Quarterly Report: Q3 2024

Urban Design Development Report

Moorebank Precinct West Stage 2

Moorebank Intermodal Precinct West Stage 2

SSD 7709

UDDR Quarterly Report – Q3 2024

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Acronyms and Definitions

Acronym / Term	Meaning
Albedo	The amount of the light hitting a surface that it reflects back. Described in percentages or on a scale from 0 to 1.
CoC	Conditions of Consent
ESR	ESR Australia and NZ
GPT	Gross Pollutant Trap
LOGOS	LOGOS Pty Ltd
MIP	Moorebank Intermodal Precinct
MPE	Moorebank Precinct East
MPW	Moorebank Precinct West
RLDD	Revised Landscape Design Drawings
SSD	State significant development
The Development	The MPW Stage 2 Development
UDDR	Urban Design Development Report
Warehouse JN	The warehouse known as Warehouse JN, identified as Warehouse 6 in the plan titled ‘Precinct Modification Plan — Proposed’ (Drawing No JR-SK-A-0-9402, Revision G), prepared by Bell Architecture and dated 16 October 2020)
Warehouse JR	The warehouse known as Warehouse JR, identified as Warehouse 5 in the plan titled ‘Precinct Modification Plan — Proposed’ (Drawing No JR-SK-A-0-9402, Revision G), prepared by Bell Architecture and dated 16 October 2020)
WSUD	Water Sensitive Urban Design

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1. Introduction

1.1. Moorebank Intermodal Precinct

The Moorebank Precinct East (MPE) and Moorebank Precinct West (MPW) Developments are being developed as part of the broader Moorebank Intermodal Precinct (MIP), operated by ESR Australia & NZ (formerly LOGOS). When completed, the MIP will move 1.05 million shipping containers annually. It will also feature Australia's largest purpose-built warehouse and distribution precinct, serviced by automated technology which will see driverless shuttle carriers collect and transport containers around the precinct to be processed, unpacked and stored on site or distributed in smaller consignments.

Construction activities are currently underway across the MIP, for both the MPE and MPW Developments. MPE construction is largely complete with all warehouses, except Warehouse 2, and the IMEX terminal constructed.

Notification of the commencement of operation of warehouses on MPW Stage 2 (State significant development (SSD) 7709) was provided to the Department of Planning, Housing and Infrastructure on the 27 May 2024. Since then, warehouses have progressively commenced operations.

1.2. The MPW Stage 2 Development

The approval for the construction and operation of the MPW Stage 2 Development (SSD 7709), which comprises the second stage of development under the MPW Concept Approval (SSD 5066), was received in November 2019.

The MPW Stage 2 Development (the Development) involves the construction and operation of a multi-purpose intermodal (freight) terminal facility, rail link connection, warehousing, freight village, and upgrades to the Moorebank Avenue and Anzac Road intersection and the subdivision of site including ancillary works.

1.3. Approved Urban Design Development Report

CoC B52 of the MPW Stage 2 Development Consent states that an Urban Design Development Report (UDDR) and associated drawings must be submitted to the Planning Secretary for approval prior to commencement of relevant permanent built surface works and/or landscaping.

The UDDR aims to establish a set of detailed objectives to create a facility that is efficient in its intended operations and provides for local and regional amenity. It incorporates ecologically sustainable design initiatives, water sensitive urban design (WSUD) including water storage and reuse, urban heat island mitigation strategies, landscape design sympathetic to the surrounding vegetation and passive and active measures employed in the design of buildings and logistic operations.

The Planning Secretary approved the UDDR (Revision 5, dated July 2020) and associated drawings on the 12 August 2020.

1.4. Scope and Purpose

As part of the UDDR approval, the Planning Secretary included a requirement to provide quarterly progress updates on the implementation of UDDR strategies under CoC B48, B49, B58, B75, B76, B77, B78, B80 and B81 until all design aspects of the MPW S2 Development are successfully implemented.

This UDDR Quarterly Report is the first progress update on the implementation of UDDR strategies under the above-mentioned MPW S2 CoC.

1.5. Reporting Period

This UDDR Quarterly Report covers the reporting period from the notification of commencement of MPW S2 operations (as notified as 27 May 2024), through to 30 September 2024.

2. UDDR Strategy Implementation

This section describes the current operational status of the MPW Stage 2 warehouses and reports on the implementation of strategies under the UDDR for warehouses that are operational.

2.1. Warehouse Status During Reporting Period

Table 2-1 shows the operational status of warehouses.

Table 2-1 - Operational status of warehouses

Warehouse	Operational Status
Warehouse N1 – Maersk	Not in operation
Warehouse N2 – Sydney Tools	Not in operation
Warehouse N3 – TBA	Not in operation
Warehouse N4 – TBA	Not in operation
Warehouse 5 – JR: Primary Connect – Moorebank Regional Distribution	Not in operation
Warehouse 6 – JN: Primary Connect Moorebank National Distribution	Not in operation

2.2. Rail Terminal Status

The Interstate Rail Terminal (INTS) was ready for operations from May 27, 2024.

2.3. Status of UDDR Implementation

A review of the relevant CoC identified within the approved UDDR, the strategies for addressing each CoC and the implementation status is provided in Table 2-2.

Evidence of implementation is provided in Appendix A.

Table 2-2 - Status of UDDR Implementation

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
B48	The Development must be designed and operated to meet Urban Heat Island Mitigation principles and to achieve a 4C degree decrease in temperature compared to neighbouring industrial developments by including measures such as:	Section 2.2 of the UDDR addresses all of the Urban Heat Island Mitigation principles. The 'Urban Heat Island Mitigation Strategy' (UHIMS) prepared by SIMTA covering the MPW S2 Precinct provides further detail about how cooling has been achieved. Part 2 of the UDDR has UHIMS modelling and a UHIMS report. Appendix 4.4, a UHIMS report by Integral Group, found that cooling of 4C degree was achieved.	*See comments below		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(a) WSUD elements such as wetlands;	Section 3.9 of the UDDR identifies the following strategies for WSUD within MPW S2 (this is supported by the Stormwater Development Design Report (SDDR) (Rev C, 29/04/2020, Costin Roe): - limiting post-development flow to pre-development flows by implementing a series of detention tanks and open basins sized for the 1:100 ARI storm event - achieving water quality and pollution reduction through implementation of a treatment train including GPTs and bio-retention systems, including within the OSD basins - managing flood flow events by locating infrastructure 500mm above the 1% AEP flood level and providing overland flow paths - rainwater reuse tanks included for each warehouse, freight village and IMT Rainwater to meet demand for irrigation, internal non-potable uses & container washdown facility - landscape design would be integrated into the stormwater system to improve visual amenity.	WSUD elements are progressively being implemented in accordance with the latest approved SDDR (Rev C, 29/04/2020, Costin Roe). This will be implemented through on-site detention (OSD) basins, overland flow paths, and rainwater tanks. See figures B48.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(b) shade tree planting;	Section 2.2 of the UDDR states that *the UHIMS addresses shade tree planting*. The UHIMS modelling on page 4 of the UDDR Part 2 states that *the MPW Precinct is to have 12% tree canopy shading based on a 1 per 30m tree spacing method.*	Tree spacing of 1 per 30m is required as part of the updated Development Layout Drawings (refer to CoC B2 Plan). Shade tree plantings have been undertaken and is being progressively implemented with satisfactory rates of mortality. See figures B48.		
	(c) vegetation ground cover;	Section 2.2 of the UDDR states the UHIMS addresses vegetation ground cover. The UHIMS modelling on Page 4 of Part 2 of the UDDR identifies that vegetation ground cover (including the conservation area) has been designed to cover 22% of the site area.	The latest updated B2 plan identifies that a total of 15.06% of vegetated ground cover is now provided excluding the conservation area. Vegetation cover is progressively being implemented in accordance with the B2. See figures B48.		
	(d) use of 'cool' building and pavement materials (i.e. those with high reflectivity in the infrared spectrum); and	The UHIMS modelling on Page 4 of the UDDR Part 2 identifies that *all buildings are to be built with cool roof materials (albedo of 0.65).*	Roofs and pavements were designed with low albedo material. This strategy is progressively being implemented as Warehouses are constructed. See figures B48.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(e) green roofs.	(e) green roofs were not included in design as they are not suitable for an industrial project.	Consistent with UDDR - not appropriate for the Development.		
B49	The Development must be designed and operated to meet ESD principles and include measures such as the following:	Section 2.3 of the UDDR addresses Ecologically Sustainable Development in detail.	*See comments below		
	(a) passive solar design;	Section 2.3 of the UDDR identifies that buildings will be orientated to facilitate solar power capture of the northern sun, designed to incorporate overhanging eaves and awnings, warehouses will utilise cross-ventilation.	This strategy has been implemented on Warehouses North 1 (N1)1, North 2 (N2), JR Regional Distribution Precinct (JR) and JN National Distribution Precinct (JN). The strategy will continue to be implemented.See figures B49.		
	(b) use of energy efficient plant and equipment;	Section 2.3 of the UDDR states the use of energy efficient plant and equipment will be managed through plant and equipment being compliant with SIMTA's internal Environmental Management System's Plan. Section 2.3 also states that efficient plant and equipment will be addressed in more detail per tenant requirements.	The implementation of this strategy will be confirmed in future UDDR Quarterly Reports.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(c) use of renewable energy sources;	Section 2.3 of the UDDR strategies that solar panels are to be installed on 30% of warehouse roof surface area, where feasible. It also aims for the solar panels to be visually unobtrusive. Drawings PIWW-RCG-AR-DWG-0110-112 and JR-SK-A-9200 show approximately 30% rooftop solar panel coverage across the Warehouses.	Warehouses N1, N2, JR and JN have been designed to have approximately 30% of roof surface area covered with solar panels. This has been implemented on Warehouses N1, N2, JR and JN. Solar panels are not visible from ground level. See figures B49.		
	(d) cross-ventilation;	Section 2.3 of the UDDR states the strategy to provide cross ventilation is to promote open spaces between buildings, have permeable facades (through openings and vents) and to select orientation considerate of overall site layout.	Warehouses N1, N2, JR and JN have open space between them. Warehouses N1, N2, JR and JN have roller doors that can be left open to enable cross ventilation. See figures B49.		
	(e) selection of materials with lower energy manufacturing requirements;	Section 2.3 of the UDDR states the strategy is to reuse demolished materials as aggregate through a co-located concrete crushing plant; the CEFC agreement to consider low embodied energy materials. The section states further that long span timber was considered but steel was chosen instead because of the scale and operational requirements of the Development.	Implementation of this strategy will be confirmed in future UDDR Quarterly Reports. Long span timber was used where possible. See figures B49.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(f) use of locally sourced material to reduce impacts associate with transport	Section 2.3 of the UDDR states the strategy to use locally sourced fill material can be achieved through using local sources such as the WestConnex Projects about 20km away as opposed to the normal quarry sourced fill which is about 100km away.	Implementation of this strategy will be confirmed in future UDDR Quarterly Reports.		
	(g) rainwater capture and reuse;	Section 2.3 of the UDDR states that all buildings are to be fitted with water recycling and reuse tanks. It also states that stormwater collection on-site detention systems and overland flow paths will be implemented to mitigate localised flood as per engineer's specifications and requirements under the consent.	Warehouses N1, N2, JR and JN include rainwater tanks. Water recycling and reuse will be confirmed in future UDDR Quarterly Reports. See figures B49.		
	(h) water efficient fixtures and fittings; and	Section 2.3 of the UDDR states that all taps will be fitted with efficient tap fittings to help minimise water use throughout the Development where possible.	Warehouses N1, N2, JR and JN have water efficient tap fittings installed. See figures B49.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(i) waste minimisation and recycling.	Section 2.3 of the UDDR states that the Development will be working with end users to promote and develop best practice in their operations.	As tenants (end users) progressively occupy warehouses, the Developer will assist to promote best practice for their operations. A Management Plan has been established with regular audits conducted to verify effective waste management and recycling practices are maintained.See figures B49.		
B58	The Revised Landscape Design Drawings and Revised Architectural Drawings and associated elements must demonstrate a design criteria and other requirements listed in Conditions B59 to B74.		*See comments below against relevant CoC		
	B59: Pedestrian and cycle paths must: (a) be provided through the site to provide connections to Moorebank Avenue, the rail terminal office and between warehouses and the freight village; and (b) integrate with existing and planned footpaths or cycleways in the locality.	Section 3.4 of the UDDR provides the strategy for pedestrian and cycle paths to, from and through the Precinct. It states that there will be pedestrian and cyclist access entry and exit via the Moorebank Avenue Frontage, an integrated pedestrian and cycle path along the Estate Road with a landscape buffer, and pedestrian and cycle paths for internal roads with a landscape strip on either side. Additionally, there is provision for future connections to the Casula Railway Station via the Estate Road	Pedestrian and cycle paths have been provided from Moorebank Avenue to the Estate Road and to Warehouses N1, N2, JR and JN. See figures B59.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
		shared cycle path. This is outlined on Figure 3.5 of the UDDR. The B2 plan (PIWW-RCG-AR-DWG-0100 ('Post Approvals - MPW Masterplan - Part 1')) shows the Precinct will be designed to comply with this condition.			
	B60: Paths must be integrated with landscaping and include meanders to allow for canopy tree clusters and a more varied walking/ riding experience.	Section 3.4 of the UDDR shows that pedestrian and cycle paths along the Estate Roads and Internal Roads have been designed to have landscaping buffers. Meandering paths are shown on the B2 plan.	This strategy has been implemented along all currently developed pedestrian and cycle paths. Future pedestrian and cycle paths will be built to design. See figures B60.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B61: The rail terminal office, freight village and each warehouse must include an outdoor meal break area with shade, seating, lighting and landscaping including shrubs and groundcover and canopy trees where reasonable. In addition, the freight village outdoor area(s) must include a water fountain(s) or other fresh drinking water provision.	The B2 plan shows the rail terminal office has an outdoor break area. Drawings PIWW-RCG-LN-DWG-0110-0112 show the Warehouses are designed to have outdoor meal break areas.	Warehouses N1, N2, JR and JN include outdoor meal break areas. See figures B61.		
	B62: Secure bicycle parking and end-of-trip facilities must provide: (a) a minimum 1 staff bicycle parking per 10 staff (or 1 per 10 car spaces if staff numbers are undetermined); (b) compliance with the minimum requirements of AS 2890.3:2015 Parking facilities - Bicycle parking for the layout, design and security of bicycle facilities, and be located in easy to access, well-lit areas that incorporate passive surveillance; and (c) under cover bike storage, showers and change facilities at each warehouse sufficient to accommodate the needs of the forecast number of employees.	The B2 Plan shows each warehouse has been designed to have bicycle parking. Drawing PIWW-RCG-AR-DWG-0190 identifies that every Warehouse has been designed to meet this condition.	Warehouses N1, N2 and JN have secure bicycle parking.Warehouse JN bicycle parking services Warehouse JR as well.See figures B62.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B63: The following minimum setbacks apply: (a) 18 m from Moorebank Avenue with minimum soft landscaped width of 10 m, subject to any variation agreed to by the Planning Secretary at the site entrance for the purpose of facilitating the primary access driveway into the site; and (b) 5 m setback from the western internal road to warehouse carparks. Note: See also Condition B2.	This condition is designed for in the B2 Plan. Section 3.3 of the UDDR addresses an approved change to the 18m setback for the purpose of facilitating the primary access driveway into the site. Drawings PIWW-GNK-LN-DWG-101, 102, 106 show the design to comply with this condition.	The requirements of this CoC are progressively being implemented for all developed areas. See figures B63.		
	B64: Canopy tree planting must be provided around the perimeter of the site, including the southern fill area where future warehousing is proposed.	This condition is designed for in drawings PIWW-RCG-AR-DWG-0100 and PIWW - GNK-LN-DWG-101, 102, 104, 106-108.	This is a progressive action and will be verified in future UDDR Quarterly Reports.		
	B65: The southern fill area where future warehousing is proposed must be topsoiled and hydroseeded with native grasses.	Drawing PIWW-GNK-LN-DWG-102 shows the design that meets this condition.	This is a progressive action and will be verified in future UDDR Quarterly Reports.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B66: Perimeter fill batters must be stabilised with vegetation.	Drawing PIWW-GNK-LN-DWG-101 and 102 shows the design that meets the requirements of this condition.	Perimeter fill batters have been stabilised with vegetation in some locations including the western basins. The Northern and Southern fill batters have not yet been constructed. The Western fill batter is vegetated with some areas undergoing management for weeds and as an asset protection zone. This is a progressive action and will be verified in future UDDR Quarterly Reports. See figures B66.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B67: Landscaping within the warehouse area must include dense canopy tree planting, shrubs, sedges, herbs, ground covers and tufted native grasses primarily derived from OEH lists of Cumberland Plain Woodland. The canopy tree mix must include some or all of the following species: *Eucalyptus crebra, Eucalyptus moluccana Eucalyptus amplifolia, Eucalyptus bosistoana, Eucalyptus eugenioides, Eucalyptus tereticornis, Eucalyptus punctate, Eucalyptus baueriana, Corymbia maculata, Angophora floribunda* and *Angophora bakeri.*	Section 2.4 of UDDR has the strategy to provide native landscaping consistent with that of the existing area and to blend it in with surrounding bushland. PIWW - GNK-LN-DWG-001 shows the list of species chosen to be planted on the Precinct.	This is a progressive action and will be verified in future UDDR Quarterly Reports.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B68: The following minimum landscaping requirements apply: (a) 15% of the warehouse area landscaped at ground level, 10% of which must be soft landscaping, excluding the OSD basins unless they are accepted as contributing to soft landscaping in the peer review report required under Condition B55; (b) 1 canopy tree per 30 m^2 of landscaped area; and (c) a 2.5 m wide landscaped bay every 6-8 car spaces to provide shade within carpark areas, or alternative carpark landscaping (such as linear planting of vegetation of a minimum width of 2 m between rows of carparking) accepted as providing adequate shade in the peer review report required under Condition B55. Note: For the purposes of this condition, canopy trees are not required to be planted on or immediately adjacent to vehicle paths between the intermodal terminal and the eastern elevation of each warehouse.	Section 3.1 of the UDDR requires car parking to include landscape bays every 6-8 bays. The B2 plan and drawings PIWW-RCG-AR-DWG -110-112, PIWW-GNK-LN-DWG-100, 101, 102, 104-108, 200 and JR SK A-9200 show the designs for this condition such as 15.06% of the Warehouse area being landscaped, 1 canopy tree per 30m^2 of landscaped area and landscaping every 6-8 metres.	Where landscaped areas have been completed, plantings meet the requirement of one per 30m^2. This is a progressive action and will be verified in future UDDR Quarterly Reports. See figures B68.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B69: Perimeter and on-site detention and biofiltration/ bioretention basin fences higher than 1.2m must be transparent and dark in colour but not constructed of chain wire, to provide visual amenity.	Section 3.7 of UDDR has the strategy that OSD basin fences that will be higher than 1.2m will be transparent and dark in colour.	All completed perimeter fencing around Warehouses comply with this condition. See figures B69.		
	B70: Boundary fencing design must allow for fauna movement where required under Condition B152(b).	Not addressed in the UDDR. CoC is addressed via Koala Management Plan No. 18194RP1 (Cumberland Ecology, 03/03/2020). Sections 7.4 and 8.3.5 of the MPW Stage 2 Koala Management Plan identify a connection to the Moorebank Biodiversity Offset area from the south of the precinct. The movement corridor can be constructed through the use of fences, culverts, and bridges. The B2 plan identifies a koala movement corridor close to the southern boundary of the Precinct.	This requirement will be verified in future UDDR Quarterly Reports.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B71: Screen fencing and planting must be provided around waste bins or other outside storage areas.	Drawings PIWW-RCG-AR-DWG-0110-12 and JR-SK-A-9200 + 9204 show designs for screen fencing as required by this condition.	Screen fencing has been installed at Warehouses N1, N2, JR and JN.This is a progressive action and will be verified in future UDDR Quarterly Reports.See figures B71.		
	B72: Screen planting must be provided on both sides of noise walls.	Section 3.7 of UDDR states that *there is no need for a noise wall and that OSD landscaping can provide visual amenity in place of one.* It also states that *retaining walls should include landscaping per CoC B73.* Drawings PIWW-GNK-LN-DWG-101, 102, 104, 106-108 provide design for screen planting on both sides of the noise wall.	Screen planting has been implemented on the Estate Road side of the noise wall. This is a progressive action and will be verified in future UDDR Quarterly Reports. See figures B72.		
	B73: Retaining wall materials and colours must be of a natural appearance and incorporate landscaping.	Section 3.7 of UDDR states that *retaining walls should include landscaping per CoC B73.*	Retaining walls for perimeter batters and attached to basin outlets meet this requirement. See figures B73.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	B74: Noise barriers must minimise visual and amenity impacts and be designed in accordance with the Noise wall design guideline – Design guideline to improve the appearance of noise walls in NSW (RMS, March 2016).	Section 3.7 of UDDR and Appendix 4.5 of the UDDR determines that *there is no need for a noise wall from an urban design perspective*. Drawings PIWW-RCC-AR-DWG-0100-0112 + 0130 and PIWW-GNK-LN-DWG-101, 102, 104, 106-108 all provide a design for a noise wall and landscaping on both sides of it.	The noise wall has been completed in accordance with the condition. See figures B74.		
B75	The following must be included on, or provided with the Revised Landscape Design Drawings required under Condition B52.		*See comments below		
	(a) irrigation systems;	Revised Landscape Design Drawing (RLDD) PIWW-GNK-LN-DWG-400 shows a diagram and description of the irrigation system: *A low volume drip irrigation system may be installed at the discretion of the Developer., Position of control box, solenoids ad irrigation conduits to be designed and constructed concrete based pedestal mount. Performance specification to be provided by landscape architect, nominally 25mm delivered to plant areas each week during establishment (depending on weather conditions). After establishment, irrigation rates can be decreased in*	The RLDD meet the requirements of this Condition. The RLDDs will be updated progressively as the precinct develops.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
		certain areas of the landscape depending on the species.			
	(b) planting schedule including tree and shrub species, expected mature height, planting densities and to sizes;	RLDD PIWW-GNK-LN-DWG-001 provides all the information required for this condition.	The RLDD meet the requirements of this Condition. The RLDDs will be updated progressively as the precinct develops.		
	(c) soil specification and depth for landscaped areas in relation to pot sizes and species to ensure the viability of shrubs and trees;	RLDD PIWW-GNK-LN-DWG-400 provides the strategy for pot size and soil types and depth. *Soil horizon A will be a sandy loam to clay loam topsoil, horizon B will be open granular well drained growing media and horizon C will be compacted site sub base. Holes for planting will be no less than 100mm wider all around to allow for space for the roots.*	The RLDD meet the requirements of this Condition.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(d) landscaping around the southern and northern boundaries of the site; and	RLDD PIWW-GNK-LN-DWG-101 102 shows designs for landscaping around the southern and northern boundaries of the site.	The RLDD meet the requirements of this Condition.The RLDDs will be updated progressively as the precinct develops.		
	(e) noise wall, retaining wall and fencing graphics and material details.	UDDR Section 3.8: Screening and Fencing references Appendix 4.5 of the UDDR which identifies that *a noise wall is not needed despite the condition as it will have no effect.*	The RLDD meet the requirements of this Condition. The RLDDs will be updated progressively as the precinct develops.		
B76	Operational lighting must:		*See comments below		
	(a) comply with the latest version of *AS 4282-1997* - Control of the obtrusive effects of outdoor lighting (Standards Australia, 1997); and	UDDR Section 3.8 identifies that *operational Lighting and Signage will comply with Conditions B76, B77 and B78, and will be detailed during Construction Certificate.* *Lighting is to be designed and managed to mitigate light spill impacts on fauna, habitat and any adjoining developments or residences, but must be maintained to a level sufficient for operational standards and site safety*	Lighting has been located appropriately and has been set up to shine light downwards. Construction in accordance with the Australian Standards will be verified in future UDDR Quarterly Reports. See figures B76.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
	(b) be designed to reduce light spill and be mounted, screened and directed in such a manner that it does not create a nuisance and minimises visual impacts to surrounding properties, the public road network, the Georges River riparian corridor and the Boot Land.	UDDR Section 3.8 identifies that *design and lux of any internal or spot lighting shall be designed to avoid off site or traffic safety impacts such as reflection and glare, and signage fronting Moorebank Avenue is to be designed to complement the architectural character of the built form, the landscape treatments, the sites natural character, and to provide a unique SIMTA identity.*			
B77	The following signage is not permitted:		*See comments below		
	(a) general advertising or moving or flashing signs;	Drawing PIWW-RCG-AR-DWG-0190 shows the standard design for Warehouse signage acknowledging signage must comply with this condition.	Signage on buildings and along the Estate Road comply with this condition. This is a progressive action and will be verified in future UDDR Quarterly Reports. See figures B77.		
	(b) west facing illuminated building signage visible from residences; and				
	(c) internally illuminated signs that are visible from residences.				
B78	Signage must not occupy more than 10% of any façade or wall of a building.	Drawing PIWW-RCG-AR-DWG-0190 shows the standard design for Warehouse signage acknowledging signage can be no more than 10% greater than the facade/wall.	No signage on any completed warehouse occupies more than 10% of any façade or wall of a building. This is a progressive action and will be verified in future UDDR Quarterly Reports.		

CoC Ref.	Condition Text	UDDR Strategy	Status of Implementation	In Progress	Complete
			See figures B78.		
B80	A rainwater tank(s) must be included on each warehouse, the freight village and rail terminal buildings.	Drawings PIWW-RCG-AR-WG-0110-0112 show rainwater tanks designed to be implemented per this condition.JR-SK-A-9200 shows rainwater tanks designed for Warehouses JR and JN.	Warehouses N1, N2, JR and JN have rainwater tanks installed. The freight village has not yet been developed and there are currently no permanent rail terminal buildings.This is a progressive action and will be verified in future UDDR Quarterly Reports.See figures B80.		
B81	Rainwater must be used for irrigation, all internal non-potable uses, the container washdown facility and be considered for cooling towers; heating, ventilation, and air conditions; and ground source heat exchange.	UDDR Section 3.9: *Rainwater tanks may be used to collect off water from the site's warehouses and stored to meet demand for irrigation, internal non-potable uses and the container wash down facility.* Drawing PIWW-GNK-LN-DWG-400 shows the design for irrigation from the Site's stormwater system.	This requirement will be verified in future UDDR Quarterly Reports.		

3. Conclusion

A review of the relevant CoC's identified within the approved UDDR, the strategies for addressing each CoC and the implementation status of each strategy have been presented in this UDDR Quarterly Report.

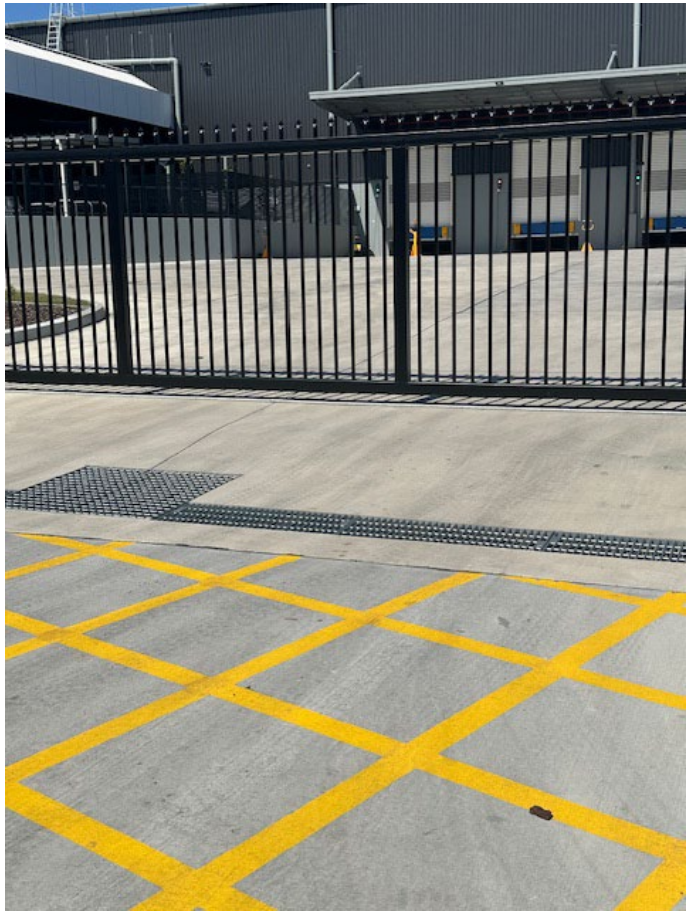
During the reporting period no warehouses were operational. The INTS became operationally ready during the reporting period.

The strategies identified in the UDDR to address the relevant CoC continue to be progressively implemented across the MIP as warehouses become operational.

Appendix A. Evidence of Implementation

CoC Ref.	Condition Description	Evidence
B48	*The Development must be designed and operated to meet Urban Heat Island Mitigation principles and to achieve a 4C degree decrease in temperature*.	 Figure B48 - 1 Completed OSD Basin 5

CoC Ref.	Condition Description	Evidence
		 Figure B48 - 2 - OSD at MPW South

CoC Ref.	Condition Description	Evidence
		 Figure B48 - 3 Overland flow path with drainage directed to OSD 5

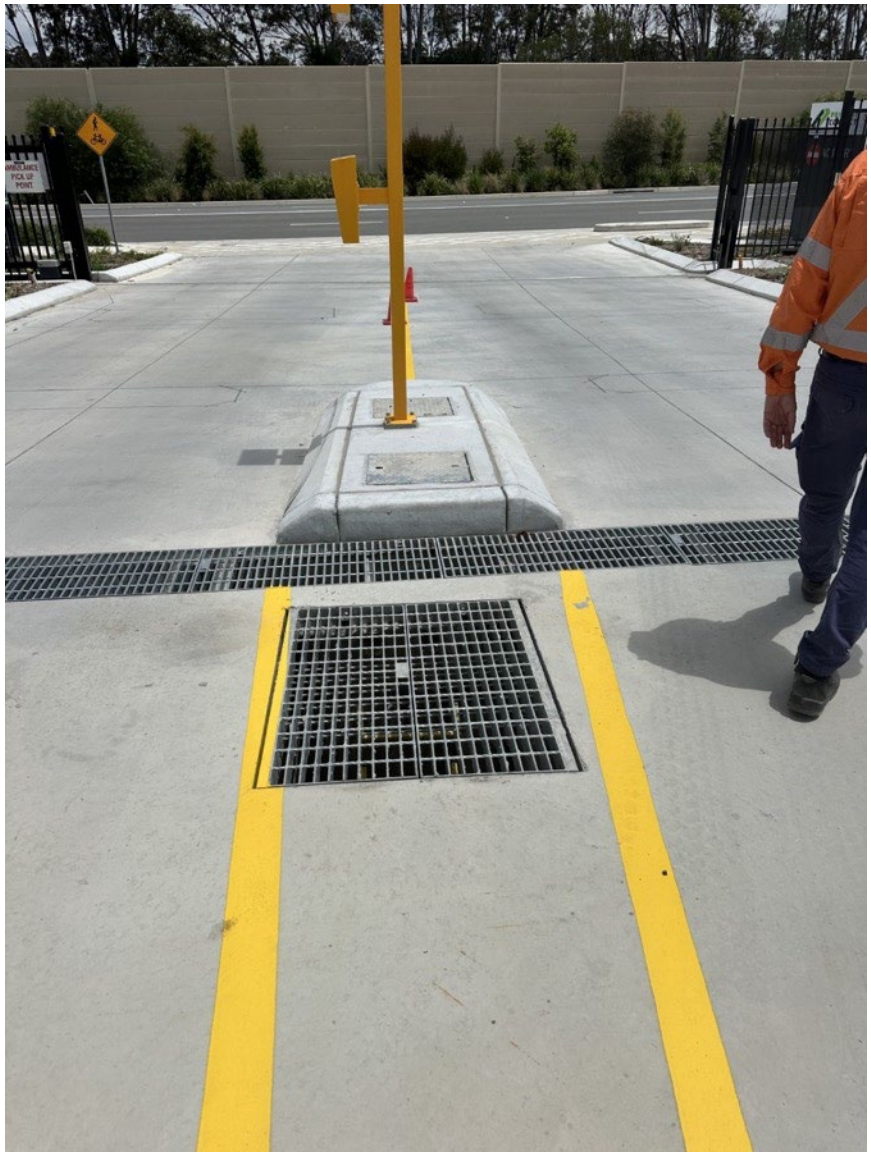


Figure B48 - 4 - overland flow path at warehouse JR

CoC Ref.	Condition Description	Evidence
		 Figure B48 - 5 Operational rainwater tank at warehouse N2

CoC Ref.	Condition Description	Evidence
		 Figure B48-6 – Operational rainwater tank at warehouse N1

Figure B48 - 7 Operational rainwater tank at warehouse JR

Figure B48 - 8 Operational rainwater tank at warehouse JN

CoC Ref.	Condition Description	Evidence
		 Figure B48 - 9 Landscaping (hydroseed) located at OSD 5

CoC Ref.	Condition Description	Evidence
		 Figure B48 - 10 Gross pollutant Trap (GPT) system that discharges onto bioretention cell

CoC Ref.	Condition Description	Evidence
		 Figure B48 - 11 Clean water discharging from GPT and bioretention cell

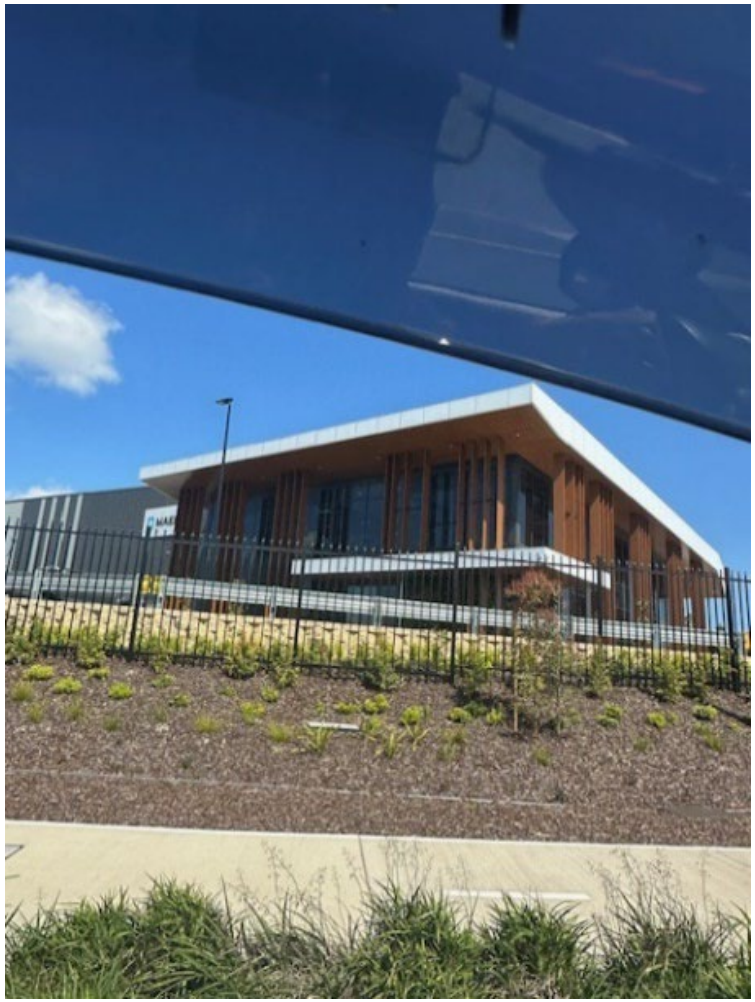
CoC Ref.	Condition Description	Evidence
	The Development must be designed and operated to meet Urban Heat Island Mitigation principles and to achieve a 4C degree decrease in temperature.	 Figure B48 - 12 Example of tree planting to provide canopy shading

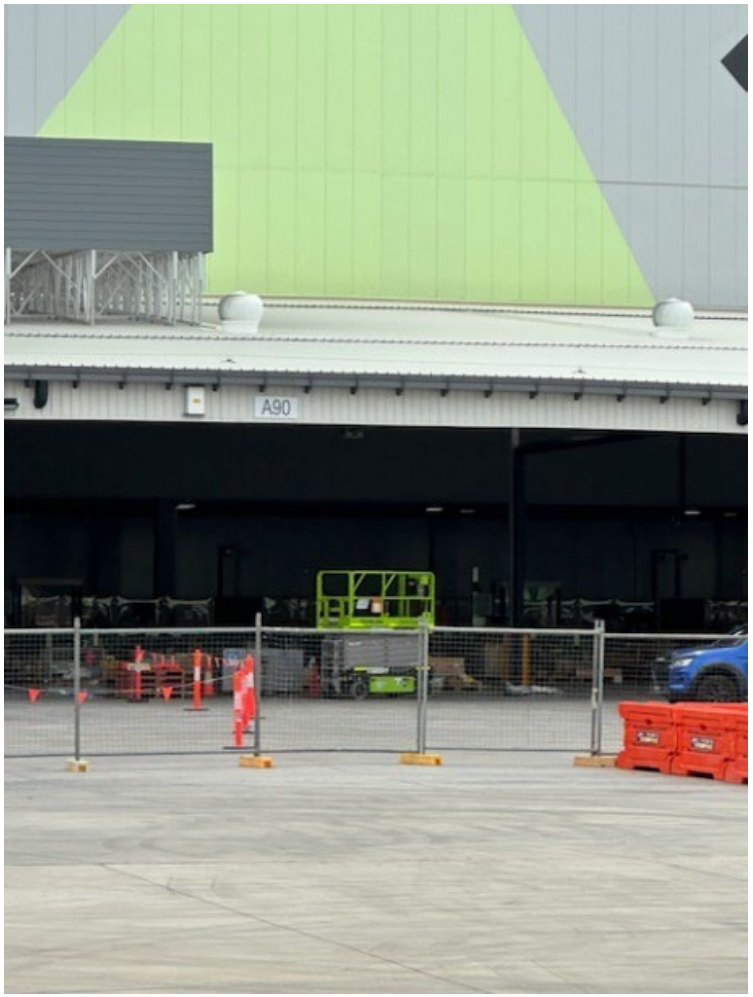
CoC Ref.	Condition Description	Evidence
	The Development must be designed and operated to meet Urban Heat Island Mitigation principles and to achieve a 4C degree decrease in temperature.	 Figure B48 - 13 Example of landscaping to meet the 22% vegetation cover

	The Development must be designed and operated to meet Urban Heat Island Mitigation principles and to achieve a 4C degree decrease in temperature.	

Figure B48 - 14 Roof of warehouse JN with low albedo material installed

Figure B48 - 15 Low albedo material pavement

CoC Ref.	Condition Description	Evidence
B49	Condition B49 requires the development be designed and operated to meet Environmentally Sustainable Design principles.	 Figure B49 - 1 Example of overhanging eave on Warehouse N1

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 2 Completed awning on warehouse JR

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 3 Completed awning on warehouse N1

Figure B49 - 4 Completed awning and cross ventilation at warehouse JN

Figure B49 - 5 Awning and roller doors that can be used for cross ventilation at warehouse N2

Figure B49 - 6 Roller doors that can be used for cross ventilation at warehouse N1

CoC Ref.	Condition Description	Evidence
	Condition B49 requires the development be designed and operated to meet Environmentally Sustainable Design principles.	NA – see report

CoC Ref.	Condition Description	Evidence
	Condition B49 requires the development be designed and operated to meet Environmentally Sustainable Design principles.	 Figure B49 - 7 Solar panels installed on warehouse JN

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 8 Aerial image of MPW Stage 2 warehouses showing solar panel installation

CoC Ref.	Condition Description	Evidence
	Condition B49 requires the development be designed and operated to meet Environmentally Sustainable Design principles.	 Figure B49 - 9 Open space and landscaping between warehouses on MPW South

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 10 Aerial image showing open space between warehouses

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 11 Roller door from the inside of warehouse JR that enables cross ventilation

CoC Ref.	Condition Description	Evidence
	Condition B49 requires the development be designed and operated to meet Environmentally Sustainable Design principles.	 Figure B49 - 12 Use of timber on warehouse N1 office space
		NA

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 13 Rainwater tank installed at warehouse N2

CoC Ref.	Condition Description	Evidence
		 Figure B49 - 14 Water efficient tap fittings at warehouse JN

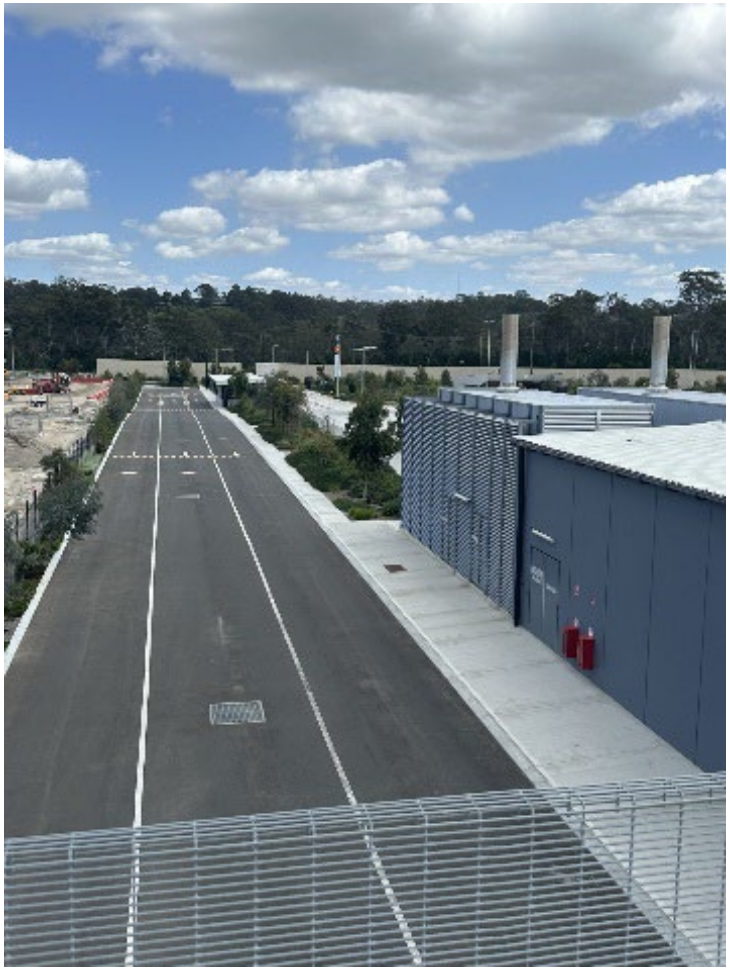
CoC Ref.	Condition Description	Evidence
		 Figure B49 - 15 Water efficient tap at warehouse JR

Figure B49 - 16 Water efficient tap at warehouse N2

Figure B49 - 17 Water efficient tap at warehouse N1

CoC Ref.	Condition Description	Evidence
B58	Condition B58 states that landscape design and architectural drawings associated with the development of MPW Stage 2 Precinct Warehouses must incorporate Conditions B59 to B74.	NA – see report

CoC Ref.	Condition Description	Evidence
	B59: Pedestrian and cycle paths must: (a) be provided through the site to provide connections to Moorebank Avenue, the rail terminal office and between warehouses and the freight village; and (b) integrate with existing and planned footpaths or cycleways in the locality.	 Figure B59 - 18 Example of pedestrian and cycle path along the Estate Road

CoC Ref.	Condition Description	Evidence
		 Figure B59 - 2 Pedestrian and cycle path towards warehouse JN

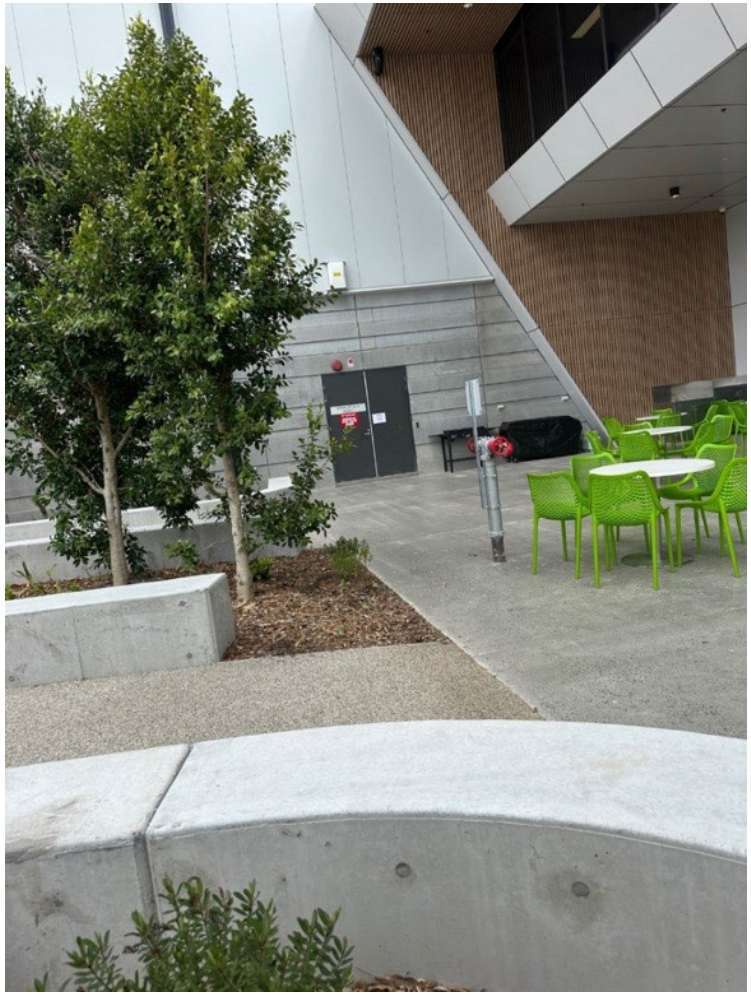
CoC Ref.	Condition Description	Evidence
		 Figure B59 – 3 Pedestrian crossing and traffic lights to Moorebank Avenue that are connected to pedestrian and cycle paths along the Estate Road

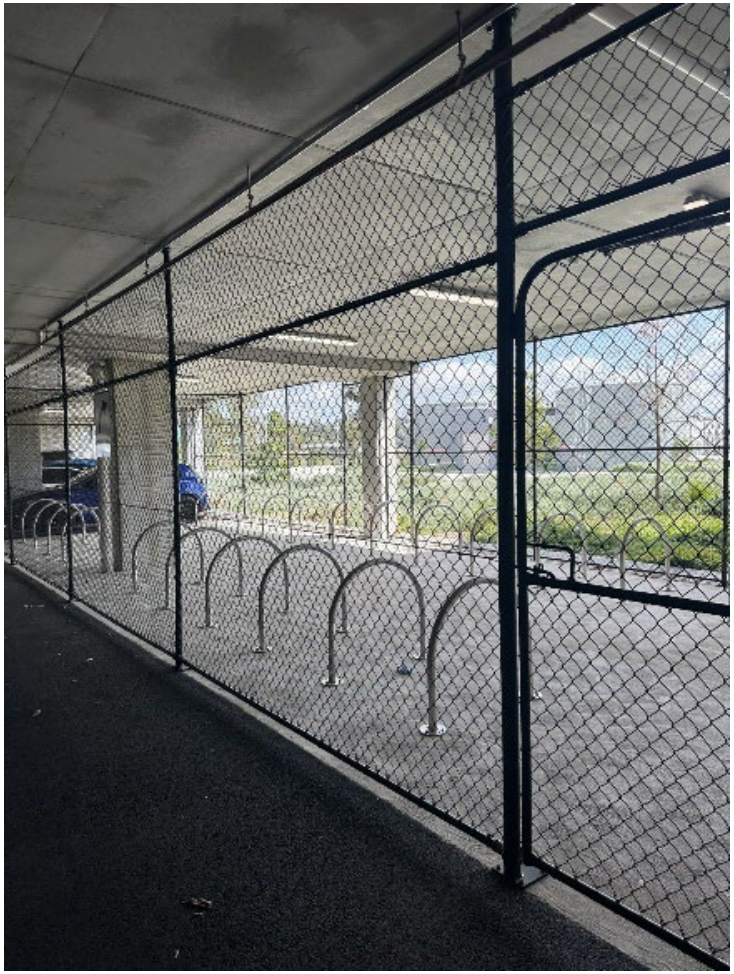
CoC Ref.	Condition Description	Evidence
	B60: Paths must be integrated with landscaping and include meanders to allow for canopy tree clusters and a more varied walking/ riding experience.	 Figure B60 - 1 Section of completed pedestrian and cycle path

CoC Ref.	Condition Description	Evidence
	B61: The rail terminal office, freight village and each warehouse must include an outdoor meal break area with shade, seating, lighting and landscaping including shrubs and groundcover and canopy trees where reasonable. In addition, the freight village outdoor area(s) must include a water fountain(s) or other fresh drinking water provision.	 Figure B61 - 1 Meal break area located at warehouse JN

Figure B61 - 19 Outdoor break area located at warehouse N1

CoC Ref.	Condition Description	Evidence
		 Figure B61 – 3 Outdoor break areas at warehouse N2

CoC Ref.	Condition Description	Evidence
		 Figure B61 - 420 Outdoor break areas at warehouse JR

CoC Ref.	Condition Description	Evidence
	B62: Secure bicycle parking and end-of-trip facilities must provide: (a) a minimum 1 staff bicycle parking per 10 staff (or 1 per 10 car spaces if staff numbers are undetermined); (b) compliance with the minimum requirements of AS 2890.3:2015 Parking facilities - Bicycle parking for the layout, design and security of bicycle facilities, and be located in easy to access, well-lit areas that incorporate passive surveillance; and (c) under cover bike storage, showers and change facilities at each warehouse sufficient to accommodate the needs of the	 Figure B62 - 1 Secure bicycle parking located at warehouse JN

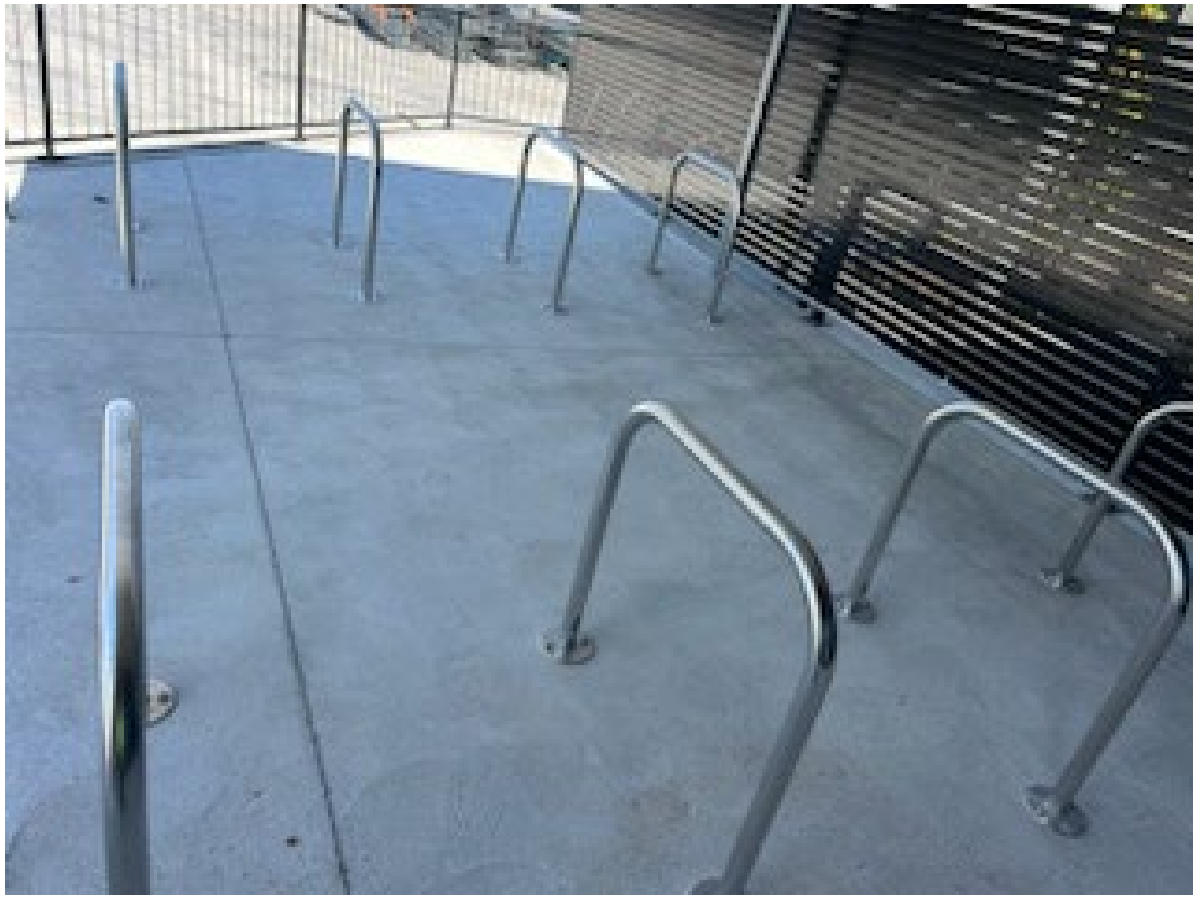
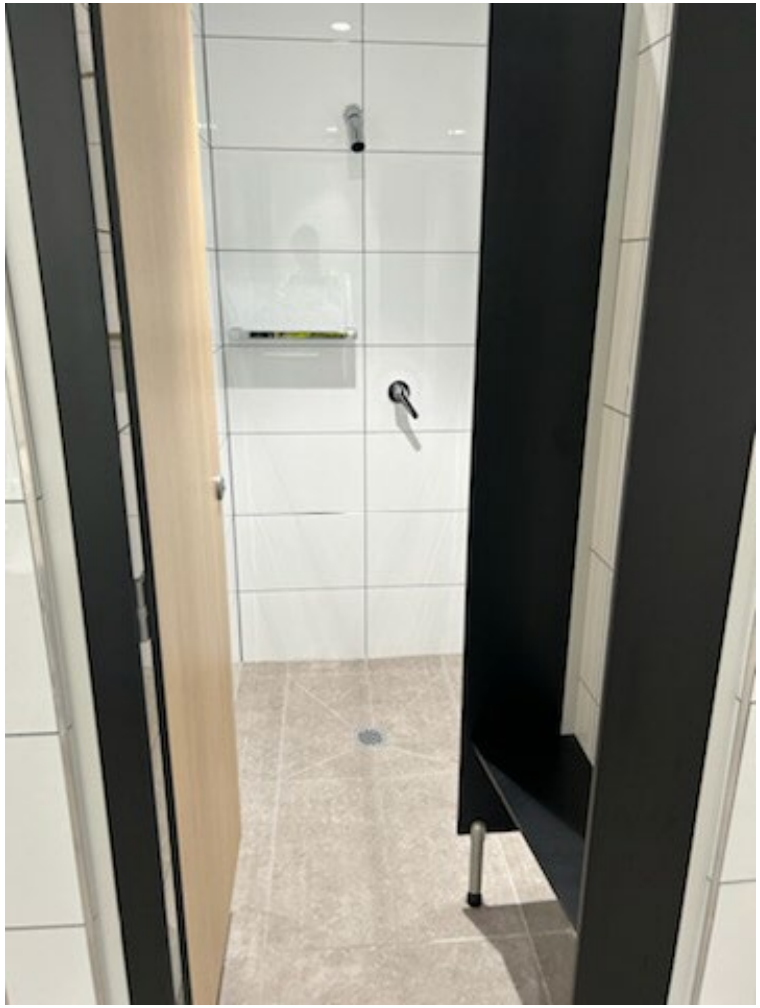
CoC Ref.	Condition Description	Evidence
	forecast number of employees.	 Figure B62 - 3 Bicycle parking located at warehouse N2

Figure B62 - 4 Bike parking located at warehouse N1

Figure B62 - 5 End of trip facility located at warehouse JN, also serves warehouse JR

CoC Ref.	Condition Description	Evidence
		 Figure B62 - 621 End of trip facilities located at warehouse N2

CoC Ref.	Condition Description	Evidence
		 Figure B62 - 7 End of trip facilities at located at warehouse N1

CoC Ref.	Condition Description	Evidence
	B63: The following minimum setbacks apply: (a) 18 m from Moorebank Avenue with minimum soft landscaped width of 10 m, subject to any variation agreed to by the Planning Secretary at the site entrance for the purpose of facilitating the primary access driveway into the site; and (b) 5 m setback from the western internal road to warehouse carparks. Note: See also Condition B2.	 Figure B63 - 1 18m setback from Moorebank Avenue

CoC Ref.	Condition Description	Evidence
		 Figure B63 - 2 5m setback from the internal road to warehouse carparking
	B64: Canopy tree planting must be	NA – see report

CoC Ref.	Condition Description	Evidence
	provided around the perimeter of the site, including the southern fill area where future warehousing is proposed.	
	B65: The southern fill area where future warehousing is proposed must be topsoiled and hydroseeded with native grasses.	NA – see report

CoC Ref.	Condition Description	Evidence
	B66: Perimeter fill batters must be stabilised with vegetation.	 Figure B66 - 1 Perimeter fill batters on OSD 5 seeded with hydro mulch

CoC Ref.	Condition Description	Evidence
		 Figure B66 - 2 Western fill batter

CoC Ref.	Condition Description	Evidence
	B67: Landscaping within the warehouse area must include dense canopy tree planting, shrubs, sedges, herbs, ground covers and tufted native grasses primarily derived from OEH lists of Cumberland Plain Woodland. The canopy tree mix must include some or all of the following species: Eucalyptus crebra, Eucalyptus moluccana Eucalyptus amplifolia, Eucalyptus bosistoana, Eucalyptus eugenioides, Eucalyptus tereticornis, Eucalyptus punctate, Eucalyptus baueriana, Corymbia maculata, Angophora	NA.

CoC Ref.	Condition Description	Evidence
	floribunda and Angophora bakeri.	
	B68: The following minimum landscaping requirements apply: (a) 15% of the warehouse area landscaped at ground level, 10% of which must be soft landscaping, excluding the OSD basins unless they are accepted as contributing to soft landscaping in the peer review report required under Condition B55; (b) 1 canopy tree per 30 m2 of landscaped area; and (c) a 2.5 m wide landscaped bay every 6-8 car spaces to provide shade within carpark areas, or alternative carpark landscaping (such	 Figure B68 - 2 Example of tree planting to meet the requirement of one per 30m^2

CoC Ref.	Condition Description	Evidence
	as linear planting of vegetation of a minimum width of 2 m between rows of carparking) accepted as providing adequate shade in the peer review report required under Condition B55. Note: For the purposes of this condition, canopy trees are not required to be planted on or immediately adjacent to vehicle paths between the intermodal terminal and the eastern elevation of each warehouse.	

CoC Ref.	Condition Description	Evidence
	B69: Perimeter and on-site detention and biofiltration/ bioretention basin fences higher than 1.2m must be transparent and dark in colour but not constructed of chain wire, to provide visual amenity.	 Figure B69 - 1 Warehouse perimeter fence is transparent and dark in colour
	B70: Boundary fencing design must allow for fauna movement where required under Condition B152(b).	NA – see report

CoC Ref.	Condition Description	Evidence
	B71: Screen fencing and planting must be provided around waste bins or other outside storage areas.	 Figure B71 - 1 Screen fencing around waste bins at warehouse N1

Figure B71 - 2 Outside fenced area for storage at warehouse N2

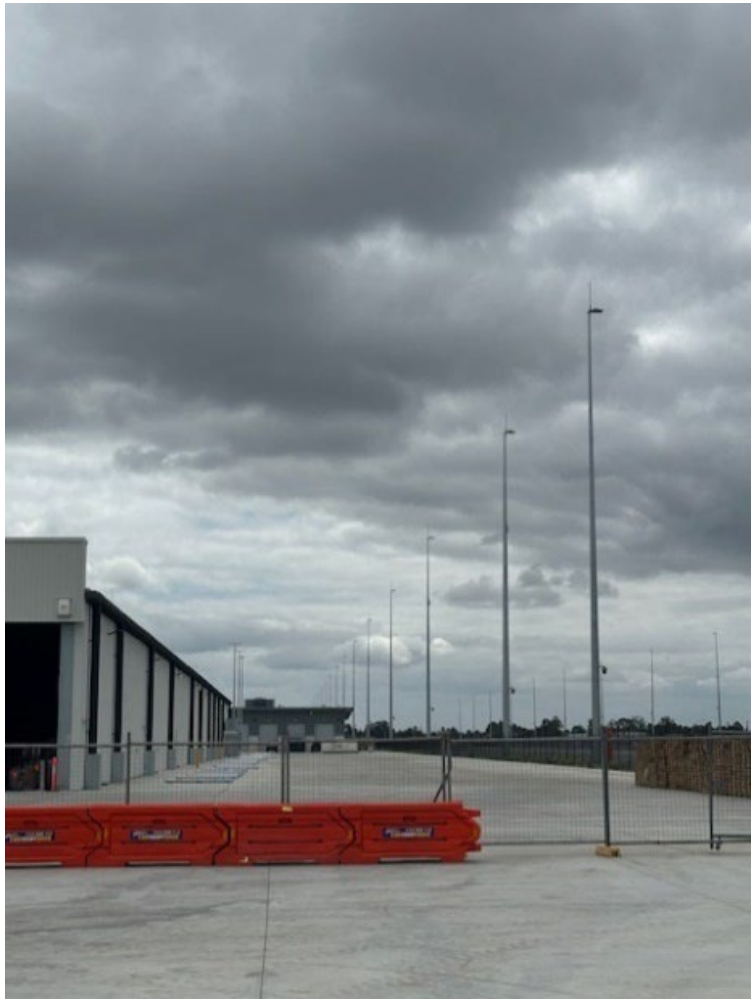
CoC Ref.	Condition Description	Evidence
		 Figure 71 - 3 Outside screened area at warehouse JR and JN for storage.

CoC Ref.	Condition Description	Evidence
	B72: Screen planting must be provided on both sides of noise walls.	 Figure B72 - 1 Screen planting on the Estate Road side of the noise wall

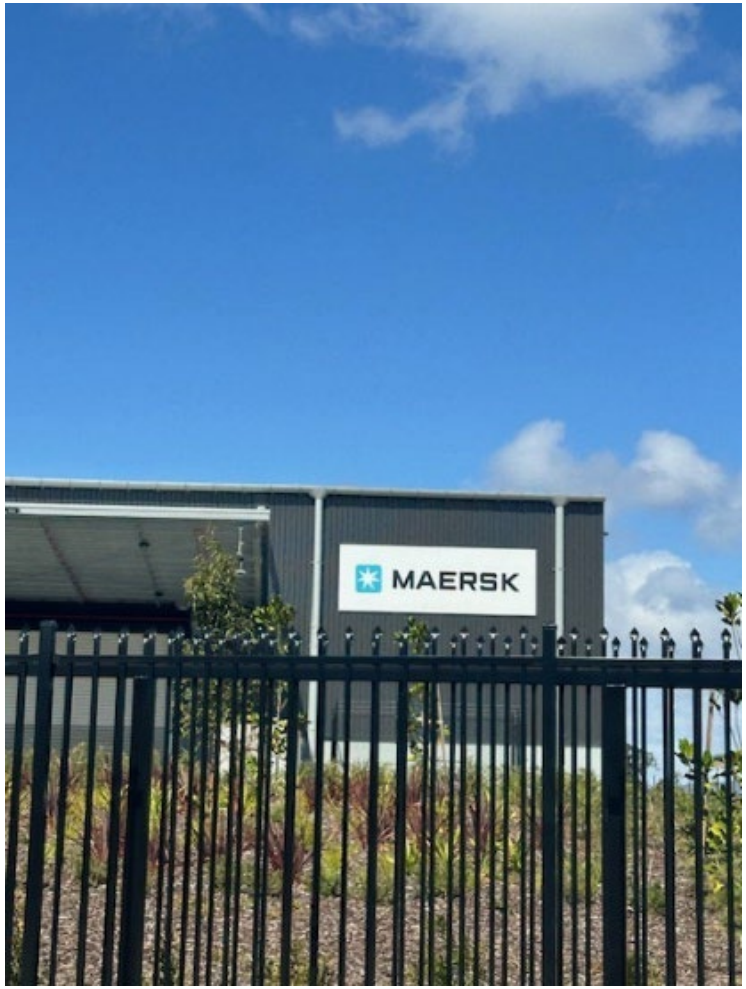
CoC Ref.	Condition Description	Evidence
	B73: Retaining wall materials and colours must be of a natural appearance and incorporate landscaping.	 Figure B73 - 1 OSD basin outlet retaining wall

CoC Ref.	Condition Description	Evidence
	B74: Noise barriers must minimise visual and amenity impacts and be designed in accordance with the Noise wall design guideline – Design guideline to improve the appearance of noise walls in NSW (RMS, March 2016).	 Figure B74 – 1 Noise wall installed

CoC Ref.	Condition Description	Evidence
B75	Condition B75 lists a number of requirements the Revised Landscape Design Drawings (RLDD) must have.	NA – see report

CoC Ref.	Condition Description	Evidence
B76	Condition B76 requires that operational lighting comply with Australian standards and be designed to reduce visual impact on surrounding stakeholders.	 Figure B76 - 1 Operational lighting

CoC Ref.	Condition Description	Evidence
		 Figure B76 - 2 Operational lighting

CoC Ref.	Condition Description	Evidence
B77	Condition B77 lists restrictions for signage on the Warehouses and building on the Precinct. These restrictions are no general advertising or flashing signs; no west facing illuminated building signage visible from residences and; no internally illuminated signs that are visible from residences.	 Figure B77 - 1 Representative example of complying signage

CoC Ref.	Condition Description	Evidence
		 Figure B77 - 2 Complying signage along the Estate Road

Figure B77 - 3 Maersk Estate Road signage

CoC Ref.	Condition Description	Evidence
B78	Condition B78 states that signage must not occupy more than 10% of a façade or wall of a building.	 Figure B78 - 1 Warehouse JN signage complies with Condition requirements

CoC Ref.	Condition Description	Evidence
B80	CoC 80 states that a rainwater tank must be included on each Warehouse, the freight village and rail terminal buildings.	 Figure B80 - 1 Representative rainwater tank located at warehouse N2
B81	CoC B81 states that rainwater must be used for	NA – see report

CoC Ref.	Condition Description	Evidence
	irrigation, internal non-potable uses, the container washdown facility and be considered for a variety of cooling techniques.	