the study area. Of particular relevance is the western Sydney airport at Badgerys Creek, the Western Sydney Priority Growth Area and future development of the Western Sydney Parklands (refer to Figure 2-3).

2.5.1 Current and approved development applications

There are a number of development applications that have been approved or are active within the study area. Two mosques have been approved in the Kemps Creek area by Council. A cemetery has also been approved in the western portion of the study area. There is also an active development application for the Ifran College property for a two storey building. The Kemps Creek Sporting and Bowling Club has a development application for a number of additions and alterations, including extend the bistro and kitchen, extend the existing terrace and new children’s play area.

2.5.2 Western Sydney Priority Growth Area

The WSPGA is in the Liverpool and Penrith council areas. The majority of the study area is located in the WSPGA.

The WSPGA would provide local people with better access to jobs within and around the airport, as well as infrastructure and services for local residents. The Department of Planning and Environment will work closely with Liverpool City Council and Penrith City Council to prepare a draft land use and infrastructure strategy. This will guide new infrastructure investment, identify new homes and jobs close to transport and coordinate services in the area. Once it is prepared, the draft strategy will be released for consultation with the community.

2.5.3 Infrastructure development

There are a number of road projects in and around the study area to upgrade roads in western Sydney as part of the Western Sydney Infrastructure Plan (as mentioned in chapter 1 of this report). In addition, there are some works being undertaken to preserve a corridor for heavy rail through the study area. A review of infrastructure upgrades in the area is detailed in this section.

Outer Sydney Orbital Preservation Study

Transport for NSW is investigating a suitable corridor for the M9 Outer Sydney Orbital to provide a north – south connection for a future motorway, freight rail and where practical a passenger rail line.

The corridor will be preserved now so it is available in the future while western Sydney grows and changes. The corridor is also expected to provide for a future freight rail connection from Port Kembla to the T2 South Line, to the T1 Western Line and the Northern Line. The northern section of the South West Rail Link Extension between Bringelly and the T1 Western Line will be included in the Outer Sydney Orbital study.

When constructed, the M9 Outer Sydney Orbital would connect at the western extent with the M12 Motorway.

The Northern Road

The upgrade of The Northern Road between Mersey Road, Bringelly to Littlefields Road, Luddenham will see the diversion of the road around the western Sydney airport at Badgerys Creek. The M12 Motorway will connect to the upgraded The Northern Road.
Key features of the upgrade include:

- Diverting The Northern Road to the east of Luddenham, close to the western Sydney airport site boundary
- Widening from two lanes to a six lane divided road (two general traffic lanes and a kerbside bus lane in each direction), with a wide median to allow for eight lanes if required in the future
- Providing kerbside bus lanes, bus priority at traffic lights and indented bus bays where required
- Providing a bypass to access the Luddenham town centre from the realigned The Northern Road
- Installing new traffic lights and turning lanes at some intersections
- Providing a new shared path for pedestrians and cyclists on the western side of the road and a new footpath on the eastern side of the road
- Installing new street lighting, particularly at intersections
- Providing for a future connection with the proposed M12 Motorway
- Upgrading drainage.

A preliminary design and access strategy was placed on display in February 2016 to obtain feedback from the community.

**South West Rail Link Extension Corridor**

The extension of the South West Rail Link is one of 19 major transport corridors across Sydney identified for preservation to meet future transport requirements. The corridor will provide a north-south connection through the WSPGA including the proposed western Sydney airport at Badgerys Creek. The extension corridor would connect Leppington Station to Bringelly and then deviate north to the T1 Western Line near St Marys and south to Narellan.

The northern section of the extension corridor falls within the study area, in a north south orientation, passing through and beyond the airport site.

**Western Sydney**

**Future rail transport in Western Sydney**

The Western Sydney Rail Needs Scoping Study is currently underway and aims to determine the rail needs of Western Sydney including the operation of the planned western Sydney airport. There are some works being undertaken to preserve a corridor for heavy rail through the study area.
3 Description of the shortlisted route options

3.1 Introduction

In February 2016, the eight shortlisted route options for the M12 Motorway were placed on public display. These consisted of two corridor options in Zones A to C, and one option in Zone D (that is, D1 is common to all route options). Each route option consists of a corridor 300 metres wide. The options were:

<table>
<thead>
<tr>
<th>Route option</th>
<th>Zone A</th>
<th>Zone B</th>
<th>Zone C</th>
<th>Zone D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua (4)</td>
<td>A1</td>
<td>B2</td>
<td>C1</td>
<td>D1</td>
</tr>
<tr>
<td>Blue (5)</td>
<td>A1</td>
<td>B2</td>
<td>C2</td>
<td>D1</td>
</tr>
<tr>
<td>Green (16)</td>
<td>A1</td>
<td>B5</td>
<td>C1</td>
<td>D1</td>
</tr>
<tr>
<td>Orange (17)</td>
<td>A1</td>
<td>B5</td>
<td>C2</td>
<td>D1</td>
</tr>
<tr>
<td>Pink (18)</td>
<td>A3</td>
<td>B2</td>
<td>C1</td>
<td>D1</td>
</tr>
<tr>
<td>Purple (19)</td>
<td>A3</td>
<td>B2</td>
<td>C2</td>
<td>D1</td>
</tr>
<tr>
<td>White (20)</td>
<td>A3</td>
<td>B5</td>
<td>C3</td>
<td>D1</td>
</tr>
<tr>
<td>Yellow (21)</td>
<td>A3</td>
<td>B5</td>
<td>C4</td>
<td></td>
</tr>
</tbody>
</table>

While these were the options that went to the value management workshop, last minute refinements to the shortlisted route options in Zone C and D due to community feedback and further work on interfacing with other transport projects in the area resulted in a change to the options.

This resulted in a change in Zone C, through the modification of C1 and C2 to C3 and C4. Zone D was also removed from the project.

Due to this change in the shortlisted route options, this report assesses the modified shortlisted route options.

3.2 Modified shortlisted options

There are eight shortlisted route options and their zone corridor option components are identified in Table 3-1 and Figure 3-1. Each route option consists of a corridor 300 metres wide. Table 3-2 further details the modified route options.

Table 3-1 Shortlisted route options

<table>
<thead>
<tr>
<th>Route option</th>
<th>Zone A</th>
<th>Zone B</th>
<th>Zone C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Aqua</td>
<td>A1</td>
<td>B2</td>
<td>C3</td>
</tr>
<tr>
<td>Modified Blue</td>
<td>A1</td>
<td>B2</td>
<td>C4</td>
</tr>
<tr>
<td>Modified Green</td>
<td>A1</td>
<td>B5</td>
<td>C3</td>
</tr>
<tr>
<td>Modified Orange</td>
<td>A1</td>
<td>B5</td>
<td>C4</td>
</tr>
<tr>
<td>Modified Pink</td>
<td>A3</td>
<td>B2</td>
<td>C3</td>
</tr>
<tr>
<td>Modified Purple</td>
<td>A3</td>
<td>B2</td>
<td>C4</td>
</tr>
<tr>
<td>Modified White</td>
<td>A3</td>
<td>B5</td>
<td>C3</td>
</tr>
<tr>
<td>Modified Yellow</td>
<td>A3</td>
<td>B5</td>
<td>C4</td>
</tr>
</tbody>
</table>
Figure 3.1 M12 Motorway Shortlisted Route Options
<table>
<thead>
<tr>
<th>Route option</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Modified Aqua option** | The modified aqua option is 15 kilometres long. It connects to the M7 Motorway more than one kilometre south of the Elizabeth Drive interchange at a new interchange location. 

The option passes through Western Sydney Parklands (including a section of the Wyde Mountain Bike Trail) in a north-westerly direction before crossing Elizabeth Drive near the existing Mamre Road intersection. It passes through a number of commercial properties fronting Elizabeth Drive and Mamre Road, including the Hi-Quality Group property and Kemps Creek Sporting and Bowling Club.

The option then travels around the north of the Kemps Creek village north of Elizabeth Drive, crossing Kemps Creek and passing through rural agricultural and residential properties. It also passes through some larger businesses including a quarry site and Andreasens Nursery. It crosses South Creek and skirts to the south of the landfill site and crosses Badgerys Creek before connecting to the planned western Sydney airport site through an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 700 metres away.

The option then crosses Cosgroves and Oaky creeks near the confluence of the creeks, before crossing Luddenham Road just north of the intersection with Elizabeth Drive and south of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Model Park in Luddenham.

The option connects to Elizabeth Drive via ramps, with Elizabeth Drive upgraded to a principal arterial road, and connects with The Northern Road. |
| **Modified Blue option** | The modified blue option is 15 kilometres long. It connects to the M7 Motorway more than one kilometre south of the Elizabeth Drive interchange at a new interchange location. 

The option passes through Western Sydney Parklands (including a section of the Wyde Mountain Bike Trail) in a north-westerly direction before crossing Elizabeth Drive near the existing Mamre Road intersection. It passes through a number of commercial properties fronting Elizabeth Drive and Mamre Road, including the Hi-Quality Group property and Kemps Creek Sporting and Bowling Club.

The option then skirts around the north of Kemps Creek village north of Elizabeth Drive, crossing Kemps Creek and passing through rural agricultural and residential properties. It also passes through some larger businesses including a quarry site and Andreasens Nursery. It crosses South Creek and skirts to the south of the landfill site and crosses Badgerys Creek before connecting to the planned western Sydney airport site through an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 700 metres away.

The option crosses Cosgroves Creek and passes through rural and agricultural properties before crossing Luddenham Road about 1.2 kilometres north of the intersection with Elizabeth Drive and north of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Luddenham Raceway.

The option connects to The Northern Road about 900 metres north of the existing Elizabeth Drive roundabout. |
<p>| <strong>Modified Green option</strong> | The modified green option is 16 kilometres long. It connects to the M7 Motorway more than one kilometre south of the Elizabeth Drive interchange at a new interchange location. |</p>
<table>
<thead>
<tr>
<th>Route option</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Orange option** | The option passes through Western Sydney Parklands (including a section of the Wylde Mountain Bike Trail) in a north-westerly direction before crossing Elizabeth Drive near the existing Mamre Road intersection. It passes through a number of commercial properties fronting Elizabeth Drive and Mamre Road, including the Hi-Quality Group property and Kemps Creek Sporting and Bowling Club.  

The option then crosses Kemps Creek and travels north-west, parallel to Clifton Avenue, before heading west and passing through the former Fleurs radio telescope site and crossing South Creek. It passes to the north of the landfill site, crossing Badgerys Creek before connecting to the planned western Sydney airport site via an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 1750 metres away.  

The option then crosses Cosgroves and Oaky creeks near the confluence of the creeks, before crossing Luddenham Road just north of the intersection with Elizabeth Drive and south of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Model Park.  

The option connects to Elizabeth Drive via ramps, with Elizabeth Drive upgraded to a principal arterial road, and connects with The Northern Road. |
| **Modified Orange option** | The modified orange option is 16 kilometres long. It connects to the M7 Motorway more than one kilometre south of the Elizabeth Drive interchange at a new interchange location.  

The option passes through Western Sydney Parklands (including a section of the Wylde Mountain Bike Trail) in a north-westerly direction before crossing Elizabeth Drive near the existing Mamre Road intersection. It passes through a number of commercial properties fronting Elizabeth Drive and Mamre Road, including the Hi-Quality Group property and Kemps Creek Sporting and Bowling Club.  

The option then crosses Kemps Creek and travels north-west, parallel to Clifton Avenue, before heading west and passing through the former Fleurs radio telescope site and crossing South Creek. It passes to the north of the landfill site, crossing Badgerys Creek before connecting to the planned western Sydney airport site via an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 1750 metres away.  

The option then crosses Cosgroves Creek and passes through rural and agricultural properties before crossing Luddenham Road about 1.2 kilometres north of the intersection with Elizabeth Drive and north of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Luddenham Raceway.  

The option connects to The Northern Road about 900 metres north of the existing Elizabeth Drive roundabout. |
| **Pink option** | The modified pink option is about 16 kilometres long. It connects to the M7 Motorway at the same location as the existing Elizabeth Drive interchange.  

The option generally follows the Elizabeth Drive alignment to the Mamre Road intersection. The alignment is on a more direct route than Elizabeth Drive to meet current design standards and to avoid the steep topography to the north of Elizabeth Drive. As this option would be built in the existing Elizabeth Drive corridor as much as possible, Elizabeth Drive would need to be reconstructed around the motorway.  

The option passes through Western Sydney Parklands (including a section of the Wylde Mountain Bike Trail) and a number of commercial properties |
<table>
<thead>
<tr>
<th>Route option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route option</strong></td>
<td>Fronting Elizabeth Drive or Mamre Road including the Hi-Quality Group property and CSR Brickworks. Around the existing intersection with Mamre Road, it travels north-west, crossing Kemps Creek. The option then travels around the north of Kemps Creek village north of Elizabeth Drive, passing through rural agricultural and residential properties. It also passes through some larger businesses including a quarry site and Andreasens Nursery. It crosses South Creek and travels to the south of the landfill site and crosses Badgerys Creek. It then connects to the planned western Sydney airport site through an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 700 metres away. The option then crosses Cosgroves and Oaky creeks near the confluence of the creeks, before crossing Luddenham Road just north of the intersection with Elizabeth Drive and south of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Model Park. The option connects to Elizabeth Drive via ramps, with Elizabeth Drive upgraded to a principal arterial road, and connects with The Northern Road.</td>
</tr>
<tr>
<td>Modified Purple option</td>
<td>The modified purple option is about 16 kilometres long. It connects to the M7 Motorway at the same location as the existing Elizabeth Drive interchange. The option generally follows the Elizabeth Drive alignment to the Mamre Road intersection. The alignment is on a more direct route than Elizabeth Drive to meet current design standards and to avoid the steep topography to the north of Elizabeth Drive. As this option would be built in the existing Elizabeth Drive corridor as much as possible, Elizabeth Drive would need to be reconstructed around the motorway. The option passes through Western Sydney Parklands (including a section of the Wylde Mountain Bike Trail) and a number of commercial properties fronting Elizabeth Drive or Mamre Road, including the Hi-Quality Group property and CSR Brickworks. Around the existing intersection with Mamre Road, it traverses north-west, crossing Kemps Creek. The option then travels around the north of Kemps Creek village north of Elizabeth Drive, passing through rural agricultural and residential properties. It also passes through some larger businesses including a quarry site and Andreasens Nursery. It crosses South Creek, skirting south of the landfill site and crossing Badgerys Creek. It then connects to the planned western Sydney airport site through an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 700 metres away. The option then crosses Cosgroves Creek and passes through rural and agricultural properties before crossing Luddenham Road about 1.2 kilometres north of the intersection with Elizabeth Drive and north of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Luddenham Raceway. The option connects to The Northern Road about 900 metres north of the existing Elizabeth Drive roundabout.</td>
</tr>
<tr>
<td>Modified White option</td>
<td>The modified white option is about 17 kilometres long. It connects to the M7 Motorway at the same location as the existing Elizabeth Drive interchange. The option generally follows the Elizabeth Drive alignment to the Mamre Road intersection. The alignment is on a more direct route than Elizabeth Drive to meet current design standards and to avoid the steep topography to the north of Elizabeth Drive. As this option would be built in the existing Elizabeth Drive</td>
</tr>
<tr>
<td>Route option</td>
<td>Description</td>
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<td>--------------</td>
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<tr>
<td></td>
<td>corridor as much as possible, Elizabeth Drive would need to be reconstructed around the motorway.</td>
</tr>
<tr>
<td></td>
<td>The option passes through Western Sydney Parklands (including a section of the Wylde Mountain Bike Trail) and a number of commercial properties fronting Elizabeth Drive or Mamre Road including the Hi-Quality Group property and CSR Brickworks. Around the existing intersection with Mamre Road, it traverses north-west, crossing Kemps Creek.</td>
</tr>
<tr>
<td></td>
<td>The option then traverses north-west, parallel to Clifton Avenue, before heading west and passing through the former Fleurs radio telescope site and crossing South Creek. It passes to the north of the landfill site, crossing Badgerys Creek before connecting to the planned western Sydney airport site via an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 1750 metres away.</td>
</tr>
<tr>
<td></td>
<td>The option then crosses Cosgroves and Oaky creeks near the confluence of the creeks, before crossing Luddenham Road just north of the intersection with Elizabeth Drive and south of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Model Park.</td>
</tr>
<tr>
<td></td>
<td>The option connects to Elizabeth Drive via ramps, with Elizabeth Drive upgraded to a principal arterial road, and connects with The Northern Road.</td>
</tr>
</tbody>
</table>

**Modified Yellow option**

- The modified yellow option is about 16 kilometres long. It connects to the M7 Motorway at the same location as the existing Elizabeth Drive interchange.
- The option generally follows the Elizabeth Drive alignment to the Mamre Road intersection. This alignment is on a more direct route than Elizabeth Drive to meet current design standards and to avoid the steep topography to the north of Elizabeth Drive. As this option would be built in the existing Elizabeth Drive corridor as much as possible, Elizabeth Drive would need to be reconstructed around the motorway.
- The option passes through Western Sydney Parklands (including a section of the Wylde Mountain Bike Trail) as well as a number of commercial properties fronting onto Elizabeth Drive or Mamre Road including the Hi-Quality Group property and the CSR Brickworks. Around the existing intersection with Mamre Road, it traverses north-west, crossing Kemps Creek.
- The option then travels north-west, parallel to Clifton Avenue, before heading west and passing through the former Fleurs radio telescope site and crossing South Creek. It passes to the north of the landfill site, crossing Badgerys Creek before connecting to the planned western Sydney airport site via an interchange. The distance between the option and Elizabeth Drive in this area varies; at its furthest, the corridor is 1750 metres away.
- The option then crosses Cosgroves Creek and passes through rural and agricultural properties before crossing Luddenham Road about 1.2 kilometres north of the intersection with Elizabeth Drive and north of Blackford Hill. It passes through rural residential, agricultural and other uses such as the Luddenham Raceway.
- The option connects to The Northern Road about 900 metres north of the existing Elizabeth Drive roundabout.
4 Assessment of shortlisted route options

This section discusses the land use impacts of the shortlisted corridor options. As the route options consist of a unique combination of the corridor options, the corridor options are used to assess the land use impacts. These impacts are then summarised for each route option. Figure 4-1 shows the land uses and notable facilities within the corridor options.

4.1 Zone A

4.1.1 Corridor option A1

Option A1 includes the following land use zones: RU4 Rural small holdings, and Western Sydney Parklands.

The main land use activities that are within the corridor include:

- Recreational land uses (55.4 per cent of the corridor) including: Western Sydney Parklands (including Sydney International Shooting Centre, Wylde Mountain Bike Trail and passive recreational areas such as walking and cycling paths), Kemps Creek Sporting and Bowling Club
- Industrial land uses (2.3 per cent of the corridor) including quarrying and mechanical/construction services
- Agricultural land uses (20.5 per cent of the corridor) including herb produce activities
- Rural residential and urban residential land uses (2.5 per cent of the corridor), with urban residential confined to the eastern side of the M7 Motorway
- Transport and other corridors (15.5 per cent of the corridor) including Elizabeth Drive and the M7 Motorway.

Through the Western Sydney Parklands, this corridor option would pass through 109.18 hectares of parklands, and could impact on:

- The northern extent of the Sydney International Shooting Centre
- The south west corner of the Wylde Mountain Bike Trail
- A length of the Biobanking site M7 West along the M7 Motorway
- The bushland corridor, bisecting the area used for passive recreation
- Utilities (including the Upper Canal System and TransGrid high voltage lines).

The loss of land from the Western Sydney Parklands could be a substantial impact. Although the option would bisect the existing land use, there would be the opportunities to consider offsetting these impacts. In terms of future development, this option could impact on the future plans of Western Sydney Parklands including upgrading and augmenting the existing walking and cyclist tracks. Maintaining connectivity should be considered in the future design of the corridor.

Land uses affected are in ready supply in the study area (within and outside Zone A). The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the majority of the property, and would reduce the development potential and may reduce the feasibility of the proposed business park. As such, alternative development sites within the area would need to be investigated.
West of Mamre Road, this option would pass through the Western Sydney Priority Growth Area (WSPGA). This option, at this location, would be around 400 metres north of Elizabeth Drive. This has the potential to affect WSPGA zoning, as Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres to provide a viable lot for development. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should the zoning become commercial and industrial, there would be a change in land use for some of the existing land uses. This would increase the opportunities for business parks being able to be developed in the study area. The corridor option would not constrain this type of development.

The option would also interface with the new road hierarchy for the WSPGA, including the proposed extension of Devonshire Road to Mamre Road.

As both options in zone A pass through the WSPGA, this is not a differentiator between the two options.

4.1.2 Corridor option A3

Option A3 includes the following land use zones: RU1 Primary production, RU4 Rural small holdings, E4 Environmental living and the Western Sydney Parkland. This option would be partially constructed within the existing Elizabeth Drive corridor.

The main land use activities that are within the corridor include:

- Recreational land uses (33.9 per cent of the corridor) including: Western Sydney Parklands (Sydney International Shooting Centre (access only), Wylde Mountain Bike Trail and passive recreational areas such as walking and cycling paths), Kemps Creek Sporting and Bowling Club
- Industrial land uses (2.8 per cent of the corridor) including brick making and mechanical/ construction services
- Agricultural land uses (26.7 per cent of the corridor) including herb produce activities
- Rural residential land uses (0.1 per cent of the corridor)
- Transport and other corridors (15.5 per cent of the corridor) including Elizabeth Drive and the M7 Motorway.

Through the Western Sydney Parklands, this corridor option would pass through 102.35 hectares of parklands, including:

- Length of Wylde Mountain Bike Trail, south of the Elizabeth Drive alignment
- Section of the Biobanking site M7 West along the M7 Motorway
- Registered carbon credit site
- Bushland corridor area, along the Elizabeth Drive and M7 Motorway
- Part of the proposed of the Wallgrove Road and Elizabeth Drive business hubs.

The area of Western Sydney Parklands to be impacted is located north and south along Elizabeth Drive. To the south of Elizabeth Drive, this would create an edge effect to the parklands and would not create a severance effect. There would be limited opportunities to relocate the land use impacts on the Western Sydney Parklands. The corridor would have a large impact on the existing bike trails in the Wylde Mountain Bike Trail facility that would require some redevelopment to create smaller trails or may require increasing the size of the overall facility across adjoining land.
In terms of future land use, the corridor would impact on the future development of the Western Sydney Parklands, particularly the proposed locations of the Wallgrove Road and Elizabeth Drive business hubs. These commercial activities in the parklands are used as a source of income for the parklands. The disturbance of these sites would remove a potential source of income for the parklands and if required, would need to be relocated elsewhere in the remaining parklands.

Land uses affected are in ready supply in the study area. The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the northern extent of the property, reducing its frontage to Elizabeth Drive. While it passes through less of the property than option A1, it could still reduce the developmental yield potential of the property.

West of Mamre Road, this option would also pass through the WSPGA. This option, at this location, would be around 400 metres north of Elizabeth Drive. This has the potential to affect WSPGA zoning, as the Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres for development to provide a viable lot. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed.

However, should the zoning become commercial and industrial, there would be a change in land use for some of the existing land uses. This would increase the opportunities for business parks being able to be developed in the study area. The corridor would not constrain this type of development.

The option would also interface with the new road hierarchy for WSPGA, including the proposed extension of Devonshire Road to Mamre Road.

As both options in Zone A pass through the WSPGA, this is not a differentiator between the two options.

4.2 Zone B

4.2.1 Corridor option B2

Corridor option B2 includes the following land use zones: RU4 Rural small holdings, E2 Environmental conservation (around creek lines), and RU2 Rural landscape.

The main land use activities that are within the corridor include:

- Horticultural/agricultural land uses (87 per cent of the corridor) including Andreasens Nursery and market gardens
- Industrial and commercial land uses (3.0 per cent of the corridor) including quarries and landfill facilities
- Rural residential land uses (0.9 per cent of the corridor).

Land uses affected are in ready supply in the study area (within and outside Zone B) and disturbed land uses could be accommodated in existing land. As such, a substantial impact would not be likely.

The corridor could constrain some land use development as it would result in some land not having road access. The future development of adjacent land would then be dependent on the construction of new roads to provide access.

An approved development application for a mosque is situated on a property located wholly in the corridor. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area.

The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres for development to provide a viable lot. This
option would not achieve the minimum distance from Elizabeth Drive for land along the majority of its length, which could affect the potential for rezoning. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should the zoning become commercial and industrial, there would be a substantial change in land use in the zone. The corridor would not constrain this type of development.

Option B2 would require a shorter access road to the western Sydney airport at Badgerys Creek. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA.

In relation to the connection with the airport, this option would also need to consider the South West Rail Link Extension as it traverses north from the airport site. This is similar to option B5 and is not a differentiator.

4.2.2 Corridor option B5

Corridor option B5 includes the following land use zones: E4 Environmental living, RU4 Rural small holdings, E2 Environmental conservation (around creek lines) and RU2 Rural landscape.

The main land use activities that are within the corridor include:

- Horticultural/agricultural land uses (93.1 per cent of the corridor) including market gardens
- Industrial and commercial land uses (0.2 per cent of the corridor) including quarries.

Land uses affected are in ready supply in the study area (within and outside Zone B) and disturbed land uses could be accommodated in existing land. As such, a substantial impact would not be likely.

The corridor could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access. This impact is of a lesser extent than corridor B2, due to its distance away from Elizabeth Drive.

This option passes to the north of the Elizabeth Drive landfill site, but south of the Twin Creeks Golf and Country Club residential estate. This provides a beneficial outcome by forming a barrier between the two incompatible land uses.

The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated for property lots to be viable for the growth area, a minimum depth of 600 metres is required from Elizabeth Drive. This option passes in excess of 600 metres north of Elizabeth Drive and would not constrain any rezoning proposal for the WSPGA. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be determined fully. However, should the zoning become commercial and industrial, there would be a substantial change in land use in the zone.

Option B5 would require a longer access road to the western Sydney airport at Badgerys Creek. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA.

In relation to the connection with the airport, this option would need to consider the South West Rail Link Extension as it traverses north from the airport site. This is similar to option B2 and is not a differentiator.
Figure 4.1 Land uses within the shortlisted route options
4.3 Zone C

4.3.1 Corridor option C3

Corridor option C3 includes the following land use zones: RU2 Rural landscape, E2 Environmental conservation (along creek lines) and RU1 Primary production.

The main land use activities that are within the corridor include:

- Horticultural and agricultural land uses (81.3 per cent of the corridor)
- Recreational land uses (2.5 per cent of the corridor) including Sydney Society of Model Engineers Model Park
- Transport and other corridors (7.4 per cent of the corridor).

Land uses affected are in ready supply in the study area (within and outside Zone C) and disturbed land uses could be accommodated in existing land. However it is noted that the Sydney Society of Model Engineers Model Park, while it could move, would take time to re-establish the improvements made to the land to facilitate recreational purposes.

The corridor could also constrain some land use development by potentially removing road access to a number of properties along Elizabeth Drive and by severing some large properties. Maintaining existing land uses at these properties would be dependent on the construction of new roads to provide access.

An approved development application for a cemetery exists at a property located partially in the corridor, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained.

Option C3 passes through land that has been identified as the Western Sydney Priority Growth Area. The corridor joins back into Elizabeth Drive for half of its length. However, it would still have the potential to affect rezoning, as it does not allow for a 600 metre minimum distance from Elizabeth Drive. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. If the zoning becomes commercial and industrial, there would be a substantial change in land use in the zone.

In terms of current and future infrastructure projects in the study area, both options in Zone C would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.

4.3.2 Corridor option C4

Corridor option C4 includes the following land use zones: RU2 Rural landscape and E2 Environmental conservation (along creek lines).

The main land use activities that are within the corridor include:

- Horticultural and agricultural land uses (96.6 per cent of the corridor)
- Rural residential land uses (0.16 per cent of the corridor)
- Transport and other corridors (1.5 per cent of the corridor).

Land uses affected are in ready supply in the study area (within and outside Zone C) and disturbed land uses could be accommodated in existing land. As such, a substantial impact would not be likely. However it is noted that while the Luddenham Raceway could move to another rural-residential property, it would take time to re-establish the improvements made to the land to facilitate recreational purposes.
The corridor could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access.

An approved development application for a cemetery exists at a property located partially in the corridor, and may affect the northern extent. This is on a property of rural residential land use, which is in ready supply in the study area. Should the site be no longer viable, alternative sites could be present in the surrounding area.

Option C4 passes through land that has been identified as the WSPGA. This would meet the recommendation of the Department of Planning and Environment of a minimum distance of 600 metres from Elizabeth Drive to provide a viable area for rezoning as part of the WSPGA. As such, the corridor would not impact on the potential rezoning. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should zoning be commercial and industrial, there would be a substantial change in land use in the zone.

In terms of current and future infrastructure projects in the study area, both options in Zone C would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.

### 4.3.3 Route option summary

A summary of the potential impacts against each of the shortlisted route options is detailed in Table 4-1.
### Table 4-1 Route options summary

<table>
<thead>
<tr>
<th>Route option</th>
<th>Land use assessment</th>
</tr>
</thead>
</table>
| **Modified Aqua option** | The following land use zones are within this option:  
- RU1 Primary production  
- RU4 Rural small holdings,  
- E2 Environmental conservation (around creek lines)  
- RU2 Rural landscape  
- Western Sydney Parklands.  

The main land use activities that are within the route option include:  
- Agricultural land uses (60.7 per cent of the option)  
- Recreational land uses (22 per cent of the option)  
- Transport and other options (7.6 per cent of the option)  
- Industrial land uses (1.5 per cent of the option)  
- Rural residential and urban residential land uses (1.5 per cent of the option).  

Through the Western Sydney Parklands, this option would pass through 109.18 hectares of parklands. The loss of land from the Western Sydney Parklands could be a substantial impact. Although the option would bisect the existing land use, there would be the opportunities to consider offsetting these impacts. In terms of future development, this option could impact on the future plans of Western Sydney Parklands including upgrading and augmenting the existing walking and cyclist tracks. Maintaining connectivity should be considered in the future design of the option. Land uses affected are in ready supply in the study area. The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the majority of the property, and would reduce the development potential and may reduce the feasibility of the proposed business park. As such, alternative development sites within the area would need to be investigated.
<table>
<thead>
<tr>
<th>Route option</th>
<th>Land use assessment</th>
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<tbody>
<tr>
<td></td>
<td>The option could constrain some land use development as it would result in some land not having road access. The future development of adjacent land would then be dependent on the construction of new roads to provide access. An approved development application for a mosque is situated on a property located wholly in the option. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres for development to provide a viable lot. This option would not achieve the minimum depth for land on Elizabeth Drive along the majority of its length, which could affect the potential for rezoning. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should the zoning become commercial and industrial, there would be a substantial change in land use. The option would not constrain this type of development. The option would also interface with the new road hierarchy for the WSPGA, including the proposed extension of Devonshire Road to Mamre Road. A shorter access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA. In relation to the connection with the airport, this option would also need to consider the South West Rail Link Extension as it traverses north from the airport site. An approved development application for a cemetery exists at a property located partially in the option, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained. In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.</td>
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<tr>
<td><strong>Modified Blue option</strong></td>
<td>This option includes the following land use zones:</td>
</tr>
<tr>
<td></td>
<td>• RU4 Rural small holdings</td>
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<tr>
<td></td>
<td>• Western Sydney Parklands.</td>
</tr>
<tr>
<td>Route option</td>
<td>Land use assessment</td>
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</tr>
<tr>
<td></td>
<td>• E2 Environmental conservation (around creek lines)</td>
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<tr>
<td></td>
<td>• RU2 Rural landscape.</td>
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</tbody>
</table>

The main land use activities that are within the route option include:
- Agricultural land uses (65.3 per cent of the option)
- Recreational land uses (20.6 per cent of the option)
- Transport and other options (6.1 per cent of the option)
- Industrial land uses (1.4 per cent of the option)
- Rural residential and urban residential land uses (1.4 per cent of the option).

Through the Western Sydney Parklands, this option would pass through 109.18 hectares of parklands. The loss of land from the Western Sydney Parklands could be a substantial impact. Although the option would bisect the existing land use, there would be the opportunities to consider offsetting these impacts. In terms of future development, this option could impact on the future plans of Western Sydney Parklands including upgrading and augmenting the existing walking and cyclist tracks. Maintaining connectivity should be considered in the future design of the option.

Land uses affected are in ready supply in the study area. The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the majority of the property, and would reduce the development potential and may reduce the feasibility of the proposed business park. As such, alternative development sites within the area would need to be investigated.

The option could constrain some land use development as it would result in some land not having road access. The future development of adjacent land would then be dependent on the construction of new roads to provide access.

An approved development application for a mosque is situated on a property located wholly in the option. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area.

The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres for development to provide a
viable lot. This option would not achieve the minimum depth for land on Elizabeth Drive along the majority of its length, which could affect the potential for rezoning. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should the zoning become commercial and industrial, there would be a substantial change in land use. The option would not constrain this type of development.

The option would also interface with the new road hierarchy for the WSPGA, including the proposed extension of Devonshire Road to Mamre Road.

A shorter access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA.

In relation to the connection with the airport, this option would also need to consider the South West Rail Link Extension as it traverses north from the airport site.

An approved development application for a cemetery exists at a property located partially in the option, and may affect the northern extent. This is on a property of rural residential land use, which is in ready supply in the study area. Should the site be no longer viable, alternative sites could be present in the surrounding area.

In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.

### Modified Green option

The following land use zones are within this option:

- E4 Environmental living,
- RU1 Primary production
- RU4 Rural small holdings,
- E2 Environmental conservation (around creek lines)
- RU2 Rural landscape
- Western Sydney Parklands.

The main land use activities that are within the route option include:
### Route option

<table>
<thead>
<tr>
<th>Land use assessment</th>
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<tbody>
<tr>
<td>• Agricultural land uses (64.3 per cent of the option)</td>
</tr>
<tr>
<td>• Transport and other options (39.0 per cent of the option)</td>
</tr>
<tr>
<td>• Recreational land uses (20.4 per cent of the option)</td>
</tr>
<tr>
<td>• Rural residential and urban residential land uses (1.1 per cent of the option)</td>
</tr>
<tr>
<td>• Industrial land uses (0.4 per cent of the option).</td>
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</tbody>
</table>

Through the Western Sydney Parklands, this option would pass through 109.18 hectares of parklands. The loss of land from the Western Sydney Parklands could be a substantial impact. Although the option would bisect the existing land use, there would be the opportunities to consider offsetting these impacts. In terms of future development, this option could impact on the future plans of Western Sydney Parklands including upgrading and augmenting the existing walking and cyclist tracks. Maintaining connectivity should be considered in the future design of the option.

Land uses affected are in ready supply in the study area. The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the majority of the property, and would reduce the development potential and may reduce the feasibility of the proposed business park. As such, alternative development sites within the area would need to be investigated.

The option could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access.

This option passes to the north of the Elizabeth Drive landfill site, but south of the Twin Creeks Golf and Country Club residential estate. This provides a beneficial outcome by forming a barrier between the two incompatible land uses.

The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated for property lots to be viable for the growth area, a minimum depth of 600 metres is required from Elizabeth Drive. This option passes in excess of 900 metres north of Elizabeth Drive along most of its length and would not constrain any rezoning proposal for the WSPGA. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be determined fully. However, should the zoning become commercial and industrial, there would be a substantial change in land use.

The option would also interface with the new road hierarchy for the WSPGA, including the proposed extension of Devonshire Road to Mamre Road.
A longer access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA.

In relation to the connection with the airport, this option would need to consider the South West Rail Link Extension as it traverses north from the airport site.

An approved development application for a cemetery exists at a property located partially in the option, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained.

In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.

<table>
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<tr>
<th>Route option</th>
<th>Land use assessment</th>
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<tbody>
<tr>
<td></td>
<td>A longer access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA. In relation to the connection with the airport, this option would need to consider the South West Rail Link Extension as it traverses north from the airport site. An approved development application for a cemetery exists at a property located partially in the option, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained. In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.</td>
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</table>

**Modified Orange option**

The following land use zones are within this option:
- E4 Environmental living,
- RU4 Rural small holdings,
- E2 Environmental conservation (around creek lines)
- RU2 Rural landscape
- Western Sydney Parklands.

The main land use activities that are within the route option include:
- Agricultural land uses (68.5 per cent of the option)
- Recreational land uses (19.2 per cent of the option)
- Transport and other options (5.7 per cent of the option)
- Rural residential and urban residential land uses (1.0 per cent of the option)
- Industrial land uses (0.3 per cent of the option).
<table>
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<th>Route option</th>
<th>Land use assessment</th>
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<tr>
<td>Through the Western Sydney Parklands, this option would pass through 109.18 hectares of parklands. The loss of land from the Western Sydney Parklands could be a substantial impact. Although the option would bisect the existing land use, there would be the opportunities to consider offsetting these impacts. In terms of future development, this option could impact on the future plans of Western Sydney Parklands including upgrading and augmenting the existing walking and cyclist tracks. Maintaining connectivity should be considered in the future design of the option. Land uses affected are in ready supply in the study area. The corridor would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the majority of the property, and would reduce the development potential and may reduce the feasibility of the proposed business park. As such, alternative development sites within the area would need to be investigated. The option could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access. This option passes to the north of the Elizabeth Drive landfill site, but south of the Twin Creeks Golf and Country Club residential estate. This provides a beneficial outcome by forming a barrier between the two incompatible land uses. The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated for property lots to be viable for the growth area, a minimum depth of 600 metres is required from Elizabeth Drive. This option passes in excess of 900 metres north of Elizabeth Drive for the majority of its length and would not constrain any rezoning proposal for the WSPGA. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be determined fully. However, should the zoning become commercial and industrial, there would be a substantial change in land use. The option would also interface with the new road hierarchy for the WSPGA, including the proposed extension of Devonshire Road to Mamre Road. A longer access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA. In relation to the connection with the airport, this option would need to consider the South West Rail Link Extension as it traverses north from the airport site.</td>
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## Route option

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<thead>
<tr>
<th>Land use assessment</th>
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<tbody>
<tr>
<td>An approved development application for a cemetery exists at a property located partially in the option, and may affect the northern extent. This is on a property of rural residential land use, which is in ready supply in the study area. Should the site be no longer viable, alternative sites could be present in the surrounding area. In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.</td>
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## Modified Pink option

<table>
<thead>
<tr>
<th>Land use zones:</th>
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</thead>
<tbody>
<tr>
<td>RU1 Primary production,</td>
</tr>
<tr>
<td>RU2 Rural landscape</td>
</tr>
<tr>
<td>RU4 Rural small holdings,</td>
</tr>
<tr>
<td>E2 Environmental conservation (around creek lines)</td>
</tr>
<tr>
<td>E4 Environmental living</td>
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<tr>
<td>Western Sydney Parkland.</td>
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</tbody>
</table>

The main land use activities that are within the route option include:

- Agricultural land uses (61.8 per cent of the option)
- Recreational land uses (14.5 per cent of the option)
- Transport and other options (11.5 per cent of the option)
- Rural residential and urban residential land uses (3.7 per cent of the option)
- Industrial land uses (2.3 per cent of the option).

Through the Western Sydney Parklands, this option would pass through 102.35 hectares of parklands. The area of Western Sydney Parklands to be impacted is located north and south along Elizabeth Drive. To the south of Elizabeth Drive, this would create an edge effect to the parklands and would not create a severance effect. There would be limited opportunities to relocate the land use impacts on the Western Sydney Parklands. The option would have a large impact on the existing bike
<table>
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<tr>
<th>Route option</th>
<th>Land use assessment</th>
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<tr>
<td>trails in the Wylde Mountain Bike Trail facility that would require some redevelopment to create smaller trails or may require increasing the size of the overall facility across adjoining land. In terms of future land use, the option would impact on the future development of the Western Sydney Parklands, particularly the proposed locations of the Wallgrove Road and Elizabeth Drive business hubs. These commercial activities in the parklands are used as a source of income for the parklands. The disturbance of these sites would remove a potential source of income for the parklands and if required, would need to be relocated elsewhere in the remaining parklands. Land uses affected are in ready supply in the study area. The option would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the northern extent of the property, reducing its frontage to Elizabeth Drive and could reduce the developmental yield potential of the property. The option could constrain some land use development as it would result in some land not having road access. The future development of adjacent land would then be dependent on the construction of new roads to provide access. An approved development application for a mosque is situated on a property located wholly in the option. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres for development to provide a viable lot. This option would not achieve the minimum depth for land on Elizabeth Drive along the majority of its length, which could affect the potential for rezoning. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should the zoning become commercial and industrial, there would be a substantial change in land use. The option would not constrain this type of development. The option would also interface with the new road hierarchy for WSPGA, including the proposed extension of Devonshire Road to Mamre Road. A shorter access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA. In relation to the connection with the airport, this option would also need to consider the South West Rail Link Extension as it traverses north from the airport site.</td>
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<tr>
<td>Route option</td>
<td>Land use assessment</td>
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<td></td>
<td>An approved development application for a cemetery exists at a property located partially in the option, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained. In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.</td>
</tr>
</tbody>
</table>

| Modified Purple option | This option includes the following land use zones:  
  - RU1 Primary production,  
  - RU2 Rural landscape  
  - RU4 Rural small holdings,  
  - E2 Environmental conservation (around creek lines)  
  - E4 Environmental living  
  - Western Sydney Parkland.  
  
  The main land use activities that are within the route option include:  
  - Agricultural land uses (66.1 per cent of the option)  
  - Recreational land uses (13.5 per cent of the option)  
  - Transport and other options (9.9 per cent of the option)  
  - Industrial land uses (2.2 per cent of the option)  
  - Rural residential and urban residential land uses (1.5 per cent of the option).  
  
  Through the Western Sydney Parklands, this option would pass through 102.35 hectares of parklands. The area of Western Sydney Parklands to be impacted is located north and south along Elizabeth Drive. To the south of Elizabeth Drive, this would create an edge effect to the parklands and would not create a severance effect. There would be limited opportunities to relocate the land use impacts on the Western Sydney Parklands. The option would have a large impact on the existing bike |
Route option | Land use assessment
---|---
trails in the Wylde Mountain Bike Trail facility that would require some redevelopment to create smaller trails or may require increasing the size of the overall facility across adjoining land.

In terms of future land use, the option would impact on the future development of the Western Sydney Parklands, particularly the proposed locations of the Wallgrove Road and Elizabeth Drive business hubs. These commercial activities in the parklands are used as a source of income for the parklands. The disturbance of these sites would remove a potential source of income for the parklands and if required, would need to be relocated elsewhere in the remaining parklands.

Land uses affected are in ready supply in the study area. The option would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the northern extent of the property, reducing its frontage to Elizabeth Drive and could reduce the developmental yield potential of the property.

The option could constrain some land use development as it would result in some land not having road access. The future development of adjacent land would then be dependent on the construction of new roads to provide access.

An approved development application for a mosque is situated on a property located wholly in the option. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area.

The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated that the minimum distance from Elizabeth Drive should be at least 600 metres for development to provide a viable lot. This option would not achieve the minimum depth for land on Elizabeth Drive along the majority of its length, which could affect the potential for rezoning. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be accurately assessed. However, should the zoning become commercial and industrial, there would be a substantial change in land use. The option would not constrain this type of development.

The option would also interface with the new road hierarchy for WSPGA, including the proposed extension of Devonshire Road to Mamre Road.

A shorter access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA.

In relation to the connection with the airport, this option would also need to consider the South West Rail Link Extension as it traverses north from the airport site.
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| Modified White option | This option includes the following land use zones:  
- RU1 Primary production,  
- RU2 Rural landscape  
- RU4 Rural small holdings,  
- E2 Environmental conservation (around creek lines)  
- E4 Environmental living  
- Western Sydney Parkland.  

The main land use activities that are within the route option include:  
- Agricultural land uses (65.1 per cent of the option)  
- Recreational land uses (13.6 per cent of the option)  
- Transport and other options (10.7 per cent of the option)  
- Rural residential and urban residential land uses (3.1 per cent of the option)  
- Industrial land uses (1.1 per cent of the option).  

Through the Western Sydney Parklands, this option would pass through 102.35 hectares of parklands. The area of Western Sydney Parklands to be impacted is located north and south along Elizabeth Drive. To the south of Elizabeth Drive, this would create an edge effect to the parklands and would not create a severance effect. There would be limited opportunities to relocate the land use impacts on the Western Sydney Parklands. The option would have a large impact on the existing bike
trails in the Wylde Mountain Bike Trail facility that would require some redevelopment to create smaller trails or may require increasing the size of the overall facility across adjoining land.

In terms of future land use, the option would impact on the future development of the Western Sydney Parklands, particularly the proposed locations of the Wallgrove Road and Elizabeth Drive business hubs. These commercial activities in the parklands are used as a source of income for the parklands. The disturbance of these sites would remove a potential source of income for the parklands and if required, would need to be relocated elsewhere in the remaining parklands.

Land uses affected are in ready supply in the study area. The option would pass through a property of currently undeveloped land that is proposed to be developed into a business park. This option would pass through the northern extent of the property, reducing its frontage to Elizabeth Drive and could reduce the developmental yield potential of the property.

The option could also constrain some land use development as it would result in some land not having road access. The future development of these sites would then be dependent on the construction of new roads to provide access.

This option passes to the north of the Elizabeth Drive landfill site, but south of the Twin Creeks Golf and Country Club residential estate. This provides a beneficial outcome by forming a barrier between the two incompatible land uses.

The option also passes through land that has been identified as the WSPGA. The Department of Planning and Environment has indicated for property lots to be viable for the growth area, a minimum depth of 600 metres is required from Elizabeth Drive. This option passes in excess of 900 metres north of Elizabeth Drive along the majority of its length and would not constrain any rezoning proposal for the WSPGA. At the time of writing this report, there was no structure or zoning plan available for the WSPGA and as such potential impacts cannot be determined fully. However, should the zoning become commercial and industrial, there would be a substantial change in land use.

The option would also interface with the new road hierarchy for WSPGA, including the proposed extension of Devonshire Road to Mamre Road.

A longer access road to the western Sydney airport at Badgerys Creek would be required. The access road to the airport could facilitate support services being established along the route. However, this would be in direct response to the operation of an airport, rather than the M12 Motorway and would be dependent on the zoning of the WSPGA.

In relation to the connection with the airport, this option would need to consider the South West Rail Link Extension as it traverses north from the airport site.
## Land use assessment

An approved development application for a cemetery exists at a property located partially in the option, and may affect its access. This is on a property of rural residential land use, which is in ready supply in the study area. An alternative site could be present in the surrounding area. Or should it continue at the present location, access would need to be maintained.

In terms of current and future infrastructure projects in the study area, all options would need to consider the interaction with The Northern Road project and the Outer Sydney Orbital.

### Modified Yellow option

This option includes the following land use zones:

- RU1 Primary production,
- RU2 Rural landscape
- RU4 Rural small holdings,
- E2 Environmental conservation (around creek lines)
- E4 Environmental living
- Western Sydney Parkland.

The main land use activities that are within the route option include:

- Agricultural land uses (69.1 per cent of the option)
- Recreational land uses (12.6 per cent of the option)
- Transport and other options (9.3 per cent of the option)
- Rural residential and urban residential land uses (3.1 per cent of the option)
- Industrial land uses (1.1 per cent of the option).

Through the Western Sydney Parklands, this option would pass through 102.35 hectares of parklands. The area of Western Sydney Parklands to be impacted is located north and south along Elizabeth Drive. To the south of Elizabeth Drive, this would create an edge effect to the parklands and would not create a severance effect. There would be limited opportunities to relocate the land use impacts on the Western Sydney Parklands. The option would have a large impact on the existing bike
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5 Future steps

5.1 Further investigations

Roads and Maritime will continue to carry out investigations to identify environmental constraints and potential impacts during the future stages of the M12 Motorway project.

Roads and Maritime will continue to consult with property owners and stakeholders to discuss progress and status of the project and integration with other developments and infrastructure projects in the area.

Key stakeholders include:

- Western Sydney Parklands Trust
- Commonwealth Department of Infrastructure and Regional Development
- NSW Department of Planning and Environment
- Transport for NSW
- Liverpool City Council
- Fairfield City Council
- Penrith City Council.
6 References

6.1 Reports/documents

- Department of Infrastructure and Regional Development; Western Sydney airport draft Environmental Impact Statement; Canberra; 2015
- Western Sydney Parklands Trust; Western Sydney Parklands Plan of Management 2020; Parramatta; 2010.

6.2 Legislation and government plans

- Penrith Local Environmental Plan 2010
- Penrith Local Environmental Plan (Glenmore Park Stage 2) 2009
- Liverpool Local Environmental Plan 2008
- Fairfield Local Environmental Plan 2013.

6.3 Databases

- ABS Australia; Analysis of Population Census and Agriculture Census Data in Sydney Statistical Division; Canberra; 2010.