

Luddenham Advanced Resource Recovery Centre (Lot 3 DP 623799) | SSD 10446

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Prepared for Coombes Property Group | 25 March 2025







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PR371

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DOCUMENT CONTROL

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6	25 March 2025	Address DPHI comments and TfNSW approval conditions	Element Environment	CPG

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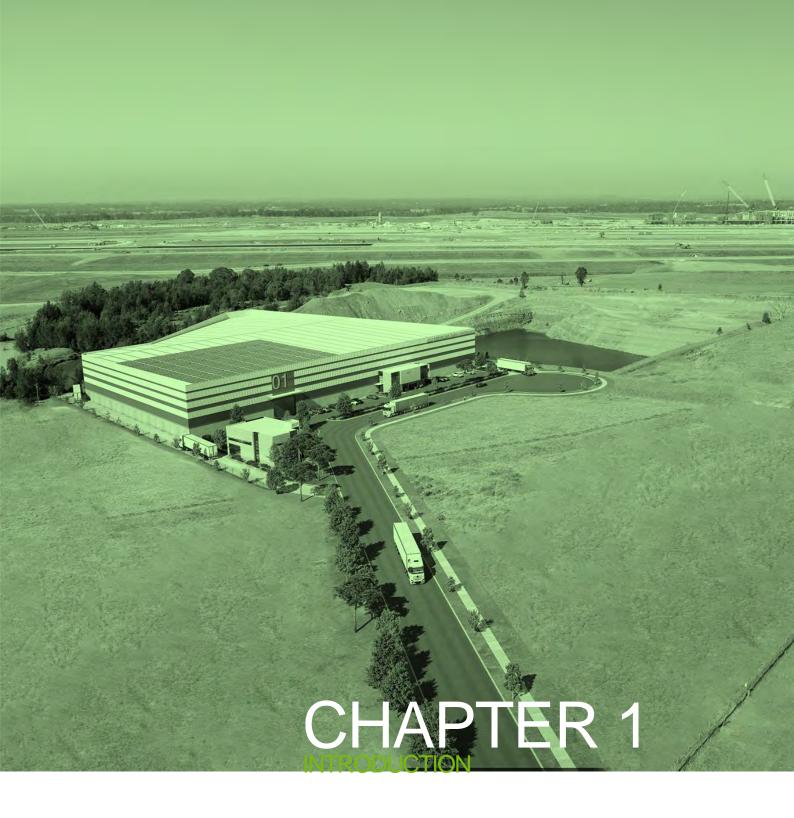
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APPENDIX A DRIVERS CODE OF CONDUCT APPENDIX B CONTINGENCY MANAGEMENT PLAN APPENDIX C TRAFFIC GUIDANCE SCHEME

Table 1.1 Main components of the approved development





1 INTRODUCTION

The site is located at 275 Adams Road, Luddenham NSW (Lot 3 in DP 623799, 'the site') within the Liverpool Local Government Area. The Advanced Resource Recovery Centre (ARRC) is approved by State significant development (SSD) consent DA 10446 (the DA).

The adjoining existing shale/clay quarry is approved by SSD consent DA 315-7-2003, issued by the NSW Minister for Planning under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act).

The site is owned by CFT No 13 Pty Ltd, a member of the Coombes Property Group (CPG).

1.1 Project description

The proposed Advanced Resource Recovery Centre (ARRC) is located in the Greater Western Sydney region on a 19-hectare site in Luddenham. Approximately 19 km north-west of the City of Liverpool, this facility is being developed to support advanced waste processing and recycling for up to 600,000 tonnes per annum (tpa) of non-putrescible general solid waste, with a maximum on-site storage capacity of 34,515 tonnes at any one time. The development footprint spans approximately 3 hectares.

The ARRC is designed to provide critical recycling and resource recovery infrastructure, playing a key role in the region's sustainable waste management. The facility will include advanced processing equipment, comprehensive site infrastructure, and supporting amenities for operational efficiency and safety.

Table 1.1 provides an overview of the main aspects of the ARRC development, outlining the facility's infrastructure, capacity, waste management approach, and traffic considerations.

Table 1.1 Main components of the approved development

Aspect	Description	
Development Summary	Construction and operation of a fully enclosed ARRC with an annual throughput of up to 600,000 tpa of non-putrescible general solid waste and a maximum storage capacity of 34,515 tonnes at any one time.	
Site Area and Development Footprint	Area of subject property approximately 19 haDevelopment footprint of approximately 3 ha	
Infrastructure	 16 m tall metal-clad warehouse over a footprint of 13,230 m² External hardstand area, internal roads, and car parking (47 spaces) On-site ancillary infrastructure, including two site offices and landscaping 	
Waste Volumes Received	 - 150,000 to 200,000 tpa bulk waste from other facilities within the KLF group and other recycling facilities - 100,000 to 200,000 tpa commercial and industrial (C&I) waste - 100,000 to 200,000 tpa construction and demolition (C&D) waste, including bulk general solid waste and excavated natural materials (such as clay, gravel, sand, soil, or rock fines) 	
Recycled Products	Up to 540,000 tpa of recycled products stockpiled in 11 segregated product bays, including concrete/rubble/masonry, clean timber, rigid plastics, paper/cardboard/film, stumps/asphalt/metal, heavy residual fines screened, soil audit, ferrous metals, non-ferrous metals, and tyres	
Non-recyclable Residues	60,000 – 120,000 tpa of co-mingled waste that will not be recovered as products, including plastic film, blown polystyrene, wet and/or dirty paper and cardboard, plasterboard, treated timber, glass, and ceramic	
Waste and Product Storage	Up to 34,515 tonnes of unprocessed or processed waste with a maximum stockpile height of 6 m	

Aspect	Description
Plant and Equipment	- Shredder, crushing plant, vibratory screens, an eddy current separator (to extract non-ferrous metals), belt separator (to recover ferrous metals), density separator (to remove light fractions such as paper and light plastics), ballistic separator (to separate 3D materials such as bricks and plastics from 2D materials such as cardboard and plasterboard), and sensor-based sorting equipment
Additional Site Facilities	 Weighbridges: Two weighbridges for inbound and outbound vehicles Wheel Wash: Wheel wash facility for outbound vehicles Ticket Booths: Two ticket booths for incoming and outgoing vehicles Fire Protection: Underground tanks for firewater supply, fire containment systems, and fire suppression equipment Stormwater Management: System including rainwater tanks, an on-site detention basin, and water treatment facilities Wastewater Management: On-site septic tank for wastewater management
Traffic Generation	 - 629 two-way vehicle movements (1,258 trips) per day comprising: - 303 trucks with 4.4 t load capacity and 222 trucks with 30 t load capacity (up to 26 m in length) - 104 cars
Construction Timeframe and Work Hours	- 18 months - Monday to Friday, 7 am to 6 pm and Saturday
Road and Intersection Works	 Upgrade of turn treatments to the Elizabeth Drive and Adams Road intersection: Provision of a 90 m deceleration left-hand turn lane into Adams Road Provision of a short left-hand turn lane on Adams Road into Elizabeth Drive to minimise queuing on Adams Road Widening of existing Elizabeth Drive/Adams Road intersection to accommodate B-double swept paths Pavement upgrade along Adams Road between Elizabeth Drive and Anton Road Road widening at the site access and Adams Road junction to accommodate B-doubles

The ARRC will accept a wide range of general solid waste types, primarily building and demolition waste, as well as selected commercial and industrial waste. Notably, the ARRC will not accept any special, liquid, hazardous, restricted solid waste, putrescible solid waste, or odorous materials to avoid potential risks to the adjacent Western Sydney Airport, which is currently under construction.

Additional infrastructure upgrades to support ARRC operations include lifting the 3-tonne load limit on Adams Road through pavement enhancements on the northern section between the site access road and Elizabeth Drive. Waste received at the facility will undergo extensive recovery processes, with approximately 80-90% recycled materials, while non-recyclable residues (about 10-20%) will be transported to an offsite licensed landfill or used for quarry rehabilitation on-site.

The regional context is shown in Figure 1.1 and ARRC layout in Figure 1.2.

1.2 Purpose

This Construction Traffic Management Plan (CTMP) is based on the findings of the Environmental Impact Statement (EIS), including the Traffic Impact Assessment (TIA) provided within the EIS, and the Addendum TIA in the Response to Submissions. It has been prepared to address Condition A2 of the consent, which requires compliance with the consent conditions, Planning Secretary directions, the EIS, the Development Layout in Appendix 1, and management and mitigation measures in Appendix 2. This CTMP details the traffic management strategies to mitigate construction traffic impacts effectively.

In compliance with Condition B13(a), which requires that the CTMP be "prepared by a suitably qualified and experienced person(s)," this document was prepared by an experienced planning and environmental consultant at Element Environment. Additionally, Daniel Lee and Nick

Bernard, traffic specialists from SCT Consulting, conducted a technical review to ensure the plan's accuracy and effectiveness in addressing potential traffic management issues.

It is understood that should TfNSW Network and Asset Management, Network Operations, CJP Operations, Network and Safety, or any other TfNSW business area determine that additional information is required for review and acceptance, including other TCS locations, such information must be submitted prior to the implementation of the CTMP, or as otherwise agreed upon.

1.3 Conditions of consent

This plan has been prepared as required by the conditions of consent (CoC) summarised in Table 1.2 along with the CTMP reference within the document.

Table 1.2 Conditions of consent

Conditi	on	CTMP reference
TRAFFI	C AND ACCESS	
Constru	uction and Traffic Management Plan	
B13	Prior to the commencement of construction of the Development, the Applicant must prepare a Construction Traffic Management Plan for the Development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:	This Plan
B13(a)	Be prepared by a suitably qualified and experienced person(s)	Section 1.2
B13(b)	Be prepared in consultation with Council and TfNSW;	Section 1.4
B13(c)	Detail the measures that are to be implemented to ensure road safety and network efficiency during construction;	Section 3
B13(d)	Detail heavy vehicle routes, access and parking arrangements;	Section 2.1 Section 2.2 Section 3.11
B13(e)	Include a Construction Driver Code of Conduct to: (i) minimise the impacts of earthworks and construction on the local and regional road network; (ii) minimise conflicts with other road users; (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes;	Appendix A
B13(f)	(f) include a program to monitor the effectiveness of these measures; and	Section 4
B13(g)	(g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Section 3.7 Section 3.8
B14	The Applicant must ensure that:	
B14(a)	Not commence construction until the Construction Traffic Management Plan required by condition B13 is approved by the Planning Secretary; and	Section 1.4
B14(b)	Implement the most recent version of the Construction Traffic Management Plan approved by the Planning Secretary for the duration of construction.	This plan
ENVIRO	NMENTAL MANAGEMENT	
Manage	ment Plan Requirements	
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	
C1(a)	Detailed baseline data	Section 2
C1(b)	(b) details of:(i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);(ii) any relevant limits or performance measures and criteria; and	Section 1.3 Section 2 Section 3 Section 4

Condit	Condition		
	(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Development or any management measures;		
C1(c)	a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria	Section 3	
C1(d)	a program to monitor and report on the: (i) impacts and environmental performance of the Development; and (ii)effectiveness of the management measures set out pursuant to paragraph (c) above;	Section 4	
C1(e)	a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible.	Appendix B	
C1(f)	a program to investigate and implement ways to improve the environmental performance of the Development over time.	Section 4.1	
C1(g)	a protocol for managing and reporting any: (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria); (ii) complaint; (iii) failure to comply with statutory requirements; and	Section 4.3	
C1(h)	a protocol for periodic review of the plan.	Section 4.2	

1.4 Stakeholder consultation

This section outlines the consultation undertaken with key stakeholders, as required by Condition B13(b) and other relevant conditions.

Table 1.3 Stakeholder consultation

Stakeholder	Date	Sender	Details
Liverpool City Council	18/11/2024	Element Environment	Initial email sent requesting feedback on the CTMP by 3 December 2024.
	18/11/2024	Element Environment	Email forwarded to confirm Stella as the appropriate contact in Charles' absence.
	6/12/2024	Element Environment	Follow-up email extending the deadline to 11 December 2024.
	10/12/2024	Element Environment	Final reminder email indicating assumption of no comments if no feedback was received by 11 Dec.
	No response	_	No feedback or comments were received from Liverpool City Council by the deadline.
Transport for NSW	18/11/2024	Element Environment	Initial submission of the draft CTMP for review, requesting comments by 3 December 2024.
(TfNSW)	19/11/2024	Transport for NSW	Referral of the CTMP by Transport for NSW Landuse Administration to the relevant team for review.
	2/12/2024	Transport for NSW	Confirmation of a minimum 10-business-day turnaround for review, noting delays due to high workloads.
	5/12/2024	Element Environment	Follow-up requesting updates or partial feedback to assist with project timelines.
	10/12/2024	Element Environment	Follow-up requesting updates on comments pending from another department.
	17/01/2025	Transport for NSW	Comments provided:

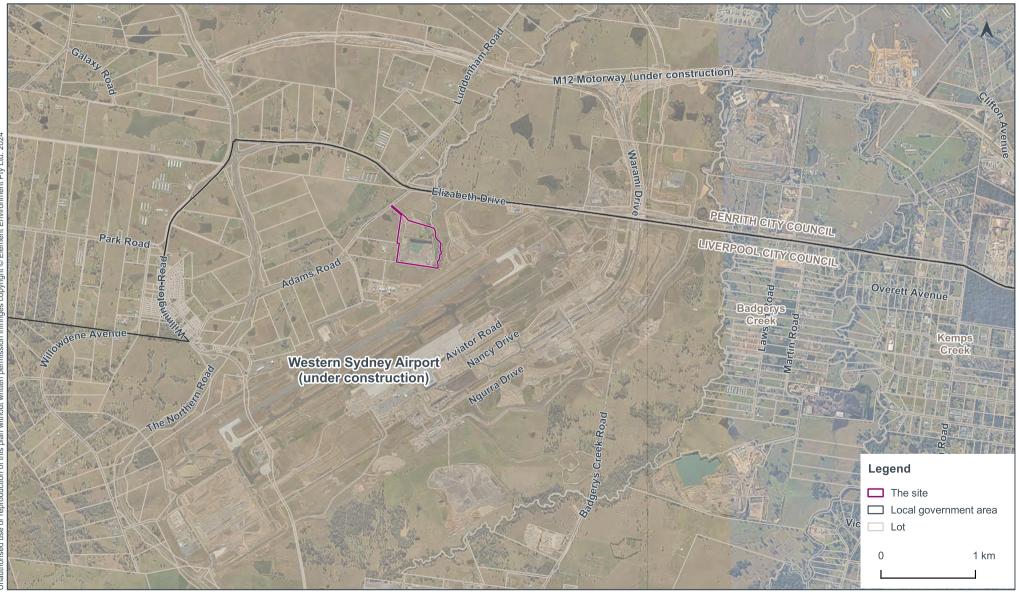
Stakeholder	Date	Sender	Details
Stakeholder	Date	Sender	 The CTMP for the road upgrades has been prepared by ptc (December 2024) that Includes TGS's to show detailed traffic management arrangements: The TMP includes detailed Traffic Guidance Schemes (TGS), outlining specific traffic control measures, detours, and signage plans. These TGSs comply with the TfNSW Traffic Control at Work Sites Manual (2022). The CTMP also references the TGSs in Section 3.9, specifying that they will be implemented as needed. More detail on how construction vehicle traffic volumes will be managed and impacts, particularly around Elizabeth Drive and the intersection with Adams Road: Sections 2.4.1 and 2.4.2 of the CTMP provide detailed information on traffic volumes and road configurations for Elizabeth Drive and Adams Road, while Table 3.1 summarises peak construction vehicle movements. The TMP adds further detail through its phasing plans (Section 3.7), which outline how traffic management will be implemented in stages at these locations. Detail construction vehicle volumes across different major junctions accessing the construction site: The CTMP provides a high-level summary of vehicle
	14/02/2025	Transport for	volumes and movements in Section 3.3 and Table 3.1. The TMP supports this with detailed vehicle access routes in Section 3.9 and Figure 13, ensuring appropriate physical geometry for all vehicles. Provide assessment on impacts to Public Transport: The CTMP (Section 2.5.1) and TMP confirm that public transport impacts are minimal due to the site's remote location and limited nearby options. Provide swept paths to demonstrate existing access is suitable for the heavy vehicles which will need to enter and exit the site and adjoining access intersections: The TMP includes a comprehensive swept path assessment in Section 3.9, demonstrating that heavy vehicles (up to 19m AV and truck-and-dog configurations) can safely access the site. This complements the CTMP's reference to the swept path analysis.
	14/02/2025	Transport for NSW	Comments provided: 1. Section 2.1 – Right Turn Treatment: - The CTMP references a right turn treatment at the Elizabeth Drive and Adams Road intersection. At present, this work is in the final review stage and is scheduled to commence in March 2025. Accordingly, no pictures or drawings are available at this time.
			 Section 2.3.1 – Scope of CTMP: Section 3.9 clarifies that, although the construction and operation of the ARRC necessitate several road upgrades to ensure safe and efficient access, these upgrades are not directly mandated as part of this CTMP. A separate CTMP (prepared by ptc. provided) has been prepared specifically for the upgrade of Adams Road and the intersection of Adams Road/Elizabeth Drive. This document includes comprehensive Traffic Management Schemes (TGS), work stages, and traffic flow management for the intersection upgrade work. Construction Stages and Traffic Generation: The updated CTMP (Section 3.3) now includes detailed construction stages and the associated traffic generation figures. The separate CTMP (ptc.) further outlines the work stages and traffic management arrangements for the intersection upgrade work.
			4. Traffic Guidance Schemes (TGS):

Stakeholder	Date	Sender	Details
			 The separate CTMP (ptc.) includes detailed TGS that demonstrate the planned traffic arrangements, facilitating an effective impact assessment. Swept Paths: Swept paths drawings have been attached to confirm that the existing access is suitable for the heavy vehicles required for site entry and exit.
	11/03/2025	Transport for	Comments provided:
		NSW	 CTMP is still missing truck signage as part of the worksite. A TGS showing truck warning signs and similar devices needs to be a part of this CTMP. A TGS has been prepared to show site entry and warning signs and provided in Appendix C of this plan. Under Table 3.1 (section 3.3) there is a reference to the Intersection Upgrade Works – Does this refer to the road upgrades to be undertaken by Texco? If so, please clearly state this will be part of a new and separate CTMP to be submitted. A clear statement has been included in section 3.4 stating that the upgrade of Adams Road and intersection of Adams Road / Elizabeth Drive is subject to a separate Construction Traffic Management Plan.
	24/03/2025	Transport for NSW	Transport for NSW, Coordinator General Division has reviewed the CTMP and endorse the proposed temporary construction arrangements, subject to to the listed conditions. Most of the listed condition have been addressed in the CTMP Rev5. The CTMP has been updated to include the required conditions that were not present in Rev 5 of the CTMP:
			- Section 1.2 has been amended to include:
			It is understood that should TfNSW Network and Asset Management, Network Operations, CJP Operations, Network and Safety, or any other TfNSW business area determine that additional information is required for review and acceptance, including other TCS locations, such information must be submitted prior to the implementation of the CTMP, or as otherwise agreed upon
			- Section 2.4 has been amended to include:
			 Access for residents and business vehicles will be maintained at all times. Section 3.12 has been updated to include: Any traffic control devices, including signage and line marking that will be installed in accordance with TGS must comply with Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads). Section 3.15 has been amended to include: Any approved Works Zone must only be used for work activities. No infrastructure, including bins, tanks or traffic control equipment must be left on the road when the works zone is not in use by a vehicle. All non-vehicular items must be contained with the work area and not on the carriageway. When a work zone is not in use, the area/lane must be opened up to allow for normal trafficable conditions.

Figure 1.1 Regional context

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Luddenham Advanced Resource Recovery Centre CONSTRUCTION TRAFFIC MANAGEMENT PLAN

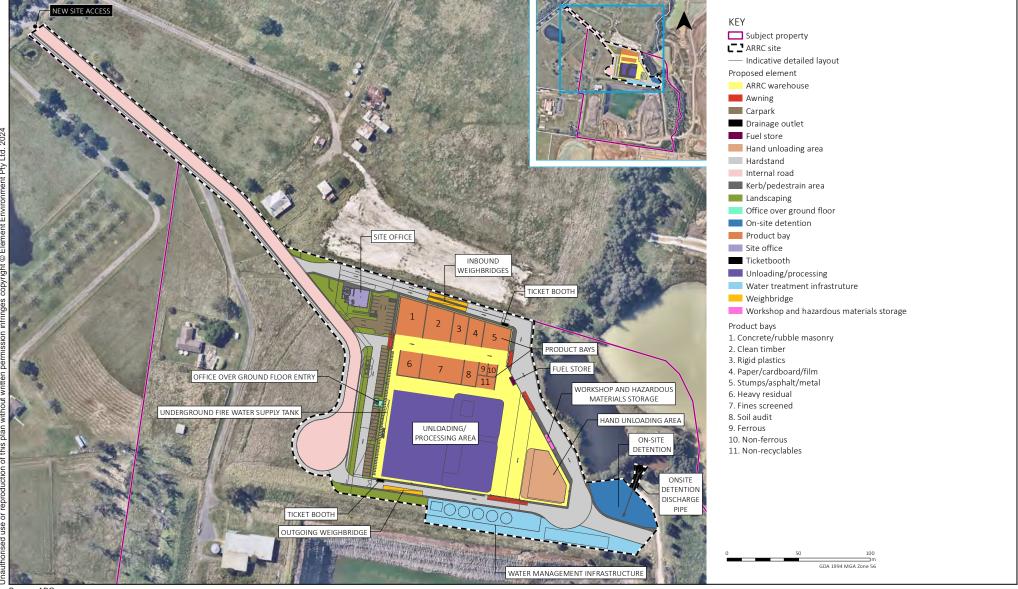


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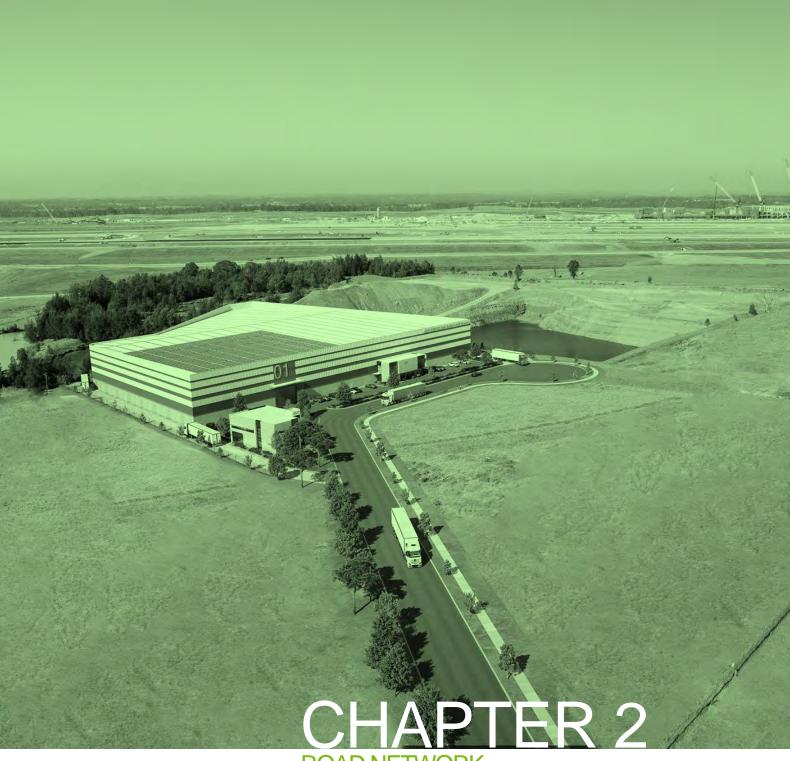
Figure 1.2 **ARRC layout**

Luddenham Advanced Resource Recovery Centre CONSTRUCTION TRAFFIC MANAGEMENT PLAN





Source: ABC



ROAD NETWORK



2 ROAD NETWORK

2.1 Site access

The site is accessed from Adams Road, a local road with a 3-tonne load limit that connects to Elizabeth Drive to the north and The Northern Road to the south (refer to Figure 2.1). The site's road network has undergone significant upgrades to accommodate heavy vehicle access associated with the guarry and the ARRC development.

The recent modification to the Luddenham Quarry consent (DA315-7-2003) included the following upgrades to Adams Road and its intersections, ensuring the ARRC can utilise the access route from Elizabeth Drive:

- Northern section of Adams Road: The stretch between the site access and Elizabeth Drive has been upgraded to enable the lifting of the 3-tonne load limit, allowing quarry trucks and ARRC-related heavy vehicles to access Elizabeth Drive.
- Site access road: The site access road, originally unsealed, has been upgraded and widened at its intersection with Adams Road to support safe ingress and egress for heavy vehicles.
- Elizabeth Drive and Adams Road intersection: This intersection has been modified to incorporate a right-turn treatment for heavy vehicles turning onto Adams Road from Elizabeth Drive.

The southern section of Adams Road, from Anton Road to The Northern Road, was upgraded by WSA Co to facilitate aviation fuel truck access to the Western Sydney Airport (WSA) fuel farm. However, the 3-tonne load limit remains in place south of Anton Road following The Northern Road Upgrade State Significant Infrastructure approval (SSI-7127, as modified), to discourage heavy vehicle traffic from using this segment and to protect local property access.

2.2 Emergency Services

Emergency vehicle access will be maintained at all times, with specific measures ensuring access routes remain unobstructed and clearly signposted. Road upgrade activities, intersection modifications and pavement widening will be managed to prevent any impact on emergency vehicles response times or accessibility.

Access to properties for emergency vehicles will be provided at all times. An emergency vehicle parking space will be maintained at all times, clearly marked and left vacant unless occupied by an emergency vehicle.

Additionally, traffic controllers will be instructed to prioritise emergency vehicles and to facilitate their immediate passage if necessary.

Access rules and responsibilities will be clearly communicated to all arriving drivers through signage at the site entry.

2.3 Vehicle access routes

The construction site is in the suburb of Luddenham and the proposed construction vehicle routes have regard for the surrounding traffic arrangements in the vicinity of the site. No marshalling of heavy vehicles is permitted on any public road and all loading and unloading of materials will be undertaken within the site or within approved work zones.

All vehicle routes to the site are restricted to existing public roads that have the physical geometry to accommodate the turning movements.

A swept path assessment has been undertaken for all proposed vehicle routes, details of which are summarised below:

- Vehicles, up to 19m AV and 19m Truck and Dog, approaching the site from The Northern Road (north and south) will either travel via Elizabeth Drive or Adams Road to access the work area.
- The vehicles approaching the site from the east will travel via Elizabeth Drive to access the work area.
- The loading and unloading activities are proposed to occur within the work area. Vehicles will then exit to Elizabeth Drive to access Westlink M7 to east and The Northern Road to west and Adams Road to access The Northern Road to west.

2.4 Access Arrangement

Approved vehicle access routes for the ARRC site have been established to facilitate safe and efficient movement of both light and heavy construction vehicles. The site is accessed from Adams Road, a local road with a 3-tonne load limit that connects to Elizabeth Drive in the north and The Northern Road to the south (see Figure 2.2). Upgrades to the road network surrounding the site have been completed to support the increased traffic demands of ARRC and quarry operations.

A traffic guidance scheme (TGS) has been prepared for the ARRC site which is a visual guide that shows how traffic control devices will be used to manage traffic around a work site. The TGS is provided in Appendix C.

Access for residents and business vehicles will be maintained at all times.

2.4.1 Access to 275 Adams Road

The site is being developed as ARRC, which can support advanced waste processing and recycling of up to 600,000 tonnes per annum. It is acknowledged from the development consent for the development of ARRC at 275 Adams Road, CPG must submit the detailed design plans for Adams Road and the intersection upgrade of Adams Road / Elizabeth Drive for approval to TfNSW and Council. It is expected that the road upgrade works will commence following the commencement of the construction works for the ARRC development. The access to the development site at 275 Adams Road (ARRC) will be maintained throughout the road upgrade work

All vehicles shall access the work area via Elizabeth Drive and Adams Road.

2.5 Major and local roads

The site is accessed from a narrow frontage on Adams Road, with a fenced access road connecting the bulk of the site to Adams Road. Adams Road is a local road intersecting with Elizabeth Drive approximately 500 meters north of the site and The Northern Road about 1.2 kilometres south. Elizabeth Drive and The Northern Road are the closest state roads to the site. The existing access road is generally unsealed, and there is currently no constructed intersection on Adams Road.

The site is adjacent to several major transport and infrastructure projects, including the Western Sydney Airport (WSA), which is currently under construction on Commonwealth-owned land to the east and south of the site. This project includes extensive road infrastructure upgrades, bulk earthworks, and future connectivity improvements to support increased regional transport demands. Transport for NSW has also proposed the Elizabeth Drive - West Upgrade and The Northern Road Upgrade, designed to improve regional road network efficiency and safety while

accommodating expected freight and traffic volume increases linked to the airport and surrounding developments.

2.5.1 Adams Road

Adams Road is a local road between Elizabeth Drive (north-east) and The Northern Road (south-west). The speed limit is 70 kilometres per hour (km/h), which may change in the future. Adams Road is one lane each way with a sealed road without a road shoulder and is generally a carriageway approximately 7 m wide with travel lanes of 3.5 m wide. The road prohibits vehicles over 3 tonnes (t); however, this restriction must be lifted to allow heavy vehicle access to the site from The Northern Road. Predominantly carrying local traffic, if realigned with Luddenham Road, will be a thoroughfare for regional traffic. The configuration and timing of the realignment of Adams Road to join Luddenham Road are currently unknown.

Traffic data from the TIA indicates that Adams Road carries approximately 2,100 vehicles per day, with heavy vehicles making up an average of 7% of the traffic. Although this is a high proportion for a rural road, it is acceptable given the area's character. However, the 85th percentile speed on Adams Road significantly exceeds the posted speed limit of 70 km/h.

2.5.2 Elizabeth Drive

Elizabeth Drive is a state road extending between The Northern Road (west) and the Hume Highway (east), serving as an important east-west arterial connection for regional traffic. The speed limit near the ARRC site is 80 km/h. Near Adams Road, Elizabeth Drive typically comprises one lane in each direction, with a sealed surface, road shoulders, and a carriageway width between 7 and 10 meters. Transport for New South Wales (TfNSW) has approved Elizabeth Drive as a 25/26-meter B-double route between The Northern Road and the Hume Highway, accommodating significant heavy vehicle movement.

Existing traffic data from the *Elizabeth Drive - West Upgrade Traffic and Transport Assessment Report* (AECOM, 2023) shows that Elizabeth Drive currently supports substantial daily traffic volumes, averaging between 24,000 and 55,000 vehicles per day, with a high proportion of heavy vehicles. During peak hours, heavy vehicles account for approximately 17% of eastbound traffic and up to 35% of westbound traffic, primarily due to construction activities around the Western Sydney Airport. Despite these high volumes, the Volume Capacity Ratio (VCR) for Elizabeth Drive remains below 0.5 on average, indicating that the road currently operates with minimal congestion, even during peak periods (AECOM, 2023, p. 26).

This data provides essential context for the ARRC's reliance on Elizabeth Drive for site access. The road is well-equipped to handle significant volumes of light and heavy vehicles in the current regional network configuration.

2.5.3 The Northern Road

The Northern Road is a major regional road connecting Campbelltown to Windsor, forming part of Route A9. It is a crucial north-south corridor for regional freight, commuter traffic, and access to major infrastructure projects, including the Western Sydney Airport. The speed limit along The Northern Road near the ARRC site is 80 km/h, and the road is configured as a multi-lane divided roadway to handle significant traffic volumes while ensuring regional connectivity.

Recent upgrades to The Northern Road, including adding a fully signalised intersection at Adams Road, have enhanced capacity and accessibility. This intersection, designed to replace a previously proposed bridge structure, optimises traffic flow by enabling all turning movements between Adams Road and The Northern Road. It includes dedicated turn lanes for northbound

and southbound traffic, enhancing efficiency and safely supporting the anticipated traffic demands from the area's developments.

According to The Northern Road Upgrade – Mersey Road, Bringelly to Glenmore Parkway, Glenmore Park – Proposed changes between Littlefields Road, Luddenham and Glenmore Parkway, Glenmore Park, Division 5.2 and EPBC Act Approval Modification Assessment (TfNSW, 2018), this intersection was specifically engineered to accommodate increased traffic volumes. It is projected to perform at a Level of Service (LoS) B through 2031, with average wait times of approximately 20 seconds during the 2021 morning peak and increasing to around 26 seconds by 2031. Queue capacities are expected to accommodate demand, maintaining efficient flow even with regional traffic growth.

The report forecasts significant increases in traffic along Adams Road, especially during peak hours. By 2031, morning peak volumes will reach approximately 524 eastbound vehicles. This signalised intersection, now fully operational, is designed to handle these volumes, supporting Adams Road's role as a critical feeder route into regional networks like Elizabeth Drive and The Northern Road. These improvements meet the infrastructure and safety standards required to sustain the anticipated regional growth driven by Western Sydney Airport and the ARRC projects.

2.6 Public Transport and Active Transport Options

Access to public transport and active transport options is a key consideration for any construction project. However, the location and characteristics of the subject site impose significant constraints on the feasibility of these modes of travel for construction workers and patrons.

2.6.1 Public transport

The NSW Planning Guidelines for Walking and Cycling (2004) define a reasonable walking distance to public transport facilities as 800m (approximately 10 minutes on foot). The nearest bus stops to the site are in Luddenham, approximately 2.5km west of the construction area. This distance significantly exceeds the guidelines' acceptable catchment, making walking to public transport impractical for workers and patrons.

Additionally, there are no direct public transport links connecting the site to Luddenham or other nearby hubs. Given these limitations, public transport is not considered a viable option for accessing the site during the construction phase.

2.6.2 Active Transport

Cycling is another potential mode of transport, with a typical acceptable catchment area of 1500m as outlined in the NSW Planning Guidelines for Walking and Cycling (2004). However, the lack of cycling infrastructure in the area presents safety concerns.

Key access roads, such as Elizabeth Drive and Adams Road, lack dedicated bike lanes or pedestrian footpaths. Cyclists would need to share high-speed, high-traffic lanes or use narrow road shoulders. These conditions create a hazardous environment for cyclists, discouraging active transport as a viable option for site access.

2.6.3 Summary

To summarise, the site's remote location and lack of direct public transport connections render public transportation impractical for both workers and patrons. Furthermore, the absence of cycling and pedestrian infrastructure makes active transport unsafe and unsuitable.

Given these limitations, construction workers and patrons will need to rely on private vehicles to access the site. This reliance highlights the importance of providing sufficient on-site parking and managing vehicle movements to minimise traffic impacts on local roads.

Figure 2.1 **Site access**

Luddenham Advanced Resource Recovery Centre CONSTRUCTION TRAFFIC MANAGEMENT PLAN



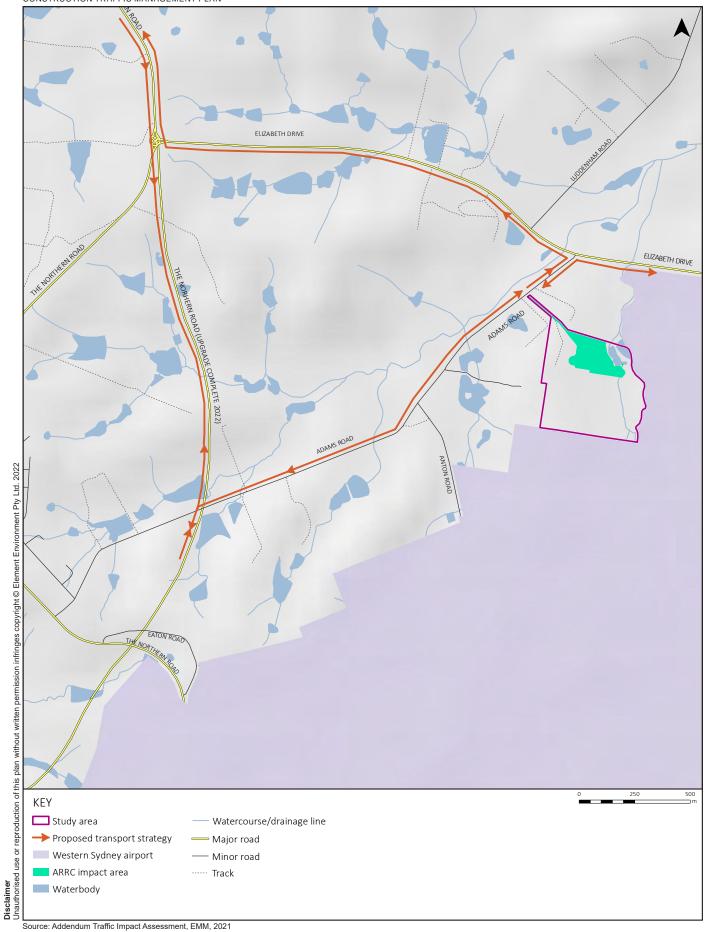


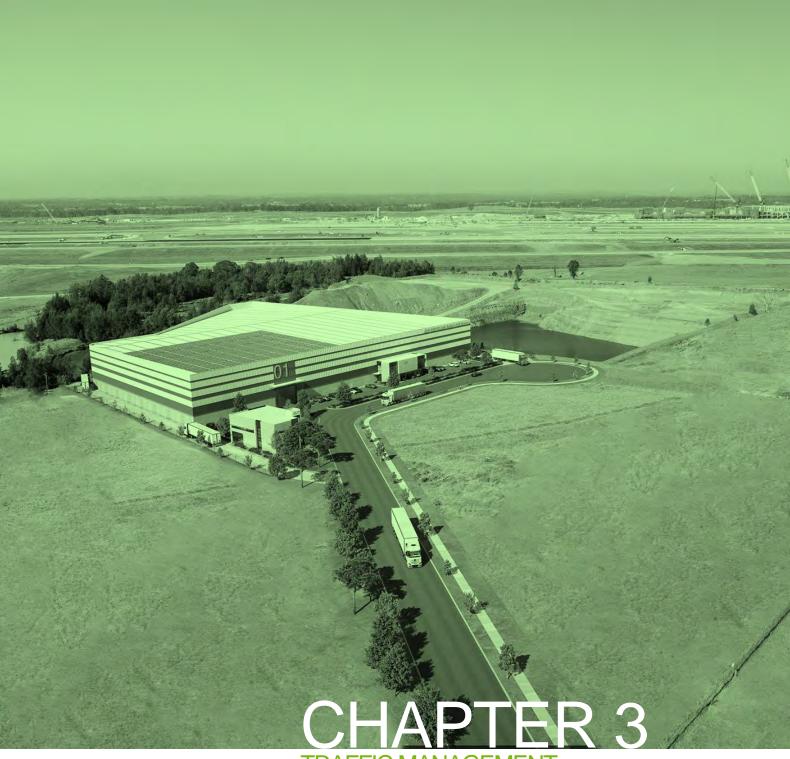
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Figure 2.2 **Vehicle access routes**



Luddenham Advanced Resource Recovery Centre CONSTRUCTION TRAFFIC MANAGEMENT PLAN





TRAFFIC MANAGEMENT



3 TRAFFIC MANAGEMENT

3.1 General requirements

Per TfNSW requirements, all vehicles transporting loose materials will have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles from depositing onto the roadway during travel to and from the site.

The lead contractor will induct all subcontractors to ensure procedures are met for all vehicles entering and exiting the construction site. The lead contractor will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicles operating to, from, and within the site will do so without creating unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Materials, vehicles, refuse skips, or the like will not obstruct public roads and access roads.

3.2 Construction vehicle types

It is anticipated that the works will involve the use of 19 m Articulated Vehicles (AV), 19 m Truck and Dog, 12.5 m Heavy Rigid Vehicle (HRV), 8.8 m Medium Rigid Vehicle (MRV) and Utes/Sedans.

Oversized and Overmass Vehicle Requirements

In some instances, the delivery or removal of materials may require the use of oversized or overmass (OSOM) vehicles due to the dimensions or weight of certain items. These may include large structural steel beams, pre-fabricated modules, or heavy equipment.

For any vehicle classified as OSOM, the following requirements will apply:

- Permit requirements: OSOM vehicles will require permits from the National Heavy Vehicle Regulator (NHVR) when they exceed standard size and weight limits as specified by TfNSW. These limits include, but are not limited to, items that exceed regulated dimensions for width, height, length, or gross weight.
- Route approval: Specific routes for OSOM vehicles may need to be assessed and approved to ensure safe passage and minimise impact on local infrastructure.
- Application process: Prior to the movement of any OSOM vehicles, a permit application will be prepared and submitted to the NHVR, via the NVHR Portal, to ensure all legal and safety requirements are met. This process will be conducted in advance of any planned OSOM vehicle movements to avoid delays.

This approach ensures compliance with all applicable road and traffic regulations, including those of TfNSW and the NHVR, for safe and approved transport of oversized loads associated with the ARRC construction.

3.3 Traffic Management Planning Process

Temporary Traffic Management (TTM) for the project has been planned in accordance with Transport for NSW, Traffic control at work sites – Technical Manual, Issue No.6.1, March 2022 (TCAWS). The process is shown in Figure 3.1.

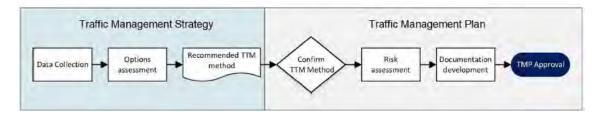


Figure 3.1 Traffic Management Planning Process

3.4 Construction Stages and Traffic Generation

Construction of the ARRC is planned to start in April of 2025 and will take approximately 18 months. The construction program has been developed to efficiently complete civil works, building construction, plant installation and upgrade the intersection of Adams / Elizabeth Drive in distinct stages.

The key phases and expected traffic generation for each phase are provided in Table 3.1 below.

Table 3.1 Daily movements per the construction phase

Key Construction Phases	Proposed Duration	Light Vehicle ¹	Heavy Vehicle ¹
Phase 1 – Civil and Enabling works	50 days	40	102
Phase 2 – Structural Construction and Envelope	100 days	120	86
Phase 3 – Base Build Services and Fit- Out	60 days	140	98
Phase 4 – Intersection and Adams Road upgrade works ²	129 days	24	20

Note

This staggered approach ensures critical civil and structural works are completed early, providing sufficient time for mechanical and plant installers to mobilise and carry out their specialist work without delay.

3.5 Construction vehicles generated

The impact of traffic during construction was assessed as part of the project's planning, with the expected traffic volume during construction anticipated to be significantly lower than that of the ARRC's operational phase. While the EIS prioritised operational traffic volumes due to their higher projected long-term impact on the local road network, the numbers presented here represent recent projections specific to the construction phase.

These construction traffic volumes at the peak of construction are intended to account for both light and heavy vehicle movements, as detailed in Table 3.2.

¹ Typical Peak Vehicle Movement Profile is 1 truck = 1 in movement + 1 out movement = 2 movements.

² The upgrade of Adams Road and intersection of Adams Road / Elizabeth Drive is subject to a separate Construction Traffic Management Plan.

Table 3.2 Daily movements at peak of construction

Stage Name / Description (e.g. demolition, excavation, structure, fitout etc.)	Earthworks / Retaining Walls / Stormwater					
Truck types (sizes): Small (<6.4m), Medium (>6.4, <8.8m), Heavy (>12.5m) rigid trucks, truck and dog, semi-trailer etc.	Small, LV, Heavy - truck/dogs, semi					
Worker numbers - maximum onsite at any one time	Average over stage:		20	Peak Times:		30
Details regarding any proposed measures to limit contractor parking on-street in the vicinity of the site (if any).	Provide subcontractor parking within the lot near the site compound					
Typical Peak Vehicle Movement Profile (1 truck = 1 in movement + 1 out movement = 2 movements)	Light Vehicles (cars)		Rigid Trucks/ Commercial Vans		Articulated Vehicles/ Truck + Dog Combination	
Time (hour starting)	IN	OUT	IN	OUT	IN	оит
7:00	20					
8:00					6	
9:00			1		6	6
10:00			1	1	6	6
11:00				1	6	6
12:00					6	6
13:00					6	6
14:00			1		6	6
15:00		5		1	6	6
16:00		10				6
17:00		5				
TOTAL	20	20	3	3	48	48

Stage Name / Description (e.g. demolition, excavation, structure, fitout etc.)	Services & Fit-out					
Truck types (sizes): Small (<6.4m), Medium (>6.4, <8.8m), Heavy (>12.5m) rigid trucks, truck and dog, semi-trailer etc.	small - LV, medium - concrete trucks, deliveries etc., heavy - semi-trailer					
Worker numbers - maximum on- site at any one time	Average over stage:	70	Peak Times:		120	
Details regarding any proposed measures to limit contractor parking on-street in the vicinity of the site (if any).	Provide subcontractor parking within the lot near the site compound					
Typical Peak Vehicle Movement Profile (1 truck = 1 in movement + 1 out movement = 2 movements)	Light Vehicles (cars)			+ Dog		

Time (hour starting)	IN	OUT	IN	OUT	IN	OUT
7:00	50		5	5	2	
8:00	20		5	5	2	
9:00			7	7	0	
10:00			7	7		
11:00			7	7		
12:00			2	2		
13:00						
14:00			5			2
15:00			5	5		2
16:00		20	2	5		0
17:00		50		2		
TOTAL	70	70	45	45	4	4

3.6 Construction vehicle circulation

Future contractors are expected to prepare Vehicle Movement Plans (VMPs) to manage on-site vehicle circulation, especially for project stages that generate vehicle movement volumes. A VMP is recommended for stages with traffic exceeding 184 vehicle movements per day (92 inbound and 92 outbound trips) ensuring efficient site access and safety.

In preparing relevant VMPs, the contractor should:

- Minimise interaction between truck traffic and other work areas whenever possible.
- Separate truck movements from contractor parking areas to reduce congestion and enhance safety.
- Prepare Traffic Control Plans (TCPs) where necessary to provide additional management for high-traffic periods on-site.

Site access traffic will be managed in accordance with the following protocol during entry to and exit from the site:

- Drivers must turn on/off flashing lights before entering/exiting the site.
- Drivers must communicate via UHF radio before entering and exiting the site (the approved UHF channel will be provided at the pre-start) to ensure the gate is clear.
- If not safe to enter, vehicle is to continue driving and not stop / queue on the public roadway.
- If it is not safe to enter, the vehicle must continue driving and not stop/queue on the public roadway.
- If the driver cannot exit, they must communicate this via UHF radio and wait until the gate is clear to exit.

3.7 Stakeholder consultation

Potential stakeholders are:

- Department of Planning, Housing and Infrastructure.
- Liverpool City Council.
- Transport for NSW.
- Western Sydney Airport; and
- The site's neighbours.

The project team proposes a three-step process to notify sensitive receivers about traffic disruptions and traffic management (Table 3.3).

As the project progresses, the project team will contact residents directly via their preferred communication method, streamlining the process.

Table 3.3 Notification process

	Step 1	Step 2	Step 3
Timing	Provide a six-month look ahead of impactful work to all potentially impacted residents.	Notification issued every month advising upcoming work to potentially impacted noise receivers.	Notification 7 – 14 days before work.
Content	Description of types of OOHW, notification process, reengagement requirements and complaints.	General notification outlining programmed impactful for three months.	Notification of specific works. To include contact details for complaints/concerns.
Distribution	All sensitive receivers.	All sensitive receivers	All sensitive receivers
	Method	Method	Method
	Letterbox drop / face-to-face meeting. Email.	Letterbox drop (where contact details unknown).	Letterbox drop (where contact details unknown).
		Email or text (where contact details are known).	Email or text (where contact details are known).
			Project updates will be published on the project website.

3.8 Method of Communicating Traffic Changes

Traffic Guidance Schemes (TGS) in accordance with the Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads) and TfNSW Traffic Control at Work Sites will advise motorist of upcoming changes in the road network.

During work operation the contractor shall, each morning, prior to work commencing, ensure all signage is erected in accordance with the TGS and clearly visible. Each evening, upon completion of work, the contractor is to ensure signage is either covered or removed as required.

The associated TGS road signage will inform drivers of work activities in the area including truck movements in operation. Any variation to the layout of the TGS on site is to be recorded and certified by authorised SafeWork NSW accredited personnel. Amended TGSs must also be approved by Council (and TfNSW) prior to implementing any changes.

A minimum 14-day notification must be provided to adjoining property owners prior to the implementation of any temporary traffic control measures.

A Road Occupancy License is required for any works which impact on the road corridor, in addition to any permits required by Council (and TfNSW). These need to be submitted to the Transport Management Centre (via the OPLINC system) a minimum of 10 business days prior to commencement of works.

3.9 Construction hours

Construction of the ARRC will primarily be conducted during standard construction hours, in compliance with the approved hours detailed condition B26:

- Monday to Friday: 7:00am to 6:00pm.
- Saturday: 8.00 am to 1:00 pm; and
- No work on Sundays or public holidays.

Work outside of these standard hours may only be undertaken under specific circumstances, as outlined in Condition B27, including:

- Activities that are inaudible at the nearest sensitive receivers.
- Deliveries required outside standard hours by the NSW Police Force or other authorities for safety reasons.
- Emergency situations where work is necessary to prevent the loss of life, property, or to prevent environmental harm.

In these cases, out-of-hours work will be conducted following the noise management requirements specified in the *Interim Construction Noise Guideline* (DECC, 2009), with all feasible and reasonable noise mitigation measures implemented to minimise the potential impact on nearby sensitive receivers.

3.10 Cumulative impacts

The ARRC construction phase coincides with several major infrastructure projects in Western Sydney, each contributing to construction-related traffic in the area. However, only a subset of these projects is expected to have a direct cumulative impact on local traffic near the ARRC site.

Projects with a direct cumulative impact on local traffic include:

- Western Sydney Airport (WSA): Currently 80% complete, the Western Sydney International (Nancy-Bird Walton) Airport is on track to begin operations in 2026, initially handling up to 10 million passengers annually. While the early stages of WSA construction generated significant regional traffic, the project is transitioning to internal works, reducing heavy construction traffic near the ARRC site. As a result, while there will be some cumulative impact on Adams Road and Elizabeth Drive, this impact will decrease as the ARRC construction phase progresses.
- Elizabeth Drive Upgrades: The Elizabeth Drive upgrade, currently in the design and planning phase, is expected to begin construction in mid-2026. This timeline aligns with the anticipated completion of ARRC construction, minimising any cumulative impact. The final upgrades will transform Elizabeth Drive into a dual carriageway, supporting increased traffic flow and providing long-term benefits for ARRC's operational phase.
- Sydney Metro Western Sydney Airport Line: The metro project connecting St Marys to the new airport will contribute additional construction traffic near the airport and shared access routes with the ARRC. While this project primarily impacts regional traffic, the construction activity near the airport may create localised cumulative impacts.

Projects with an indirect or broader regional impact include:

- M12 Motorway: The M12, under construction as a direct east-west link to the airport, contributes primarily to regional traffic patterns and is not expected to directly impact Adams Road or Elizabeth Drive traffic near the ARRC site.
- Mamre Road Upgrade: The Mamre Road project, which aims to double lane capacity and support airport traffic, is another regional improvement that, while critical for broader access, has minimal direct impact on ARRC's construction traffic.

Therefore, only Western Sydney Airport and Sydney Metro construction activities near the airport are expected to directly impact the ARRC's construction traffic. As Western Sydney Airport's construction moves into its final phases, focusing on internal works, heavy construction traffic is expected to decrease gradually, reducing cumulative impacts on local roads like Adams Road and Elizabeth Drive.

With Elizabeth Drive upgrades scheduled to begin only after ARRC's completion, and The Northern Road upgrades already complete, the remaining infrastructure projects will create minimal localised traffic impacts. Given these circumstances, no additional quantitative analysis, such as intersection modelling, is necessary.

3.11 Proposed road upgrades

The construction and operation of the ARRC will necessitate several road upgrades to facilitate safe and efficient vehicle access and to meet specific conditions of consent. While these upgrades are not directly mandated as part of the Construction Traffic Management Plan (CTMP), they are essential to the overall project obligations. CPG and its contractors are committed to completing these upgrades per the timeline stipulated by the consent conditions.

Emergency vehicle access along public roads, particularly during heavy vehicle deliveries and road upgrade activities, will remain unobstructed and prioritised. Construction scheduling, traffic management procedures, and traffic control measures will specifically ensure uninterrupted emergency vehicle access. Traffic controllers will be instructed to provide immediate clearance and facilitate emergency vehicle passage when required.

Required upgrades:

- 1. Site access intersection at Adams Road (Condition B15)
 - a. Requirement: Before commencing construction work, CPG must submit design plans to the relevant roads authority, demonstrating that the site's access can accommodate the turning paths of a 26 m B-double.
 - b. Due Phase: This requirement must be met before construction begins.
 - c. Commitment: CPG will submit and secure approval for the site access intersection design from the appropriate authority, ensuring the access meets standards for heavy vehicle use.
- 2. Approval for removal of 3-tonne load restriction on Adams Road (Condition B17)
 - a. Requirement: Before construction begins, CPG must obtain approval from the Council's Pedestrian, Active Transport, and Traffic Committee to remove the 3-tonne heavy vehicle load restriction on Adams Road, if required by the Council.
 - b. Due Phase: Approval is required before operations commence, but consultation should ideally begin during the pre-construction phase.
 - c. Commitment: CPG will coordinate with the relevant committee within the Council to secure any necessary approvals, ensuring that Adams Road is fit for heavy vehicle access during the ARRC's construction and operational phases.
- 3. Elizabeth Drive / Adams Road intersection works (Condition B19)
 - a. Requirement: Before commencing construction at this intersection, CPG must submit detailed design plans for the intersection upgrade to TfNSW for approval per the following:
 - i. TfNSW and Council requirements.
 - ii. Austroads Guide to Road Design and Australian Codes of Practice.
 - iii. The Strategic Concept Design dated July 2021, prepared by CPG and Indesco.
 - Design Elements: The design must include a 90-meter deceleration lane on Elizabeth Drive, accommodation for B-double swept paths, and signage prohibiting right turns into Adams Road.
 - c. Due Phase: Detailed design must be submitted and approved before construction commences at the intersection.

- d. Commitment: CPG or their appointed contractor will submit the required plans and obtain approvals to meet these obligations. The upgrades will be completed before the ARRC becomes operational, ensuring compliance with Condition B20.
- 4. Pavement upgrades on Adams Road (Condition B16)
 - a. Requirement: CPG must complete pavement upgrades along Adams Road, between the ARRC site access and Anton Road, to accommodate heavy vehicle traffic.
 - b. Due Phase: Pavement upgrades must be completed before the commencement of ARRC operations.
 - c. Commitment: CPG or their contractor will carry out the necessary pavement upgrades, enabling the lifting of the 3-tonne load limit on Adams Road as part of the ARRC's operational readiness.
- 5. Approval for 26 m B-Double access on Adams Road (Condition B18)
 - a. Requirement: CPG must obtain approval from the National Heavy Vehicle Regulator, in consultation with Council, to permit 26 m B-doubles to utilise Adams Road between Elizabeth Drive and The Northern Road.
 - b. Due Phase: Approval must be obtained before ARRC operations commence.
 - c. Commitment: CPG will work with the National Heavy Vehicle Regulator and Council to secure this approval, allowing 26 m B-double access on Adams Road to support ARRC operations.
- 6. Completion of Elizabeth Drive / Adams Road intersection works (Condition B20)
 - a. Requirement: Before ARRC operations commence, CPG must complete the intersection upgrade works at Elizabeth Drive and Adams Road as TfNSW approves.
 - b. Due Phase: These upgrades must be completed before the facility becomes operational.
 - c. Commitment: CPG will ensure that all approved upgrades, including signage, line marking, and entry into a Works Authorisation Deed with TfNSW, are in place as required under Condition B20, supporting safe and efficient access for the ARRC.

By proactively addressing these requirements and maintaining a clear focus on emergency vehicle access, CPG is committed to ensuring that all road infrastructure obligations are fulfilled within the specified timelines, supporting the safe and effective construction and operation of the ARRC.

ptc. has prepared a Construction Traffic Management Plan (CTMP, ptc.) associated with the upgrade of Adams Road and intersection of Adams Road / Elizabeth Drive. This CTMP (ptc.) includes traffic management schemes (TGSs), work stages and traffic flow management during the intersection upgrade work.

3.12 Traffic guidance scheme

Traffic Guidance Schemes (TGS) will be developed in accordance with the Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads) and the *Traffic Control at Work Sites Manual* (TfNSW 2022).

Any traffic control devices, including signage and line marking that will be installed in accordance with TGS must comply with Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads).

All traffic controllers engaged on-site shall be accredited by TfNSW, and act per TfNSW Standard Conditions, including:

No stopping of traffic on Adams Road;

- There is little pedestrian traffic on Adams Road. Nonetheless, pedestrians will only be stopped for their safety while a truck is entering or leaving the site and will only be held for short periods.
- No marshalling or queuing of trucks will be permitted on Adams Road.

3.13 Pedestrian access

The general public will not be allowed access to the work area. The contractor will ensure that the perimeter of the work area is maintained in a clean, well illuminated and safe manner at all times, throughout the duration of the work. Due to the location of the construction site, the pedestrian activity is assumed to be negligible. However, the emphasis placed on materials handling, the efficient control and protection of pedestrian traffic is of utmost importance. The work area perimeter boundaries shall consist of delineation traffic cones or water filled barrier, installed during the various phases of road upgrade.

3.14 Parking

Under Condition B21, adequate on-site parking facilities will be provided for heavy vehicles and site personnel. This arrangement prevents construction-related traffic from using public or residential streets or parking facilities. Workers will be encouraged to carpool during construction to minimise parking demands further.

By implementing these measures, we aim to maintain clear access to public areas and minimise any potential disruption to local traffic or parking resources.

Due to the location of the work area and poor connection to public transport, the construction workers need to rely on private vehicles.

If possible, staff will be advised to consider carpooling to reduce the number of construction vehicles.

In alignment with Condition B21, CPG will provide sufficient on-site parking and queuing areas to prevent any traffic spillover, including heavy vehicles, onto public and residential streets or public parking facilities.

No parking or heavy vehicle queuing must occur outside the project boundaries to prevent disruptions to the local road network.

3.15 Works zone requirements

The upgrades at the Elizabeth Drive/Adams Road intersection, Adams Road site access intersection, and the northern section of Adams Road may necessitate the establishment of work zones. If necessary, these requirements will be further detailed in the TGS, as referenced in Section 3.12.

Given Adams Road's narrow, two-lane configuration, establishing a work zone along this road may not be feasible without impacting two-way traffic flow. Therefore, the contractor must carefully evaluate the need for work zones on Adams Road, considering the potential impacts on traffic, safety, and compliance with the Conditions of Consent. If a work zone is deemed essential, the contractor will develop and implement suitable traffic control measures, such as one-way movement control, to maintain safe and efficient traffic flow.

The contractor is responsible for identifying required work zones and securing necessary approvals from the relevant road authority, ensuring compliance with all applicable Conditions of Consent. This includes adhering to Condition B21, which mandates sufficient on-site parking facilities to avoid using public or residential streets for parking.

For upgrades at the Elizabeth Drive/Adams Road intersection, the contractor will obtain a Works Authorisation Deed (WAD) from TfNSW as required.

In cases where specialised or intermittent work activities necessitate temporary use of sections of Adams Road or nearby areas, the contractor will submit separate applications to the Council or the relevant authority to obtain permission for any planned work zones or road occupation, ensuring full compliance with applicable conditions of consent for construction traffic.

Any approved Works Zone must only be used for work activities. No infrastructure, including bins, tanks or traffic control equipment must be left on the road when the works zone is not in use by a vehicle. All non-vehicular items must be contained with the work area and not on the carriageway.

When a work zone is not in use, the area/lane must be opened up to allow for normal trafficable conditions

3.16 Road occupancy licences

Any lane or road closures required for upgrades at the Elizabeth Drive/Adams Road intersection, the Adams Road site access intersection, or the northern section of Adams Road will necessitate obtaining a Road Occupancy Licence (ROL). The contractor will submit ROL applications to the Transport Management Centre (TMC) for approval before commencing any activities impacting the state road network traffic flow. This ensures that all closures are coordinated and managed in compliance with regulatory requirements to minimise disruption to road users.

3.17 Work site security

Temporary road barriers and fences will be used to secure the extent of the site. All access points must be securely locked when construction activities are not in progress.

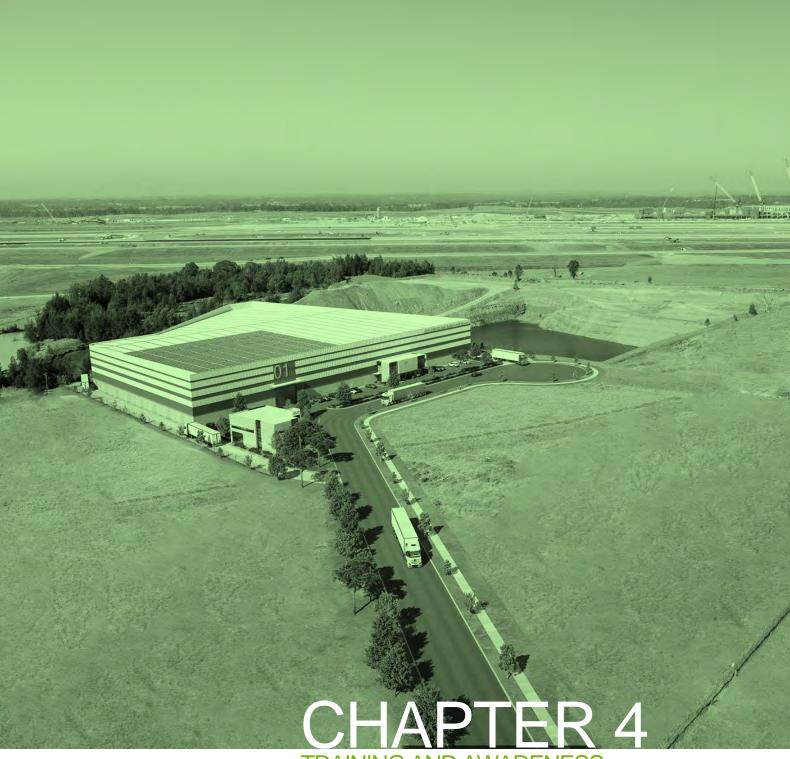
3.18 Staff induction

All staff and subcontractors engaged will be required to undergo a site induction upon entry. The induction will include permitted access routes to and from the construction site for all vehicles and standard environmental, occupational health and safety, driver protocols, and emergency procedures. Additionally, the lead contractor will discuss traffic management requirements regularly as part of toolbox talks.

Toolbox talks will be held to identify traffic issues (parking, access road) and controls during construction works to ensure that drivers are aware of the site traffic management conditions.

3.19 Workplace health and safety

Any personnel required to undertake works or traffic control within the public domain will be suitably trained and covered by appropriate insurance. All traffic controllers will be TfNSW accredited.



TRAINING AND AWARENESS



4 MONITORING AND AWARENESS

4.1 Monitoring Program

The CPG construction management team will constantly monitor construction traffic associated with the project to ensure compliance with this CTMP. This includes regular visual monitoring during site inspections and walkthroughs and CCTV surveillance at the site entrance and other strategic points on-site. This monitoring will allow CPG to oversee both heavy and light vehicle behaviour on Adams Road and within the site boundaries, maintaining adherence to the CTMP (refer to Table 4.1).

The roadway must be kept in a serviceable condition for the duration of construction. At the direction of Council, undertake remedial treatments such as patching at no cost to Council.

Table 4.1 Monitoring Program

Stage	Activity	Purpose	Responsibility	Tools and Checklists
Planning	Traffic Guidance Scheme (TGS) verification	Identify required variations to the TGS, and ensure that they are updated, recorded, and approved To ensure that the TGS selected or designed is suitable for the works and location.	Construction Manager	Traffic Controllers shall be appropriately accredited and implemented
During construction works	Weekly TTM inspections (includes preopening inspection)	To ensure that the TGS are being implemented. Construction vehicle entry/egress suitability, with no queuing on the public road network at any time. Periodic checks to ensure that heavy vehicles are using the correct access route. Delineation is effective with appropriate signage installed for changed conditions.	Construction Manager	Site Inspection Checklist
During construction works	Weekly Site Inspection	To ensure all loads are entering and leaving site covered as outlined within this CTMP. Road Safety Audits are arranged or confirmed as required.	Site Engineer Construction Manager	Site Inspection Checklist
During construction works	Daily observations	To identify any shortfalls and develop an updated action plan to address issues that may arise. The work site is operating safely. Speed control effectiveness.	Site Engineer Construction Manager	Site Diary
During construction works	Daily observations	To monitor vehicle arrival and departure schedules to ensure queuing remains strictly on-site.	Site Engineer Construction Manager	Site Diary
During construction works	Daily observations	To monitor the site access routes to ensure no materials sediments are on the public roads.	Site Engineer Construction Manager	Site Diary

Stage	Activity	Purpose	Responsibility	Tools and Checklists
During construction works	Daily tracking deliveries against the volumes outlined within the plan.	To ensure that vehicle movements are within the prosed limits, deliveries will be tracked against approved volumes, with monthly reviews of the contractor's daily logbook of vehicles required.	Site Engineer Construction Manager	A vehicle log - including rego & time of entry - for the purpose of assessing the effectiveness of these monitoring programs

All employees, subcontractors and staff working on site will be inducted and trained in construction traffic management, including:

- Requirements of this CTMP, including adherence to Condition B21.
- Relevant requirements of TfNSW.
- Roles and responsibilities related to construction traffic management.
- Disciplinary action around non-compliance with this CTMP.

4.2 Review and Improvement

Review and improvement of this plan will be undertaken in accordance with the Conditions of Development Consent and of the CEMP. Continuous improvement will be achieved by the ongoing evaluation of environmental management performance and effectiveness of this plan against environmental policies, objectives and targets.

4.3 Incidents

In the event of a safety / environmental incident or unpredicted impacts relating to waste and resource recovery operations, it is the responsibility of all personnel to report the incident or event to the Contactor Site Supervisor and Construction Manager.

All incidents will be managed and reported according to the CEMP.

4.4 Complaints

Complaints may be received directly from stakeholders, or indirectly via the dedicated phone number, website. Complaints handling will be undertaken in accordance with of the CEMP.

4.5 Non-Compliance, Non-Conformances and Corrective Actions

Non-compliance may be identified via internal and external audits, site monitoring, inspections and observations, environmental incidents and emergencies, complaints and management reviews.

Non-compliance, non-conformances and resulting corrective actions are to be managed in accordance with the CEMP.







Luddenham Advanced Resource Recovery Centre (Lot 3 DP 623799) | SSD 10446

DRIVER CODE OF CONDUCT

Prepared for Coombes Property Group Pty Ltd | 14 March 2025







Luddenham Advanced Resource Recovery Centre (Lot 3 DP 623799) | SSD 10446

SSD 10446 | DRIVER CODE OF CONDUCT

Prepared for Coombes Property Group Pty Ltd 14 March 2025

PR371

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Date	3 September 2024	7 March 2025	

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DOCUMENT CONTROL

Revision	Date	Description	Prepared by	Reviewed by
0	3 September 2024	Draft for client review	Element Environment	Coombes Property Group Pty Ltd
1	3 September 2024		Element Environment	Coombes Property Group Pty Ltd
2	05 March 2025	Reviewed to address DPHI comments	Element Environment	Coombes Property Group Pty Ltd

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EPA pollution hotline	-	131 555
SafeWork NSW	-	131 050
NSW Health		(02) 9391 9939 (office hours) or 0491 227 423 (after hours)
Fire and Rescue NSW	-	1300 729 579 (or 000 if an emergency situation)
WIRES Wildlife Rescue	-	1300 737

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1 CONDITIONS

This report addresses the Drivers Code of Conduct conditions of consent in SSD 10446 and the Traffic management plan requirements provided by Transport for NSW (TfNSW).

1.1 Conditions of consent

Driver's code of conduct related conditions are provided in Table 1.1 Conditions of consent

Condition	Condition				
TRAFFIC AN	ND ACCESS				
Constructio	n and Traffic Management Plan				
B13(e)	Include a Construction Driver Code of Conduct to: (i) minimise the impacts of earthworks and construction on the local and regional road network. (ii) minimise conflicts with other road users. (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes.	Section 2			
B13(f)	(f) include a program to monitor the effectiveness of these measures; and	Section 3 Section 4			
B13(g)	(g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Section 5			

2 DRIVERS CODE OF CONDUCT

2.1 Purpose of this document

This Driver Code of Conduct applies to all personnel and any other person conducting business for Coombes Property Group, whether a direct employee or employed by some other organisation providing a service or product to the project.

Objectives of Drivers Code of Conduct:

- To minimise the impact of earthworks and construction on the local and regional road network;
 and
- Minimise conflict with other road users; and
- Minimise road traffic noise; and
- Ensure truck drivers use specified routes.

The code of conduct requires that while driving any vehicle for work-related purposes. Drivers are to be issues with a copy of the Drivers Code of Conduct, and must comply with all the following:

- Demonstrate safe driving and road safety activities.
- Abide by traffic, road, and environmental legislations.
- Follow site signage and instructions.
- Drivers must only enter and exit the site via the approved entry and exit points and travel routes.

2.2 Driving licence

You must hold a current and valid driving licence for the class of vehicle that you operate. Additionally, you must always carry your current driver's licence with you while you are on duty. If your licence is cancelled or suspended, you must inform your supervisor immediately who will in turn inform project management immediately.

2.3 Vehicle minimum maintenance and operating condition

All vehicles must be maintained and operated in accordance with the vehicle manufacturers recommended standards (refer to vehicle manufacturer's handbook).

2.4 Construction Vehicle Routes

The work area is located in the suburb of Luddenham and the proposed construction vehicle routes have regard for the surrounding traffic arrangements in the vicinity of the site.

No queuing or marshalling of heavy vehicles is permitted on any public road and all loading and unloading of materials will be undertaken within the site or within approved work zones.

All vehicle routes to the site are restricted to existing public roads that have the physical geometry to accommodate the turning movements.

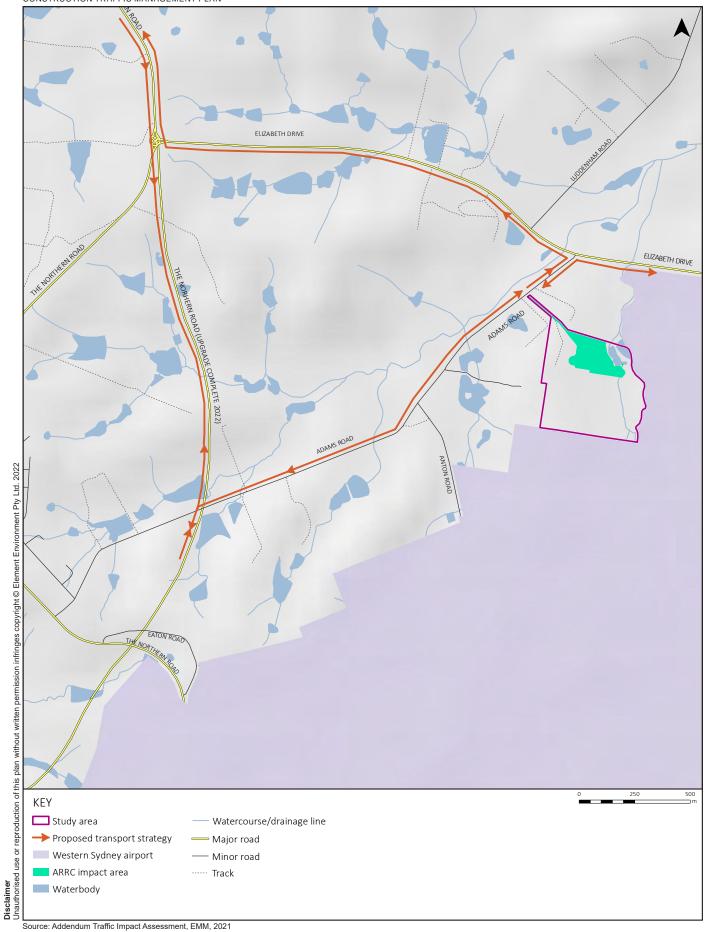
The loading and unloading activities are proposed to occur within the work area. The vehicles will then exit to Elizabeth Drive to access Westlink M7 to east and The Northern Road to west and Adams Road to access The Northern Road to west.

The construction vehicle access routes are shown in Figure 2.1.

Figure 2.2 **Vehicle access routes**



Luddenham Advanced Resource Recovery Centre CONSTRUCTION TRAFFIC MANAGEMENT PLAN



2.5 Penalties and disciplinary action

Failure to comply with this Driver Code of Conduct will lead to either the issue of a 'warning notice' or 'disciplinary action' if the offender is an employee of Coombes Property Group. If the offending party represents another company then 'disciplinary action' may be treated as suspension or cancellation of a service contract or arrangement with that company.

The below activities in any vehicles will be considered as a breach of conduct:

- Reckless or dangerous driving causing injury or death.
- Driving whilst disqualified or not correctly licensed.
- Drinking or being under the influence of drugs while driving.
- Failing to stop after an incident.
- Loss of demerit points leading to suspension of licence.
- Any actions that warrant the suspension of a licence.
- Exceeding the speed limit in place on any permanent or temporary roads.

Any above-mentioned activities will result in removal from site. All vehicles blacklisted from accessing sites when captured in an illegal traffic event.

Any breaches of the CTMP and Driver Code of Conduct may be considered a breach of development consent SSD-10446 and penalties such as fines and/or prosecution may apply.

2.6 Load covering

Loose material on the road surface has the potential to cause crashes and vehicle damage. All loaded vehicles entering and leaving the site must be covered and remain covered as required NSW law for the duration of the trip. The load cover may be removed upon arrival at the delivery site. All care is to be taken to ensure that all loose debris from the vehicle body and wheels is removed prior to leaving the site and again after unloading.

Drivers must ensure that the tailgate is locked before leaving the site. Coombes is to monitor for presence of loose material on the side of the vehicle route and take appropriate action regularly.

2.7 Noise control

Using engine brakes can be extremely noisy. If possible, you should not use engine brakes near residences and built-up areas. Generating excessive noise is an offence governed by relevant legislation.

You must also not unnecessarily over-rev your engine when driving and pulling off from a stationary position.

The following noise management measures must be implemented where possible when delivering/offloading materials on site to minimise construction noise:

- Avoid shouting and minimise talking loudly and slamming vehicle doors.
- Avoid metal to metal contact and dropping materials from height.
- Minimise idling of trucks; and
- Avoid reversing.

2.8 Highway courtesy

The on-going reputation of the project depends very much on the way you drive your vehicle and courtesy that you extend to the community. The road is there to share and therefore, it is a project requirement that you display courtesy and restraint towards other road users.

2.9 Speed restrictions

As a competent driver, you must always adjust your driving to the existing conditions. Speeding is the leading behavioural factor in deaths and serious injury on NSW roads. Speeding is not just driving faster than the posted speed limit, it includes driving too fast for the weather, light, traffic and road conditions.

Always follow posted signs as they provide vital clues to road conditions and characteristics. You should always apply the following rules:

- Always reduce your speed in wet conditions.
- Drive cautiously in low visibility.
- Descend hills in the lowest gear to suit the conditions.
- Always observe the special limits that apply for road works etc.

DO NOT exceed the posted maximum speed.

Always comply with school zone time speed limits and reduce speed when approaching a bus stopping/stopped.

Reduce speed from dusk to dawn in areas where nocturnal wildlife may be present. Do not use bright headlights as blinded animals cannot see the vehicle and do not move away from the road.

2.10 Site speed limits

The project site has a general speed limit of 20 km/h with 10 km/h limits in designated areas. These limits are to ensure the interaction between personnel and vehicles are managed to minimise the risk of injury to all personnel.

Drivers are required to observe the posted speed limits and other traffic signage at all times. All incidents where drivers do not observe speed limits and other traffic instructions will be logged and investigated and where appropriate, disciplinary action will be taken.

2.11 Defensive driving

You should always drive in a manner that will help you to avoid an accident, despite incorrect/inappropriate actions of others or poor driving conditions. Defensive driving requires a high degree of anticipation.

2.12 Vehicle breaking

One of the most important single skills that a professional and competent driver possesses is bringing a loaded vehicle to a controlled stop both in the city and in open road conditions. You may need to brake heavily but you must also be aware of the possible consequences. As a rule, you should always be aware of traffic conditions 1 to 2 km in front of you. In doing so, you are adjusting your own driving conditions to avoid the need for heavy braking.

Always brake with care, remembering that the truck will react differently according to the weight of the load, weight distribution of the load and road surface condition. You should never, under any conditions, drive a vehicle with faulty or suspect brakes. You must always immediately report the fault to your supervisor to be repaired.

Engine brakes are auxiliary to the main service brakes. In general, the following should be observed regarding engine brakes:

- DO NOT use the engine brake on slippery or wet surfaces.
- DO NOT use engine brakes in or near residences and built-up areas, as this causes excessive noise and is a public disturbance.

2.13 Tailgating

By law, you are required to maintain a gap between yourself and the vehicle directly in front of you, so that heavy braking will not be required. The gap is based on several factors including speed, vehicle weight, traffic congestion and road condition. During wet weather or other adverse conditions, the gap distance should be doubled.

The legal distance for heavy vehicles in areas with limited streetlights is 60 metres. A gap of 60 metres is approximately the same as:

- The length of four (4) semi-trailer combinations.
- Twelve (12) car lengths.
- Four (4) seconds.

Always remember, appropriate gap distance between other road users is a key defensive driving tool.

2.14 Overtaking

Overtaking and passing should be done so only when necessary, where legally allowed and in a careful and safe manner. There is to be no overtaking or passing within residential areas.

2.15 Mobile phone device

Using a mobile phone while driving is strictly prohibited for all drivers operating a motor vehicle unless a blue tooth hands-free kit is installed and utilized in the vehicles. This will be enforced to all site personnel and delivery partners during the site specific induction process prior to commencing on the project.

2.16 Road hazards

During most journeys that you take, there will be hazards on and near roadways. Always be alert for these hazards and make your adjustments as necessary.

Examples of hazards are:

- Rough/slippery surfaces.
- Flooded roads.
- High winds.
- Fog and smoke haze.
- Sunset and sunrise.
- Narrow or winding roads.
- Low wires or awnings.

- Low bridges, tunnels etc.
- Crossings, rail/people.
- Animals, pedestrians & cyclists.
- Underpasses and trees.

Be aware that your vehicle itself may become a road hazard when it is parked on a roadway, broken down or otherwise. In this circumstance, use portable warning signals, placing them 50-150 metres in front of and behind the vehicle, as well as at the side.

If your vehicle becomes bogged on site, make contact with your supervisor or site contact and do not attempt to retrieve your vehicle without approval and appropriate risk controls including a SWMS.

2.17 Parking

Adequate on-site parking will be provided for all vehicles, including heavy vehicles, site personnel and visitors, to ensure sufficient traffic flow and safety.

- No parking is permitted outside designated site areas or within the Work Zone.
- Heavy vehicles must park only in allocated bays to prevent obstruction of site access and public roads.
- Any unauthorised parking outside approved areas will be addressed immediately, and noncompliance may result in disciplinary action.

2.18 Material transport

Drivers are responsible for ensuring that all tail and side gates are properly secured and that no ropes, straps or chains are dangling from the trailer.

Drivers of trucks hauling materials to and from the project site will ensure adequate separation between vehicles. No tailgating or formation of rolling convoys is permitted.

Drivers are responsible for ensuring that all loads are properly secured and/or covered and that the load does not spill or leak from the vehicle to the road surface.

Drivers are responsible to ensure the cleanliness of their vehicle and must inspect for the following:

- Loose material, including but not limited to packing material, gravel, dirt, dust etc, may spill from the trailer platform and become a hazard to other drivers on the road.
- Loose material (gravel, dirt or caked mud) may become dislodged from the underside of the vehicle, including wheel arches, and become a hazard to other drivers on the road.

2.19 Monitoring and compliance

. The following procedure will be implemented to enforce the Driver's Code of Conduct:

- Provide a copy of the Driver's Code of Conduct.
- Regular Toolbox discussions on safety features, managing fatigue, approved heavy routes, driver responsibility and drink-driving.
- Encouraging Safe Driving behaviour by:
 - Ensuring the subcontractor is informed if their staff become unlicensed.
 - Not covering or reimbursing staff speeding or other infringement notices.
 - Ensuring legal use of mobile phones in vehicles while driving only and that illegal use is not undertaken.

- Encouraging better fuel efficiency by:
 - Use of other transport modes or remote conferencing, whenever practical.
 - Providing training on, and circulating information about, travel planning and efficient driving habits.

2.20 Reporting

All Drivers on site must:

- Report to their supervisor if they have been prescribed medication before starting work.
- Report ALL near-misses, crashes, and scrapes to their manager,
- Report infringements to a manager at the earliest opportunity.
- Report vehicle defects to a manager prior to the next use of the vehicle.

Corrective and/or preventative actions will be assigned to relevant personnel due to the investigation. Actions will be communicated through planning meetings and toolbox talks.

Crash or incident procedure

In the event of a crash or traffic incident, consider these steps to ensure safety, compliance and accurate reporting.

1. Ensure safety first:

- a. Stop your vehicle immediately at the safest possible location, ensuring you are not obstructing traffic or creating a further hazard.
- b. Activate hazard lights and use warning signals.
- c. Assess the situation and ensure your own safety before assisting others.
- d. If it is safe to do so, check on any injured persons and seek emergency assistance immediately by calling 000 if required.

2. Collect and exchange information:

- a. Record the following:
- b. Details of the other vehicles and registration numbers
- c. Names and addresses of the other vehicle drivers.
- d. Names and addresses of witnesses.
- e. Insurers details

3. Give the following information to the involved parties:

a. Name, address, and company details.

4. If the other vehicle is unattended:

a. If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.

5. Notify authorities if required:

- a. Contact NSW Police (000 or the Police Assistance Line at 131 444) in the following situations:
 - i. If there is a disagreement over the cause of the crash.
 - ii. If there are injuries.
 - iii. If you damage property other than your own.

6. Report the incident to your manager:

a. As soon as reasonably practical, report all details gathered to your manager.



CONTINGENCY MANAGEMENT PLAN



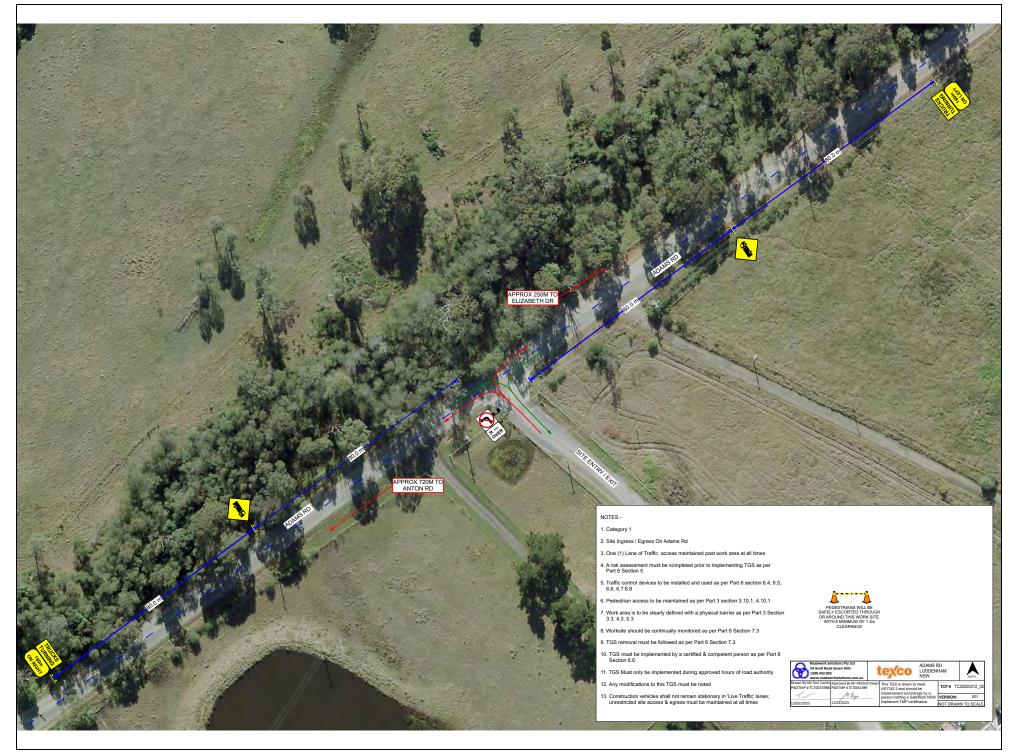
ANNEX B - Contingency management plan

Item	Trigger/	Condition			
	response	Green	Amber	Red	
Queuing	Trigger	 No queuing identified 	 Queuing identified within site. 	 Queuing identified on the public road. 	
	Response	 No response required. Continue monitoring program. 	 The construction delivery schedule will be reviewed and adjusted if heavy vehicles are queuing within the site. Drivers not following the schedule will receive additional training and a copy of the Driver Code of Conduct to reinforce compliance. Site staff will monitor vehicle arrival and departure schedules to ensure queuing remains strictly on-site. 	 In the event of unforeseen congestion at the site entrance, heavy vehicles will be directed to "circle the block" until they can enter the site without queuing on public roads. Public roads and access routes will be clear of any materials, vehicles, or obstructions. Should queuing on public roads be identified, incoming heavy vehicle deliveries will be temporarily suspended to address congestion. Any non-compliance with the noqueuing requirement will prompt a review of the CTMP and, if needed, updates to further enforce queuing management practices. 	
Traffic Guidance Scheme	Trigger	 No observable issues (TGS implements according to plan) 	 Minor inconsistencies with TGS to onsite operations (such as covered signs, missing signs, fallen cones, etc.) 	 Major failure in TGS implementation, or a near miss/incident occurs, regardless of or as a result of the TGS being implemented 	
	Response	 No response required. Continue monitoring program. 	 Traffic Controller to amend TGS on site immediately and document all adjustments. Additional traffic control personnel deployed if required. 	 Immediate halt of all site operations until an investigation is completed. TGS must be updated and revalidated to ensure full compliance with safety requirements. Emergency response coordination with TfNSW and relevant authorities if required. 	
Road obstruction	Trigger	 No obstructions on public roads or site access routes. 	 Temporary obstruction due to minor site activity (e.g., parked vehicle, equipment movement). 	 Major obstruction affecting traffic flow, emergency access, or public safety. 	

Item	Trigger/	Condition		
	response	Green	Amber	Red
	Response	 Continue monitoring traffic conditions. 	 Traffic controllers to clear obstruction immediately. Implement alternate routing or adjust delivery schedules. 	 Emergency clearance measures initiated (e.g., vehicle removal, road reconfiguration). Temporary closure notification sent to authorities and stakeholders. Implement detour plan to maintain access.
Traffic accident near site	Trigger	No incidents reported near site.	 Minor traffic incident occurs, but no major disruptions. 	 Major traffic accident causing significant delays or road closures.
	Response	 Continue observing external traffic conditions. 	 Traffic controllers to manage site access to reduce congestion. Notify emergency services if required. 	 Full emergency response coordination with authorities. Implement detour plans and alert heavy vehicle operators to avoid the area.
Heavy vehicle breakdown	Trigger	 No vehicle breakdowns affecting traffic flow. 	 A vehicle breaks down in a non- critical location but does not block site access or public roads. 	 A vehicle breaks down in a critical location, obstructing site access or causing road congestion.
	Response	 Continue monitoring traffic conditions. 	 Deploy on-site recovery assistance (e.g., mobile mechanic, tow support). Adjust delivery schedules as needed. 	 Deploy emergency vehicle removal and implement detour routes. Notify TfNSW and relevant authorities if needed. Conduct incident review and update CTMP.



RAFFIC GLIDANCE SCHEME





SYDNEY NEWCASTLE CENTRAL COAST MACKAY





