Long Term Environmental Management Plan

290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW 2178

Prepared for: ESR Australia Pty Ltd
EP3244.009_v1 28 August 2024

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Our Ref: EP3244.009_v1

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List of Abbreviations

Abbreviation	Definition
Alliance	Alliance Geotechnical
ACM	Asbestos Containing Material
AF	Asbestos Fines
ASBINS	Asbestos In Soils
BoM	Bureau of Meteorology
CEnvP(SC)	Certified Environmental Practitioner (Site Contamination)
COPC	Contaminants of Potential Concern
CPSS CSAM	Certified Professional Soil Scientist Contaminated Site Assessment and Management
CSM	Conceptual Site Model
EIL	Ecological Investigation Level
ENM	Excavated Natural Material
EP Risk	EP Risk Management Pty Ltd
ESR	ESR Australia Pty Ltd
FES	Foundation Earth Sciences
JKW	JK Williams Pty Ltd
LTEMP	Long Term Environmental Management Plan
EPA	Environment Protection Authority
EPL	Environmental Protection Licence
ESL	Ecological Screening Level
FA	Fibrous Asbestos
ha	Hectares
HHRA	Human Health Risk Assessment
HIL	Health Investigation Level
HSL	Health Screening Level
LOR	Limit of Reporting
mBGL	Metres Below Ground Level
NEPM	National Environmental Protection Measure
Omega	Omega Hazmat Pty Ltd
PAH	Polycyclic Aromatic Hydrocarbons
PG	Penny Green Pty Ltd
RAP	Remediation Action Plan

Abbreviation	Definition
Site	The boundary is shown on **Figure 1.**
SPR	Source-Pathway-Receptor
SRVR	Site Remediation and Validation Report
SSD	State Significant Development
TCE	TCE Contracting Pty Ltd
VENM	Virgin Excavated Natural Material

1 Introduction

ESR Australia Pty Ltd (Council) engaged EP Risk Management Pty Ltd (EP Risk) to prepare a Long Term Environmental Management Plan (LTEMP) for the on-site Containment Cell, at the property located at 290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW 2178 (the Site).

The Site covers an area of approximately 32 hectares (Ha) and is legally described as Lots 111, 112 and 113 in Deposited Plan (DP) 1296469. The Site is currently zoned as IN1: General Industrial under the State Environmental Planning Policy (Industry and Employment) 2021 (currency 04.03.2024).

The Containment Cell, the subject of this LTEMP, is approximately 733 m^2 and located within Lot 112 DP 1296469 within the new Trunk Drainage Swale (**Figure 3 and 4**) of the Site.

The location of the Site mapped against an aerial photograph dated March 2024 has been provided within **Figure 1**, with an overlay of the existing Lot boundaries presented in **Figure 2**. The layout of the Development, with proposed new Lot definitions has been provided in **Figure 3.**

The Site has been identified as a State Significant Development (SSD), SSD-9138102 (**Appendix G**). A Conditions of Consent (SSD-9138102) is relevant to the Site and adjacent Lots under the Westlink Stage 2 Project (Lots 111, 112, 113, 114 and 115 in DP 1296469 and Lot 10 in DP1296455, Mamre Road / Abbotts Road intersection, Abbotts Road and Aldington Road).

The provision of the LTEMP is provided under SSD-9138102 Condition of Consent B68 (**Appendix G)**:

- **B68 Validation Report:** Within one month of completion of the remediation works for the development, the Applicant must submit a Remediation Validation Report (RVR) to the satisfaction of the Planning Secretary which has been prepared, or reviewed and approved, by a consultant certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The validation report shall demonstrate that:

    a) the site is suitable for its intended industrial land use, or

    b) <u>the site is suitable for its intended industrial land use with the implementation of an environmental management plan or long term environmental management plan.</u>

This LTEMP is required to ensure appropriate ongoing management of potential human health risks posed by the identified Contaminants of Potential Concern (CoPC) within the Containment Cell under the proposed commercial / industrial land use. It is a standalone document that provides an environmental management framework for the Containment Cell and is focused on both short to long-term management for the ongoing use and management. The LTEMP may be considered as a 'live' document which should be updated in the event of changes to the Site ownership structure, condition and/or regulatory requirements.

This LTEMP has been prepared in accordance with the Remediation Action Plan (RAP) prepared by Alliance Geotechnical Pty Ltd (Alliance 2023[1]), the RAP Addendum prepared by EP Risk (EP Risk 2023[2]) and the Site Remediation and Validation Report (SRVR) (EP Risk 2024[3]).

[1] Alliance (2023), *Remediation Action Plan, 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW*, Alliance geotechnical & environmental solutions, 21 June 2023 ref: 13546-ER-2-2_Rev2, dated 21 June 2023.
[2] EP Risk (2023) *Addendum (01) – Alliance Remediation Action Plan Westlink Stage 1 -290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek, NSW, 2178 NSW,* EP Risk Management Pty Ltd, ref: EP3244.004_Addendum 01_v1, dated 12 September 2023.
[3] EP Risk (2024) Site Remediation and Validation Report, Westlink Stage 1 -290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek, NSW, 2178, ref: EP3244.006_v1, dated 28 August 2024.

Contaminants managed under the scope of this LTEMP comprise previously identified friable asbestos in soils (ASBINS), present as asbestos fines (AF) and fibrous asbestos (FA) at concentrations below and above the health screening level (HSL) for a commercial / industrial land use criterion of 0.05 %w/w, and building materials contaminated with asbestos including brick and concrete stockpiles, now placed within a Containment Cell constructed on-site.

The Containment Cell had a theoretical capacity of 2,250 m^3 and an actual quantity of 2,198 m^3. The average fill depth was 2.5 m, with a maximum fill depth of 3.2 m. Material was placed at a minimum depth of 0.5 mBGL in accordance with the Addendum (EP Risk 2023) to an approximate depth of 0.8 – 4.2 m below finished surface levels and was encapsulated with a high visibility geotextile marker layer and covered with Site won clay / shale. It is understood the elevation of the swale will be raised further above this capping later and the swale will be completed with a mix of landscaping and rock/concrete materials.

1.1 Objectives

The objective of the LTEMP is to document the management framework and responsibilities for the on-site Containment Cell during the operational use and any potential future development, construction and/or maintenance works. The LTEMP has been prepared in general accordance with the NSW EPA Practice Note 'Preparing Environmental Management Plans for Contaminated Land' (EPA January 2022). As per the Conditions of Consent, a LTEMP is required to render the site is suitable for its intended industrial land use (**Appendix G**).

2 Site Identification

The Site identification details are presented in **Table 1** below.

Table 1 – Site identification

Item	Description
Site Address	290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW 2178 (**Figure 1**)
Legal Description	**Site:** Lot 111, 112 and 113 in DP 1296469 **(Figure 2)** **Containment Cell**: Lot 112 DP 1296469 within the new Trunk Drainage Swale **(Figure 3 and 4).**
Surface Area	**Site:** 32 Hectares (ha) (Site) **Containment Cell:** Approximately 733 m^2 **(Figure 3 and 4).**
Site Operator	ESR
Municipality	Penrith City Council
Zoning	IN1: General Industrial
Proposed Land Use	

3 Background and Site History

ESR are developing the Site into a commercial warehouse precinct including the construction of multiple large-scale warehouse and associated office space, heavy vehicle access, parking and associate infrastructure including on-site stormwater detention basins and landscaping. As part of SSD-9138102, a number of environmental investigations have been completed across the Site:

- Douglas Partners (DP) (2019), *Preliminary Environmental Site Investigation with Limited intrusive Investigation*, Proposed Commercial / Industrial Subdivision 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW, ref: 92352.00, dated August 2019.

  The PESI highlighted a number of potential contamination sources at the Site and recommended further assessment.

- Alliance (2019), *Stage 1 Preliminary Site Investigation (with Limited Sampling)*, 290-308 Aldington Road, Kemps Creek NSW Lot 13 in DP253503, ref: 9687-ER-1-1, dated 18 October 2019.

  Alliance considered the Site was unlikely to pose a significant contamination risk which may limit the future development.

- Alliance (2021), *Detailed Site Investigation and Dam Water & Sediment Assessment*, 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW, ref: 13546-ER-2-1, dated 1 December 2021.

  Contamination was identified at the Site which required further assessment, management and / or remediation. A number of data gaps were identified which required further assessment.

- Alliance (2023a), *Supplementary Contamination Assessment Report,* 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW, ref: 13546-ER-2-3, dated 20 April 2023.

  The assessment delineated portions of previous identified contamination. Additional contamination was identified which required further assessment.

- Alliance (2023b), *Supplementary Contamination Assessment Report No. 2*, 290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW, ref: 13546-ER-2-4, dated 06 June 2023.

  The assessment delineated portions of previous identified contamination. Additional contamination was identified which required further assessment.

- Alliance (2023), *Remediation Action Plan, Proposed Commercial / Industrial Subdivision 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW,* ref: 13546-ER-2-2_Rev2, dated 21 June 2023.

  A RAP was prepared to outline the extents of the areas of environmental concern (AECs) and the remediation process at the Site to render the Site suitable for the proposed commercial development without ongoing management.

  Twenty (20) areas of environmental concern (AECs) were identified within the RAP (Alliance 2023). These included:

  - Asbestos:
    - Bonded (non-friable) asbestos in surface soils ≤0.1 m below surface (mBS);
    - Bonded (non-friable) asbestos in fill soils >0.1 mBS;
    - Friable asbestos as AF or FA in surface and/or fill soils;
    - Visible asbestos in surface soils; and

    - Bonded (non-friable) asbestos-containing material (ACM).
  - Septic tank systems (petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAH), metals, pathogens); and
  - Aesthetics (concrete stockpiles, bricks and demolition waste).

- EP Risk (2023), *Addendum (01) – Alliance Remediation Action Plan Westlink Stage 1 -290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek, NSW, 2178,* ref: EP3244.004_v1, dated 12 September 2023.

  An addendum to the RAP (EP Risk 2023) was prepared to review the remedial strategy and provide additional options to the assessment, treatment and validation of remedial works. A remediation hierarchy was developed for the Site comprised of three (3) categories of contamination and three (3) levels of suitability based on exceedances to the adopted relevant criteria.

  The three (3) categories of contamination for the Site are:

  - Bonded (non-friable) asbestos, denoted as B;
  - Friable asbestos (AF/FA) denoted as F;
  - Other impacted, denoted as O;

  Material will be assigned a level of suitability as below:

  - 1 = Suitable (no detections).
  - 2 = Below HSL / relevant guideline
  - 3 = Above HSL / relevant guideline.

  In summary:

  - Material classified as B1, F1 or O1 is considered suitable to remain onsite as no contamination has been identified and thus no further remediation actions are required.
  - Material classified as B2, F2 or O2 is considered suitable to remain on-site, subject to placement at depth > 2 m below finished ground level, and in areas where no services will be installed with a survey to confirm placement at depth as contamination has been detected in concentrations below the adopted criteria.
  - Material classified as B3, F3 or O3 is considered not suitable to remain on-site as contamination has been detected in concentration above the adopted criteria.
    - B3 material can be made suitable, if subject to mechanical raking and emu picking treatment in accordance with the RAP (Alliance 2023) and Addendum (EP Risk 2023).
    - F3 material should be disposed off-site with a Waste Classification or placed within an on-site Contamination Cell with a LTEMP.

- EP Risk (2024) Site Remediation and Validation Report, *Westlink Stage 1 -290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek, NSW, 2178,* ref: EP3244.006_v1, dated 28 August 2024.

  EP Risk was engaged as the Validation Consultant, to prepare a Site Remediation and Validation Report (SRVR) following the assessment, treatment and validation of remedial works at the Westlink Stage 1 Project (the Project) located at 290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek, NSW, 2178 (the Site).

Based on the findings of the visual clearance inspections, field observations, analytical results and subject to the limitations within this SRVR, EP Risk consider the remediation works described in the RAP (Alliance 2023) and Addendum (EP Risk 2023) successfully implemented within the Site boundary.

Overall, subject to the implementation of the Asbestos Management Plan (AMP) (EP Risk 2024a) and LTEMP, the boundary of the Site is considered suitable for the proposed commercial / industrial land use, with incomplete SPR linkages. In the event unexpected ACM may become uncovered, outside of the Containment Cell, through proposed future development or maintenance works, this should be managed in accordance with the AMP.

- EP Risk (2024a) Asbestos Management Plan, *Westlink Stage 1 -290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek, NSW, 2178,* ref: EP3244.008_v1, dated 28 August 2024.

  The AMP was prepared by EP Risk following the completion of remediation and validation of the Site in accordance with the RAP (Alliance 2023) and Addendum (EP Risk 2023). The objective of this AMP is to provide procedures for the management of ASBINS placed on-site at depth, within two (2) Asbestos Placement Areas, containing bonded (non-friable) asbestos at concentrations below the adopted HSL (0.05 %w/w) and the management of unexpected asbestos finds at the Site, outside of the Asbestos Placement Areas (excluding the Containment Cell which is subject to an LTEMP).

4 Remediation Works

Remediation works, including the construction of the Containment Cell were undertaken in 2023, in accordance with the RAP (Alliance 2024) and Addendum (EP Risk 2023) over two (2) phases:

- Phase 1 of the Remediation Project – was undertaken between 10 July 2023 and 25 September 2023 by Class A Licensed Asbestos Remediation Contractor (LARC), TCE Contracting Pty Ltd (TCE) as engaged by JK Williams Pty Ltd (JKW) with asbestos hygiene and validation works undertaken by EP Risk. EP Risk was engaged by ESR from 10 July 2023 to 04 September 2023, and later engaged by TCE from 19 September 2023 to 25 September 2023.
- Phase 2 of the Remediation Project – was undertaken 28 September 2023 and 03 November 2023, by Class A LARC Omega Hazmat Pty Ltd (Omega) and Penny Green Pty Ltd (PG), as engaged by Ground King Civil Pty Ltd (GKC) with asbestos hygiene works undertaken by Foundation Earth Sciences Pty Ltd (FES).

Phase 1 of the Remediation Project

All AECs were remediated via in-situ treatment or excavation and placement within the central (southern) treatment and stockpiling pad and eastern stockpiling pad. AECs were validated in accordance with the RAP (Alliance 2023) and Addendum (EP Risk 2023) which is documented in the SRVR (EP Risk 2024).

Phase 1 of the Remediation Project involved the:

- Establishment of stockpiling and treatment pads **(Figure 9)**;
    - Central (southern) stockpiling and treatment pad; and
    - Eastern stockpiling pad.
- In-situ treatment of bonded (non-friable) ASBINS above the HSL from selected AECs;
- Excavation of bonded (non-friable) ASBINS above the HSL and friable (F2/F3) asbestos above the HSL and friable asbestos contaminated building materials (tyre and bricks stockpile) from selected AECs for stockpiling at the central (southern) stockpiling and treatment pad, with bonded (non-friable) and friable soils stockpiled separately;
- Treatment of some bonded (non-friable) ASBINS above the HSL from AEC19a stockpiled at the central (southern) stockpiling and treatment pad via mechanical raking and emu-picking;
- Removal of vegetation (stripped, tilled or grubbed) from selected AECs to facilitate clear and unobstructed visual walkover of surface soils. Vegetation not inspected by EP Risk was stockpiled as B3 material at the central (southern) stockpiling and treatment pad;
- Removal of bonded (non-friable) ACM in the form of fibre cement sheeting fragments within three (3) wheelie bins within AEC23a;
- Excavation of material associated with septic tank systems from selected AECs for stockpiling at the eastern stockpiling pad;
- Removal of concrete stockpiles (not contaminated with ACM) off-site;
- Movement of concrete stockpiles contaminated with bonded (non-friable) ACM for stockpiling at the central (southern) stockpiling pad; and
- Management of unexpected finds for the duration of ASBINS remediation works.
- Construction of one (1) Asbestos Placement Area.

- **Lot 5 Northern Finger Placement Area:** a portion of the Lot 5 Northern Finger, currently a portion of Lot 112 in DP1296469).

Phase 2 of the Remediation Project

Phase 2 of the Remediation Project involved the:

- Treatment of all bonded (non-friable) ABSINS above the HSL stockpiled at the central (southern) stockpiling and treatment pad **(Figure 9)** via mechanical raking and emu-picking to downgrade the material to a bonded (non-friable) ABSINS below the HSL classification;
- Construction / extension of two (2) Asbestos Placement Areas (**Figure 10**):
  - **Lot 4 Placement Area:** a portion of Lot 4, currently a portion of Lot 111 and Lot 112 in DP1296469.
  - **Lot 5 Northern Finger Placement Area:** a portion of the Lot 5 Northern Finger, currently a portion of Lot 112 in DP1296469).
- Removal of bonded (non-friable) ABSINS below the HSL from central (southern) stockpiling and treatment pad and septic materials from 40SEP01 for final placement on-site, within the two (2) Asbestos Placement Areas with a survey undertaken to confirm location at depths;
- Construction of one (1) on-site Containment Cell within a portion of Lot 4 Trunk Drainage Swale, currently a portion of Lot 112 in DP1296469**;**
- Removal of friable ASBINS above and below the HSL, asbestos contaminated building materials brick stockpile from AEC14 and concrete stockpiles SP2, SP15 and SP16 and UF019 and septic tank material from central (southern) stockpiling pad for final placement on-site, within the on-site Containment Cell with a survey **(Appendix E)** undertaken to confirm location at depths;
- Visual clearance inspection and validation sampling of the footprint of the central (southern) stockpiling and treatment pad used for the stockpiling and treatment of bonded (non-friable) ASBINS above and below the HSLs;
- Visual clearance inspection and validation sampling of the footprint of the central (southern) stockpiling pad used for the stockpiling of friable ASBINS above and below the HSLs; and
- Removal of select material associated with the excavation of septic tank systems, for stockpiling off-site at the adjacent Westlink Stage 2 project, which falls within the same SSD.
- Disposal of AC fragments, asbestos contaminated tyres, geotextile fabric for disposal to a licensed landfill facility as Special Waste (Asbestos).

At the end of Phase 2 remediation period and following completion of validation works documented within the SRVR (EP Risk 2024), the Site was considered suitable for proposed the commercial / industrial land use, subject to the implementation of an Asbestos Management Plan (AMP) (EP Risk 2024a) in relation to the Asbestos Placement Areas and the management of unexpected asbestos finds at the Site, and this LTEMP for the on-site Containment Cell.

This LTEMP refers to the Containment Cell area only, as described within **Section 4**. Full reference must be made to the SRVR (EP Risk 2024) for further information on remediation and validation works at the Site, including the AMP (EP Risk 2024a) for additional asbestos management areas.

5 Containment Cell Overview

The Containment Cell is located within a portion of Lot 112 in DP1296469, within the new Trunk Drainage Swale (**Figure 4**).

The Containment Cell comprises of:

- Previously identified friable ASBINS, present as AF and FA at concentrations below and above the HSL for a commercial / industrial land use criteria of 0.05 % w/w and;
- Building materials contaminated with asbestos including tyre, brick and concrete stockpile.

Details pertaining to the construction of the Containment Cell have been summarised below:

- Indicator (orange) geotextile marker layer, surrounds the material on all sides (**Appendix D**);
- The cell measures approximately 140 m by 5 m in length and width;
- The cell covers a surface area of approximately 733 m^2;
- The average fill depth was 2.5 m, with a maximum fill depth of 3.2 m;
- The theoretical capacity of the cell was approximately 2,250 m^3;
- The actual capacity of the cell was approximately 2,198 m^3;
- Material was placed at an approximate depth of 0.8 – 4.2 m below finished surface levels and covered with Site won clay / shale; and
- The site won clay / shale were blended to geotechnical specifications stipulated by Douglas Partners.

A copy of the survey plans is provided in **Appendix E** (JKW 2024)[4].

It is understood the elevation of the swale will be raised further above this capping later and surface completion will comprise of vegetation with the minor rock materials lining the channel (**Appendix F**).

[4] JKW (2024), Remediation Works – Friable (F2/F3) Containment Cell Report, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW,* ref: JKW Report F3 Material Rev2, no date.

6 Site Conditions and Surrounding Environment

6.1 Site Description

The Site is situated at the end of Abbotts Road, Kemps Creek and encompasses three (3) Lots, Lot 111, 112 and 113 in DP 1296469 (**Figure 2**).

A summary of the Site conditions based on the most recent aerial photograph (17.05.2024) has been provided below:

- Earthworks at the Site have been largely completed;
- All former residential properties within the boundary of the Site have been demolished;
- All former dams and man-made channels on the Site have been drained and filled in;
- An on-site stormwater detention (OSD) basin has been constructed in the western end of the Site;
- Site compounds, sheds and associated parking lots for the earthworks have been established north of the OSD basin;
- A large warehouse is currently under construction towards the northern end of the Site; and
- Earthworks have commenced in the adjacent Westlink Stage 2 area, to the west of the Site.

The layout of the Development, with proposed new Lot definitions is provided as **Figure 3.**

The Containment Cell is located within a portion of Lot 112 DP 1296469 and will exist within a portion of the new Trunk Drainage Swale (**Figure 4**). Further site conditions are provided within the SRVR (EP Risk 2024).

6.2 Geology and Hydrogeology

Topography, Hydrology and Hydrogeology

The finished development contains an OSD basin within the southwest corner, with any overflows draining into stormwater drains located along Abbotts Road, west of the Site.

Kemps Creek, the nearest off-site surface water body is located approximately 220 m west of the Site.

Based on the local topography and surrounding features, groundwater flow is inferred to be towards the west (Alliance 2023b[5]).

The Containment Cell is located approximately 0.8 – 4.2 m below finished surface levels within a portion of the Trunk Drainage Swale (**Figure 4**).

It is understood the area above the Containment Cell will be raised, then surface completion will comprise vegetation, with some portions of the channel rock lined (**Appendix F**).

Geology

The Site is likely to be underlain by Bringelly Shale, comprised of shale, carbonaceous claystone, laminate, fine to medium grained lithic sandstone, rare coal and tuff. The Containment cell is capped with approximately 0.8

[5] Alliance (2023b), *Supplementary Contamination Assessment Report No. 2, 290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW*, dated 06 June 2023 (ref: 13546-ER-2-4).

– 4.2 m of Site won clay / shale, blended to geotechnical specifications stipulated by Douglas Partners. The capping material was placed and certified by a Level 1 Geotechnical Consultant from Douglas Partners.

6.3 Surrounding Land Use

The Containment Cell is surrounded by a commercial / industrial complex, which comprises warehouses and an OSD basin. The wider Site is surrounded by low-density residences on large lots of land to the north, west and southeast, vacant land to the east and earthworks works to the west.

7 Remaining Contamination Extent and Risk

7.1 Sources and Contaminants of Concern (CoC)

Based on the findings of previous investigations undertaken at the Site, and following subsequent remediation and validation works, by EP Risk (2024), remaining contamination at the Site has been contained within the Containment Cell within a portion of the new Trunk Drainage Swale (**Figure 4**).

The Containment Cell comprises of the following Contaminants of Concern (CoC):

- Previously identified friable ASBINS, present as AF and FA at concentrations below and above the HSL for a commercial / industrial land use criterion of 0.05 %w/w; and
- Building materials contaminated with asbestos including tyre, brick and concrete stockpiles.

A high visibility geotextile layer is present underneath, around and above the buried material **(Appendix D)**, with clean Site won clay / shale (thickness of 0.8 – 4.2 m below finished surface levels) placed on top as the capping layer. It is understood the elevation of the swale will be raised further above this capping later and the swale will be completed with a mix of landscaping and rock/concrete materials.

The source of the friable ASBINS was attributed to the uncontrolled filling and uncontrolled demolition of residential properties within the wider Site boundary.

The source of the building materials contaminated with asbestos was attributed to the historical uncontrolled demolition of residential properties within the wider Site boundary.

7.2 Impacted Media

The impacted media within the Containment Cell is contained below the visible geotextile marker layer, and is comprised of soils and building materials, largely contaminated with friable asbestos.

7.3 Pathways

Based on a review of the previous investigations and conclusions presented within the SRVR (EP Riks 2024), the inhalation of airborne particles and fugitive dust (asbestos) during future maintenance and/or remediation works within the Containment Cell that penetrates through the high visibility geotextile marker layer, into the friable ASBINS and building materials contaminated with asbestos is considered to be a potential inhalation exposure pathway at the Site.

7.4 Receptors, Exposure and Risk Assessment Conclusions

Source – pathway – receptor (SPR) linkages are discussed subject to the implementation of the LTEMP, which provides restrictions on activities and ongoing management that must be undertaken across the Site to ensure SPR linkages are not complete.

Ecological Receptors

No potential complete exposure pathways were identified for ecological receptors on or off-site.

Human Receptors

The inhalation of asbestos in the form of fugitive dust or airborne particles was identified as a complete SPR linkage for potential current and future construction and maintenance workers, working below the Site won clay

/ shale capping layer that penetrates through the high visibility geotextile layer into the Containment Cell containing friable ASBINS and building materials contaminated with asbestos. For works conducted above the geofabric marker layer within the site-won clay / shale layer, no complete SPR linkage was noted and risk to receptors was considered negligible.

The complete exposure pathways present for residual contaminants on-site is presented in **Table 2**.

Table 2 - Conceptual Exposure Model (CSM)

Source	Exposure Point	Exposure Route	Potential Receptors	Completed Pathway
Soil below the cap and high visibility geotextile marker layer within Containment Cell as per **Appendix E**	Fugitive dust from excavation activities	Inhalation	Current and Future Construction and Maintenance workers	✓

8 Regulatory Framework

The regulatory safety, health and environment standards which apply to this LTEMP are listed below:

- *Work Health and Safety Act 2011 (WHS Act)* and WHS Regulation 2017

  The WHS Act and Regulation aims to protect workers against the health and safety risk arising from the activities of persons at work. This LTEMP will assist Site management with disclosure of potential workplace risks and assist site workers and contractors with the development of appropriate controls to mitigate the risks.

- *Contaminated Land Management Act 1997* (CLM Act)

  The CLM Act provides a framework for the management of contaminated land in NSW and accountabilities for managing contamination. This LTEMP has been prepared in accordance with the CLM Act.

- *Protection of the Environment Operations Act 1997* (POEO Act)

  The POEO Act aims to manage the cumulative impact on the environment from existing and future human activities. This LTEMP will assist site management, site workers and contractors with the management of potential environmental risks associated with future Site activities.

- *Environmental Planning and Assessment Act 1997* (EP&A Act)

  The EP&A Act regulates development in NSW and incorporates the principles of ecologically sustainable development through the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation). The EP&A Act established planning requirements for projects with potential environmental impacts. It is understood this LTEMP may be considered by planning authorities when assessing future development applications and planning approvals for the Site.

Other relevant codes include:

- Safe Work Australia (SWA) (2022), Workplace Exposure Standards for Airborne Contaminants (SWA, 2022).
- SafeWork NSW Code of Practice How to Safely Remove Asbestos (SafeWork NSW 2022a).
- SafeWork NSW Code of Practice How to Manage and Control of Asbestos in the Workplaces, SafeWork NSW (SafeWork NSW 2022b).

Other relevant standards and guidelines include:

- NSW Environment Protection Authority (NSW EPA) 2020 Contaminated Land guidelines, Consultants Reporting on Contaminated Land and (NSW EPA 2020).
- NSW EPA 2022 Practice Note: Preparing environmental management plans for contaminated land, (NSW EPA 2022).
- State Environmental Planning Policy (Resilience and Hazards) 2021.

9 Management Activities

Specific procedures in relation to the management of residual and potentially contaminated materials and associated activities are provided in **Appendix A**.

A formal list of procedures provided in the LTEMP is summarised in **Table 3**. Specific responsibilities for the implementation of each procedure are also detailed in the appropriate procedures.

Table 3 – EMP Procedures and Responsibilities

No.	Procedure Title	Responsibilities		
		Site Owner	Principal Contractor	Worker
01	Review and Inspection of Capping Layer	X		
02	Subsurface Excavation within the Containment Cell	X	X	X
03	Non-compliance with LTEMP	X	X	X
04	Land Ownership Change	X		

10 Application and Enforcement

10.1 Application of LTEMP

The purpose of this LTEMP is to address the management requirements of any potential ongoing maintenance and intrusive works within the containment cell. The LTEMP is required to address the ongoing presence of friable ASBINS and building materials contaminated with asbestos within the Containment Cell and should include the following minimum requirements:

- Primary controls include the periodic inspection of the low permeability capping layer (high visibility geotextile marker layer and overlying imported soil material); and
- Secondary controls comprise administrative and management strategies required during any proposed intrusive excavation / construction works at the Site to manage exposure risks to receptors.

This LTEMP is a standalone document that provides an environmental management framework for the management of the Containment Cell, inclusive of the capping layer, high visibility geotextile marker layer and underlying contaminated materials, installed under the remediation scope (EP Risk 2023) and as validated within the SRVR (EP Risk 2024).

Any revision of the LTEMP should be completed, reviewed and approved by an environmental consultant who is a Certified Environmental Practitioner (Site Contamination Specialist (CEnvP(SC)) recognised by one of the certifying bodies recognised by the NSW EPA.

10.2 Enforcement and Notification of LTEMP

An appropriate mechanism must be implemented to ensure that this LTEMP is readily available to construction workers, occupiers, maintenance workers and future landowners including:

- In accordance with the EP&A Act the LTEMP will be enforceable via planning instruments such as Section 88E of the Conveyancing Act 1919 and publicly notified as a condition on the Section 10.7 Planning Certificate for the Site;
- Provision of the LTEMP as an attachment to future contracts of sale or lease agreements, with contractual obligations to ensure implementation of the LTEMP (as the most recent revision), via further contracts of lease or sale;
- During operation, the LTEMP will be incorporated into the owner's / operator's business management system (BMS) / environmental management system (EMS); and
- A site induction protocol shall be implemented for personnel involved in subsurface maintenance, where removal of the capping layer and disturbance of the underlying fill is required. Requirements for site inductions are outlined in **Section 11.4.**

11 LTEMP Implementation

11.1 Roles and Responsibilities

The terminology, roles and responsibilities relevant to the LTEMP are provided in **Table 4**.

Table 4 – Responsibilities for LTEMP Implementation

Position	Company/Entity	Responsibilities
Site Owner (including any future Site Owners)	ESR Australia Pty Ltd	Responsible for: - The overall management of the Site. - The implementation of the LTEMP including induction of land occupiers/lessees to the LTEMP. - Engaging appropriately qualified contractors to undertake required works with appropriate insurance and licences. - Ensure this LTEMP is legally enforceable preferably via a public positive covenant on land (which run with the land) under Section 88E of the Conveyancing Act 1919. - Informing stakeholders of activities being conducted pertaining to the LTEMP and of any changes to the LTEMP (if required) following completion of works managed under the LTEMP.
Land Occupier/Lessee	Various	Responsible for implementing the LTEMP during occupation of the Site.
Principal Contractor (Maintenance / construction / development works)	TBC	Responsible for: - The implementation of the LTEMP during construction works. Responsible for inductions, training, notifying the owner, appropriate consultant and LARC in relation to unexpected finds. Also responsible for quarantining unexpected finds requiring management with suitable barricades and informing other workers of its location. - Engaging a Class A LARC and independent environmental consultant with a SafeWork NSW LAA licence for works within the Containment Cell due to the presence of friable asbestos. - Responsible for undertaking works in accordance with this LTEMP.
Class A LARC (any amount of friable asbestos, notifiable work)	TBC	Responsible for: - Completion of required SafeWork NSW notifications (5 days) for any amount of friable asbestos works are required (Class A work); - Preparing a site-specific ARCP prior to commencement of any asbestos removal works; - Ensuring compliance with relevant legislation and the conditions of this AMP; - Removal of friable ACM or ASBINS; - Handling of any friable ACM or ASBINS across Site; - Disposal of friable ACM or ASBINS to a suitably licensed waste facility lawfully able to accept the waste;

Table 4 – Responsibilities for LTEMP Implementation		
Position	**Company/Entity**	**Responsibilities**
		- Ensure appropriate environmental and safety controls outlined in the ARCP and this AMP are maintained for the duration of the works; - Assisting all site sub-contractors where required in complying with relevant legislation and the procedures outlined in the ARCP and this AMP; - Ensure a wet decontamination area is set-up and operated in accordance with the Code of Practice (SafeWork NSW 2022) (Class A generally requires a wet decontamination unit); and - Ensure all asbestos wastes are handled and disposed to a licensed facility in accordance with the Code of Practice (SafeWork NSW 2022).
Environmental Consultant, with a SafeWork LAA Licence	TBC	Responsible for: - Undertaking inspection, monitoring and reporting as required in the LTEMP, following engagement by Site owner or principal contractor. - Assessment and management of any unexpected finds as required in the LTEMP, following engagement by the owner or principal contractor. - Informing Site owner of changes to LTEMP (if required) following completion of any works managed under the scope of the LTEMP. - Conducting asbestos air monitoring during asbestos removal works. - Conducting visual clearance inspections following asbestos removal works. - Conducting validation sampling following asbestos removal works.
Workers	TBC	Responsible for: - Adhering to the requirements of the LTEMP during ongoing maintenance activities and any intrusive works within the Containment Cell. - Workers are responsible for undertaking their tasks in a safe manner and notifying the Principal Contractor if they see any items / conditions which may constitute an unexpected find.
Regulators	Penrith City Council (PCC)	Responsible for: - Including a reference to this LTEMP onto the Section 10.7 certificate. - Review of proposal to amend or end ongoing management requirements. - Final review / acceptance of any changes to LTEMP.

11.2 General Requirements

It is understood responsibility for implementation of the LTEMP will be borne by the Site Owner. Any intrusive workers should be made aware of the LTEMP and its requirements. This includes workers associated with ongoing maintenance, workers associated with utilities or other infrastructure onsite that is not owned/controlled by the Site Owner, and those undertaking intrusive activities within and below the location of the containment cell. All of these workers will be required to be suitably inducted into this LTEMP.

11.3 Responsibilities

The Site Owner, or their nominated representative is required to manage the implementation of the LTEMP. It is noted where specific procedures are technical or complex in nature, appropriately qualified agents may be appointed to fulfil the requirements of the procedure and/or advise the appropriate implementation of the procedure.

A formal list of procedures managed in the LTEMP is provided in **Table 3.** Specific responsibilities for the implementation of each procedure are detailed in the appropriate procedure as presented in **Appendix A** of this document.

11.4 Site Induction

All personnel involved in any works on the Site will be subject to a site induction. The level of induction will depend on the tasks to be undertaken by the individual. It is the responsibility of the Site owner/manager/tenant to ensure the inductions are performed and records of inductions are maintained. It is anticipated tasks associated with routine operations and maintenance which do not involve intrusive groundworks (where required), will not require any specific inductions or training. However, all other workers will need to be made aware of the LTEMP and how it is to be implemented.

The following items should be discussed during a Site induction, where works require disturbance of the capping layer, geofabric textile marker layer and underlying soils:

- General overview of the work to be conducted;
- Hazard identification and prevention measures;
- Review of the residual contamination in the cell and when the LTEMP applies; and
- Review of the control measures required for implementation of the LTEMP.

An LTEMP induction records form is included in **Appendix B**, which must be filled out during the induction process and a record kept in accordance with **Section 11.6.**

11.5 Corrective Actions

Where corrective actions have been identified during periodic capping layer inspections, these must be communicated to the Site owner. Corrective actions should be completed in accordance with the adopted environmental management system. However, where the actions relate to breaches in environmental controls, use of PPE and WHS requirements, corrective action must be implemented immediately.

A Corrective Actions Record is included in **Appendix C.**

11.6 Records

The Site owner has the responsibility to maintain all records relevant to the management of potentially contaminated soils, including (but not limited to) the following:

- Reports of environmental incidents, complaints and follow-up action;
- Minutes of management review meetings for environmental issues;
- Evidence of action taken as a result of such meetings / events;
- Induction and training records; and
- Records should be kept for a minimum of 5 years.

11.7 Periodic Review

According to NSW EPA (2022) *Preparing Environmental Management Plans for Contaminated Land*, LTEMP review timings would typically be undertaken:

- When there is a change in the scope of work;
- Following significant environmental incidents such as flooding of the Land;
- When a non-compliance occurs;
- When there is a need to improve performance in an area of environmental impact;
- At the completion of environmental audits; and
- At the end of a project (to allow for improvements in subsequent projects).

The process should typically include review of environmental controls and procedures in use to make sure they remain effective. Changes to the LTEMP should be documented and copies of all versions of the LTEMP kept for project records.

This LTEMP should be reviewed and amended accordingly following alterations to the Containment Cell capping.

Where the above review of the LTEMP occurs and significant changes to the LTEMP are required, notification to the regulator to amend managed activities is required.

Following significant alteration to the LTEMP, amendments are required to be reviewed and approved by a duly certified and qualified environmental consultant.

In addition, this LTEMP and the Site's broader approach to environmental management should be reviewed once every three (3) years, to ensure:

- Information and environmental management strategies remain relevant;
- Opportunities for improvement are identified;
- Changes to legislation, licence and approval conditions are complied with; and
- Any field data collected are in compliance with selected criteria (if applicable).

Reviews shall take the following form:

- Management consideration of environmental issues on an ongoing basis (minimum annually); and

- Review by a duly certified and qualified environmental consultant engaged by the Site owner following significant environmental incidents or changes in Site conditions or operations that require changes to the environmental management of the Site.

Figures

EP RISK

www.eprisk.com.au

Long Term Environmental Management Plan

290 - 380 Aldington Road and 59 - 63 Abbotts Road, Kemps Creek, NSW, 2178

Figure 1 - Site Location and Layout

Job No: EP3244
Date: 17/05/2024
Drawing Ref: EP3244.009_Fig. 1
Version No: v1

N

0 30 60 90 120 m

Approximate Scale Only

Coordinate System: WGS 84
Drawn by: JS Checked by: KG
Scale of regional map not shown
Source: Nearmap

ISO 9001 Quality management system
ISO 45001 OH&S management system
ISO 14001 Environment management system

EP RISK

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Long Term Environmental Management Plan

290 - 380 Aldington Road and 59 - 63 Abbotts Road, Kemps Creek, NSW, 2178

Figure 2 - Exisiting Lot Boundaries

Job No: EP3244
Date: 17/05/2024
Drawing Ref: EP3244.009_Fig. 2
Version No: v1

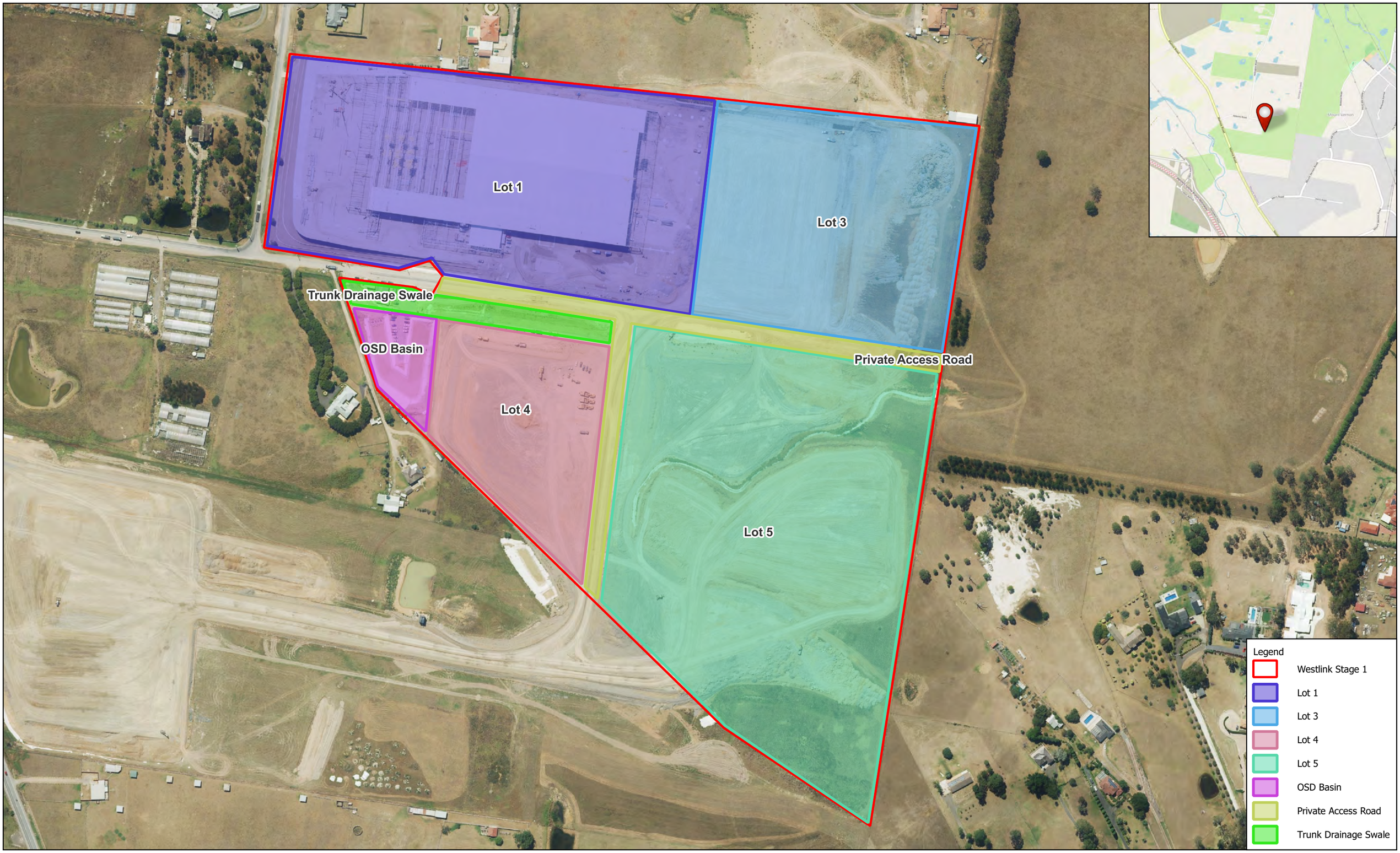
N

0 30 60 90 120 m

Approximate Scale Only

Coordinate System: WGS 84
Drawn by: JS Checked by: KG
Scale of regional map not shown
Source: Nearmap

ISO 9001 Quality management system
ISO 45001 OH&S management system
ISO 14001 Environment management system



EP RISK

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Long Term Environmental Management Plan

290 - 380 Aldington Road and 59 - 63 Abbotts Road, Kemps Creek, NSW, 2178

Figure 3 - Development Plan

Job No: EP3244
Date: 17/05/2024
Drawing Ref: EP3244.009_Fig. 3
Version No: v1

N

0 30 60 90 120 m

Approximate Scale Only

Coordinate System: WGS 84
Drawn by: JS Checked by: KG
Scale of regional map not shown
Source: Nearmap

ISO 9001 Quality
ISO 45001 OH&S
ISO 14001 Environment

EP RISK

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Long Term Environmental Management Plan

290 - 380 Aldington Road and 59 - 63 Abbotts Road, Kemps Creek, NSW, 2178

Figure 4 - Containment Cell Location

Job No: EP3244
Date: 17/05/2024
Drawing Ref: EP3244.009_Fig. 4
Version No: v1

N

0 30 60 90 120 m

Approximate Scale Only

Coordinate System: WGS 84
Drawn by: JS Checked by: KG
Scale of regional map not shown
Source: Nearmap

ISO 9001 Quality management system
ISO 45001 OH&S management system
ISO 14001 Environment management system

Appendix A

ENVIRONMENTAL MANAGEMENT PROCEDURES

Procedure 01 – Review and/or Inspection of Capping Layer

Area Affected

The lateral extent of the Containment Cell is presented within **Figure 4** of this LTEMP and a survey of the Containment Cell, including capping materials has been provided within **Appendix E.**

Overview of Capping Requirements

Prior to placement of friable ASBINS and asbestos contaminated building materials within the Containment Cell, a high visibility geotextile maker layer was placed across the walls and base of the cell (**Figure 4**). Following placement of the contaminated material, a high visibility geofabric maker layer was placed across the top of the impacted materials.

A summary of progressive long-term cap construction across the Containment Cell is presented in **Table 1** below.

Table 1 – Summary of Cap Construction

Area / Location on Site	Typical Profile Beneath Cap	Typical Cap Depth / Thickness	Long-Term Cover / Site Surface	Cap Thickness
Containment Cell, located within a portion of the current Lot 112 in DP1296469, within a portion of the new Trunk Drainage Swale (**Figure 4, Appendix E)**	High visibility geotextile marker layer overlying friable ASBINS and asbestos contaminated building materials, of approximately 2.5 m thickness to maximum depth of 3.2	0.8 m – 4.2 m below finished surface levels	Site won Clay/shale. Elevation of the swale to be raised further above this capping later, and swale to be completed with a mix of landscaping and rock/concrete materials	0.8 m – 4.2 m below finished surface levels

Note a procedure for intentional subsurface excavation works is provided as LTEMP **Procedure 02**.

Responsibility

Site Owner (including any future landowner).

Objective

- To protect the health and safety of workers and Site users.
- To ensure the maintenance of the capping layer overlying the Containment Cell per construction specifications outlined within the survey in **Appendix E.**

Procedure for ongoing monitoring and inspection of the Landscaped Area

- Visual inspection of the capping extents outlined above should be undertaken periodically to ensure the relative level of the Site remains consistent with the capping requirements outlined above.
- Where the visual inspection identifies intensive landscaping has occurred, or significant weather events or general weathering processes may have caused degradation of the capping layer, reinstatement of the capping layers should be undertaken (in accordance with the requirements of **Procedure 02**) and

additional survey data will be required to ensure the appropriate capping thickness as per the survey in **Appendix E.**

- Note a procedure for intentional subsurface excavation works is provided as LTEMP **Procedure 01**.

Frequency of Inspections

Inspection of the capping layer should occur following:

- Significant rainfall events event to ensure no subsidence which may reduce the integrity of the vegetation and rock lined cover of the swale (**Appendix F**) and underlying capping material (**Appendix E)**. A significant rainfall event is defined as a 48-hour period where more than 50% of mean annual rainfall is recorded at the Bureau of Meteorology (BoM) weather station closest to the Site (Badgerys Creek, NSW).
- Intensive landscaping works which may have altered the condition of the cap. Note a procedure required for subsurface excavation works is provided under **Procedure 02**.

Action Trigger Values

The adopted trigger values and associated corrective action tasks are provided within **Table 2.**

Table 2 – Trigger Values

Detail	Trigger	Action
Containment Cell, containing friable ASBINS and asbestos contaminated building materials (**Figure 4, Appendix E**)	Significant damage or alteration to capping layer as per **Figure 4** and **Appendix E.**	1. Inspection and survey of capping where significant alteration has occurred. 2. Notification to regulator ONLY where capping is identified to be less than the required 0.5 m. 3. Re-instatement of capping and re-survey. Survey data to be included within update to LTEMP. 4. Inspection by suitably qualified environmental professional. 5. Preparation of LTEMP addendum or update and review/approval by a certified environmental consultant – site contamination.

Inspection / Reporting

If the inspection does not show satisfactory maintenance of the capping layer, it should be repaired and reported in accordance with **Table 2** and **Procedure 02** and **03.**

All records shall be retained by the Site Owner, including any future landowners.

Procedure 02 – Subsurface Excavation within Containment Cell

Area Affected

The lateral extent of the Containment Cell is presented within **Figure 4** of this LTEMP and a survey of the Containment Cell, including capping materials has been provided within **Appendix E**.

Overview of Capping and Containment On-site

The exact surveyed capping layer components are provided within the survey design plans as **Appendix E** of this report and are summarised in **Table 3** below.

Table 3 – Summary of Cap Construction

Area / Location on Site	Typical Profile Beneath Cap	Typical Cap Depth / Thickness	Long-Term Cover / Site Surface	Cap Thickness
Containment Cell, located within a portion of Lot 112 in DP1296469, within a portion of the new Trunk Drainage Swale	High visibility geotextile marker layer overlying friable ASBINS and asbestos contaminated building materials, of approximately 2.5 m thickness to maximum depth of 3.2	0.8 m – 4.2 m below finished surface levels.	Site won Clay/shale. Elevation of the swale to be raised further above this capping later, and swale to be completed with a mix of landscaping and rock/concrete materials	0.8 m – 4.2 m below finished surface levels

Responsibility

Site Occupier/Lessee and Site Owner (including any future land occupier), and the Principal Contractor engaged for excavation works.

Objective

- To ensure the maintenance of the capping layer overlying the Containment Cell per construction specifications outlined within the Survey in **Appendix E**.
- To ensure materials excavated within the Containment Cell, below the high visibility geotextile marker layer into friable ASBINS and asbestos contaminated building materials are controlled to ensure protection of the environment and workers.
- To ensure capping materials overlying the Containment Cell are stockpiled separate from friable ASBINS and asbestos contaminated building materials within the Containment Cell, below the high visibility geotextile marker layer

Procedure

All works are to comply with the *Work Health and Safety Act (2011).*

WORKS WITHIN THE CAPPING LAYER (As per the survey provided within Appendix E):

Care must be taken during any excavation works above the lateral extent of the Containment Cell, as per **Figure 4** and **Appendix E**, to ensure there is no disturbance below the high visibility marker layer, where friable ASBINS and asbestos contaminate building materials are present. Due to the presence of friable ASBINS and asbestos contaminated materials within the Containment Cell, it is recommended a Class A LARC and Environmental

Consultant with a SafeWork NSW Licence is present to oversee the works in case of a breach of the high visibility marker layer.

Re-instatement of the capping layer must ensure a minimum capping thickness in accordance with the survey provided within **Appendix E** to comply with LTEMP requirements.

Where additional material is required to be imported to Site for the maintenance of the capping layer as per the survey provided in **Appendix E**, soil must comprise of clay soil that complies with the excavated natural material (ENM) / virgin excavated natural material (VENM) requirements as outlined within NSW EPA (2014).

WORKS EXTENDING BELOW THE CAPPING LAYER AND HIGH VISIBILITY GEOTEXTILE MARKER LAYER INTO THE CONTAINMENT CELL (As per the survey provided within Appendix E):

Based on the presence of friable asbestos within the Containment Cell, works below the high visibility geotextile marker layer should be undertaken under controlled Class A asbestos conditions, with asbestos hygiene works undertaken by an Environmental Consultant with a SafeWork NSW LAA Licence.

Prior to commencement, the proposed excavation area or work area should be barricaded off as an exclusion, to prevent commercial/industrial site users or any other unauthorised personnel entering the work area.

All subsurface works involving the disturbance below the capping layer and high visibility geotextile marker layer into friable ASBINS and asbestos contained building materials must be undertaken in accordance with relevant health and safety guidelines and SafeWork provisions including:

- Completion of required SafeWork NSW notifications (5 days) for any amount of friable asbestos works are required (Class A work);
- Preparing a site-specific ARCP prior to commencement of any asbestos removal works;
- Providing a safe work method statement (SWMS). This shall be reviewed and authorised by the Site Occupier or their nominee (including any nominated contractor undertaking the work) or any future landowner/occupier.
- Establishment of a designated wet decontamination area.
- Additional induction or daily toolbox talk for personnel who will be entering the work zone.
- Dust emissions should be minimised within the work area by employing dust control procedures as required, including the wetting of areas prior to excavation and keeping excavation and stockpile surfaces moist. Water use will be in accordance with any applicable restrictions.
- Capping material and friable ASBINS and asbestos contaminated building materials must be segregated during excavation works through the use of a designated stockpiling area to ensure no cross contamination of material. The designated stockpiling area will need to placed on geotextile fabric material, or if placed on bare ground, subject to a surface scrape and validation sampling at the conclusion of works. Stockpiles within the designated stockpiling must be covered with geotextile fabric daily. The designated stockpiling area must be barricaded to prevent authorised access.
- Any soil surplus to site requirements must be sampled in accordance with the NSW EPA *Sampling Design Guidelines* (2022) and classified in accordance with NSW EPA (2014) prior to disposal at an appropriately licensed facility. All materials to be preclassified as Special Waste (Asbestos) at minimum.
- Materials that are not excess to requirements can remain on the Site but must be placed back in the Containment Cell excavation at the same depth they were removed from. Caution must be employed to ensure no mixing of material types occurs on-site.
- Reinstatement of the high visibility marker layer as per the survey provided in **Appendix E.**

- Reinstatement of the capping layer in the same order which it had been removed, to a thickness as per the survey provided in **Appendix E.**
- Airborne asbestos air monitoring must be conducted during intrusive works at the boundary of the asbestos work area (control airborne asbestos air monitoring) and within the asbestos work area for reoccupation purposes (clearance airborne asbestos air monitoring) by a SafeWork NSW Licensed Asbestos Assessor (LAA).
- All workers undertaking intrusive works across the Site are required to wear appropriate levels of PPE. This shall include as a minimum:
    - Disposable nitrile or cut resistant gloves, when in direct contact with the soil;
    - Long pants;
    - Long-sleeved shirt;
    - Hard hat (when plant and machinery are in operation);
    - High visibility fluorescent vest; and
    - Steel-capped boots.
    - Type 5 & 6 disposable coveralls;
    - Half face respirator with P3 particulate filter or;
    - Gloves; and
    - Footwear that can be easily decontaminated (i.e. gumboots).

Control Airborne Asbestos Air Monitoring

Control airborne asbestos air monitoring is required to be undertaken during any intrusive works below the high visibility geotextile marker layer into the friable ASBINS and contaminated building materials in the Containment Cell, comprising monitoring using static (positional) samples by an Environmental Consultant with a SafeWork NSW LAA Licence, in accordance with the SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* 2022 to measure the levels of airborne asbestos fibres at the boundary of the work area to assess the effectiveness of implemented control measures.

Table 4 – Excavation Monitoring below capping layer Trigger Values

Detail	Location	Trigger	Action
Asbestos Air Monitoring	Control asbestos air monitoring to be undertaken at the work area boundary	0.1 fibres/mL TWA for an 8-hour shift	1. Reading of less than 0.01 fibres/mL – control measures in place are working effectively, site works to continue. 2. Reading between 0.01 and 0.02 fibres/mL – a review of control measures shall be completed in the work area. 3. Reading greater than 0.02 fibres/mL – works shall cease until the cause of contamination is identified and rectified. Notification to SafeWork may be required.

Visual Clearance Inspections

A visual clearance inspection must be undertaken following the completion of intrusive works below the high visibility geotextile marker layer into the friable ASBINS and contaminated building materials in the Containment Cell. The visual clearance inspection should confirm reinstatement of the high visibility geotextile marker layer over the friable ASBIN and contaminated building materials in the Containment Cell. The visual clearance inspection must be undertaken by an Environmental Consultant with a SafeWork NSW LAA Licence. Following a satisfactory visual clearance inspection, should be undertaken and an Asbestos Clearance Certificate should be issued to document the findings of the inspection. Reoccupation should only occur following the completion of a visual clearance inspection and satisfactory clearance asbestos air monitoring results.

Clearance Airborne Asbestos Air Monitoring

Clearance airborne asbestos air monitoring is required to be undertaken by an Environmental Consultant with a SafeWork NSW LAA Licence at the completion of intrusive works below the high visibility geotextile marker layer into the friable ASBINS and contaminated building materials, comprising monitoring using static (positional) samples to measure the levels of airborne asbestos fibres within the work area and assist to determine in the work area is suitable for reoccupation without asbestos controls. Clearance asbestos air monitoring should be undertaken following the completion of a satisfactory visual clearance inspection by the Environmental Consultant with a SafeWork NSW LAA Licence.

Table 5 – Excavation Monitoring below capping layer Trigger Values

Detail	Location	Trigger	Action
Asbestos Air Monitoring	Control asbestos air monitoring to be undertaken at the work area boundary	0.1 fibres/mL TWA for an 8-hour shift	1. Reading of less than 0.01 fibres/mL – control measures in place are working effectively, site works to continue. 2. Reading between 0.01 and 0.02 fibres/mL – a review of control measures shall be completed in the work area. 3. Reading greater than 0.02 fibres/mL – works shall cease until the cause of contamination is identified and rectified. Notification to SafeWork may be required.

Frequency

During any intrusive works carried out within the Containment Cell, as per **Figure 4** and **Appendix E**. Prior and at the completion of any subsurface works, the reinstatement of capping layer surfaces shall be inspected.

Inspection / Reporting

If the reinstatement of the maker layer and/or capping layer is insufficient post inspection it should be repaired and reported in accordance with **Procedure 02 and 03.**

All records shall be retained by the Site Occupier and Site Owner, including any future landowners.

Procedure 03 – Non-compliance with LTEMP

Area Affected

The lateral extent of the Containment Cell is presented within **Figure 4** of this LTEMP and a survey of the Containment Cell, including capping materials has been provided within **Appendix E**.

Responsibility

Site Occupier or Site Owner (including any future landowner).

Objective

- To ensure the LTEMP is implemented as intended.
- To ensure that in the event of unplanned exposure to friable ASBINS and asbestos contaminated building materials, beneath the high visibility geotextile marker layer, that all appropriate measures are implemented to minimise the risk to on-site personnel and the environment.

Procedure

Non-compliances with the intent and procedures of the LTEMP may occur during the implementation of the LTEMP.

Where a non-compliance is identified by a responsible organisation, they shall inform the affected organisations of the non-compliance in writing. Where a non-compliance with the LTEMP is identified by another organisation (in the activities of an alternate organisation), then they shall have the responsibility of informing the non-complying party in writing of the non-compliance. The non-complying party will be required to rectify the non-conformity as soon as possible, as per the requirements of the relevant procedure(s) where non-compliance has occurred.

Detail of the action taken to rectify the non-compliance shall be provided to each of the affected organisations in writing. Where a non-compliance cannot be rectified, then the LTEMP will require to be reviewed as per the requirements of **Section 11.7.**

If site operations or conditions result in the disturbance of significant friable ASBINS and contaminated building materials without the prior preparation of specific works/management procedures and implementation of appropriate exposure minimisation measures, or alternatively an environmental incident occurs (contaminant leak/spill, identification of asbestos in imported material, etc), the following shall be implemented:

- Isolation of the affected area via the placement of temporary barriers or other appropriate measures (i.e. plastic sheeting, geotextile fabric covers, polymer dust suppressant spray, etc) to prevent exposure to site personnel and/or off-site airborne dust migration; and
- Implementation of applicable LTEMPs with respect to personnel and site management, and subsequent appropriate removal/management of the identified impacted ASBINS material via excavation and off-site removal or otherwise containment/treatment as applicable.

Where considered appropriate by the Site Owner (or its nominated representative), an appointed Environmental Consultant shall undertake an assessment of the impacted area to confirm the disturbance of material has not resulted in conditions with unacceptable risks to site users or the environment. This may include inspections, and/or soil sampling within the Site and subsequent analysis of samples for identified CoC at the site.

Frequency

As required.

Inspection / Reporting

A formal review of the incident by an appropriately qualified person appointed by the Site Owner (or nominated representative) with the objective of identifying the cause of the incident and providing recommendations on alternative procedures or systems to be implemented at the site and/or within the LTEMP to prevent/minimise the likelihood of the incident reoccurring.

Copies of all assessment of finds and actions to deal with the finds should be reported and copies held by the Site Occupier, Site Owner or any future landowners.

Procedure 04 – Land Ownership Change

Area Affected

The lateral extent of the Containment Cell is presented within **Figure 4** of this LTEMP and a survey of the Containment Cell, including capping materials has been provided within **Appendix E**.

The Containment Cell is located within a portion of the current Lot 112 in DP1296469 or the new Trunk Drainage Swale.

Responsibility

Site Occupier (including any nominated site manager) or Site Owner (including any future landowner).

Objective

The LTEMP requires review to ensure its continued appropriateness to be used on the Site.

Procedure

The Site Occupier and Site Owner shall undertake a review of the LTEMP if a review is warranted (e.g. change in site ownership or site configuration). The review shall consider:

- The frequency of inspections required;
- Any non-compliance with the EMP that have been unable to be resolved;
- Any changes in state or national environmental protection or occupational legislation or guidelines that impact any part of the LTEMP; or
- Proposed changes in land use of the site or adjoining sites.

Where a review identifies items which require modification or addition to the LTEMP, then a revision of the LTEMP shall be published and made available.

The review / updates to the LTEMP shall also include any environmental monitoring findings required within this LTEMP.

Frequency

When change of ownership or Site configuration occurs.

Inspection / Reporting

All LTEMP reviews shall be retained by the Site Occupier and Site Owner (including any other future landowner).

Appendix B

LTEMP INDUCTION REGISTER

Site: 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW 2178
LTEMP Induction Record

Induction record for Long-Term Environmental Management Plan (LTEMP) for subsurface works within the containment cell, for disturbance of capping layer and potential excavation into underlying friable asbestos in soil (ASBINS) and asbestos containing building waste.

Name	Company	Date	Sign

Appendix C

CORRECTIVE ACTIONS RECORD

Site: 290-308 Aldington Road and 59-63 Abbotts Road Kemps Creek NSW 2178 **Corrective Action Report**		
Date:		
Trigger for Corrective Action (from Inspection Checklist Form):		
Non-Conformance Identified by:	Company:	Name: Mobile: Email:
Item	**Comments**	
EMP non-conformance		
What was the issue?		
Where was issue?		
What date was it identified?		
What is required to address the issue (Corrective Action)?		
Corrective Action Details		
Was the corrective action completed?		
Date of action?		
Any further works required?		
Follow up inspections required?		
Record of completion		
Non-Conformance Identified by:	Company:	Name: Mobile: Email:
Additional supporting documents	Photos, Site Records, Invoices (to be attached if required)	

Appendix D

HIGH VISBILITY GEOTEXTILE MARKER LAYER PHOTOLOG

Plate 1 – 25/10/2024

Photo supplied by JK Williams.

"Placement of the F3/F2 material showing the marker layer at the base of the excavation. Photo taken looking in a south westerly direction"

Plate 2 – 26/10/2023

Photo supplied by JK Williams.

"Photo from the western aspect of the works showing the extent of the cell underway"

Plate 3 – Unknown date

Photo supplied by JK Williams.

"F3/F2 placement complete, workers installing the top marker layer"

Plate 4 – Unknown date

Photo supplied by JK Williams.

"Marker layer complete at the top of the cell"

Plate 5 – Unknown date

Photo supplied by JK Williams.

"Marker layer being installed to the eastern side whilst capping works progressing along the western side of the cell"

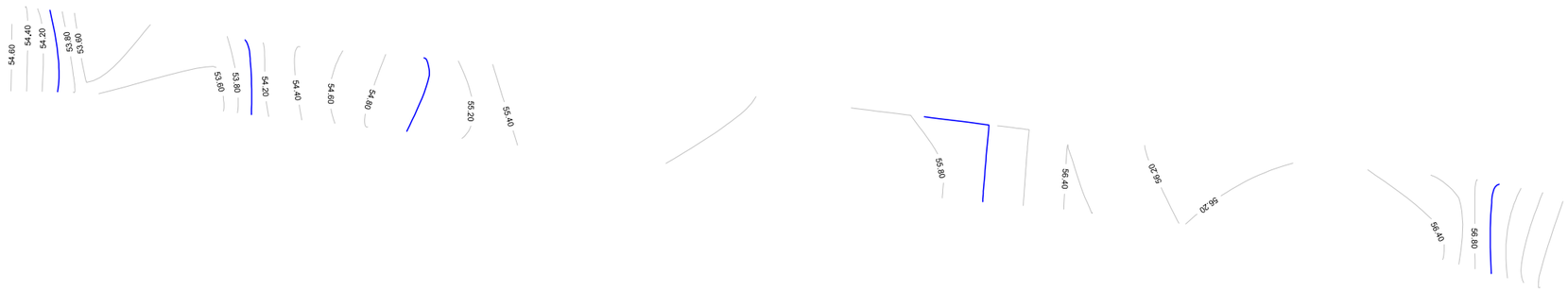
Plate 6 – Unknown date

Photo supplied by JK Williams.

"Marker layer at the top of the cell complete and capping material being installed"

Appendix E

CONTAINMENT CELL SURVEY PLANS



0 25 50

jkWilliams

39-53 Jack Willams Drive, Penrith, NSW 2750
Phone: 02 4725 3400 Email: jkw@jkw.com.au

Client:

Project:

Horizontal Datum: | Level Datum:

Surveyed: | Checked:
Drawn: | Ref No.:

Local Authority:

Description:

Trunk Drainage Channel

Underside contours of burial pit

Rev	Date	Revision Details
A		
B		
C		
D		
E		
F		

DATE OF SURVEY:

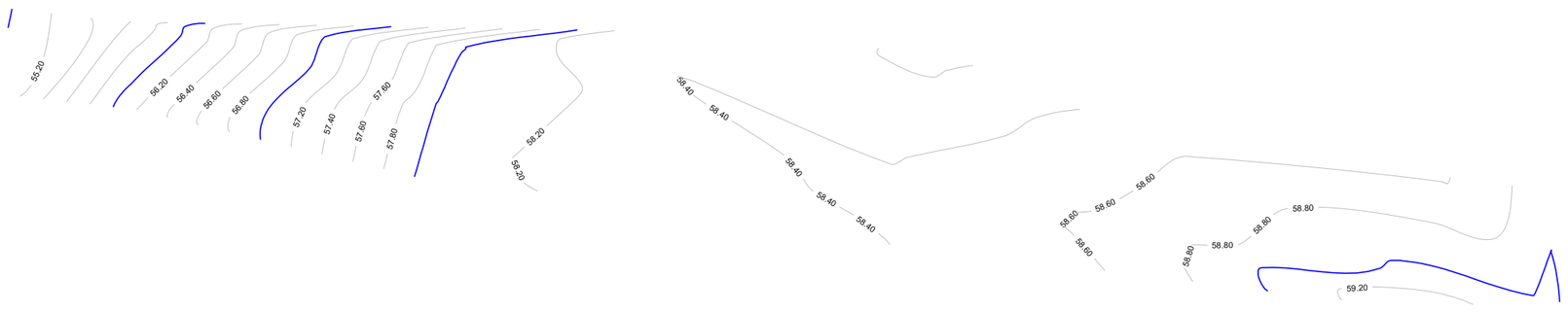
Contour Interval
Major:
Minor:

Scale:

Sheet Size: A3

Drawing Number:

Sheet No. of Rev. A



0 25 50

jkWilliams
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Phone: 02 4725 3400 Email: jkw@jkw.com.au

Client:

Project:

Horizontal Datum: | Level Datum:

Surveyed: | Checked:
Drawn: | Ref No.:

Local Authority:

Description:

Trunk Drainage Channel

Top contours of burial pit

Rev	Date	Revision Details
A		
B		
C		
D		
E		
F		

Contour Interval
Major:
Minor:

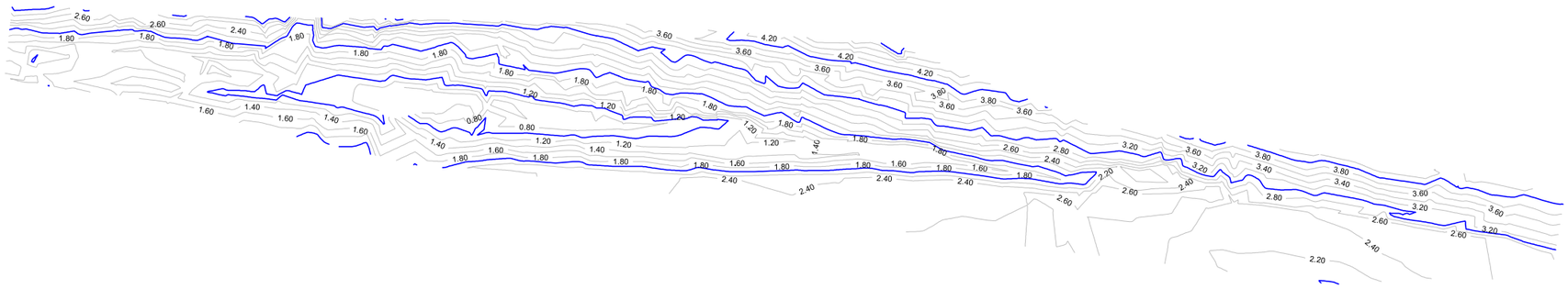
Scale:

Sheet Size: A3

Drawing Number:

DATE OF SURVEY:

Sheet No. of Rev. A



jkWilliams

39-53 Jack Willams Drive, Penrith, NSW 2750
Phone: 02 4725 3400 Email: jkw@jkw.com.au

Client:

Project:

Horizontal Datum:

Level Datum:

Surveyed:

Drawn:

Checked:

Ref No.:

Local Authority:

Description:

Trunk Drainage Channel

Depth contours FSL to top of burial pit

Rev	Date	Revision Details
A		
B		
C		
D		
E		
F		

DATE OF SURVEY:

Contour Interval
Major:
Minor:

Scale:

Sheet Size: A3

Drawing Number:

Sheet No. of

Rev. A

Appendix F
SWALE DESIGN PLANS

WESTLINK - ABBOTTS RD, KEMPS CREEK
TRUNK DRAINAGE

STAGE 1 DRAINAGE CHANNEL WORKS

COUNCIL REF: SSD-9138102

DETAILED CONCEPT DESIGN

IMAGE REF: METROMAP - 17/05/24

LOCALITY SKETCH

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	AMENDMENT	DES	DRN	CKD	APR	DATE

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
COVER SHEET

PROJECT No: 110965-03
SHEET No: DD001

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD001 | 3

LEGEND

DESCRIPTION	PROPOSED	EXISTING	FUTURE
EXTENT OF WORKS			
EDGE STRIP			
DRAINAGE LINE & PIT	05/06 Ø600		
DRAINAGE LINE & PIT BY OTHERS	05/06 Ø600		
CONTOURS			
CATCH DRAIN			
ELECTRICITY, POWER POLE	E	eE FP eE	
TELECOM, BOX	T	eT	
WATER, STOP VALVE, HYDRANT	W	eW HYD eW SV eW	
SEWER, MANHOLE	S	eS SMH eS	
GAS	G	eG	
SUBSOIL	SS		
RETAINING WALLS			
HEADWALLS			
SIGNAGE			
SURVEY MARKS - BENCH MARKS			
STATE SURVEY MARKS			
RECOVERY PEGS			

GENERAL NOTES

1. ALL WORKS WITHIN THE DRAINAGE CORRIDOR ARE TO BE IN ACCORDANCE WITH SYDNEY WATER'S TECHNICAL SPECIFICATION - CIVIL (CURRENT VERSION). ALL WORKS WITHIN THE ROAD RESERVE ARE TO BE IN ACCORDANCE WITH PENRITH CITY COUNCIL'S ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS (CURRENT VERSION).
2. SURVEY MARKS: -
   a. STATE SURVEY MARKS SHOWN THUS SHALL BE SET IN TOP OF THE KERB AS IT IS BEING LAID, BY THE CONTRACTOR, IN THE INDICATED LOCATIONS. MARKS SHALL BE SUPPLIED BY THE PROJECT SURVEYOR.
   b. SURVEY MARKS SHOWN THUS SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
3. THE CONTRACTOR SHALL LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY.
4. THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS. TO BE PROVIDED PRIOR TO THE APPROVAL OF THE PLANS.
5. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.
6. NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL'S ENGINEER.
7. TREES TO BE RETAINED ON SITE SHALL BE PROTECTED BY SUITABLE STURDY APPROVED PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF SITE WORKS.
8. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES, OUT-HOUSES, CAR BODIES AND DEBRIS ETC.
9. PUBLIC RESERVE AREAS SHALL BE CLEARED OF UNDERGROWTH, IMPROVEMENTS AND FENCES AS DIRECTED BY THE ENGINEER.
10. FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE, ORGANIC MATTER AND OTHER DEBRIS. PLACING OF FILLING ON THE PREPARED AREAS SHALL NOT COMMENCE UNTIL THE AUTHORITY TO DO SO HAS BEEN OBTAINED FROM THE COUNCIL.
11. SITE FILL AREAS: - THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
12. ALL SITE FILLING TO BE COMPACTED TO 95% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY IN ACCORDANCE WITH COUNCIL'S "WORKS SPECIFICATION".
13. ALL SITE REGRADING AREAS SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS REQUIREMENTS.
14. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.
15. VEHICULAR CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER WHERE SHOWN.
16. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
17. DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.
18. ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS.

GEOTECHNICAL NOTES:

1. ONCE THE EARTHWORKS ARE GRADED TO THE FINISHED DESIGN SURFACE LEVEL, RIP THE SUBGRADE OVER THE CHANNEL FORMATION / WORKS AREA TO A DEPTH OF 150mm AND APPLY 1.0kg OF GYPSUM INTO THE EXPOSED SUBGRADE / TOPSOIL.

STORMWATER NOTES

1. STORMWATER DESIGN CRITERIA:
   1% AEP MAJOR SYSTEM
   20% AEP MINOR SYSTEM
2. PIPES TO BE INSTALLED TO TYPE HS1 SUPPORT IN ACCORDANCE WITH AS 3725 (1989) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
3. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 (1998) AND AS/NZS 3500 3.2 (1998).
4. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
5. GRATES AND COVERS SHALL CONFORM TO AS 3996.
6. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
7. ALL STORMWATER PIPES WITHIN ROADS TO BE REINFORCED CONCRETE PIPE (RCP) CLASS 2.
8. ALL STORMWATER PITS ARE TO BE AUSPIT OR APPROVED EQUIVALENT. CAST INSITU PITS MAY BE USED, STRUCTURAL CERTIFICATION TO BE PROVIDED BY CONTRACTOR.

SURVEY SET OUT INFORMATION NOTES:

1. ALL SITE SET OUT AND CONTROL POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR.
2. THE INFORMATION DETAILED ON THE CERTIFIED CONSTRUCTION CERTIFICATE PLANS TAKES PRECEDENCE OVER ALL ELECTRONIC INFORMATION PROVIDED. THE ORDER OF PRIORITY FOR USE OF ALL INFORMATION PROVIDED IS AS FOLLOWS:
   a. CERTIFIED CONSTRUCTION CERTIFICATE DRAWINGS
   b. 2D DRAFTING BASE (ELECTRONIC FILE)
   c. 3D DTM (ELECTRONIC FILE)
3. ANY DISCREPANCY BETWEEN ANY OF THE INFORMATION CONTAINED WITHIN THESE FILES IS TO BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT PRIOR TO CONSTRUCTION WHO WILL SEEK CLARIFICATION AND ISSUE INSTRUCTIONS ON THE APPROPRIATE COURSE OF ACTION.

CIVIL PLAN INDEX

BEFORE YOU DIG www.byda.com.au

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY, CONTRCTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCUVATION GUIDE LINES & STANDARDS.

NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

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	AMENDMENT	DES	DRN	CKD	APR	DATE
3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	INDEX UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

J. WYNDHAM PRINCE
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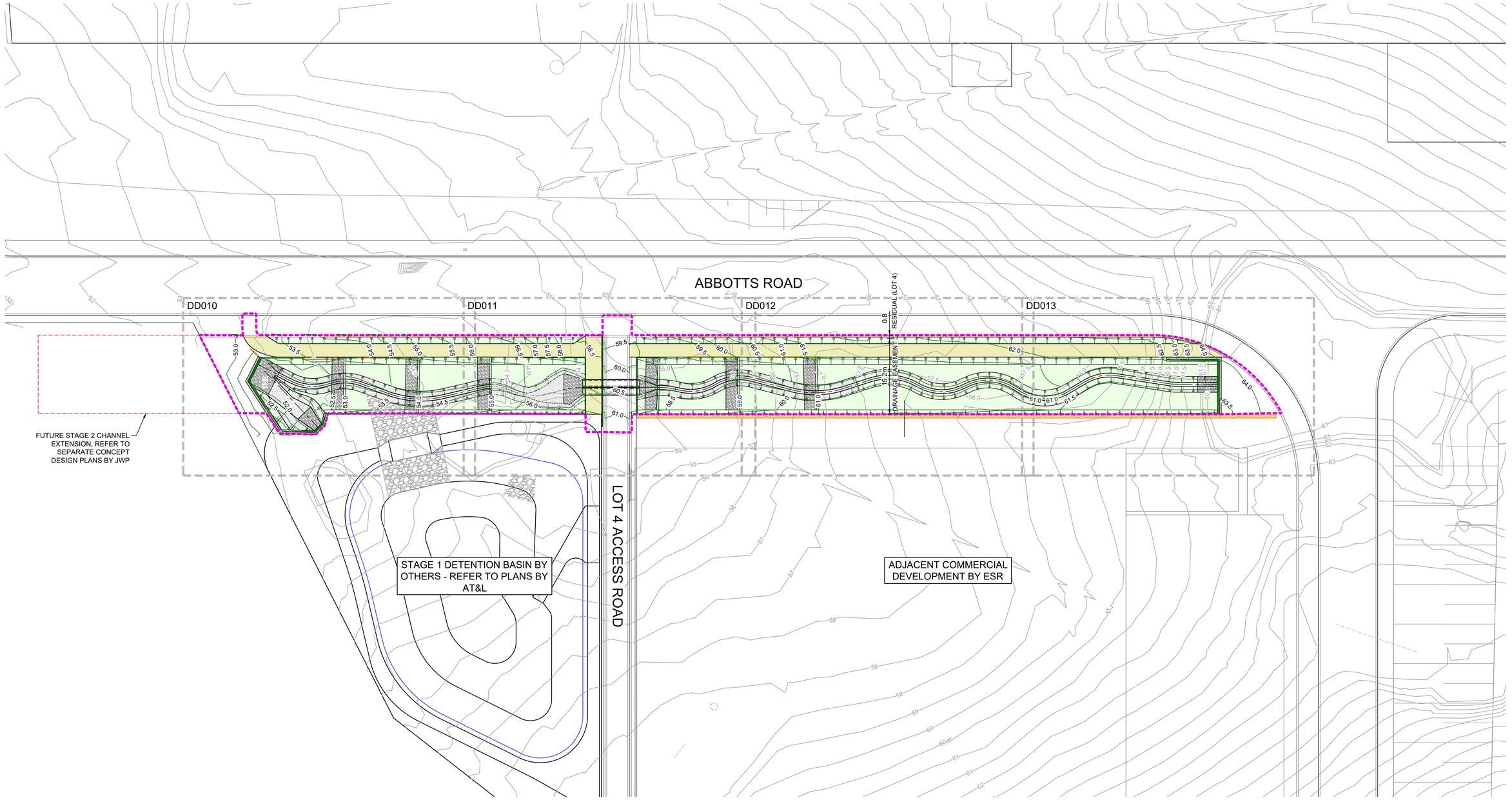
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
NOTES, INDEX & LEGEND

PROJECT No: 110965-03
SHEET No: DD002

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD002 | 3

Plotted: 1 August, 2024 12:26:32 PM File Name: C:\Synergy\WS\data\ASJWP07\110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD001.dwg



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PRELIMINARY DESIGNS SUBJECT TO CHANGE

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2	PLAN UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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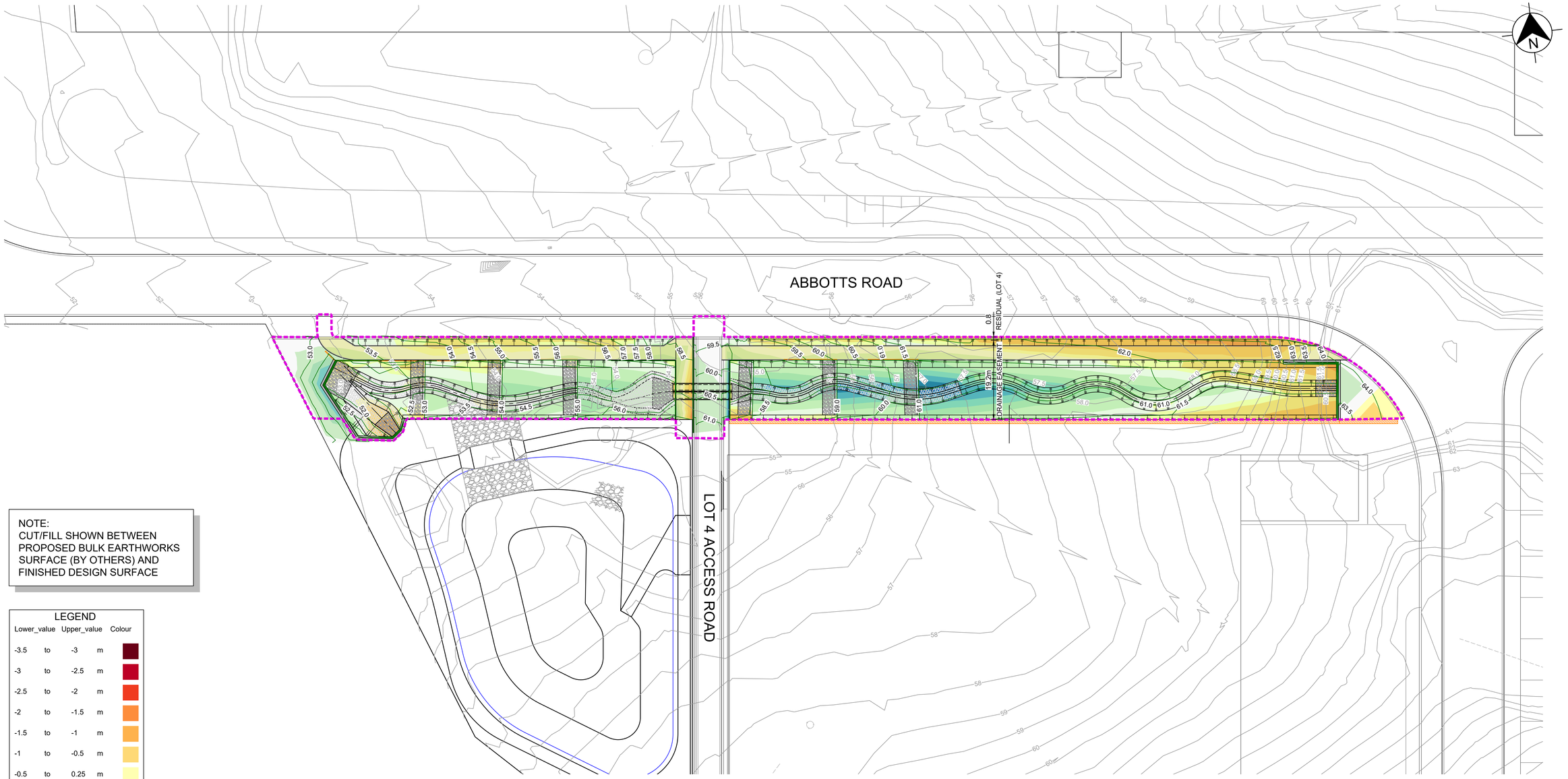
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SITE LAYOUT PLAN

PROJECT No: 110965-03
SHEET No: DD005

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD005 | 3



NOTE:
CUT/FILL SHOWN BETWEEN PROPOSED BULK EARTHWORKS SURFACE (BY OTHERS) AND FINISHED DESIGN SURFACE

LEGEND

Lower_value		Upper_value		Colour
-3.5	to	-3	m	
-3	to	-2.5	m	
-2.5	to	-2	m	
-2	to	-1.5	m	
-1.5	to	-1	m	
-1	to	-0.5	m	
-0.5	to	0.25	m	
-0.25	to	0.25	m	
0.25	to	1	m	
1	to	1.5	m	
1.5	to	2	m	
2	to	2.5	m	
2.5	to	3	m	
3	to	3.5	m	
3.5	to	4	m	

EARTHWORKS QUANTITIES
TOTAL CUT = 1,210m³
TOTAL FILL = 2,290m³
BALANCE = 1,080m³ (IMPORT)

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PRELIMINARY DESIGNS SUBJECT TO CHANGE

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1:1000 (AT A3)

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METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
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1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CUT / FILL PLANS

PROJECT No: 110965-03
SHEET No: DD006

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD006 | 3

Plotted: 31 July 2024 3:13:16 PM File Name: C:\Synergy\WS\data\ASJWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD005.dwg

ABBOTTS ROAD

FLOODWAY SIGNAGE

94.426

CT90.523
90.000

PROVIDE REMOVABLE BOLLARD
SEE DD035 FOR DETAILS

RW8

MAINTENANCE TRACK WEST

RW5

RW4

150 WIDE CONCRETE EDGING
TO MAINTENANCE TRACK

PROVIDE OUTLET PIPE STUB TO
ABBOTTS ROAD BOUNDARY FOR
FUTURE CONNECTION BY OTHERS -
REFER TO PLANS BY AT&L FOR DETAILS

ROCK SCOUR
PROTECTION

CONCRETE BLOCK
RETAINING WALL

SLOPED SANDSTONE BLOCK
RETAINING WALLS FOR HEADWALLS

STORMWATER INLET PIT WITH
RAISED GRATE. REFER TO
SHEET DD022 FOR DETAILS

DROP
STRUCTURE 6

DROP STRUCTURE
SCOUR PROTECTION

DROP
STRUCTURE 5

MATCH LEVELS AT
WESTERN BOUNADRY

HEADWALL 5 REFER TO DETAIL
SHEETS DD020 & DD022

DROP STRUCTURE
SCOUR PROTECTION

ROCK LINED LOW
FLOW CHANNEL

FUTURE STAGE 2 CHANNEL.
REFER TO SEPARATE CONCEPT
PLANS BY JWP.

VEGETATED CHANNEL
OVERBANKS TO LANDSCAPE
ARCHITECTS DETAILS

EXTEND SPILLWAY ROCK SCOUR
PROTECTION INTO CHANNEL AS PER
AT&L STAGE 1 PLANS. REFER TO
C13091 FOR DETAILS

SLOPED SANDSTONE BLOCK
RETAINING WALLS FOR HEADWALLS

PROVIDE PIPE STUB TO CHANNEL
BOUNDARY FOR FUTURE CONNECTION
BY OTHERS - REFER TO PLANS BY AT&L
FOR DETAILS AND PIPE DIMENSIONS

HEADWALL 4 REFER TO DETAIL
SHEETS DD020 & DD022.

SPILLWAY

STAGE 1 DETENTION BASIN
BY OTHERS - REFER TO
PLANS BY AT&L

NOTE:

ALL WORKS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN, AS NECESSARY.

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1:200 (AT A3)

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
ENGINEERING PLAN
SHEET 1

PROJECT No: 110965-03
SHEET No: DD010

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD010 | 3

Plotted: 1 August , 2024 12:00:20 PM File Name: C:\SynergyWS\data\AS.JWP07\110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD010.dwg

FLOODWAY SIGNAGE

ABBOTTS ROAD

AA-11

1350Ø

RW1

MAINTENANCE TRACK WEST

RW4

MAINTENANCE TRACK EAST

RW3

RW7

DETENTION BASIN ACCESS TRACK

LOT 4 ACCESS ROAD

PROVIDE REMOVABLE BOLLARD SEE DD035 FOR DETAILS

HEADWALL 3 REFER TO DETAIL SHEET DD020

HEADWALL 2 REFER TO DETAIL SHEETS DD020 & DD035

SIGN PLINTH REFER TO STREET SIGN PLANS FOR DETAILS

150 WIDE CONCRETE EDGING TO MAINTENANCE TRACK

STEPPED STANDSTONE BLOCK RETAINING WALL

VEGETATED CHANNEL OVERBANKS TO LANDSCAPE ARCHITECTS DETAILS

DROP STRUCTURE SCOUR PROTECTION

ROCK SCOUR PROTECTION

ROCK LINED LOW FLOW CHANNEL

SAFETY BARRIER TO BE INTEGRATED WITH REINFORCED EARTH RETAINING WALL

2 x 1800 WIDE x 1200 HIGH RCBC REFER TO DD023 FOR DETAILS

DROP STRUCTURE 3

DROP STRUCTURE 2

DROP STRUCTURE 4

PROVIDE PIPE STUB TO CHANNEL BOUNDARY FOR FUTURE CONNECTION BY OTHERS - REFER TO PLANS BY AT&L FOR DETAILS

KEYSTONE REINFORCED EARTH WALL WITH SANDSTONE FACING REFER TO DD035 FOR DETAILS

KEYSTONE REINFORCED EARTH WALL WITH SANDSTONE FACING REFER TO DD035 FOR DETAILS

FUTURE RETAINING WALL BY OTHERS

AA-12

900Ø

PIPE BY OTHERS

L1-1

GPT BY OTHERS

AA-13

STAGE 1 DETENTION BASIN BY OTHERS - REFER TO PLANS BY AT&L

NOTE:

ALL WORKS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN, AS NECESSARY.

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PRELIMINARY DESIGNS SUBJECT TO CHANGE

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1:200 (AT A3)

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
ENGINEERING PLAN
SHEET 2

PROJECT No: 110965-03
SHEET No: DD011

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD011 | 3

Plotted: 1 August, 2024 12:00:52 PM File Name: C:\Synergy\WS\data\ASJ\WP071110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD010.dwg

ABBOTTS ROAD

1350Ø

750Ø

750Ø

AA-10

AA-9

N

RW2

MAINTENANCE TRACK EAST

3.5

150 WIDE CONCRETE EDGING
TO MAINTENANCE TRACK

VEGETATED CHANNEL
OVERBANKS TO LANDSCAPE
ARCHITECTS DETAILS

STEPPED
STANDSTONE BLOCK
RETAINING WALL

DROP STRUCTURE
SCOUR PROTECTION

DROP
STRUCTURE 1

LONG NATIVE GRASS LINED LOW
FLOW CHANNEL TO LANDSCAPE
ARCHITECTS DETAILS

FUTURE RETAINING WALL
BY OTHERS

VEGETATED CHANNEL
OVERBANKS TO LANDSCAPE
ARCHITECTS DETAILS

NOTE:

ALL WORKS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN, AS NECESSARY.

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:100 (AT A1)
1:200 (AT A3)

2 1 0 1 2 3 4 5
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	PLAN AND NOTES UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: ESR

STATUS:
ADVANCE COPY
DESIGN SUBJECT TO CHANGE
NOT FOR CONSTRUCTION
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
ENGINEERING PLAN
SHEET 3

PROJECT No: 110965-03
SHEET No: DD012

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD012 | 3

Plotted: 1 August, 2024 12:01:22 PM File Name: C:\Synergy\WS\data\AS_JWP07\110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD010.dwg

ABBOTTS ROAD

ABBOTTS ROAD DRAINAGE BY OTHERS REFER TO PLANS BY AT&L FOR DETAILS

750Ø

AA-8

1350Ø

STEPPED SANDSTONE BLOCK RETAINING WALL ADJACENT TO ROAD

MAINTENANCE TRACK EAST

3.5

150 WIDE CONCRETE EDGING TO MAINTENANCE TRACK

PROVIDE REMOVABLE BOLLARD SEE DD035 FOR DETAILS

PIPE BY OTHERS

FLOODWAY SIGNAGE

WARNING

FLOODWAY

RAIN MAY CAUSE FLOOD WATER TO RISE RAPIDLY.

KEEP OFF THE AREA DURING HEAVY RAIN.

VEGETATED CHANNEL OVERBANKS TO LANDSCAPE ARCHITECTS DETAILS

HEADWALL 1 REFER TO DETAIL SHEETS DD020 & DD022

ROCK SCOUR PROTECTION

XA-14

XA-13

1350Ø

PROVIDE INLET PIPE STUB TO ABBOTTS ROAD BOUNDARY FOR CONNECTION BY OTHERS - REFER TO PLANS AT&L FOR DETAILS

LONG NATIVE GRASS LINED LOW FLOW CHANNEL TO LANDSCAPE ARCHITECTS DETAILS

SLOPED SANDSTONE BLOCK RETAINING WALLS FOR HEADWALLS

FUTURE RETAINING WALL BY OTHERS

VEGETATED CHANNEL OVERBANKS TO LANDSCAPE ARCHITECTS DETAILS

NOTE:

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DRAFT ISSUE ONLY

PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:100 (AT A1)
1:200 (AT A3)

2 1 0 1 2 3 4 5

METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
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1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
ENGINEERING PLAN
SHEET 4

PROJECT No: 110965-03

SHEET No: DD013

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD013 | 3

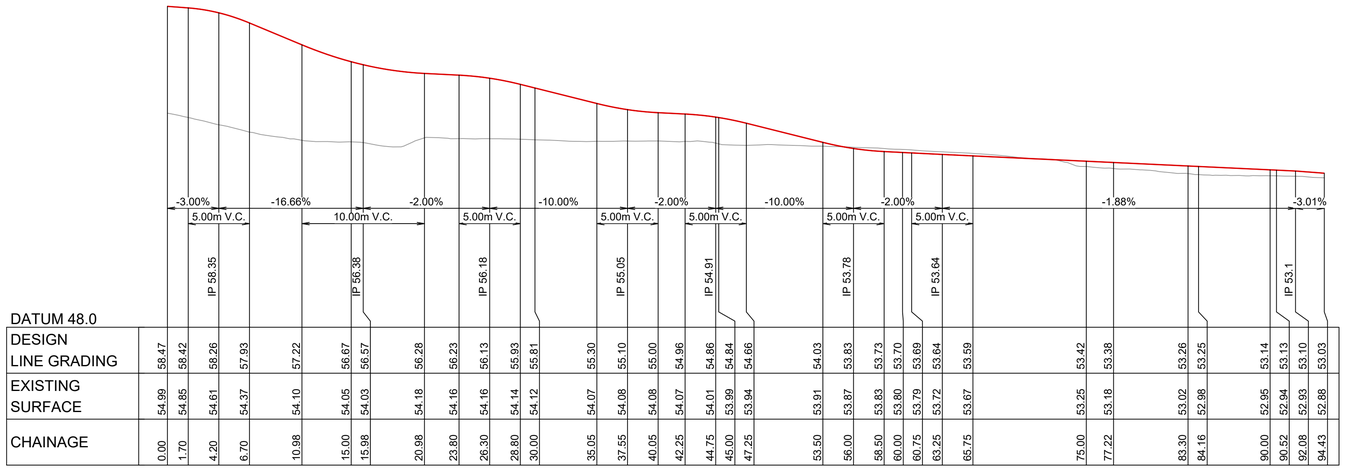
Plotted: 1 August, 2024 12:01:44 PM File Name: C:\SynergyWS\data\ASJWP07\110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD010.dwg

MAINTENANCE TRACK WEST					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	296215.45	6251462.99	276°49'23.33"		
77.22	296138.77	6251472.16	276°49'23.33"		
80.26	296135.69	6251472.53		12	6.08
83.3	296133.17	6251474.35	305°51'20.07"		
84.16	296132.47	6251474.86	305°51'20.07"		
87.34	296129.62	6251476.91		6	6.36
90.52	296130.03	6251480.41	6°35'56.58"		
94.43	296130.47	6251484.28	6°35'56.58"		

LOT 4 ACCESS			
CHAINAGE	EASTING	NORTHING	BEARING
0	296225.54	6251480.01	186°49'23.37"
143.38	296208.51	6251337.64	186°49'23.37"

BASIN ACCESS ROAD WEST			
CHAINAGE	EASTING	NORTHING	BEARING
0	296216.11	6251468.55	186°49'23.33"
20	296213.74	6251448.69	186°49'23.33"

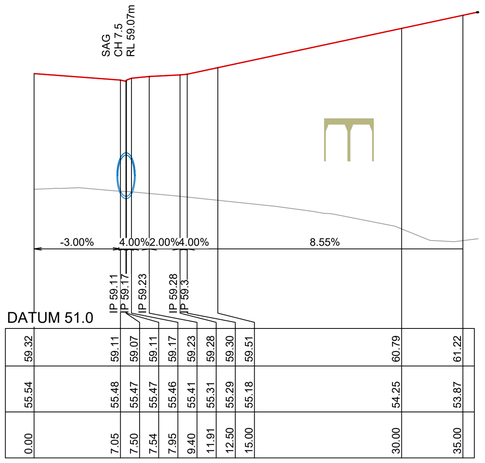
MAINTENANCE TRACK EAST			
CHAINAGE	EASTING	NORTHING	BEARING
0	296386.3	6251442.55	276°49'23.33"
161.07	296226.37	6251461.68	276°49'23.33"



DATUM 48.0

CHAINAGE	0.00	1.70	4.20	6.70	10.98	15.00	15.98	20.98	23.80	26.30	28.80	30.00	35.05	37.55	40.05	42.25	44.75	45.00	47.25	53.50	56.00	58.50	60.00	60.75	63.25	65.75	75.00	77.22	83.30	84.16	90.00	90.52	92.08	94.43
EXISTING SURFACE	54.99	54.85	54.61	54.37	54.10	54.05	54.03	54.18	54.16	54.16	54.14	54.12	54.07	54.08	54.08	54.07	54.01	53.99	53.94	53.91	53.87	53.83	53.80	53.79	53.72	53.67	53.25	53.18	53.02	52.98	52.95	52.94	52.93	52.88
DESIGN LINE GRADING	58.47	58.42	58.26	57.93	57.22	56.67	56.57	56.28	56.23	56.13	55.93	55.81	55.30	55.10	55.00	54.96	54.86	54.84	54.66	54.03	53.83	53.73	53.70	53.69	53.64	53.59	53.42	53.38	53.26	53.25	53.14	53.13	53.10	53.03

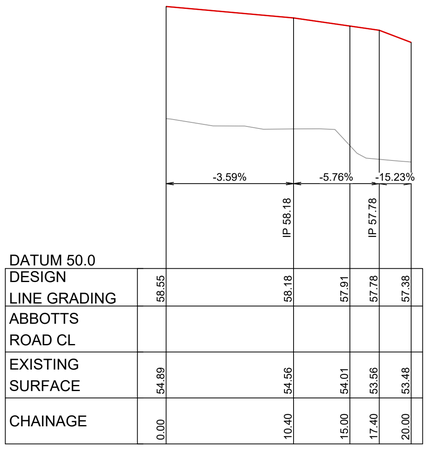
LONGITUDINAL SECTION MAINTENANCE TRACK WEST
HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:100



DATUM 51.0

CHAINAGE	0.00	7.05	7.50	7.54	7.95	9.40	11.91	12.50	15.00	30.00	35.00
EXISTING SURFACE	55.54	55.48	55.47	55.47	55.46	55.41	55.31	55.29	55.18	54.25	53.87
DESIGN LINE GRADING	59.32	59.11	59.07	59.11	59.17	59.23	59.28	59.30	59.51	60.79	61.22

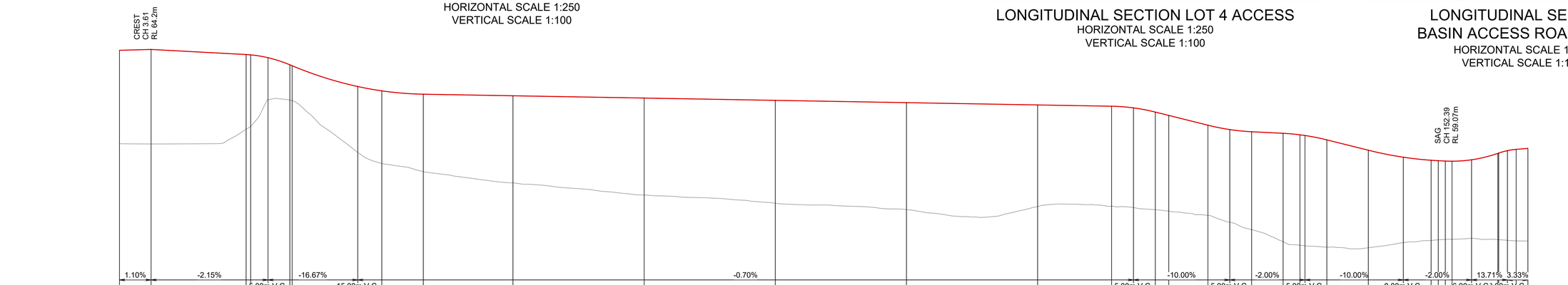
LONGITUDINAL SECTION LOT 4 ACCESS
HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:100



DATUM 50.0

CHAINAGE	0.00	10.40	15.00	17.40	20.00
EXISTING SURFACE	54.89	54.56	54.01	53.56	53.48
ABBOTTS ROAD CL					
DESIGN LINE GRADING	58.55	58.18	57.91	57.78	57.38

LONGITUDINAL SECTION BASIN ACCESS ROAD WEST
HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:100



DATUM 50.0

CHAINAGE	0.00	3.61	14.48	15.00	16.98	19.48	19.75	27.25	30.00	34.75	45.00	60.00	75.00	90.00	105.00	113.46	115.96	118.46	120.00	124.48	126.98	129.48	133.08	135.00	135.58	138.08	142.82	146.82	150.00	150.82	151.63	152.39	154.63	157.63	157.73	158.73	159.73	161.07
EXISTING SURFACE	59.88	59.87	60.54	60.67	61.89	61.88	61.85	59.48	58.96	58.60	58.08	57.53	57.15	56.86	57.00	57.01	56.95	56.85	56.78	56.60	56.28	55.94	55.39	55.22	55.20	55.14	55.11	55.34	55.44	55.48	55.49	55.50	55.54	55.48	55.48	55.45	55.42	55.42
DESIGN LINE GRADING	64.16	64.20	63.96	63.95	63.82	63.49	63.45	62.50	62.30	62.14	62.07	61.97	61.86	61.76	61.65	61.59	61.52	61.33	61.17	60.72	60.52	60.42	60.35	60.28	60.25	60.05	59.58	59.26	59.12	59.10	59.08	59.07	59.14	59.43	59.45	59.56	59.62	59.66

LONGITUDINAL SECTION MAINTENANCE TRACK EAST
HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:100

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:100 (AT A1)
1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

1:250 (AT A1)
1:500 (AT A3)
5 0 5 10 15
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
1	ISSUE FOR INFORMATION	DA	NJ	PM	PM	23/07/24
	AMENDMENT	DES	DRN	CKD	APR	DATE

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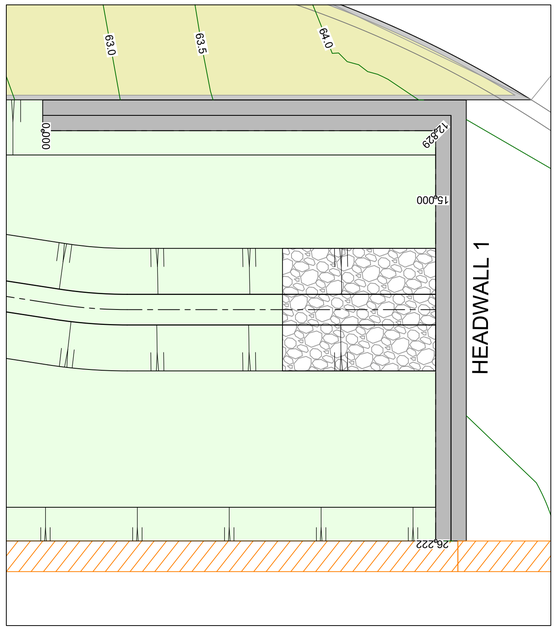
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
ACCESS TRACK LONGITUDINAL SECTIONS

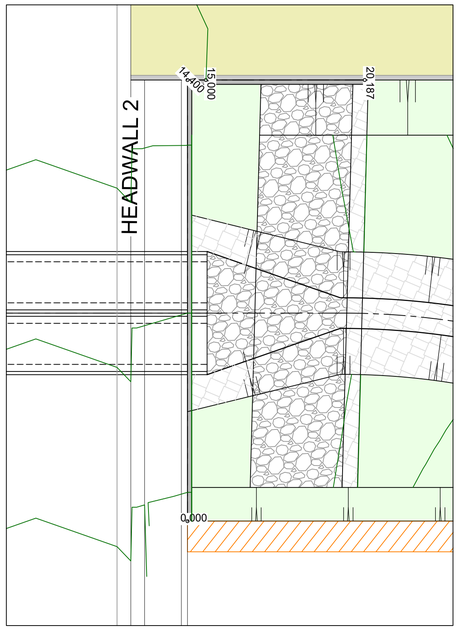
PROJECT No: 110965-03
SHEET No: DD015

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD015 | 3

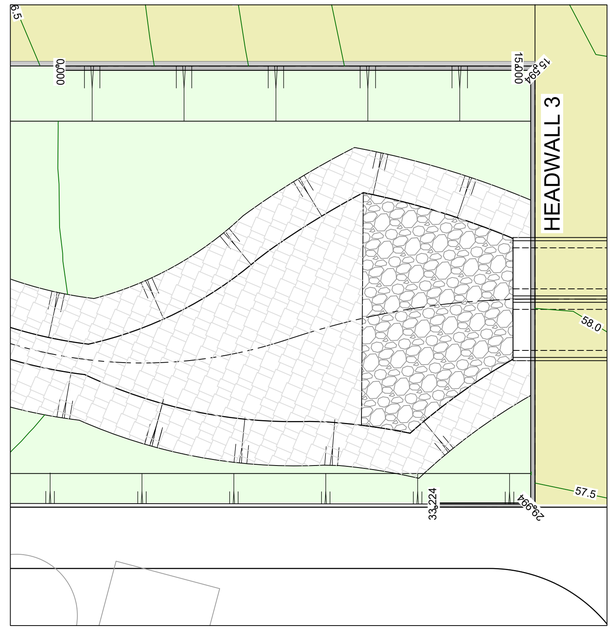
Plotted: 31 July, 2024 3:13:17 PM File Name: C:\SynergyWS\data\ASJWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD015.dwg



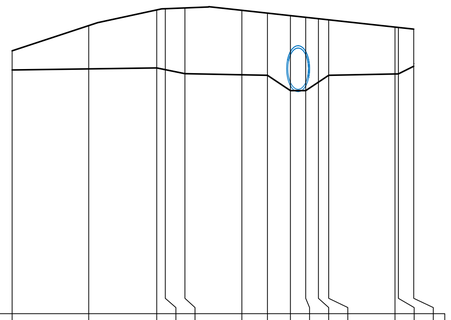
PLAN
SCALE 1:100



PLAN
SCALE 1:100



PLAN
SCALE 1:100

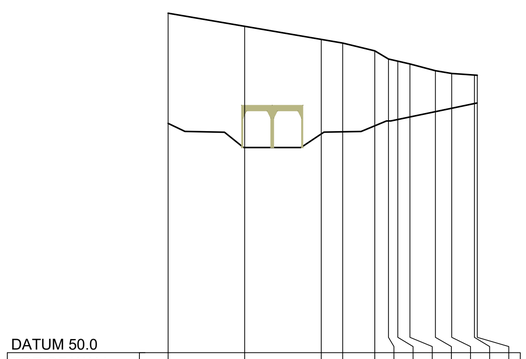


DATUM 54.0														
TOE OF WALL GROUND LEVELS	61.955	61.990	62.021	61.964	61.834	61.797	61.780	61.280	61.280	61.557	61.780	61.824	61.826	62.076
TOP OF WALL GROUND LEVELS	62.580	63.402	63.914	63.953	63.975	63.902	63.810	63.728	63.673	63.628	63.591	63.354	63.342	63.287
CHAINAGE	0.000	5.000	9.442	10.000	11.283	15.000	16.670	18.170	19.170	20.000	20.670	25.000	25.220	28.222

LONGITUDINAL SECTION HEADWALL 1

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

HEADWALL 1			
CHAINAGE	EASTING	NORTHING	BEARING
0	296361.4	6251444.51	96°49'23.33"
12.83	296374.13	6251442.99	
26.22	296372.54	6251429.69	186°49'12.05"

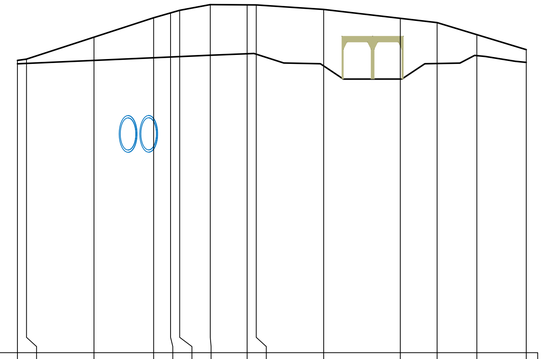


DATUM 50.0														
TOE OF WALL GROUND LEVELS	61.080	60.653	60.226	60.106	59.852	59.585	59.515	59.424	59.203	59.114	59.062	59.055		
TOP OF WALL GROUND LEVELS	57.484	56.696	57.139	57.210	57.405	57.611	57.693	57.867	57.978	58.132				
CHAINAGE	0.000	5.000	10.000	11.400	13.496	14.390	15.000	15.790	17.455	18.520	20.000	20.187		

LONGITUDINAL SECTION HEADWALL 2

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

HEADWALL 2			
CHAINAGE	EASTING	NORTHING	BEARING
0	296226.59	6251447.15	6°49'23.37"
14.4	296228.31	6251461.45	
20.19	296234.05	6251460.76	96°49'23.33"



DATUM 47.0														
TOE OF WALL GROUND LEVELS	56.540	56.582	57.298	57.932	58.090	58.175	58.361	58.353	58.351	58.203	57.914	57.774	57.380	56.892
TOP OF WALL GROUND LEVELS	56.429	56.442	56.540	56.627	56.651	56.665	56.709	56.757		56.358	55.931	56.438		56.476
CHAINAGE	0.000	0.594	5.000	8.886	10.000	10.594	12.594	15.000	15.594	20.000	25.000	27.403	30.000	33.224

LONGITUDINAL SECTION HEADWALL 3

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

HEADWALL 3			
CHAINAGE	EASTING	NORTHING	BEARING
0	296199.96	6251464.84	96°49'23.33"
15.59	296215.45	6251462.99	
29.99	296213.74	6251448.69	
33.22	296210.53	6251449.07	276°49'23.33"

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

NOTE:
- DETAILS AND CONFIGURATION OF HEADWALLS TO BE FURTHER DEVELOPED.
- HEADWALLS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN

1:100 (AT A1)
1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

1:200 (AT A1)
1:400 (AT A3)
4 2 0 4 8 12
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	HEADWALLS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
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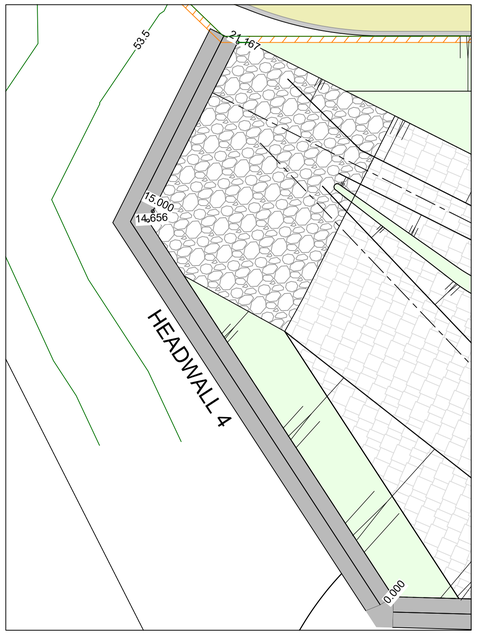
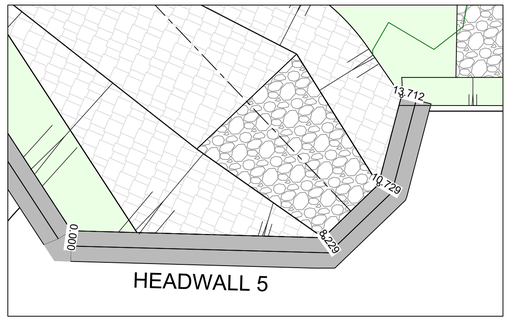
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
HEADWALL SECTIONS
SHEET 1

PROJECT No: 110965-03
SHEET No: DD020

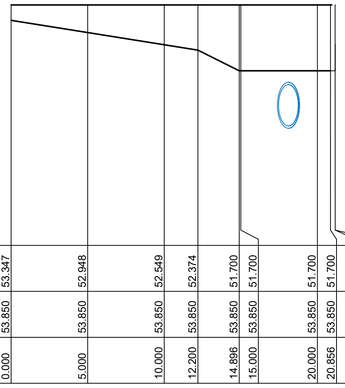
AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD020 | 3



PLAN
SCALE 1:100



PLAN
SCALE 1:100

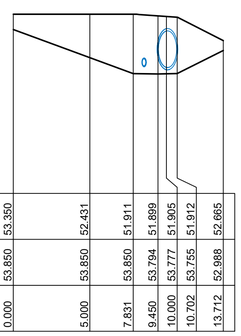


DATUM 46.0											
TOE OF WALL GROUND LEVELS	53.347	52.948	52.549	52.374	51.700	51.700	51.700	51.700	51.700	52.564	
TOP OF WALL GROUND LEVELS	53.850	53.850	53.850	53.850	53.850	53.850	53.850	53.850			
CHAINAGE	0.000	5.000	10.000	12.200	14.896	15.000	20.000	20.856	21.164	21.167	

LONGITUDINAL SECTION HEADWALL 4

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

HEADWALL 4			
CHAINAGE	EASTING	NORTHING	BEARING
0	296136.88	6251453.96	333°43'11.22"
14.66	296130.39	6251467.1	
21.17	296133.98	6251472.52	33°31'30.83"



DATUM 48.0							
TOE OF WALL GROUND LEVELS	53.350	52.431	51.911	51.899	51.905	51.912	52.665
TOP OF WALL GROUND LEVELS	53.850	53.850	53.850	53.794	53.777	53.755	52.988
CHAINAGE	0.000	5.000	7.831	9.450	10.000	10.702	13.712

LONGITUDINAL SECTION HEADWALL 5

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

HEADWALL 5			
CHAINAGE	EASTING	NORTHING	BEARING
0	296136.88	6251453.96	98°25'02.41"
8.23	296145.02	6251452.75	
10.73	296147.01	6251454.26	
13.71	296148.1	6251457.04	21°28'16.70"

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

NOTE:
- DETAILS AND CONFIGURATION OF HEADWALLS TO BE FURTHER DEVELOPED
- HEADWALLS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN

1:100 (AT A1)
1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

1:200 (AT A1)
1:400 (AT A3)
4 2 0 4 8 12
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	HEADWALLS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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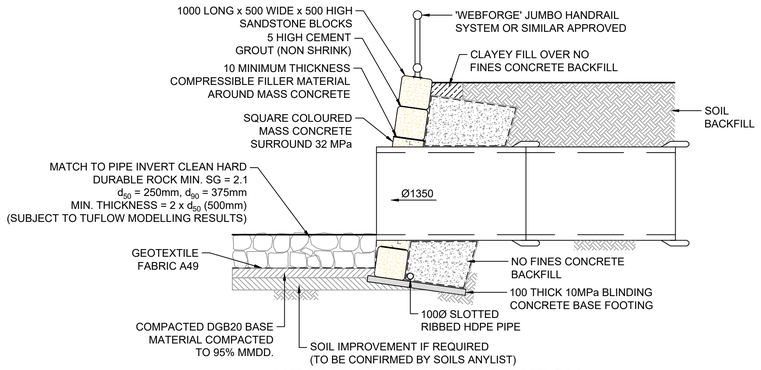
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CULVERT DETAILS
SHEET 2

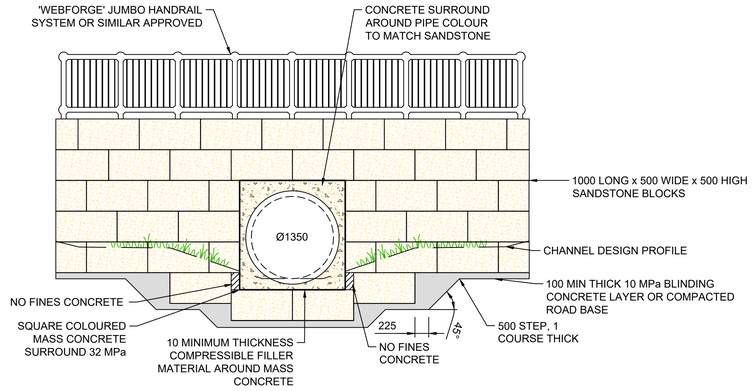
PROJECT No: 110965-03
SHEET No: DD021

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD021 | 3



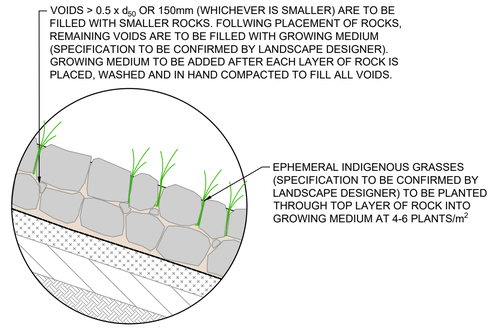
HEADWALL OUTLET SECTION Ø1350 PIPE (XA-14)

SCALE 1:50



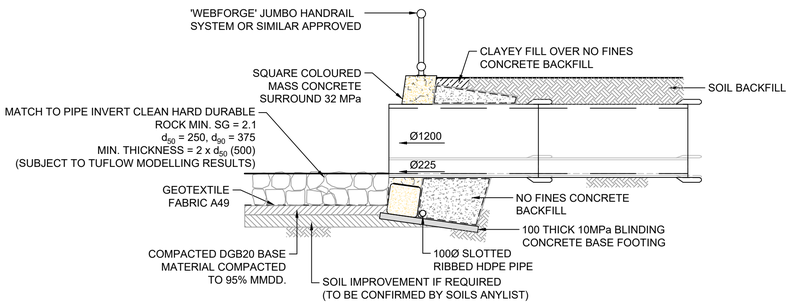
HEADWALL OUTLET ELEVATION Ø1350 PIPE (XA-14)

SCALE 1:50



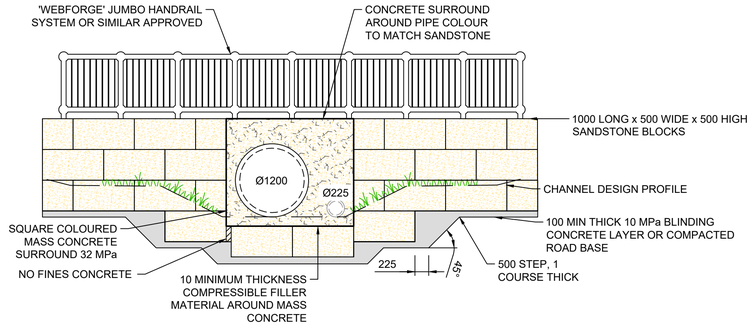
INSET 'A'

SCALE 1:50



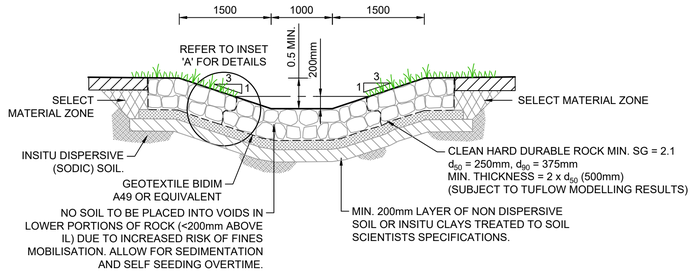
HEADWALL OUTLET SECTION Ø1200 (B1-2) & Ø225 (B2-2)

SCALE 1:50



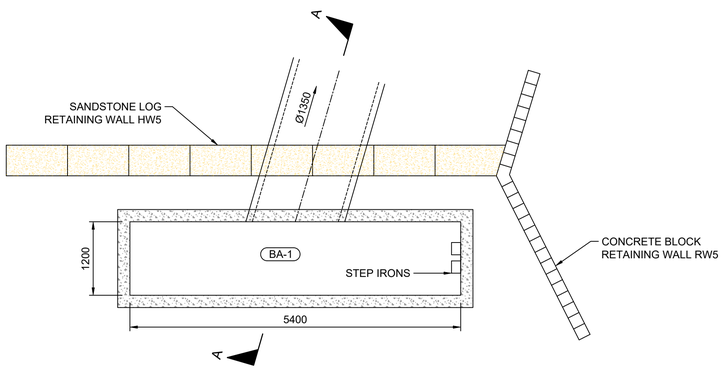
HEADWALL OUTLET ELEVATION Ø1200 (B1-2) & Ø225 (B2-2)

SCALE 1:50



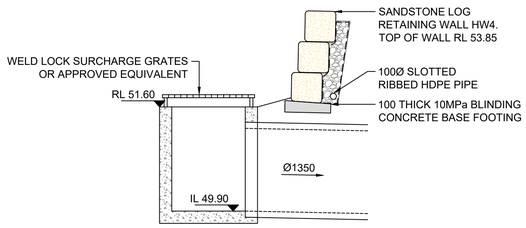
TYPICAL ROCK LINED BASE FLOW CHANNEL DETAIL

SCALE 1:50



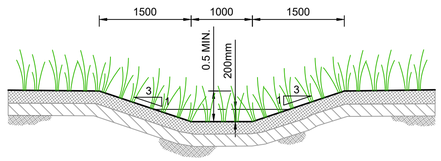
INLET PIT

SCALE 1:50



DETAIL A

SCALE 1:50



TYPICAL LONG NATIVE GRASS LINED BASE FLOW CHANNEL DETAIL

(IN ACCORDANCE WITH LANDSCAPE ARCHITECTS DETAILS)

SCALE 1:50

NOTE:
- DETAILS AND CONFIGURATION OF HEADWALLS TO BE FURTHER DEVELOPED
- HEADWALLS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:100 (AT A1)
1:200 (AT A3)

2 1 0 1 2 3 4 5
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	DETAILS ADDED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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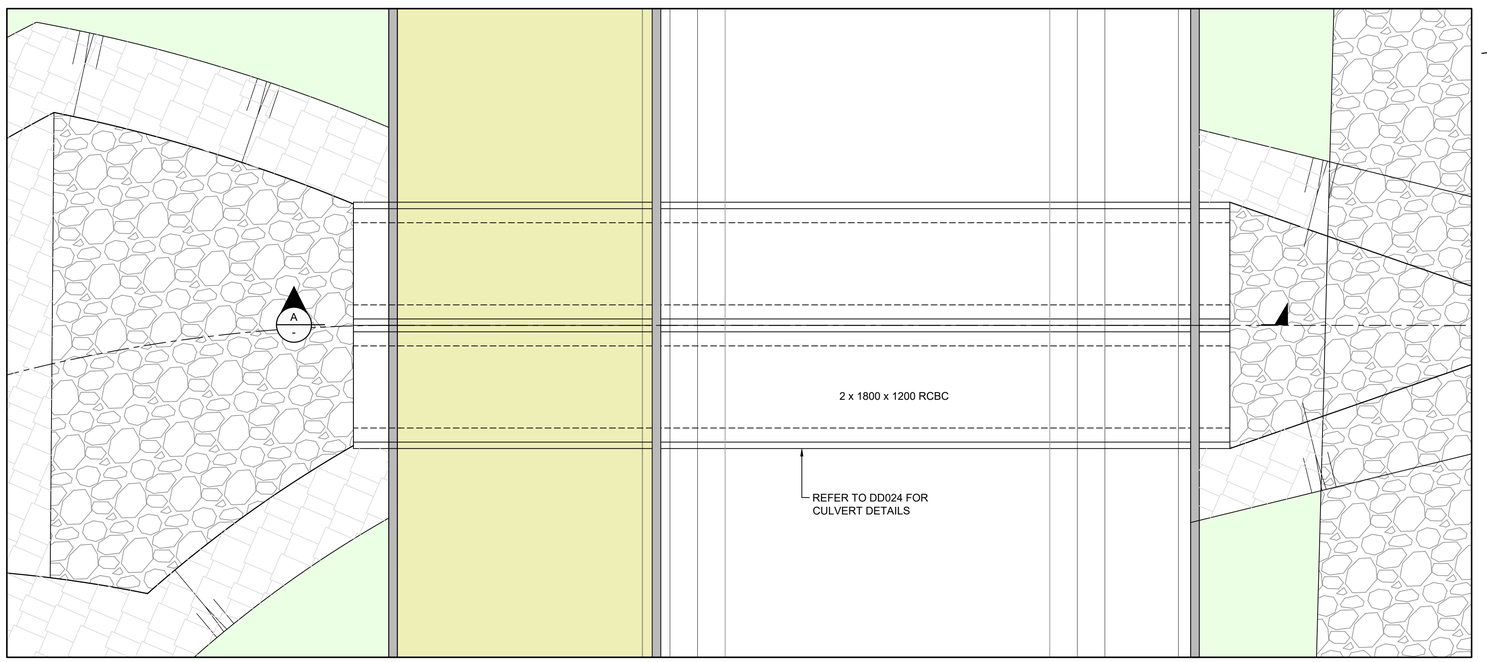
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
HEADWALL DETAILS

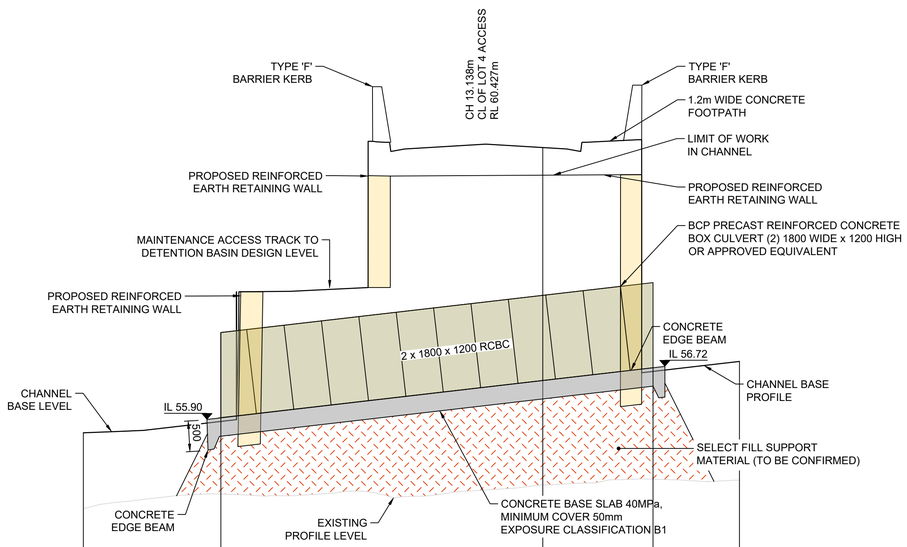
PROJECT No: 110965-03
SHEET No: DD022

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD022 | 3

Plotted: 31 July, 2024 3:13:18 PM File Name: C:\SynergyWS\data\AS\JWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD020.dwg

NOTE:
- REFER TO PLANS BY CLS CONSULTING ENGINEERS FOR STRUCTURAL DESIGN





DATUM 53.0

DESIGN SURFACE	55.716	55.900	60.371	56.720	56.881
EXISTING SURFACE	54.482		54.866		54.942
CHAINAGE	0.000	4.490	15.000	18.600	21.421

SECTION A
SCALE H 1:50
V 1:50

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:50 (AT A1)
1:100 (AT A3)
1 0 1 2 3
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	DETAILS ADDED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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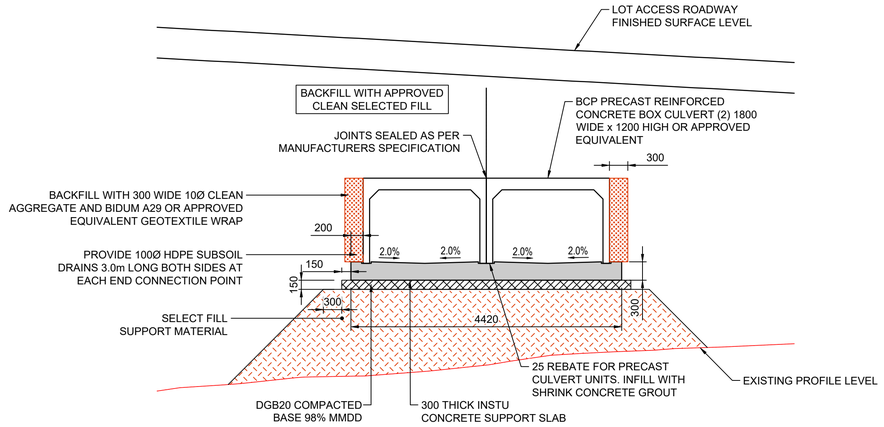
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CULVERT SECTIONS

PROJECT No: 110965-03
SHEET No: DD023

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD023 | 3

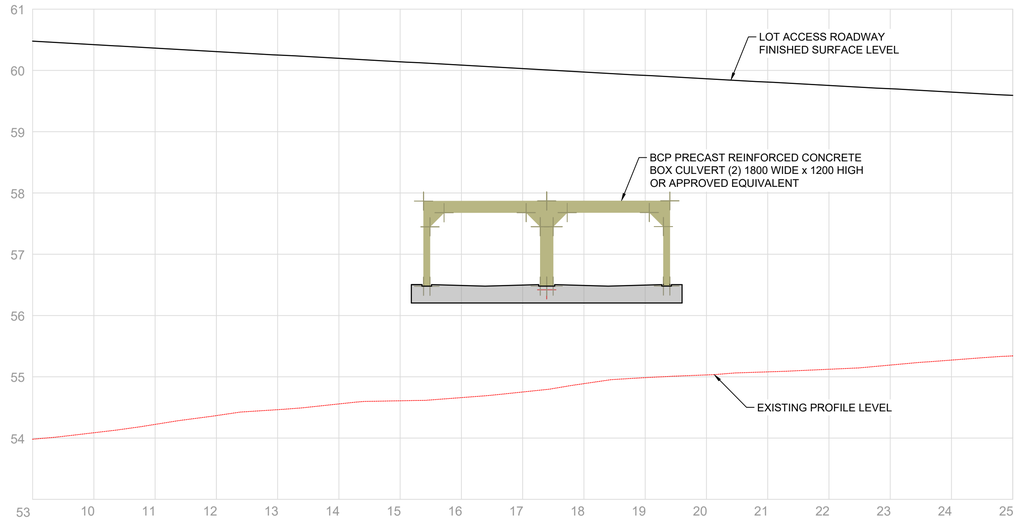
Plotted: 31 July, 2024 3:18:02 PM File Name: C:\SynergyWS\data\AS\JWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD020.dwg



GEOTECHNICAL ENGINEER TO CONFIRM GROUND CONDITIONS ON SITE PRIOR TO CONSTRUCTION AND THE SUITABLE SUPPORT TREATMENT REQUIRED TO THE PRECAST CONCRETE BOX CULVERTS AND CONCRETE BASE SLAB

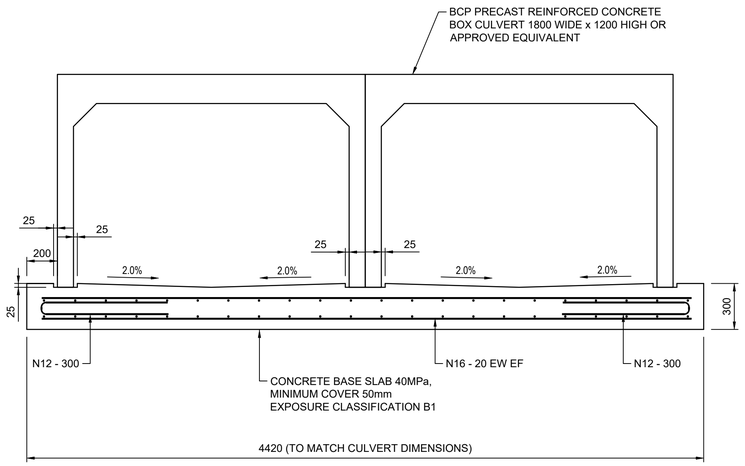
TYPICAL BOX CULVERT CROSSING SECTION DETAIL

SCALE 1:50



TYPICAL BOX CULVERT CROSSING SECTION

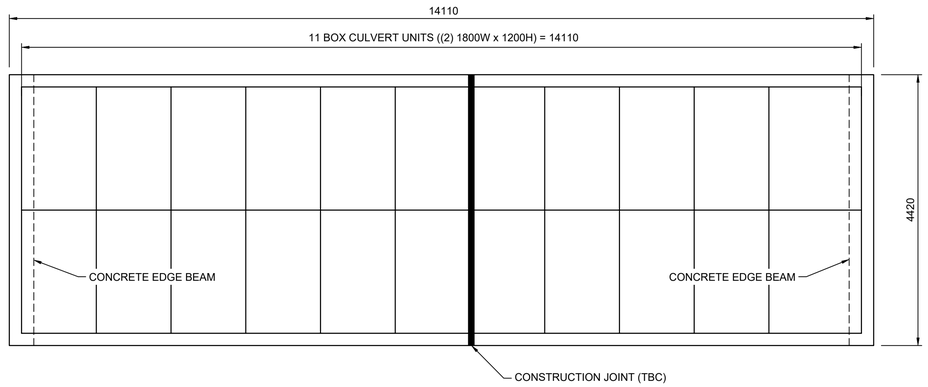
SCALE 1:50



SUPPORT SLAB REINFORCED TO BE CONFIRMED BY STRUCTURAL ENGINEER

TYPICAL SECTION - SUPPORT SLAB REINFORCEMENT

SCALE 1:20



SUPPORT SLAB PLAN

SCALE 1:50

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:20 (AT A1) 400 200 0 400 800 1200 MILLIMETRES

1:50 (AT A1) 1:100 (AT A3) 1 0 1 2 3 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	DETAILS ADDED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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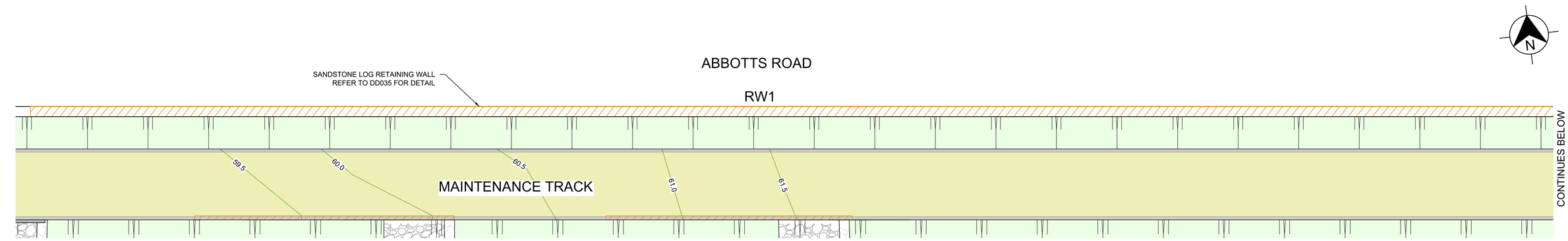
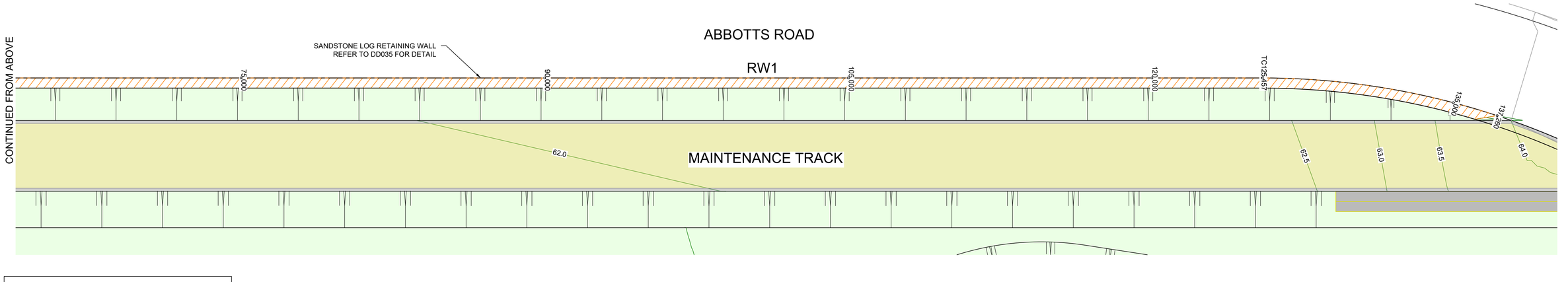
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CULVERT DETAILS

PROJECT No: 110965-03
SHEET No: DD024

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD024 | 3





NOTE:
- REFER TO PLANS BY CLS CONSULTING ENGINEERS FOR STRUCTURAL DESIGN

DATUM 52.0

TOE OF WALL GROUND LEVELS	59.776	60.115	60.453	60.791	60.935	61.126	61.444	61.742	62.020	62.279	62.519	62.739
TOP OF WALL	59.276	59.614	59.952	60.291	60.435	60.629	60.932	61.221	61.510	61.759	62.009	62.220
CHAINAGE	0.000	5.000	10.000	15.000	17.131	20.000	25.000	30.000	35.000	40.000	45.000	50.000

TOE OF WALL GROUND LEVELS	62.926	62.940	63.121	63.283	63.426	63.549	63.653	63.737	63.802	63.823	63.824	63.844
TOP OF WALL	61.959	61.912	61.799	61.969	62.106	62.230	62.342	62.376	62.409	62.424	62.424	62.444
CHAINAGE	54.631	55.000	60.000	65.000	70.000	75.000	80.000	85.000	90.000	92.131	92.233	95.000

TOE OF WALL GROUND LEVELS	63.880	63.916	63.952	63.988	64.024	64.060	64.064	64.064	64.041	64.015	64.004
TOP OF WALL	62.480	62.516	62.552	62.588	62.624	62.660	62.664	62.664	62.979	62.995	
CHAINAGE	100.000	105.000	110.000	115.000	120.000	125.000	125.457	125.467	130.000	135.000	137.260

LONGITUDINAL SECTION RETAINING WALL RW1

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW1 (SANDSTONE LOG)

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	296234.01	6251466.41	96°49'23.37"		
125.46	296358.57	6251451.5			
131.36	296364.48	6251450.8		37.05	11.8
137.26	296369.87	6251448.27	115°04'31.51"		

1:100 (AT A1)
1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

1:200 (AT A1)
1:400 (AT A3)
4 2 0 4 8 12
METRES

Plotted: 31 July , 2024 3:13:20 PM File Name: C:\SynergyWS\data\ASJWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD030.dwg

	AMENDMENT	DES	DRN	CKD	APR	DATE
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1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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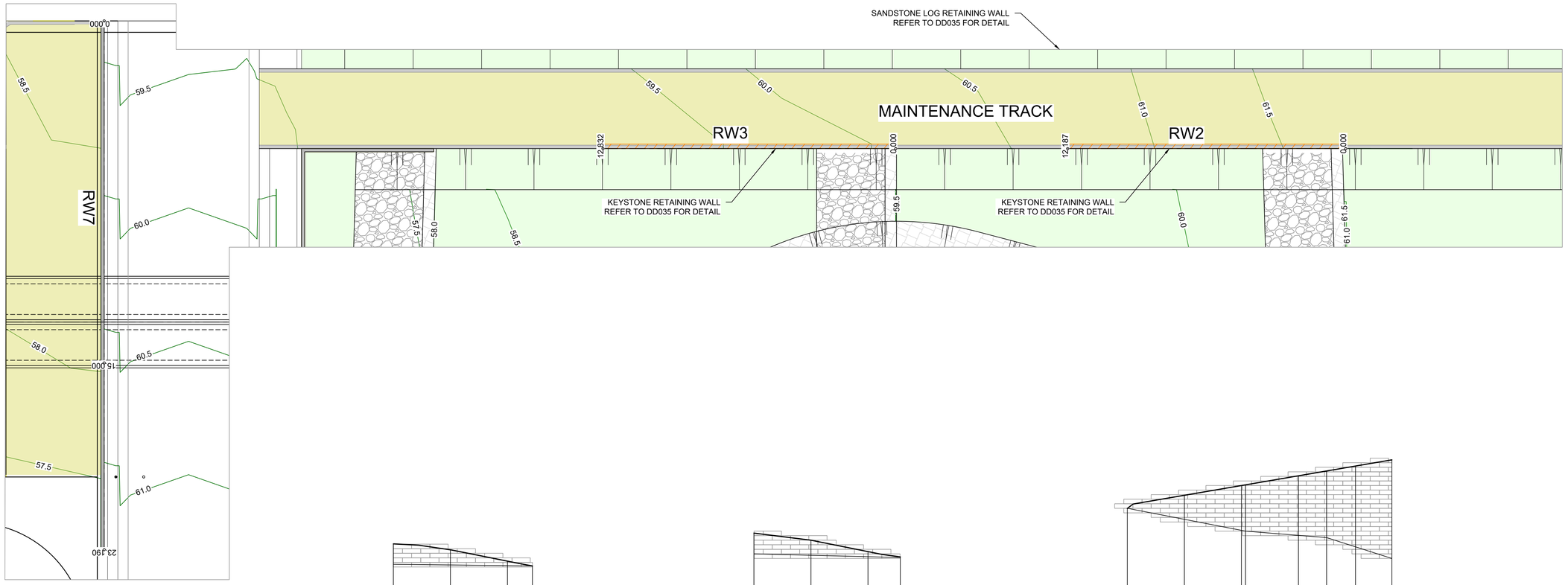
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
RETAINING PLAN AND SECTIONS
SHEET 1

PROJECT No: 110965-03
SHEET No: DD030

AZIMUTH: M.G.A. 2020
DATUM: A.H.D.
ORIGIN: SSM 1112
PLAN No: 110965-03-DD030
3



DATUM 54.0

TOE OF WALL GROUND LEVELS	60.700	60.670	60.640	60.626	
TOP OF WALL	61.594	61.334	60.837	60.627	
CHAINAGE	0.000	5.000	10.000	12.187	

LONGITUDINAL SECTION RETAINING WALL RW2

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW2 (CONCRETE BLOCK)			
CHAINAGE	EASTING	NORTHING	BEARING
0	296273.75	6251456.01	276°49'23.33"
12.19	296261.65	6251457.46	276°49'23.33"

DATUM 52.0

TOE OF WALL GROUND LEVELS		59.093	59.031	58.996	
TOP OF WALL	60.066	59.755	59.255	59.023	
CHAINAGE	0.000	5.000	10.000	12.832	

LONGITUDINAL SECTION RETAINING WALL RW3

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW3 (CONCRETE BLOCK)			
CHAINAGE	EASTING	NORTHING	BEARING
0	296254.17	6251458.36	276°49'23.33"
12.83	296241.42	6251459.88	276°49'23.33"

DATUM 50.0

TOE OF WALL GROUND LEVELS	59.203	58.719	58.235	58.200	58.015	57.917	57.512	57.001
TOP OF WALL	59.195	59.773	60.200	60.231	60.627	60.838	61.055	61.327
CHAINAGE	0.000	5.000	10.000	10.360	15.000	17.466	20.000	23.190

LONGITUDINAL SECTION RETAINING WALL RW7

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW7 (KEYSTONE REINFORCED EARTH)			
CHAINAGE	EASTING	NORTHING	BEARING
0	296220.38	6251468.04	186°49'23.33"
23.19	296217.63	6251445.01	186°49'23.33"

NOTE:
- REFER TO PLANS BY CLS CONSULTING ENGINEERS FOR STRUCTURAL DESIGN

1:100 (AT A1)
1:200 (AT A3)

2 1 0 1 2 3 4 5
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
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2	RETAINING WALLS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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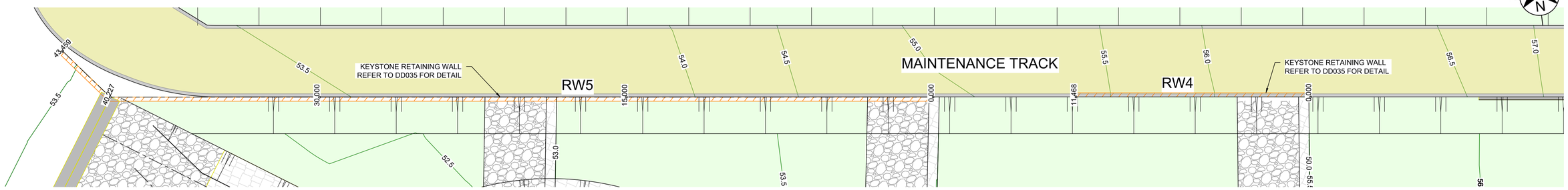
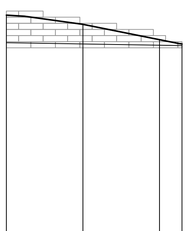
WESTLINK - ABBOTTS ROAD, KEMPS CREEK STAGE 1 DRAINAGE CHANNEL WORKS

RETAINING PLAN AND SECTIONS
SHEET 2

PROJECT No: 110965-03
SHEET No: DD031

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD031 | 3





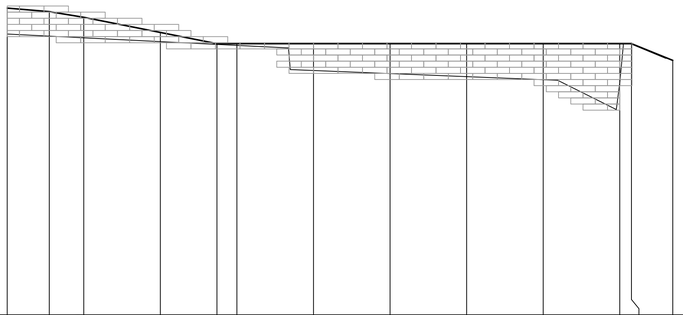
DATUM 48.0

TOE OF WALL GROUND LEVELS	55.380	55.339	55.298	55.286	
TOP OF WALL	56.280	55.979	55.479	55.341	
CHAINAGE	0.000	5.000	10.000	11.468	

LONGITUDINAL SECTION RETAINING WALL RW4

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW4 (CONCRETE BLOCK)			
CHAINAGE	EASTING	NORTHING	BEARING
0	296191.8	6251465.82	276°49'23.33"
11.47	296180.42	6251467.18	276°49'23.33"



DATUM 45.0

TOE OF WALL GROUND LEVELS	54.164	54.096	54.040	53.917	53.826	53.793	52.974	53.874	52.774	52.674	52.576	53.850	53.304
TOE OF WALL AT ACCESS TRACK	54.164	54.096	54.040	53.917	53.826	53.793	52.974	52.874	52.774	52.674	52.576	53.835	
TOP OF WALL	55.010	54.895	54.711	54.216	53.850	53.850	53.850	53.850	53.850	53.850	53.850	53.850	53.304
CHAINAGE	0.000	2.747	5.000	10.000	13.695	15.000	20.000	25.000	30.000	35.000	40.000	40.761	43.459

LONGITUDINAL SECTION RETAINING WALL RW5

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW5 (CONCRETE BLOCK)			
CHAINAGE	EASTING	NORTHING	BEARING
0	296173.49	6251468	276°49'23.33"
40.23	296133.55	6251472.78	
43.46	296131.51	6251475.29	320°53'22.91"

NOTE:
- REFER TO PLANS BY CLS CONSULTING ENGINEERS FOR STRUCTURAL DESIGN

1:100 (AT A1)
1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
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1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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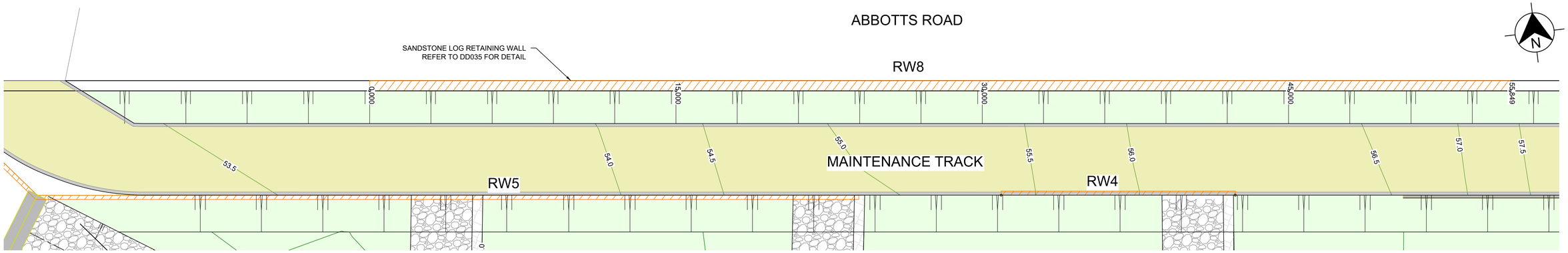
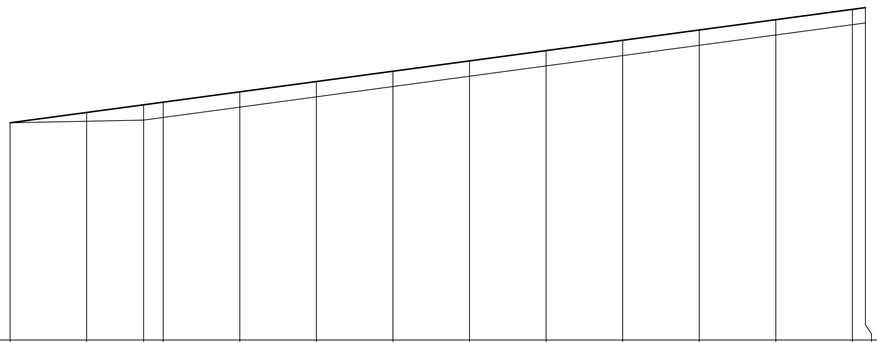
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
RETAINING PLAN AND SECTIONS
SHEET 3

PROJECT No: 110965-03
SHEET No: DD032

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD032 | 3





DATUM 47.0														
TOE OF WALL GROUND LEVELS	54.091	54.141	54.178	54.264	54.601	54.937	55.274	55.610	55.947	56.283	56.620	56.956	57.293	57.350
TOP OF WALL GROUND LEVELS	54.091	54.427	54.678	54.764	55.100	55.437	55.774	56.110	56.447	56.783	57.120	57.456	57.793	57.850
CHAINAGE	0.000	5.000	8.722	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	55.849

LONGITUDINAL SECTION RETAINING WALL RW8

HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RETAINING WALL RW8
(SANDSTONE BLOCK)

CHAINAGE	EASTING	NORTHING	BEARING
0	296150.37	6251476.41	96°49'23.33"
55.85	296205.83	6251469.78	96°49'23.33"

NOTE:
- REFER TO PLANS BY CLS CONSULTING ENGINEERS FOR STRUCTURAL DESIGN

1:100 (AT A1)
1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	RETAINING WALLS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

J. WYNDHAM PRINCE
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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT:
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STATUS:
ISSUE FOR INFORMATION

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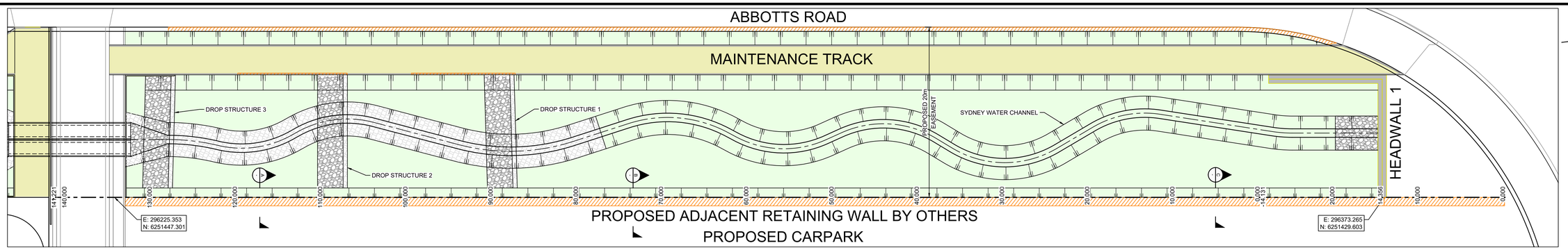
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
RETAINING PLAN AND SECTIONS
SHEET 4

PROJECT No: 110965-03
SHEET No: DD033

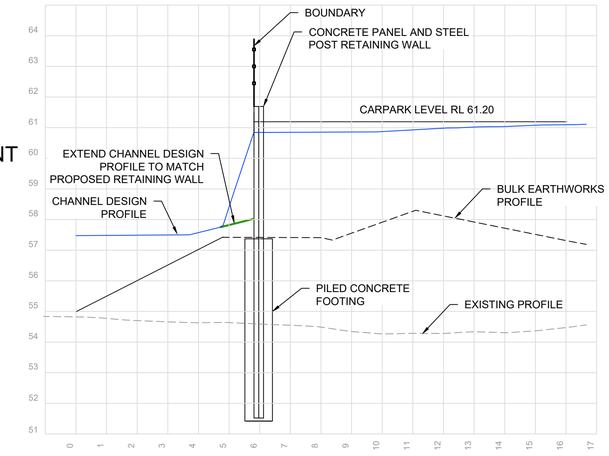
AZIMUTH: M.G.A. 2020
DATUM: A.H.D.
ORIGIN: SSM 1112
PLAN No: 110965-03-DD033
3

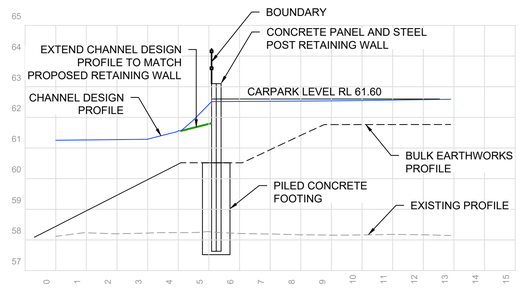
Plotted: 31 July , 2024 3:13:22 PM File Name: C:\SynergyWS\data\ASJWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD030.dwg



PROPOSED ADJACENT RETAINING WALL DETAIL A

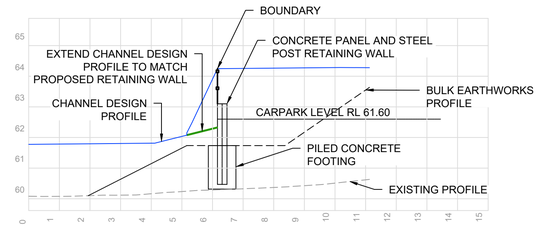
HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:100





PROPOSED ADJACENT RETAINING WALL DETAIL B

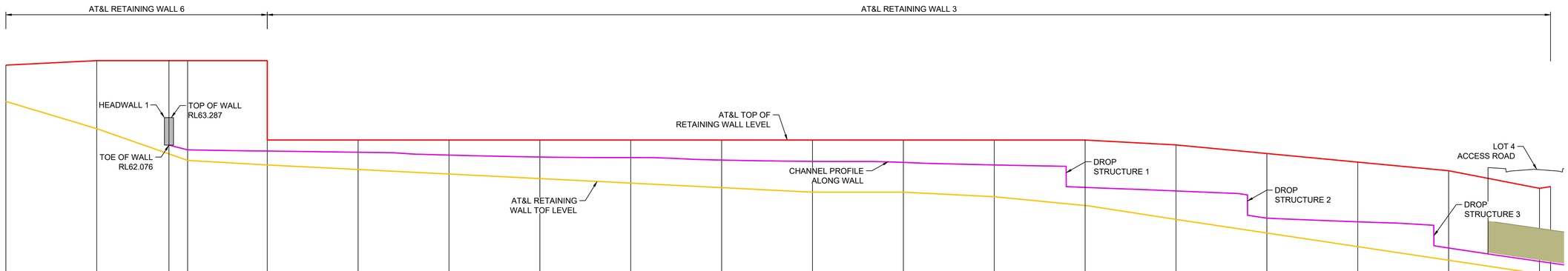
HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:100



PROPOSED ADJACENT RETAINING WALL DETAIL C

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:100

NOTE:
- RETAINING WALLS ARE SUBJECT TO STRUCTURAL AND GEOTECHNICAL DESIGN BY OTHERS



DATUM 56.0

CHAINAGE	0.000	10.000	14.356	20.000	28.764	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	141.221
AT&L INDICATIVE TOP OF RETAINING WALL LEVELS (RW3 & RW6)	65.600		65.800	65.800	62.800	62.300	62.300	62.300	62.300	62.300	62.300	62.300	62.300	62.300	62.300	62.083	61.704	61.325	60.946	60.169	60.246
AT&L INDICATIVE TOF RETAINING WALL LEVELS (RW3 & RW6)	62.800		61.687	61.400	61.200	61.000	60.800	60.600	60.400	60.200	60.000	60.000	59.800	59.400	59.400	58.800	58.200	57.600	57.000	56.400	56.400
CHANNEL PROFILE ALONG WALL			62.076	61.866	61.813	61.760	61.635	61.550	61.525	61.416	61.358	61.358	61.200	60.210	60.054	58.857	58.693	57.539			

LONGITUDINAL SECTION PROPOSED ADJACENT RETAINING WALL

HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:100

1:200 (AT A1) 1:400 (AT A3) — 4 2 0 4 8 12 METRES
1:250 (AT A1) 1:500 (AT A3) — 5 0 5 10 15 METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	RETAINING WALLS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DA	NJ	PM	PM	15/02/24
	AMENDMENT	DES	DRN	CKD	APR	DATE

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK STAGE 1 DRAINAGE CHANNEL WORKS

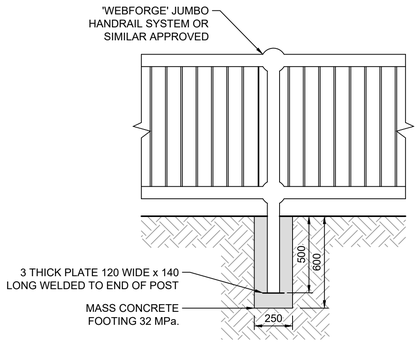
ADJACENT RETAINING WALL PLAN AND SECTIONS

PROJECT No: 110965-03

SHEET No: DD034

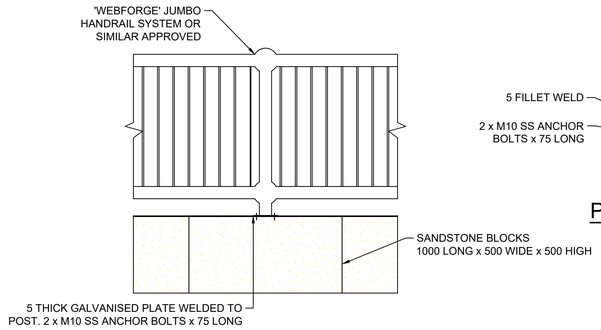
AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD034 | 3

Plotted: 31 July, 2024 3:13:23 PM File Name: C:\Synergy\WS\data\ASJWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD030.dwg



FENCING DETAILS
IN GROUND FOOTING

SCALE 1:20



FENCING DETAILS
CONNECTION TO SANDSTONE LOGS

SCALE 1:20

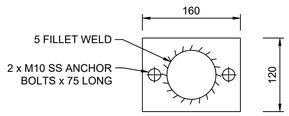
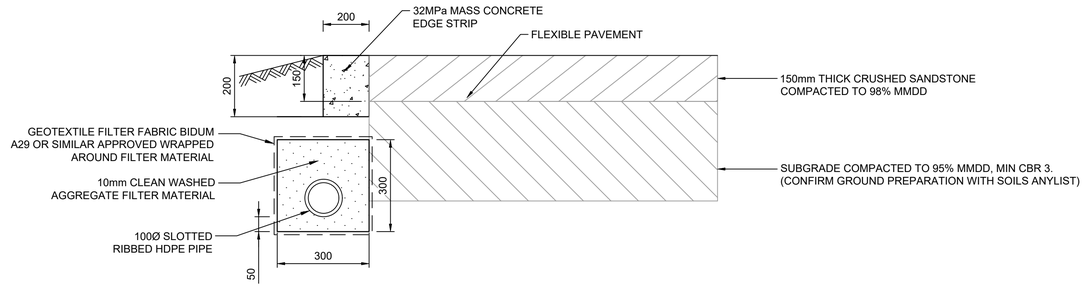


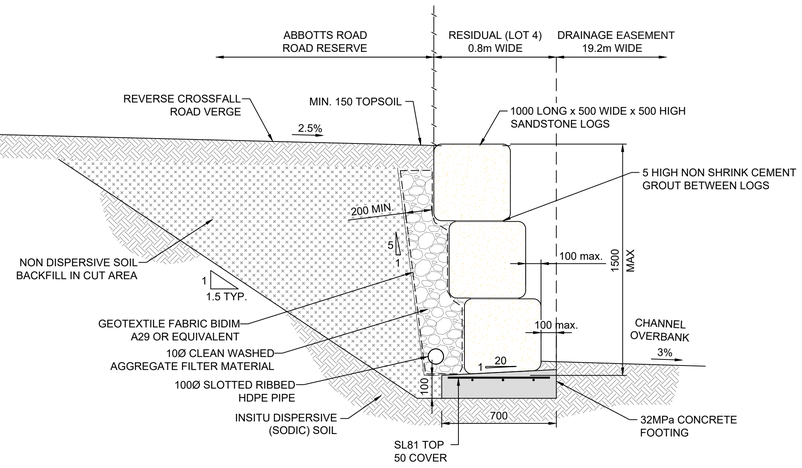
PLATE DETAIL

SCALE 1:5



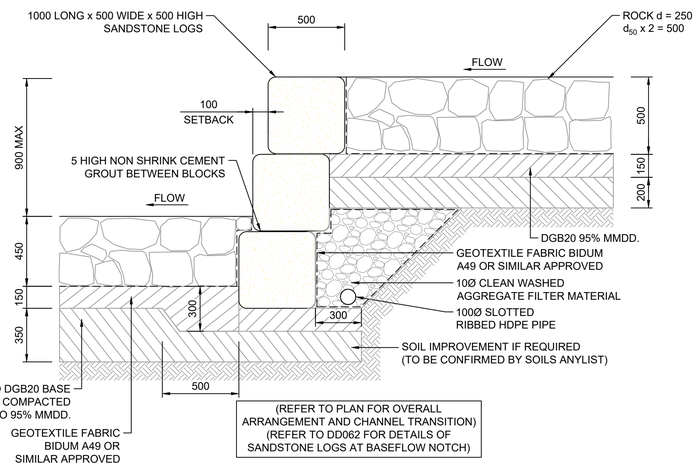
CONCRETE EDGE STRIP AND
MAINTENANCE ACCESS PAVEMENT DETAIL

SCALE 1:10



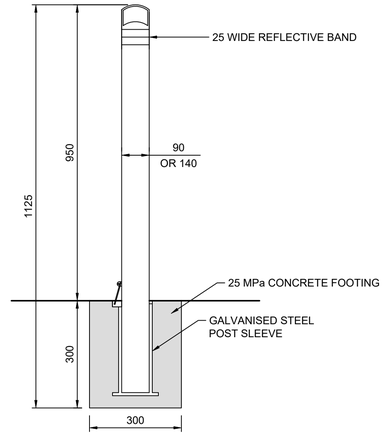
TYPICAL SECTION
SANDSTONE LOG RETAINING WALL

SCALE 1:20



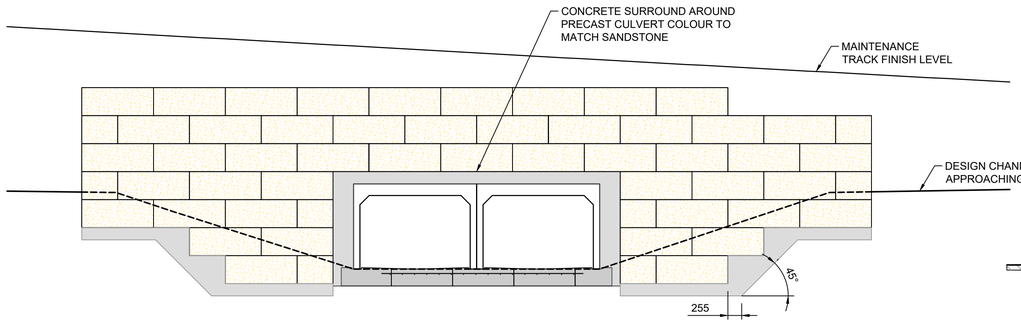
TYPICAL CHANNEL STEP DETAIL

SCALE 1:20



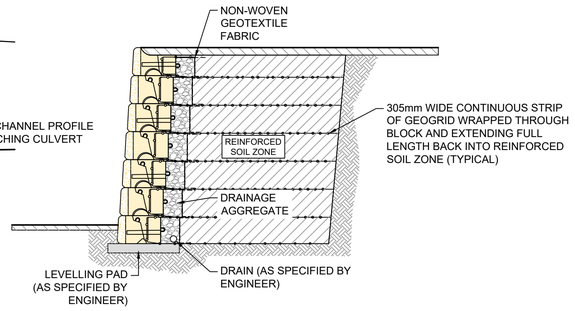
REMOVABLE BOLLARD DETAIL

SCALE 1:10



TYPICAL 'KEYSTONE' RETAINING WALL ELEVATION

SCALE 1:50



TYPICAL 'KEYSTONE' RETAINING WALL DETAIL

SCALE 1:50

NOTE:
REFER TO PLANS BY CLS ENGINEERS FOR
HEADWALL/RETAINING WALL STRUCTURAL DETAILS

1:100 (AT A1)
1:200 (AT A3)

2 1 0 1 2 3 4 5

METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	DETAILS ADDED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
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STATUS: ISSUE FOR INFORMATION

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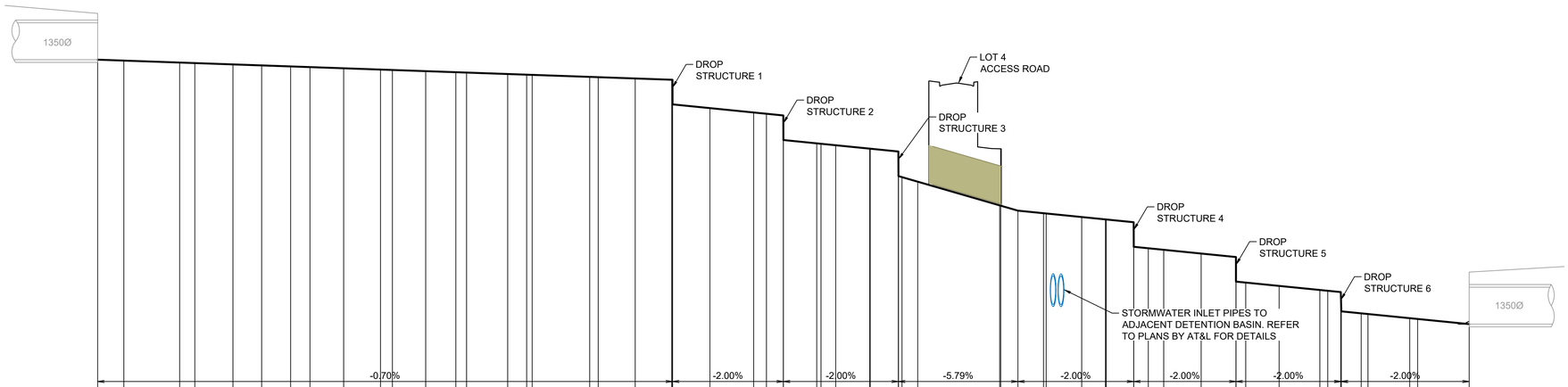
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
RETAINING WALL AND TYPICAL DETAILS

PROJECT No: 110965-03

SHEET No: DD035

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD035 | 3



DATUM 45.0

DESIGN LINE GRADING	61.28	61.25	61.18	61.16	61.11	61.07	61.03	61.01	60.97	60.92	60.90	60.86	60.82	60.81	60.76	60.73
CHAINAGE	0.00	4.79	15.00	17.77	24.74	30.00	35.30	38.83	45.00	51.74	53.91	60.00	65.52	67.48	75.00	78.48

DESIGN LINE GRADING	60.72	60.65	60.64	60.59	60.55	60.54	59.64	59.51	59.35	59.30	59.24	58.34	58.22	58.20	58.15	58.02
CHAINAGE	79.48	90.00	91.56	98.32	105.00	105.15	105.15	111.99	120.00	122.33	125.42	125.43	131.53	132.31	135.00	141.23

DESIGN LINE GRADING	58.02	57.92	57.02	56.98	56.81	55.95	55.93	55.75	55.66	55.65	55.52	55.43	55.43	55.33	54.43	54.38
CHAINAGE	141.31	146.46	146.48	147.13	150.00	165.00	165.20	168.33	173.01	173.50	180.00	184.34	184.48	189.50	189.52	192.18

DESIGN LINE GRADING	54.32	54.18	54.06	53.16	53.12	53.00	52.85	52.82	52.77	52.07	51.99	51.97	51.82	51.79	51.60
CHAINAGE	195.00	201.85	208.22	208.22	210.00	216.11	223.56	225.00	227.39	227.48	231.12	232.36	240.00	241.45	250.87

LONGITUDINAL SECTION LOW FLOW CHANNEL

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

V 1:100 (AT A1)
V 1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

H 1:500 (AT A1)
H 1:1000 (AT A3)
10 0 10 20 30
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	LONGITUDINAL SECTION UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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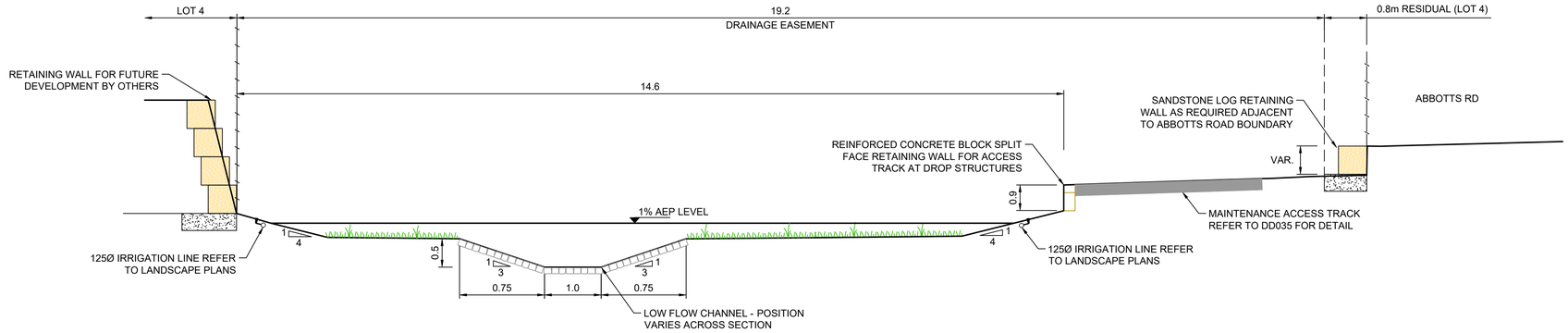
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CHANNEL LONGITUDINAL SECTIONS

PROJECT No: 110965-03
SHEET No: DD040

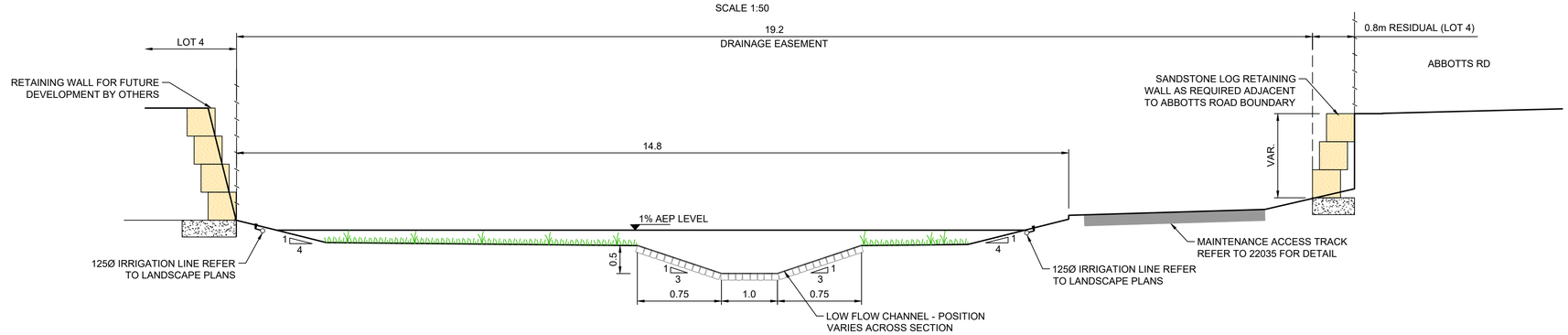
AZIMUTH: M.G.A. 2020
DATUM: A.H.D.
ORIGIN: SSM 1112
PLAN No: 110965-03-DD040
3

Plotted: 31 July , 2024 3:13:27 PM File Name: C:\SynergyWS\data\ASJWP07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD040.dwg



TYPICAL CROSS SECTION AT DROP STRUCTURE

SCALE 1:50



TYPICAL CROSS SECTION NOT AT DROP STRUCTURE

SCALE 1:50

DRAFT ISSUE ONLY

PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:50 (AT A1)
1:100 (AT A3)

1 0 1 2 3

METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	CHANNEL TYPICAL CROSS SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CHANNEL TYPICAL CROSS SECTIONS

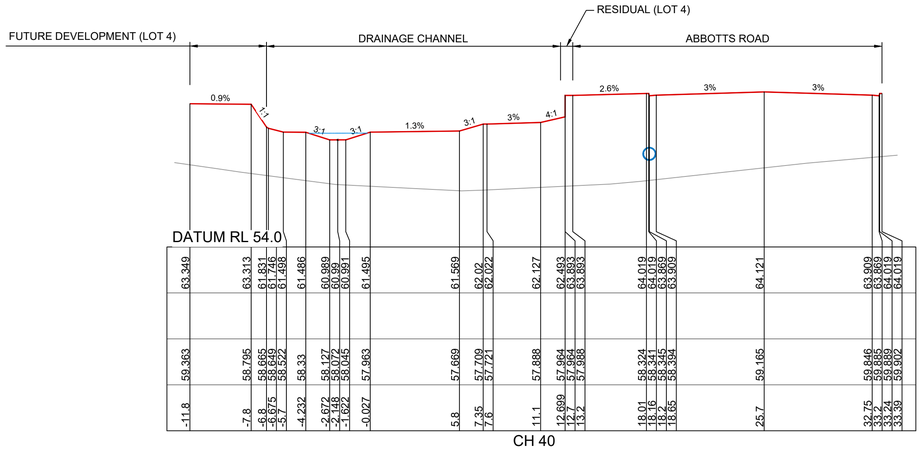
PROJECT No: 110965-03

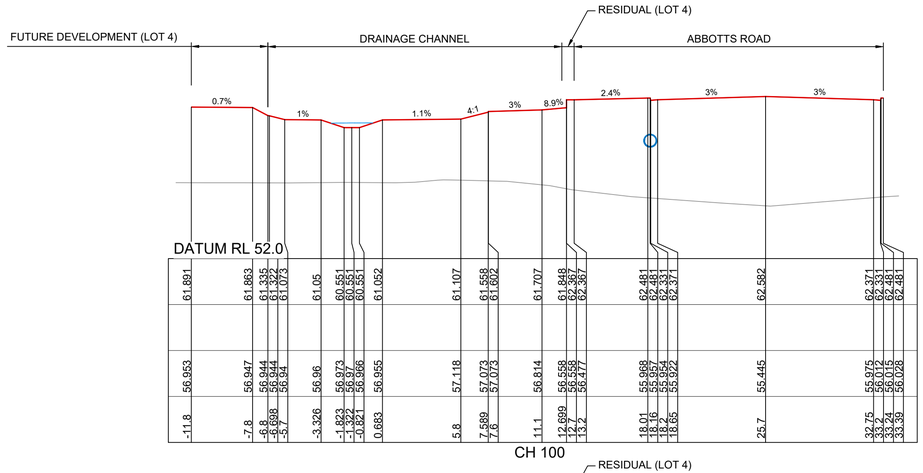
SHEET No: DD042

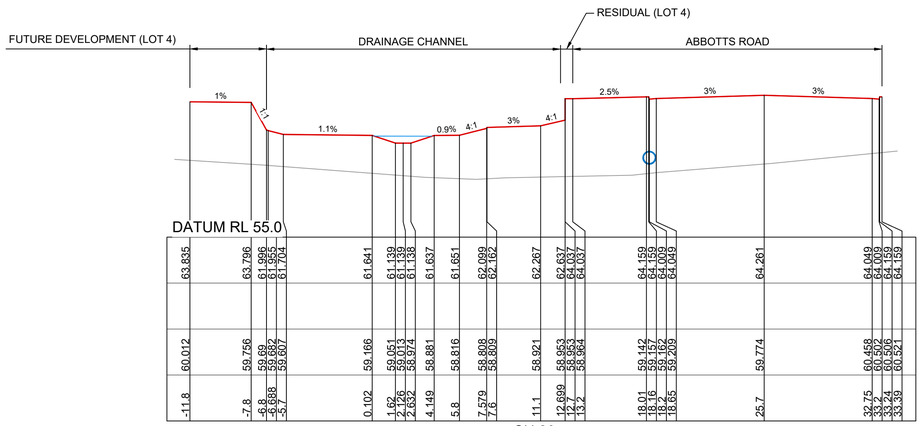
AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD042 | 3

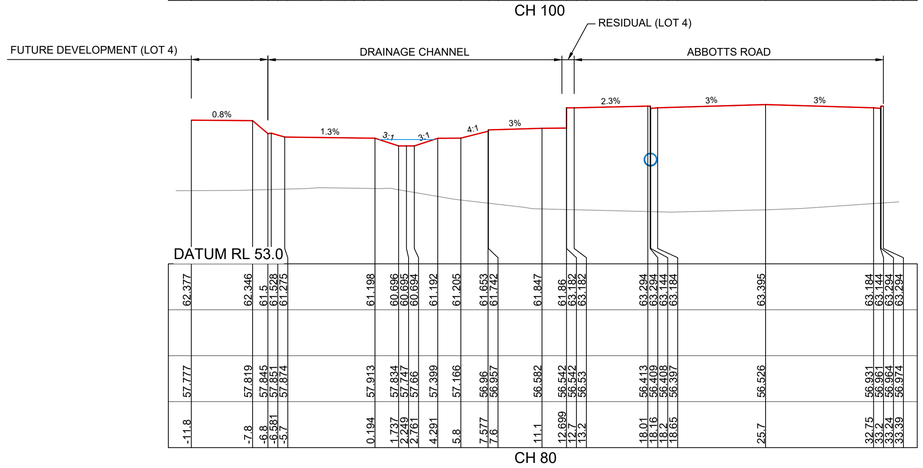
Plotted: 31 July, 2024 3:20:06 PM File Name: C:\Synergy\WS\data\ASJW\P07\110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD040.dwg

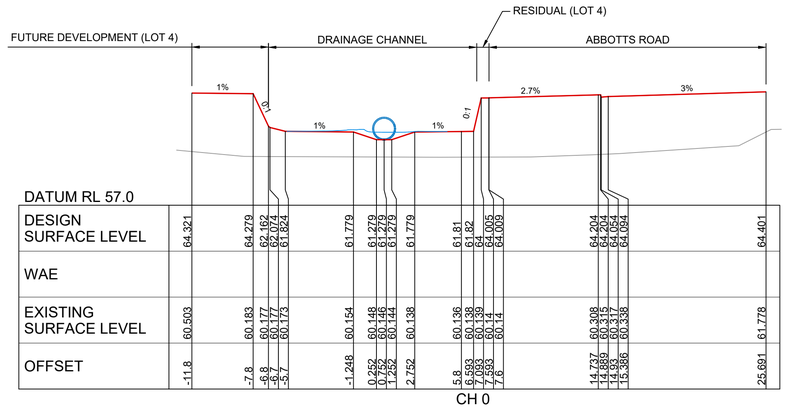
NOTE:
4EY HGL

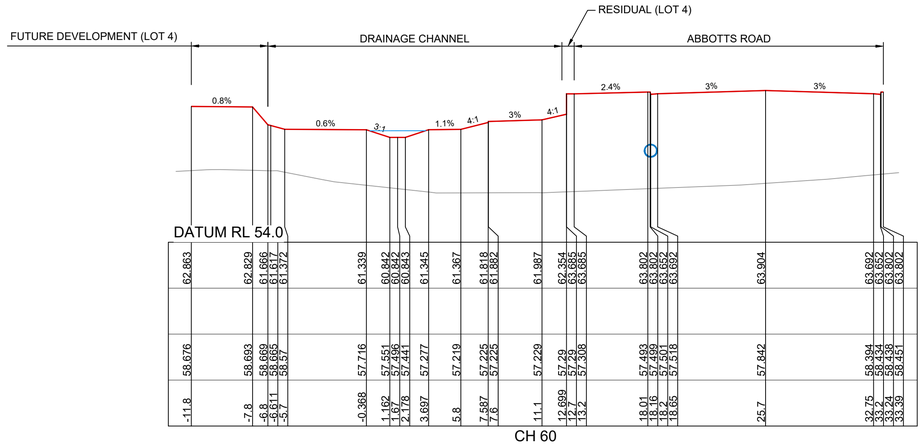












DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:200 (AT A1)
1:400 (AT A3)
4 2 0 4 8 12
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
	CROSS SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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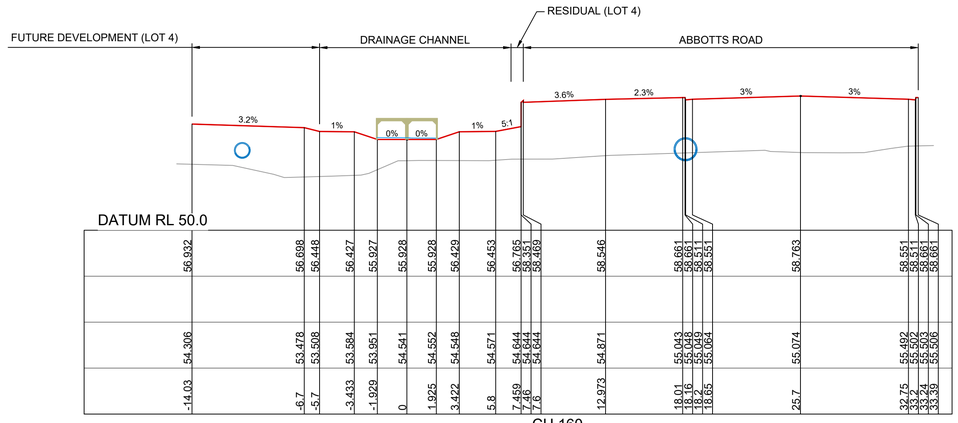
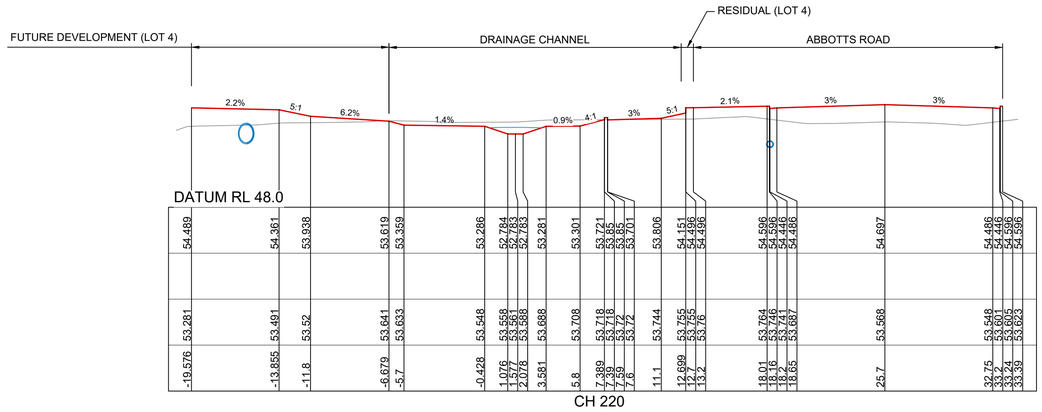
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CROSS SECTIONS
SHEET 1

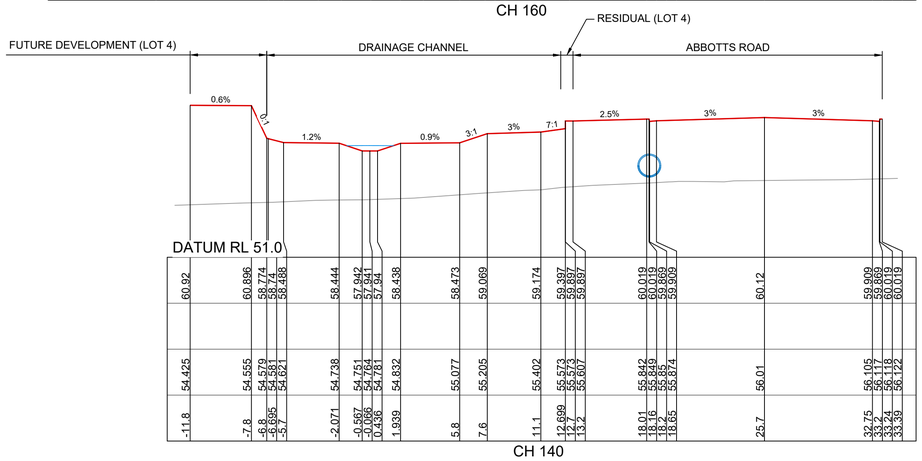
PROJECT No: 110965-03
SHEET No: DD050

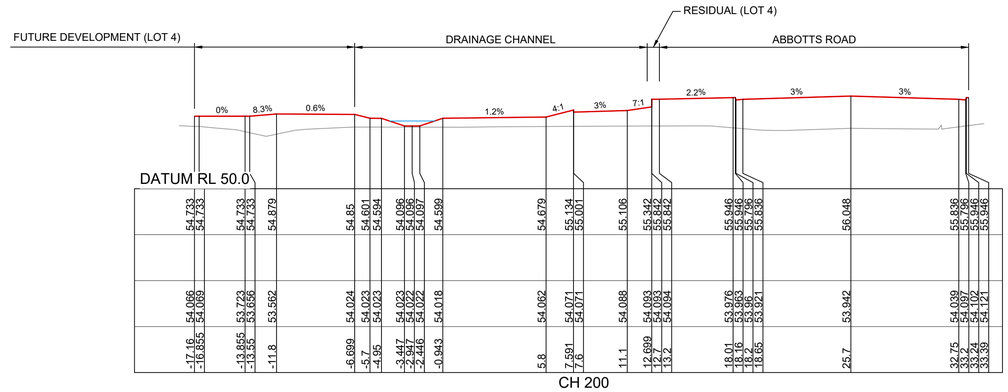
AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD050 | 3

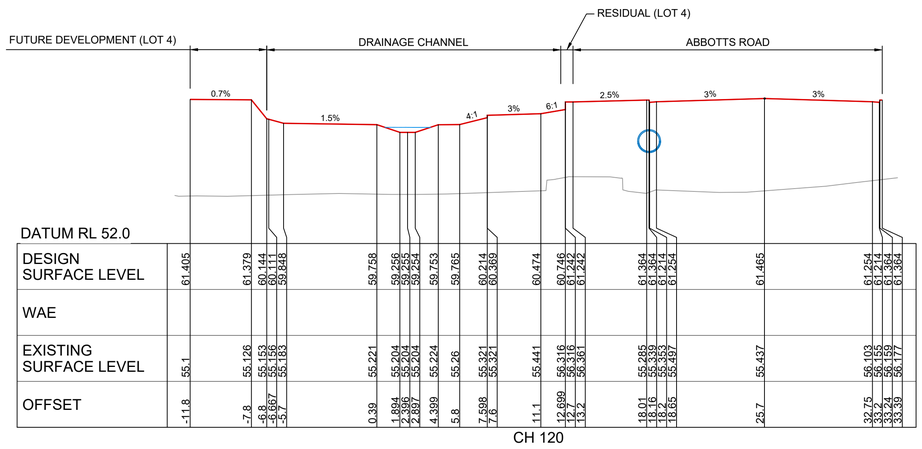
NOTE:
4EY HGL

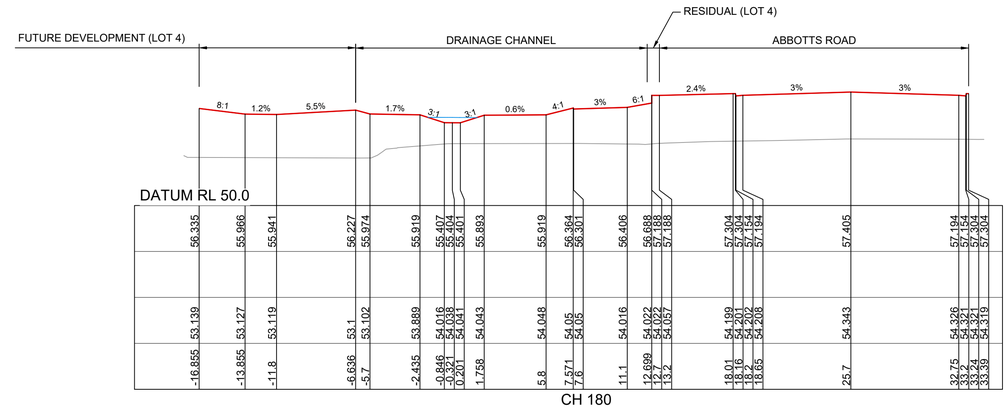












DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:200 (AT A1)
1:400 (AT A3)
10 2 0 10 20 30
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
	CROSS SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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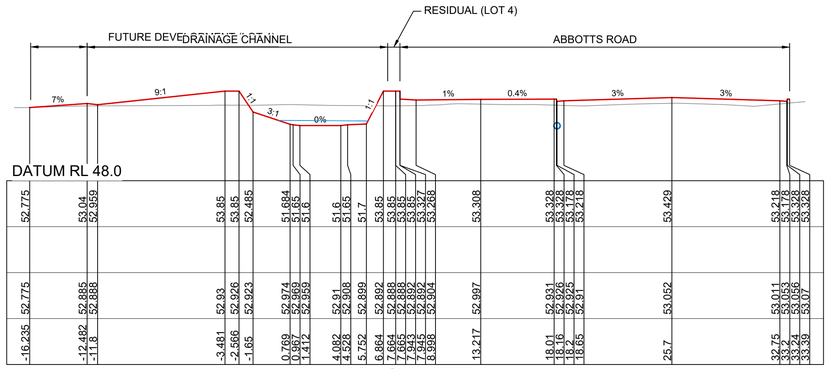
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CROSS SECTIONS
SHEET 2

PROJECT No: 110965-03
SHEET No: DD051

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD051 | 3



NOTE:
4EY HGL

52.775		52.775	-16.235
53.04		52.885	-12.482
52.959		52.888	-11.8
53.85		52.93	-3.481
53.85		52.926	-2.566
52.485		52.923	-1.65
51.684		52.974	0.769
51.65		52.969	0.967
51.6		52.959	1.412
51.6		52.91	4.082
51.65		52.908	4.528
51.7		52.899	5.752
53.85		52.892	6.864
53.85		52.888	7.664
53.85		52.888	7.665
53.85		52.892	7.943
53.327		52.892	7.945
53.268		52.904	8.998
53.308		52.997	13.217
53.328		52.931	18.01
53.328		52.926	18.16
53.178		52.925	18.2
53.218		52.91	18.65
53.429		53.052	25.7
53.218		53.011	32.75
53.178		53.053	33.2
53.328		53.056	33.24
53.328		53.07	33.39

CH 242.655

DESIGN SURFACE LEVEL	WAE	EXISTING SURFACE LEVEL	OFFSET
53.388		52.957	-13.286
53.214		52.963	-11.8
53.85		53.015	-7.553
53.85		53.024	-6.637
52.873		53.045	-5.722
51.715		53.058	-0.768
51.653		53.035	2.958
51.659		53.022	4.417
51.645		52.984	6.005
52.157		53.001	7.389
53.85		53.001	7.39
53.85		53.008	7.59
53.352		53.008	7.591
53.322		53.032	7.973
53.403		53.064	11.635
53.456		53.026	18.01
53.456		53.024	18.16
53.306		53.023	18.2
53.346		53.015	18.65
53.557		53.11	25.7
53.346		53.06	32.75
53.306		53.102	33.2
53.456		53.106	33.24
53.456		53.12	33.39

CH 240

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1:200 (AT A1)
1:400 (AT A3)
4 2 0 4 8 12
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
	CROSS SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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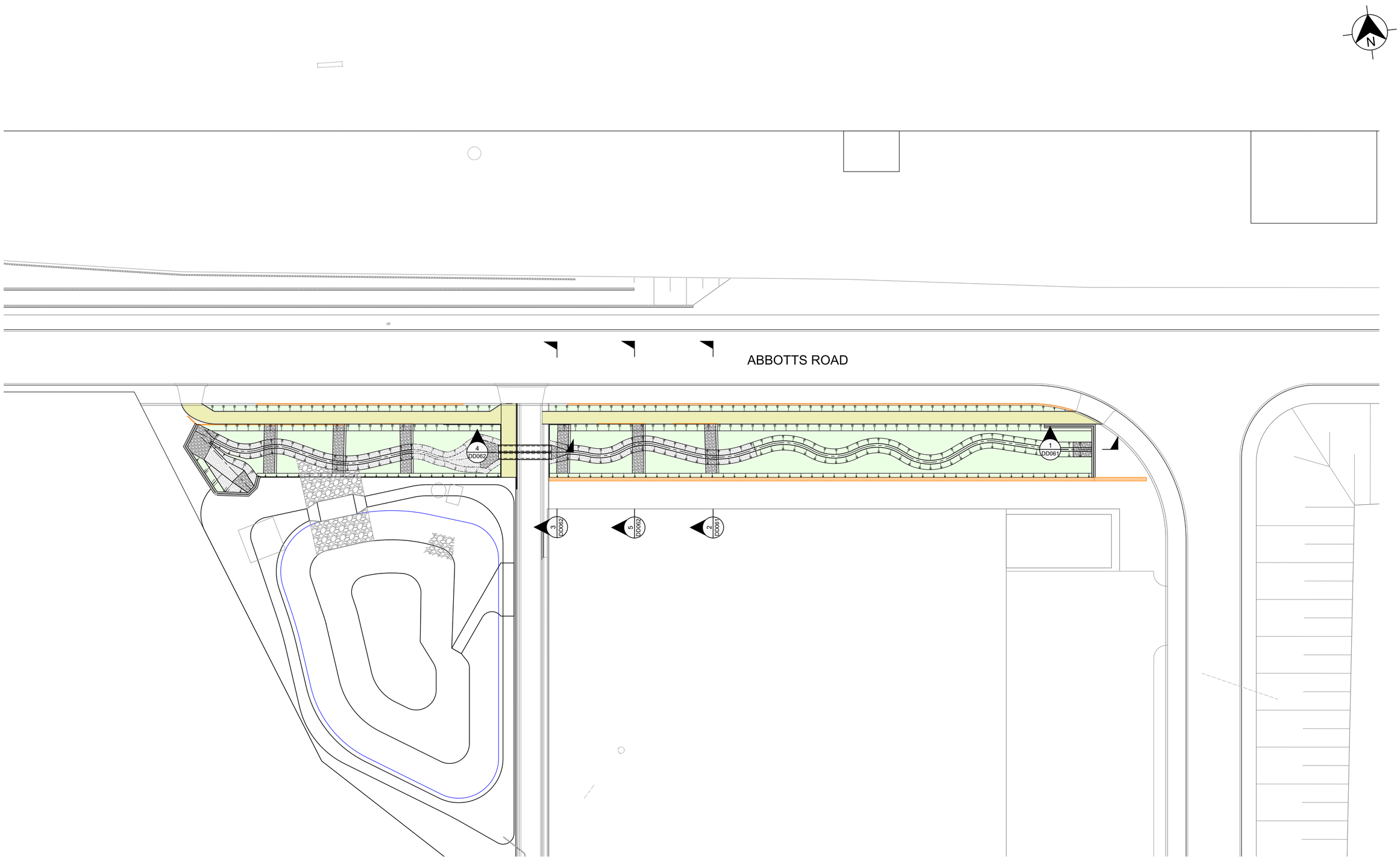
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
CROSS SECTIONS
SHEET 3

PROJECT No: 110965-03
SHEET No: DD052

AZIMUTH: M.G.A. 2020
DATUM: A.H.D.
ORIGIN: SSM 1112
PLAN No: 110965-03-DD052
3

Plotted: 1 August , 2024 10:40:25 AM File Name: C:\SynergyWS\data\ASJWP07\110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD050.dwg



DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
	PLAN UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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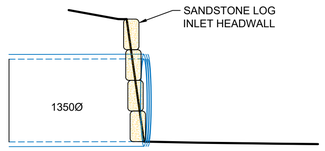
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SITE SECTIONS PLAN

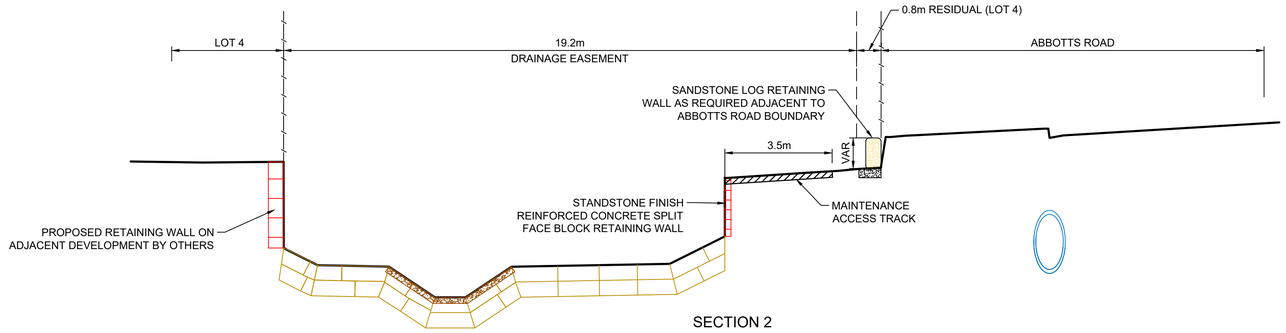
PROJECT No: 110965-03
SHEET No: DD060

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD060 | 3



SECTION 1

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:50



SECTION 2

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:50

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

V1:50 (AT A1)
V1:100 (AT A3)
1 0 1 2 3
METRES

H 1:100 (AT A1)
H 1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	SITE SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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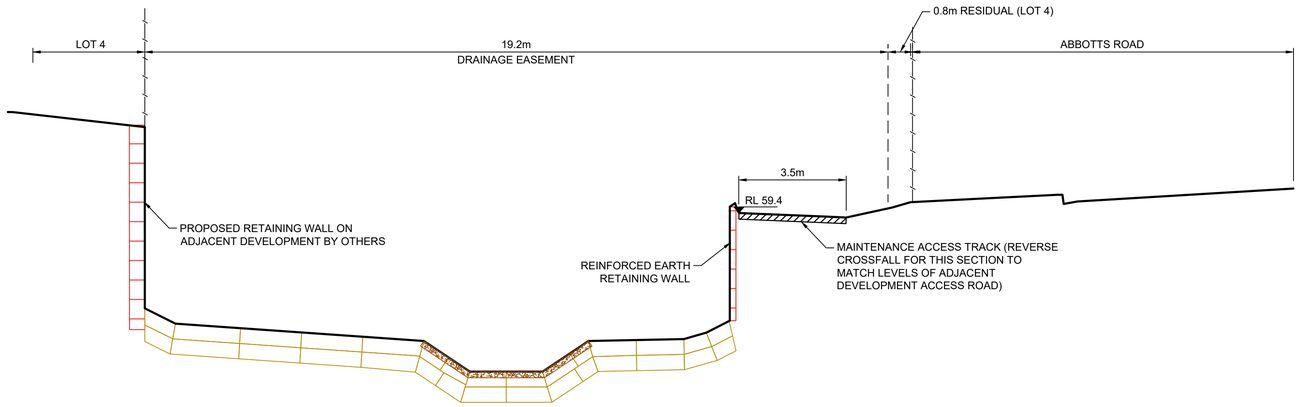
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SITE SECTIONS
SHEET 1

PROJECT No: 110965-03
SHEET No: DD061

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD061 | 3



SECTION 3

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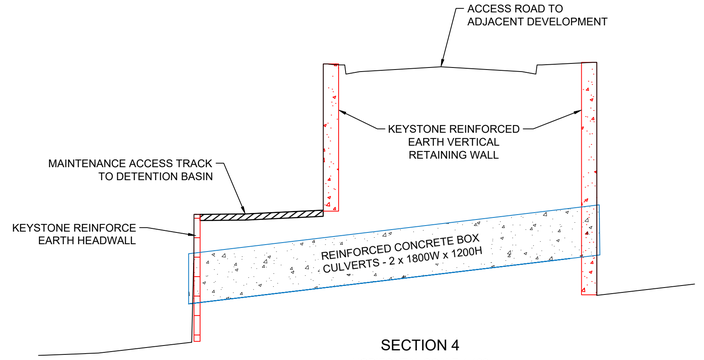
VERTICAL SCALE 1:50



SECTION 4

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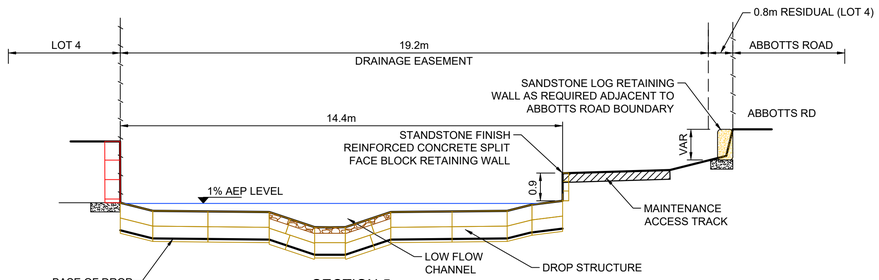

SECTION 5

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:50

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

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V1:100 (AT A3)
1 0 1 2 3
METRES

H 1:100 (AT A1)
H 1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
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	SITE SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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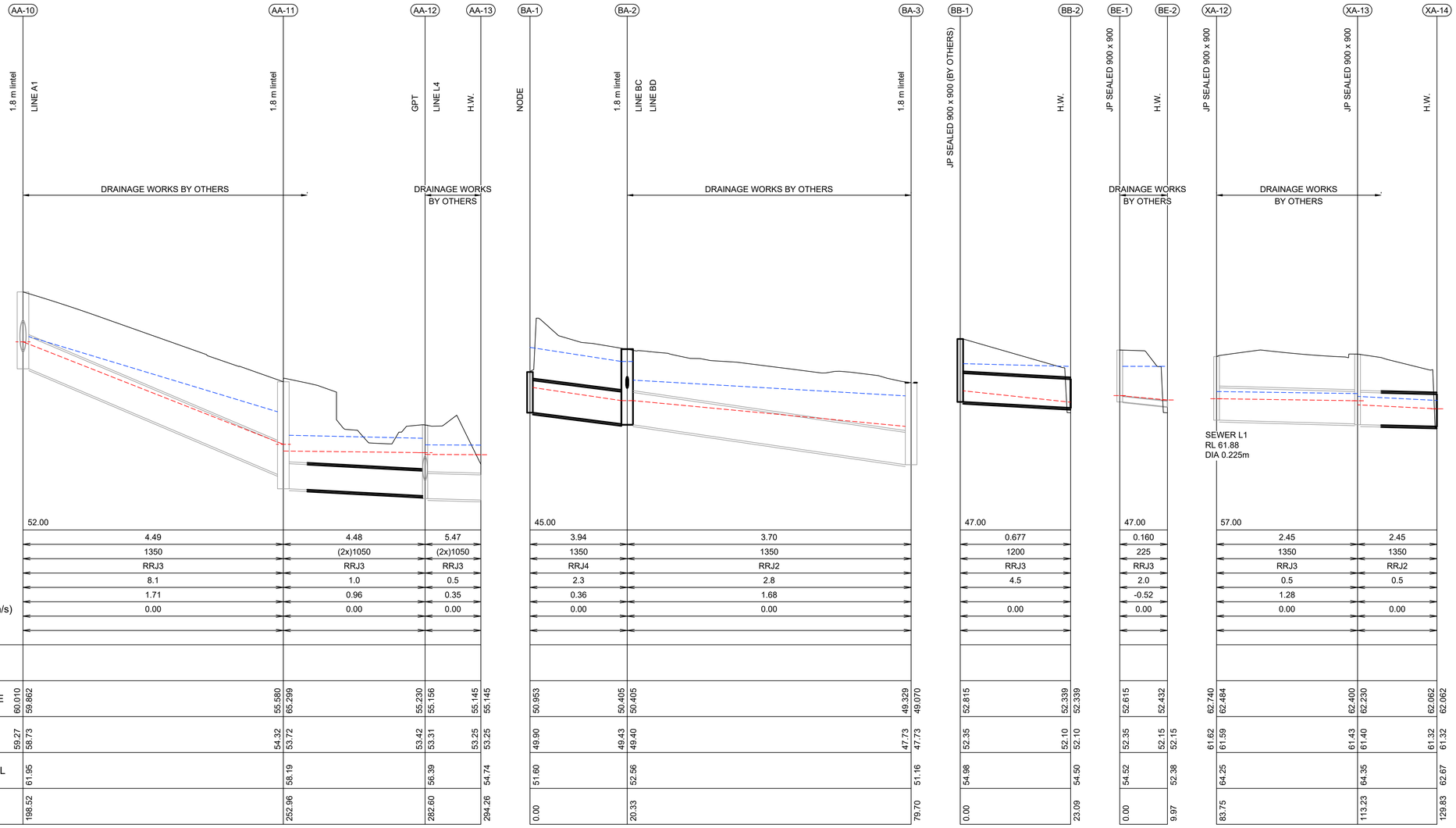
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SITE SECTIONS
SHEET 2

PROJECT No: 110965-03
SHEET No: DD062

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD062 | 3



DATUM (m)	52.00							
PEAK FLOW (m^3/s)	4.49	4.48	5.47					
PIPE SIZE (mm)	1350	(2x)1050	(2x)1050					
PIPE CLASS	RRJ3	RRJ3	RRJ3					
PIPE GRADE (%)	8.1	1.0	0.5					
PIPE COVER MINIMUM	1.71	0.96	0.35					
FULL PIPE VELOCITY (m/s)	0.00	0.00	0.00					
HGL GRADE (%)								
WAE								
HYDRAULIC GRADE LINE	60.010	59.862	55.580	65.299	55.230	55.156	55.145	55.145
INVERT LEVEL	59.27	58.73	54.32	53.72	53.42	53.31	53.25	53.25
DESIGN SURFACE LEVEL	61.95	58.19	56.39	54.74				
PIPE CHAINAGE	198.52	252.96	282.60	294.26				

LINE AA

DATUM (m)	45.00				
PEAK FLOW (m^3/s)	3.94	3.70			
PIPE SIZE (mm)	1350	1350			
PIPE CLASS	RRJ4	RRJ2			
PIPE GRADE (%)	2.3	2.8			
PIPE COVER MINIMUM	0.36	1.68			
FULL PIPE VELOCITY (m/s)	0.00	0.00			
HGL GRADE (%)					
WAE					
HYDRAULIC GRADE LINE	50.953	50.405	50.405	49.329	49.070
INVERT LEVEL	49.90	49.43	49.40	47.73	47.73
DESIGN SURFACE LEVEL	51.60	52.56	51.16		
PIPE CHAINAGE	0.00	20.33	79.70		

LINE BA

DATUM (m)	47.00		
PEAK FLOW (m^3/s)	0.677		
PIPE SIZE (mm)	1200		
PIPE CLASS	RRJ3		
PIPE GRADE (%)	4.5		
PIPE COVER MINIMUM			
FULL PIPE VELOCITY (m/s)	0.00		
HGL GRADE (%)			
WAE			
HYDRAULIC GRADE LINE	52.815	52.339	52.339
INVERT LEVEL	52.35	52.10	52.10
DESIGN SURFACE LEVEL	54.98	54.50	
PIPE CHAINAGE	0.00	23.09	

LINE BB

DATUM (m)	47.00		
PEAK FLOW (m^3/s)	0.160		
PIPE SIZE (mm)	225		
PIPE CLASS	RRJ3		
PIPE GRADE (%)	2.0		
PIPE COVER MINIMUM	-0.52		
FULL PIPE VELOCITY (m/s)	0.00		
HGL GRADE (%)			
WAE			
HYDRAULIC GRADE LINE	52.615	52.432	
INVERT LEVEL	52.35	52.15	52.15
DESIGN SURFACE LEVEL	54.52	52.38	
PIPE CHAINAGE	0.00	9.97	

LINE BE

DATUM (m)	57.00					
PEAK FLOW (m^3/s)	2.45	2.45				
PIPE SIZE (mm)	1350	1350				
PIPE CLASS	RRJ3	RRJ2				
PIPE GRADE (%)	0.5	0.5				
PIPE COVER MINIMUM	1.28					
FULL PIPE VELOCITY (m/s)	0.00	0.00				
HGL GRADE (%)						
WAE						
HYDRAULIC GRADE LINE	62.740	62.484	62.400	62.230	62.062	62.062
INVERT LEVEL	61.62	61.59	61.43	61.40	61.32	61.32
DESIGN SURFACE LEVEL	64.25	64.35	62.67			
PIPE CHAINAGE	83.75	113.23	129.83			

LINE XA

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NOTE:
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PROVIDED BY AT&L

V 1:100 (AT A1)
V 1:200 (AT A3)
2 1 0 1 2 3 4 5
METRES

H 1:500 (AT A1)
H 1:1000 (AT A3)
10 0 10 20 30
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
	DRAINAGE LONGITUDINAL SECTIONS UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23

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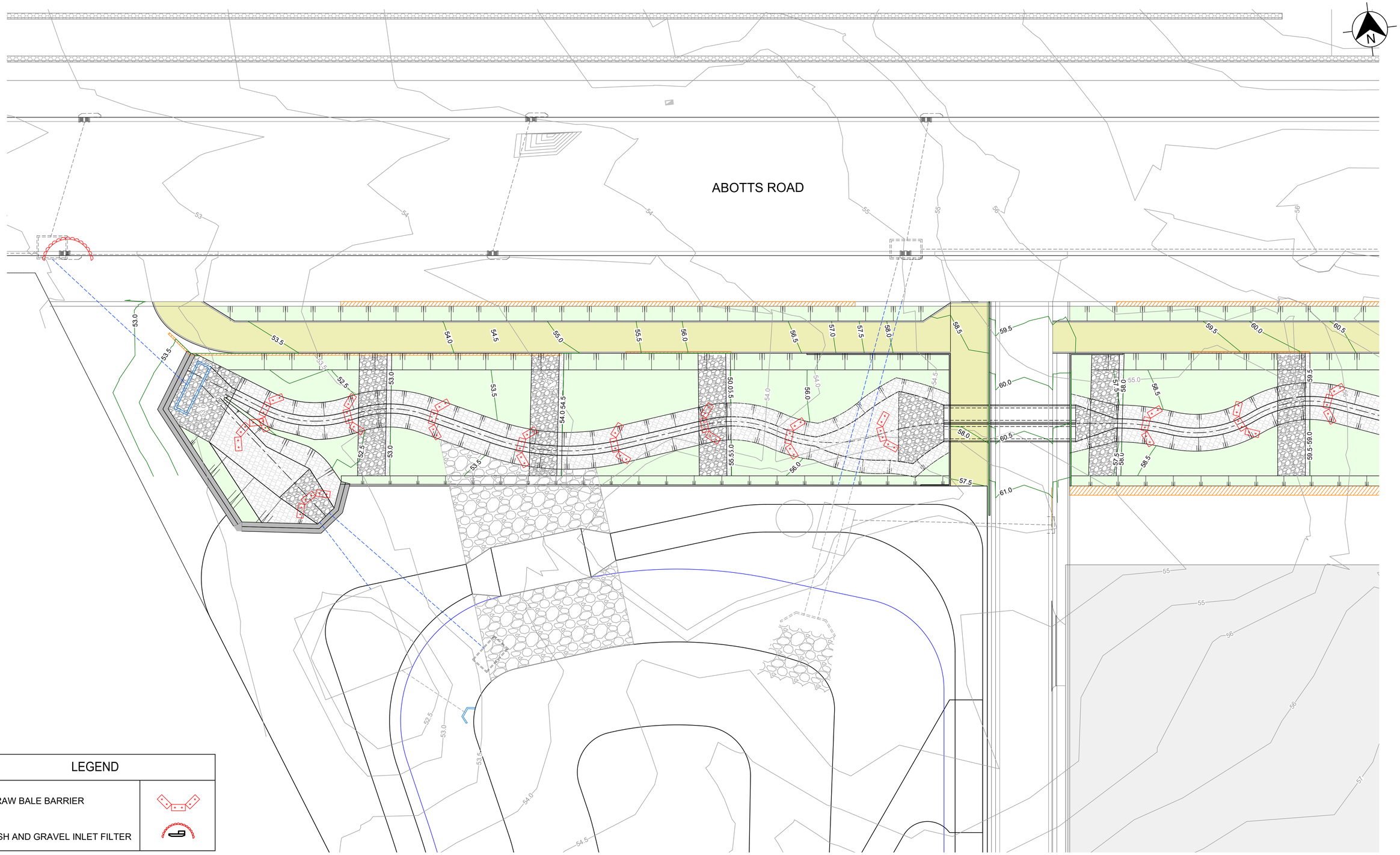
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
DRAINAGE LONGITUDINAL SECTIONS

AZIMUTH: M.G.A. 2020
DATUM: A.H.D.
ORIGIN: SSM 1112

PROJECT No: 110965-03
SHEET No: DD063
PLAN No: 110965-03-DD063
3

Plotted: 1 August , 2024 11:38:52 AM File Name: C:\SynergyWS\data\ASJWP07\110965.003 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD060.dwg



LEGEND	
STRAW BALE BARRIER	
MESH AND GRAVEL INLET FILTER	

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30
METRES

3	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
2	PLAN UPDATED	DA	NJ	PM	PM	23/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SOIL & WATER MANAGEMENT PLAN
SHEET 1

PROJECT No: 110965-03
SHEET No: DD070

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD070 | 3

Plotted: 31 July 2024 3:13:29 PM File Name: C:\SynergyWS\data\ASJWP07110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD070.dwg

ABOTTS ROAD

N

LEGEND	
STRAW BALE BARRIER	
MESH AND GRAVEL INLET FILTER	

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

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1:1000 (AT A3)

10 0 10 20 30
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SOIL & WATER MANAGEMENT PLAN
SHEET 2

PROJECT No: 110965-03
SHEET No: DD071

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD071 | 3

SOIL AND WATER MANAGEMENT NOTES

GENERAL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE " SOILS AND CONSTRUCTION - VOLUME 1, 4TH EDITION, MARCH 2004 ".

2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.

3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.

4. ALL TAIL-OUT DRAINS SHALL BE COUCH GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.

5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.

6. ROADS SHALL BE PAVED AS EARLY AS POSSIBLE AFTER FORMATION.

7. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.

8. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.

9. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.

10. THE SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND COUNCIL'S WRITTEN GUIDELINES FOR THE DEVELOPMENT OF LAND.

11. CONTRACTORS SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS SPECIFIED ON THE PLAN AND IN ACCORDANCE WITH THE GUIDELINES SHOWN IN "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" ("THE BLUE BOOK").

12. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.

13. THE SOIL EROSION HAZARD ON THE SITE IS TO BE KEPT AS LOW AS POSSIBLE AND GENERALLY IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

LAND USE	LIMITATION	COMMENTS
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN 5m (PREF 2m) FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON THESE PLANS	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES - WHERE APPROPRIATE THE CONSTRUCTION AREAS ARE TO BE IDENTIFIED WITH BARRIER FENCING (DOWNSLOPE) OR SIMILAR MATERIAL.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF 10m	THE SITE MANAGER SHALL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. THEY CAN VARY IN POSITION TO BEST CONSERVE THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS SHALL CLEARLY RECOGNISE THEIR BOUNDARIES. WHERE APPROPRIATE THE ACCESS AREAS ARE TO BE MARKED WITH BARRIER MESH, SEDIMENT FENCING OR SIMILAR MATERIALS.
REMAINING LANDS	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH	THINNING OF GROWTH MAY BE REQUIRED FOR FIRE HAZARD REDUCTION.

NOTE:
WORKS WITHIN WATERWAYS AND CREEKS SHALL BE RESTRICTED AS DIRECTED - ALL LANDS WITHIN CREEKS AND WATERWAYS SHALL HAVE A GROUNDCOVER MORE THAN 70%, USING MATERIALS THAT CAN CATER FOR CONCENTRATED FLOWS.

14. WORKS ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE. EACH SUBSEQUENT STAGE IS NOT TO COMMENCE UNTIL THE PREVIOUS ONE IS COMPLETE:-

    a. INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN AND TO DETAIL(SD) 6-8.
    b. CONSTRUCT STABILISED SITE ACCESS AS SHOWN ON THE PLAN AND TO DETAIL (SD) 6-14.
    c. CONSTRUCT LOW FLOW EARTH BANKS WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 5-5.
    d. PROVIDE TEMP. ACCESS TO THE SEDIMENT BASIN(S)AND PROTECT THIS WITH SEDIMENT FENCING (SD) 6-8 OR BARRIER FENCING AND EARTH BANKS (SD) 5-5.
    e. PLACE SEDIMENT FENCING (SD) 6-8 DOWNSLOPE OF LANDS TO BE DISTURBED FOR CONSTRUCTION OF THE SEDIMENT BASINS.
    f. CONSTRUCT SEDIMENT BASIN(S) GENERALLY IN ACCORDANCE WITH (SD) 6-4
    g. STABILISE LAND SURFACES DISTURBED BY CONSTRUCTION OF THE SEDIMENT BASIN(S) AS SOON AS FINAL LEVELS ARE ESTABLISHED
    h. CLEAR THE SITE AND STRIP AND STOCKPILE THE TOPSOIL IN THE LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT TO DETAIL (SD) 4-1.
    i. UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS.
    j. GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 14 DAYS OF COMPLETION OF CONSTRUCTION WORKS.
    k. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.

15. CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE

16. EARTH BATTERS SHALL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER THAN:-

    a. 2(h) - 1(v) WHERE SLOPE LENGTH IS LESS THAN 7m
    b. 2.5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 7m AND 10m
    c. 3(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 10m AND 12m
    d. 4(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 12m AND 18m
    e. 5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 18m AND 27m
    f. 6(h) - 1(v) WHERE SLOPE LENGTH IS GREATER THAN 27m

    SLOPE LENGTHS CAN BE SHORTENED BY USING LOW FLOW EARTH BANKS AS CATCH DRAINS ABOVE THE EARTH BATTER AREA.

17. PROTECTION FROM EROSIVE FORCES SHALL BE UNDERTAKEN ON ALL LANDS. GROUND COVER TO BE IN PLACE WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY ANY CONCENTRATED FLOWS.

18. TEMPORARY GROUND COVER SHOULD BE MINIMUM 70%. FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS.

19. WHERE POSSIBLE THE CONSTRUCTION PROGRAM IS TO SCHEDULE WORKS SUCH THAT LAND DISTURBANCE ACTIVITIES ARE COMPLETED IN LESS THAN 6 MONTHS. REVEGETATION WORKS MUST BE CARRIED OUT AS STIPULATED IN THE RELEVANT COUNCIL GUIDELINES / SPECIFICATIONS SUCH THAT A SATISFACTORY GROUND COVER IS PROVIDED TO AT LEAST 60% OF THE DISTURBED AREA WITHIN 10 DAYS AND AT LEAST 70% OF THE DISTURBED AREA WITHIN A FURTHER 60 DAYS..

20. SEDIMENT FENCES (SD) 6-8 SHALL:-

    a. BE INSTALLED WHERE SHOWN ON THE PLAN AND AS DIRECTED AT THE DISCRETION OF THE SITE SUPERINTENDENT DURING THE COURSE OF CONSTRUCTION TO CONTAIN THE COARSER SEDIMENT FRACTIONS AS NEAR AS POSSIBLE TO THEIR SOURCE.
    b. HAVE A CATCHMENT AREA NOT EXCEEDING 720sq.m, AND A STORAGE DEPTH OF AT LEAST 0.6m.
    c. PROVIDE AN UPSLOPE RETURN OF 1m AT INTERVALS ALONG THE FENCE WHERE THE CATCHMENT AREA EXCEEDS 720sq.m. TO LIMIT THE DISCHARGE REACHING EACH SECTION TO 50litres/sec IN A MAX. 10yr Tc DISCHARGE.

21. STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.

22. DURING WINDY WEATHER LARGE UNPROTECTED AREAS ARE TO BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. IN THE EVENT WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES SOIL BINDERS AND/OR DUST RETARDANTS SHALL BE USED OR THE SURFACE SHALL BE LEFT IN A CLODDY STATE THAT RESISTS REMOVAL BY WIND.

23. STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.

24. THE SEDIMENT RETENTION BASINS (SD) 6-4 SHALL:-

    a. BE CONSTRUCTED WHERE SHOWN ON THE PLANS.
    b. BE FLOCCULATED (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) BEFORE DISCHARGE OCCURS (UNLESS THE DESIGN STORM EVENT IS EXCEEDED)
    c. HAVE ONE OR MORE PEGS PLACED ON THE FLOOR TO CLEARLY INDICATE THE LEVEL AT WHICH DESIGN CAPACITY OCCURS AND WHEN SEDIMENT SHALL BE REMOVED.

25. STORED CONTENTS OF THE BASINS SHALL BE TREATED WITH GYPSUM (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) OR OTHER FLOCCULATING AGENTS WHERE THEY CONTAIN MORE THAN 50mg/litre OF SUSPENDED SOLIDS. TREATMENT SHALL BE AS FOLLOWS:-

    a. LOWER SUSPENDED SOLIDS TO LESS THAN 50mg/litre WITHIN 24hrs OF FILLING
    b. THE BASINS SHALL THEN BE ALLOWED TO STAND 36 TO 48hrs FOR FLOCCULATED PARTICLES TO SETTLE
    c. THE BASINS SHALL THEN BE DRAINED SO THAT FULL STORAGE CAPACITY IS REGAINED WITHOUT DISCHARGING SEDIMENT FROM THE SITE.

26. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE SHALL BE DISPOSED IN LOCATIONS WHERE FURTHER EROSION AND CONSEQUENT POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHALL NOT OCCUR.

27. WATER SHALL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE (ie THE CATCHMENT HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE) NEVERTHELESS STORMWATER INLETS SHALL BE PROTECTED (SD) 6-11 & 6-12.

28. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.

29. ACCEPTABLE BINS SHALL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES SHALL BE PROVIDED AT LEAST ONCE A WEEK.

STOCKPILE NOTES:

1. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.

2. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.

3. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATED.

SEDIMENTATION CONTROL DEVICES:

1. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCKED ON THE BALE CENTRELINE.

2. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2.5m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG IT'S LOWER EDGE.

3. PROVIDE STRIP OF TURF MIN. 300mm WIDE BEHIND KERB + 1m WIDE AROUND ALL SURFACE INLET PITS

SITE INSPECTION AND MAINTENANCE:

1. A SELF-AUDITING PROGRAM SHALL BE ESTABLISHED BASED ON A INSPECTION TEST PLAN (ITP) OR LOG BOOK. A SITE INSPECTION USING THE ITP SHALL BE MADE BY THE SITE MANAGER-:

    a. AT LEAST WEEKLY
    b. IMMEDIATELY BEFORE SITE CLOSURE
    c. IMMEDIATELY FOLLOWING RAINFALL EVENTS IN EXCESS OF 5mm IN ANY 24hr PERIOD.

    THE SELF AUDIT SHALL INCLUDE:-

    a. RECORDING THE CONDITION OF EVERY 'BEST MANAGEMENT PRACTICE' EMPLOYED
    b. RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH 'BEST MANAGEMENT PRACTICE'
    c. RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS WHERE APPLICABLE
    d. RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
    e. FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER FOR THEIR INFORMATION.

2. IN ADDITION A SUITABLY QUALIFIED PERSON SHALL BE RESPONSIBLE FOR OVERSEEING THE INSTALLATION AND MAINTENANCE OF ALL SOIL AND WATER MANAGEMENT WORKS ON THE SITE. THE PERSON SHALL BE REQUIRED TO SPEND A MINIMUM OF:-

    a. 2hrs ONSITE EACH FORTNIGHT UP UNTIL COMPLETION OF ROAD AND DRAINAGE WORKS AND/OR THE COMMISSIONING OF SEDIMENT BASIN(S)/WATER QUALITY CONTROL FACILITIES, AND DURING THE DECOMMISSIONING OF SAME AND/OR FINAL SITE STABILISATION. TO PROVIDE A SHORT MONTHLY WRITTEN REPORT.
    b. ONE HOUR ONSITE EACH 2 MONTHS DURING THAT PHASE WHERE THE DEVELOPERS RESPONSIBILITIES ARE LIMITED TO MAINTENANCE OF THE SDS DEVICES AND/OR SEDIMENT BASINS (ie DURING THE STAGE WHEN BUILDING WORKS CAN BE UNDERTAKEN) TO PROVIDE A SHORT WRITTEN REPORT EACH 4 MONTHS

    THE RESPONSIBLE PERSON SHALL ENSURE THAT:-

    a. THIS PLAN IS BEING IMPLEMENTED CORRECTLY
    b. REPAIRS ARE BEING UNDERTAKEN AS REQUIRED
    c. ESSENTIAL MODIFICATIONS TO THIS PLAN ARE BEING MADE IF AND WHEN NECESSARY. EACH REPORT SHALL CERTIFY THAT WORKS HAVE BEEN CARRIED OUT ACCORDING TO THE APPROVED PLANS.

3. WASTE BINS SHALL BE EMPTIED AS NECESSARY, DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT

4. PROPER DRAINAGE OF THE SITE SHALL BE MAINTAINED. DRAINS (INCLUDING INLET AND OUTLET WORKS) SHALL BE CHECKED TO ENSURE THAT THEY ARE OPERATING AS INTENDED,ESPECIALLY THAT:-

    a. NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT.
    b. AREAS OF EROSION ARE REPAIRED (e.g LINED WITH SUITABLE MATERIAL) AND/OR VELOCITY OF FLOW IS REDUCED APPROPRIATELY THROUGH CONSTRUCTION OF SMALL CHECK DAMS OR INSTALLING ADDITIONAL DIVERSIONS UPSLOPE
    c. BLOCKAGES ARE CLEARED (THESE MIGHT OCCUR BECAUSE OF SEDIMENT POLLUTION, SAND/SOIL/SPOIL BEING DEPOSITED IN OR TOO CLOSE TO THEM, BREACHED BY VEHICLE WHEELS etc)

5. SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 2m FROM HAZARD AREAS SHALL BE REMOVED SUCH HAZARD AREAS INCLUDE ANY AREAS OF HIGH VELOCITY WATER FLOWS (eg WATERWAYS AND GUTTERS) PAVED AREAS AND DRIVEWAYS.

6. RECENTLY STABILISED LANDS SHALL BE CHECKED TO ENSURE THAT THE EROSION HAZARD HAS BEEN EFFECTIVELY REDUCED. ANY REPAIRS SHALL BE INITIATED AS APPROPRIATE.

7. EXCESSIVE VEGETATIVE GROWTH SHALL BE CONTROLLED THROUGH MOWING OR SLASHING.

8. ALL SEDIMENT DETENTION SYSTEMS SHALL BE KEPT IN GOOD WORKING CONDITION. IN PARTICULAR ATTENTION SHALL BE GIVEN TO:-

    a. RECENT WORKS TO ENSURE THAT THEY HAVE NOT RESULTED IN DIVERSION OF SEDIMENT LADEN WATER AWAY FROM THEM.
    b. DEGRADABLE PRODUCTS TO ENSURE THAT THEY ARE REPLACED AS REQUIRED
    c. SEDIMENT REMOVAL TO ENSURE THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE.

9. ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS SHALL BE CONSTRUCTED AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS (ie MAKE ONGOING CHANGES TO THIS PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECTED TO CHANGES IN CONDITIONS AT THE WORKS SITE OR ELSEWHERE IN THE CATCHMENT.

10. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORKS ACTIVITIES ARE COMPLETED AND THE SITE STABILISED.

11. WATERS IN SEDIMENT RETENTION BASIN(S) THAT OCCUPY MORE THAN 1/4 OF THE DESIGN CAPACITY DURING THAT STAGE OF THE WORKS UP UNTIL COMMISSIONING OF THE BASIN(s) SHALL BE:-

    a. TREATED WITH A FLOCCULATING AGENT (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.)
    b. DISCHARGED WITHIN 5 days FROM THE CONCLUSION OF ANY STORM EVENT LARGE ENOUGH TO FILL THE BASIN TO THAT LEVEL.

12. LITTER, DEBRIS AND COARSE SEDIMENT SHALL BE REMOVED FROM THE GROSS POLLUTANT TRAPS AND TRASH RACKS AS REQUIRED.

DRAFT ISSUE ONLY
PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30
METRES

2	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
1	ISSUE FOR INFORMATION	DG	NDW			07/07/23
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
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CLIENT: ESR

STATUS: ADVANCE COPY
DESIGN SUBJECT TO CHANGE
NOT FOR CONSTRUCTION
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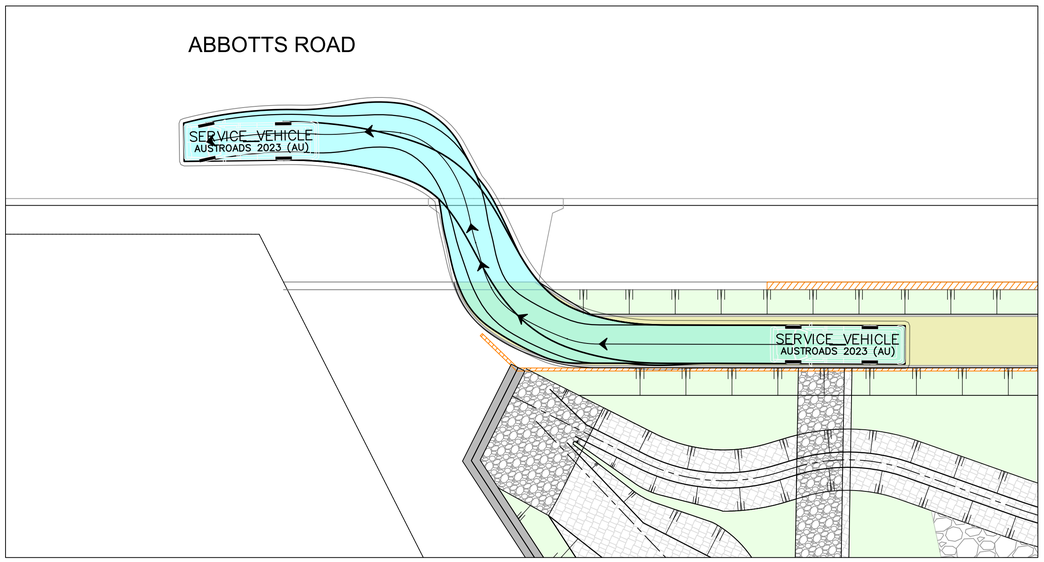
WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
SOIL & WATER MANAGEMENT NOTES

PROJECT No: 110965-03
SHEET No: DD072

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD072 | 2

Plotted: 31 July , 2024 3:13:29 PM File Name: C:\SynergyWS\data\ASJWP\07110965 - 03 - Stage 1 Stormwater Design_13833\Design\DD\110965-03-DD070.dwg



PLAN - LAYOUT 1

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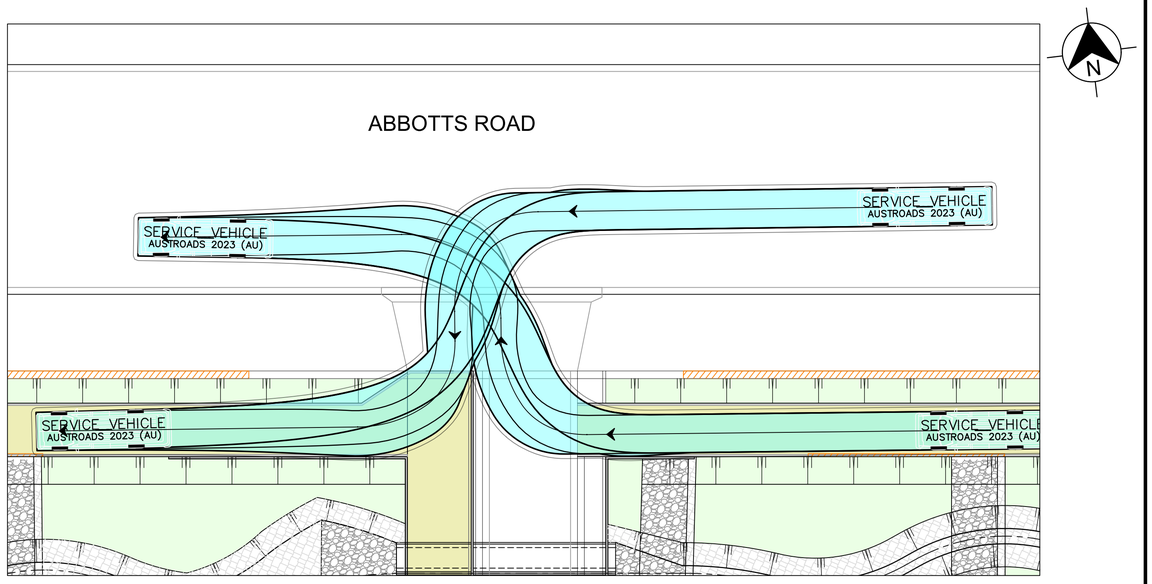

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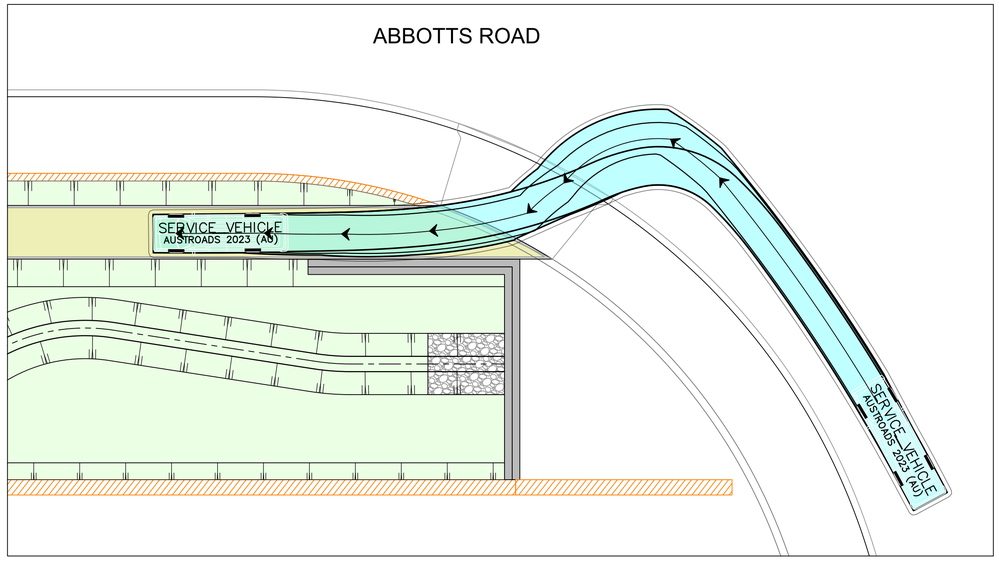

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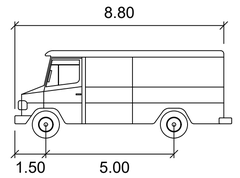

SERVICE VEHICLE

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Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DRAFT ISSUE ONLY

PRELIMINARY DESIGNS SUBJECT TO CHANGE

1:200 (AT A1)
1:400 (AT A3)

4 2 0 4 8 12

METRES

2	ISSUE FOR SYDNEY WATER REVIEW	DG	NJ	DG	PM	31/07/24
1	ISSUE FOR INFORMATION	DA	NJ	PM	PM	23/07/24
	AMENDMENT	DES	DRN	CKD	APR	DATE

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CLIENT: ESR

STATUS:

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WESTLINK - ABBOTTS ROAD, KEMPS CREEK
STAGE 1 DRAINAGE CHANNEL WORKS
TURNING PATH PLANS

PROJECT No: 110965-03

SHEET No: DD080

AZIMUTH: M.G.A. 2020 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 110965-03-DD080 | 2

Appendix G
CONDITIONS OF CONSENT

Development Consent

Section 4.38 of the Environmental Planning and Assessment Act 1979

As delegate of the Minister for Planning and Public Spaces under delegation executed on 9 March 2022, I approve the Development Application referred to in Schedule 1, subject to the conditions specified in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development

Director
Industry Assessments

Sydney 21 April 2023

The Department has prepared a consolidated version of the consent which is intended to include all modifications to the original determination instrument.

The consolidated version of the consent has been prepared by the Department with all due care. This consolidated version is intended to aid the consent holder by combining all consents relating to the original determination instrument but it does not relieve a consent holder of its obligation to be aware of and fully comply with all consent obligations as they are set out in the legal instruments, including the original determination instrument and all subsequent modification instruments.

CONSOLIDATED CONSENT

SCHEDULE 1

Application Number:	SSD-9138102
Applicant:	ESR Developments (Australia) Pty Ltd
Consent Authority:	Minister for Planning and Public Spaces
Site:	Lots 111, 112, 113, 114 and 115 DP 1296469 and Lot 10 DP 1296455, Mamre Road / Abbotts Road intersection, Abbotts Road and Aldington Road
Development:	Construction of the first stage of an industrial estate including bulk earthworks, subdivision, construction, fit out and operation of two warehouse buildings and ancillary office space with a total gross floor area of 81,417m^2, landscaping, construction of estate roads and external road upgrades, site servicing and stormwater infrastructure.

CONSOLIDATED CONSENT

SUMMARY OF MODIFICATIONS

Application Number	Determination Date	Decider	Modification Description
SSD-9138102-Mod-4	9 April 2024	Team Leader	Minor amendments to the design and layout of Warehouse 1
SSD-9138102-Mod-5	7 June 2024	Director	Construction of external road works including upgrade of the Mamre Road / Abbotts Road intersection, widening of Abbotts Road and widening a section of Aldington Road

TABLE OF CONTENTS

DEFINITIONS

ADR	Amended Development Report titled *SSD-9138102: Westlink Stage 1 Amendment Report*, prepared by Ethos Urban and dated 21 October 2022 (version D) and 6 December 2022 (version RFI A)
Additional Information	Additional information provided by the Applicant titled *Response to request for further information*, prepared by Ethos Urban and dated 14 February 2023
Applicant	ESR Developments (Australia) Pty Ltd, or any person carrying out any development to which this consent applies
BCA	Building Code of Australia
BC Act	*Biodiversity Conservation Act 2016*
Carrier	Operator of a telecommunication network and/ or associated infrastructure, as defined in section 7 of the *Telecommunications Act 1997* (Cth)
Certifier	A council or an accredited certifier (including principal certifiers) who is authorised under section 6.5 of the EP&A Act to issue Part 6 certificates
CEMP	Construction Environmental Management Plan
Conditions of this consent	Conditions contained in Schedule 2 of this document
Construction	Construction of buildings, hardstands, offices, roads, stormwater infrastructure and landscaping
Council	Penrith City Council
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Department	NSW Department of Planning and Environment
Development	The development described in Schedule 1, the EIS, RTS, ADR and Additional Information, including bulk earthworks, subdivision, construction and fit out of two warehouse buildings and ancillary office space, landscaping, construction of estate roads and external road upgrades, site servicing and stormwater infrastructure, as modified by the conditions of this consent
Development layout	The plans at Appendix 1 of this consent
DPE	Department of Planning and Environment
Earthworks	Bulk earthworks, clearing, site levelling, import and compaction of fill material, excavation for installation of drainage and services, to prepare the site for construction
EHG	Environment and Heritage Group of the Department
EIS	The Environmental Impact Statement titled *290-308 Aldington Road, 59-62 Abbotts Road & 63 Abbotts Road, Kemps Creek, Westlink Industrial Estate, SSD-9138102*, prepared by Ethos Urban dated 17 June 2021, submitted with the application for consent for the development
ENM	Excavated Natural Material
Environment	As defined in section 1.4 of the EP&A Act
Environmental Representative Protocol	The document of the same title published by the Department.
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
External Road Works	The upgrade of: • Mamre Road / Abbotts Road Intersection Works as shown on the plans in Appendix 7 and including installation of interim traffic signals

	• Abbotts Road and Aldington Road Widening Works as shown on the plans in Appendix 7
Fibre-ready facility	As defined in section 372W of the *Telecommunications Act 1997* (Cth)
Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement
Heritage item	An item as defined under the *Heritage Act 1977,* and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the *National Parks and Wildlife Act 1974'*, the World Heritage List, or the National Heritage List or Commonwealth Heritage List under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), or anything identified as a heritage item under the conditions of this consent
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance Note: "material harm" is defined in this consent
IWCM	Integrated Water Cycle Management
Land	Has the same meaning as the definition of the term in section 1.4 of the EP&A Act
MRP	Mamre Road Precinct
MRP DCP	Mamre Road Precinct Development Control Plan 2021
Material harm	Is harm that: a) involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)
Minister	NSW Minister for Planning and Public Spaces (or delegate)
Mitigation	Activities associated with reducing the impacts of the development prior to or during those impacts occurring
Modification Assessments	The documents assessing the environmental impact of proposed modification of this consent and any other information submitted with the following modification application made under the EP&A Act: a) Section 4.55(1A) Modification Report, Modification 3, 1030-1048 & 1050-1064 Mamre Road, 59-62 & 63 Abbotts Road and 290-308 Aldington Road, Kemps Creek' prepared by Ethos Urban dated 9 November 2023. b) Section 4.55(1A) Modification Report, Modification 5, 1030-1048 & 1050-1064 Mamre Road, 59-62 & 63 Abbotts Road and 290-308 Aldington Road, Kemps Creek prepared by Ethos Urban dated 21 March 2024 and Response to Submissions prepared by ESR dated 21 May 2024
NCC	National Construction Code
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
NRAR	Natural Resources Access Regulator, DPE
OEMP	Operational Environmental Management Plan
Operation	The use of warehouse buildings for storage or distribution of goods upon completion of construction, as described in the EIS, RTS and ADR
PA	Means a planning agreement within the meaning of the term in section 7.4 of the EP&A Act
Principal Certifier	The certifier appointed as the principal certifier for the building work under section 6.6(1) of the EP&A Act or for the subdivision work under section 6.12(1) of the EP&A Act
Planning Secretary	Secretary of the Department, or delegate
POEO Act	*Protection of the Environment Operations Act 1997*

Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
Regional Stormwater Authority	Sydney Water Corporation
Registered Aboriginal Parties	Means the Aboriginal persons identified in accordance with the document entitled "*Aboriginal cultural heritage consultation requirements for proponents 2010*" (DECCW)
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Response to Submissions (RTS)	The Applicant's response to issues raised in submissions received in relation to the application for consent for the development under the EP&A Act and includes the document titled *Submissions and Amendment Report, 290-308 Aldington Road, 59-62 Abbotts Road and 63 Abbotts Road, Kemps Creek, Westlink Industrial Estate*, prepared by Ethos Urban and dated 26 April 2022
Sensitive receivers	A location where people are likely to work, occupy or reside, including a dwelling, school, hospital, office or public recreational area
Site	The land defined in Schedule 1
Stage 1 Abbotts Road Widening Works	Constructing temporary pavement on the southern side of Abbotts Road and western side of Aldington Road and temporary safety barriers, as shown on the plan 'AARU Civil Works Staging Drawing Stage 01 Abbotts Rd SP2_3 (Nov 2023)' prepared by Robson Civil
Stormwater Scheme	Regional stormwater infrastructure as shown on the MRP Stormwater Scheme Plan, December 2022 prepared by Sydney Water
TfNSW	Transport for New South Wales
Trunk Drainage	Stormwater assets, typically open natural trunk drainage channels, wetlands and storage ponds, as shown on Sydney Water's Mamre Road Precinct Stormwater Scheme Plan, December 2022
VENM	Virgin Excavated Natural Material
WAD	Works Authorisation Deed, a contract between TfNSW and the Applicant to undertake roadworks on the State road network
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
WSUD	Water Sensitive Urban Design
Year	A period of 12 consecutive months

SCHEDULE 2

PART A ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

A1. In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

TERMS OF CONSENT

A2. The development may only be carried out:

(a) in compliance with the conditions of this consent;

(b) in accordance with all written directions of the Planning Secretary;

(c) in accordance with the EIS, RTS, ADR and additional information;

(d) in accordance with the Development Layout in Appendix 1; and

(e) in accordance with the management and mitigation measures in Appendix 25; and

(f) in accordance with the Modification Assessments.

A3. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:

(a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and

(b) the implementation of any actions or measures contained in any such document referred to in condition A3(a).

A4. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c) or A2(e). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c) or A2(e), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

LIMITS OF CONSENT

A5. This consent lapses five years after the date from which it operates, unless the development has physically commenced on the land to which the consent applies before that date.

A6. The maximum GFA for development on the site must not exceed the limits in Table 1.

Table 1 *Maximum GFA of the Development*

Land Use	Maximum GFA (m^2)
Warehouse or distribution centres	79,031
Ancillary offices	2,286
Total	**81,317**

NOTIFICATION OF COMMENCEMENT

A7. The date of commencement of each of the following phases of the development must be notified to the Planning Secretary in writing, at least one month before that date, or as otherwise agreed with the Planning Secretary:

(a) construction;

(b) operation; and

(c) cessation of operations.

A8. If the construction or operation of the development is to be staged, the Planning Secretary must be notified in writing, at least one month before the commencement of each stage (or other timeframe agreed with the Planning Secretary), of the date of commencement and the development to be carried out in that stage.

EVIDENCE OF CONSULTATION

A9. Where conditions of this consent require consultation with an identified party, the Applicant must:

(a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and

(b) provide details of the consultation undertaken including:

(i) the outcome of that consultation, matters resolved and unresolved; and

(ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

A10. With the approval of the Planning Secretary, the Applicant may:

(a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);

(b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and

(c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).

A11. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.

A12. If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program.

PROTECTION OF PUBLIC INFRASTRUCTURE

A13. Before the commencement of construction of the development, the Applicant must:

(a) consult with the relevant owner and provider of services that are likely to be affected by the development to make suitable arrangements for access to, diversion, protection and support of the affected infrastructure;

(b) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and

(c) submit a copy of the dilapidation report to the Planning Secretary and Council.

A14. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:

(a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the development; and

(b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

DEMOLITION

A15. All demolition must be carried out in accordance with *Australian Standard AS 2601-2001 The Demolition of Structures* (Standards Australia, 2001).

STRUCTURAL ADEQUACY

A16. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the NCC.

Note:

- *Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.*
- *The EP&A (Development Certification and Fire Safety) Regulation 2021 sets out the requirements for the certification of the development.*

CIVIL PLANS

A17. Engineering plans are to be prepared in accordance with the development consent, Penrith City Council's *Design Guidelines for Engineering Works for Subdivisions and Developments, Engineering Construction Specification for Civil Works* and Austroads Guidelines.

A18. All earthworks and retaining walls subject to this development must be contained within the site and not cause any constraint on future development of any adjoining properties, as described in the information titled ' Westlink Stage 1 (SSD-9138102) – Retaining Wall and Earthworks', prepared by ESR and dated 20 April 2023 and supporting attachments.

SUBDIVISION

A19. Prior to the issuing of Subdivision Certificates for any stage of the development, detailed work-as-executed drawings shall be prepared and signed by a Registered Surveyor, which show the finished surface levels of the access road,

internal roads, drainage, street trees and any areas of fill, carried out under this consent. The work-as-executed drawing must be submitted to the Certifier, Council and Sydney Water prior to the issue of a Subdivision Certificate.

A20. Prior to the issuing of Subdivision Certificates for any stage of the development, the Applicant must provide to the Certifier evidence that all matters required to be registered on title, including easements, have been lodged for registration or registered at the Land Registry Services.

A21. Prior to the issuing of Subdivision Certificates for any stage of the development:

(a) a certificate from an electricity and telecommunications provider must be submitted to the Certifier certifying that satisfactory service arrangements to the site have been established; and

(b) a certificate from the Regional Stormwater Authority must be submitted to the Certifier certifying that satisfactory stormwater servicing arrangements for the site have been established.

A22. Prior to issue of a Subdivision Certificate that proposes the dedication of any internal estate road as a public road:

(a) a final inspection of the estate road is to be undertaken by the relevant Roads Authority. All compliance documentation for road and drainage construction of the estate road must be submitted to the relevant Roads Authority in accordance with the relevant Roads Authorities specifications and requirements.

(b) a Maintenance Bond is to be lodged with Penrith City Council for all road and drainage works that are to be dedicated to the relevant Roads Authority. The value of the bond shall be determined in accordance with Penrith City Council's adopted Fees and Charges.

(c) where installation of any regulatory/advisory signage and line marking are proposed, plans are to be lodged with Penrith City Council and approved by the Local Traffic Committee

(d) an application for proposed street names must be lodged with and approved by Penrith City Council and the signs erected on-site. The proposed names must be in accordance with Penrith City Council's Street Naming Policy.

Note: Contact Penrith City Council's Engineering Services Department on 4732 7777 for further information on this process and applicable fees.

COMPLIANCE

A23. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

DEVELOPMENT CONTRIBUTIONS

A24. Prior to the issue of a Subdivision Certificate or Construction Certificate (as required by the contributions plan or agreed by Council), the Applicant must pay contributions to Council as required in accordance with the Penrith City Mamre Road Precinct Development Contributions Plan 2022, or any other contributions plan as in force when the later consent takes effect.

Note: Subject to agreement between Council and the Applicant, local contributions may be satisfied by a planning agreement or works-in-kind agreement between Council and the Applicant.

A25. A special infrastructure contribution must be made in accordance with the Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Aerotropolis) Determination 2022 (2022 Determination) as in force when this development consent takes effect.

A person may not apply for a subdivision certificate or construction certificate (as the case may require, having regard to the Determination) in relation to the development unless the person provides, with the application, written evidence from the Department of Planning and Environment that the special infrastructure contribution for the development (or that part of the development for which the certificate is sought) has been made or that arrangements are in force with respect to the making of the contribution.

More information

A request for assessment by the Department of Planning and Environment of the amount of the contribution that is required under this condition can be made through the NSW planning portal (https://www.planningportal.nsw.gov.au/development-assessment/contributions/sic-online-service). Please refer enquiries to SIContributions@planning.nsw.gov.au.

OPERATION OF PLANT AND EQUIPMENT

A26. All plant and equipment used on site, or to monitor the performance of the development, must be:

(a) maintained in a proper and efficient condition; and

(b) operated in a proper and efficient manner.

EXTERNAL WALLS AND CLADDING

A27. The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the BCA.

A28. Prior to the issuing of:

(a) any Construction Certificate relating to the construction of external walls (including the installation of finishes and claddings such as synthetic or aluminium composite panels); and

(b) an Occupation Certificate,

the Applicant must provide the Certifier with documented evidence that the products and systems proposed for use or used in the construction of external walls (including finishes and claddings such as synthetic or aluminium composite panels) comply with the requirements of the BCA.

A29. The Applicant must provide a copy of the documentation given to the Certifier to the Planning Secretary within seven days after the Certifier accepts it.

UTILITIES AND SERVICES

A30. Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.

A31. Before the commencement of operation of the development, the Applicant must obtain a Compliance Certificate for water and sewerage infrastructure servicing of the site under section 73 of the *Sydney Water Act 1994*.

A32. Before the issuing of a Subdivision Works or Construction Certificate for any stage of the development, the Applicant (whether or not a constitutional corporation) is to provide evidence, satisfactory to the Certifier, that arrangements have been made for:

(a) the installation of fibre-ready facilities to all individual lots and/or premises in the development to enable fibre to be readily connected to any premises that is being or may be constructed on those lots; and

(b) the provision of fixed-line telecommunications infrastructure in the fibre-ready facilities to all individual lots and/or premises in the development demonstrated through an agreement with a carrier.

A33. Before the issuing of the Occupation Certificate for the development the Applicant must demonstrate that the carrier has confirmed in writing it is satisfied that the fibre-ready facilities are fit-for-purpose.

WORK AS EXECUTED PLANS

A34. Before the issuing of the Occupation Certificate for the first warehouse building, work-as-executed drawings signed by a registered surveyor demonstrating that the street trees, stormwater drainage (including operation and maintenance management plans) and finished ground levels have been constructed as approved, must be submitted to the Principal Certifier.

ENVIRONMENTAL REPRESENTATIVE

A35. The Applicant must engage an Environmental Representative (ER) to oversee construction of the development. Unless otherwise agreed to by the Planning Secretary, construction of the development must not commence until an ER has been approved by the Planning Secretary and engaged by the Applicant. The approved ER must:

(a) be a suitably qualified and experienced person who was not involved in the preparation of the EIS, RTS, ADR, and any additional information for the development and is independent from the design and construction personnel for the development;

(b) receive and respond to communication from the Planning Secretary in relation to the environmental performance of the development;

(c) consider and inform the Planning Secretary on matters specified in the terms of this consent;

(d) consider and recommend to the Applicant any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community;

(e) review the CEMP required in Condition C2 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this consent and if so:

(i) make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or

(ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary/Department for information or are not required to be submitted to the Planning Secretary/Department);

(f) regularly monitor the implementation of the CEMP to ensure implementation is being carried out in accordance with the document and the terms of this consent;

(g) as may be requested by the Planning Secretary, help plan, attend or undertake audits of the development commissioned by the Department including scoping audits, programming audits, briefings, and site visits;

(h) as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints;

(i) provide advice to the Applicant on the management and coordination of construction works on the site with adjoining sites in the Mamre Road Precinct in relation to construction traffic management, earthworks and sediment control and noise;

(j) attend the Mamre Road Precinct Working Group (see Condition A37) in a consultative role in relation to the environmental performance of the development; and

(k) prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, an **Environmental Representative Quarterly Report** providing the information set out in the Environmental Representative Protocol under the heading 'Environmental Representative Quarterly Reports'. The **Environmental Representative Quarterly Report** must be submitted within seven calendar days following the end of each quarter for the duration of the ER's engagement for the development, or as otherwise agreed with the Planning Secretary.

A36. The Applicant must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in condition A35 (including preparation of the ER monthly report), as well as:

(a) the complaints register (to be provided on a daily basis); and

(b) a copy of any assessment carried out by the Applicant of whether proposed work is consistent with the consent (which must be provided to the ER before the commencement of the subject work).

A37. The Planning Secretary may at any time commission an audit of an ER's exercise of its functions under condition A34. The Applicant must:

(a) facilitate and assist the Planning Secretary in any such audit; and

(b) make it a term of their engagement of an ER that the ER facilitate and assist the Planning Secretary in any such audit.

MAMRE ROAD PRECINCT WORKING GROUP

A38. Within three months of the commencement of construction of the development and until all components of the development are constructed and operational, the Applicant must establish and participate in a working group, or join and participate in an existing working group, with relevant consent holders in the MRP, to the satisfaction of the Planning Secretary. The purpose of the working group is to consult and coordinate construction works within the MRP to assist with managing and mitigating potential cumulative environmental impacts. The working group must:

(a) comprise at least one representative of the Applicant, the Applicant's ER, and relevant consent holders in the MRP;

(b) meet periodically throughout the year to discuss, formulate and implement measures or strategies to improve monitoring, coordination of the approved industrial developments in the MRP;

(c) regularly inform Council, TfNSW, Sydney Water and the Planning Secretary of the outcomes of these meetings and actions to be undertaken by the working group;

(d) review the performance of approved industrial developments in the MRP and identify trends in the data with respect to cumulative construction traffic, erosion and sediment control, noise, stormwater management and waterway health objectives under the MRP DCP;

(e) review community concerns or complaints with respect to environmental management;

(f) identify interim traffic safety measures to manage construction traffic and how these measures will be coordinated, communicated, funded and monitored in the MRP; and

(g) provide the Planning Secretary with an update and strategies, if a review under subclause (d) and (e) identifies additional measures and processes are required to be implemented by the working group.

A39. Three (3) months prior to completion of construction of all components of the development, the Applicant is eligible to exit the working group required under condition A38. The Applicant must:

(a) consult with the Planning Secretary;

(b) provide confirmation that all components of the development are operational; and

(c) advise on the date of the proposed exit.

APPLICABILITY OF GUIDELINES

A40. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.

A41. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

ADVISORY NOTES

AN1. All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.

PART B SPECIFIC ENVIRONMENTAL CONDITIONS

TRAFFIC AND ACCESS

Construction Traffic Management Plan

B1. Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with Council and TfNSW;

(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction works to:

(i) ensure access to the site and road safety and network efficiency is maintained,

(ii) manage cumulative construction traffic from other concurrent construction works within the Mamre Road Precinct, and

(iii) address necessary interim traffic safety controls and management measures, including consideration of any traffic control measures required to manage traffic entering Mamre Road in the period before Mamre Road/Abbotts Road intersection construction is complete;

(d) detail heavy vehicle routes, access and parking arrangements;

(e) include a Driver Code of Conduct to:

(i) minimise the impacts of earthworks and construction on the local and regional road network;

(ii) minimise conflicts with other road users;

(iii) minimise road traffic noise; and

(iv) ensure truck drivers use specified routes, including entering and exiting Mamre Road via Abbotts Road and not Bakers Lane;

(f) include a program to monitor the effectiveness of these measures; and

(g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.

B2. The Applicant must:

(a) not commence construction until the Construction Traffic Management Plan required by condition B1 is approved by the Planning Secretary; and

(b) implement the most recent version of the Construction Traffic Management Plan approved by the Planning Secretary for the duration of construction.

Operational Traffic Monitoring Program

B3. At the commencement of operation of the development and for a minimum period of 12 months of operation, the Applicant must establish an Operational Traffic Monitoring Program to verify light and heavy vehicle traffic numbers against the predictions in the ADR. The Program must also monitor the effectiveness of the traffic management measures to the satisfaction of the Planning Secretary and include but not be limited to the following:

(a) detail the numbers and frequency of truck movements, sizes of trucks, vehicle routes and hours of operation;

(b) queue monitoring at the Mamre Road/Abbotts Road intersection and background travel counts on Mamre Road and Abbotts Road;

(c) verify the predicted traffic numbers and level of service against the actual impacts of the development, and analyse the potential cause of any significant discrepancies;

(d) consider the current capacity and efficiency of the existing road network including Mamre Road and Aldington Road; and

(e) include procedures for the reporting and monitoring of results to evaluate the traffic performance of the development.

~~**External Road Upgrades**~~

~~B4. Prior to the commencement of operation of the development, the Applicant must complete the construction of the upgrades to Abbotts Road to the satisfaction of Council. The Applicant must obtain approval for the works under section 138 of the *Roads Act 1993*.~~

~~B5. Prior to the commencement of construction works for the Mamre Road/Abbotts Road intersection works and signalised intersection of Abbotts Road and Aldington Road, the Applicant must enter into a Works Authorisation Deed with TfNSW. TfNSW fees for administration, plan checking, civil works inspections and project management shall be paid by the Applicant prior to the commencement of works.~~

~~B6. Prior to the commencement of construction of signalised intersection road works, the proposed Traffic Control Signal/s at the intersection of Mamre Road/Abbotts Road and Aldington Road/Abbotts Road must be designed to meet TfNSW requirements. The Traffic Control Signal (TCS) plans shall be drawn by a suitably qualified person and endorsed by a suitably qualified practitioner.~~

~~The submitted design shall be in accordance with Austroads Guide to Road Design in association with relevant TfNSW supplements (available on www.transport.nsw.gov.au). The certified copies of the TCS design and civil design plans shall be submitted to TfNSW for consideration and approval prior to the release of a Construction Certificate and commencement of signalised intersection road works. Please send all documentation to development.sydney@transport.nsw.gov.au.~~

~~B7. Detailed design plans and hydraulic calculations of any changes to the stormwater drainage system are to be submitted to TfNSW for approval, prior to the commencement of any works referred to in Condition B5. Please send all documentation to is development.sydney@transport.nsw.gov.au. A plan checking fee will be payable and a performance bond may be required before TfNSW approval is issued.~~

~~B8. The Applicant must be responsible for all public utility adjustment/relocation works, necessitated by the work referred to in Condition B5 and as required by the various public utility authorities and/or their agents. Should any public utility adjustment/relocation works be required adjacent to a classified road, plans are to be submitted to TfNSW for approval, prior to the commencement of any works. Please send all documentation to is development.sydney@transport.nsw.gov.au.~~

~~A plan checking fee may be payable and a performance bond may be required before TfNSW approval is issued.~~

~~B9. Any realignment of site boundaries to facilitate the works referred to in Condition B5, inclusive but not limited to drainage, footpaths and batters resulting from the proposed road and construction works, must be dedicated as public road at no cost to the relevant roads authority unless specified otherwise in a planning agreement.~~

~~B10. The Applicant must obtain a Road Occupancy Licence (ROL) from TfNSW Transport Management Centre for any works that may impact on traffic flows on Mamre Road during construction activities. A ROL can be obtained through https://myrta.com/oplinc2/pages/security/oplincLogin.jsf.~~

~~B11. Prior to the commencement of operation of the first warehouse building, the upgrade works to the Mamre Road and Abbotts Road intersection, Abbotts Road and Aldington Road intersection, and upgrades to Abbotts Road must be completed to the satisfaction of the relevant roads authority for each component of the works.~~

~~**Internal Access Roads**~~

~~B12. Prior to the commencement of operation of the first warehouse building, the Applicant must construct and operate the road works shown in Figure 1 in Appendix 1 to the satisfaction of relevant road authority.~~

Street Trees

B13. Prior to the commencement of any stage of road construction, detailed design plans showing the provision of passively irrigated street trees within the relevant stage of works must be submitted to the satisfaction of the relevant road authority. The plans must:

(a) be prepared in consultation with Council; and

(b) demonstrate compliance with the Sydney Water *Stormwater Scheme Infrastructure Design Guideline* and MRP DCP.

Parking

B14. The Applicant must provide sufficient parking facilities on-site in accordance with the MRP DCP, including for heavy vehicles and for site personnel, to ensure that traffic associated with the development does not utilise public and residential streets or public parking facilities.

B15. Prior to the issue of the occupation certificate for the first warehouse building, the development must include bicycle parking and end of trip facilities in accordance with Australian Standard AS1742.9:2018 *Manual of Uniform Traffic Control Devices - Bicycle Facilities*, and *Cycling Aspects of Austroads Guides*. Any bicycle parking and storage facilities must be secure, convenient, well lit, physically and visually accessible and within close proximity to the main in accordance with Austroads guidelines.

B16. A minimum of 5% of parking bays for each warehouse must provide for electric vehicle charging, with a further 5% constructed as readily adaptable.

Operating Conditions

B17. The Applicant must ensure:

(a) internal roads, driveways and parking (including grades, turn paths, sight distance requirements, aisle widths, aisle lengths and parking bay dimensions) associated with the development are constructed and maintained in accordance with the latest version of *AS 2890.1:2004 Parking facilities Off-street car parking* (Standards Australia, 2004), *AS 2890.2:2018 Parking facilities Off-street Commercial Vehicle Facilities* (Standards

Australia, 2018) and *AS 2890.6.2009 Parking facilities Off-street parking for people with disabilities* (Standards Australia, 2009)

(b) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant AUSTROADS guidelines;

(c) the development does not result in any vehicles queuing on the public road network;

(d) heavy vehicles and bins associated with the development are not parked on local roads or footpaths in the vicinity of the site;

(e) all vehicles are wholly contained on site before being required to stop;

(f) all loading and unloading of materials is carried out on-site;

(g) all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network; and

(h) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times

(i) all vehicles accessing and departing the site from/to Mamre Road must travel via Abbotts Road and not Bakers Lane, until the completion of the ultimate upgrade of Aldington Road and delivery of the Southern Link Road or otherwise agreed in writing by the Secretary, Council and TfNSW

(j) Use of 30m PBS Level on local roads will require approval from the National Heavy Vehicle Regulator (NHVR) and Council's Asset Section.

Workplace Travel Plan

B18. Prior to the commencement of operation of any part of the development, the Applicant must prepare a Workplace Travel Plan and submit a copy to the Planning Secretary. The Workplace Travel Plan must:

(a) be prepared in consultation with TfNSW;

(b) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; and

(c) describe pedestrian and bicycle linkages and end of trip facilities available on-site.

B19. The Applicant must implement the most recent version of the Workplace Travel Plan for the duration of the development.

SOILS, WATER QUALITY AND HYDROLOGY

Imported Soil

B20. The Applicant must:

(a) ensure that only VENM, ENM, or other material approved in writing by EPA is brought onto the site;

(b) keep accurate records of the volume and type of fill to be used; and

(c) make these records available to the Planning Secretary upon request.

Erosion and Sediment Control

B21. Prior to the commencement of earthworks for the development, the Applicant must design and detail the erosion and sediment control measures for the site to ensure the construction phase IWCM controls in the MRP DCP are achieved to the satisfaction of the Planning Secretary. Detailed Erosion and Sediment Control Plans (ESCP) and drawings must:

(a) be prepared by a Chartered Professional Erosion and Sediment Control (CPESC) specialist;

(b) be prepared in accordance with *Managing Urban Stormwater: Soils and Construction – Volume 1:Blue Book* (Landcom, 2004) and with the WSUD design principles set out in the *Technical Guidance for Achieving Wianamatta South Creek Stormwater Management Targets* (Technical Guidance) (NSW Government, 2022);

(c) include:

(i) each major phase of construction work including catchment plans and calculations and sizing for all major drainage and sediment controls for each phase;

(ii) the type of sediment basin, details of all functional components and calculations demonstrating compliance with the DCP;

(d) demonstrate the construction approach and timing to ensure the construction phase stormwater quality targets can be met; and

(e) detail measures to manage external catchment flows and dispersive soils;

(f) detail measures to protect passively irrigated street trees during construction works, if these are installed before construction is completed;

(g) be included in the CEMP required by Condition C2.

B22. The Applicant must:

(a) not commence earthworks until the Erosion and Sediment Control Plan required by condition B21 is approved by the Planning Secretary; and

(b) implement the most recent version of the Erosion and Sediment Control Plan approved by the Planning Secretary for the duration of earthworks and construction.

B23. The Applicant must ensure delivery and operation of all construction phase erosion and sediment controls on the site is supervised and certified by a CPESC. Monthly audits are to be completed by CPESC and kept on record for the duration of the construction and an additional 12 months following completion of construction works.

Discharge Limits

B24. The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL.

Stormwater Management System Design

B25. Within two months of the date of this consent, the Applicant must design the stormwater management system to the satisfaction of the Planning Secretary. The stormwater management system design must:

(a) be prepared in consultation with the Environment & Heritage Group, Sydney Water and Council;

(b) be prepared and certified by a suitably qualified chartered professional engineer with experience in modelling, design and supervision of WSUD systems, whose appointment has been endorsed by the Planning Secretary;

(c) be consistent with the plan shown on **Figure 2** in **Appendix 1** and the updated Stormwater Management Plan required by Condition B30;

(d) include all private, Council and trunk drainage infrastructure within the site including connections to adjacent landholdings;

(e) be designed in accordance with the *Technical Guidance for Achieving Wianamatta South Creek Stormwater Management Targets* (Technical Guidance) (NSW Government, 2022) and detail how:

(i) the requirements and objectives of the IWCM controls of the DCP will be achieved;

(ii) the waterway health objectives and targets set out in the Technical Guidance will be achieved;

(iii) levels are resolved to demonstrate the system functions effectively;

(iv) the development will ultimately connect to the MRP Stormwater Scheme and interim measures to meet the waterway health objectives and targets will be decommissioned;

(v) all stormwater management devices will contain an impermeable liner and all naturalised trunk drainage (or other open drainage) is either lined with an impermeable liner, or ameliorated (i.e., gypsum), and compacted to a suitable depth and topsoiled (AS44119) to limit infiltration to soils;

(f) demonstrate the on-site stormwater detention design is free draining;

(g) demonstrate maintenance access driveways to water storage or bio-retention basins are designed in accordance with Council's specifications;

(h) demonstrate that sufficient land is reserved on site for stormwater management purposes (such as irrigation areas and undeveloped areas) as shown on **Figure 2** in **Appendix 1**, to ensure the development meets the controls in the DCP and the waterway health targets in the Technical Guidance, unless an alternative stormwater management strategy has been approved by the Planning Secretary;

(i) include civil design drawings that define the design for the WSUD systems in accordance with the Technical Guidance and the requirements of Sydney Water and Council;

(j) include landscape drawings that include planting and hardscape details of the WSUD systems; and

(k) include certification (and appropriate designed checklists) of the civil and landscape drawings by suitably qualified chartered professional engineer with experience in modelling, design and supervision of WSUD systems that the design drawings comply with the Technical Guide requirements and the stormwater targets are achieved; and

(l) include evidence that the design and mix of WSUD infrastructure has considered ongoing operation and maintenance, including a detailed lifecycle cost assessment (including capital, operation / maintenance and renewal costs over 30 years).

B26. The Applicant must:

(a) not commence earthworks until the design required by Condition B25 is approved by the Planning Secretary;

(b) ensure construction of the stormwater management system is supervised and certified by a suitably qualified chartered professional engineer with experience in modelling, design and supervision of WSUD systems; and

(c) implement the stormwater management system approved by the Planning Secretary prior to the commencement of operation of the first warehouse building.

B27. The Applicant must not carry out earthworks or construction, other than those works approved under this consent, on land shown as 'undeveloped land' on **Figure 2** in **Appendix 1** (including Lots 3 and 4 on DP 250002) unless the site is connected to the Stormwater Scheme or an alternative Stormwater Management System for the site has been approved by the Planning Secretary.

Trunk Drainage Design

B28. Within two months of the date of this consent, the Applicant must design the trunk drainage infrastructure on the site, to the satisfaction of the Planning Secretary. The trunk drainage infrastructure must:

(a) be designed in consultation with the Regional Stormwater Authority (Sydney Water);

(b) be integrated into the Stormwater Management System required under Condition B25;

(c) be designed in accordance with the Mamre Road Stormwater Scheme Plan and Sydney Water's *Stormwater Scheme Infrastructure Design Guidelines (draft) 2022*, or its latest version, unless otherwise agreed with the Regional Stormwater Authority;

(d) be designed so that the naturalised trunk drainage channel is used to carry all overland flows greater than the 5% AEP piped drainage capacity where the catchment upstream of the commencement of the trunk drainage exceeds 15 ha or where overland flows are unsafe to pedestrians and vehicles;

(e) be modelled with demonstration of flow modelling using either XP-Rafts (Laurenson's Method) or DRAINS (ILSAX or Laurenson's Methods) with full catchment diagrams – discretised to accurately show development catchments and external catchments . Input data sets shall be fully described and can be provided in spreadsheet form.

(f) include access for management and maintenance by the Regional Stormwater Authority as per the *Stormwater Scheme Infrastructure Design Guideline (draft) 2022*, including provision of an easement in accordance with Condition B32;

(g) include appropriate connections from the trunk drainage channel on site to the existing downstream flow paths, until such time as the trunk drainage channel downstream of the site is constructed;

(h) ensure any piped infrastructure that intersects or connects into the trunk drainage channel on the site is designed to accommodate the trunk drainage channel design; and

(i) include landscape drawings with planting details.

B29. The Applicant must:

(a) not commence earthworks until the design required by Condition B28 is approved by the Planning Secretary;

(b) ensure construction of the trunk drainage infrastructure is supervised and certified by a suitably qualified chartered professional engineer with experience in modelling, design and supervision of WSUD systems; and

(c) implement the trunk drainage infrastructure approved by the Planning Secretary prior to the commencement of operation of the first warehouse building.

Stormwater Management Plan

B30. Within two months of the date of this consent, the Applicant must prepare a separate Water and Stormwater Management Plan (WSMP) to the satisfaction of the Planning Secretary. The WSMP must:

(a) be prepared by a suitably qualified chartered professional engineer with experience in modelling, design and supervision of WSUD systems, whose appointment has been endorsed by the Planning Secretary;

(b) comply with the requirements of the Technical Guidance;

(c) be consistent with the plan shown on **Figure 2** in **Appendix 1**;

(d) be prepared in consultation with the Environment & Heritage Group, Sydney Water, Council and the Department;

(e) describe the baseline soil, surface water and groundwater conditions at the site;

(f) define how each stage of the development will comply with the Stormwater Targets including ultimate development (i.e. connection to the regional scheme);

(g) include MUSIC modelling for each stage of the development in accordance with the Technical Guidance;

(h) provide catchments plans, tables and all stormwater management details as per the Technical Guidance;

(i) ensure;

(i) proprietary devices are located on private land and only include including sediment and nutrient removal if certified under SQIDEP;

(ii) ensure external catchments are drained to trunk drainage;

(iii) ensure all catchment areas are accounted for in the MUSIC modelling and post processing tool and there are no inconsistencies;

(iv) the strategy and stormwater elements are consistent with the design drawings required by Conditions B25 to B27 (including the detailed drawings in appendices to the report);

(j) include a protocol for investigation of any non-compliances of the stormwater management system with the IWCM controls in the MRP DCP the waterway health objectives and targets in the Technical Guidance;

(k) detail the contingency measures that would be implemented should issues arise;

(l) include a Maintenance Plan for the WSUD measures; and

(m) detail triggers for a review of the plan, including, but not limited to a review of the plan within 6 months of the Stormwater Scheme being available for the site to connect to.

B31. The Applicant must:

(a) not commence operation of the first warehouse building until the Stormwater Management Plan required by Condition B30 is approved by the Planning Secretary; and

(b) implement the most recent version of the Stormwater Management Plan approved by the Planning Secretary for the duration of the development.

Easements and Maintenance

B32. Prior to the issue of a Compliance Certificate under Section 73 of the *Sydney Water Act, 1994*, an easement under section 88A and/or restriction or public positive covenant under section 88E of the *Conveyancing Act 1919* naming the Regional Stormwater Authority (Sydney Water) as the prescribed authority, which can only be revoked, varied or modified with the consent of the Regional Stormwater Authority and which provides for appropriate access to all trunk drainage land for maintenance at no cost to the Regional Stormwater Authority must be registered on the title of the land.

B33. The stormwater management system must continue to be operated and maintained in perpetuity for the life of the development in accordance with the final operation and maintenance management plan. Regular inspection records are required to be maintained and made available to Council on request. All necessary improvements are required to be made immediately upon awareness of any deficiencies in the stormwater management systems.

Note: *This does not include any passively irrigated street trees that may be transferred to the relevant roads authority. This also does not include trunk drainage infrastructure for which maintenance and operation may be transferred to the Regional Stormwater Authority.*

B34. All stormwater infrastructure, including bio-retention basins, shall remain under the ownership, control and care of the registered proprietor of the lots. Upstream drainage catchment pipes are to be located outside of the public road reserve and remain in private ownership, in accordance with Council requirements.

Note*: This does not include any passively irrigated street trees that may be transferred to the relevant roads authority. This also does not include trunk drainage infrastructure for which maintenance and operation may be transferred to the Regional Stormwater Authority.*

B35. Prior to the issue of any Occupation Certificate, a restriction on the use of land and positive covenant relating to the permanent stormwater management systems (including on-site stormwater detention and water sensitive urban design), shall be registered on the title of the property. The restriction on the use of land and positive covenant shall be in Penrith City Council's standard wording as detailed in Council's Stormwater Drainage Specification for Building Developments – Appendix F.

Dam Decommissioning Strategy

B36. Prior to commencement of construction of the development, the Applicant must prepare a Dam Decommissioning Strategy to the satisfaction of the Planning Secretary. The Dam Decommissioning Strategy must form part of the CEMP required by condition C2. The Applicant must implement the most recent version of the Dam Decommissioning Strategy for the duration of construction.

Flooding

B37. Prior to the commencement of operation of the development, the Applicant must connect the development to the road drainage infrastructure for the upgraded Aldington and Abbotts Roads, to ensure the development does not increase flood flows and velocities on adjoining properties for all flood events up to and including the critical 1% Annual Exceedance Probability flow.

VISUAL AMENITY

Landscaping

B38. Within six months of the date of this consent, the Applicant must prepare a Landscape Management Plan to manage the revegetation and landscaping works on-site, to the satisfaction of the Planning Secretary. The plan must:

(a) detail the species to be planted on-site that:

(i) are consistent with the plant list in Appendix C of the Mamre Road Precinct Development Control Plan; and

(ii) are suitable in relation to wildlife management in proximity to the Western Sydney Airport.

(b) ensure planting including large trees with sufficient deep soil is provided the areas between retaining wall tiers and between retaining walls and the northern property boundary on Lot 1 (as shown in the landscape plans titled *Kemps Creek Logistics Park SSDA Report Landscape Concept plan*, prepared by Site Image and dated 14 February 2023);

(c) ensure adequate planting is implemented to provide screening between the basin and retaining wall on Lot 4 (as shown in the landscape plans titled *Kemps Creek Logistics Park SSDA Report Landscape Concept plan*, prepared by Site Image and dated 14 February 2023);

(d) demonstrate that the minimum tree canopy targets are achieved in accordance with the MRP DCP; and

(e) describe the monitoring and maintenance measures to manage revegetation and landscaping works.

B39. The Applicant must:

(a) not commence operation until the Landscape Management Plan is approved by the Planning Secretary;

(b) must implement the most recent version of the Landscape Management Plan approved by the Planning Secretary and not commence operation until the landscaping works have been completed in accordance with the plan; and

(c) maintain the landscaping and vegetation on the site in accordance with the approved Landscape Management Plan required by condition B37 for the life of the development.

B40. Prior to the issue of an Occupation Certificate for each warehouse building, the Applicant must provide the Certifier with written evidence in the form of plans and a report prepared by the project landscape architect confirming that trees identified in the approved document package as contributing to the site's canopy target have been installed and that the trees are capable of reaching maturity in their locations. Where the canopy cover target (in accordance with the MRP DCP) is identified as not being achievable through those trees planted, the report is to detail what measures have been undertaken to address the tree canopy shortfall and a rectification plan is to be provided.

Retaining Walls

B41. Prior to the commencement of retaining wall construction, the Applicant must submit details of retaining wall materials fronting the public domain demonstrating suitable visual presentation, particularly treatment of higher fill walls visible from the public domain, to the satisfaction of the Planning Secretary.

B42. All structures (foot, batter, tie backs/in and drainage) associated with retaining walls must be within private property and not within the public road reserve and not within any zone of influence.

Building Materials

B43. The Applicant must ensure the finished facades and roofs of the warehouses and office buildings use neutral, recessive colours, non-reflective materials and are designed to present an attractive façade to residential areas and to minimise glare.

Lighting

B44. The Applicant must ensure the lighting associated with the development:

(a) complies with the latest version of AS 4282-2019 - *Control of the obtrusive effects of outdoor lighting* (Standards Australia, 2019); and

(b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.

Signage and Fencing

B45. Prior to the commencement of construction of the first warehouse building, the Applicant must submit a Signage Strategy to the satisfaction of the Planning Secretary. The Signage Strategy must demonstrate that proposed signage is consistent with Chapter 3 of *State Environmental Planning Policy (Industry and Employment) 2021* and the MRP DCP, including limiting illumination of signage or measures to control lighting impacts from illuminated signs.

B46. All signage and fencing must be erected in accordance with the development plans included in **Appendix 1**.

Note: *This condition does not apply to temporary construction and safety related signage and fencing.*

NOISE

Hours of Work

B47. The Applicant must comply with the hours detailed in Table 2, unless otherwise agreed in writing by the Planning Secretary.

Table 2 *Hours of Work*

Activity	Day	Time
Earthworks and construction	Monday – Friday Saturday	7 am to 6 pm 8 am to 1 pm
Operation	Monday – Sunday	24 hours

B48. Works outside of the hours identified in condition B47 may be undertaken in the following circumstances:

(a) works that are inaudible at the nearest sensitive receivers;

(b) works agreed to in writing by the Planning Secretary;

(c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

(d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

Construction Noise Limits

B49. The development must be constructed to achieve the construction noise management levels detailed in *the Interim Construction Noise Guideline* (DECC, 2009) (as may be updated or replaced from time to time). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures in **Appendix 5**.

Construction Noise and Vibration Management Plan

B50. The Applicant must prepare a Construction Noise and Vibration Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must

(a) be prepared by a suitably qualified and experienced noise expert(s);

(b) be approved by the Planning Secretary prior to the commencement of construction of each stage of the development;

(c) describe procedures for achieving the noise management levels in EPA's *Interim Construction Noise Guideline* (DECC, 2009) (as may be updated or replaced from time to time);

(d) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;

(e) include strategies that have been developed with the community for managing high noise generating works; and

(f) describe the community consultation undertaken to develop the strategies in condition B50(e).

(g) include a complaints management system that would be implemented for the duration of the development.

B51. The Applicant must:

(a) not commence earthworks until the Construction Noise and Vibration Management Plan required by condition B50 is approved by the Planning Secretary; and

(b) implement the most recent version of the Construction Noise and Vibration Management Plan approved by the Planning Secretary for the duration of earthworks and construction.

Operational Noise Limits

B52. The Applicant must ensure that noise generated by operation of the development does not exceed the noise limits in Table 3.

Table 3 *Noise Limits (dB(A))*

Location	Day $L_{Aeq(15\ minute)}$	Evening $L_{Aeq(15\ minute)}$	Night $L_{Aeq(15\ minute)}$
Residential receivers near Medinah Avenue (Luddenham), Mount Vernon Road (Mount Vernon) and Kerrs Road (Mount Vernon)	36	31	27
BAPS Temple - Outdoor Use Area (Except Car Parking Area)	33 (When in use)		

Note *Noise generated by the development is to be measured in accordance with the relevant monitoring performance procedures and exemptions (including certain meteorological conditions) of the NSW Noise Policy for Industry (EPA, 2017) (as may be updated or replaced from time to time). Refer to the plan in Appendix 2 for the location of residential sensitive receivers.*

B53. The Applicant must ensure that noise generated by:

(a) all fixed external mechanical plant for the warehouse building on Lot 1 does not exceed a cumulative sound power level of $L_{Aeq(15min)}$ 90 dB(A);

(b) all fixed external mechanical plant for the warehouse building on Lot 4 does not exceed a cumulative sound power level of $L_{Aeq(15min)}$ 86 dB(A); and

(c) any activity on the site does not exceed a sound power level of L_{AMax} 115 dB(A) or result in annoying noise characteristics as determined in accordance with the Noise Policy for Industry (EPA, 2017) and Australian Standard AS 1055:2018 Acoustics – Description and measurement of environmental noise (Standards Australia, 2018).

Noise Verification

B54. Within three months of the commencement of earthworks for the development, the Applicant must prepare and submit a Design Noise Verification Report for the development to the satisfaction of the Planning Secretary. The Applicant must not commence construction of any warehouse buildings until the Design Noise Verification Report is approved by the Planning Secretary. The Design Noise Verification Report must:

(a) be prepared by a suitably qualified, experienced and independent acoustic consultant whose appointment has been endorsed by the Planning Secretary;

(b) identify and justify the design noise emission scenario, including the adopted engineering safety factor, schedule of all noise generating sources on the site (including but not limited to, all vehicle types, mechanical plant and waste areas), stationary equipment specification and verifiable data of dynamic noise emission activities;

(c) demonstrate the noise propagation modelling is capable of accurately predicting noise levels under noise enhancing meteorological conditions to surrounding receivers in Mount Vernon and Luddenham;

(d) provide updated noise modelling to verify the predicted performance of the development and the predicted noise levels identified in the report titled *ESR Westlink Stage 1, Kemps Creek, NSW, Noise and Vibration Impact Assessment*, prepared by RWDI, dated 6 October 2022;

(e) develop an Operational Noise Monitoring Plan in accordance with Section 7 of the Noise Policy for Industry to verify the operational performance of the development, including details of the nominated intermediate monitoring locations, reference noise levels at each intermediate location, and noise level relationship between each intermediate location and sensitive receivers identified in condition B52;

(f) include:

(i) an analysis of compliance with noise limits specified in conditions B52 and B53;

(ii) an outline of at-source and transmission path mitigation measures required to ensure compliance with the limits specified in conditions B52 and B53;

(iii) a description of contingency measures (including specific measures to manage noise generating activities during the night time period) in the event management actions are not effective at reducing noise levels to comply with limits specified in conditions B52 and B53.

B55. Should the Design Noise Verification Repot identify that the noise limits in Conditions B52 and B53 cannot be achieved through the mitigation measures and contingency measures required to be considered under Condition B51, the Applicant must:

(a) offer to enter into noise agreement(s) with eligible receivers outside of the Mamre Road Precinct where noise limits are predicted to be exceeded

(b) provide written evidence to the Planning Secretary that an agreement is in place with these receivers.

B56. If a Noise Agreement is in place with a specific receiver(s) to exceed the noise limits in Condition B52, the noise limits in Table 3 do not apply to that receiver(s).

B57. Within three months of the commencement of operation of the development, the Applicant must prepare and submit an Operational Noise Verification Report for the development to the satisfaction of the Planning Secretary. The Operational Noise Verification Report must:

(a) be prepared by a suitably qualified, experienced and independent acoustic consultant whose appointment has been endorsed by the Planning Secretary;

(b) demonstrate that noise verification has been carried out in accordance with:

(i) the Australian Standard AS 1055:2018 Acoustics – Description and measurement of environmental noise (Standards Australia, 2018); and

(ii) the EPA Approved Methods for the Measurement and Analysis of Environmental Noise in NSW (EPA, 2022);

(iii) the Operational Noise Monitoring Plan established under condition B54(e);

(c) include:

(i) an analysis of compliance with noise limits specified in conditions B52 and B53;

(ii) an outline of implemented at-source and transmission pathway mitigation measures and their effectiveness at reducing operational noise; and

(iii) a description of contingency measures in the event implemented mitigation measures are not effective at reducing noise levels to comply with limits specified in condition B52 and B53 at all times.

MRP Noise Agreement(s)

B58. Prior to the commencement of operation of the development, the Applicant must offer to enter into noise agreement(s) with the eligible receivers shown in **Figure 4** in **Appendix 3**. The Applicant must provide written evidence to the Planning Secretary that an agreement is in place with these receivers.

B59. The noise agreement required under Condition B55 must be in force until the existing residential use ceases on the land subject to the agreement or a development consent for general industrial or other employment uses applies to the land, whichever is the sooner.

Road Traffic Noise

B60. Prior to the commencement of construction of the development, the Applicant must prepare a Driver Code of Conduct and induction training for the development to minimise road traffic noise. The Applicant must update the Driver Code of Conduct and induction training for construction and operation and must implement the Code of Conduct for the life of the development.

VIBRATION

Vibration Criteria

B61. Vibration caused by construction at any residence or structure outside the site must be limited to:

(a) for structural damage, the latest version of *DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures* (German Institute for Standardisation, 1999); and

(b) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: a technical guideline* (DEC, 2006) (as may be updated or replaced from time to time).

B62. Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition B61.

B63. The limits in conditions B61 and B62 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition C2 of this consent.

Dilapidation Reporting

B64. Prior to commencement of earthworks, the Applicant must offer and prepare (if the offer is accepted) a preconstruction dilapidation report for adjoining properties that may be affected by proposed earthworks (including Lot 2 DP 250002, Lots 141 and 142 DP 1033686, Lot 15 DP 253503 and Lot 4132 DP 857093). The report must be submitted to the Planning Secretary and the relevant property owner(s) prior to construction works commencing on the site.

B65. If requested by the property owner, the Applicant must repair, or pay the full costs associated with repairing, any damage to adjoining properties caused by carrying out the development in accordance with the preconstruction dilapidation reports required by Condition B64, unless otherwise agreed by the Planning Secretary.

CONTAMINATION AND REMEDIATION

Supplementary Site Investigation

B66. Prior to the commencement of earthworks, the Applicant must undertake further soil sampling in areas of the site that were inaccessible during the Detailed Site Investigation prepared by Alliance dated 1 December 2021, to further refine the nature and extent of contamination on the site. The supplementary site investigation must:

(a) be prepared by a suitably qualified and experienced consultant certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme;

(b) be prepared in accordance with the relevant guidelines produce or approved under the *Contaminated Land Management Act, 1997*;

(c) define the nature and extent of contamination in areas not previously accessible for sampling; and

(d) include an updated Remedial Action Plan that describes the preferred remediation approach to make the site suitable for the intended industrial land use and details the need for any long term management following completion of remediation.

Remedial Works

B67. The Applicant must remediate the site in accordance with the Remedial Action Plan approved under Condition B66 and relevant guidelines produced or approved under the *Contaminated Land Management Act 1997*. Remediation works must be undertaken by a suitably qualified and experienced consultant(s) and must be completed prior to the commencement of earthworks.

Validation Report

B68. Within one month of completion of the remediation works for the development, the Applicant must submit a Remediation Validation Report (RVR) to the satisfaction of the Planning Secretary which has been prepared, or reviewed and approved, by a consultant certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The validation report shall demonstrate that:

(a) the site is suitable for its intended industrial land use, or

(b) the site is suitable for its intended industrial land use with the implementation of an environmental management plan or long term environmental management plan.

Asbestos

B69. The Applicant must ensure that any asbestos encountered during the remediation works for the development is monitored, handled, transported and disposed of by appropriately qualified and licensed contractors in accordance with the requirements of SafeWork NSW and relevant guidelines, including:

(a) *Work Health and Safety Regulation 2017*;

(b) SafeWork NSW Code of Practice – How to Manage and Control Asbestos in the Workplace September 2016;

(c) SafeWork NSW Code of Practice – How to Safely Remove Asbestos September 2016; and

(d) *Protection of the Environment Operations (Waste) Regulation 2014*.

Unexpected Finds

B70. Prior to the commencement of earthworks, the Applicant must prepare an unexpected contamination finds procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the CEMP in accordance with condition C2 and must ensure any material identified as contaminated is disposed of in accordance with the POEO Act and its associated regulations. Details of the final disposal location and the results of any associated testing must be submitted to the Planning Secretary prior to removal of the contaminated material from the site.

BUSHFIRE PROTECTION

B71. The Applicant shall ensure the development complies with:

(a) the relevant provisions of *Planning for Bushfire Protection* (NSW RFS, 2019);

(b) the recommendations of the Bushfire Protection Assessment prepared by Australian Bushfire Protection Planners dated 3 March 2022; and

(c) Australian Standard *AS2419.1-2005 Fire hydrant installations System design, installation, and commissioning*.

B72. The Applicant must ensure the entire site, including landscaping, is managed as an inner protection area (IPA) in accordance with *Planning for Bushfire Protection 2019.*

B73. The Applicant must ensure the warehouse buildings are constructed in accordance with the Bushfire Attack Level (BAL) plan shown in **Appendix 4** and relevant sections of the Australian Standard AS3959-2018 *Construction of buildings in bush fire prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas - 2014* as appropriate, and Section 7.5 of *Planning for Bushfire Protection, 2019.*

AIR QUALITY

Dust Minimisation

B74. The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.

B75. During construction, the Applicant must ensure that:

(a) exposed surfaces and stockpiles are suppressed by regular watering;

(b) all trucks entering or leaving the site with loads have their loads covered;

(c) trucks associated with the development do not track dirt onto the public road network;

(d) public roads used by these trucks are kept clean; and

(e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.

Construction Air Quality Management Plan

B76. Prior to the commencement of earthworks, the Applicant must prepare a Construction Air Quality Management Plan (CAQMP) to the satisfaction of the Planning Secretary. The CAQMP must form part of the CEMP required by condition C2 and must:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with owners of adjoining residential properties (including those still occupied for residential use in the MRP), include evidence of this consultation, details of any issues raised and how the plan has responded to any issues raised during consultation;

(c) detail and rank all emissions from all sources during construction of the development, including particulate emissions;

(d) describe a program that is capable of evaluating the performance of the construction and determining compliance with key criteria, including installation of dust deposition gauges at neighbouring existing residences (where agreed by the landowner) or on the site boundary;

(e) identify the control measures that will be implemented for each emission source; and

(f) nominate the following for each of the proposed controls:

(i) key criteria;

(ii) monitoring method; and

(iii) location, frequency and duration of monitoring;

(g) outline procedures that will be implemented in relation to:

(i) record keeping;

(ii) reporting to the Environmental Representative required under Condition A35;

(iii) complaints register;

(iv) response procedures; and

(v) compliance monitoring;

(h) detail contingency measures to be implemented to reduce any exceedances of relevant performance indicators or criteria and include a timetable for implementation.

B77. The Applicant must:

(a) not commence earthworks until the CAQMP required by condition B76 is approved by the Planning Secretary; and

(b) implement the most recent version of the CAQMP approved by the Planning Secretary for the duration of construction; and

(c) offer to enter into an agreement with a neighbouring landowner, that may involve at-property treatment, if a complaint is received from that landowner and a non-compliance is confirmed by dust monitoring. Evidence of any agreement must be provided to the Planning Secretary.

Odour Management

B78. The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).

ABORIGINAL HERITAGE

Statutory Requirements

B79. Prior to the commencement of earthworks, the Applicant must undertake surface collection of the identified artefacts IF1, IF2 and IF3 as detailed in the Aboriginal Cultural Heritage Assessment Report prepared by Urbis and dated 12 April 2022. The identified artefacts must be registered on the OEH's Aboriginal Heritage Information Management System (AHIMS) Aboriginal Sites Register, prior to construction.

Consultation

B80. The Applicant must continue to consult with Registered Aboriginal Parties (RAPs) for the duration of construction. The RAPs should be consulted to determine the appropriate management of unexpected finds on the site.

Site Induction

B81. Prior to the commencement of earthworks, the Applicant must prepare and implement Aboriginal cultural heritage induction training for all staff and contractors. The Applicant must involve Aboriginal knowledge holders in the development of the induction training. The training must outline the obligations of staff and contractors under the *National Parks and Wildlife Act, 1974* and the conditions of this consent. The Applicant must ensure any new staff or contractors receive the induction training prior to commencing works on the site. The induction training material must form part of the CEMP required by condition C2.

Unexpected Finds Protocol

B82. If any item or object of Aboriginal heritage significance is identified on site:

(a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately;

(b) a 10 m wide buffer area around the suspected item or object must be cordoned off; and

(c) Heritage NSW must be contacted immediately.

B83. Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the *National Parks and Wildlife Act 1974*.

HISTORIC HERITAGE

Unexpected Finds Protocol

B84. If any non-Aboriginal archaeological relics are uncovered during any works being carried out for the development:

(a) all work in the immediate vicinity of the suspected relic(s) must cease immediately;

(b) Heritage NSW must be contacted immediately; and

(c) the suspected relic(s) must be evaluated, recorded and, if necessary, excavated by a suitably qualified and experienced expert in accordance with the requirements of Heritage NSW.

B85. Work in the immediate vicinity of any suspected non-Aboriginal archaeological relic(s) must not recommence until this has been authorised by Heritage NSW.

BIODIVERSITY

B86. Prior to, and during, construction works the Applicant must implement the mitigation measures recommended in Section 2.2.5 of the Biodiversity Development Assessment Report prepared by Eco Logical Australia Pty Ltd, dated 14 April 2022.

B87. Prior to the commencement of construction, a Wildlife Management Plan must be prepared in accordance with section 6.2 of the *Westlink Industrial Estate Wildlife Management Assessment Report* prepared by Eco Logical Australia Pty Ltd dated 14 April 2022, and be submitted to the Planning Secretary.

B88. The Wildlife Management Plan must form part of the CEMP required by Condition C2 and the Applicant must implement the Wildlife Management Plan for the duration of construction and operation.

HAZARDS AND RISK

Dangerous Goods

B89. The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department's *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* at all times.

Bunding

B90. The Applicant must store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Manual* (Department of Environment and Climate Change, 2007).

WASTE MANAGEMENT

Waste Management Plan

B91. Prior to the commencement of construction of the first warehouse building, the Applicant must update the Waste Management Plan included in the EIS for the development. The Plan must:

(a) detail the type and quantity of waste to be generated during construction and operation of the development;

(b) describe the handling, storage and disposal of all waste streams generated on site, consistent with the *Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014* and the *Waste Classification Guideline* (Environment Protection Authority, 2014); and

(c) detail the materials to be reused or recycled, either on or off site.

B92. The Applicant must implement the Waste Management Plan for the duration of construction and operation.

Waste Storage and Processing

B93. Prior to the commencement of construction of the development, the Applicant must obtain agreement from Council for the design of the waste storage area for the development.

B94. Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site onto neighbouring public or private properties.

Statutory Requirements

B95. The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's *Waste Classification Guidelines Part 1: Classifying Waste* (EPA, 2014) and dispose of all wastes to a waste management facility or premises lawfully permitted to accept the waste.

Pests, Vermin and Priority Weed Management

B96. The Applicant must:

(a) implement suitable measures to manage pests, vermin and declared priority weeds on the site; and

(b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or priority weeds are not present on site in sufficient numbers to pose an environmental hazard or cause the loss of amenity in the surrounding area.

Note: *For the purposes of this condition, priority weed has the same definition of the term in the* Biosecurity Act 2015.

PART C ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Management Plan Requirements

C1. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

(a) detailed baseline data;

(b) details of:

(i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);

(ii) any relevant limits or performance measures and criteria; and

(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;

(c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;

(d) a program to monitor and report on the:

(i) impacts and environmental performance of the development; and

(ii) effectiveness of the management measures set out pursuant to paragraph (c) above;

(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;

(f) a program to investigate and implement ways to improve the environmental performance of the development over time;

(g) a protocol for managing and reporting any:

(i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);

(ii) complaint;

(iii) failure to comply with statutory requirements; and

(h) a protocol for periodic review of the plan.

Note: *The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans*

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

C2. The Applicant must prepare a Construction Environmental Management Plan (CEMP) for the development in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.

C3. As part of the CEMP required under condition C2 of this consent, the Applicant must include the following:

(a) Construction Traffic Management Plan (see condition B1);

(b) Erosion and Sediment Control Plan (see condition B21);

(c) Dam Decommissioning Strategy (see condition B36);

(d) Construction Noise and Vibration Management Plan (see condition B50);

(e) Unexpected Finds Protocol (see condition B70);

(f) Construction Air Quality Management Plan (see condition B76);

(g) Site induction training material (see condition B81);

(h) Wildlife Management Plan (see condition B87);

(i) Community Consultation and Complaints Handling.

C4. The Applicant must:

(a) not commence construction of the development until the CEMP is approved by the Planning Secretary; and

(b) carry out the construction of the development in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

C5. The Applicant must prepare an Operational Environmental Management Plan (OEMP) for the development in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.

C6. As part of the OEMP required under condition C5 of this consent, the Applicant must include the following:

(a) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;

(b) describe the procedures that would be implemented to:

(i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;

(ii) receive, handle, respond to, and record complaints;

(iii) resolve any disputes that may arise;

(iv) respond to any non-compliance;

(v) respond to emergencies; and

(c) include the following environmental management plans:

(i) Operational Traffic Monitoring Program (see condition B3);

(ii) Workplace Travel Plan (see condition B18);

(iii) Stormwater Management Plan (see condition B30);

(iv) Landscape Management Plan (see condition B38);

(v) Wildlife management Plan (see condition B87);

(vi) Waste Management Plan (see condition B91).

(d) detail measures to minimise air emissions during operation.

C7. The Applicant must:

(a) not commence operation until the OEMP is approved by the Planning Secretary; and

operate the development in accordance with the OEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time).

REVISION OF STRATEGIES, PLANS AND PROGRAMS

C8. Within three months of:

(a) the submission of a Compliance Report under condition C14;

(b) the submission of an incident report under condition C10;

(c) the approval of any modification of the conditions of this consent; or

(d) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,

the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing of the outcomes of any review.

C9. If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review required under condition C8, or such other timing as agreed by the Planning Secretary.

Note: *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.*

REPORTING AND AUDITING

Incident Notification, Reporting and Response

C10. The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in **Appendix 6**.

Non-Compliance Notification

C11. The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance.

C12. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

C13. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Compliance Reporting

C14. Within six months after the commencement of construction of the development, and in the same month each subsequent year (or such other timing as agreed by the Planning Secretary) for the duration of construction works, the Applicant must submit a Compliance Report to the Planning Secretary reviewing the environmental performance

of the development to the satisfaction of the Planning Secretary. Compliance Reports must be prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2020) and must also:

(a) identify any trends in the monitoring data;

(b) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and

(c) describe what measures will be implemented over the next year to improve the environmental performance of the development.

C15. The Applicant must make each Compliance Report publicly available no later than 60 days after submitting it to the Planning Secretary and notify the Planning Secretary in writing at least seven days before this is done.

Monitoring and Environmental Audits

C16. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance reporting and independent auditing.

Note: *For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.*

ACCESS TO INFORMATION

C17. At least 48 hours before the commencement of construction of the development and for the life of the development, the Applicant must:

(a) make the following information and documents (as they are obtained or approved) publicly available on its website:

(i) the documents referred to in condition A2 of this consent;

(ii) all current statutory approvals for the development;

(iii) all approved strategies, plans and programs required under the conditions of this consent;

(iv) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;

(v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;

(vi) a summary of the current stage and progress of the development;

(vii) contact details to enquire about the development or to make a complaint;

(viii) a complaints register, updated monthly;

(ix) the Compliance Report of the development;

(x) any other matter required by the Planning Secretary; and

(b) keep such information up to date, to the satisfaction of the Planning Secretary.

PART D EXTERNAL ROAD WORKS

ADMINISTRATIVE CONDITIONS

Terms of Consent

D1. The External Road Works may only be carried out:

(a) in compliance with the conditions of this consent;

(b) in accordance with all written directions of the Planning Secretary;

(c) in accordance with the Modification Report and Response to Submissions for Modification 5; and

(d) in accordance with the plans in Appendix 7.

Notification of Commencement

D2. The date of commencement of each of the following phases of the External Road Works must be notified to the Planning Secretary in writing, at least one month before that date, or as otherwise agreed with the Planning Secretary:

(a) construction of each stage of the External Road Works, including any sub-stages;

(b) operation of the interim traffic signals at the Mamre Road / Abbotts Road intersection; and

(c) completion of the External Road Works.

Mamre Road / Abbotts Road Intersection Works - Works Authorisation Deed

D3. Within 3 months of the date of the consent for SSD-9138102-Mod-5, or as otherwise agreed by the Planning Secretary, the Applicant must enter into a Works Authorisation Deed with TfNSW for the Mamre Road/Abbotts Road intersection works, including the installation of the interim signalised intersection of Abbotts Road and Aldington Road. TfNSW fees for administration, plan checking, civil works inspections and project management shall be paid by the Applicant prior to the commencement of works.

D4. Prior to the commencement of construction of the interim traffic control signals, the proposed Traffic Control Signal/s (TCS) at the intersection of Mamre Road/Abbotts Road and Aldington Road/Abbotts Road must be designed to meet TfNSW requirements and have approval under section 87(4) of the *Roads Act, 1993*. The TCS plans shall be drawn by a suitably qualified person and endorsed by a suitably qualified practitioner.

The submitted design shall be in accordance with Austroads Guide to Road Design in association with relevant TfNSW supplements (available on www.transport.nsw.gov.au). The certified copies of the TCS design and civil design plans shall be submitted to TfNSW for consideration and approval prior to the release of a Construction Certificate and commencement of construction of the traffic control signals. Please send all documentation to development.sydney@transport.nsw.gov.au.

D5. Detailed design plans and hydraulic calculations of any changes to the stormwater drainage system are to be submitted to TfNSW for approval, prior to the commencement of any works referred to in Condition D3. Please send all documentation to is development.sydney@transport.nsw.gov.au. A plan checking fee will be payable and a performance bond may be required before TfNSW approval is issued.

D6. The Applicant must be responsible for all public utility adjustment/relocation works, necessitated by the work referred to in Condition D3 and as required by the various public utility authorities and/or their agents. Should any public utility adjustment/relocation works be required adjacent to a classified road, plans are to be submitted to TfNSW for concurrence under section 138 of the *Roads Act, 1993*, prior to the commencement of any works. Please send all documentation to is development.sydney@transport.nsw.gov.au.

A plan checking fee may be payable and a performance bond may be required before TfNSW approval is issued.

D7. Any realignment of site boundaries to facilitate the works referred to in Condition D3, inclusive but not limited to drainage, footpaths and batters resulting from the proposed road and construction works, must be dedicated as public road at no cost to the relevant roads authority unless specified otherwise in a planning agreement.

D8. The Applicant must obtain a Road Occupancy Licence (ROL) from TfNSW Transport Management Centre for any works that may impact on traffic flows on Mamre Road during construction activities. A ROL can be obtained through https://myrta.com/oplinc2/pages/security/oplincLogin.jsf.

Internal Access Roads

D9. Prior to the commencement of operation of the first warehouse building, the Applicant must construct and operate the east-west internal road works shown in Figure 1 in Appendix 1 to the satisfaction of relevant road authority.

D10. Prior to the commencement of operation of warehouse 4, the Applicant must construct and operate the north-south internal road works shown in Figure 1 in Appendix 1 to the satisfaction of the relevant road authority.

Abbotts Road and Aldington Road Widening Works

D11. The Applicant must design and construct the Abbotts Road and Aldington Road widening works in accordance with the requirements of Council and any approval issued under section 138 of the *Roads Act 1993*.

Road Maintenance

D12. The Applicant is responsible for the upkeep and repair of the operational road pavement of Abbotts Road for its full length within the existing road reserve and Aldington Road across the development frontage (full width) during the External Road Works. The repair works must be undertaken to the satisfaction of Council, and be at no cost to Council. Weekly pavement inspections must be undertaken by the Applicant to ensure that the road pavements are safe for all vehicles. Any identified potholes or pavement failures must be reported to Council immediately together with the proposed rectification method and timing for repair. All repairs must be undertaken at no cost to Council. If Council is required to undertakes any repairs to the road works to ensure a safe operating environment for all road users, the cost of such will be paid by the Applicant.

Timing

D13. Prior to the commencement of operation of warehouse 1, the Applicant must prepare an Operational Traffic Management Plan (OTMP) for the development to the satisfaction of the Planning Secretary. The OTMP must:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with TfNSW and Council;

(c) detail the measures to be implemented to manage operational traffic from warehouse 1 to ensure that all operational traffic accesses the site from Abbotts Road via a left turn in from Mamre Road and exit the site via Abbotts Road and turn left onto Mamre Road until the interim traffic signals are operational;

(d) detail the measures to manage operational traffic with concurrent construction traffic from the site and the External Road Works and other public traffic, to ensure road safety and network efficiency at all times;

(e) detail heavy vehicle routes, turning restrictions, access and parking arrangements;

(f) include an Operational Driver Code of Conduct to:

(i) minimise impacts on the local and regional road network;

(ii) minimise conflicts with other road users;

(iii) minimise road traffic noise;

(iv) inform truck drivers of the site access arrangements, turning restrictions and use of specified routes;

(v) include a program to monitor the effectiveness of these measures; and

(vi) detail the compliance actions that would be implemented for any vehicles that deviate from approved routes and turning restrictions.

D14. The Applicant must:

(a) not commence operation of warehouse1 until the OTMP required by condition D13 is approved by the Planning Secretary;

(b) update the OTMP to reflect any changes to staging, routes or turning restrictions, and submit the updated plan to the Planning Secretary for approval, at least 1 month prior to implementing the changes; and

(c) implement the most recent version of the OTMP approved by the Planning Secretary for the duration of the development.

D15. The Applicant must lodge an application under section 138 of the *Roads Act 1993* to the relevant roads authority to undertake the Stage 1 Abbotts Road Widening Works within 1 month of the date of consent of SSD-9138102-Mod-5.

D16. The Applicant must complete the Stage 1 Abbotts Road Widening Works within 4 months of receiving the section 138 *Roads Act, 1993* approval for the works, to the satisfaction of the relevant roads authority, unless otherwise agreed by the Planning Secretary.

D17. The Applicant must execute a Voluntary Planning Agreement with Council to complete the remaining stages of the Abbotts and Aldington Road widening works, within 12 months of the date of consent of SSD-9138102-Mod-5 and prior to the issue of an occupation certificate for warehouse 4.

D18. The Applicant must complete the External Road Works to the satisfaction of the relevant roads authorities prior to operation of warehouse 4.

D19. The Applicant must comply with the requirements of TfNSW and Council for all construction and operational vehicle movements, as detailed in Construction Traffic Management Plans approved as part of the WAD and *Section 138 Roads Act, 1993* approval processes.

D20. The Applicant must not:

(a) undertake any subsequent development, including exempt or complying development, on the Stage 1 site shown in Figure 1 in Appendix 1; and

(b) commence operation of warehouse 4;

until the External Road Works are completed to the satisfaction of the Planning Secretary.

D21. All External Road Works must be completed, to the satisfaction of the relevant roads authorities, prior to any other buildings on the Stage 1 site receiving occupation certificate(s).

COMMUNITY CONSULTATION PLAN

D22. The Applicant must prepare a Community Consultation Plan for the External Road Works to the satisfaction of the Planning Secretary. The Plan must:

(a) be approved by the Planning Secretary prior to the commencement of the External Road Works;

(b) be implemented for the duration of the External Road Works;

(c) assign a central contact person to keep the community regularly informed throughout the works;

(d) detail the mechanisms for regularly consulting with the nearest sensitive receivers and wider residential communities, to keep them informed about:

(i) upcoming works, duration and any night-time or out of hours works;

(ii) changes to property access and details of traffic disruptions;

(iii) schedule for high noise generating works and vibration intensive activities, including details of the specific mitigation measures that would be implemented in accordance with the construction noise and vibration management plan approved under Condition D25;

(iv) procedures to minimise dust impacts including details of the controls that would be implemented in accordance with the air quality management plan approved under Condition D25;

(v) relocation of services including utilities and drainage; and

(vi) details of environmental monitoring results;

(e) include contact details for key project personnel, relevant regulatory authorities and key community stakeholders;

(f) include a complaints procedure for recording, responding to and managing complaints, including:

(i) website, email, toll-free telephone number and postal address for receiving complaints;

(ii) advertising the contact details for complaints prior to and during the works through on-site signage;

(iii) a complaints register to record the date, time and nature of the complaint, details of the complainant and any actions taken to address the complaint; and

(iv) procedures to resolve any disputes that may arise during the course of the External Road Works.

D23. The Applicant must:

(a) not commence construction of the External Road Works until the Community Consultation Plan is approved by the Planning Secretary;

(b) implement the approved Community Consultation Plan for the duration of the External Road Works.

D24. The Applicant must provide details of the consultation undertaken in accordance with the Community Consultation Plan, to the Planning Secretary on a monthly basis including:

(a) the outcomes of consultation, matters resolved and unresolved; and

(b) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

D25. Prior to the commencement of the External Road Works, the Applicant must prepare a Construction Environmental Management Plan (CEMP) for the External Road Works in accordance with the requirements of Condition C1 and to the satisfaction of the Planning Secretary. The CEMP must include the following:

(a) be prepared in consultation with Council;

(b) a **traffic management plan** prepared in consultation with TfNSW and Council, detailing the measures to ensure road safety and network efficiency during the External Road Works, a Driver Code of Conduct, a program to monitor the effectiveness of the measures and adherence to specified routes, and procedures for notifying residents and local schools of any disruptions to routes;

(c) a **noise and vibration management plan** prepared in accordance with the *Construction Noise and Vibration Guideline*, TfNSW 2023 and *Interim Construction Noise Guideline*, DECC 2009, describing measures developed in consultation with affected residents to manage high noise and vibration intensive works, and include an out of hours work protocol. Measures may include notifications, respite periods, scheduling of noisy works, temporary barriers, quieter plant or alternative construction methods, verification monitoring and/or provision of alternative accommodation;

(d) an **air quality management plan** prepared in accordance with the *Good Practice Guide for the Assessment and Management of Air Pollution from Road Transport Projects*, CASANZ 2023, detailing the location and

duration of dust controls, details of monitoring and triggers for implementation of additional dust controls if required;

(e) an **erosion and sediment control plan** prepared in accordance with *Managing Urban Stormwater: Soils and Construction – Volume 1: Blue Book* (Landcom, 2004) and detail the measures to ensure the construction phase water quality targets in the *Technical Guidance for Achieving Wianamatta South Creek Stormwater Management Targets* (Technical Guidance) (NSW Government, 2022) are met;

(f) mitigation measures recommended in the Biodiversity Development Assessment Report for the Mamre and Abbotts Road Intersection prepared by Fraser Ecological and dated 3 June 2024;

(g) a **cultural heritage management plan** including an unexpected finds protocol, prepared in consultation with Registered Aboriginal Parties;

(h) an **unexpected finds procedure** to manage any unexpected contamination encountered during the works, including details of testing and off-site disposal in accordance with the POEO Act and associated regulations; and

(i) a **contingency plan** detailing measures to deal with unexpected issues arising during the works, such as excessive dust, noise, traffic, water quality impacts and unfavourable weather conditions.

D26. The Applicant must:

(a) not commence construction of the External Road Works until the CEMP is approved by the Planning Secretary; and

(b) carry out the construction of the External Road Works in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.

INDEPENDENT AUDIT

D27. Within six months of the commencement of construction of the External Road Works, and every six months thereafter, until completion of the works, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the works. The audits must:

(a) be prepared in accordance with the Independent Audit Post Approval Requirements (Department, 2020)

(b) be led and conducted by a suitably qualified, experienced and independent expert, including a specialist traffic person, whose appointment has been endorsed by the Planning Secretary;

(c) assess the environmental performance of the External Road Works;

(d) assesses whether the works are complying with the conditions of this consent; and

(e) recommends measures or actions to improve the environmental performance of the works; and

(f) be submitted to the satisfaction of the Planning Secretary within six weeks of commissioning the Audit (or within another timeframe agreed by the Planning Secretary).

D28. In accordance with the specific requirements in the Independent Audit Post Approval Requirements (Department 2020), the Applicant must:

(a) review and respond to each Independent Audit Report prepared under condition D27 of this consent;

(b) submit the response to the Planning Secretary and any other NSW agency that requests it, together with a timetable for the implementation of the recommendations;

(c) implement the recommendations to the satisfaction of the Planning Secretary; and

(d) make each Independent Audit Report and response to it publicly available no later than 60 days after submission to the Planning Secretary and notify the Planning Secretary in writing at least 7 days before this is done.

NOISE

D29. The External Road Works must be undertaken during the following hours:

(a) 7 am to 6 pm Monday to Friday;

(b) 8 am to 1 pm Saturday; and

(c) at no time on Sundays or public holidays.

D30. Works outside of the hours identified in condition D29 may be undertaken in the following circumstances:

(a) works that are inaudible at the nearest sensitive receivers;

(b) works agreed to in writing by the Planning Secretary;

(c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

(d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

D31. Notwithstanding Conditions D29 and Condition D30, the following works may be undertaken out of hours, in accordance with the Out of Hours Works Protocol approved under Condition D25(c):

(a) installation of drainage infrastructure;

(b) asphalting; and

(c) other works required to be completed at night for safety reasons, as detailed in an approved CTMP.

VIBRATION

Condition Surveys

D32. Prior to the commencement of the External Road Works, the Applicant must:

(a) undertake building condition surveys for properties located within 25 metres of the works; and

(b) prepare a dilapidation survey of the heritage post adjacent to Mamre Road.

D33. The Applicant must repair, or pay the full costs associated with repairing property that is damaged by carrying out the External Road Works.

Vibration Criteria

D34. Vibration caused by external road works at any residence or structure outside the site must be limited to:

(a) for structural damage, the latest version of *DIN 4150-3 (2016-12) Vibration in Buildings – Part 3: Effects on Structures* (German Institute for Standardisation, 2016); and

(b) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: a technical guideline* (DEC, 2006) (as may be updated or replaced from time to time).

D35. Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition D34.

D36. The limits in Conditions D34 and D35 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved under Condition D25 of this consent.

APPENDIX 1 DEVELOPMENT LAYOUT PLANS

Table 4 Schedule of Approved Plans

Drawing No.	Title	Issue	Date
Architectural Drawings prepared by Nettletontribe Architects			
DA102	Estate Plan - Stage 1	P22	30/10/2023
DA104	Lower Ground Floor Plan - LOT4	P2	13/02/2023
DA105	Ground Floor Plan - LOT1	P21	30/10/2023
DA106	Ground Floor Plan - LOT4	P14	15/02/2023
DA107	Roof Plan - LOT1	P14	30/10/2023
DA108	Roof Plan - LOT4	P7	13/02/2023
DA121	Elevations - LOT1	P15	30/10/2023
DA124	Elevations - LOT4	P7	13/02/2023
DA151	Retain Wall & Fence - LOTS 1 & 4	P11	30/10/2023
Landscape Concept prepared by Site Image			
001	Landscape Stage 01 Masterplan Report	B	25/03/2024
Tree Canopy Plan prepared by Site Image			
STAGE1_SK001	Tree Canopy Plan	E	20/02/2023
Civil Works Package – Infrastructure Works			
20-748 – SKC182	INTERIM STORMWATER MANAGEMENT PLAN	A	27/03/2023

Figure 1: Site Plan(s)

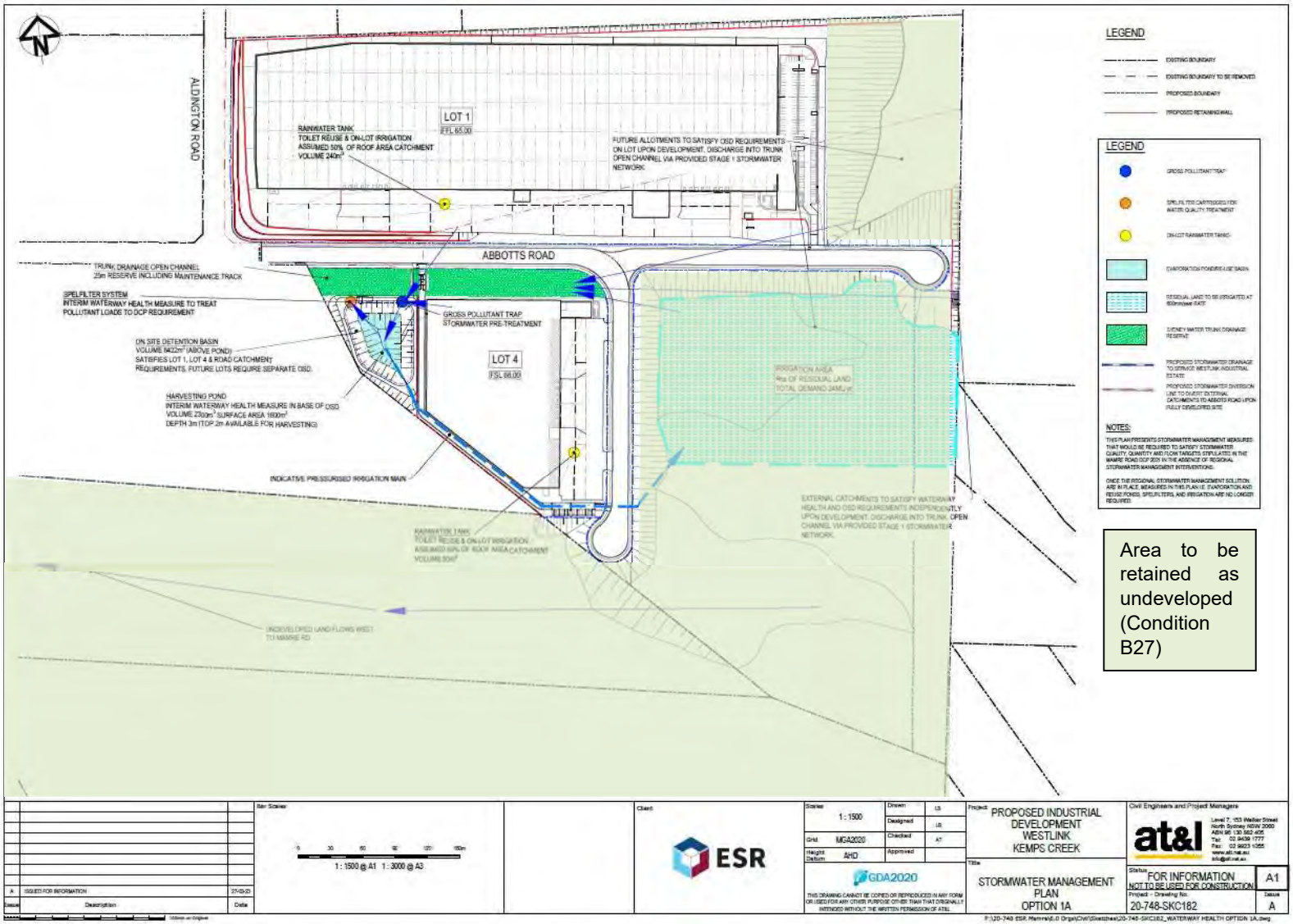

Figure 2: Stormwater Management Infrastructure

APPENDIX 2 NOISE SENSITIVE RECEIVERS

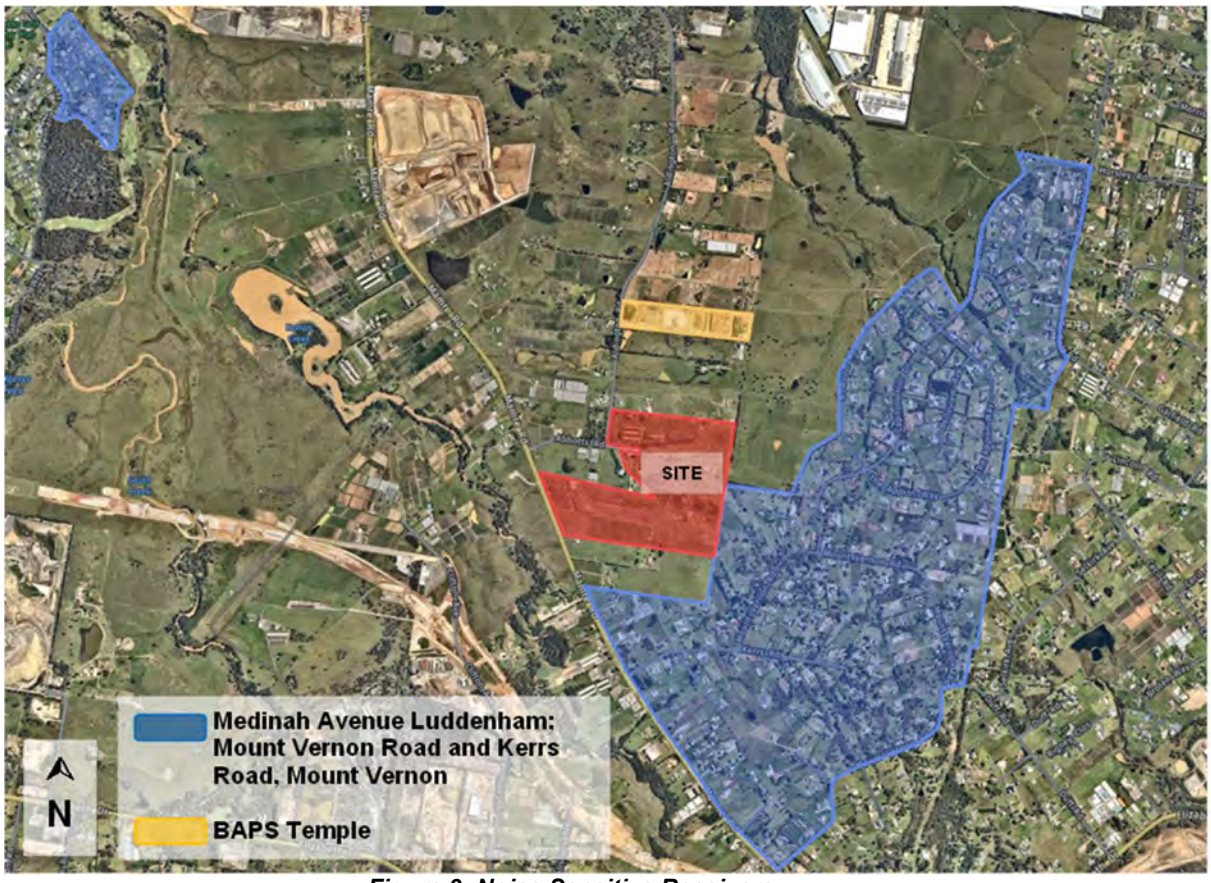

Figure 3: Noise Sensitive Receivers

APPENDIX 3 NOISE MITIGATION ELIGIBLE RECEIVERS' LOCATIONS

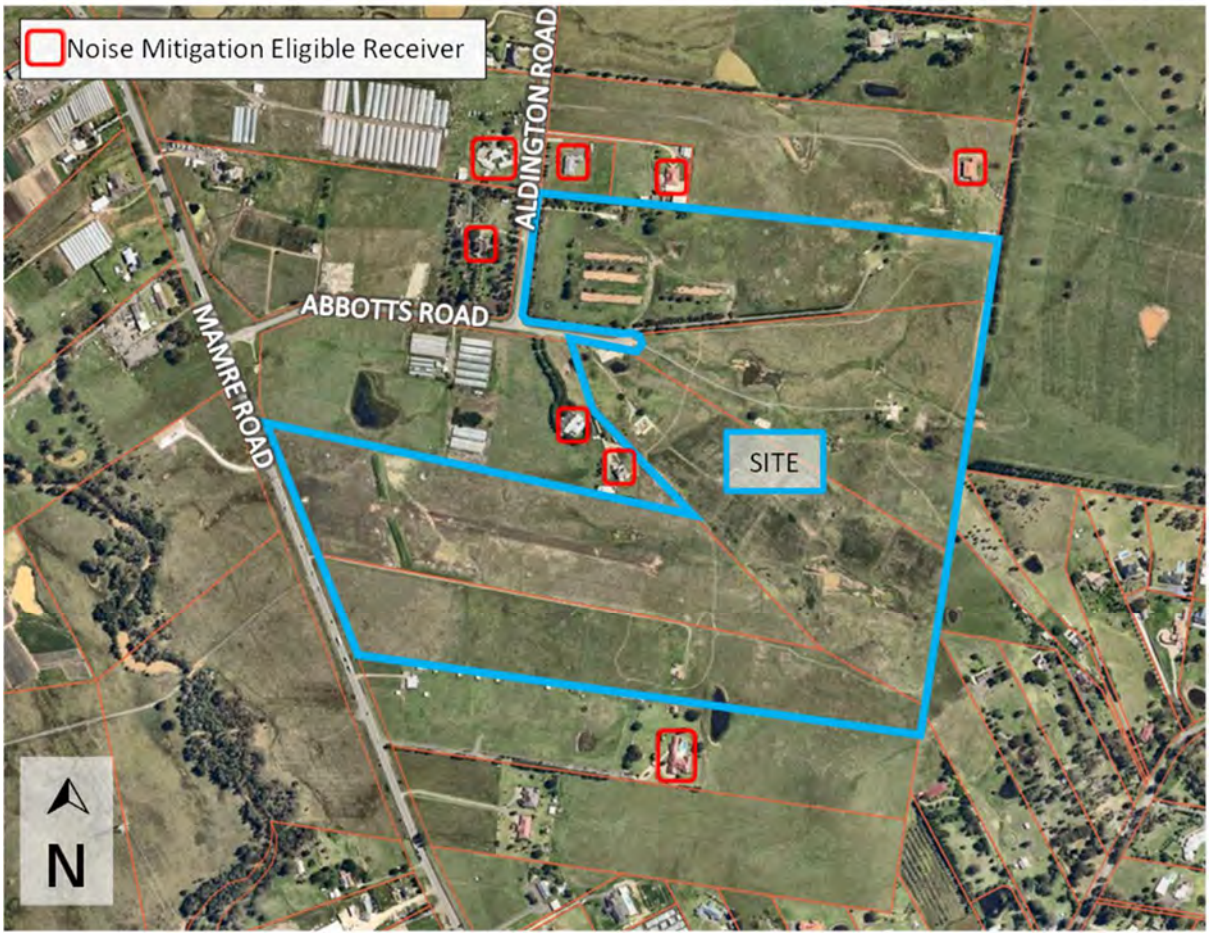

Figure 4: Noise mitigation eligible receivers within the MRP

APPENDIX 4 BUSHFIRE ATTACK LEVEL PLAN

BLACKASH
BUSHFIRE CONSULTING

Figure 5: Bushfire Attack Level Plan

APPENDIX 5 APPLICANT'S MANAGEMENT AND MITIGATION MEASURES

Construction Hours

Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:
Monday to Friday: 7:00 to 18:00;
Saturday: 8:00 to 13:00; and
No work on Sundays or public holidays

Construction Impacts

A Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor prior to the commencement of works. The CEMP will establish site management principles.

Sedimentation and erosion control

The development is to follow the Soil and Water Management Plan, site inspection and maintenance requirements, and sediment basin maintenance measures outlined in Section 8 of the Civil Infrastructure Report and Plans prepared by AT&L dated 14 February 2023.

Site Inspection and Maintenance

- The inspection and maintenance requirements outlined in this section must be carried out while either earthworks or quarrying is being conducted, and all areas re-established. The Contractor will be required to inspect the site after every rainfall event and at least weekly, and will:
- Inspect and assess the effectiveness of the SWMP and identify any inadequacies that may arise during normal work activities or from a revised construction methodology.
- Construct additional erosion and sediment control works as necessary to ensure the desired protection is given to downstream lands and waterways.
- Ensure that drains operate properly and to affect any repairs.
- Remove spilled sand or other materials from hazard areas, including lands closer than 5 metres from areas of likely concentrated or high velocity flows especially waterways and paved areas.
- Remove trapped sediment whenever less than design capacity remains within the structure.
- Ensure rehabilitated lands have affectively reduced the erosion hazard and to initiate upgrading or repair as appropriate.
- Maintain erosion and sediment control measures in a fully functioning condition until all construction activity is completed and the site has been rehabilitated.
- Remove temporary soil conservation structures as the last activity in the rehabilitation.
- Inspect the sediment basin during the following periods:
    - During construction to determine whether machinery, falling trees, or construction activity has damaged and components of the sediment basin. If damage has occurred, repair it.
    - After each runoff event, inspect the erosion damage at flow entry and exit points. If damage has occurred, make the necessary repairs.
    - At least weekly during the nominated wet season (if any), otherwise at least fortnightly; and
    - Prior to, and immediately after, periods of 'stop work' or site shutdown.
- Clean out accumulated sediment when it reaches the marker board/post and restore the original volume. Place sediment in a disposal area or, if appropriate, mix with dry soil on the site.
- Do not dispose of sediment in a manner that will create an erosion or pollution hazard.
- Check all visible pipe connections for leaks, and repair as necessary.
- Check all embankments for excessive settlement, slumping of the slopes or piping between the conduit and the embankment, make all necessary repairs.
- Remove the trash and other debris from the basin and riser; and
- Submerged inflow pipes must be inspected and de-silted (as required) after each inflow event.

Sediment Basin Maintenance

The site contains 'Type F' soils, or soils that contain a significant proportion of fine grained (33% or more of finer than 0.02mm) and require a much longer residence time to settle. Stormwater within the settling zone should be drained or pumped out within 5 days (design time), if the nominated water quality targets can be met, to the satisfaction of the superintendent. Flocculation should be employed where extended settling is likely to fail to meet the objectives within the 5-day period. Flocculation is when flocculating agents are applied to the sediment basins causing the colloidal particles to clump into larger units or 'floc' that can either settle in a reasonable time or be filtered. Refer to Appendix E4 of the Blue Book for flocculation methodologies and manufacturer's instructions for application rates, regarding the proposed sediment basins.

Stormwater Management

Design criteria and requirements for the proposed site stormwater management and stormwater drainage are outlined in the following documents:

- AS 3500.3 – Plumbing and drainage – Stormwater drainage
- Commonwealth of Australia (Geoscience Australia), Australian Rainfall and Runoff: A guide to flood estimation, 2019.
- NSW Department of Planning, Industry and Environment (DPIE), Mamre Road Precinct Development Control Plan 2021.
- NSW Department of Planning, Industry and Environment (DPIE), MUSIC Modelling Toolkit – Wianamatta, 2 August 2021.

- Penrith City Council, Design Guidelines for Engineering Works for Subdivisions and Developments, as amended 20 November 2013.
- Penrith City Council, Water Sensitive Urban Design (WSUD) Policy, December 2013.
- Penrith City Council, WSUD Technical Guidelines, Version 4 – October 2020.

Noise Management

The development is to follow the construction noise and vibration mitigation measures outlined in Section 7.5 of the Noise and Vibration Assessment prepared by RWDI at Appendix J of the ADR.

Without mitigation, noise levels from construction activities have been predicted to exceed the noise management levels nominated in the guidelines at some surrounding receivers. Therefore, noise control measures are recommended to ensure that noise is reduced where feasible. The following project-specific mitigation measures are recommended:

- Selection of quietest feasible construction equipment;
- Use of saw cutting in preference to rock-breakers where feasible; and
- Localised treatment such as barriers, shrouds, and the like around fixed plant, such as pumps, generators, and concrete pumps.

In addition, the following measures should be included in a Noise & Vibration Management Plan.

- Plant Noise Audit – Noise emission levels of all critical items of mobile plant and equipment should be checked for compliance with noise limits appropriate to those items prior to the equipment going into regular service. To this end, testing should be established with the contractor.
- Operator Instruction – Operators should be trained in order to raise their awareness of potential noise problems and to increase their use of techniques to minimise noise emission.
- Equipment Selection – All fixed plant at the work sites should be appropriately selected, and where necessary, fitted with silencers, acoustical enclosures, and other noise attenuation measures in order to ensure that the total noise emission from each work site complies with EPA guidelines.
- Site Noise Planning – Where practical, the layout and positioning of noise-producing plant and activities on each work site should be optimised to minimise noise emission levels.
- The adoption of the above measures is aimed at working towards achieving the noise management levels established at surrounding receivers.

Community Liaison and General Approaches to Mitigation

An effective community relations programme should be put in place to keep the community that has been identified as being potentially affected appraised of progress of the works, and to forewarn potentially affected groups (e.g. by letterbox drop, meetings with surrounding owners/tenants, etc) of any anticipated changes in noise and vibration emissions prior to critical stages of the works, and to explain complaint procedures and response mechanisms.

Close liaison should be maintained between the communities overlooking work sites and the parties associated with the construction works to provide effective feedback in regard to perceived emissions. In this manner, equipment selections and work activities can be coordinated where necessary to minimise disturbance to neighbouring communities, and to ensure prompt response to complaints, should they occur.

Noise & Vibration Management Plan

A Construction Noise & Vibration Management Plan for the site is recommended which should be prepared by the successful contractor. The plan should reference the findings of this assessment. Areas that should be addressed in plan include:

- Noise and vibration mitigation measures;
- Noise and vibration monitoring;
- Response to complaints;
- Responsibilities;
- Monitoring of noise emissions from plant items;
- Reporting and record keeping;
- Non-compliance and corrective action; and
- Community consultation and complaint handling

Biodiversity

The development is to follow the measures proposed to mitigate and manage biodiversity impacts outlined in Section 2.2.5 of the Biodiversity Development Assessment Report prepared by Eco Logical at Appendix N of the RTS.

- Instigating clearing protocols including pre-clearing surveys, daily surveys and staged clearing, the presence of a trained ecological or licensed wildlife handler during clearing events
- Installing artificial habitats for fauna in adjacent vegetation and habitat or human made structures to replace the habitat resources lost and encourage animals to move from the impacted site, e.g. nest boxes
- Timing works to avoid critical life cycle events such as breeding or nursing.
- Sediment barriers or sedimentation ponds to control the quality of water released from the site into the receiving environment.
- Prevent impacts of noise, dust and light spill on fauna species.
- Prevent damage to vegetation retained adjacent to site.
- Prevent the dumping of rubbish found on site.
- Hygiene protocols to prevent the spread of weeds or pathogens between infected areas and uninfected areas.
- Staff training and site briefing to communicate environmental features to be protected and measures to be implemented.

- Making provision for the ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on or adjacent to the development site.

Site contamination and geotechnical assessment

The development is to follow the recommendations given in Section 9 of the Preliminary Environmental Site Investigation prepared by Douglas Partners at Appendix R of the RTS, and recommendations for further investigation provided in Section 7 of the Geotechnical Investigation Report prepared by Alliance Geotechnical at Appendix T of the RTS. A Detailed Site Investigation and Remediation Action Plan prepared by Alliance Geotechnics are at Appendices DD and BB of the RTS.

Preliminary Environmental Site Investigation

- A hazardous building material survey should be conducted for structure at the site prior to demolition

Geotechnical Investigation Report

Based on the results of the investigation for the proposed development addressing the specific site condition in 29030 8 Aldington Road, Kemps Creek, it is recommended that further geotechnical investigation be carried out prior to the detail design of the development. The proposed investigation should include rock coring to 3m below the base of t he proposed rock cuts and laboratory rock testings to provide rock strength and defects of the rock mass. The results o f the investigation should address bedrock conditions for stability analysis, retaining wall design and required ear thworks based on architectural design of development.

Bushfire Impacts

The development shall comply with the bushfire management strategies identified in Section 5 of the Bushfire Protection Assessment prepared by Australian Bushfire Protection Planners at Appendix U of the RTS.

Strategy 1 – Defendable Space management Requirements:

Management of the defendable spaces/landscaped areas within the development site shall comply with the following:

- Maintain a clear area of low cut lawn or pavement adjacent to the building;
- Keep areas under shrubs and trees raked and clear of combustible fuels;
- Utilise non-flammable materials such as Scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to building;
- Trees and shrubs should be maintained in such a manner that tree canopies are separated by 2 metres and understorey vegetation is not continuous [retained as clumps].

Strategy 2 – Water Supplies/Utilities for Firefighting Operations:

The fire-fighting water supply to the proposed buildings shall comply with the Building Code of Australian [BCA] and Australian Standard A.S. 2419.1 – 2005. Electricity and gas supplies will be laid underground and therefore address the performance standard of Chapter 4 of Planning for Bushfire Protection 2019.

Strategy 3 – Construction Standards to the buildings located adjacent to the bushfire hazard:

Table 2 identifies the bushfire construction standards required to be implemented to comply with A.S. 3959 – 2018 – 'Construction of Buildings in Bushfire Prone Areas'.

The non-exposed elevations of the warehouse building shall be constructed to one level less than the BAL rating for the hazard side of the building e.g. the BAL rating to the northern elevation of the warehouse on Lot 1 is BAL 29 therefore the remaining elevations shall be constructed to BAL 19 standards in accordance with A.S. 3959 – 2018 – 'Construction of Buildings in Bushfire Prone Areas'.

The following additional construction measures also apply:

- Access doors [PA and Vehicle] to the buildings shall be fitted with seals that seal the bottom, stiles and head of the door against the opening/frame to prevent the entry of embers into the building. Particular attention shall be given to the gap at the head of the curtain of the roller doors, where mohair type seals can be used;
- External timber doors shall be fitted with a stainless steel/Colorbond kick plate of 400mm high on the outside of the door;
- External glazed doors and windows shall comply with the requirements for glazing less than 400mm above finished ground level; paths / pavement and elevated roofs;
- Any external vents, grilles and ventilation louvres shall have stainless steel mesh with a maximum aperture of 2mm square fitted to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.

Strategy 4 – Access Standards for Firefighting Operations.

Fire Appliance access shall be provided to the perimeter of each lot, either by a perimeter road or by vehicular access to the future buildings or parking areas incorporated into the defendable space setback.

The Fire Brigade access adjacent to the southern and eastern boundaries shown on the Master Plan shall be linked across the lot boundaries to provide continuous access for fire appliances.

The access provisions shall satisfy the NSW Rural Fire Service and Fire & Rescue NSW appliance requirements.

Air Quality

The development shall comply with the recommended mitigation and management measures for air quality provided in Section 8 of the Air Quality Assessment prepared by RWDI at Appendix N of the ADR.

Dust

To ensure best practice management, the following mitigation measures are recommended so that construction dust impacts are minimised and remain low risk.

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Develop and implement a Dust Management Plan (DMP) that considers, as a minimum, the measures identified herein.

Site management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to relevant authorities (Council, EPA, etc).
- Record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the logbook.

Monitoring

- Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust. Record inspection results and make available to relevant authorities. This should include regular dust soiling checks of surfaces such as street furniture, cars and window. Specific real-time dust monitoring is not necessary for this project.

Preparing & Maintaining the Site

- Plan site layout so that machining and dust generating activities are located away from receptors, as far as possible.
- Avoid site runoff of water or mud.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being reused on site. If being re-used, keep materials covered.
- Cover, seed or fence stockpiles to prevent wind erosion.

Construction vehicles and sustainable travel

- Ensure all vehicles switch off engines when stationary – no idling vehicles
- Impose and signpost a maximum-speed-limit of 25km/h on surfaced and 15km/h on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided).

Measures for general construction activities

- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. Measures specific to haulage
- Use water-assisted dust sweeper(s) on the access and local roads, as necessary.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site logbook.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10m from receptors where possible.

Operation

Although no specific mitigation measures have been triggered, it would be sensible to:

- Limit unnecessary idling of truck engines on-site.
- Ensure truck maintenance is up to date.

Waste management

The development should implement where possible the operational waste management strategies and recommendations provided in Section 6 of the Waste Management Plan prepared by SLR Consulting at Appendix O of the ADR.

Waste Avoidance, Reuse and Recycling Measures

Waste avoidance measures include:

- Participating in take-back services to suppliers to reduce waste further along the supply chain;
- Avoiding printing where possible;
- Review of packaging design to reduce waste but maintain ‘fit for purpose’;
- Providing ceramic cups, mugs, crockery and cutlery rather than disposable items;
- Purchasing consumables in bulk to avoid unnecessary packaging;
- Presenting all waste reduction initiatives to staff as part of their induction program, and
- Investigating leased office equipment and machinery rather than purchase and disposal.

<u>Reuse</u>

Possible re-use opportunities include establishing systems with in-house and supply chain stakeholders to transport products in re-useable packaging where possible.

<u>Recycling</u>

Recycling opportunities include:

- Collecting and recycling e-waste;
- Flatten or bale cardboard to reduce number of bins required;
- Paper recycling trays provided in office areas for scrap paper collection and recycling;
- Collecting printer toners and ink cartridges in allocated bins for appropriate contractor recycling, and
- Development of 'buy recycled' purchasing policy.

Communication Strategies

Waste management initiatives and management measures should be clearly communicated to building managers, owners, employees, customers and cleaners. Benefits of providing this communication include:

- improved satisfaction with services;
- increased ability and willingness to participate in recycling;
- improved amenity and safety;
- improved knowledge and awareness through standardisation of services;
- increased awareness or achievement of environmental goals and targets;
- reduced contamination of recyclables stream;
- increased recovery of recyclables and organics material, if implemented, and
- greater contribution to targets for waste reduction and resource recovery, the environment and heritage conservation.

To realise the above benefits, the following communication strategies should be considered:

- Use consistent signage and colour coding throughout the Project;
- Ensure all staff are trained in correct waste separation and management procedures;
- Provide directional signage to show location of and routes to waste storage area;
- General waste and co-mingled recycling bins should be clearly labelled and colour-coded to ensure no cross contamination, where applicable;
- Employees and cleaners should adhere to the WMP for compliance, in consultation with management, and
- Repair signs and labels promptly to avoid breakdown of communications.

Signage

Signs which clearly identify waste management procedures and provisions to staff and visitors should be distributed around the Project. Key signage considerations are:

- Clear and correct labelling on all waste and recycling bins, indicating the correct type or types of waste that can be placed into a given bin.
- Signposts and directions to location of waste storage areas;
- Clear signage in all waste storage areas to instruct users how to correctly separate waste and recycling;
- Maintaining a consistent style colour scheme and system for signs throughout the Project, and
- Emergency contact information for reporting issues associated with waste or recycling management.

Colour-coded and labelled bin lids are necessary for identifying bins. All signage should conform to the relevant Australian Standard and use labels approved by the NSW EPA14. The design and use of safety signs for waste rooms and enclosures should comply with Australian Standard AS 1319 Safety Signs for the Occupational Environment and clearly describes the types of materials designated for each bin.

Monitoring and Reporting

Monitoring is recommended to ensure waste and recycling management arrangements and provisions for the Project are functional, practical and are maintained to the standard outlined in this plan, at a minimum. Visual assessments of bins and bin storage areas should be conducted by the building manager, at minimum:

- Weekly, in the first two months of operation to ensure the waste management system is sufficient for the operation, and
- Every six months, to ensure waste is being managed to the standards outlined in this document.

In addition, audits are to be conducted on a half-yearly basis to ensure WMP provisions are maintained. Quantities of waste and recycling associated with disposal of waste and recycling, including dockets, receipts and other physical records should be recorded by the Building Manager. This is to allow reviews of the waste management arrangements and provisions at the site over time. Records of waste disposal should also be available to regulatory authorities such as the NSW Environmental Protection Authority and SafeWork NSW, upon request.

Any deficiencies identified in the waste management system, including, but not limited to, unexpected waste quantities, is to be rectified by the Building Manager as soon as it is practical. Where audits show that recycling is not carried out effectively, management should carry out additional staff training, signage re-examination and reviews of the waste management system where the audit or other reviewing body has deemed necessary. If this waste management plan no longer sufficiently meets the needs of the Project, review and updates to maintain suitability must be undertaken.

Roles and Responsibilities

Management:

- Ensure the WMP is implemented throughout the life of the operation.
- Update the WMP on a regular basis (e.g. annually) to ensure the Plan remains applicable.
- Undertake liaison and management of contracted waste collections.

- Organise internal waste audits on a regular basis.
- Manage any complaints and non-compliances reported through waste audits etc.
- Perform inspections of all waste storage areas and waste management equipment on a regular basis.
- Organise cleaning and maintenance requirements for waste management equipment.
- Monitor bins to ensure no overfilling occurs.
- Ensure effective signage, communication and education is provided to alert visitors, employees and cleaners about the provisions of this WMP and waste management equipment use requirements.
- Monitor and maintain signage to ensure it remains clean, clear and applicable.
- Ensure waste and recycling storage rooms are kept tidy.
- Ensure that regular cleaning and daily transfer of bins is being undertaken by the cleaners
- Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.

Cleaners and Staff:

- Removal of general waste, recyclables, cardboard waste and hazardous waste from floor areas for transfer to centralised waste and recycling collection rooms daily or as required.
- Cleaning of all bins and waste and recycling rooms on a weekly basis or as required.
- Compliance with the provisions of this WMP.

Gardening Contractor, as applicable:

- Removal of all garden organics waste generated during gardening maintenance activities for recycling at an off-site location or reuse as organic mulch on landscaped areas.

Ecologically Sustainable Development

The development shall be consistent with the sustainability measures commitments outlined in Section 5, and monitoring and reporting measures outlined in Section 7, of the Sustainability Management Plan prepared by SLR Consulting at Appendix P of the ADR.

Energy Review and Audit

An energy usage review should be undertaken within the first few months of operation to ensure the Energy Management Plan is sufficient for the development's needs. A breakdown of energy usage per month at the Project Site will help to measure the development's baseline energy use and assess what appliances, equipment and processes are consuming energy.

An energy review is also necessary for the assessment of energy utilisation to further identify opportunities for improvement. Energy usage data obtained during the review process may be used to establish key performance indicators and annual energy targets for the Project.

Energy usage to be included in the review should include all purchased electricity and energy which is consumed by stationary equipment on site. Energy consumed by mobile equipment (e.g. forklifts) should also be examined as this will identify variations in warehouse operation efficiency. (Refer to 'Guidelines for Energy Savings Action Plans' (2005) (as developed by the former Department of Energy, Utilities and Sustainability) for reporting templates and further information.)

An energy audit and management review should also be undertaken on a half-yearly basis to ensure employees are following energy savings procedures correctly. Where audits show that energy savings procedures are not carried out effectively, additional employee training should be undertaken and signage and procedures re-examined.

The Energy Management Plan should be progressively improved and updated on an annual basis, or as required, to reflect changes to the Energy Management System and to promote continual improvement of energy management at the Project Site.

Energy Metering and Monitoring

To enable effective review of energy usage by the project, sub-metering should be implemented for all major energy consuming processes or items of equipment including sub-metering for all loads greater than 100 kVA.

Electrical equipment should be maintained to Australian Standards to ensure unnecessary energy wastage is minimised. Roof access system is proposed for third party access to roof for carry out necessary maintenance as required.

A Building Users' Guide will be prepared for the Project. The Building Users' Guide provides details regarding the everyday operation of a building and should include energy minimisation initiatives such as natural ventilation strategies, user comfort control, maintenance of air conditioning units and other electrical devices to ensure maximum operating efficiency, and lighting zoning strategies. An effective Building Users' Guide will ensure that:

- Facility managers understand in detail their responsibilities for the efficient operation of the facility and any additional building tuning necessary to continuously improve energy management.
- Maintenance contractors understand how to service the particular systems to maintain reliable operations and maximum energy efficiency.
- Employees understand energy minimisation procedures and working limitations required to maintain design performance for energy efficiency.

• Future fit-out / refurbishment designers understand the design basis for the building and the systems so that these are not compromised in any changes.
Roles and Responsibilities It is the responsibility of the facility manager to routinely check energy savings procedures are undertaken correctly (i.e. lighting turned off while areas of the development are not in use). The facility manager should also ensure all monitoring and audit results are well documented and carried out as specified in the Energy Management Plan. Senior management should also be involved in energy management planning as an indication of the organisation's commitment to the Energy Management Plan.

APPENDIX 6 INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

WRITTEN INCIDENT NOTIFICATION REQUIREMENTS

1. A written incident notification addressing the requirements set out below must be submitted to the Planning Secretary via the Major Projects website within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition C10 or, having given such notification, subsequently forms the view that an incident has not occurred.

2. Written notification of an incident must:
   (a) identify the development and application number;
   (b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
   (c) identify how the incident was detected;
   (d) identify when the applicant became aware of the incident;
   (e) identify any actual or potential non-compliance with conditions of consent;
   (f) describe what immediate steps were taken in relation to the incident;
   (g) identify further action(s) that will be taken in relation to the incident; and
   (h) identify a project contact for further communication regarding the incident.

INCIDENT REPORT REQUIREMENTS

3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.

4. The Incident Report must include:
   (a) a summary of the incident;
   (b) outcomes of an incident investigation, including identification of the cause of the incident;
   (c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
   (d) details of any communication with other stakeholders regarding the incident.

APPENDIX 7 EXTERNAL ROAD WORKS PLANS

Table 5 Schedule of External Road Works Plans

Drawing No.	Title	Issue	Date
Civil Engineering Drawings			
GE-2000	MR536 Mamre Road and Abbotts Road Kemps Creek 2000 Series – Proposed Signalised Intersection Civil Works Package 80% Detailed Design	1	03/11/2023
24-1177-C500	Westlink – External Roads Kemps Creek 500 Series – Phase 1 – Civil Works Package	P1	01/02/2024