

STORMWATER INFRASTRUCTURE OPERATION AND MAINTENANCE PLAN – ADDENDUM

Moorebank Intermodal Precinct –
Precinct West South

JANUARY 2026

Moorebank Intermodal Precinct – Precinct West South

EPBC 2011/6086 Approval, SSD 5066 Development Consent, SSD 7709 Development Consent, Complying Development Consent 230736/01, 230736/01(MOD) and 230736/07

Stormwater Infrastructure Operation and Maintenance Plan – Addendum

Revision Author 

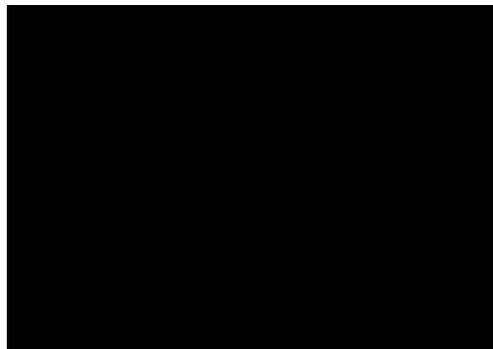
Checker 

Approver 

Report No J192720260130.03

Date 30/01/2026

Revision Text 03



Limitations on use and reliance

Aspect Environmental Pty Ltd has prepared this report solely for the use of the Client and those parties with whom a warranty / end-user agreement or licence has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from Aspect Environmental Pty Ltd; a charge may be levied against such approval.

Aspect Environmental Pty Ltd accepts no responsibility or liability for:

- a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and*
- b) the use of, or reliance on, this document by any third party with whom an agreement has not been formally executed.*

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client).

Should additional information become available which may affect the opinions expressed in this report, Aspect Environmental Pty Ltd reserves the right to review such information and, if warranted, to modify the opinions accordingly.

<https://moorebankintermodalprecinct.com.au/>

© Copyright 2026 ESR Australia & NZ. The concepts and information contained in this document are the property of ESR Australia & NZ. Use or copying of this document in whole or in part without the written permission of ESR constitutes an infringement of copyright. Limitation: This report has been prepared on behalf of, and for the exclusive use of ESR's Client, and is subject to, and issued in accordance with, the provisions of the contract between ESR and the Client. ESR accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

Original Author Details

Author Details	Qualifications and Experience
[REDACTED]	Bachelor of Environmental Science 6 months experience in environmental assessment and management across a variety of projects, including State significant development and Commonwealth approvals
[REDACTED]	BEnvSc (Hons1), Grad Cert EnvPI 18 years of experience in environmental planning, assessment and management.

Revision Author Details

Author Details	Qualifications and Experience
[REDACTED]	BEnvSc 3 years of experience in environmental assessment and management across a variety of projects, including State significant development and Commonwealth approvals.
[REDACTED]	BEnvSc (Hons1), Grad Cert EnvPI 18 years of experience in environmental planning, assessment and management.

Revisions

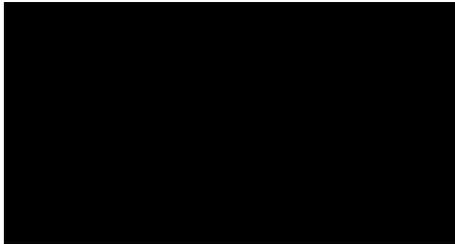
Revision	Date	Description	Prepared by	Approved by
01	07/06/2024	Draft for client review	[REDACTED]	[REDACTED]
02	23/10/2024	Final for issue	[REDACTED]	[REDACTED]
03	30/01/2026	Updated for Warehouse S2A and S5	[REDACTED]	[REDACTED]

DECLARATIONS OF ACCURACY

LOGOS MLP Development Management PTY LTD (as joint approval holder)

In making this declaration, I am aware that section 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed



Full name

Organisation LOGOS MLP Development Management PTY LTD (ACN: 649 469 778)

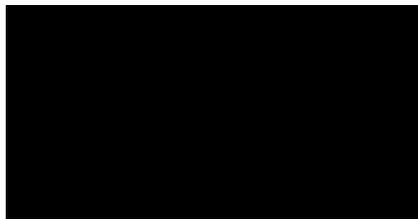
Date

9 February 2026

Qube Holdings Limited (as joint approval holder)

In making this declaration, I am aware that section 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed



Full name

Organisation Qube Holdings Limited (ACN: 149 723 053)

Date

5 February 2026

ACRONYMS AND DEFINITIONS

Acronym/Term	Meaning
Addendum	Stormwater Quality Monitoring Plan – Addendum
CoA	Conditions of Approval as detailed in the EPBC Act Approval EPBC 2011/6086
CoC	Conditions of Consent as detailed in the EP&A Act Development Consent SSD 5066
CZMP	Coastal zone management plan
DAWE	Department of Agriculture, Water and the Environment (formerly DotEE)
DCCEEW	Department of Climate Change, Energy, Environment and Water (formerly DotEE)
The Development	The three warehouses and associated landscaping and infrastructure on the MPW South site.
Development site	All operational areas of the MPW South Development
DPE	Department of Planning and Environment (formerly the Department of Planning, Industry and Environment)
DotEE	Department of the Environment and Energy merged with all functions of the Department of Agriculture (February 2020) to form the Department of Agriculture, Water and the Environment (DAWE)
DPHI	Department of Planning, Housing and Infrastructure
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act 2011/6086 Approval	Commonwealth Approval (No. 2011/6086) granted in September 2016 under the Environment Protection and Biodiversity Conservation Act 1999, for the impact of the MPW Development on listed threatened species and communities (sections 18 and 18A of the EPBC Act) and Commonwealth action (sections 28 of the EPBC Act).
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESR	ESR Australia & New Zealand
MIP	Moorebank Intermodal Precinct
MPE	Moorebank Precinct East
MPW	Moorebank Precinct West
MPW Concept Development Consent	MPW Concept Development Consent (SSD 5066), granted by (the now) DPHI on 29 September 2014 for the development of an intermodal terminal facility including a rail link connecting the site to the Southern Sydney Freight Line, an intermodal terminal, warehousing and distribution facilities and a freight village.
Non-compliance	An occurrence, set of circumstances, or development that results in a non-compliance or is non-compliant with Development Consent SSD 7709 and SSD 10431 Conditions of Consent or EPBC Act Approval (EPBC 2011/6086) Conditions of Approval but is not an incident.
OEMP	Operational Environmental Management Plan
OSD	On-site detention basin
REMM	Revised Environmental Management Measures. These are the management and mitigation measures presented in the MPW Concept Plan Supplementary RtS (August 2017).

Acronym/Term	Meaning
RtS	Response to Submissions
SDDR	Stormwater Development Design Report
SIOMP	Stormwater Infrastructure Operation and Maintenance Plan
SQMP	Stormwater Quality Monitoring Program
SSD	State significant development

TABLE OF CONTENTS

DECLARATIONS OF ACCURACY	V
ACRONYMS AND DEFINITIONS	VII
1 INTRODUCTION	11
1.1 Development Ownership	11
1.2 Moorebank Intermodal Precinct Overview	11
1.3 Addendum Purpose	11
1.4 Objectives and Targets.....	12
1.5 Progressive Implementation of this Addendum.....	13
1.5.1 Distribution and availability	13
1.5.2 Submission, review and update.....	14
1.6 Document Structure.....	14
2 DEVELOPMENT DESCRIPTION.....	16
3 STATUTORY REQUIREMENTS.....	18
3.1 Development Approvals	18
3.2 Legislation.....	18
3.3 Permits and Licences	19
3.4 Guidelines.....	19
4 ENVIRONMENTAL MANAGEMENT	20
4.1 Precinct-wide Environmental Management.....	20
4.2 Roles and Environmental Responsibilities	20
4.3 Training and Competence	20
5 IMPLEMENTATION	21
5.1 Existing Environment.....	21
5.2 Potential Operational Impact	21
5.2.1 Stormwater Quantity.....	21
5.2.2 Stormwater Quality	21
5.3 Aspects, Impacts and Risks	22
5.3.1 Impacts from operational activities	22
5.4 Management and Maintenance Measures	23
5.4.1 Routine Inspection and Maintenance Schedule	23
6 MONITORING, AUDITING AND REVIEW.....	25
6.1 Monitoring Requirements	25
6.2 Environmental Reporting	27
6.3 Environmental Auditing and Inspections	27
6.4 Non-Compliance and Non-Conformance	27
6.5 Incidents	27
6.6 Complaints.....	27
6.7 Non-Compliance, Non-Conformances and Corrective Actions	27



7 REFERENCES28

APPENDICES

APPENDIX A – APPROVALS AND CONSENT COMPLIANCE MATRIX

LIST OF TABLES

Table 1-1 Objectives and Targets	12
Table 2-1 MPW South Tenant Details	16
Table 4-1 Precinct-wide environmental management requirements	20
Table 6-1 Monitoring requirements for stormwater infrastructure for the Development.....	26

LIST OF FIGURES

Figure 2-1 MPW South Development site (Aspect Environmental, January 2026)	17
--	----

1 INTRODUCTION

1.1 Development Ownership

In 2022, LOGOS joined the ESR group of companies and since August 2024, the LOGOS and ESR operations have been integrated to now operate under the name ESR Australia & NZ (ESR). The applicant/ approval holder entity remains unchanged at this stage until further notice and references to LOGOS and LOGOS authored documents and/or plans may continue and remains relevant where LOGOS and ESR are used interchangeably.

1.2 Moorebank Intermodal Precinct Overview

The Moorebank Intermodal Precinct (MIP), operated by ESR (formerly LOGOS), is an integral component of the freight, ports and transport strategies of both the Commonwealth and NSW governments and is located approximately 27km south-west of the Sydney Central Business District and 26km west of Port Botany within the Liverpool Local Government Area.

The MIP aims to streamline the freight logistics supply chain from port to store, deliver savings to businesses and consumers, and help service the rapidly growing demand for imported goods in south-west Sydney. On completion, MIP will move 1.55 million shipping containers annually by rail instead of road. It will also feature Australia's largest purpose-built warehouse and distribution precinct serviced by the latest automated technology which will see driverless shuttle carriers collect and transport containers around the precinct to be processed, unpacked and stored on site prior to distribution.

The MIP is divided into the Moorebank Precinct West (MPW) and Moorebank Precinct East (MPE) developments.

MPW Stage 2 is located to the north of MPW South (the Development) and includes operation of a multi-purpose Intermodal (freight) Terminal facility, rail link connection, warehousing and a freight village. The MPW Stage 2 Operational Environmental Management Plan (OEMP) and sub-plans were approved by:

- the Commonwealth Department of Climate Change, Energy, Environment and Water (DCCEEW) in accordance with Condition of Approval (CoA) 4 of the EPBC 2011/6086 Approval
- the NSW Department of Planning, Industry and Environment (DPIE) in accordance with Condition of Consent (CoC) C7 of the MPW Stage 2 (SSD 7709) Development Consent.

Operations on MPW Stage 2 commenced after these plans were approved.

1.3 Addendum Purpose

This Stormwater Infrastructure Operation and Maintenance Plan (SIOMP) – Addendum (this Addendum) has been prepared to provide a detailed monitoring program for the impacts of stormwater quality during operation of the Development and meet the relevant conditions of the applicable development approvals and consents. This Addendum is an addendum to the MPW Stage 2 SIOMP and forms a sub-plan to the MPW South OEMP – Addendum.

This Addendum addresses:

- the relevant conditions of the EPBC 2011/6086 Approval issued under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- the relevant conditions of the MPW – Concept and Stage 1 (State Significant Development (SSD) 5066) Development Consent
- the relevant conditions of the MPW Stage 2 (SSD 7709) Development Consent
- the relevant conditions of the following Complying Development Consent (CDC) instruments issued under the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP):
 - CDC 230736/01 (27 February 2024) for the construction and use of Warehouses S1, S2, S3, S5 and S6
 - CDC 230736/01 (MOD) (25 June 2025) modification for the storage of dangerous goods at Warehouse S5
 - CDC 230736/07 (14 July 2025) modification for the storage of dangerous goods at Warehouse S2A

This Addendum has been prepared for submission to DCCEEW under CoA 21 of the EPBC 2011/6086 Approval.

This Addendum was developed in reference to the following documents:

- Moorebank Intermodal Terminal Environmental Impact Statement (Parsons Brinkerhoff, October 2014), Chapter 16 – Hydrology, groundwater and water quality
- Moorebank Intermodal Terminal Response to Submissions Report (Parsons Brinkerhoff, May 2015), Chapter 6 - Response to Community Submissions
- Moorebank Intermodal Terminal Supplementary Response to Submissions Report (Parsons Brinkerhoff, August 2015), Chapter 5.9 – Hydrology, groundwater and water quality and Chapter 7 Revised environmental management measures
- MPW Stage 2 SIOMP
- MPW South OEMP – Addendum.

This Addendum is consistent with the outcomes and recommendations of the Addendum to the Stormwater Design Development Report (SDDR – Addendum, Costin Roe Consulting, 3 October 2023) and approved as part of CDC 230736/01.

1.4 Objectives and Targets

The objectives and targets for this Addendum are consistent with those detailed in Table 1-1 of the MPW Stage 2 SIOMP.

The approach to addressing these objectives and targets is informed by the conditions of the approval and consents.

Table 1-1 Objectives and Targets

Objective	Target	Timeframe	Accountability
Minimise adverse impacts pollutants can have on downstream receiving waters	Stormwater quality treatment measures will reduce the average annual load of the following pollutants: <ul style="list-style-type: none"> • Gross Pollutants (GP) 90% • Total Suspended Solids (TSS) 85% • Total Phosphorous (TP) 65% • Total Nitrogen (TN) 45% • Total Hydrocarbons (TH) 90% Detain water to control volume and velocity of stormwater leaving the site	Duration of operation and monitored in accordance with Table 6-1	Health, Safety and Environment (HSE) Manager
Reduce potable water demand uses such as toilet flushing and irrigation	100% of rainwater captured from warehouse roof areas will be reused onsite	Duration of operation and monitored in accordance with Section 5.1	HSE Manager

1.5 Progressive Implementation of this Addendum

This Addendum is applicable to the operation of the Development. Operation of the Development will not commence until this Addendum has been submitted to the Minister responsible for the EPBC Act (or delegate) under CoA 21 of the EPBC 2011/6086 Approval. The most recent version of this Addendum will be implemented to manage the potential impacts of the Development on stormwater during operation.

Operational areas will come online progressively as warehouses are constructed, commissioned, and tenanted. As areas become operational, any adjacent construction areas will continue to be managed in accordance with the relevant approved Construction Environmental Management Plan and sub-plans, while operational areas will be managed in accordance with the MPW South OEMP – Addendum and sub-plan addenda.

Until the entire Development is operational, all construction areas will be appropriately identified and demarcated to enable effective management of the interface between any construction areas and operations.

1.5.1 Distribution and availability

A copy of the approved MPW South OEMP – Addendum and sub-plan addenda will be kept at the Development Office and will be made available to relevant regulatory officers, the Certifying Authority and operational staff upon request.

In accordance with CoA 27 of the EPBC 2011/6086 Approval, each management plan will be published on the website of the person taking the action within one month of being approved or being submitted under CoA 21. This Addendum will be published on the Development's website (<https://moorebankintermodalprecinct.com.au/>).

1.5.2 Submission, review and update

This Addendum will be submitted to DCCEEW as required by CoA 21 of the EPBC 2011/6086 Approval prior to the commencement of operation of the Development.

This Addendum will be reviewed annually, as a minimum (until all areas are operational), which may lead to revision of the document.

Under CoA 21 of the EPBC 2011/6086 Approval, the revised document can be submitted to DCCEEW for information if implementing the plan would not be likely to have a new or increased impact, and approval of the plan under Section 143A of the EPBC Act is not required. CoA 21 to 25 of the EPBC 2011/6086 Approval detail the process for review and implementation of the revised documents following submission to DCCEEW. In the event that ESR or DCCEEW considers that the implementation of the revised document would be likely to have a new or increased impact, approval of the revised documents under Section 143A of the EPBC Act will be required prior to implementation.

In addition to the triggers above, this Addendum may be revised more regularly as a result of:

- Inspection outcomes (either by internal or external parties)
- Changes to the precinct-wide environmental management requirements (see Section 4.1)
- Changes to procedures and/or scope of works after an incident or potential incident
- Design or operational changes
- Opportunities for improvement identified as part of an investigation or non-compliance report
- Internal or external environmental audits
- Material complaints.

1.6 Document Structure

The structure of this Addendum is:

- **Section 1** provides a brief overview of the MIP and the purpose, objectives and targets, and application of this Addendum. It also describes requirements for consultation (if any).
- **Section 2** provides a summary of the activities being undertaken during operation of the Development.
- **Section 3** outlines the statutory requirements and obligations which need to be fulfilled during operation of the Development in relation to the management of stormwater.
- **Section 4** describes the environmental management requirements for the Development, relevant to stormwater.
- **Section 5** describes the existing environment, identifies the aspect, impacts and risks for stormwater management and details the management measures that will be implemented to manage these risks.



- **Section 6** provides details for monitoring and review of the implementation of this Addendum, and how environmental non-compliance and non-conformance will be managed during operations

This Addendum has been structured to be consistent with the other MPW South sub-plan addenda, as appropriate.

2 DEVELOPMENT DESCRIPTION

The Development comprises Warehouses S1, S2 (A and B), S3 and S5, located within the southern portion of the MPW footprint. The operation of the Development also includes ancillary infrastructure, namely car parking, landscaping, signage and lighting. Bushmaster Avenue provides truck and car access to the Development site.

The warehouses have been approved to operate 24 hours per day, 365 days per year. Heavy and light vehicles would access the warehouses via the main site access off Moorebank Avenue and Bushmaster Avenue, light vehicles would park in the allocated parking area adjacent to each warehouse and heavy vehicles would progress to the truck loading/unloading areas alongside each warehouse. Containers would be transferred directly to the warehouses from the rail terminals located to the east of the Development site.

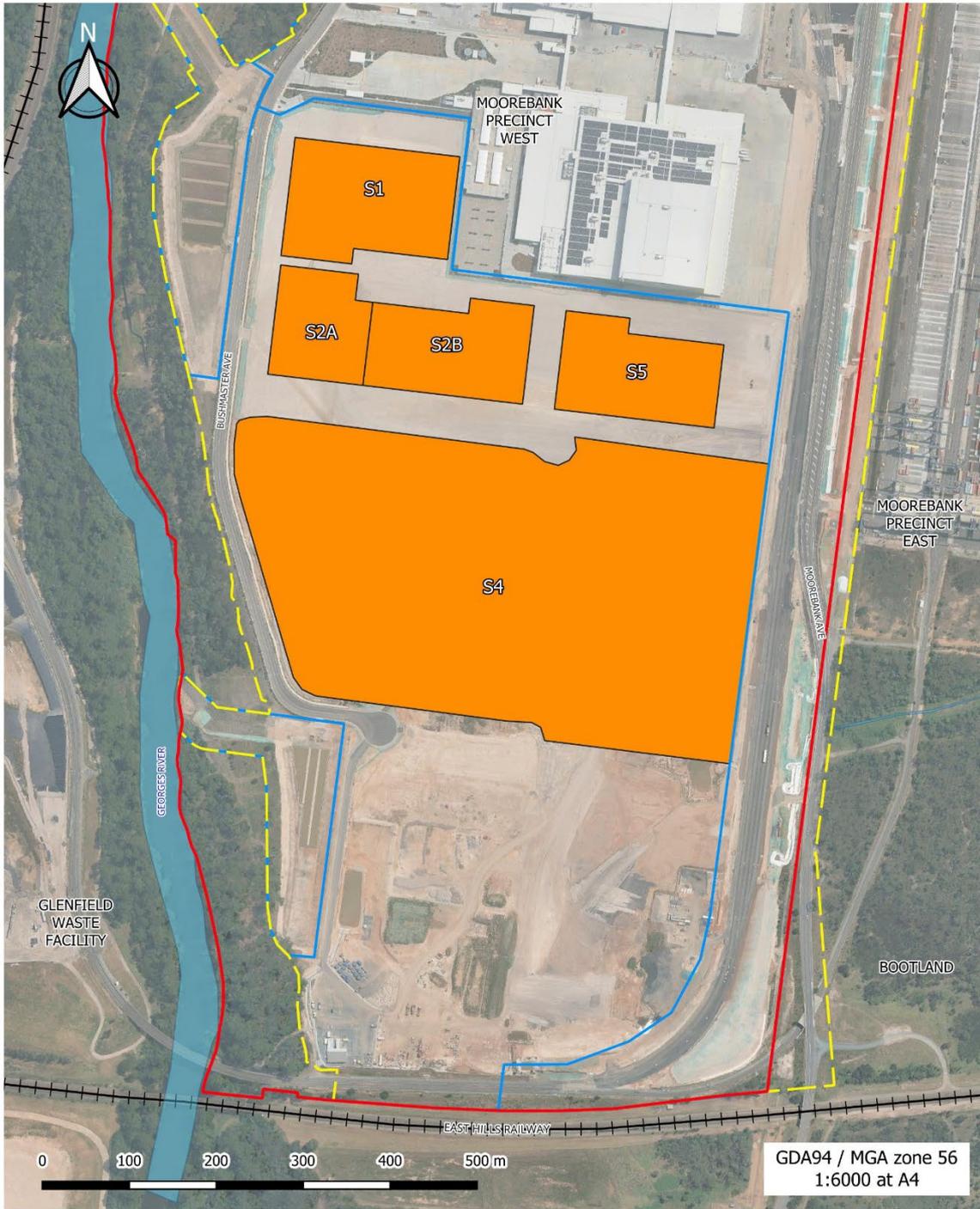
Known tenant details at the time of reporting are provided in Table 2-1. Where warehouses are untenanted, this is identified as NA.

Table 2-1 MPW South Tenant Details

Warehouse	Tenant
S1	NA
S2A	Bracknells Warehousing and Distribution
S2B	Signify
S5	Opal Packaging Plus

The Development site is shown in Figure 2-1. Note the footprint for future Warehouse S4 is shown as indicative only and subject to future updates to this plan.

Figure 2-1 MPW South Development site (Aspect Environmental, January 2026)



LEGEND		 			
	MPW Concept (SSD 5066) area				South Warehouses
	MPW EPBC 2011/6086 area				Existing Railway
	MPW Stage 2 (SSD 7709) area				Watercourse

3 STATUTORY REQUIREMENTS

The operation of the Development is required to comply with all relevant development approvals and consents legislation, permits, and licences applicable to the Development site. Where updated or revised versions of guidelines, protocols, standards or policies, or a replacement of these are available, the most recent versions would be reviewed and their applicability to this Addendum determined.

3.1 Development Approvals

The Development was approved under both the EPBC Act and *Environment Planning and Assessment Act 1979* (EP&A Act). The approval, consent and certificate granted under these acts include conditions relevant to operations and potential stormwater impacts as detailed below. The EPBC 2011/6086 Approval for the MPW Concept was granted by DotEE (Department of the Environment and Energy, now DCCEEW) in September 2016 and varied on 17 September 2019 and 22 April 2022. The operation of the Development will be consistent with the EPBC 2011/6086 Approval conditions. The EPBC 2011/6086 Approval refers to the Revised Environmental Management Measures (REMM) of the “finalised EIS” (i.e. the Moorebank Intermodal Terminal Plan Supplementary Response to Submissions (RtS), Parsons Brinckerhoff, August 2017).

The MPW Concept and Stage 1 (SSD 5066) Development Consent was granted on 3 June 2016. The CoC under Schedule 2 (Terms of Approval) are potentially relevant to the operations of the Development, although CoC under Schedule 3 (Stage 1 Early Works) and Schedule 4 (Future Development Applications) are not.

The MPW Stage 2 (SSD 7709) Development Consent was approved on 11 November 2019 by the NSW Independent Planning Commission (IPC) and is predominantly applicable to operations within the northern portion of the MPW Stage 2 Site. However, the SSD 7709 Consolidated Consent defines MPW Stage 2 Site as including the area of the Development (Appendix 1 Figure 1 of SSD 7709). Therefore, SSD 7709 CoC that refer to the “site” may apply to operation of the Development. A number of CDC consents have been issued in relation to the Development, as detailed in Section 1.3. These consents include conditions relevant to the operation of the Development but not specifically related to air quality management and this Addendum.

The compliance of this Addendum with the relevant conditions of the approval and consents is detailed in Appendix A.

3.2 Legislation

The regulatory framework relevant to the operation of the Development is documented in Appendix F of the MPW Stage 2 OEMP. This framework identifies relevant legislative instruments, their key objectives and their application to the Development.

This register will be revised and updated in conjunction with the management review outlined in Section 6 of the MPW South OEMP – Addendum or when there has been a change to relevant legislation.

3.3 Permits and Licences

Permits and licences relevant to operations are detailed in Appendix B of the MPW Stage 2 OEMP. This register is revised and updated in conjunction with the management review outlined in Section 6 of the MPW South OEMP – Addendum, or when there has been a change to relevant legislation.

Compliance conditions relating to items listed on this register are incorporated into the MPW South OEMP – Addendum and the sub-plan addenda, where relevant.

A summary of the key permits and licences applicable to operations of the Development is provided in Section 3.3 of the MPW South OEMP – Addendum.

3.4 Guidelines

This Addendum has been prepared in accordance with a list of guidelines and codes of practice as detailed in Appendix C of the MPW Stage 2 OEMP, including the *Environmental Management Plan Guidelines (Commonwealth of Australia, 2014)* and the *Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPE, 2020)*.

4 ENVIRONMENTAL MANAGEMENT

4.1 Precinct-wide Environmental Management

Section 4 of the MPW South OEMP – Addendum describes the precinct-wide environmental management requirements as summarised in Table 4-1. This Addendum will be implemented in a manner that is consistent with these requirements.

Table 4-1 Precinct-wide environmental management requirements

Environmental Management Requirements	Section of MPW South OEMP – Addendum
LOGOS' Environmental Management System	Section 4.1
MIP Sustainability Policy and Sustainability Framework	Section 4.2
LOGOS' Workplace Health and Safety Management System	Section 4.3
MPW Stage 3 Precinct OEMP	Section 4.4
Operational environmental and sustainability objectives and targets	Section 4.5
Roles and environmental responsibilities	Section 4.6
Training and competence	Section 4.7
Community consultation and complaints management	Section 4.8
Incident management and emergency response	Section 4.9
Document control and records	Section 4.10

4.2 Roles and Environmental Responsibilities

Key roles and responsibilities associated with the implementation of this Addendum are detailed in Section 2.3 of the MPW Stage 2 SIOMP.

4.3 Training and Competence

Appropriate training and inductions for operations personnel will be undertaken in accordance with Section 4.7 of the MPW South OEMP – Addendum.

5 IMPLEMENTATION

5.1 Existing Environment

Section 3.1 of the MPW Stage 2 SIOMP describes the existing environment in terms of stormwater. This has been summarised below, as relevant to the Development.

The Development is situated within the boundaries of the MPW Site, to the south of the MPW Stage 2 footprint, which is generally bounded by the Georges River to the west, Moorebank Avenue to the east, the East Hills Railway Line to the south and the M5 Motorway to the north. The Development is located entirely within the catchment area of the Georges River and drains westward to the Georges River directly by grading westward.

The Georges River enters the Liverpool LGA from the south on the western side of the Defence lands at Holsworthy and flows to the north, meeting Glenfield Creek at Casula. The river then continues to flow north past the Liverpool City Centre, under Newbridge Road, past Lighthorse Park and over the Liverpool Weir. Downstream of the Liverpool Weir, the Georges River becomes brackish and subject to tidal influences.

The Development is located within Catchment 6 as identified by the SDDR – Addendum (Costin Roe, 2023) and managed by Onsite Detention Basin (OSD) 6. Catchment 6 has a post-developed catchment size of 557.10 ha which drains to Outlet 6 via OSD 6.

5.2 Potential Operational Impact

The operations of the Development involve warehousing activities which have the potential to impact upon the existing local hydrology and water quality, which is discussed in further detail below.

5.2.1 Stormwater Quantity

Water quantity management (stormwater detention) is provided for the MPW Precinct to limit the runoff discharged to meet pre-development runoff rates for the 1 in 1 year ARI storm and the 1 in 100 year ARI storm events.

The Development is managed by OSD Basin 6. The SDDR – Addendum (Costin Roe, 2023) confirmed that the stormwater management system, including OSD Basin 6, has sufficient capacity to manage stormwater discharge from the Development. No additional measures beyond that which is identified in the MPW Stage 2 SIOMP and its accompanying SDDR is required.

5.2.2 Stormwater Quality

Operation of the Development has the potential to reduce stormwater quality of the Georges River catchment through pollution of surface runoff from the impervious surfaces.

Section 3.1.2.2 of the MPW Stage 2 SIOMP provides further detail on effectiveness of the stormwater treatment train on anticipated pollutant loads. MUSIC modelling predicted that the treatment train for the MPW Precinct reduced the pollution in stormwater runoff sufficiently to meet the objectives of the MPW Stage 2 (SSD 7709) Development Consent. The SDDR – Addendum (Costin Roe, 2023) included revised MUSIC modelling to assess

if the Development changed this. It was concluded that the existing infrastructure still reduced pollution to the required levels.

5.3 Aspects, Impacts and Risks

5.3.1 Impacts from operational activities

5.3.1.1 Permanent Stormwater Infrastructure

The permanent stormwater quality and OSD infrastructure that will be used by the Development have been constructed and implemented under the MPW Stage 2 (SSD 7709) Development Consent, and in accordance with CoC B33 and B34. These structures have been designed to comply with the requirements specified in the MPW Stage 2 SDDR, which has since been affirmed as appropriate for the Development in the SDDR – Addendum (Costin Roe, 2023).

These requirements are summarised in Section 3.2.1.1 of the MPW Stage 2 SIOMP and remain applicable to the Development.

The Development drains to OSD 6 (see Figure 4-2 in the MPW South Stormwater Quality Management Program (SQMP) – Addendum (Costin Roe, 2023)), which manages stormwater discharged from the Development.

OSD 6 provides approximately 38,900 m³ of active storage to limit the pre- and post-development runoff from its catchment (including the Development).

5.3.1.2 Stormwater Quantity

Discharge

The MPW Stage 2 SIOMP details how stormwater infrastructure has been designed to manage discharge from the MPW Site (including the Development site) for a number of peak flow events. These are provided in Section 3.1.2 of the MPW Stage 2 SIOMP and remain applicable to the Development. As identified in the MPW South SQMP – Addendum, Outlet 6 is the point from which the Development discharges from OSD 6 and into the Georges River.

The SDDR – Addendum (Costin Roe, 2023) confirmed that no additional changes to the existing stormwater infrastructure were needed to manage flow rates.

Rainwater

Unmanaged rainwater can contribute to an increase in potable water demand and stormwater runoff. The Development is to reduce non potable water demand (such as toilet flushing and irrigation) by 50% via rainwater harvesting at each warehouse through the provision of rainwater tanks.

Final configuration and sizing of rainwater tanks is subject to detailed design consideration and optimum site utilisation.

5.3.1.3 Stormwater Quality

Stormwater quality management is required to provide management of pollutants discharging from the Development from impacting downstream waters.

Section 3.2.1 of the MPW Stage 2 SIOMP identifies the treatment train approach that has been applied to MPW Stage 2 to address potential impacts on stormwater quality. This approach remains applicable and will be implemented for the Development.

Key treatment measures implemented to meet performance targets (Section 1.3) are:

- Gross Pollutant Traps (GPTs)
- Biofiltration / bioretention systems.

In addition, where possible, all warehouses would be fitted with an oil separator system to separate, capture and store oily wastes so that they do not enter the stormwater system.

Section 3.2.1.3 of the MPW Stage 2 SIOMP provides an outline of the specific requirements and specifications of these components of the treatment train implemented to management stormwater from the Development.

The SDDR – Addendum (Costin Roe, 2023) confirmed that no further stormwater quality management measures will be needed for the Development to continue to meet the stormwater quality requirements.

5.3.1.4 Operational Activities

Section 3.2.2 of the MPW Stage 2 SIOMP details the operational activities with the potential to impact on the stormwater quality. The following activities are relevant for the Development:

- Spillage and leaks of hazardous materials from shipping containers
- Spillage and leak of oils, fuel, lubricants and other chemical substances from the operation of light and heavy vehicles, plant and machinery.

In addition, if fuel storage tanks are present on the Development site leakage has the potential to impact stormwater quality.

5.4 Management and Maintenance Measures

Management actions prescribed by this Addendum aim to avoid and minimise impacts from stormwater from the Development on downstream waterways. Management measures to be implemented during operations are detailed in Table 6-1. These measures are consistent with those identified in Sections D and E of the SDDR – Addendum (Costin Roe, 2023).

Maintenance activities, inspections and schedules will be conducted consistent with Section 3.3 of the MPW Stage 2 SIOMP. This section describes proactive, reactive and rectification maintenance.

All maintenance activities undertaken will be recorded as detailed in Section 5.3.

5.4.1 Routine Inspection and Maintenance Schedule

Under CoC B36(b) and (c) of SSD 7709, regular inspections to routinely check water quality devices is required. These inspections are to be made quarterly and after major rainfall events. Section 5.2 of this plan provides more details on the reporting of these inspections.

Information on the required routine inspection and maintenance schedule is shown in Section 3.3 of the MPW Stage 2 SIOMP. These schedules deal with the whole MPW Stage 2 site and include all stormwater infrastructure including rainwater tanks and landscaping.

Should inspections outlined in Section 3 of the MPWP Stage 2 SIOMP reveal that maintenance of any item is required, this will be reported to the Asset Manager for action.

6 MONITORING, AUDITING AND REVIEW

6.1 Monitoring Requirements

Stormwater quality monitoring criteria applicable to monitoring activities undertaken for operation of the Development are consistent with Table 4-1 of the MPW Stage 2 SIOMP.

Monitoring required to determine the effectiveness of management measures in achieving compliance with monitoring criteria required by this Addendum are outlined in Table 6-1. In the event that an exceedance of criteria is detected during monitoring, an investigation into the source of the pollution will be undertaken to determine if the Development is the source. Activities include, but are not limited to the following:

- If there is an exceedance in the downstream criteria, a review against the upstream monitoring results will be undertaken to assess whether the impact has resulted from further upstream in Georges River, or as a result of the discharges from the Development discharge point
- A review of weather conditions preceding the exceedance of the critical parameter to be undertaken i.e. excessive rainfall events
- Visual inspection of OSDs and outlet points to assess if there are any visible pollutants (e.g. grease, oil sheens)
- Undertake additional sampling for all exceeded criteria offsite at the monitoring locations to assess the validity of the samples
- Review the incidents register to determine whether there have been any incidents which could lead to on offsite discharge
- Maintenance contractor to inspect any onsite infrastructure to determine whether there have been any failures in the system.

The MPW Stage 2 SIOMP provides monitoring requirements for all stormwater infrastructure (including all OSDs) as covered under the MPW Stage 2 (SSD 7709) Development Consent. Table 6-1 identifies the monitoring activities required under the MPW Stage 2 SIOMP, that are directly applicable to the Development.

Table 6-1 Monitoring requirements for stormwater infrastructure for the Development

Monitoring Focus	Area/Location	Trigger	Responsibility	Frequency
Monitoring of water quality OSDs Bioretention basin outlet channels Piped outlets discharging to the Georges River	Outlet 6 or OSD 6 outlet sample locations should be at the head wall Note this needs to be progressive – upstream, downstream samples and OSD 6	As outlined in Table 1 1	HSE Manager	Six-monthly
Inspection	Scour/ bank protection structures	Regular inspection, and Major rainfall	HSE Manager	Quarterly/ after major rainfall events
Cleaning and servicing	All water quality devices	Manufacturer’s and/ or designer’s recommendations	HSE Manager	Schedule for routine checking (at least quarterly)

6.2 Environmental Reporting

Section 6.2 of the MPW South OEMP – Addendum details the environmental reporting required during the operation of the Development.

Reporting requirements related to maintenance and monitoring of stormwater infrastructure for the MPW Stage 2 development, inclusive of all OSDs, are detailed in CoC B36 of the MPW Stage 2 (SSD 7709) Development Consent and the MPW Stage 2 SIOMP. Reporting for the Development will be captured by this reporting, as it relates to OSD 6.

6.3 Environmental Auditing and Inspections

Auditing and inspections will be undertaken in accordance with Sections 6.3 of the MPW South OEMP – Addendum.

6.4 Non-Compliance and Non-Conformance

It is the responsibility of all personnel to report non-conformances to ESR. The HSE Manager and/or Asset Manager will investigate non-conformances, log corrective and/or preventative actions, and delegate responsibility for corrective and/or preventative actions within assigned timeframes.

Non-compliances and non-conformances will be managed in accordance with Section 6.4 of the MPW South OEMP – Addendum.

6.5 Incidents

All stormwater infrastructure and maintenance related incidents are to be reported and managed in accordance with Section 4.9 of the MPW South OEMP- Addendum.

6.6 Complaints

All stormwater infrastructure and maintenance related complaints are to be managed in accordance with Section 4.8 of the MPW South OEMP- Addendum.

6.7 Non-Compliance, Non-Conformances and Corrective Actions

All stormwater infrastructure and maintenance-compliance non-conformances and resulting corrective actions are to be managed in accordance with Section 6.4 of the MPW South OEMP – Addendum.

7 REFERENCES

Costin Roe Consulting (2020) MPW Stage 2 SDDR

Costin Roe Consulting (2023) Addendum to the SDDR

Parsons Brinkerhoff (October 2014) Moorebank Intermodal Terminal Environmental Impact Statement

Parsons Brinkerhoff (May 2015) Moorebank Intermodal Terminal Response to Submissions Report

Parsons Brinkerhoff (August 2015) Moorebank Intermodal Terminal Supplementary Response to Submissions Report.



APPENDIX A – APPROVALS AND CONSENT COMPLIANCE MATRIX

CoA/CoC	Requirement	Section	How Addressed
EPBC 2011/6086 Approval			
9	Sections of the CEMP and OEMP relating to water must be prepared by a suitably qualified expert and must:	This Addendum	This Addendum has been prepared by suitably qualified experts from Aspect Environmental with reference to the SDDRs prepared by Costin Roe Consulting.
	a) Be consistent with the Water Quality, Stormwater and Flooding Provisional Environmental Management Framework (2 July 2014), provided at Appendix O to the finalised EIS	This Addendum	This Addendum is consistent with Section 6.1.3 of the Water Quality, Stormwater and Flooding Provisional Environmental Management Framework which details management controls to be implemented during the operation phase.
	b) Incorporate all measures 9A to 9AG from Table 7.1 of the finalised EIS that are described as 'mandatory'	Section 5.3 MPW South SQMP - Addendum LTEMP	REMM 9X and 9AD apply to operations. REMM 9A-9B, 9E-9H, 9J-9W, 9Y, 9AA-9AC and 9AG do not apply to operations.
	c) explain how all measures 9A to 9AG from Table 7.1 of the finalised EIS that are described as 'subject to review' have been addressed	Section 4.2	REMM 9AE applies to operations. REMM 9C, 9I, 9Z and 9AF do not apply to operations.
	d) be approved by the Minister or a relevant New South Wales regulator.	NA	This Addendum, SQMP – Addendum and the SIOMP – Addendum will be submitted to DCCEEW under CoA 21. The LTEMP was approved by (then) DAWE on 26/10/21.

CoA/CoC	Requirement	Section	How Addressed
REMM			
9X	A stormwater treatment system would be implemented, incorporating sedimentation and bio-filtration basins upstream of the stormwater detention basins.	Section 4.2 MPW South SQMP – Addendum	Section 4.2 describes the stormwater treatment system that has been implemented for the Development. Sections 4 and 5 of the MPW South SQMP – Addendum outlines stormwater monitoring requirements during operations.
9AD	Suitable groundwater monitoring where required would be established and undertaken before construction, during construction and during operation of the Project.	LTEMP Appendix D	LTEMP Appendix D EMP18 outlines the groundwater monitoring required during (construction and) operations.
9AE	To prevent the contamination of groundwater during Project construction and operation, suitable water treatment, water retention, water proofing and ground treatments would be investigated and implemented where required.	SIOMP – Addendum Section 4.2	Section 4.2 of the SIOMP – Addendum details the surface water management system and its maintenance requirements.
SSD 5066 Development Consent			
	There are no conditions relevant to stormwater management for the Development.		
SSD 7709 Development Consent			
B36	<p>Prior to commencement of operation, the Applicant must prepare a Stormwater Infrastructure Operation and Maintenance Plan to manage the operation and maintenance of stormwater infrastructure on-site and off-site, to the satisfaction of the Planning Secretary. The plan must form part of the OEMP required under Condition C5 and must be implemented for the life of the assets and must include provision for:</p> <ul style="list-style-type: none"> (a) the management and maintenance of the assets, including evidence that a maintenance contract is in place with a reputable and experienced maintenance contractor; (b) quarterly inspections, and inspections after major rainfall events including scour/ bank protection structures; (c) schedule for routine checking (at least quarterly), cleaning and servicing of all 	<p>This Addendum</p> <p>This condition is relevant because it involves ‘on-site’ stormwater infrastructure for the MPW Stage 2 site. The requirements of this condition are met throughout this Addendum.</p>	

CoA/CoC	Requirement	Section	How Addressed
	<p>water quality devices/ systems in accordance with the manufacturer’s and/ or designer’s recommendations;</p> <p>(d) maintenance of records of all maintenance activities undertaken;</p> <p>(e) preparing quarterly maintenance reports, detailing the results of quarterly inspections, inspections after major rainfall events, and maintenance activities;</p> <p>(f) recording results of water quality monitoring required under Condition B38;</p> <p>(g) investigation, management and mitigation of water quality target exceedances;</p> <p>(h) requiring annual independent auditing; and</p> <p>(i) procedures for submission of the quarterly maintenance reports and annual independent audit reports to the Planning Secretary, including the results of inspections, management and maintenance actions and water quality monitoring.</p>		
CDC 230736/01, CDC 230736/01 (MOD)			
	<p>The CDC did not include conditions relevant to stormwater management during the operation of the Development.</p>		
CDC 230736/07			
	<p>The CDC did not include conditions relevant to stormwater management during the operation of the Development.</p>		