



Downer Western Sydney Sustainable Road Resource Centre | State Significant Development  
**SCOPING REPORT**

Prepared for Downer EDI Works Pty Ltd | 6 November 2020



el  
em  
ent.



# Downer Western Sydney Sustainable Road Resource Centre

## STATE SIGNIFICANT DEVELOPMENT | SCOPING REPORT

Prepared for Downer EDI Works Pty Ltd  
6 November 2020

PR106

Prepared by		Reviewed by
Name	Mark Ryan	Mark Roberts
Company	Element Environment	Element Environment
Position	Senior Environmental Consultant	Senior Environmental Consultant
Project Role	Lead Author	Technical Reviewer
Signature		
Date	4 November 2020	6 November 2020

This report has been prepared in accordance with the scope of services set out in the contract between Element Environment Pty Ltd and the client. The report is for the use of the client and no responsibility will be taken for its use by other parties.

© 2020 Reproduction of this report is prohibited without Element Environments prior written permission.

## DOCUMENT CONTROL

Revision	Date	Description	Prepared by	Reviewed by
0	17 September 2020	For Downer review	Element Environment	Downer EDI Works Pty Ltd
1	16 October 2020	For submission to DPIE	Element Environment	Downer EDI Works Pty Ltd
1	6 November 2020	For re-submission to DPIE	Element Environment	Downer EDI Works Pty Ltd

# Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>3</b>
1.1	Overview	3
1.2	Proponent	3
1.3	Purpose of this report	3
<b>2</b>	<b>PROJECT OVERVIEW</b>	<b>6</b>
2.1	Project description	6
2.1.1	Existing activities	6
2.1.2	Proposed activities	6
2.2	Alternatives considered	16
2.3	Site details	16
2.4	Baseline information and environmental setting	16
2.4.1	Transport	16
2.4.2	Topography and waterways	17
2.4.3	Protected areas	17
2.4.4	Geology, soils, salinity and groundwater	17
2.4.5	Sensitive receivers	18
2.4.6	Heritage	19
2.4.7	Biodiversity	19
2.4.8	Bushfire prone land	19
2.4.9	Air quality	19
2.4.10	Noise	20
<b>3</b>	<b>STRATEGIC AND STATUTORY CONTEXT</b>	<b>25</b>
3.1	Greater Sydney Region Plan and Western City District Plan	25
3.2	Western Sydney Aerotropolis Plan	26
3.3	Western Sydney Aerotropolis SEPP	27
3.4	State significant development	28
3.5	Other SEPPs	31
3.5.1	SEPP (Sydney Region Growth Centres) 2006	31
3.5.2	SEPP 33 (Hazardous and Offensive development).	31
3.6	Other approvals and licenses	31
<b>4</b>	<b>MATTERS AND IMPACTS</b>	<b>34</b>
4.1	Scoping worksheet	34
4.2	Key matters	34
4.2.1	Aboriginal cultural heritage	34
4.2.2	Access – road network	35
4.2.3	Atmospheric emissions – particulate matter and odour	35
4.2.4	Amenity – noise	36
4.2.5	Hazards and risks and water – floods and surface water quality	37
4.2.6	Contamination	37
4.3	Other matters	37
4.3.1	Hazard and risks – bushfire	37
4.3.2	Hazard and risks – dangerous goods and hazardous and/or offensive development	38
4.3.3	Amenity – visual impacts	38
4.4	Scoping only matters	38

4.5	Cumulative impacts	40
<b>5</b>	<b>COMMUNITY AND STAKEHOLDER ENGAGEMENT</b>	<b>45</b>
5.1	Scoping phase engagement	45
5.2	Proposed EIS engagement	45
5.3	Future project stages and opportunities for engagement	45
<b>6</b>	<b>CONCLUSION</b>	<b>49</b>

## Tables

Table 1.1	Proponent details	3
Table 2.1	Intersection LoS criteria	16
Table 2.2	Air quality measurements for Bringelly and Liverpool	19
Table 2.3	Ambient noise and rating background levels	20
Table 2.4	Existing traffic noise levels	20

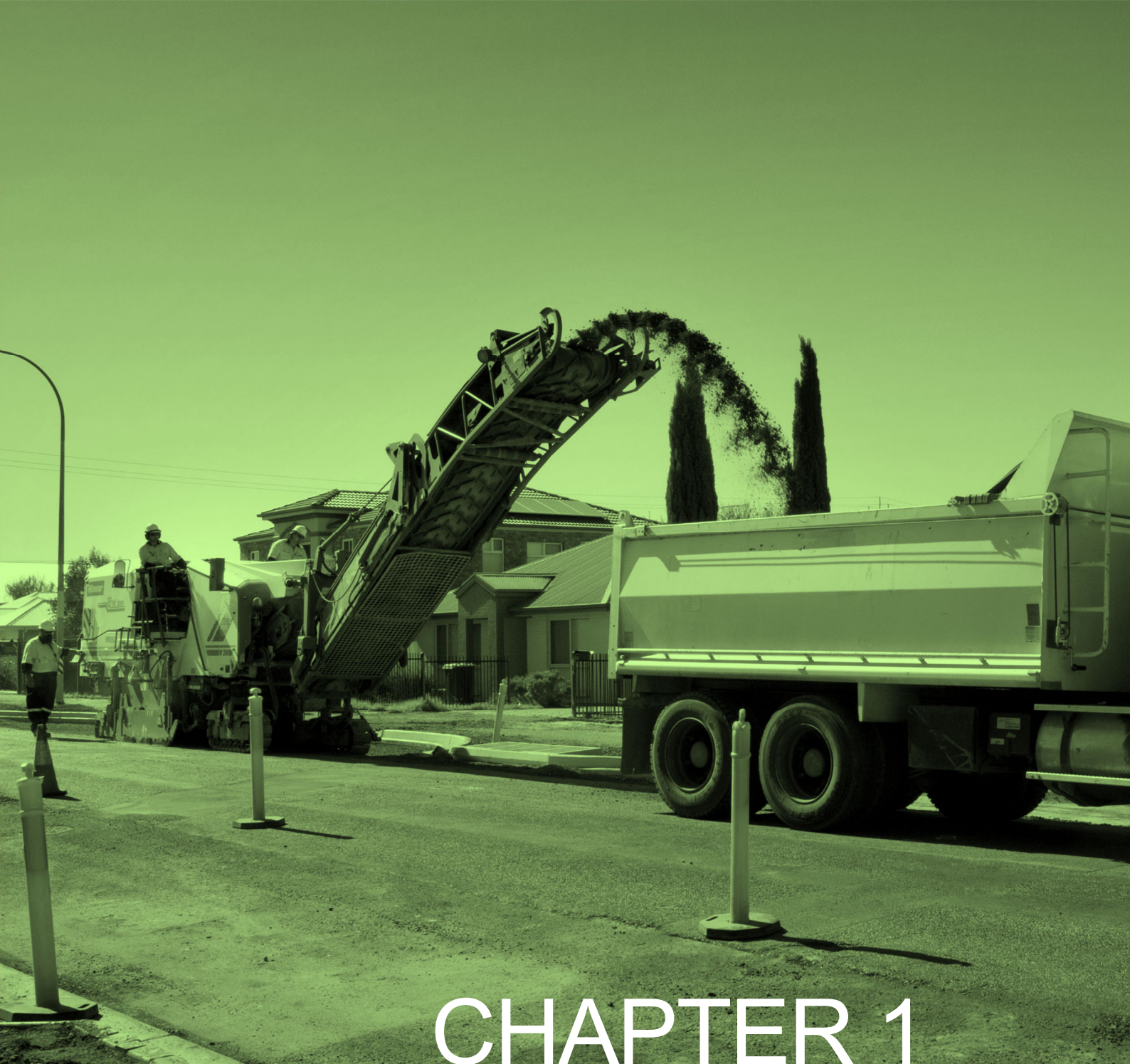
## Figures

Figure 2.1	Local context	11
Figure 2.2	The project	12
Figure 2.3	Indicative asphalt plant	13
Figure 2.4	Detritus plant	14
Figure 2.5	RAP and C&D waste processing and blending plants	15
Figure 2.6	Heritage and biodiversity	21
Figure 2.7	Bushfire prone land	22
Figure 3.1	Western Sydney Aerotropolis precincts	29
Figure 3.2	Western Sydney Aerotropolis zoning	30

## Appendices

APPENDIX A	SCOPING WORKSHEET	51
------------	-------------------	----





# CHAPTER 1

INTRODUCTION



# 1 INTRODUCTION

## 1.1 Overview

This scoping report has been prepared by Element Environment Pty Limited (Element) on behalf of Downer EDI Works Pty Ltd (Downer) for submission to the NSW Department of Planning, Industry and Environment (DPIE) to gain Secretary's environmental assessment requirements (SEARs) for the construction and operation of an asphalt plant, Reconomy facility and bitumen products plant (the project) at 230 Martin Road, Badgerys Creek (the site).

## 1.2 Proponent

Downer is the proponent for the project and its company and contact details are in Table 1.1.

**Table 1.1 Proponent details**

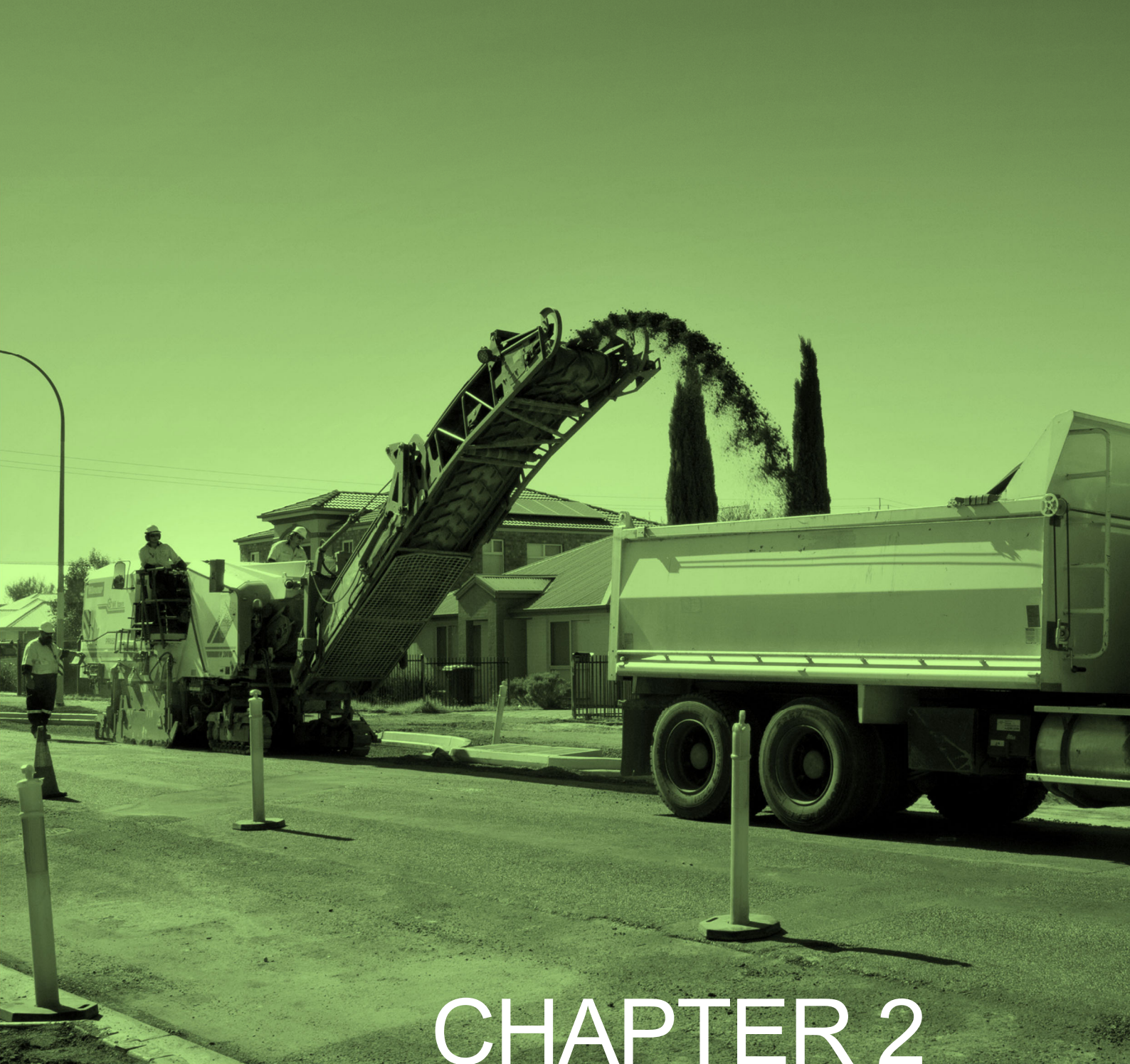
Item	Detail
Project contact	Downer EDI Works Pty Ltd
Postal address	L2 Triniti 3, Triniti Business Campus, 39 Delhi Road, North Ryde, NSW 2113
ABN	66 008 709 608
Report authors	Mark Ryan (M.Soc.Sci (Env Mgnt)), Mark Roberts (B. Env. Science).
Site owner	Private

## 1.3 Purpose of this report

This report describes the following to assist DPIE prepare the SEARs for the environmental impact statement (EIS) accompanying the development application (DA):

- nature, scale, and extent of the project;
- environmental context of the site;
- planning, legislative and policy context of the project;
- environmental matters likely requiring further assessment in the EIS; and
- community and stakeholder engagement for the scoping and EIS stages of the project.





# CHAPTER 2

PROJECT OVERVIEW



## 2 PROJECT OVERVIEW

### 2.1 Project description

#### 2.1.1 Existing activities

The site is undeveloped and is used for grazing. The site is cleared of vegetation apart from scattered individual or isolated stands of trees. There is riparian vegetation along South Creek.

#### 2.1.2 Proposed activities

The application proposes the construction and operation of a:

- Asphalt plant.
- Reconomy facility.
- Bitumen products manufacturing plant.

The project site is shown on Figure 2.1 and Figure 2.2.

#### Earthworks

The project will require bulk earthworks to establish a suitable platform(s) on which to construct the Sustainable Road Resource Centre. As discussed further in sections 3.2 and 3.3, the western third of the site is above the (1% annual exceedance probability (AEP)) flood level while the eastern two-thirds of the site is below the 1% AEP flood level. This significantly constrains the area of land available for development if no development was to occur within the 1% AEP flood extent.

There are significant sustainability benefits to the co-location of all the proposed project components on one site and to achieve this the project requires a minor encroachment into the western edge of the South Creek 1% AEP flood extent as shown on Figure 2.2.

However, earthworks will raise the finished floor level of the development to above the 1% AEP flood level.

#### Asphalt plant

A fixed asphalt plant will produce up to 550,000 tonnes per annum (tpa) of asphalt and will comprise:

- Ground bins to receive aggregate and reclaimed asphalt pavement (RAP).
- Aggregate feed bins and conveyors to weigh and transport aggregates to a dryer drum.
- RAP feed bins and conveyors to weigh and transport RAP to a double drum mixer.
- Double-barrel dryer drum with inside chamber to dry and heat virgin aggregate material.
- Hot bitumen storage tanks with bitumen pumped to the double drum mixer.
- Lime filler silo to receive lime and conveyors to double drum mixer.
- Recycled filler silo for storage of baghouse reclaimed fines and conveyors to the double drum mixer.
- Double-barrel drum transfers heated aggregate material to the outer shell chamber to mix heated aggregate with measured proportions of bitumen, RAP and other additives in a continuous process.
- Produced homogeneous asphalt mixture is transferred with a drag slat conveyor to asphalt silo bins for finished product storage and discharge for loading asphalt trucks.
- Fabric filter baghouse for cleaning exhaust gases from the dryer.

- Fan and stack for exhausting the gases from the baghouse.
- Control room containing plant switchboard and controls.
- Soap spray station for lining truck trays with an anti-stick film.

Operation of the asphalt plant will comprise:

- Delivery of aggregates, sand, lime and bitumen by truck and some internal deliveries of material from the Reconomy facility.
- Feeding of sand and aggregates to a dryer drum for heating to 160°C and mixing with bitumen and other weighed additives in a continuous process that creates a homogeneous asphalt mixture.
- Finished asphalt product conveyed to individual product silos to store and load into trucks when required.

An isometric view of the type of asphalt plant that could be selected for the project and a photograph of an existing similar asphalt plant erected on one of Downer's other sites are shown in Figure 2.3. Depending on the ultimate model of asphalt plant selected, the height of the tallest component of the plant is likely to range between 24 m and 36 m.

### Reconomy facility

Downer proposes to construct a Reconomy facility that receives and processes various waste materials so they can be beneficially reused on-site in the production of asphalt and sold into the Sydney construction market.

The Reconomy facility would process up to 500,000 tpa of the following materials:

- Street sweepings.
- Gully pit (gross pollutant trap) arisings.
- Hydro-excavation material (non-destructive digging muds).
- Low-level contaminated spoil (typically a waste material from construction projects comprising a mixture of soil (sand, stone and silt) with low levels of contamination. This waste is classified as a general solid waste).
- Material recycling facility (MRF) glass fines.
- Reclaimed asphalt pavement (RAP).
- Construction and demolition waste (C&D) (eg concrete).

### **Material from road maintenance contracts, low-level contaminated spoil and MRF glass fines**

Street sweepings, gully pit waste, hydro-excavation material, low-level contaminated spoil and MRF glass fines will be processed in a Detritus plant. A Detritus plant is a wash plant that uses mechanical and chemical processes to recover raw materials from waste and decontaminate these materials so they are safe for re-use in the production of asphalt and other road construction materials.

Isometric views of the type of Detritus plant that could be selected for the project are shown in Figure 2.4.

The Detritus plant process involves the following:

- Vehicles will deposit dry and semi-dry gully pit and street sweepings waste as well as glass fines and low-level contaminated spoil into covered ground level storage bays.
- Wet waste from non-destructive digging is deposited into a below ground concrete pit.
- A front-end loader/excavator will load the material into the reception hopper of the Detritus plant.
- The Detritus plant will generally include conveyors, reclaimers, screens, log washer, clarifier, pumps, separators, chemical dosing system, centrifuge and settlement tanks.

- Material will be washed and separated during the recovery process and temporarily stockpiled adjacent to the Detritus plant at the separation points and removed as required.
- MRF glass fines will be washed in the Detritus plant.
- Low-level contaminated spoil will be processed through the Detritus plant in the same way as the non-destructive diggings mud.
- Recovered aggregates, sand and glass fines will be beneficially reused almost immediately in the adjacent asphalt plant and will require external storage bays as a collection point prior to transport to the asphalt plant.

Downer intends to beneficially reuse the recovered aggregates, sand and glass fines for application to roads. The proposed beneficial reuse of recovered aggregate, sand and glass fines will reduce the use of virgin aggregate and sand from quarries in NSW. Recovered plastics and oil are likely to be incorporated into the production of asphalt and other blended granular road products, replacing filler and/or aggregate.

Downer does not propose to reuse the recovered organic material in the production of asphalt. The recovered organic material will be transported to an approved composting facility eg the adjacent ANL facility for beneficial reuse. Recovered metals will be transported to an appropriate metal recycling facility for beneficial reuse.

Any remaining recovered material which cannot be directly reused in the asphalt plant or other on-site processes could be transported to recycling facilities near the site, for example, SUEZ Kemps Creek Resource Recovery Park.

There will be a water recycling plant to treat water used during the process and a storage tank for future re-circulation of treated water or disposal as trade waste. The water loss factor for the resource recovery plant is low due to a portion of the incoming waste material being wet or semi-dry.

### **Reclaimed asphalt pavement**

Of the 500,000 tpa of waste to be processed by the Reconomy facility, up to 300,000 tpa will be RAP. RAP will be delivered from offsite into the unprocessed RAP stockpiles, where it will be loaded into a crusher and screen plant. The processed RAP will be stockpiled in concrete bunkers and either used in asphalt production or sold for reuse as a pavement construction material.

### **Construction and demolition waste**

Similar to RAP, C&D waste eg concrete will be delivered from offsite into unprocessed material stockpiles. It will be loaded into a crusher and screen plant for processing and then stockpiled in finished product stockpiles.

### **Granular blending plant**

Aggregates, sand and glass fines, recovered from the Reconomy facility and processed RAP, that is not used in the manufacture of asphalt on-site, is either sold in its recovered form or is blended in a granular blending plant to produce other higher value blended products used in the construction industry.

Indicative examples of similar RAP and C&D waste crushing and screening and blending plants that would be used on the project site are shown in Figure 2.5.

### **Bituminous products plant**

A next generation, co-located bitumen emulsion and polymer modified bitumen (PMB) plant is proposed. The blending plant is likely to comprise:

- Tanks for the storage of up to 240 tonnes of hot bitumen, 240 tonnes of PMB and 720,000 litres of emulsions.

- Production of up to 15,000 tpa of blended products.

### Other waste streams

Downer's national laboratory has succeeded in beneficially reusing local and regional waste streams traditionally destined for landfill including (but not limited to):

- Toner from printer cartridges.
- Tyres.
- Reclaimed process sand (e.g. foundry sand & dredging sand).
- Recycled glass fines (described earlier).
- Fly ash.
- Steel furnace slag.

Downer propose to use these wastes in the manufacture of asphalt and other granular blended products at the site.

The beneficial reuse of waste in asphalt and other road construction materials is not only contributing to a lower carbon and ecological footprint, but their combination is also producing higher quality roads. Improvements Downer has discovered include:

- Increases the fatigue life of the asphalt.
- Deformation resistance, increasing product ability to resist damage from heavy traffic.
- Improvement in stiffness.
- Improving bearing capacity to carry heavy traffic.
- Providing the ability to lay a thinner surface, therefore reducing raw material quantities even further.

Asphalt generally comprises:

- Binder (bitumen) – approximately 5%.
- Aggregate – approximately 78%.
- Sand – approximately 15%.
- Filler (lime/fly ash) – approximately 2%.

The proposed beneficial reuse of recovered aggregate, sand and glass from the Reconomy facility and other waste streams for the manufacture of asphalt and other road construction materials will reduce the use of virgin aggregate and sand transported from quarries in NSW. Downer currently uses approximately 20% recovered/recycled materials in the manufacture of asphalt and aims to increase this to more than 30% once road design specifications allow.

### Ancillary infrastructure, hours of operation and employment

The project will also comprise the following ancillary infrastructure to facilitate the above land uses:

- 30 car parking bays.
- Capacity to park 20 trucks.
- Site offices.
- Laboratory.
- Workshop building.
- Weighbridge.
- Stormwater management infrastructure.
- Services and utilities.

The project is proposed to operate 24-hours a day, seven days a week and will likely employ:

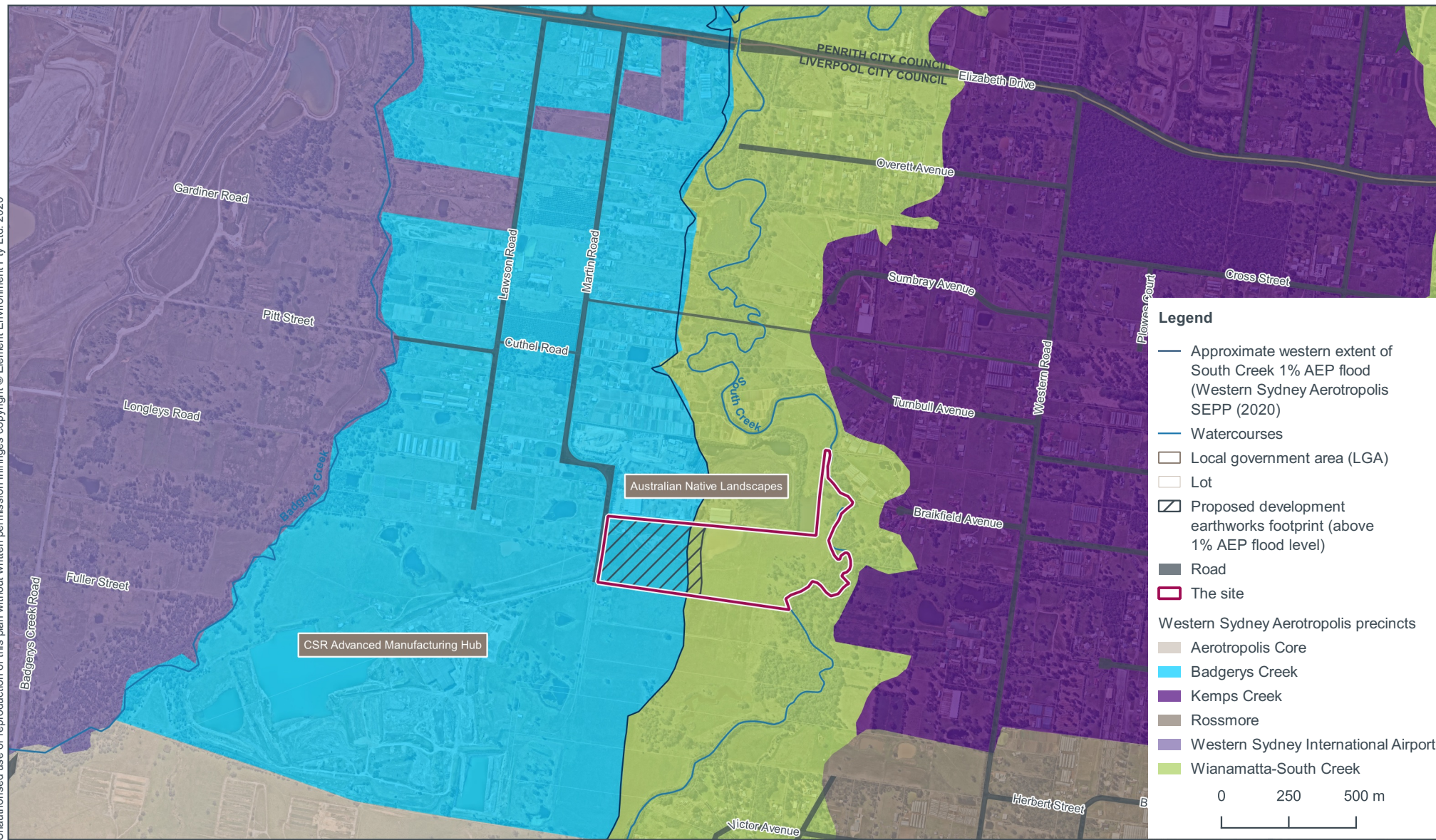
- Reconomy facility – 17 full time equivalent (FTE).

- Asphalt plant – 10 FTE.
- Emulsion plant – five FTE.

Figure 2.1  
Local context

Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT

Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd. 2020



**Legend**

- Approximate western extent of South Creek 1% AEP flood (Western Sydney Aerotropolis SEPP (2020))
- Watercourses
- Local government area (LGA)
- Lot
- ▨ Proposed development earthworks footprint (above 1% AEP flood level)
- Road
- ▭ The site

Western Sydney Aerotropolis precincts

- Aerotropolis Core
- Badgerys Creek
- Kemps Creek
- Rossmore
- Western Sydney International Airport
- Wianamatta-South Creek

0 250 500 m

Figure 2.2  
The project

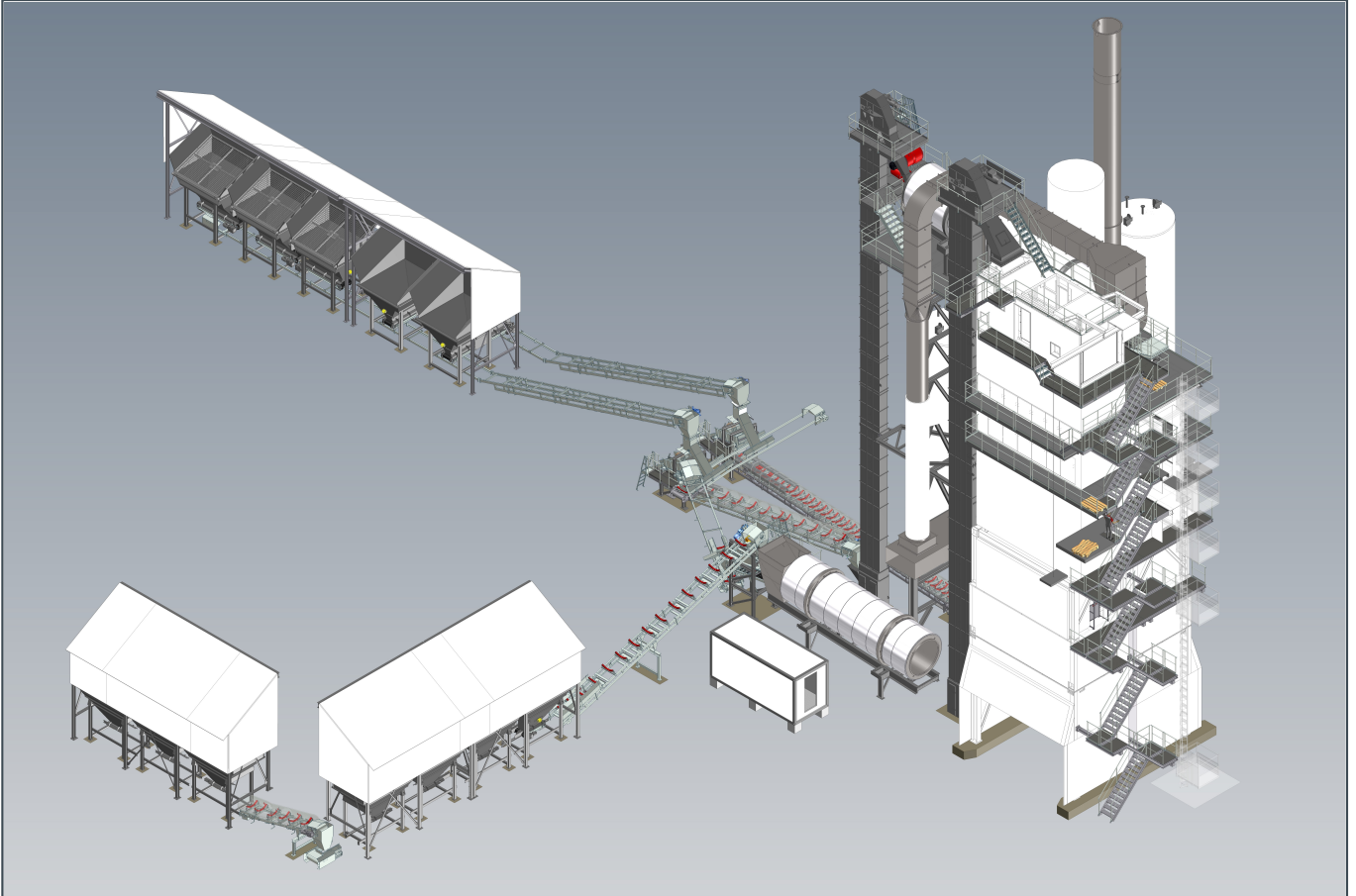
Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT

Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd. 2020



Figure 2.3  
Indicative asphalt plant

Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT



F2.3a: Isometric view



F2.3b: Photograph of similar asphalt plant

Figure 2.4  
Detritus plant

Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT

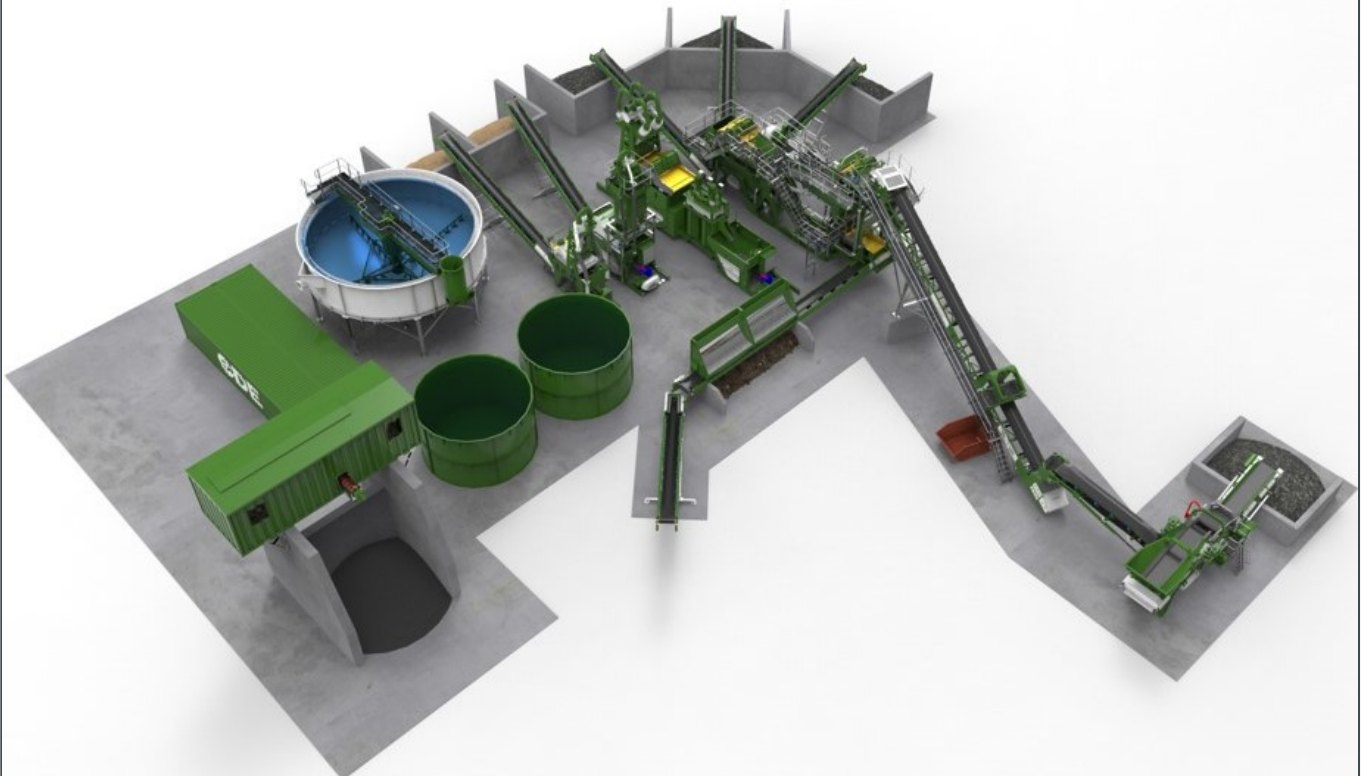
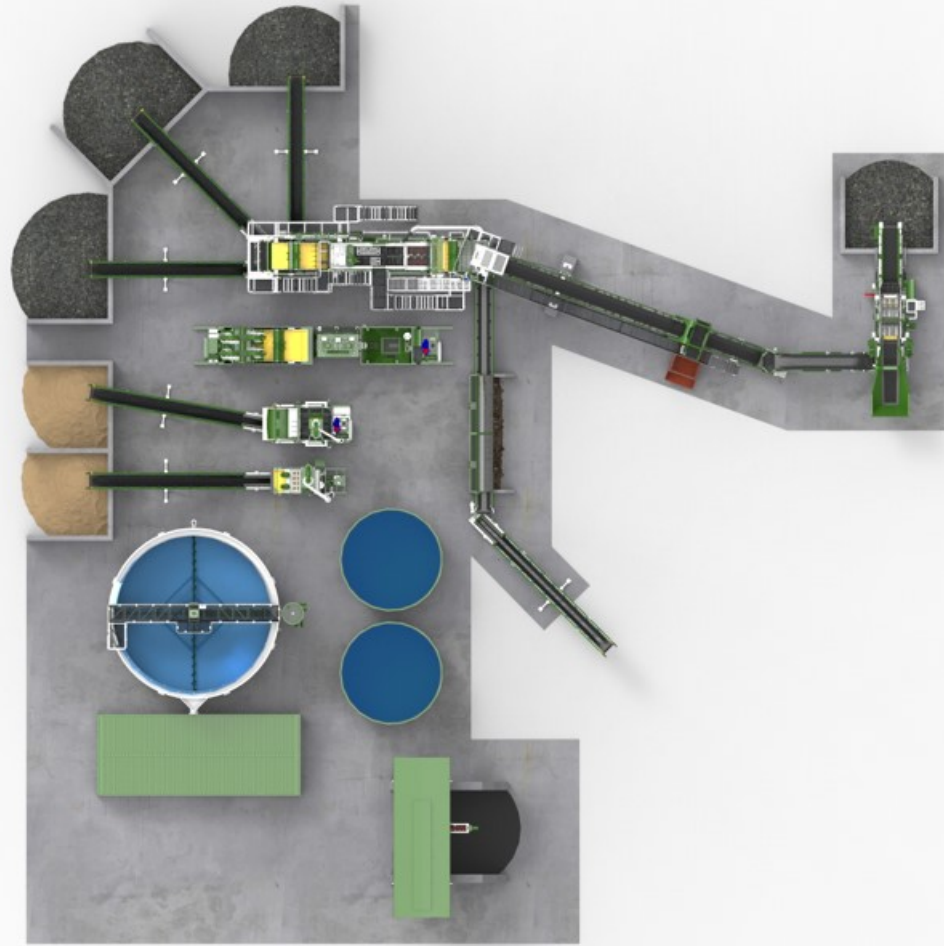
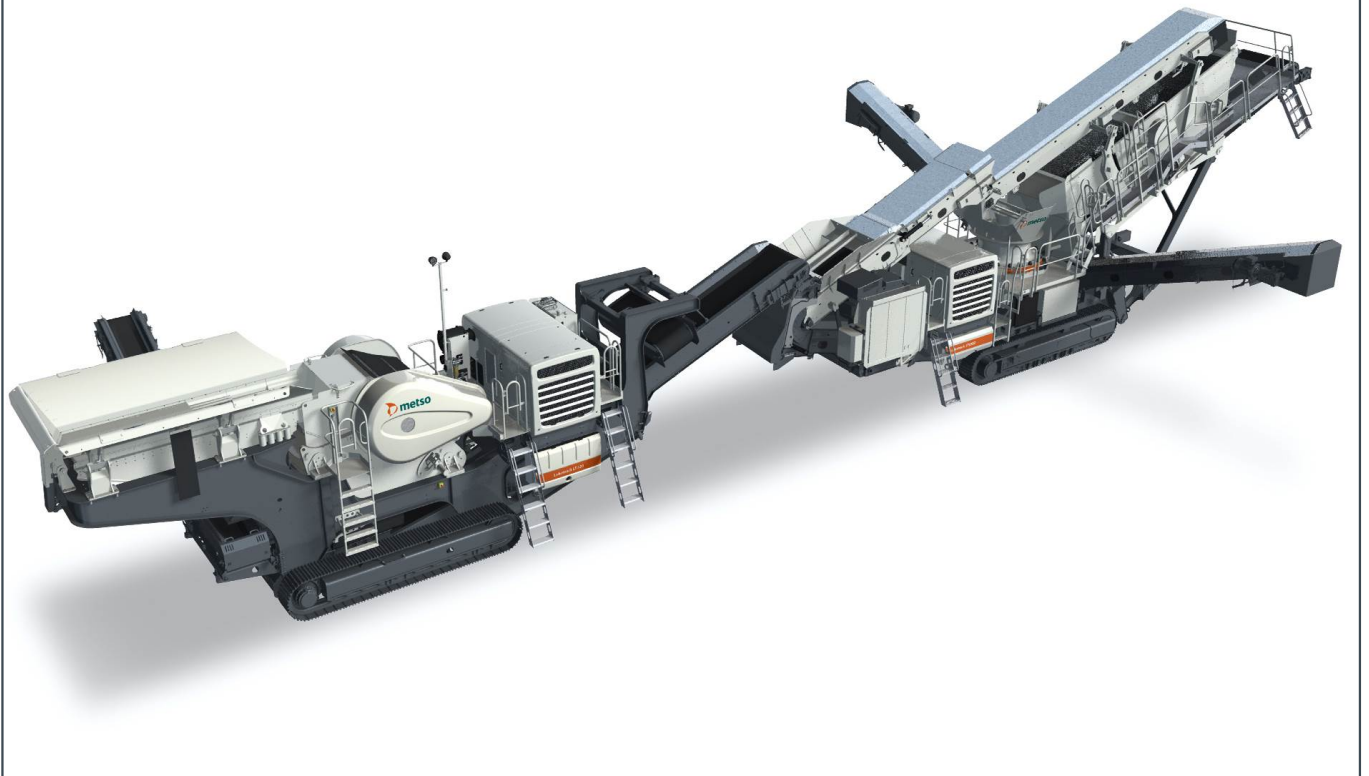


Figure 2.5  
Reclaimed asphalt pavement (RAP) and construction and demolition (C&D) waste processing and blending

Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT



F2.5a: Indicative granular blending plant



F2.5b: Indicative RAP and C&D crusher

Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd., 2020

Source:  
1) Wirtgen Group - [www.wirtgen-group.com/en-us/](http://www.wirtgen-group.com/en-us/)  
2) Metso - [www.metso.com](http://www.metso.com)

## 2.2 Alternatives considered

Downer requires land where industrial uses are permitted in the Badgerys Creek Precinct within the Enterprise Zone in accordance with the Aerotropolis SEPP (refer Section 3.3). 230 Martin Road (Lot A DP 406215) was identified as the only suitably sized property for sale in Badgerys Creek to accommodate the project.

## 2.3 Site details

The site address is 230 Martin Road (Lot A DP406215), Badgerys Creek and is approximately 24 ha in extent, privately owned and has been purchased by Downer (Figure 2.1 and Figure 2.2).

## 2.4 Baseline information and environmental setting

Baseline information has been extracted, where relevant, from a site visit, preliminary environmental investigations and interrogation of latest Nearmap aerial photography and government databases.

### 2.4.1 Transport

The site is accessed from Martin Road, which connects to the wider road network via Elizabeth Drive to the north. Elizabeth Drive is a state arterial road, which has a sealed two-way carriage way with a speed limit of 80 kilometres per hour (kph) in Badgerys Creek.

The Elizabeth Drive and Martin Road intersection is a channelised T-junction with single east and west bound lanes, a left turn deceleration lane, a right turn auxiliary lane to enable the left turn out of Martin Road; and flaring in Martin Road to accommodate a single left and right turning vehicle. There are give way signs on Martin Road and its speed limit at the intersection is 60 kph.

The intersection is approximately 120 m east of the intersection to Kemps Creek Waste Facility, which is a T-junction with a right turning lane in Elizabeth Drive.

Martin Road experiences regular truck movements from surrounding land uses including Australian Native Landscapes (ANL), which borders the site to the north and other agricultural and industrial activities in the area. PGH Bricks clay quarry and brick making facility (referred to as the CSR Advanced Manufacturing Hub) borders the site to the south and south-west at 225 Martin Road. Although it has been in a mothballed state since 2012, operations are likely to recommence on the site in late 2020 under a modified development consent.

### Intersection performance

The performance of the Martin Road-Elizabeth Drive intersection was analysed for the environmental assessment of the modified adjacent CSR Advanced Manufacturing Hub development consent. This study used the SIDRA 8 program to determine the level of service (LoS) in accordance with RMS' (2002) *Guide to Traffic Generating Developments*. The RMS LoS criteria are replicated in **Table 2.1**.

**Table 2.1 Intersection LoS criteria**

LoS	Average delay per vehicle (secs/veh)	Traffic signals, roundabout	Give way & stop signs
A	<14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity

LoS	Average delay per vehicle (secs/veh)	Traffic signals, roundabout	Give way & stop signs
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	>70	Intersection is oversaturated	Oversaturated, requires other control mode

The intersection has LoS B, with acceptable delays and spare capacity. The average delay for the right turn out of Martin Road is between 20.7-27.8 seconds per vehicle. The right turn out of Martin Road, which experiences the longest delays, is the major turning movement in Martin Road.

## 2.4.2 Topography and waterways

The site is in the South Creek catchment, which generally flows in a northerly direction towards the Hawkesbury River. The site is at approximately 50 m Australian Height Datum (AHD) on the western bank of South Creek and slopes gradually from the south-west boundary in a north-easterly direction to the creek. The wider catchment is surrounded by peri-urban residential, agricultural, and industrial land-uses.

Approximately 75% of the site is impacted by the South Creek probable maximum flood line (Advisian; 2019), and high, medium 1% AEP and low flood extents calculated for the Liverpool City Council in 2015 (Figure 2.1 and Figure 2.2).

## 2.4.3 Protected areas

There are no protected areas, such as reserves or national parks, adjacent to the site. The Kemps Creek Nature Reserve is approximately 2.5 km to the east of the site. The upper western section of the site is biodiversity certified land under the NSW *Biodiversity Conservation Act 2016* (Figure 2.6).

## 2.4.4 Geology, soils, salinity and groundwater

### Geology

Based on review of the Sydney 1:100,000 Geological series sheet 9130 (1983), the site is located on middle Triassic aged Wianamatta Group.

The Wianamatta Group is subdivided into the Liverpool and Camden Subgroups. The property is located on the Liverpool subgroup, which comprises three formations:

- Bringelly Shale which consists of shale with occasional calcareous claystone, laminate and infrequent coal;
- Minchinbury Sandstone consisting of fine to medium-grained quartz lithic sandstone; and
- Ashfield Shale formation consisting of laminated dark grey shale and siltsone.

The Wianamatta Group overlies the Triassic aged Hawkesbury Sandstone which consists of medium to coarse-grained quartz sandstone with minor shale and laminated lenses.

## Soils

Based on review of the Soil Landscapes of Penrith Sheet 1:100 000 (1990), the site is within the Blacktown Soil Landscape.

The soils associated with this landscape are typically shallow to moderately deep (<100 cm) hard setting mottled texture contrast soils, red and brown podzolic soils on crests, grading to yellow podzolic soils on lower slopes and in drainage lines.

Given the close proximity of South Creek to the east of site, it is most probable that the soil landscape will change to a fluvial soil landscape classified as South Creek (Bannerman and Hazleton, 1990).

The soils here are often deep layered sediments over bedrock or relict soils comprised of structured plastic clays or loams. Immediately adjacent to drainage lines red and yellow podzolic soils are most common.

## Acid Sulfate Soils

A review of the Acid Sulfate Soil (ASS) Risk map from the Australian Soil Resource Information System (ASRIS) database ([www.asris.csiro.au](http://www.asris.csiro.au)) identified that the site and surrounds are within an area with an 'extremely low probability' of ASS occurrence.

The site is not expected to contain ASS.

## Salinity

The NSW DIPNR (2002) Salinity Potential in Western Sydney 2002 Map indicates that areas immediately adjacent to South Creek have a high salinity potential and areas of known salinity. Moderate potential exists away from the creek line.

This means the soils in these areas have soil, geology, topography and groundwater that can readily produce saline surface conditions.

The site soils are considered likely to have salinity potential which needs to be considered for the construction of buildings and infrastructure.

## Groundwater

A search of DPIE Water's continuous water monitoring network (<http://allwaterdata.water.nsw.gov.au/water.stm>) identified one registered groundwater well (GW105016) located approximately 1km to the north west of the site. The groundwater well was registered for stock and domestic purposes.

There are eight groundwater wells located to the south west of the site associated with the adjacent brick manufacturing facility. The wells were drilled to varied depths between 20-30 m below ground level. The standing water level (SWL) for the wells also varied from 12.70 m to 27.5 m with the majority of wells having a SWL of approximately 22-25m. The water bearing zones of the wells was reported to be in the shale bedrock indicating a fractured rock aquifer.

### 2.4.5 Sensitive receivers

There are residential receivers along Martin Road from the intersection with Elizabeth Drive and to the east of South Creek. ANL shares a common boundary with the site to the north and the CSR Advanced Manufacturing Hub is immediately to the south (Figure 2.1).

## 2.4.6 Heritage

There are no known historic heritage items on the site. Kelvin Park (Cottageville or retreat Farm) is the nearest historic heritage item to the site (approximately 3.5 km to the south in Bringelly) and demonstrates nineteenth century farm estate architecture, planning and design.

As detailed in Section 4.2.1, a preliminary Aboriginal heritage assessment of the site was undertaken by Artefact Heritage involving both a desktop assessment and site inspection. A search of the Aboriginal Heritage Information Management System (AHIMS) on 22 March 2020 confirmed that there are no known Aboriginal heritage items on the site and there are five Aboriginal items within 450 m of the site, with one adjacent to the southern site boundary (Figure 2.6). No unrecorded Aboriginal sites were identified during the site inspection.

## 2.4.7 Biodiversity

The site is mostly cleared of vegetation for grazing but contains alluvial woodland along South Creek (Figure 2.6). The upper western portion of the site (approximately 6 ha) is biodiversity certified land.

## 2.4.8 Bushfire prone land

The site contains bushfire prone land (vegetation category 1) along South Creek (Figure 2.7). The project will be limited to the western part of the site, away from South Creek, therefore, the potential bushfire risk is low.

## 2.4.9 Air quality

The main sources of air pollution in the area are anthropogenic activities such as motor vehicle exhaust, domestic wood heaters, industrial and agricultural activities.

There is no air quality monitoring data for the site. Background levels for the site were estimated using data from nearby monitoring stations.

Ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, airborne particles and visibility were measured at the Bringelly and Liverpool monitoring sites on Friday 17 April 2020 (12:00 – 13:00 Australian eastern standard time). The ambient air quality monitoring data for the two sites are in Table 2.2.

**Table 2.2 Air quality measurements for Bringelly and Liverpool**

Monitoring station	Ozone (O <sub>3</sub> )	Ozone (O <sub>3</sub> )	Nitrogen dioxide (NO <sub>2</sub> )	Visibility (NEPH)	Carbon monoxide (CO)	Sulfur dioxide (SO <sub>2</sub> )	Particles	
	1-hour average	Rolling 4-hour period	1-hour average	1-hour average	Rolling 8-hour average	1-hour average	PM <sub>10</sub>	PM <sub>2.5</sub>
Bringelly	3.0	2.8		0.06		0.0		0.0
Liverpool	3.1	2.8	0.2	0.07	0.1	0.0	7.3	4.1

Air quality at both monitoring stations is very good, except for ozone (rolling 4-hour average) which is good. Data gaps for nitrogen dioxide (Bringelly), carbon monoxide (Bringelly) and PM<sub>10</sub> (particulate matter with an aerodynamic diameter of 10 µm or less) particles (Bringelly) indicate that an instrument was not online for that period or an average could not be calculated (insufficient hourly data or the pollutant is not measured at the site).

## 2.4.10 Noise

The noise catchment is characterised by rural residential properties and industrial and agricultural activities. Noise sources are vehicles, the operation of ANL and potentially construction of WSA to the west.

Unattended noise monitoring was undertaken for the environmental assessment of the modification to the adjacent CSR Advanced Manufacturing Hub development consent, at three locations in the vicinity of the site. The rating background levels (RBL) were derived from the background noise for day, evening, night and morning shoulder (0500-0700hrs) periods in accordance with the EPA's (2017) *Noise Policy for Industry* (NPI), which are summarised in **Table 2.3**.

**Table 2.3 Ambient noise and rating background levels**

Monitoring location	Period	Noise levels (dBA)	
		RBL	L <sub>Aeq</sub>
L1	Morning shoulder	38	47
	Day	40	50
	Evening	35	43
	Night	34	43
L2	Morning shoulder	38	45
	Day	37	51
	Evening	36	43
	Night	34	42
L3	Morning shoulder	41	47
	Day	38	47
	Evening	38	43
	Night	37	45

Notes: morning shoulder 0500-0700, day 0700-1800, evening 1800-2200, night 2200-0500.

Noise was also monitored at two locations on Martin Road to establish the noise levels at receivers along this road (**Table 2.4**).

**Table 2.4 Existing traffic noise levels**

Monitoring Location	Façade/Free-Field	Day a (LAeq, 15 hour)	Night a (LAeq, 9 hour)
L1	Free-field	53.1	47.9
L2	Free-field	54.1	48.4

a. Day 0700–2200; night 2200–0700.

Figure 2.6  
Heritage and biodiversity

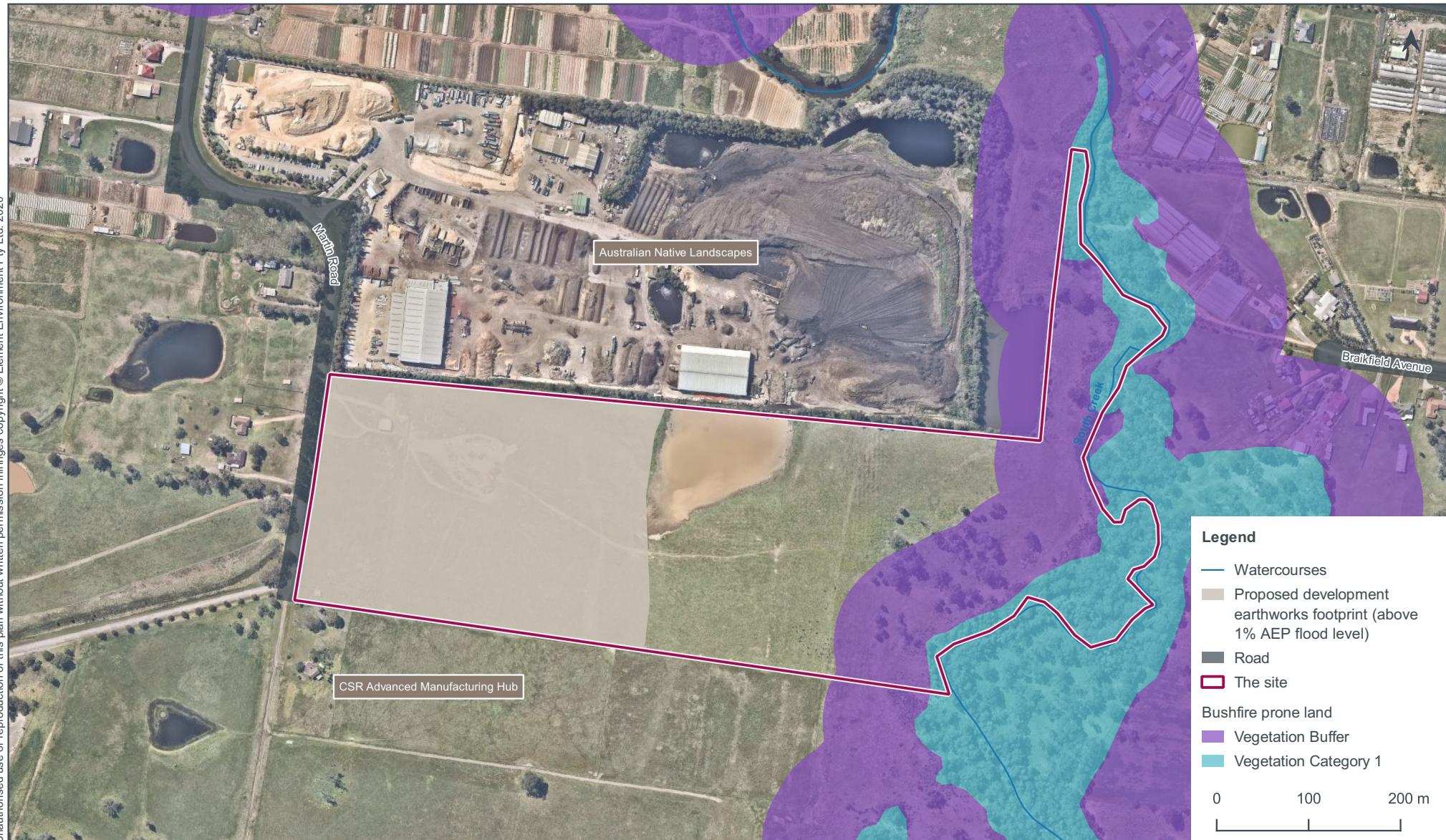
Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT

Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd. 2020



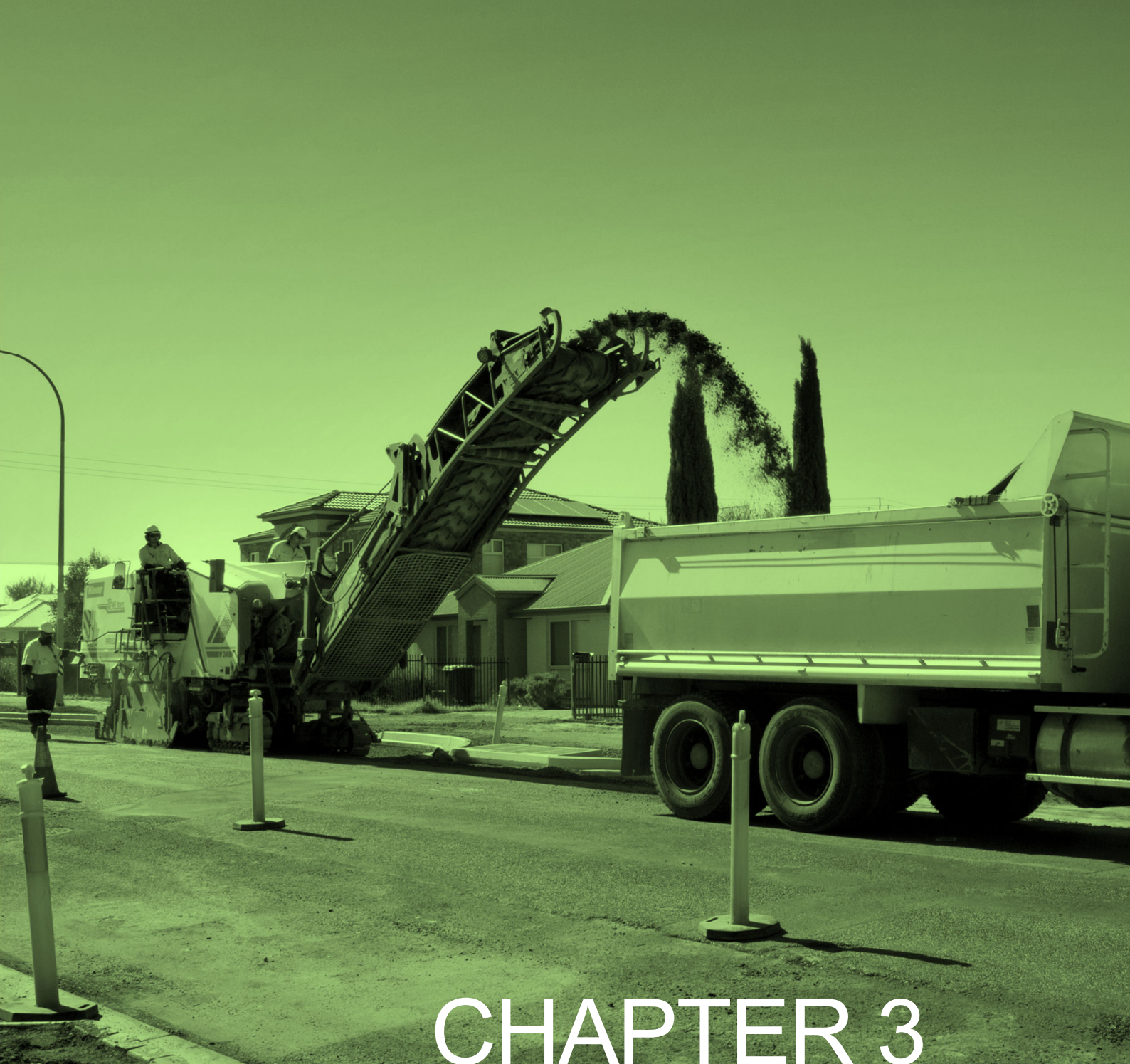
Figure 2.7  
Bushfire prone land

Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT



Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd. 2020





# CHAPTER 3

STRATEGIC AND STATUTORY  
CONTEXT



## 3 STRATEGIC AND STATUTORY CONTEXT

This chapter describes the planning pathway and additional licences/approvals required for the project and the project's locational, environmental and policy/regional land use context. The key legislation and planning policies which will apply to the project are described in this chapter.

### 3.1 Greater Sydney Region Plan and Western City District Plan

The Greater Sydney Region Plan, *A Metropolis of Three Cities* (March 2018) is the region plan for greater Sydney. It is built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places – Western Parkland City, Central River City and Eastern Harbour City. This vision seeks to rebalance the economic and social opportunities and deliver a more equitable Greater Sydney.

Greater Sydney's three cities reach across five districts: Western City District, Central City District, Eastern City District, North District and South District. The Western City District is framed by the region's Protected Natural Area and Metropolitan Rural Area. Its primary focus is the Western Parkland City.

Over the next 20 years the Western Parkland City will transform, drawing on the strength of the new Western Sydney Airport and Badgerys Creek Aerotropolis, and the first stage of a North South Rail Link that will create the opportunity for a Western Economic Corridor. The Western Parkland City will capitalise on the established centres of Liverpool, Greater Penrith and Campbelltown-Macarthur, which form a metropolitan cluster.

The Western City District Plan (March 2018) applies to the site and covers the Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly local government areas (LGA). This is a 20-year plan managing growth in relation to economic, social and environmental matters to achieve the 40-year vision of greater Sydney.

The plan informs local strategic planning statements, local environmental plans, the assessment of planning proposals and community strategic plans and policies. Planning for the WSA will be conducted through the Western Sydney City Deal and collaboration between the Greater Sydney Commission (GSC) and the Australian Federal and NSW governments, and the local governments outlined above.

Planning Priority W8 proposes to leverage the construction of the WSA as an economic catalyst for the area. Section 3.3 establishes that the project will be in the Enterprise Zone of the Badgerys Creek Precinct and aligns with the strategic intent for economic development in the area.

This Planning Priority reinforces the need to:

- support the growth of internationally competitive industry sectors;
- respond to changing technologies;
- plan for tourism and visitation activities; and
- protect and support rural industries.

Planning Priority W19 elevates the importance of reduced carbon emissions and managing energy, water and waste efficiently. Objective 34 elevates the importance of capturing and reusing water and energy. Section 2.1.2 describes how the project meets this goal by:

- recovering aggregates and sand from street sweeping, hydro-excavation and gully waste in the Reconomy facility to divert this material from landfill and reduce the use of virgin aggregate and sand from quarries in NSW;
- incorporating a water recycling plant into the project to recirculate treated water in the process; and recycling of any residual material that cannot be used in the process; and

- processing and reusing RAP in the manufacture of asphalt, and processing and reusing C&D waste and low-level contaminated spoil, thereby diverting these materials from landfill and reducing the use of virgin aggregate and sand from quarries in NSW.

## 3.2 Western Sydney Aerotropolis Plan

The Western Sydney Aerotropolis Plan (September 2020) sets the planning framework for the WSA, Australia's next global gateway focused on the Western Sydney International (Nancy- Bird Walton) Airport (the airport).

The 11,200-hectare WSA surrounds the site of the airport in Badgerys Creek (without including the airport site itself) and is within the Penrith and Liverpool LGAs (Figure 3.1). The Aerotropolis sits within the centre of the Western Parkland City, within a predominantly greenfield area.

Wianamatta–South Creek runs north–south through the eastern third of the Aerotropolis, with a diagonal tributary within the Aerotropolis Core. Wianamatta-South Creek Precinct provides the central green spine of the open space network, placing emphasis on the opportunity to view and manage this waterway as an asset in greenfield developments. Key aspects of this plan include development orientated towards the creek, interconnected waterway focussed land use and infrastructure and the rehabilitation of South Creek and its tributaries. Kemps Creek defines the eastern edge, and Badgerys Creek from the north runs diagonally to the south west. The ridges rise from the largely flat creek floodplain, creating a gentle undulating topography. This form is accentuated by strong lines of tree canopy running along the creek edges in the order of 20 metres in height.

The Western Parkland City will be home to 1.1 million people by 2036 and will experience a significant increase in jobs.

The Aerotropolis contains 10 precincts, six of which will be the focus of initial precinct planning (Figure 3.1).

Initial precincts:

- Aerotropolis Core.
- Agribusiness.
- Badgerys Creek.
- Mamre Road.
- Northern Gateway.
- Wianamatta–South Creek.

Remaining precincts:

- Dwyer Road.
- Kemps Creek.
- North Luddenham.
- Rossmore.

The site falls within two precincts. The western third of the site falls within the Badgerys Creek Precinct while the eastern two-thirds of the site falls within the Wianamatta-South Creek Precinct. South Creek forms the sites eastern boundary.

### **Badgerys Creek Precinct**

The Badgerys Creek Precinct adjoins the airport to the east and will support airport operations, the new urban centre within the Aerotropolis Core to the south and the Northern Gateway to the west. The precinct will meet demand for a range of employment generating uses that benefit from its proximity to airport operations and the new urban centre, but do not require direct access to high capacity public transport. The precinct is not suitable for noise sensitive land uses such as

residential, schools and hospitals. Defence and aerospace and technology-based industry which complements and supports the Aerotropolis Core may also locate here.

This precinct may initially support the infrastructure that enables the construction of the airport and Aerotropolis, boosting the local economy and creating employment opportunities. Some land uses, buildings and structures may be temporary in the short to medium term and transition to higher order uses in the longer term. New enabling industries to facilitate construction of the Aerotropolis may be permitted subject to interface treatments and an ability for the site to transition to higher order uses. Interface treatments may be required between existing rural industries and new land uses until they either transition to other uses or are modernised to co-exist with adjoining land uses. The precinct will be in a green setting with new green linkages and active transport opportunities between Badgerys Creek to the west and Wianamatta–South Creek to the east. Development should take advantages of views to these creek lines surrounding the precinct.

### **Wianamatta-South Creek Precinct**

The Wianamatta–South Creek Precinct is the heart of the Western Parkland City, a culturally rich environment providing critical landscape and ecology systems that help sustain Country. An ephemeral place, its water holes and pools provide important habitat for native wildlife. Part of the broader metropolitan water system, Wianamatta–South Creek will be an important local connector, ecological and community space. This precinct is generally defined by the 1% AEP flood.

The precinct is an important part of the broader Wianamatta–South Creek corridor of creeks, tributaries, parks, walking trails and areas of conservation, defined in the Region Plan vision for the corridor as the defining spatial element of the Western Parkland City.

The project is aligned with the plans for the Badgerys Creek Precinct and is generally aligned with the plans for the Wianamatta-South Creek Precinct as the majority of the proposed development will be outside the South Creek floodplain (except for a minor extension of the proposed earthworks platform into the western edge of the South Creek 1% AEP flood extent) and therefore preserves the central green spine along South Creek.

## **3.3 Western Sydney Aerotropolis SEPP**

The State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (Aerotropolis SEPP) provides the statutory basis to achieve the vision for the Aerotropolis by guiding how land will be zoned, developed and protected.

The Aerotropolis SEPP:

- establishes boundaries and strategic objectives for all precincts, consistent with the WSA Plan
- applies land use zones to the initial precincts
- clarifies requirements for developing near the airport
- provides performance criteria for master plans
- describes the different assessment processes for development applications depending on their nature and scale.

The SEPP also provides aviation safeguarding controls that extend beyond the Aerotropolis to ensure development or activities in the vicinity of the Airport and beyond the Aerotropolis do not negatively impact airport operations and protect the amenity of future residents.

Five broad zoning types are proposed throughout the Aerotropolis (Figure 3.2), allowing for greater site design and flexibility:

- Enterprise Zone.

- Mixed Use Zone.
- Environmental and Recreation Zone.
- Agribusiness Zone.
- SP2 Infrastructure Zone.

The western third of the site within the Badgerys Creek Precinct is zoned Enterprise while the eastern two-thirds of the site within the Wianamatta-South Creek Precinct is zoned Environment and Recreation.

The Enterprise Zone is proposed to permit land uses complementing the functions of the Western Parkland City and the airport as a 24-hour transport hub. The zone will enable uses typically associated with employment lands, supporting a range of commercial and industrial sectors that have synergies with the airport. The zone will also allow for Aerotropolis enabling industries, to facilitate construction of the Aerotropolis (eg production of asphalt), modernised resource recovery industries (eg Reconomy facility.)

Zoning in the Badgerys Creek Precinct will encourage and support industrial and resource recovery activities. Activities permitted with consent will include general industry and waste or resource management facilities. The project will be general industry and a waste and resource management facility.

### 3.4 State significant development

The project is State significant development (SSD) for the following reasons:

- Clause 8 of State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) identifies certain classes of development to be 'State significant development' provided they meet the criteria in Schedule 1 of the SEPP.
- Clause 23 of Schedule 1 of the SRD SEPP is relevant to waste and resource recovery facilities and clause 23(3) states that if a facility handles more than 100,000 tpa of waste, the development is SSD and approval would be required under Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).
- As described in Section 2.1.2, the project will likely handle more than 100,000 tpa of RAP and other waste streams and, therefore, the project is SSD.
- According to Section 4.12(8) of the EP&A Act, a development application for SSD is to be accompanied by an EIS.

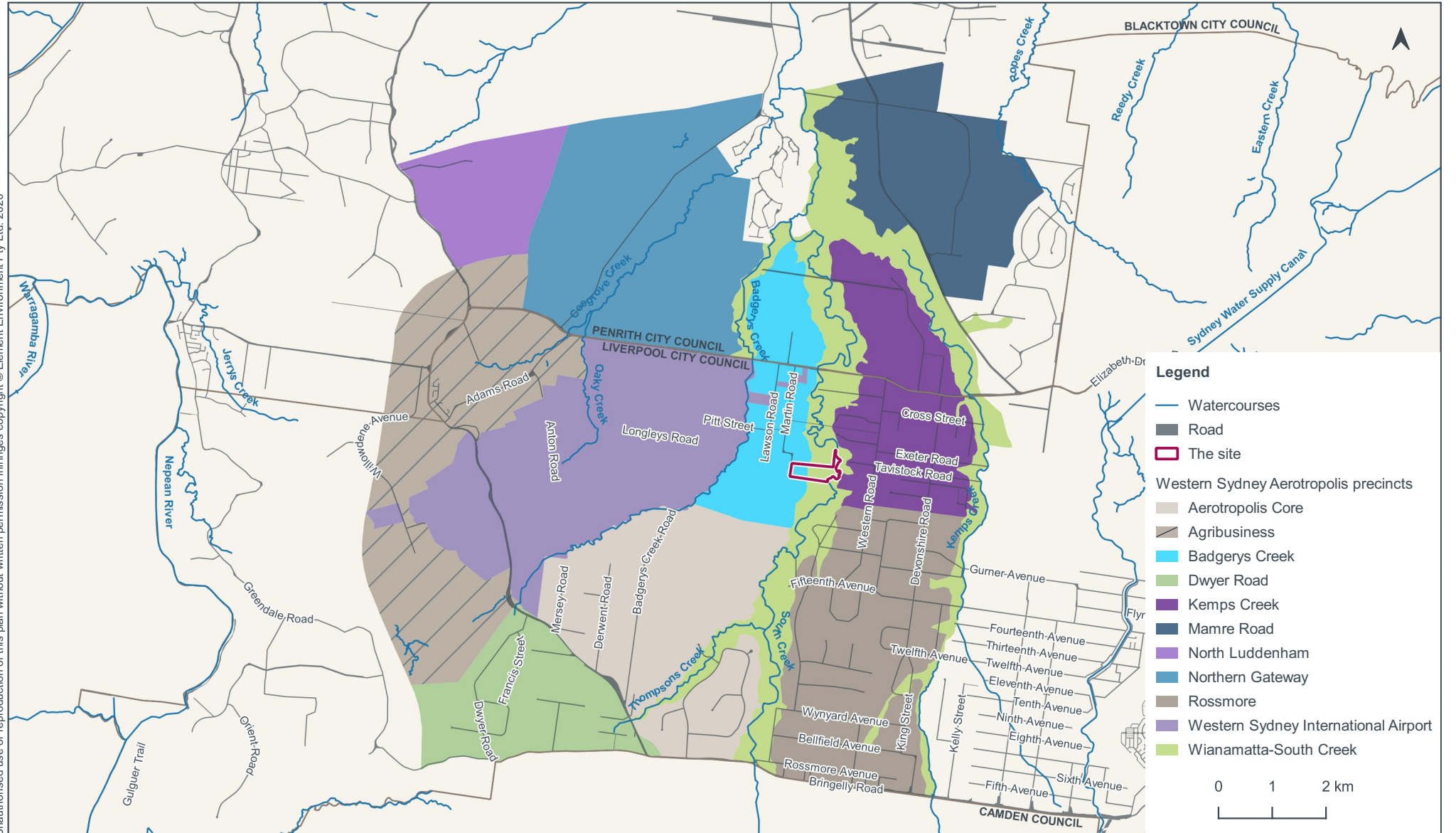
The Minister for Planning and Public Spaces is the consent authority for the following reasons:

- According to Section 4.5(a) of the EP&A Act, the Minister is the consent authority for SSD applications, except in the following cases.
- According to clause 8(A)(1) of the SRD SEPP, the Independent Planning Commission (IPC) is the consent authority for SSD applications if:
  - council objects to the proposal; and/or
  - 50 persons have objected to the proposal; and/or
  - the proponent has made a reportable political donation.

Therefore, the project is SSD, the DA must be accompanied by an EIS and the Minister is the consent authority, unless certain other criteria are met, in which case the IPC is the consent authority.

Figure 3.1  
Western Sydney Aerotropolis precincts

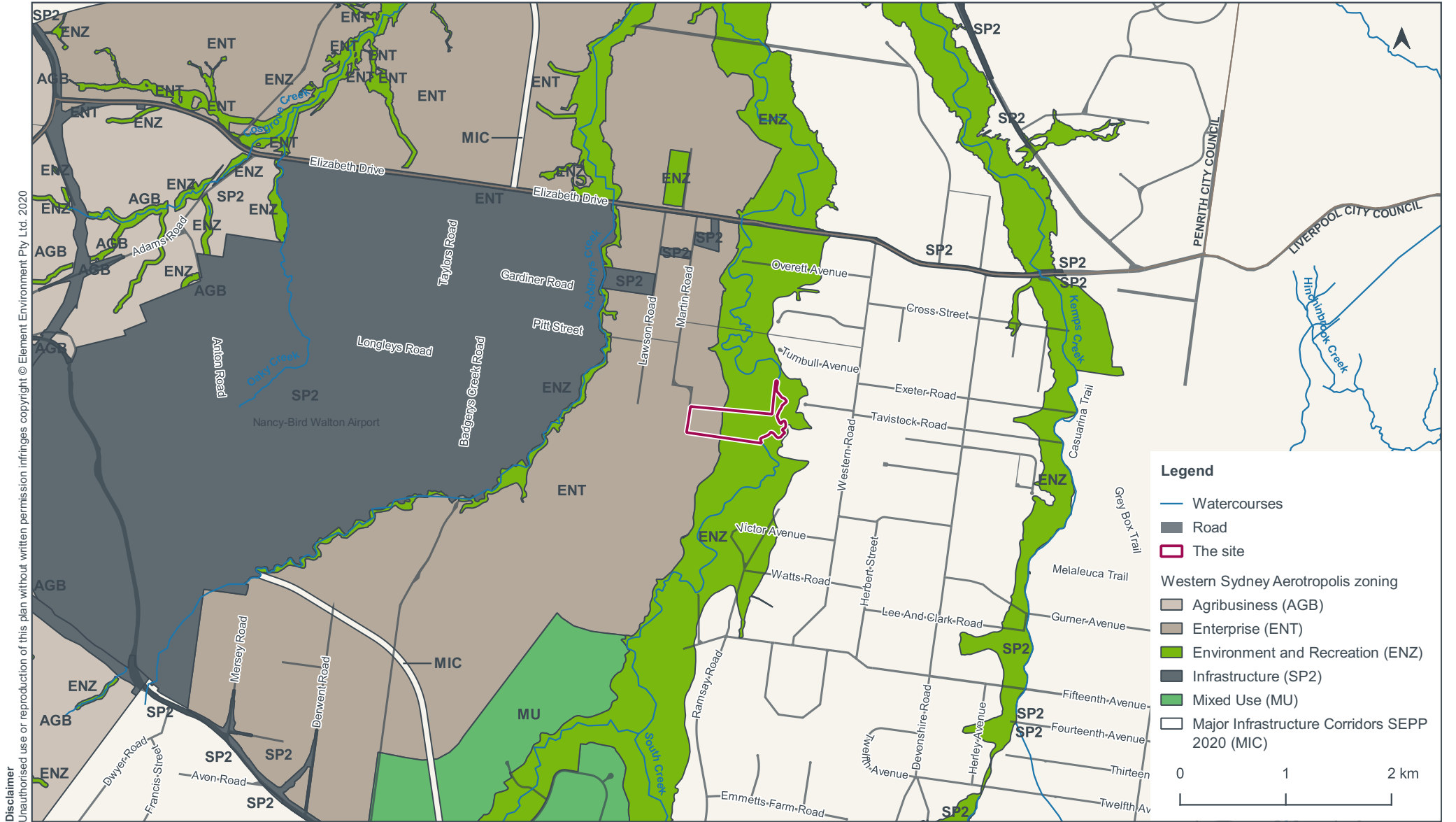
Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT



Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd. 2020

Figure 3.2  
Western Sydney Aerotropolis zoning

Downer Western Sydney Sustainable Road Resource Centre  
STATE SIGNIFICANT DEVELOPMENT - SCOPING REPORT



Disclaimer  
Unauthorised use or reproduction of this plan without written permission infringes copyright © Element Environment Pty Ltd. 2020

## 3.5 Other SEPPs

### 3.5.1 SEPP (Sydney Region Growth Centres) 2006

The Growth Centres SEPP will continue to apply to the Aerotropolis only for the purposes of retaining the biodiversity certification and strategic assessment programs.

### 3.5.2 SEPP 33 (Hazardous and Offensive development).

SEPP 33 requires the consent authority to consider whether a development proposal is a potentially hazardous industry or a potentially offensive industry. A screening assessment will be undertaken for the project to determine if it is classified as hazardous or offensive industry under SEPP 33. Based on the outcome of the screening process, the requirement for a preliminary hazard analysis will be determined.

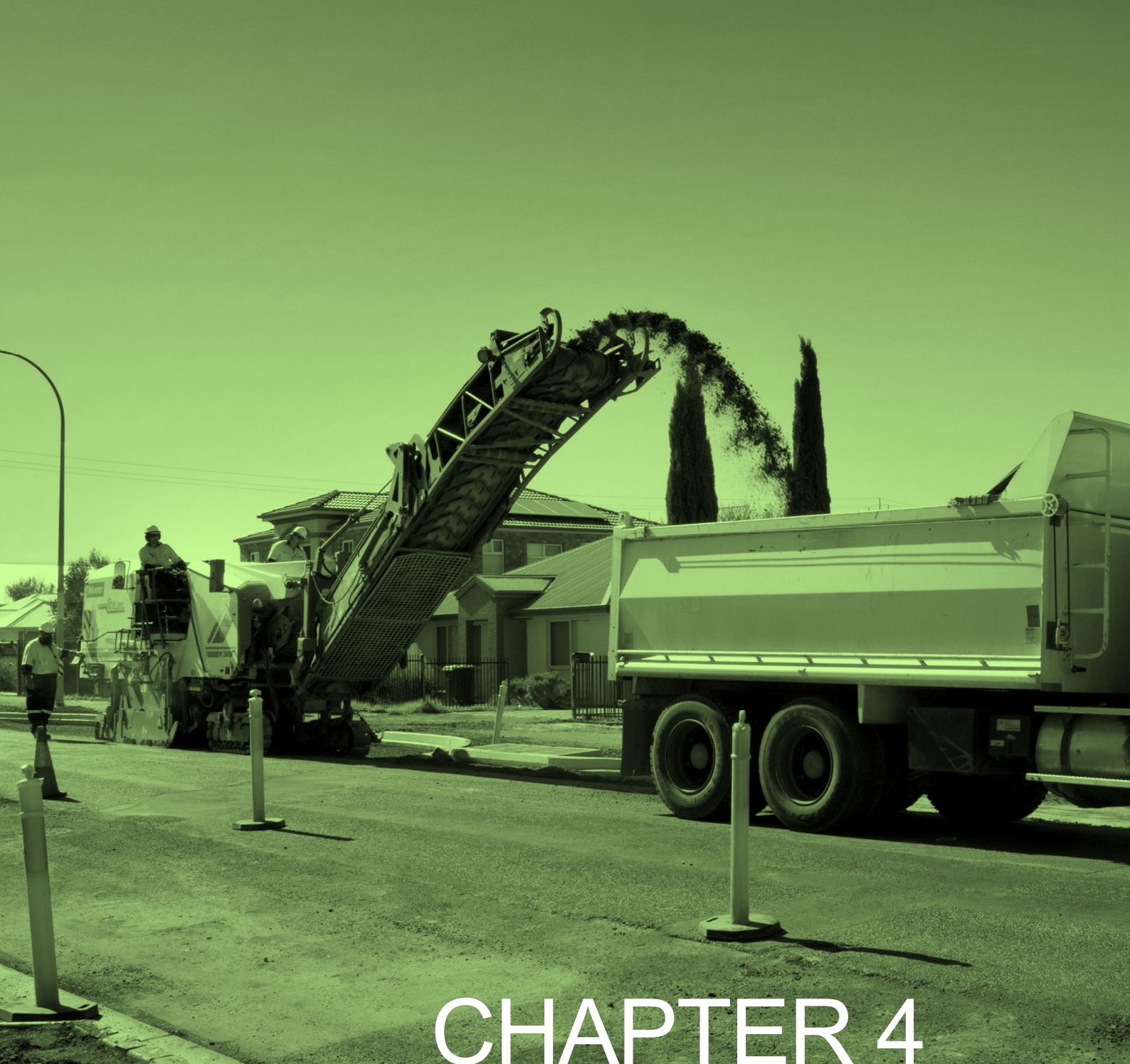
## 3.6 Other approvals and licenses

The NSW *Protection of the Environment Operations Act 1997* aims to protect, restore and enhance the quality of the environment in the context of ecologically sustainable development and to reduce risks to human health and prevent degradation of the environment.

According to Clause 48 of the Act, an environment protection licence (EPL) is required from the NSW Environment Protection Authority (EPA) for the premises-based activities in Schedule 1 of the Act.

The project satisfies clause 34 of Schedule 1 of the Act, being 'resource recovery'. Resource recovery is defined as recovery of general waste meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing, otherwise than for the recovery of energy. Accordingly, an EPL will be required for the project. Downer would apply to the EPA for an EPL for the project if it is approved.





# CHAPTER 4

MATTERS AND IMPACTS



## 4 MATTERS AND IMPACTS

### 4.1 Scoping worksheet

DPIE provided a scoping worksheet to Element on 21 October 2019, which was used to determine the environmental matters requiring detailed or standard assessment in the EIS, and those matters which will not require further assessment (Appendix A).

This chapter describes how the level of proposed assessment was determined for environmental matters, and why certain matters are not proposed to be assessed further (these will still be acknowledged in the EIS with an explanation of why they were not assessed in detail).

### 4.2 Key matters

The scoping worksheet determined the following to be key matters requiring detailed assessment for the EIS. Reports will be prepared for these assessments, which will be appended to, and summarised in, the EIS.

#### 4.2.1 Aboriginal cultural heritage

A preliminary Aboriginal heritage assessment of the site was undertaken by Artefact Heritage, involving both a desktop assessment and site inspection. The preliminary Aboriginal heritage assessment confirmed:

- No AHIMS recorded Aboriginal sites have been identified at the site.
- No unrecorded Aboriginal sites were identified during the site inspection.
- The majority of the site has been cleared of native vegetation and is dominated by short grazed grass.
- The site deposit was comprised of a highly plastic clay. Archaeological excavations completed in the adjacent property (235 Martin Road) in 2018 for the CSR Advanced Manufacturing Hub project, identified that the plastic clay deposits are archaeological sterile.
- Several soaks were noted across the lower lying, flood prone areas of the site, indicating that the deposits across the site are resistant to vertical movement of water and unlikely to have been penetrated by discarded Aboriginal objects.
- The western, elevated part of the site has been modified to establish various infrastructure to manage the livestock grazing activities including a flattened earthwork platform, retaining wall, fencing, sheds, feed lots and livestock loading pens.
- The previous earthworks completed across the western part of the site and the seasonal inundation of the flood prone areas of the site are likely to have resulted in the removal of the A horizons from across the site, leaving only the archaeologically sterile clays.

The preliminary Aboriginal heritage assessment concluded that the entire site is comprised of an archaeological sterile deposit, the areas proposed to be developed in the western part of the site have been modified by earthworks and ground disturbance and it is unlikely that subsurface Aboriginal objects will be present at the site.

The preliminary Aboriginal heritage assessment recommended:

- the project be assessed in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010);
- that as no Aboriginal heritage values were identified during the preliminary Aboriginal heritage assessment, and that the site is unlikely to support Aboriginal heritage values, that an Aboriginal Cultural Heritage Assessment Report would not be required.

## 4.2.2 Access – road network

The region is being transformed to accommodate the WSA and will include the construction of new roads and the upgrade of existing roads.

The project will generate heavy and light vehicle traffic during construction and operation which will contribute to traffic on the local and wider road network.

Traffic and transport impacts will be assessed in accordance with RMS's (2002) *Guide to Traffic Generating Development* addressing the key heads of consideration for traffic generation and impacts, transport issues, road safety, parking and internal circulation.

The assessment will involve:

- Examination of the road network near the site and the roads that form the transport routes including principal intersections.
- Traffic volume and vehicle classification counts as well as intersection counts as required to establish base line traffic conditions.
- Assessment of the project in terms of the future development and expansion of the Aerotropolis.
- Assessment of the existing road network comprising road widths, intersection treatments, compliance with current standards, existing traffic volumes and vehicle classifications, road safety and identified deficiencies.
- Assessment of the traffic and transport impacts of construction and operation of the project comprising level of service, physical condition of the roads, road safety issues and potential cumulative impacts from other approved projects in the area.
- Recommendations for improving intersection performance and road safety.

## 4.2.3 Atmospheric emissions – particulate matter and odour

Most of the project components will not be a significant dust source as:

- RAP and asphalt are loosely bound with a fluid bitumen substance. However, as RAP is processed (crushed and screened) it can dry out and integrated soil matter could generate dust.
- Potential dust generating raw materials used in asphalt production are stored in silos, preventing dust emissions.
- Emulsion will be contained and is a fluid.
- The Detritus plant uses a wet process which does not generate dust.

The processing of C&D waste and low-level contaminated spoil could generate dust during crushing and handling of processed material.

On-site vehicle movements could also generate dust, although the project site area will be sealed (concrete and asphalt) and trafficked surfaces swept regularly.

Particulates could cause human health and nuisance impacts. Particles are classified primarily by size, as TSP (total suspended particulates), PM<sub>10</sub> (particulate matter with an aerodynamic diameter up to 10 µm) and PM<sub>2.5</sub> (particulate matter with an aerodynamic diameter up to 2.5 µm).

Other potential pollutants could be products of fuel combustion from the on-site vehicles and mobile/fixed equipment and stack emissions from the asphalt plant. The project is unlikely to significantly increase ambient concentrations of these pollutants given the small quantity of emissions and varying distances between the site and residential receivers.

The project could generate odours from the asphalt plant and the Detritus plant (organics).

A quantitative method will be used to assess air quality impacts, using air dispersion modelling in accordance with EPA's (2016) *Approved methods for the modelling and assessment of air pollutants in NSW*, comprising:

- Review of existing air quality monitoring data to characterise site meteorology and background dust levels and to determine criteria and potential constraints for the project.
- Characterisation of air quality in the regional air shed considering approved and foreseeable projects based on publicly available information.
- Identification of the project and neighbouring sources of air emissions.
- Development of an air dispersion model to determine the extent and severity of operational air quality impacts.
- Quantitative analysis and assessment of operational air quality, including reference to measured background levels which include the emissions from other activities.
- Quantitative analysis and assessment of greenhouse gas generation.
- Description of pollution control equipment and processes to be employed at the site to suppress or minimise emissions.

Odour impacts will be assessed in accordance with EPA's (2006) *Technical framework: Assessment and management of odour from stationary sources in NSW*.

#### 4.2.4 Amenity – noise

Construction of the project could generate noise from vehicle movements, excavation, tipping of construction materials and use of equipment. These impacts are likely to be short term and are proposed to be assessed using a quantitative method in accordance with EPA's (2009) *Interim Construction Noise Guideline* and managed with standard and project specific construction noise management measures.

There are residences near the site, which are sensitive receivers until those in the future Badgerys Creek and Wianamatta-South Creek precincts are purchased and rezoned to accommodate future uses compatible with the Aerotropolis.

Trucks could also generate noise at receivers near local roads.

Operational noise will be assessed using a quantitative method in accordance with:

- EPA's (2017) *NSW Noise Policy for Industry* (NPfI).
- EPA's (2011) *NSW Road Noise Policy*.

The noise assessment will comprise:

- Characterisation of background noise using existing monitoring data.
- Assessment of prevailing weather conditions using historical weather data from the nearest BoM weather station over a minimum period of 12 months to derive meteorological parameters for prediction of noise during calm and noise enhancing weather.
- Identification of noise-sensitive receivers surrounding the site.
- Determination of plant and equipment sound power levels.
- Use of Environmental Noise Model software or equivalent to predict noise levels for day, evening and night and determine compliance with relevant noise criteria. This will involve:
  - Developing operational noise modelling scenarios.
  - Importing digital topographic data, including nearby residential areas and detailed site development plans.
  - Predicting contributed noise emissions for calm and noise enhancing weather using modelling.
  - Predicting site intrusive noise levels for daytime, evening and night-time for the operating scenarios to sensitive receivers.

- Producing noise contours to clearly indicate the impact of noise emissions.
  - Identifying noise mitigation measures including noise reduction equipment and control processes.
  - Description of how the project noise trigger levels would be achieved, monitored and audited, and how corrective action would be taken when needed.
- Road transportation noise impacts would be assessed using existing traffic with project truck and employee vehicle movements.

#### 4.2.5 Hazards and risks and water – floods and surface water quality

As outlined in Section 2.1.2 the project will require bulk earthworks to establish a suitable platform(s) on which to construct the Sustainable Road Resource Centre and to achieve this the project requires a minor encroachment into the western edge of the South Creek 1% AEP flood extent as shown on Figure 2.2.

However, earthworks will raise the finished floor level of the development to above the 1% AEP flood level.

Flood risks will be assessed in detail in accordance with flood planning development controls under clause 26 of the Aerotropolis SEPP.

Stormwater generated during construction and operation of the project will flow across the lower portion of the site to South Creek, and if not properly managed, could impact creek water quality. Stormwater will be managed in accordance with Landcom's (2008) *Managing urban stormwater: soils and construction*.

Water quality impacts will be assessed against relevant criteria in the Australia and New Zealand Environment and Conservation Council's (2000) *Guidelines for fresh and marine water quality*.

#### 4.2.6 Contamination

A preliminary site investigation (PSI) was undertaken by Zoic Environmental to identify the potential for contamination associated with past and present land use, and to determine whether further assessment (intrusive investigation) is required. The PSI which included both desktop assessment and a thorough site inspection did not identify any contamination or potentially contaminating activities and concluded the potential for widespread contamination is low. The PSI concluded that no intrusive investigations are necessary and recommended that the EIS includes the requirement for an unexpected finds protocol.

The PSI identified that the site is in an area of medium to high salinity potential and recommended that the EIS include the requirement for geotechnical investigations to determine appropriate management measures to protect structures.

### 4.3 Other matters

The scoping worksheet determined the matters in the following sections will require a standard assessment in the EIS.

#### 4.3.1 Hazard and risks – bushfire

The site contains bushfire prone land (vegetation category 1) along South Creek. No bushfire prone land is proposed to be developed. Notwithstanding, there is bushfire prone land on the lot and potential bushfire risks will be described in an EIS chapter.

### 4.3.2 Hazard and risks – dangerous goods and hazardous and/or offensive development

Dangerous goods to be stored and used at the project will be identified and standard or site-specific management measures provided as required. The likelihood of the project qualifying as hazardous and/or offensive development will be assessed in the EIS in accordance with DPIE's (2011) Applying SEPP 33.

### 4.3.3 Amenity – visual impacts

Structures associated with the project could be up to 36 m high and could be visible to sensitive receivers. Potential visual impacts are likely to be limited to residential receivers to the east of South Creek as:

- Martin Road is currently not a through road and the project is only likely to be visible to employees/visitors of the neighbouring industrial operations including CSR's brick making facility to the south west and ANL's composting facility to the north, neither of which are sensitive receivers.
- Land in Badgerys Creek, including the site and land to the north, west and south has been rezoned to allow for new development within the Badgerys Creek Precinct. The potential sensitive visual catchment of the project has been significantly reduced with rezoning as all the rural residential properties to the north west of the site along Martin Road and Lawson Road will be developed in accordance with the new Enterprise zoning and the existing rural residences will be removed.
- Project structures may be visible to existing residences to the east of South Creek in the Kemps Creek and Rossmore precincts of the Aerotropolis. The residences within the Kemps Creek Precinct are likely to be removed over time as this precinct is identified for flexible employment under the WSA Plan. The Rossmore Precinct is identified to be home to mixed living communities which would typically be more sensitive to visual impacts. However, the proposed development of the site will be one of many industrial type developments within the Badgerys Creek Precinct and the existing and potential future residences in the Rossmore Precinct to the east of South Creek will become accustomed to views that include industrial type land uses in the foreground and tall structures associated with the airport in the background.

Potentially sensitive viewpoints will be determined using viewshed analysis and ground truthing, and impacts to potential receivers will be assessed in terms of sensitivity and contrast with the existing and likely future viewshed. The assessment will be summarised in an EIS chapter.

## 4.4 Scoping only matters

The following matters appear in the scoping worksheet but have not been considered in detail as they are unlikely to be significantly impacted by the project. The EIS will note these matters and describe why they were not assessed further.

- Access – other than potential road impacts, the project will not impact access as it will not involve reconfiguration of roads, off street parking, blocking or reconfiguration of access to other properties or use of port or rail facilities.
- Amenity – other than potential noise, visual and odour impacts, the project will not impact amenity as vibration is unlikely to propagate the distance to nearby receivers.
- Biodiversity – The site is dominated by pasture and only contains significant areas of native vegetation near South Creek, which will not be cleared. The majority of the upper western

portion of the site is bio-certified land and clearing of scattered native trees will be considered in this context.

- Built environment – apart from offsite vehicle movements, project structures and activities will be contained on the site and will not impact other private or public property or public domain.
- Economic – the project would have beneficial economic impacts from job and increased local expenditure opportunities.
- Hazards and risks – other than the potential use and storage of hazardous goods, the project will not impact the following hazards and risks:
  - Biosecurity – the project will not involve transport and processing of vegetation (other than leaves/organic matter in street sweepings waste) and will not result in the spread of pest animals. Weeds will be managed by Downer, as the new owner of the site.
  - Coastal hazards – The project will not impact coastal processes or hazards such as erosion.
  - Dams – there are no dams on the site and the project will not involve construction of/alterations to a dam. Some sediment control structures may be constructed.
  - Environmental hazards – As outlined in Section 2.4.4, the site is not expected to contain ASS.
  - Land movement – the project will not involve undermining steep slopes and will not result in subsidence or land movement. The project will not require bulk earthworks or built structures to be constructed on steep slopes.
  - Waste – the project will involve the beneficial re-use of RAP, waste from road maintenance, glass fines, C&D waste and low-level contaminated spoil. Street sweeper waste and mud from non-destructive excavation are unlikely to generate significant quantities of residual waste.
- Heritage – the project will be contained on the site and will not impact known items of historical heritage significance. The site has been previously heavily disturbed and is unlikely to contain items of historical heritage significance. Notwithstanding, the EIS will contain standard management measures for unexpected heritage finds.
- Land –
  - Land capability – the site is within the proposed WSA SEPP Enterprise Zone which will enable uses typically associated with employment lands, supporting a range of commercial and industrial sectors that have synergies with the airport. Unlike the WSA Agribusiness Zone (located to the western edge of the airport), which will support the long-term retention of existing agricultural lands, the Enterprise Zone does not support agricultural uses. Therefore, the site will not be used for agriculture and its land capability class is not relevant to the project.
  - Soil chemistry – see hazards and risks for ASS class.
  - Stability/structure – see hazards and risks for subsidence/land movement risks.
  - Topography – other than the requirement for cut-to-fill bulk earthworks in the western part of the site, very little change is proposed to the remainder of the site topography, however, management measures will be implemented to maintain or improve stormwater flow and treatment on route to South Creek.
- Social –
  - Community services/facilities – Operational employment and subsequent demand for community services will increase with the construction and operation of the sustainable road resource centre.
  - Health – emissions such as particulates and noise will be managed in accordance with best practice.
  - Housing availability – the project may result in a minor increase in demand for housing in the area if staff employed at the site wish to live closer to work.

- Safety – project traffic could impact the safety of road users, which will be assessed as described in Section 4.2.2.
- Social cohesion – The WSA zones and supported land uses within these zones has been carefully planned to allow the right types of development within the right areas to allow for the development of an aerotropolis that facilitates social cohesion. The project is a land use that will be permitted within the Enterprise Zone and will therefore not impact negatively on the social cohesion of the Aerotropolis.
- Water –
  - Groundwater quality – the project will not involve deep excavations and interaction with groundwater during construction is likely to be minimal. The project area will be sealed, and surface water is unlikely to infiltrate the surface and interact with groundwater. The remaining portion of the site leading down to South Creek will remain unsealed and vegetated with pasture grass.
  - Water availability – surface water runoff is likely to be captured in a stormwater management/retention system and some of this water would be used for dust suppression. This will be considered in a water balance as part of the surface water assessment and management plan.

## 4.5 Cumulative impacts

The project may result in the following cumulative impacts:

- Air quality – the project will be in an area being transformed from primary production to mixed uses associated with an aerotropolis. Project emissions could combine with emissions from existing and future operations and result in cumulative impacts.

However, the risk of significant cumulative impacts will be low as project air emissions will be mitigated using best practice measures. Additionally, thresholds for regional cumulative impacts are provided in EPA's (2016) *Approved methods for the modelling and assessment of air pollutants in NSW*, which apply to all regional sources, not only individual projects.

- Noise – like air quality, noise generated by the project could combine with noise from surrounding operations and result in cumulative impacts. However, the risk of significant cumulative impacts will be low as project noise emissions will be mitigated using best practice measures.

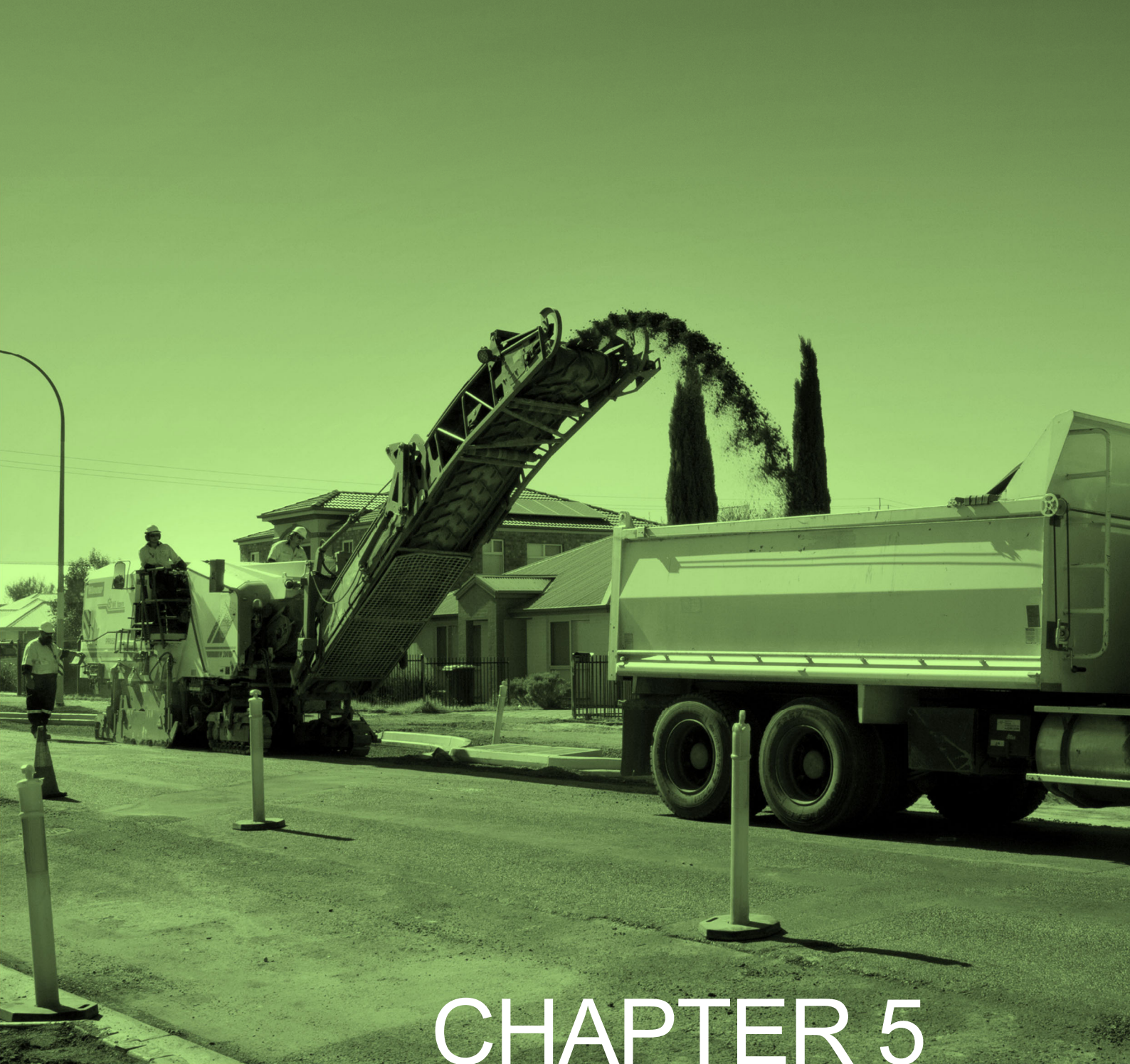
Noise assessments under the NPfl inherently consider cumulative impacts as the noise trigger levels are derived from either the project intrusiveness or amenity noise level, whichever is lowest. The intrusiveness level seeks to not increase noise by more than 5 dB over background noise levels and the amenity level seeks to prevent the ambient noise level of all industrial noise sources in an area combined from exceeding a recommended level.

Residual noise impacts are determined by subtracting the noise trigger level from the noise predicted to be generated by the project, and management measures applied according to the level of residual impact.

- Traffic – Potential cumulative intersection impacts are considered using the LoS calculations in RMS's (2002) *Guide to Traffic Generating Development*. When an intersection's LoS is unsatisfactory, the roads authority may consider upgrades to improve its performance.

The project is likely to impact the Martin Road and Elizabeth Drive intersection given increased traffic generated by the construction and operations of WSA, future aerotropolis precincts and other proposed development applications such as the neighbouring CSR Advanced Manufacturing Hub. Transport for NSW is considering the upgrade of this intersection as part

of the upgrade of Elizabeth Drive, which is required to support future traffic volumes generated by the airport and associated aerotropolis development.



# CHAPTER 5

COMMUNITY AND OTHER  
STAKEHOLDER ENGAGEMENT



## 5 COMMUNITY AND STAKEHOLDER ENGAGEMENT

### 5.1 Scoping phase engagement

Element recently completed two modification applications for the neighbouring CSR Advanced Manufacturing hub at 225 Martin Road. A thorough community engagement program was implemented, which included consultation with all neighbouring landowners as well as all property owners along Martin Road, Lawson Road and Victor Avenue. Other than the neighbour that borders the northern boundary of CSR's property (who raised concerns primarily around stormwater runoff and air quality), no other landowner raised any concerns about the development or provided a submission on the environmental assessment.

As the project is immediately adjacent to the CSR Advanced Manufacturing Hub and is of a similar type and scale of development, combined with the fact that most of the properties along Lawson and Martin roads will be acquired for redevelopment, it can be assumed that there will be a similar level of community interest in the project and that community engagement during the scoping phase is not warranted.

### 5.2 Proposed EIS engagement

The following engagement will be implemented during the preparation of the EIS:

1. Project notifications – a notification will be hand delivered to neighbouring industrial and residential properties that have potential to be impacted by the project. It will provide a project overview, details about the EIS preparation, and contact details of the project representative. The notification will invite enquiries and feedback which will be addressed by the project team.
2. Meeting immediate neighbours – project representatives will attempt to arrange a virtual meeting with immediate neighbouring properties. The representatives will provide the same information in the project notification (refer above) to the property owners. Any concerns/issues raised by neighbouring property owners will be recorded and considered in the EIS.
3. Consultation with agencies – government agencies will be consulted as required to discuss SEARs, assessment outcomes, proposed mitigation measures and submissions.

Any engagement requirements not referenced above but outlined in the SEARs will be adopted.

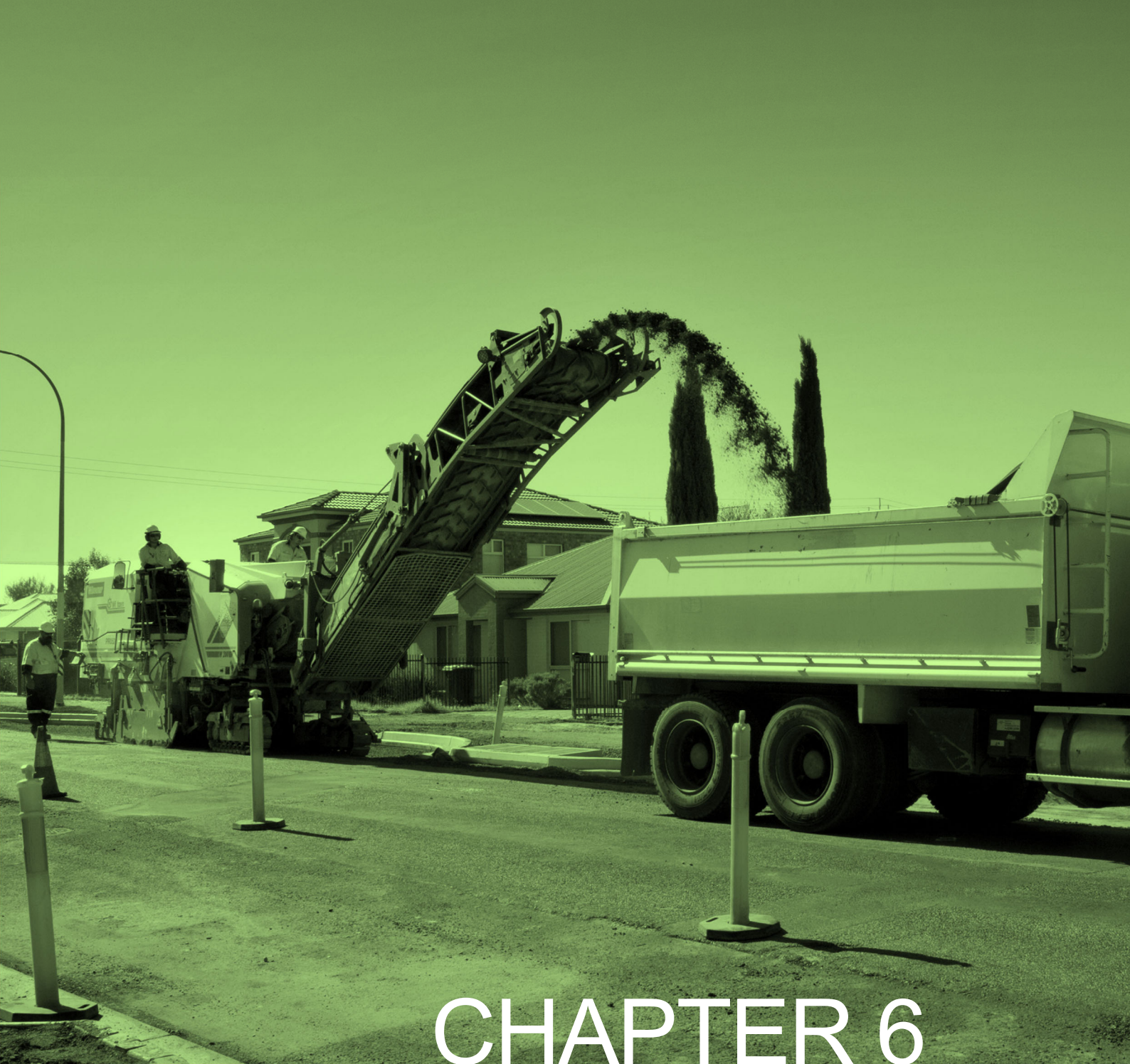
### 5.3 Future project stages and opportunities for engagement

The project is in the scoping stage. The next stage will be project description finalisation and EIS planning and preparation, when the engagement outlined in Section 5.1 will be undertaken. Feedback received during this stage will be considered and reported in the EIS.

The next stage will be public exhibition of the EIS, when government agencies and the public will have an opportunity to review the EIS and prepare submissions.

The next stage will be response to submissions on the EIS. DPIE will forward public and agency submissions on the EIS to the project team, which will respond in a report. The project team will engage with agencies during this stage if clarifications or negotiation on proposed changes are required.

The response to submissions report will be submitted to DPIE, which will present an opportunity for the project team to consult further with DPIE and agencies that have provided feedback regarding the final project description, impacts and conditions of consent.



# CHAPTER 6

CONCLUSION



## 6 CONCLUSION

As described in this report, Downer proposes to construct an asphalt plant, Reconomy facility and a modern bitumen product manufacturing plant at 230 Martin Road, Badgerys Creek.

The project will be SSD and an EIS will need to be prepared to accompany the development application to the Minister.

The scoping worksheet indicated the following matters will require detailed assessment for the EIS, which will be addressed in technical studies that will be appended to/summarised in the EIS:

- Aboriginal cultural heritage;
- access – road network;
- atmospheric emissions – particulate matter and odour;
- amenity – noise; and
- hazards and risk – flooding and surface water quality.

Visual amenity, bushfire and hazardous and/or offensive development will require standard assessment and will be addressed in an EIS chapter.

The other matters under the groups of access, amenity, biodiversity, built environment, economic, hazards and risks, heritage, land, social and water, not addressed above, are scoping only matters that will not be assessed in detail. They will be noted in the EIS with an explanation of why they will not be significantly impacted by the project.

The EIS will be prepared in accordance with DPIE's (June 2019) Draft *Preparing an environmental impact statement* and will have the form and content recommended in Chapter 3 of the draft guideline.





# APPENDIX A

SCOPING WORKSHEET



Project : Downer Western Sydney Sustainable Road Resource Centre								
MATTERS	IMPACTS	ASSESSMENT LEVEL	CUMULATIVE IMPACTS	COMMUNITY ISSUES	ASSESSMENT APPROACH	SCOPING REPORT		
Potential matters that could be affected by the project	Is the project (without mitigation) likely to cause an impact?	Are the impacts (without mitigation) likely to be significant based on the magnitude of the impacts and/or sensitivity of receivers?	What level of assessment is required to assess impacts and determine mitigation measures?	Will cumulative assessment be required?	Did the community raise any concerns about the impacts?	Indicative approach to assessment in EIS	Where was this addressed in the Scoping Report?	
Group	Specific	Impact?	Significant Impact?	Assessment Level	Cumulative Impact?	Concerns?	Category	Section
ACCESS	access to property	No						
	parking	No						
	port / airport facilities	Yes	Unlikely	Standard	Yes	No	Scoping Report	
	road / rail network	Yes	Likely	Detailed	Yes	No	Detailed Assessment and CIA	
AIR	other - please specify	No						
	atmospheric emissions	Yes	Likely	Detailed	Yes	No	Detailed Assessment and CIA	
	gases	No						
	particulate matter	Yes	Likely	Detailed	Yes	No	Detailed Assessment and CIA	
AMENITY	other - please specify	No						
	noise	Yes	Likely	Detailed	Yes	No	Detailed Assessment and CIA	
	odour	Yes	Likely	Detailed	Yes	No	Detailed Assessment and CIA	
	vibration	No						
BIODIVERSITY	visual	Yes	Unknown	Standard	No	No	Standard Assessment	
	other - please specify	No						
	conservation areas	No						
	native vegetation	No						
BUILT ENVIRONMENT	native fauna	Unknown	Unlikely	Standard	No	No	Scoping Report	
	indirect impacts	Yes	Unlikely	Standard	No	No	Scoping Report	
	private property	No						
	public domain	No						
ECONOMIC	public infrastructure	No						
	other - please specify	No						
	livelihood	No						
	natural resource use	No						
HAZARDS & RISKS	opportunity cost	No						
	other - please specify	No						
	biosecurity	No						
	bush fire	No	Unlikely	Standard	No	No	None (include short explanation in Scoping Report)	
	coastal hazards	No						
	dams	No						
	dangerous goods	Yes	Likely	Standard	No	No	Standard Assessment	
	environmental hazards	No						
	floods	Yes	Likely	Detailed	No	No	Detailed Assessment	
	groundwater contamination	Unknown	Unknown	Detailed	No	No	Detailed Assessment	
	hazardous / offensive development	Yes	Likely	Standard	No	No	Standard Assessment	
	land contamination	Unknown	Unknown	Detailed	No	No	Detailed Assessment	
HERITAGE	land movement	No						
	waste	No						
	other - please specify	No						
	Aboriginal cultural	Unknown	Unknown	Detailed	No	No	Detailed Assessment	
LAND	historic natural	No						
	land capability	No						
	soil chemistry	No						
	stability / structure	No						
SOCIAL	topography	No	Likely	Standard	No	No	None (include short explanation in Scoping Report)	
	other - please specify	No						
	community services / facilities	No						
	health	No	Unlikely	Standard	No	No	None (include short explanation in Scoping Report)	
WATER	housing availability	No						
	safety	No						
	social cohesion	No						
	other - please specify	No						
WATER	ground water quality	No						
	hydrological flows (including flooding)	Yes	Likely	Detailed	No	No	Detailed Assessment	
	surface water quality	Yes	Likely	Detailed	No	No	Detailed Assessment	
	water availability	No						
other - please specify	No							





SYDNEY NEWCASTLE CENTRAL COAST TOWNSVILLE  
[elementenvironment.com.au](http://elementenvironment.com.au)



