

# **The Edge Estate**

**SSD-17552047**

**141-251 Aldington Road,  
Kemps Creek**

## **Erosion and Sediment Control Plan**

**Frasers Property Pty Ltd**

**23/07/2025**

**20-776**

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Document Registration

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Certification      | <p>I, Tim Michel (CPESC No. 11555) of AT&amp;L, certify that this ESCP has been prepared in accordance with the principles of The Blue Book (Landcom, 2004) and the Technical guidance for achieving Wianamatta-South Creek stormwater management targets (NSW DPE, 2022).</p> <p>This ESCP does not include all details required for ESCPs – further details will not be available until a Contractor has been appointed and construction sequencing and methods have been confirmed. The Civil Contractor appointed to construct the project will be responsible for preparation of compliant Progressive ESCPs.</p> |
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# 1. Introduction

This Erosion and Sediment Control Plan (ESCP) has been prepared by AT&L on behalf of Frasers Property Industrial in support of a Construction Certificate (CC) and/or Subdivision Works Certificate (SWC) for the proposed development of the site located at 155-251 and 141-153 Aldington Road, Kemps Creek (the Site, also referred to throughout as The Edge Estate).

The Edge Estate is located in the suburb of Kemps Creek, within the Penrith Local Government Area (LGA), and approximately 13 km south-east of the Penrith CBD and 6 km north-east of the under-construction Western Sydney Airport. The site is made up of the following allotments:

- Lot 34 DP258949 (141-153 Aldington Road, Kemps Creek)
- Lot 33 DP258949 (155-167 Aldington Road, Kemps Creek)
- Lot 28 DP255560 (169-181 Aldington Road, Kemps Creek)
- Lot 27 DP255560 (183-197 Aldington Road, Kemps Creek)
- Lot 26 DP255560 (199 Aldington Road, Kemps Creek)
- Lot 25 DP255560 (201-217 Aldington Road, Kemps Creek)
- Lot 24 DP255560 (219-233 Aldington Road, Kemps Creek)
- Lot 10 DP253053 (233-251 Aldington Road, Kemps Creek)

The total area of the site is approximately 63 hectares.

The extent of the site is presented in **Figure 1**.



**Figure 1: Site Extent (imagery from nearmap dated 28 May 2025)**

## 1.1. Scope of SSDA

The NSW Minister for Planning and Public Spaces granted development consent for The Edge Estate in June 2025 under [SSD-17552047](#). The following is a general outline of the scope of development for which development consent was granted:

- Demolition of existing dwelling houses and associated outbuildings;
- Bulk earthworks involving dam dewatering, cut and fill works and pad construction;
- Vegetation clearing;
- Fourteen-lot Torrens title subdivision;
- Proposed construction of internal public access roads of approximately 24.0m and 25.6m wide and connections to existing and future local roads;
- Stormwater and drainage works including construction of four on-site detention and bio-retention basins;
- Construction of retaining walls across the site;
- Construction of interim acoustic barriers;
- Landscaping and street tree planting;
- Infrastructure comprising civil works and utilities servicing; and
- Construction of eight warehouse and distribution centres with a total building area of approximately 153,343m<sup>2</sup>.

## 1.2. Scope of this ESCP

This ESCP has been prepared to describe the approach to construction phase soil and water management and to summarise the key standards and guidelines that will inform implementation and operation of erosion and sediment control measures.

This ESCP presents design of a series of proposed measures that will need to be implemented during demolition, site clearing and construction of the infrastructure works. The objectives of the proposed erosion and sediment control measures incorporated in this ESCP are to:

- Acknowledge the activities on a construction site which may contribute to erosion, sedimentation and water quality impacts.
- Conserve and protect soil resources.
- Minimise potential impacts on receiving land and waters from demolition, site clearing and construction activities.
- Describe industry best management practices to minimise adverse water quality and sedimentation impacts brought about through construction activities.
- Demonstrate compliance with relevant regulatory requirements.

The sizing, location and sequencing of erosion and sediment control measures will suit the proposed construction sequencing, which will ultimately be determined by the principal civil contractor nominated by the Proponent. The principal civil contractor (or its representative) will be responsible for the preparation and implementation of detailed Progressive Erosion and Sediment Control Plans (PESCPs), which will be incorporated into an overarching Construction Environmental Management Plan (CEMP).

## 1.3. Key references

This ESCP references several guidelines that document minimum requirements and best practice for erosion and sediment control:

| Document title                                                                                                                                                                                                                                                                                    | Abbreviation                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <ul style="list-style-type: none"> <li>International Erosion Control Association (IECA) Australasia, <i>Best Practice Erosion &amp; Sediment Control</i>, November 2008</li> </ul>                                                                                                                | IECA (2008)                   |
| <ul style="list-style-type: none"> <li>International Erosion Control Association (IECA) Australasia, <i>Appendix B; Sediment basin design and operation</i> (Revision – June 2018), <a href="http://www.austieca.com.au/documents/item/697">www.austieca.com.au/documents/item/697</a></li> </ul> | IECA Appendix B (2018)        |
| <ul style="list-style-type: none"> <li>Landcom, <i>Managing Urban Stormwater: Soils and Construction (Volume 1)</i>, 4<sup>th</sup> edition, March 2004</li> </ul>                                                                                                                                | The Blue Book                 |
| <ul style="list-style-type: none"> <li>NSW Department of Planning and Environment, <i>Technical guidance for achieving Wianamatta-South Creek stormwater management targets</i>, September 2022</li> </ul>                                                                                        | DPE Technical Guidance (2022) |

In addition to these documents, fact sheets prepared by [Catchments and Creeks Pty Ltd](#) have also been referred to throughout this ESCP.

## 1.4. Supporting Documentation

The following documentation is referred to throughout and should be read in conjunction with this report:

- Erosion and Sediment Control Plan (C10000 series of civil works drawings) – included as **Appendix A**.
- Construction Access Package (C20000 series of civil works drawings)
- Civil Infrastructure Package (C30000 series of civil works drawings)
- Trunk Drainage Package (C40000 series of civil works drawings)
- Civil Infrastructure Report (AT&L, Rev. 05, September 2023)
- Water and Stormwater Management Plan (AT&L, Rev. 02, March 2024)
- Geotechnical Investigation Report (PSM, June 2019)



## 2. Pre-Development Site Conditions

### 2.1. General

The site is currently characterised as rural land and comprises residential dwellings, sheds, open pasture and farm dams.

The Site is zoned *IN1 – General Industrial* under the *State Environmental Planning Policy (Industry and Employment) 2021*. The Site is also located in the Mamre Road Precinct and is therefore subject to controls outlined in the *Mamre Road Development Control Plan 2021*.

Delineation of the internal drainage catchments and external catchments that drain through the site is presented in **Figure 2**.

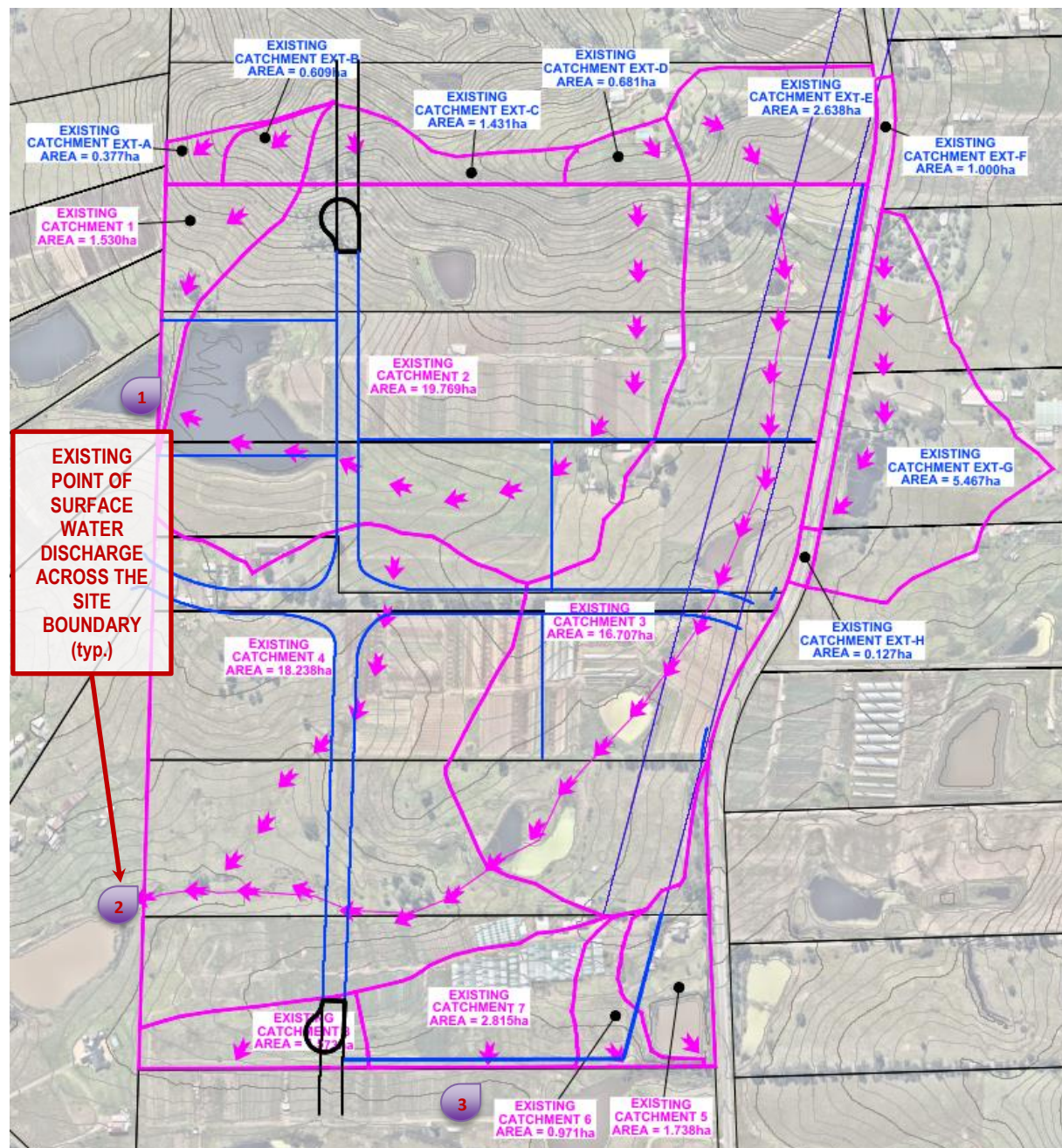


Figure 2: Catchment extents under existing conditions

Refer to the Water and Stormwater Management Plan ([AT&L, 2024](#)) for details of the pre-development site conditions including waterways and vegetation and topography.

## 2.2. Site Geology

A desktop study and geotechnical investigation has been prepared for the Site by PSM (June 2019). This study identified the following geological units within the Site extent:

- (Rwb) – Shale of the Wianamatta Group comprising carbonaceous claystone, claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff.

PSM undertook site investigation works in May 2019, consisting of 49 test pits and auger holes. Based on these tests, a summary of the inferred subsurface conditions across the Site is summarised below:

- Topsoil (0m to top of inferred unit) – silty clay and silty clay with gravel.
- Fill (up to 0.2m deep) – fill / clay / silty clay.
- Residual soil (between 0.1m and 1.2m deep) – clay (medium to high plasticity) and silty clay (medium plasticity).
- Bedrock (between 0.6m and 2.8m deep) – siltstone (pale grey and red, extremely weathered), siltstone (pale grey and orange, moderately weathered), sandstone (fine grained, slightly weathered).

### 2.2.1. Salinity

Based on site investigations undertaken by PSM (May 2019), consisting of eight soil samples across the Site, the soils on site are classified as “non-saline” (six out of eight samples) to “moderately saline” (two out of eight samples).

### 2.2.2. Sodidity

The Exchangeable Sodium Percentages (ESPs) calculated from tests undertaken by PSM ranged from <1.9% to 22.0%, which indicates that the natural soil on the site is classified as “non-sodic” (<5% ESP) to “highly sodic” (>15% ESP).

## 2.3. Soil Landscapes

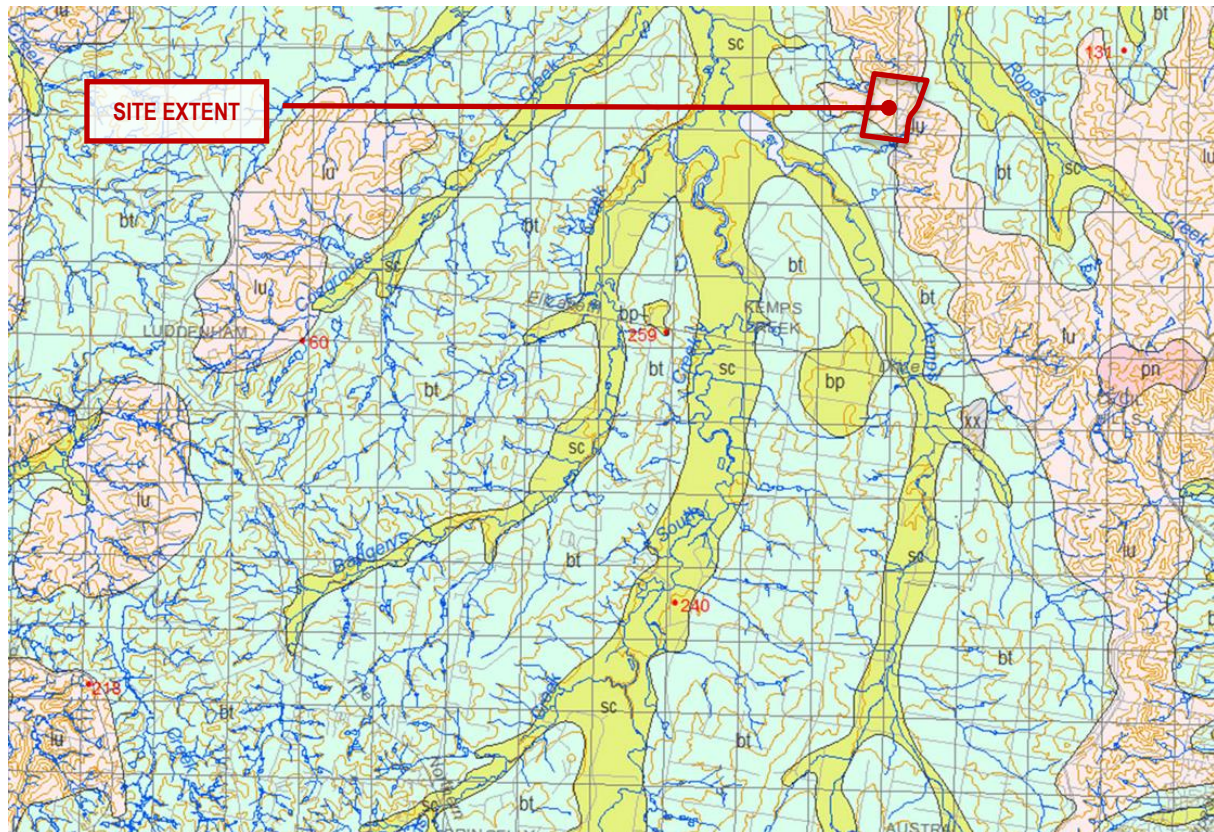
Reference to the *Soil Landscape Series Map – Penrith* (refer to **Figure 3**) shows that the soil landscape grouping for the majority of the Site is or the majority of the site is:

*Luddenham (lu) – undulating to low rolling hills on Wianamatta Group shales, often associated with Minchinbury Sandstone. Local relief 50-80m, slopes 5-20%. Narrow ridges, hillcrests and valleys. Extensively cleared tall open-forest (wet sclerophyll forest). Soils – shallow (<100cm) dark Podzolic Soils or massive earthy clays on crests; moderately deep (70-150cm) Red Podzolic Soils on upper slopes; moderately deep (<150cm) Yellow Podzolic Soils and Prairie Soils on lower slopes and drainage lines. Limitations – high soil erosion hazard, localised impermeable highly plastic subsoil, moderately reactive.*

The soil landscape in the south-western portion of the Site is:

*Blacktown (bt) – gently undulating rises on Wianamatta Group shales. Local relief to 30 m, slopes usually < 5%. Shallow to moderately deep (< 100 cm) hard setting mottled texture contrast soils, red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and in drainage lines.*





*Figure 3: Extract of the Soil Landscape Series Map – Penrith (9030)*

The Wianamatta Group extends to a depth of up to 110 m within the southern Sydney Basin and is underlain by Hawkesbury Sandstone, which is known to contain significant amounts of groundwater in some parts of the Sydney Basin.



### 3. Objectives and Controls

The Mamre Road Precinct DCP establishes the construction and operational phase stormwater quality and quantity (flow) targets for the Site. This ESCP addresses construction phase water quality targets only. Operational phase targets are addressed in a separate Water and Stormwater Management Plan for the Site.

The construction phase stormwater flow targets adopted in the Mamre Road Precinct DCP are summarised in **Table 1**.

**Table 1: Construction phase stormwater quality targets adopted in the Mamre Road Precinct DCP**

| Parameter                                 | Construction Phase Target                                                                                                                                                                                                                                                                                                                                                                                | Reference in this ESCP                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TSS and pH</b>                         | All exposed areas greater than 2500 square metres must be provided with sediment controls designed, implemented and maintained to a standard achieving at least 80% of the average annual runoff volume of the contributing catchment treated (i.e., 80% hydrological effectiveness) to 50mg/L TSS or less, and pH in the range 6.5–8.5.                                                                 | <b>Section 5.3</b><br><b>Section 6.2</b><br><b>Section 6.3</b>                                                                                                                                                                                                                                                                                                                                            |
| <b>Oil, litter and waste contaminants</b> | No release of oil, litter or waste contaminants.                                                                                                                                                                                                                                                                                                                                                         | The proposed management and mitigation measures outlined in <b>Section 5.1</b> would provide inherent capture of oil, litter and waste generated throughout the construction phase.<br><br>It is expected that further specific measures to address potential impacts associated with the discharge of oil, litter and waste contaminants would be contained within a Construction Waste Management Plan. |
| <b>Stabilisation</b>                      | Prior to completion of works for the development, and prior to removal of sediment controls, all site surfaces must be effectively stabilised including all drainage systems.<br><br>An effectively stabilised surface is defined as one that does not, or is not likely to result in visible evidence of soil loss caused by sheet, rill or gully erosion or lead to sedimentation water contamination. | <b>Section 5.4</b>                                                                                                                                                                                                                                                                                                                                                                                        |

## 4. Potential erosion and sedimentation impacts

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### 4.1. Summary of impacts

The major potential impacts on receiving waters downstream of the Site relate to erosion of distributed areas or stockpiles and sediment transportation. Potential adverse impacts from erosion and sediment transportation can include:

- Loss of topsoil.
- Increased water turbidity.
- Decreased levels of dissolved oxygen.
- Changed salinity levels.
- Changed pH levels.
- Smothering of stream beds and aquatic vegetation.
- Reduction in aquatic habitat diversity.
- Increased maintenance costs.
- Decrease in waterway capacity leading to increased flood levels and durations.

### 4.2. Sources of pollution

The activities and aspects of the works that have potential to lead to erosion, sediment transport, siltation and contamination of natural waters include:

- Earthworks undertaken immediately prior to rainfall periods.
- Work areas that have not been stabilised.
- Extraction of construction water from waterways during low rainfall periods.
- Clearing of vegetation and the methods adopted, particularly in advance of construction works.
- Stripping of topsoil, particularly in advance of construction works.
- Bulk earthworks and construction of pavements.
- Works within drainage paths, including depressions and waterways.
- Stockpiling of excavated materials.
- Storage and transfer of oils, fuels, fertilisers and chemicals.
- Maintenance of plant and equipment.
- Ineffective implementation of erosion and sediment control measures.
- Inadequate maintenance of environmental control measures; and
- Time taken for the rehabilitation / revegetation of disturbed areas.

### 4.3. Assessment of erosion hazard

To inform the design of the ESCP, an analysis using the Revised Universal Soil Loss Equation (RUSLE) has been undertaken in accordance with the “Blue Book”. This analysis has been undertaken to predict the long term, average and annual soil loss from sheet and rill flow from the site under specified management conditions.

Estimating soil loss for a proposed development has four important applications to soil and water management. These are to:

- a) Assess the erosion risk at a site.
- b) Identify suitable measures to overcome the erosion risk.
- c) Estimate the required capacity of sediment retarding basins.
- d) Compare the effectiveness of various erosion control measures.

Refer to **Table 2** below for estimates of soil loss on the site.

**Table 2: RUSLE Analysis**

| Parameter                                               | Item (Blue Book Reference) |                                                                                                    |
|---------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------|
| Rainfall Erosivity Factor (R)                           | 1893                       | (Equation 2, Appendix A2)                                                                          |
| Soil Erodibility Factor (K) (Table C20, Blue Book)      | 0.05                       | (Table C19, Appendix C)<br>For South Creek (sc) soil landscape                                     |
| Slope Length / Gradient Factor (LS)                     | 3.25                       | Table A1, Appendix A<br>Assuming a maximum slope length of 300m and a maximum slope gradient of 6% |
| Erosion Control Practice Factor (P)                     | 1.20                       | Table A1, Appendix A5<br>Assuming slopes are track-walked along the contour                        |
| Ground Cover and Management Factor (C)                  | 1                          | Assumed that all soil is recently disturbed, thus a C factor of 1 is chosen.                       |
| <b>Computed Soil Loss (tonnes per hectare per year)</b> | <b>369</b>                 |                                                                                                    |
| Soil Loss Class                                         | 4                          | (Table 4.2 of the Blue Book)                                                                       |
| Erosion Hazard                                          | Moderate                   | (Table 4.2 of the Blue Book)                                                                       |

## 4.4. Dispersive soil management

Management of dispersive (sodic) soils should be undertaken in accordance with IECA (2008). Specific advice regarding the management of problematic soils (including dispersive soils) and an overview of critical erosion and sediment control measures are outlined in Table 6.3 and Table 7.1 of IECA (2008). In summary:

- The effective use of flocculated sediment basins is critical for environmental protection where dispersive soils are present.
- Rilling is usually best managed through the appropriate treatment and/or placement of dispersive soils (rather than through the control of runoff velocity).
- Dispersive soils should be treated (e.g., with gypsum) or buried under a layer of non-dispersive soil before applying a final surface treatment, even if the final surface treatment is rock, gabions or concrete.

Where possible, catch drains and drainage channels should be avoided where they need to be cut into dispersive soils. If this cannot be avoided, appropriate sediment controls will be implemented such as:

- Addition of gypsum (or similar) to improve settlement properties or to minimise the risk of dispersion.
- Placement of sediment basins at locations that will maximise the capture of sediment-laden runoff in areas of dispersive soils.

## 5. Erosion and sediment control measures

### 5.1. Summary of measures

This section outlines the proposed erosion and sediment control measures that have been incorporated in this ESCP. Layouts and details of these proposed measures are presented on the drawings included as Appendix A. These drawings present the main control and protection measures across the site until completion of on-lot works.

The following erosion and sediment control measures and construction methodology will be adopted to minimise the impact of sedimentation due to construction works:

- Minimising the extent and duration of land disturbance
- Diversion of surface runoff from undisturbed areas away from disturbed areas and discharge via suitable scour protection.
- Provision of hay bale type flow diverters to catch drainage and divert to “clean” water drains.
- Diversion of sediment-laden water into temporary sediment control basins to capture the design volume and undertake flocculation and/or coagulation.
- Provision of construction traffic shaker grids and vehicle / wheel wash facilities to prevent vehicles carrying soils beyond the Site, in particular onto the road network adjacent to the Site.
- Provision of catch drains to carry sediment-laden water to sediment basins.
- Provision of silt fences to filter and retain sediments at source.
- Rapid stabilisation of disturbed and exposed ground surfaces with hydro-seeding areas where future construction and building works are not currently proposed.
- All temporary sediment basins will be located clear of the mainstream 1% AEP flood extent from South Creek. Where possible, all temporary sediment basins will be located clear of the 1% AEP flood extents from local overland flow.

### 5.2. Design criteria

All design, documentation, installation and maintenance of sediment and erosion controls has been undertaken in accordance with the requirements of:

- *Protection of the Environment Operations Act (1997)*
- The Blue Book
- IECA (2008) and IECA Appendix B (2018)
- DPE Technical Guidance (2023)
- Penrith City Council’s guidelines and specifications

### 5.3. Sediment basins

Sediment basins will be required based on the area of the Site that will be disturbed and the construction phase water quality targets adopted in the Mamre Road Precinct DCP.

The *Technical guidance for achieving Wianamatta-South Creek stormwater management targets* specifies that to achieve the adopted construction phase water quality targets, sediment basins need to be sized and operated as either a Type-A or Type-B basin as per IECA Appendix B (2018). Type A and Type B basins incorporate automated flocculant dosing systems and a suitable supply of flocculant or coagulant.

IECA Appendix B (2018) notes that ‘*alternative measures such as batched sediment basins (i.e., enlarged Type D) may be implemented in lieu of Type A or B basins where it can be shown that such measures will achieve a commensurate performance outcome*’.

Further to advice provided by the Biodiversity, Conservation and Science Group (BCS) within NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) (now part of the CPHR Group) on the SSDA

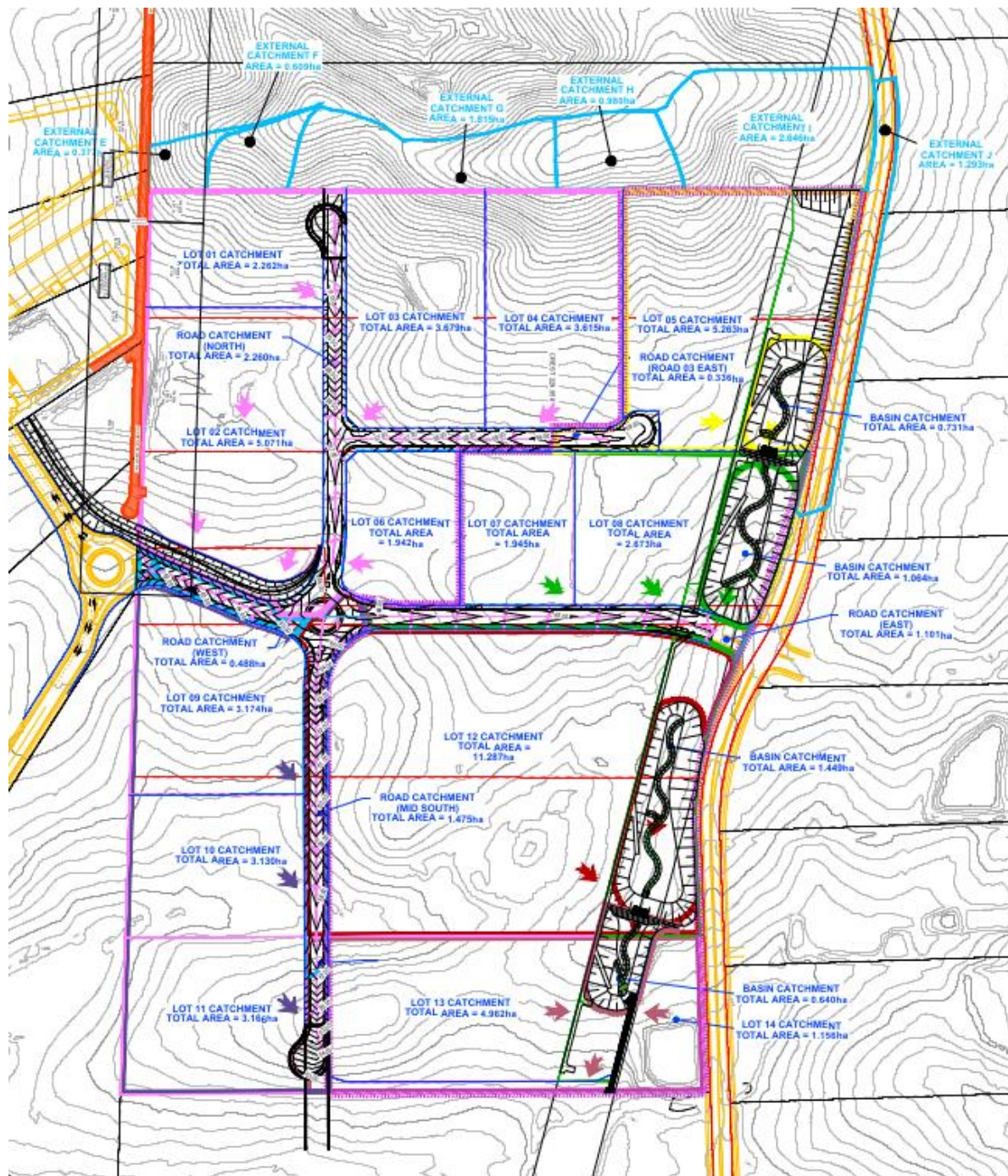


for the Dexu site at 113-153 Aldington Road ([SSD-32722834](#)), enlarged Type-D basins with a minimum volume of 900 m<sup>3</sup>/ha have been suggested as an alternative to Type A/B basins. It is noted that the Dexu development estate is located directly north of The Edge Estate, and the two sites are located within the same drainage catchments and soil landscapes (Luddenham).

Given the nature of the proposed development of The Edge Estate and the available space for enlarged Type D sediment basins, these basins have been incorporated into the ESCP.

Sizing of the sediment basins has been undertaken by applying a uniform 900 m<sup>3</sup>/ha as per recent advice from DCCEEWS BCS Group. A summary of the volume calculations is presented on drawing 20-776-C10050 (refer to **Appendix A**).

A catchment plan identifying sub catchments for the sediment basins is presented below as **Figure 4**.



**Figure 4: Catchment plan for sediment basins**

The temporary sediment basin locations and sizes have been determined to suit development staging requirements. Sediment basins will be maintained in accordance with the requirements of the above-mentioned authority documents.

## 5.4. Site stabilisation

As per The Blue Book (Landcom, 2004), site stabilisation will be achieved to protect disturbed surfaces from erosive forces. Maximum cover factors (C-factor) applicable to the Site are specified in **Table 3**.

**Table 3: Target cover factor (C) during and after construction (Landcom, 2004)**

| Land                                                                                                   | Nominated duration  | Maximum C-factor | Comments                                                                                                                |
|--------------------------------------------------------------------------------------------------------|---------------------|------------------|-------------------------------------------------------------------------------------------------------------------------|
| Waterways and other areas subject to concentrated flows (e.g., downstream of proposed detention basin) | Post-construction   | 0.05             | Applies after 10 working days from completion of formation and before they are allowed to carry any concentrated flows. |
| Material stockpiles                                                                                    | Post-construction   | 0.10             | Applies after 10 working days from completion of formation.                                                             |
| All lands, including waterways and stockpiles                                                          | During construction | 0.15             | Applies after 20 working days of inactivity, even though works might continue later.                                    |

Various stabilisation methods can be implemented (refer to Table A3 of The Blue Book), such as:

- Biodegradable mulches (e.g., wood chip, hydromulching, bonded fibre)
- Rolled Erosion Control Products (RECPs) (e.g., jute, coir, plastic fibre netting)
- Hydraulic soil stabilisers (bitumen emulsion)
- Temporary seeding
- Rolled turf

## 6. Inspection, maintenance and monitoring

### 6.1. Site inspection and maintenance

The inspection and maintenance requirements outlined in this section must be carried out while earthworks are being conducted, and until all areas are 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 ESCP and identify any inadequacies that may arise during normal work activities or from a revised construction methodology.
- Construct and/or install 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 or cleaning (e.g., removal of accumulated sediment).
- 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 sediment basins 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.

### 6.2. Sediment basin maintenance

The proposed development Site contains 'Type D' soils, or soils that contain a significant proportion of fine "dispersible" material that will never settle unless flocculated.

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. Where extended settling is likely to fail to meet the objectives within the 5-day period, dosing with a chemical coagulant and/or a flocculant should be undertaken. Coagulants achieve flocculation through charge neutralisation whereas flocculants physically bind clay and colloidal particles together. Flocculation causes colloidal particles to clump into larger units that can either settle in a reasonable time or be filtered.

Batch (jar) testing of surface water runoff from the site is the preferred method to determine the most appropriate coagulant and/or flocculant and the optimum dosing rate. The recommended procedure for jar

testing to confirm the preferred coagulant and/or flocculant and dosage rate is outlined in the [Chemical Coagulants and Flocculants Fact Sheet](#) (IECA Australasia).

Application methods for the selected coagulant and/or flocculant will depend on the type(s) of coagulants and/or flocculants ultimately adopted. These could be either passive systems (e.g., application of dry products such as gypsum by hand or machine, placement of block products or biopolymer gel socks at basin inlets) or active systems (rain or flow activated liquid dosing systems). Specific guidance on dosing methodologies for gypsum (calcium sulfate) and Polyaluminium chloride (PAC) is outlined in Appendix E4 of The Blue Book, although other application methods may be applied so long as the primary objectives for discharge water quality and hydrological effectiveness listed in **Section 3** are achieved.

### 6.3. Performance assessment

As required by IECA Appendix B (2018), ongoing review of sediment basin performance will need to be carried out throughout the construction phase of the development. As noted in IECA Appendix B, '*sediment basins are not designed to achieve a specific water quality; rather, they are designed to either capture and treat a specific volume of runoff, or to treat discharges up to a specified peak flow*'. Considering this, site specific water quality management practices such as those suggested in IECA Appendix B will need to be implemented by the Contractor responsible for implementation of the ESCP. Demonstration of adaptive management practices and decision-making processes such as that presented in **Figure 5** will provide greater certainty that all reasonable and practicable actions are being undertaken to minimise potential impacts associated with release of sediment laden water from the Site.

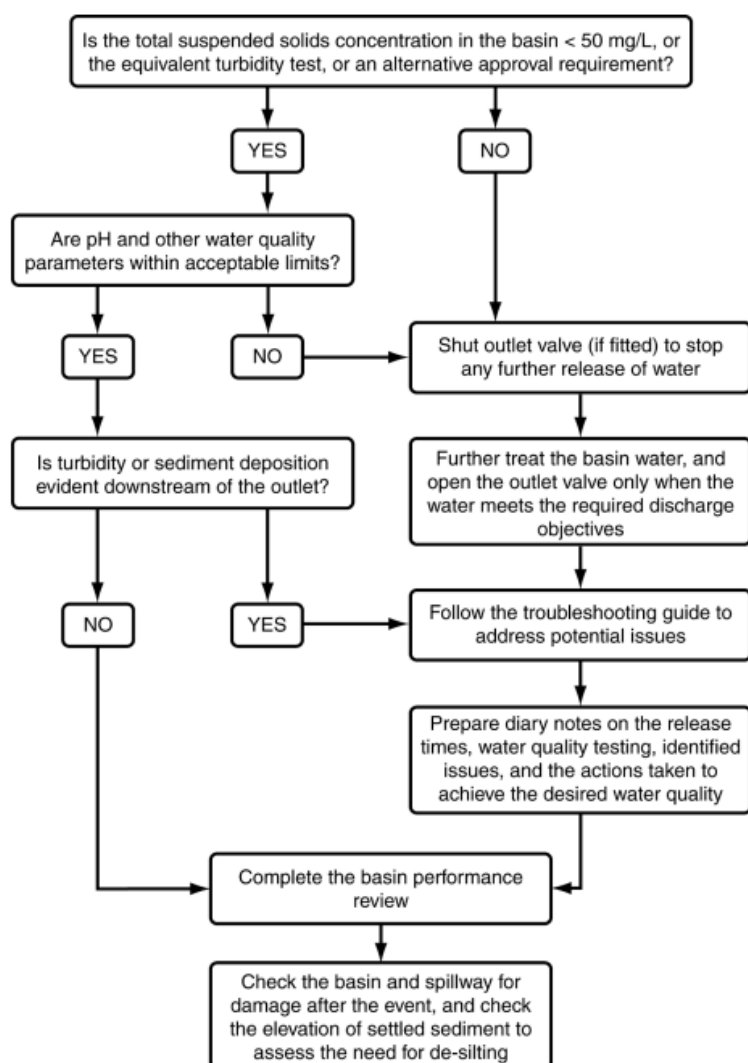


Figure 5: Sediment basin performance assessment process (IECA Appendix B, 2018)



## 7. Management of incidents and non-compliances

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Incident response requirements including classification, responses, external notification and incident review protocols are outlined in the Construction Environmental Management Plan (CEMP) as they apply to all facets of environmental management pertaining to construction activities at The Edge Estate. The CEMP documents:

- Responsibilities for incident and non-compliance response
- Notification requirements
- Contacts for regulatory authorities
- A procedure for handling incidents and non-compliances
- Requirements for keeping an Incident and Non-Compliance Register
- Procedure for handling and responding to complaints

It is the responsibility of all site personnel to report environmental incidents, non-compliances and non-conformances to the Site Supervisor and/or the Contractors Environmental Manager.



## 8. Contingency management

In the event that the ESCP is not effective in managing potential environmental impacts, specific contingency actions will be implemented. **Table 4** lists actions to be implemented if inspections, monitoring or auditing indicate that the erosion and sediment controls listed in **Section 5** are not effective in managing environmental impacts.

The Contingency Plan categorises conditions as follows:

- **Condition Green** – considered to be normal operating condition.
- **Condition Amber** – minor non-compliance that should be rectified as soon as practical.
- **Condition Red** – non-compliance that should be rectified as a matter of urgency.

All actions and responses identified in **Table 4** will be actioned by Frasers Property Industrial (or a representative of Frasers Property Industrial).

**Table 4: Contingency measures relating to construction phase erosion and sediment control**

| Element                            | Trigger / Response | Condition Green                                                                                                             | Condition Amber                                                                                                                                                      | Condition Red                                                                                                                                                        |
|------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Erosion</b>                     | Trigger            | No evidence of erosion                                                                                                      | Minor gully or tunnel erosion present and/or rilling.<br><br>Evidence of sediment or sediment laden water leaving the site.                                          | Significant gully or tunnel erosion present and/or rilling.<br><br>Evidence of sediment or sediment laden water leaving the site.                                    |
|                                    | Response           | Continue implementation of controls as per this ESCP                                                                        | A suitably trained person to inspect the site and review erosion and sediment controls that are in place. Remediation to be undertaken by Contractor as appropriate. | A suitably trained person to inspect the site and review erosion and sediment controls that are in place. Remediation to be undertaken by Contractor as appropriate. |
|                                    | Timing             | Ongoing                                                                                                                     | Within 14 days of evidence of visible indicators.                                                                                                                    | Within 5 days of evidence of visible indicators.                                                                                                                     |
| <b>Water management structures</b> | Trigger            | Water management structures have been designed, constructed and implemented in accordance with the Blue Book and this ESCP. | Inspections indicate that water management structures demonstrate minor non-compliance with the Blue Book and the ESCPs.                                             | Inspections indicate a failure of one or more of the water management structures.                                                                                    |
|                                    | Response           | Continue ESCP implementation.                                                                                               | A suitably trained person to inspect the site. Review of water management structures. Remediate as appropriate.                                                      | A suitably trained person to inspect the site. Remediate as soon as practical. Review of engineering design and revise ESCPs.                                        |
|                                    | Timing             | Ongoing                                                                                                                     | Within 14 days of evidence of visible indicators.                                                                                                                    | Within 5 days of evidence of visible indicators.                                                                                                                     |

| Element                                               | Trigger / Response | Condition Green                                                                                                                | Condition Amber                                                                                                                            | Condition Red                                                                                                                                                                                                                                                        |
|-------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Water quality monitoring</b>                       | Trigger            | No visible indicators within the Site (oil / grease, turbidity).<br>No complaints from property owners downstream of the Site. | Visible indicators within the Site.<br>Complaints from property owners downstream of the Site.                                             | Prolonged poor water quality within the sediment basins and downstream of the Site.                                                                                                                                                                                  |
|                                                       | Response           | Continue ESCP implementation                                                                                                   | Water quality sampling and testing to be undertaken to ensure results are just an anomaly and not a trend.                                 | Appropriate rectification measures are implemented (e.g., aeration, additional filtration).<br><br>Follow up water quality monitoring is undertaken to ensure parameters meet the construction phase water quality targets for the Wianamatta-South Creek catchment. |
|                                                       | Timing             | Ongoing                                                                                                                        | Within five (5) business days of evidence of visible indicators within the Site or receipt of a complaint from an adjacent property owner. | Follow up water quality monitoring within five (5) business days of implementation of measures and until water quality results are below or within acceptable limits.                                                                                                |
| <b>Tracking of soil or sediment onto public roads</b> | Trigger            | No visible indication of soil or sediment on public roads adjacent to the site.                                                | Visible indication of soil or sediment on public roads adjacent to the site.                                                               | Multiple instances of visible soil or sediment on public roads adjacent to the site.                                                                                                                                                                                 |
|                                                       | Response           | Continue ESCP implementation                                                                                                   | A suitably trained person to inspect wheel wash measures at site exit point(s). Review and remediate as appropriate.                       | A suitably trained person to inspect wheel wash measures at site exit point(s). Review and remediate as soon as practical. Review of engineering design and revise ESCPs.                                                                                            |
|                                                       | Timing             | Ongoing                                                                                                                        | Within 14 days of evidence of visible indicators.                                                                                          | Within 5 days of evidence of visible indicators.                                                                                                                                                                                                                     |

| Element         | Trigger / Response | Condition Green                                                                            | Condition Amber                                                                                                     | Condition Red                                                                                                                                                                                                                                                    |
|-----------------|--------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dust management | Trigger            | No visible evidence of dust within or adjacent to the site due to construction activities. | Visible evidence of dust within or adjacent to the site due to construction activities (primarily bulk earthworks). | Frequent visible evidence of dust within or adjacent to the site due to construction activities (primarily bulk earthworks).                                                                                                                                     |
|                 | Response           | Continue ESCP implementation                                                               | Implement dust suppression, including importing water to site if none is available in on-site water storages.       | Implement dust suppression, including importing water to site if none is available in on-site water storages.<br><br>Apply stabilisation to exposed surfaces and stockpiles. Consider covering high risk stockpiles with a suitable material (e.g., geotextile). |
|                 | Timing             | Ongoing                                                                                    | As required                                                                                                         | As required                                                                                                                                                                                                                                                      |

## 9. Review and improvement

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Continuous review and improvement of this ESCP will be achieved by ongoing evaluation of the performance of erosion and sediment control measures against the requirements of the standards and guidelines listed in **Section 1.3** and the objectives and controls outlined in **Section 3**.

This ESCP will be revised to address agency comments, monitoring outcomes, lessons learned and as otherwise necessary. The ESCP will also be revised whenever the construction programme, scope of work or work methods change to a degree that warrant amendments to the proposed erosion and sediment control measures.

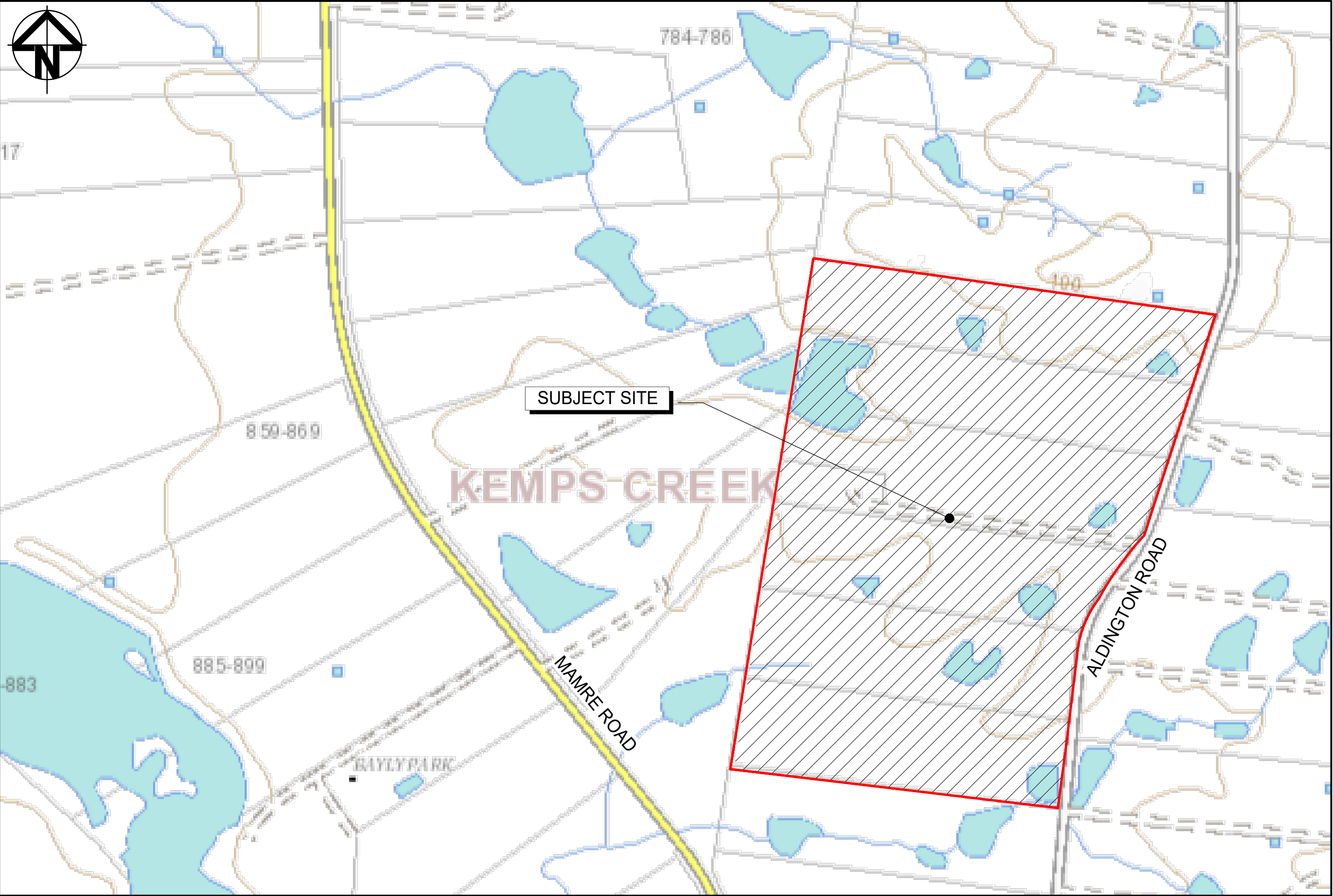
## APPENDIX A – Erosion and Sediment Control Plan Drawings

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155-251 ALDINGTON ROAD,  
KEMPS CREEK  
EROSION AND SEDIMENT CONTROL PLAN  
SSD-17552047

THESE DRAWINGS MUST READ IN CONJUNCTION WITH ITT, THE RELEVANT SYDNEY WATER, COUNCIL CONSTRUCTION SPECIFICATIONS, AUSTRALIAN STANDARDS AND AUTHORITY GUIDELINES.



LOCALITY PLAN  
NTS

NOTE:  
1. THIS PACKAGE TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWING PACKAGES.  
• 20000 SERIES - CONSTRUCTION ACCESS  
• 30000 SERIES - INFRASTRUCTURE  
• 40000 SERIES - TRUNK DRAINAGE



TIM MICHEL  
11555

|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                  |             |                                                                  |                                                                                       |                                                                                                                                                          |             |
|-------|-------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|------------------|-------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|       |                         | Bar Scales | THIS DRAWING CANNOT BE<br>COPIED OR REPRODUCED IN<br>ANY FORM OR USED FOR ANY<br>OTHER PURPOSE OTHER THAN<br>THAT ORIGINALLY INTENDED<br>WITHOUT THE WRITTEN<br>PERMISSION OF AT&L |  | Client | Scales<br>N.T.S. | Drawn<br>LM | Project<br>SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | Civil Engineers and Project Managers                                                  |                                                                                                                                                          |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                  |             |                                                                  |  | Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                  |             |                                                                  |                                                                                       |                                                                                                                                                          |             |
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|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                  |             |                                                                  |                                                                                       |                                                                                                                                                          |             |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25   |                                                                                                                                                                                    |                                                                                       |        |                  |             | Title<br>COVER SHEET                                             | Status<br>FOR CONSTRUCTION                                                            |                                                                                                                                                          | A1          |
| Issue | Description             | Date       |                                                                                                                                                                                    |                                                                                       |        |                  |             |                                                                  | Project - Drawing No.<br>20-776-C10000                                                |                                                                                                                                                          | Issue<br>01 |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                  |             |                                                                  |                                                                                       |                                                                                                                                                          |             |



| DRAWING LIST                         |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------|
| DRAWING No.                          | DRAWING TITLE                                                             |
| GENERAL                              |                                                                           |
| 20-776-C10000                        | COVER SHEET                                                               |
| 20-776-C10001                        | DRAWING LIST AND LEGENDS                                                  |
| 20-776-C10002                        | GENERAL NOTES SHEET 1                                                     |
| 20-776-C10003                        | GENERAL NOTES SHEET 2                                                     |
| 20-776-C10004                        | GENERAL NOTES SHEET 3                                                     |
| 20-776-C10005                        | GENERAL NOTES SHEET 4                                                     |
| 20-776-C10006                        | GENERAL NOTES SHEET 5                                                     |
| 20-776-C10007                        | GENERAL NOTES SHEET 6                                                     |
| 20-776-C10008                        | GENERAL NOTES SHEET 7                                                     |
| 20-776-C10009                        | GENERAL NOTES SHEET 8                                                     |
| 20-776-C10010                        | GENERAL NOTES SHEET 9                                                     |
| 20-776-C10011                        | GENERAL NOTES SHEET 10                                                    |
| EROSION AND SEDIMENT CONTROL PLANS   |                                                                           |
| 20-776-C10015                        | PERMANENT ARRANGEMENT EROSION & SEDIMENT CONTROL GENERAL ARRANGEMENT PLAN |
| 20-776-C10016                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 1           |
| 20-776-C10017                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 2           |
| 20-776-C10018                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 3           |
| 20-776-C10019                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 4           |
| 20-776-C10020                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 5           |
| 20-776-C10021                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 6           |
| 20-776-C10022                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 7           |
| 20-776-C10023                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 8           |
| 20-776-C10024                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 9           |
| 20-776-C10025                        | PERMANENT ARRANGEMENT EROSION AND SEDIMENT CONTROL PLAN SHEET 10          |
| EROSION AND SEDIMENT CONTROL BASINS  |                                                                           |
| 20-776-C10030                        | EROSION AND SEDIMENT BASIN DETAILS BASINS A AND B                         |
| 20-776-C10031                        | EROSION AND SEDIMENT BASIN DETAILS BASINS C AND D                         |
| 20-776-C10032                        | EROSION AND SEDIMENT BASIN DETAILS BASIN E                                |
| 20-776-C10033                        | EROSION AND SEDIMENT BASIN DETAILS BASIN F                                |
| 20-776-C10034                        | EROSION AND SEDIMENT BASIN DETAILS BASIN G                                |
| 20-776-C10035                        | EROSION AND SEDIMENT BASIN DETAILS BASIN H                                |
| 20-776-C10036                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB1                              |
| 20-776-C10037                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB2                              |
| 20-776-C10038                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB3                              |
| 20-776-C10039                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB4                              |
| 20-776-C10040                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB5                              |
| 20-776-C10041                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB6                              |
| 20-776-C10042                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB7                              |
| 20-776-C10043                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB8                              |
| 20-776-C10044                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB9                              |
| 20-776-C10045                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB10                             |
| 20-776-C10046                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB11                             |
| 20-776-C10047                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB12                             |
| 20-776-C10048                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB13                             |
| 20-776-C10049                        | EROSION AND SEDIMENT BASIN DETAILS BASIN SB14                             |
| 20-776-C10050                        | EROSION AND SEDIMENT BASIN SPECIFICATIONS                                 |
| EROSION AND SEDIMENT CONTROL DETAILS |                                                                           |
| 20-776-C10051                        | EROSION AND SEDIMENT CONTROL DETAILS SHEET 1                              |
| EROSION AND SEDIMENT CONTROL STAGING |                                                                           |
| 20-776-C10061                        | CONSTRUCTION STAGING PLAN STAGE 1                                         |
| 20-776-C10062                        | CONSTRUCTION STAGING PLAN STAGE 2                                         |
| 20-776-C10063                        | CONSTRUCTION STAGING PLAN STAGE 3                                         |
| 20-776-C10064                        | CONSTRUCTION STAGING PLAN STAGE 4                                         |
| 20-776-C10065                        | CONSTRUCTION STAGING PLAN STAGE 5                                         |

| SEDIMENT AND EROSION CONTROL LEGEND |                                                           |
|-------------------------------------|-----------------------------------------------------------|
|                                     | SEDIMENT FENCE (SD 6-8)                                   |
|                                     | SEDIMENT FENCE ON PAD (SD 6-8)                            |
|                                     | BARRIER FENCE                                             |
|                                     | EARTH BANK (LOW FLOW) (SD 5-5)                            |
|                                     | CLEAN WATER DIVERSION SWALE                               |
|                                     | CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)        |
|                                     | RECP : CONCENTRATED FLOW (SD 5-7)                         |
|                                     | STRAW BALE FILTER (SD 6-7)                                |
|                                     | MESH AND GRAVEL INLET FILTER (SD 6-11)                    |
|                                     | ROCK RIFFLE CHECK DAM (SD 5-4)                            |
|                                     | GEOTEXTILE INLET (SD 6-12)                                |
|                                     | STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14) |
|                                     | PROPOSED SITE ACCESS GATE                                 |
|                                     | PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL              |

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

| SITEWORKS LEGEND |                                                |
|------------------|------------------------------------------------|
|                  | EXISTING BOUNDARY                              |
|                  | EXISTING BOUNDARY TO BE REMOVED                |
|                  | EXISTING EASEMENT                              |
|                  | PROPOSED BOUNDARY                              |
|                  | PROPOSED FILL RETAINING WALL                   |
|                  | PROPOSED CUT RETAINING WALL                    |
|                  | FUTURE RETAINING WALL                          |
|                  | PROPOSED MAJOR CONTOUR                         |
|                  | PROPOSED MINOR CONTOUR                         |
|                  | PROPOSED BATTER 1(V):3(H) U.N.O                |
|                  | TEMPORARY BATTER 1(V):3(H) U.N.O               |
|                  | PROPOSED MOUNTABLE KERB                        |
|                  | PROPOSED KERB ONLY                             |
|                  | PROPOSED KERB AND GUTTER                       |
|                  | PROPOSED DISH DRAIN                            |
|                  | PROPOSED DRIVEWAY LAYBACK                      |
|                  | PROPOSED KERB RAMP                             |
|                  | LIMIT OF WORKS                                 |
|                  | PROPOSED CATCH DRAIN                           |
|                  | PROPOSED SUBSOIL (100mm Ø) WITH FLUSHING POINT |
|                  | PROPOSED STORMWATER JUNCTION PIT               |
|                  | PROPOSED STORMWATER JUNCTION PIT               |
|                  | PROPOSED STORMWATER KERB INLET PIT WITH LINTEL |
|                  | PROPOSED STORMWATER PIPE WITH HEADWALL         |
|                  | PROPOSED CAPPED STORMWATER PIPE                |
|                  | PROPOSED STORMWATER PIT LABEL                  |
|                  | PROPOSED STORMWATER PIPE, DIRECTION AND SIZE   |
|                  | PROPOSED SEWER PIPE AND MANHOLE                |
|                  | LOCATION OF TRANSGRID EASEMENT PADS            |

|       |                         |            |                                                                                                                                                                                    |                                                                                       |                 |          |          |                                                                                                                                                                                                                                                                 |                                                                  |                                        |             |    |
|-------|-------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------|-------------|----|
|       |                         | Bar Scales | THIS DRAWING CANNOT BE<br>COPIED OR REPRODUCED IN<br>ANY FORM OR USED FOR ANY<br>OTHER PURPOSE OTHER THAN<br>THAT ORIGINALLY INTENDED<br>WITHOUT THE WRITTEN<br>PERMISSION OF AT&L |  | Scales          |          | Drawn    | LM                                                                                                                                                                                                                                                              | Project<br>SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | Civil Engineers and Project Managers   |             |    |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | N.T.S.          | Designed | TM       |  <div>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</div> |                                                                  | Status<br>FOR CONSTRUCTION             | A1          |    |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | Grid            | GDA 2020 | Checked  |                                                                                                                                                                                                                                                                 |                                                                  |                                        |             | AM |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | Height<br>Datum | AHD      | Approved |                                                                                                                                                                                                                                                                 | Title<br><br>DRAWING LIST<br>AND LEGENDS                         | Project - Drawing No.<br>20-776-C10001 | Issue<br>01 |    |
| 01    | ISSUED FOR CONSTRUCTION |            |                                                                                                                                                                                    |                                                                                       | 23-07-25        |          |          |                                                                                                                                                                                                                                                                 |                                                                  |                                        |             |    |
| Issue | Description             |            |                                                                                                                                                                                    |                                                                                       | Date            |          |          |                                                                                                                                                                                                                                                                 |                                                                  |                                        |             |    |

100mm on Original

F:\20-776 Fraser Mamre\6.0 Drgs\Civil\Final\\_CONSTRUCTION\10000\_CC-ERSED\20-776-C10001.dwg



1. ORIGIN OF LEVELS- REFER SURVEY NOTES.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO AT & L.
3. ALL EARTHWORKS TO BE UNDERTAKEN IN ACCORDANCE WITH "PSM "BULL EARTHWORKS SPECIFICATION FILLING, CUTTING AND TESTING (WITH BLENDED TOPSOIL)" REPORT PSM3859-005S REV 6 DATED 21 SEPTEMBER 2023.
4. MAKE SMOOTH CONNECTION WITH EXISTING WORKS.
5. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
6. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED 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% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
7. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
8. ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S SPECIFICATION R116.
9. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S FORM 3051 (UNBOUND), R.M.S FORM 3052 (BOUND) COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m² OF BASECOURSE MATERIAL PLACED.
10. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S FORM 3051, 3051.1 AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m² OF SUB-BASE COURSE MATERIAL PLACED.
11. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S FORM 3051 AND 3051.1 WILL BE CONSIDERED. SUBMIT MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF AT & L AND PENRITH CITY COUNCIL.
12. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THE CONTRACTOR IS TO SEEK ACCEPTANCE OF THE PRODUCT FROM AT&L AND PENRITH CITY COUNCIL. THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
13. WHERE NOTED ON THE DRAWINGS THAT WORK IS TO BE CARRIED BY OTHERS, (eg ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.
14. ALL WORKS CARRIED OUT ADJACENT TO AND WITHIN TRANSGRID'S EASEMENT TO COMPLY WITH TRANSGRID'S GUIDELINES AND REQUIREMENTS.
15. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH PENRITH CITY COUNCIL'S ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY BOXALL, BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN, AT&L DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT AT&L.

THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM THE ORIGINAL SURVEY DOCUMENTS.

NOTES

1. THE BOUNDARIES HAVE APPROXIMATELY BEEN SURVEYED IN ACCORDANCE WITH CLAUSE 9 OF THE SURVEYING & SPATIAL INFORMATION REGULATION 2017
2. ALL AREAS AND DIMENSIONS HAVE BEEN COMPILED FROM PLANS MADE AVAILABLE BY NSW LAND REGISTRY SERVICES AND ARE SUBJECT TO FINAL SURVEY
3. ORIGIN OF COORDINATES HAS BEEN DERIVED USING GPS (GNSS) SURVEY FROM PM178278
4. ORIGIN OF LEVELS ON A H.D.S IS TAKEN FROM PM33561 USING GPS (GNSS) SURVEY METHODS.
5. CONTOUR INTERVAL 0.5 m
6. CONTOURS ARE INDICATIVE ONLY. ONLY SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION
7. NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. SERVICES HAVE BEEN PLOTTED FROM RELEVANT AUTHORITIES INFORMATION AND HAVE NOT BEEN SURVEYED. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION OR NEAR THE SITE
8. 8/47 DESIGN TREE SPREAD OF 8m, TRUNK DIAMETER OF 0.4m & APPROX HEIGHT OF 7m
9. SHOWS APPROXIMATE POSITION OF ROAD LINEMARKING AND IS INDICATIVE ONLY
10. BEARINGS SHOWN ARE MGA (MAP GRID OF AUSTRALIA) ADD APPROX. 1°00' FOR TRUE NORTH

1. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.
2. AT & L CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
3. CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
4. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
5. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.
6. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR IS TO CONFIRM THE ALIGNMENT AND LEVELS OF ALL EXISTING SERVICES AT ALL LOCATIONS WHERE THE PROPOSED SERVICES ARE TO CROSS, CONNECT TO, OR ARE LOCATED IN CLOSE PROXIMITY TO THE EXISTING SERVICES.

1. DEMOLITION OF EXISTING DWELLING TO BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS OF AS2601-2001 - DEMOLITION OF STRUCTURES BY CONTRACTORS EXPERIENCED IN THIS CLASS OF WORK AND HOLDING REQUIRED CURRENT PERMITS AND LICENSES AS REQUIRED.
2. EXISTING INTERNALS FENCING, CATTLE YARDS, UTILITIES AND OTHER REDUNDANT STRUCTURES TO BE DEMOLISHED AND REMOVED TO AN APPROVED WASTE MANAGEMENT FACILITY.
3. DAM DECOMMISSIONING TO BE COMPLETED AS PER THE DAM DECOMMISSIONING PROCEDURE AS CONTAINED WITHIN THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP).
4. ALL EXISTING SERVICES (INCLUDING SEPTIC TANKS) SHALL BE REMOVED FROM SITE.
5. ALL UNDERGROUND CABLES AND PIPES SHALL BE GRUBBED OUT AND CAPPED AT THE BOUNDARY OF THE SITE.
6. ALL OVERHEAD SERVICES SHALL BE REMOVED FROM WITHIN THE SITE BOUNDARY AND MADE SAFE AT THE TERMINATION LOCATION. ANY POLES SHALL BE REMOVED FROM THE SITE.
7. ALL EXISTING SERVICES TO BE CONSIDERED AS LIVE UNTIL THE CONTRACTOR HAS TESTED AND CONFIRMED TO THE SUPERINTENDENT THAT THE SERVICES ARE DEAD / REDUNDANT.

1. IF REQUIRED ANY DEWATERING WORKS TO BE AS PER THE DEWATERING PROCEDURE AS CONTAINED WITHIN THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP).

1. THE SITE SUPERINTENDENT/ENGINEER WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED.
2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
  - a. LOCAL AUTHORITY REQUIREMENT
  - b. EPA REQUIREMENTS
  - c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
5. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.
6. THE CONTRACTOR SHALL PREPARE ADDITIONAL EROSION AND SEDIMENT CONTROL PLANS THROUGHOUT THE WORKS THAT DOCUMENT THE REQUIRED CONTROLS TO MATCH THE STAGE AND PROGRESSION OF WORKS. IN THIS REGARD, THE EROSION AND SEDIMENT CONTROL PLANS INCLUDED WITHIN THIS DRAWING SET ARE GENERALLY THOSE CONTROLS TO BE IMPLEMENTED AT THE COMPLETION OF ALL WORKS.
7. SITE PERSONNEL RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROLS ARE TO BE APPROPRIATELY TRAINED IN IMPLEMENTATION AND MAINTENANCE OF CONTROL MEASURES
8. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
  - (A) INSTALL A WIND FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
  - (B) INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
  - (C) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
  - (D) INSTALL SEDIMENT BASIN AS SHOWN ON PLAN
  - (E) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
  - (F) UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

1. DURING WET WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
2. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
3. WITHIN 5 DAYS OF THE CONCLUSION OF A RUNOFF GENERATING RAINFALL EVENT (NOMINALLY 5mm OR GREATER), SEDIMENT BASINS MUST BE TREATED AND APPROVED CAPACITY RESTORED FOR THE ONGOING MANAGEMENT OF THE SITE SEDIMENT YIELD. IT IS NOTED THAT SOME BASINS MAY BE OVERSIZED TO RETAIN SITE WATER FOR CONSTRUCTION PURPOSES.
4. SITE WATER DISCHARGED FROM THE PROJECT WILL BE COMPLIANT WITH EPA CRITERIA AND WILL BE UNDERTAKEN AT APPROVED LOCATIONS BY APPROPRIATELY TRAINED SITE PERSONNEL. WATER DISCHARGE IS TO BE UNDERTAKEN AT NON-EROSIVE VELOCITIES WITH ADEQUATE DIFFUSERS, LEVEL SPREADERS, ETC. AND WILL ENSURE LOCALISED FLOODING DOES NOT OCCUR.
5. BASIN SPILLWAY MATERIAL WILL BE CLASSIFIED AS SUITABLE TO ACHIEVE DESIRED COMPACTION FOR STRUCTURE STABILITY.
6. NO VISIBLE OIL AND GREASE SHALL BE PRESENT IN ANY WATER TO BE DISCHARGED OFFSITE.
7. IF REQUIRED, THE CONTRACTOR SHALL ADD FLOCCULENT (E.G. GYPSUM) TO DROP SEDIMENT OUT OF SOLUTION TO MEET EPA REQUIREMENTS FOR TURBIDITY. THE PH OF ANY WATER TO BE DISCHARGED OFFSITE SHALL MEET EPA REQUIREMENTS.
8. BASIN INLET AND SPILLWAY CONSTRUCTION WILL INCLUDE SUITABLE SLOPE STABILISATION REQUIREMENTS AS REQUIRED TO ACHIEVE STABILITY FROM DISCHARGE AND OVERTOPPING WATER E.G. ROCK SCOUR AND GEOFABRIC. THE CONTRACTOR SHALL CONFIRM THE SPECIFIC SLOPE STABILITY CONTROLS.
9. WHERE MATERIAL OR FABRIC IS USED, THE MATERIAL WILL BE OVERLAPPED BY A MINIMUM 300MM AND ANCHORED IN TO PREVENT SLIPPAGE AND UNDERCUTTING ON THE SLOPE.
10. WHERE ROCK MATERIAL IS USED, ROCK WILL BE A MINIMUM 150MM IN DIAMETER AND CONSTRUCTED TO PROVIDE ENERGY DISSIPATION FOR OVERTOPPING WATER.
11. THE FINISHED SPILLWAY WILL BE FREE OF DEPRESSIONS, POCKETS OF SMALL ROCK AND WILL BE SMOOTH AND UNIFORM SURFACE TO ENSURE EVEN FLOW OF OVERTOPPING WATER.COMPLETED EARTHWORKS PADS, WHICH ARE TO REMAIN UNDISTURBED FOR AN EXTENDED PERIOD OF TIME, SHALL BE SUITABILITY STABILISED (E.G. CHEMICAL BINDERS OR HYDROMULCHING) TO PREVENT DUST GENERATION AND SEDIMENT RUNOFF.

1. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES (AND PREFERABLY NO CLOSER THAN 5 METRES) OF HAZARD AREAS, PARTICULARLY LIKELY AREAS OF CONCENTRATED WATER FLOWS (E.G., WATERWAYS, ROADS, SLOPES STEEPER THAN 10%). WHERE STOCKPILES ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
2. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
3. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
4. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
5. INSPECTIONS OF EROSION AND SEDIMENT CONTROLS WILL OCCUR (AND BE DOCUMENTED) ON A REGULAR BASIS. THIS WILL INCLUDE IMMEDIATELY FOLLOWING RAINFALL EVENTS >10MM, WITH ANY NECESSARY REPAIRS IMPLEMENTED AS SOON AS POSSIBLE.
6. RELEVANT CHECKLISTS AND RECORDS TO BE MAINTAINED NOTING DETAILS SUCH AS RAINFALL RECEIVED, REPAIRS TO CONTROLS AND AMOUNTS OF SEDIMENTS CLEARED FROM CONTROLS.
7. ALL SITE PERSONNEL TO REPORT ANY SPILL, LEAKS, OR OTHER FAILURE TO RELEVANT RESPONSE STAFF AS SOON AS POSSIBLE.
8. EROSION AND SEDIMENT CONTROLS ARE TO BE MAINTAINED UNTIL THE PROJECT CATCHMENTS AREA IS STABILISED TO ACHIEVE SOIL SURFACE PROTECTION FACTORS AS PER THE 'BLUEBOOK'. AN INSPECTION BY THE PROJECT SOIL CONSERVATIONIST WILL BE UNDERTAKEN TO VERIFY THE STABILISATION OF THE PROJECT CATCHMENT AREA PRIOR TO REMOVAL OF CONTROLS.

1. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
  - (A) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
  - (B) ENSURING THAT NOTHING IS NAILED TO THEM
  - (C) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS:
    - (I) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 15 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICHEVER IS THE GREATER
    - (II) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH
    - (III) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.

| BULK EARTHWORKS |              |                                                           |
|-----------------|--------------|-----------------------------------------------------------|
| EARTHWORKS      | -50mm / +0mm | OF FINISHED SURFACE LEVEL (AFTER COMPACTION AND TRIMMING) |

| LOCATION                                                  | TOLERANCE (mm)         |                          |
|-----------------------------------------------------------|------------------------|--------------------------|
|                                                           | SLOPE 1H:1V OR FLATTER | SLOPE STEEPER THAN 1H:1V |
| AT LEVEL OF TOP OF FORMATION/<br>UNDERSIDE OF PAVEMENT    | +0/-150                | +0/-150                  |
| BETWEEN TOP OF FORMATION AND<br>1m BELOW TOP OF FORMATION | +150/-150              | +150/-150                |
| BEYOND 1m BELOW TOP OF<br>FORMATION                       | +300/-300              | +300/-300                |

REFER TO TfNSW R44 SPECIFICATION

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A. INTRODUCTION

- 1) THE DETAILS SHOWN WITHIN THIS EROSION AND SEDIMENT CONTROL PLAN (ESCP) ARE OVER-ARCHING CONTROL REQUIREMENTS ONLY. AS THE WORKS PROGRESS AND SITE CONDITIONS CHANGE, THIS PLAN IS TO BE UPDATED ACCORDINGLY. SITE SPECIFIC PROGRESSIVE EROSION AND SEDIMENT CONTROL PLANS (PESCPS) WILL ALSO BE REQUIRED TO DETAIL SPECIFIC WORKS. THIS ESCP HAS BEEN PREPARED TO SUPPLEMENT THE PROJECT'S CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP).
- 2) THIS ESCP HAS BEEN PREPARED BY A CPESC IN ACCORDANCE WITH THE BLUE BOOK VOLUME 1 (LANDCOM, 2004) AND TO MEET THE REQUIREMENTS FOR CONSTRUCTION PHASE WATER QUALITY MANAGEMENT AS SET OUT IN THE TECHNICAL GUIDANCE FOR ACHIEVING WIANAMATTA SOUTH CREEK STORMWATER MANAGEMENT TARGETS (NSW GOVERNMENT, 2022). IT DEMONSTRATES THE CONSTRUCTION APPROACH AND TIMING REQUIREMENTS FOR ACHIEVING THE CONSTRUCTION PHASE STORMWATER QUALITY TARGETS.
- 3) THE NSW GOVERNMENT (2022) TECHNICAL GUIDANCE (AS NOTED ABOVE) REQUIRES 80% OF THE AVERAGE ANNUAL RUNOFF VOLUME ACHIEVES 50mg/L TOTAL SUSPENDED SOLIDS (TSS) OR LESS AND PH IN THE RANGE OF 6.5-8.5.

B. DESIGN PARAMETERS

- 1) 5 DAY 85<sup>TH</sup> PERCENTILE RAINFALL DEPTH = 35mm (PENRITH)
- 2) THE SITE IS LOCATED IN THE LUDDENHAM AND BLACKTOWN SOIL LANDSCAPES (SOIL TEXTURE TYPE D)
- 3) 2-YEAR 6-HOUR DURATION RAINFALL INTENSITY = 9.04mm/hr, WHICH GENERATES A RAINFALL EROSIVITY FACTOR OF 1870.

C. GENERAL REQUIREMENTS

- 1) THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION INCLUDING THE MAINTENANCE PERIOD.
- 2) THE EXTENT AND POSITION OF THE EROSION AND SEDIMENT CONTROL MEASURES TO BE DETERMINED ON SITE BY THE CONTRACTOR TO SUIT THE CONSTRUCTION PROGRAM.
- 3) THESE PLANS PRESENT CONCEPTS ONLY AND THE MEASURES SHOWN ON THESE DRAWING(S) ARE MINIMUM REQUIREMENTS ONLY.
- 4) THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR THE ESTABLISHMENT, MANAGEMENT AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES TO MEET STATE AND LOCAL GOVERNMENT STANDARDS AND GUIDELINES.
- 5) LARGE OPEN AREAS OR STEEP BATTERS SHOULD NOT BE LEFT EXPOSED/UNSTABILISED FOR MORE THAN 10 DAYS OR IF WET WEATHER IS FORECAST.
- 6) EXPOSED AREAS INCLUDING BATTERS WHICH REMAIN UN-WORKED FOR MORE THEN 10 DAYS SHOULD BE STABILISED USING TEMPORARY HYDROMULCHING, HYDROSEEDING OR MULCHING, EVEN IF AREAS WILL BE WORKED AT A LATER TIME.
- 7) ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DOCUMENT TITLED TECHNICAL GUIDANCE FOR ACHIEVING WIANAMATTA SOUTH CREEK STORMWATER MANAGEMENT TARGETS (NSW GOVERNMENT, 2022).
- 8) THE CONTRACTOR SHALL BE AWARE OF ITS RESPONSIBILITIES FOR PROTECTING THE DOWNSTREAM ENVIRONMENT AND RECEIVING WATER FROM POLLUTION AND ENVIRONMENTAL HARM, UNDER THE POEO ACT 1997.
- 9) ADDITIONALLY, THE CONTRACTOR SHALL BE AWARE OF ITS DUTY UNDER THE POEO ACT 1997 TO NOTIFY THE LOCAL AUTHORITY AND THE ENVIRONMENT PROTECTION AUTHORITY (NSW) OF A POTENTIAL OR ACTUAL INCIDENT OF ENVIRONMENTAL HARM.

D. RECOMMENDED IMPLEMENTATION SEQUENCE

- 1) ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO WORKS COMMENCING AND IN THE FOLLOWING SEQUENCE.
- a. CONSTRUCT TEMPORARY STABILISED SITE ACCESS, ENSURING ADJACENT STORMWATER RUN OFF IS DIVERTED AWAY FROM ACCESS. ENSURE THAT ALL VEHICLES ENTERING AND LEAVING THE WORK AREA PASS OVER A STABILISED SITE ACCESS POINT. A VEHICLE WHEEL WASH / WASH DOWN FACILITY IS TO BE ESTABLISHED AT THE MAIN CONSTRUCTION EXIT AND ALL CONSTRUCTION VEHICLES MUST PASS THROUGH THIS POINT WHEN LEAVING THE SITE.
- b. SITE ACCESS AND DISTURBANCE MUST BE MINIMISED TO THE AREAS ESSENTIAL FOR THE CONSTRUCTION WORKS ONLY.
- c. ESTABLISH A TEMPORARY SITE OFFICE, TOILET AND PARKING AREA AS NOMINATED BY THE SITE MANAGER.
- d. INSTALL SEDIMENT FENCING AND/OR BARRIER FENCING TO CONFINE INGRESS TO AND EGRESS FROM THE SITE TO STABILISED ACCESS POINT(S) ONLY.
- e. PROVIDE INLET PROTECTION TO STORMWATER INLETS AND GULLIES ON ALL ROADS ADJOINING THE SITE.
- f. CONSTRUCT BARRIER FENCING AROUND RESTRICTED 'NO-GO' ZONES OF RETAINED VEGETATION, AREAS NOT TO BE DISTURBED AND AREAS WHICH WILL REMAIN UN-WORKED.
- g. CONSTRUCT UPSTREAM DIVERSION CHANNELS TO DIVERT CLEAN WATER AROUND WORKSITE AND INSTALL APPROPRIATE CHANNEL STABILISATION.
- h. CONSTRUCT LOW FLOW EARTH BANKS AS CATCH DRAINS PARALLEL TO CONTOURS TO LIMIT LARGE SLOPE LENGTHS (SLOPES SHOULD BE LESS THEN 80M IN LENGTH).
- i. INSTALL ALL TEMPORARY SEDIMENT FENCES.
- j. CONSTRUCT ANY NOMINATED SEDIMENT BASINS AND SEDIMENT TRAPS.
- k. ESTABLISH STOCKPILE AREAS IN AREAS AS SPECIFIED BY THE SITE MANAGER AND IN ACCORDANCE WITH THE SOIL STRIPPING AND STOCKPILING NOTES BELOW.
- l. EXISTING DAMS ARE TO BE PROGRESSIVELY DEWATERED IN ACCORDANCE WITH THE PROJECT APPROVED DEWATERING PROCEDURE AND IN ACCORDANCE WITH THE 'DIRTY WATER TREATMENT AND DISCHARGE REQUIREMENTS' NOTES AND OTHER RECOMMENDATIONS ON THIS PLAN. NOTE THAT IN SOME INSTANCES (WHERE DIVERSION DRAINS OR SEDIMENT BASINS ARE LOCATED IN THE POSITION OF EXISTING DAMS), DEWATERING OF THE DAMS WILL NEED TO OCCUR PRIOR TO THE CONSTRUCTION OF THESE DEVICES.
- m. STABILISE ALL DISTURBED AREAS ASAP AND PROGRESSIVELY AS WORKS ARE COMPLETED. TEMPORARY STABILISATION TO BE DONE USING GEOTEXTILE, MULCHING, HYDROMULCHING, HYDROSEEDING OR DIRECT SEEDING TO GIVE A 70% COVERAGE OF GROUND SURFACE WITHIN 14 DAYS OF WORKS COMPLETING (EVEN IF WORKS MAY CONTINUE LATER).
- 2) UNDERTAKE SITE DEVELOPMENT WORKS SO THAT LAND DISTURBANCE IS CONFINED TO MINIMUM WORKABLE AREAS.
- 3) DISTURBED AREAS TO EXTEND NO MORE THAN 5 METRES (PREFERABLY 2 METRES) FROM ESSENTIAL WORKS AREAS.
- 4) WORK AREAS TO BE DELINEATED BY BARRIER FENCING AND DIVERSION CHANNEL UPSLOPE AND SEDIMENT FENCING DOWNSLOPE.
- 5) THE CONTRACTOR SHALL ENSURE THAT THE EXISTING VEGETATION AND GROUND COVER IS RETAINED AS MUCH AS POSSIBLE.
- 6) SITE VEGETATION APPROVED FOR CLEARING SHOULD BE MULCHED AND STOCKPILED FOR LATER USE IN LANDSCAPING, STABILISATION AND/OR SITE REHABILITATION WORKS.
- 7) AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND RECEIVING ENVIRONMENTS.
- 8) EROSION AND SEDIMENT CONTROL PROTECTION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONTRACT.
- 9) PLANS AND CONTROL MEASURES FOR LARGE SITES WILL NEED TO BE REVISED AND UPDATED TO REFLECT THE SITE STAGES AND PROGRESSION OF WORKS.
- 10) MEASURES INCLUDING SEDIMENT FENCES SHOULD BE MOVED AND REINSTATED AS WORKS PROGRESS.
- 11) PEDESTRIAN AND VEHICULAR TRAFFIC TO BE RESTRICTED IN RECENTLY STABILISED AREAS INCLUDING THOSE HYDROSEEDED, TURFED OR SEEDDED.

E. EROSION AND SEDIMENT CONTROL MEASURES

- 1) TO SATISFY THE REQUIREMENT OF 80% HYDROLOGICAL EFFECTIVENESS FOR CONSTRUCTION PHASE WATER QUALITY MANAGEMENT, ALL FEASIBLE AND PRACTICAL MEASURES SHOULD BE IMPLEMENTED FOR THE DURATION OF WORKS. SPECIFIC MEASURES INCLUDE:
- UTILISING EXISTING DAMS AND / OR FUTURE WATER RETENTION DEVICES WHERE PRACTICABLE TO PROVIDE ADDITIONAL WATER STORAGE VOLUME AND BREAK UP CATCHMENTS;
  - ENHANCED EROSION CONTROLS (E.G. REDUCED SLOPE LENGTHS, INCREASED FOCUS ON TEMPORARY AND PROGRESSIVE STABILISATION, ADDITIONAL CHECK DAMS AND A FOCUS ON TEMPORARY DRAINAGE CONTROL
  - PASSIVE BROADCAST GYPSUM SPREADING OVER THE ENTIRE DISTURBED CATCHMENT PRIOR TO LARGER RAINFALL EVENTS BEYOND THE SEDIMENT BASIN DESIGN TO ASSIST WITH WATER TREATMENT AND TO MINIMISE SOIL LOSS
  - PRE-LOADING SEDIMENT BASIN, SEDIMENT TRAPS AND THEIR INLET DRAINAGE DEVICES WITH GYPSUM OR BIOPOLYMER SOCKS TO SPEED UP SETTLEMENT RATES; AND
  - ADAPTIVE MANAGEMENT RESULTING FROM MONTHLY INSPECTIONS BY A CPESC, INCLUDING ACTING ON ADVICE AND IMPLEMENTING CHANGES TO THE EROSION AND SEDIMENT CONTROLS WHERE NECESSARY.
- 2) THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE UNDERTAKEN AS REQUIRED DURING ALL STAGES OF THE WORKS:
- a. TOPSOIL STRIPPING IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE 'SOIL STRIPPING AND STOCKPILING' NOTES.
- b. SLOPE LENGTHS ACROSS DISTURBED LANDS ARE TO BE MAINTAINED AT MAXIMUM 40M INTERVALS DURING ALL RAINFALL EVENTS. TO ACHIEVE THIS, DIVERSION BUNDS / DRAINS, LOW FLOW EARTH BANKS (STANDARD DRAWING SD 5-5) OR SANDBAGS / EQUIVALENT SHOULD BE INSTALLED PRIOR TO FORECAST RAINFALL AND SITE CLOSURE OF MORE THAN 2 DAYS. (NOTE THAT 40M INTERVALS ARE LESS THAN THE DESIGN SLOPE LENGTH OF 80M TO PROVIDE ENHANCED EROSION CONTROL AND ASSIST WITH REDUCING SEDIMENT MOVEMENT - ALSO REFER TO THE 'RAINFALL PREPARATION PROCEDURE' NOTES).
- c. BROADCAST GYPSUM SPREADING IS TO BE UNDERTAKEN ACROSS ALL EXPOSED SOILS PRIOR TO FORECAST RAINFALL ABOVE THE 85TH PERCENTILE DESIGN RAINFALL EVENT AND SITE CLOSURE OF MORE THAN 2 DAYS IN ACCORDANCE WITH THE 'RAINFALL PREPARATION PROCEDURE'.
- d. SEDIMENT BASIN AND SEDIMENT TRAP INLET POINTS WILL BE PRE-LOADED WITH GYPSUM (OR EQUIVALENT) PRIOR TO FORECAST RAINFALL ABOVE THE 85TH PERCENTILE DESIGN RAINFALL EVENT AND SITE CLOSURE OF MORE THAN 2 DAYS IN ACCORDANCE WITH THE 'RAINFALL PREPARATION PROCEDURE'.
- e. MAJOR DIRTY WATER DIVERSION DRAINS WILL HAVE GYPSUM, BIOPOLYMER GEL SOCKS (OR EQUIVALENT) PLACED WITHIN THEM AT 80M INTERVALS. THESE DEVICES WILL BE MAINTAINED OR REPLACED AS REQUIRED TO ENSURE THEY ARE IN PLACE PRIOR TO FORECAST RAINFALL ABOVE THE 85TH PERCENTILE DESIGN RAINFALL EVENT AND SITE CLOSURE OF MORE THAN 2 DAYS IN ACCORDANCE WITH THE 'RAINFALL PREPARATION PROCEDURE'.
- f. DUST SUPPRESSION TO BE CARRIED OUT WHEN REQUIRED (REFER TO THE 'DUST SUPPRESSION' NOTES).
- g. TEMPORARY DIRTY WATER CONTROL STRUCTURES (E.G. BATTER CHUTES, CHECK DAMS AND WINDROWS) ARE TO BE IMPLEMENTED (REFER TO THE 'RAINFALL PREPARATION PROCEDURE' NOTES).
- h. TEMPORARY STABILISATION IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE 'STABILISATION' NOTES AND THE 'RAINFALL PREPARATION PROCEDURE' AND THE INSTRUCTIONS ON THE PLAN/S.
- i. TREATMENT OF DIRTY WATER IS TO BE CARRIED OUT AS NECESSARY IN ACCORDANCE WITH THE 'DIRTY WATER TREATMENT AND DISCHARGE REQUIREMENTS' NOTES.
- j. MEASURES TO ASSIST WITH SALINITY MANAGEMENT ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE 'SALINITY CONSIDERATIONS' NOTES AND THE PROJECT'S SALINITY MANAGEMENT PLAN.
- k. MONITORING, MAINTENANCE AND INSPECTIONS ARE TO BE CARRIED OUT REGULARLY AS REQUIRED, IN ACCORDANCE WITH THE 'SITE INSPECTION AND MONITORING' NOTES.
- l. UNDERTAKE PROGRESSIVE STABILISATION OF LANDS AS FINAL EARTHWORKS ARE COMPLETE IN EACH AREA (RATHER THAN WAITING UNTIL THE COMPLETION OF WORKS). FINAL STABILISATION IS TO BE COMPLETED IN ACCORDANCE WITH THE 'STABILISATION' NOTES.
- 3) FINAL SITE LANDSCAPING SHALL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS OF CONSTRUCTION COMPLETION
- 4) SEDIMENT LADEN WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM BY USING INLET PROTECTION.

|                                                                                                                                                                                                                                                                 |                                                       |            |                                                                                                                                                                  |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
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|                                                                                                                                                                                                                                                                 |                                                       | Bar Scales | THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L |  | Client | <table><tr><td rowspan="2">Scales</td><td rowspan="2">N.T.S.</td><td>Drawn</td><td>LM</td></tr><tr><td>Designed</td><td>TM</td></tr><tr><td>Grid</td><td>GDA 2020</td><td>Checked</td><td>AM</td></tr><tr><td>Height Datum</td><td>AHD</td><td>Approved</td><td></td></tr></table> | Scales | N.T.S. | Drawn | LM | Designed | TM | Grid | GDA 2020 | Checked | AM | Height Datum | AHD | Approved |  | <table><tr><td>Project</td><td>SSD-17552047<br/>155-251 ALDINGTON ROAD<br/>KEMPS CREEK</td></tr><tr><td>Title</td><td>GENERAL NOTES<br/>SHEET 2</td></tr></table> | Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | Title | GENERAL NOTES<br>SHEET 2 | <table><tr><td colspan="2">Civil Engineers and Project Managers</td></tr><tr><td colspan="2"><div>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</div></td></tr><tr><td>Status</td><td>FOR CONSTRUCTION</td></tr><tr><td>Project - Drawing No.</td><td>20-776-C10003</td></tr></table> | Civil Engineers and Project Managers |  |  <div>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</div> |  | Status | FOR CONSTRUCTION | Project - Drawing No. | 20-776-C10003 |
| Scales                                                                                                                                                                                                                                                          | N.T.S.                                                |            |                                                                                                                                                                  |                                                                                       |        | Drawn                                                                                                                                                                                                                                                                              |        |        | LM    |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
|                                                                                                                                                                                                                                                                 |                                                       |            |                                                                                                                                                                  |                                                                                       |        | Designed                                                                                                                                                                                                                                                                           | TM     |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Grid                                                                                                                                                                                                                                                            | GDA 2020                                              |            |                                                                                                                                                                  |                                                                                       |        | Checked                                                                                                                                                                                                                                                                            | AM     |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Height Datum                                                                                                                                                                                                                                                    | AHD                                                   |            |                                                                                                                                                                  |                                                                                       |        | Approved                                                                                                                                                                                                                                                                           |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Project                                                                                                                                                                                                                                                         | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |            |                                                                                                                                                                  |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Title                                                                                                                                                                                                                                                           | GENERAL NOTES<br>SHEET 2                              |            |                                                                                                                                                                  |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Civil Engineers and Project Managers                                                                                                                                                                                                                            |                                                       |            |                                                                                                                                                                  |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
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| Status                                                                                                                                                                                                                                                          | FOR CONSTRUCTION                                      |            |                                                                                                                                                                  |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Project - Drawing No.                                                                                                                                                                                                                                           | 20-776-C10003                                         |            |                                                                                                                                                                  |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| 01                                                                                                                                                                                                                                                              | ISSUED FOR CONSTRUCTION                               | 23-07-25   | A1                                                                                                                                                               |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |
| Issue                                                                                                                                                                                                                                                           | Description                                           | Date       | Issue                                                                                                                                                            |                                                                                       |        |                                                                                                                                                                                                                                                                                    |        |        |       |    |          |    |      |          |         |    |              |     |          |  |                                                                                                                                                                   |         |                                                       |       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |  |                                                                                                                                                                                                                                                                 |  |        |                  |                       |               |



- 5) ALL PERIMETER BANKS AND CHANNEL DRAINS SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
- 6) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED ONCE SITE IS STABILISED AND UPSTREAM WORKS HAVE BEEN COMPLETED.
- 7) AT CONSTRUCTION COMPLETION ALL TEMPORARY EARTH STRUCTURES, INCLUDING SOIL STOCKPILES ARE TO BE TRACK ROLLED AND SEEDED. THE CONTRACTOR IS TO ENSURE A 70% COVERAGE WITHIN 14 DAYS.

F. SOIL STRIPPING ANG STOCKPILING

- 1) TOPSOIL SHOULD IDEALLY BE STRIPPED WHEN IT IS MOIST, NOT TOO WET OR TOO DRY.
- 2) TAKE CARE WHEN STRIPPING TOPSOIL NOT TO STRIP SUBSOIL WITH THE TOPSOIL PROFILE. TOPSOIL AND SUBSOILS SHOULD BE MANAGED SEPARATELY.
- 3) STOCKPILES ARE TO BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH STANDARD DRAWING SD 4-1 (LANDCOM, 2004). ALTERNATIVE CONTROLS (E.G., COVERING STOCKPILES WITH GEOTEXTILE) SHALL BE ADOPTED IF STOCKPILES CANNOT BE MAINTAINED IN ACCORDANCE WITH SD 4-1.
- 4) AS MUCH AS IS FEASIBLE, MULCHED VEGETATION, TOPSOIL AND SUBSOIL (IF APPLICABLE) ARE TO BE STOCKPILED SEPARATELY.
- 5) SEDIMENT FENCING IS TO BE INSTALLED AROUND THE LOWER EDGE OF STOCKPILES AS PER STANDARD DRAWING SD 4-1, UNLESS THE STOCKPILE IS IMMEDIATELY ADJACENT TO A SUITABLE ALTERNATIVE CONTROL SUCH AS A SEDIMENT BASIN. A DIVERSION DRAIN/BUND IS TO BE INSTALLED ON THE HIGH SIDE OF STOCKPILES IF RUN-ON FROM UPSLOPE LANDS COULD IMPACT ON THE STOCKPILE.
- 6) STOCKPILES ARE NOT TO BE POSITIONED WITHIN 5M OF POSSIBLE CONCENTRATED WATER FLOW (INCLUDES ROAD GUTTERS AND TABLE DRAINS).
- 7) STOCKPILES ARE TO BE SITED AT LEAST 50M FROM ANY WATERCOURSE, NATURAL DRAINAGE LINE OR CREEK AND AT LEAST 2M FROM ANY TREES TO BE RETAINED.
- 8) STOCKPILES WILL NOT BE LOCATED ON FLOOD PRONE LANDS BELOW THE 5 YEAR FLOOD LEVEL (NOTING THE SITE IS PRONE TO OVERLAND FLOW FLOODING).
- 9) STOCKPILES WILL BE POSITIONED WITHIN THE APPROVED PROJECT CONSTRUCTION BOUNDARY AND AWAY FROM PROTECTED AREAS (E.G. NATIVE VEGETATION).
- 10) INACTIVE STOCKPILE FACES ARE TO BE PROVIDED WITH AT LEAST 60% COVER (I.E. RUSLE C-FACTOR OF 0.1) WITHIN 10 DAYS OF FORMATION. STABILISATION OF STOCKPILES CAN BE ACHIEVED BY SEEDING AND SPRAYING WITH A SOIL STABILISER (E.G. VITAL P47), COVERING WITH GEOTEXTILE OR MATTING OR EQUIVALENT (NOTE SEEDING IS NOT REQUIRED FOR STOCKPILES IF THEY WILL BE IN PLACE FOR LESS THAN 3 MONTHS OR IF THEY HAVE AN EXISTING SEEDBANK). STOCKPILES OF TOPSOIL OR MULCH SHOULD BE CONSTRUCTED TO NO MORE THAN 2 METERS IN HEIGHT WHEREVER POSSIBLE (NOTE THIS ONLY APPLIES TO TOPSOIL AND MULCH).
- 11) STOCKPILES SHOULD BE FORMED TO BE NO STEEPER THAN 2:1 (H:V) WHEREVER POSSIBLE.

G. DUST SUPPRESSION

- 1) DUST SUPPRESSION IS TO BE CARRIED OUT WHENEVER NECESSARY TO MINIMISE SEDIMENT BECOMING AIR BORNE DUE TO WIND EROSION.
- 2) AN APPROPRIATE WATER SOURCE FOR DUST SUPPRESSION AND / OR DUST SUPPRESSANT MANAGEMENT SYSTEM MUST BE IDENTIFIED PRIOR TO STARTING CONSTRUCTION WORKS.
- 3) ENSURE DUST SUPPRESSION IS CARRIED OUT IN A MANNER TO AVOID WATER RUNOFF, EROSION OR PONDING ON SURFACES (I.E. APPLY IN A GENTLE MANNER AT APPROPRIATE RATES AND MONITOR REGULARLY).
- 4) TEMPORARY STABILISERS (E.G. VITAL BON-MATT P47), GEOTEXTILE, JUTE MATTING OR EQUIVALENT CAN BE USED IN NON-TRAFFICKED AREAS TO ASSIST WITH DUST CONTROL.

H. MAINTENANCE OF PUBLIC ROADS

- 1) ALL CONSTRUCTION VEHICLES DEPARTING FROM THE SITE SHALL HAVE THEIR TYRES WASHED DOWN OR SEDIMENT REMOVED BY A STABILISED SITE ACCESS DEVICE, WITH A MINIMUM LENGTH OF 15 METRES AND MINIMUM WIDTH OF 3 METRES.
- 2) THE STABILISED SITE ACCESS AREAS SHALL BE LOCATED SUCH THAT SILTED WATER IS FILTERED THROUGH A SUITABLE SEDIMENT TRAP (SUCH AS A SEDIMENT FENCE) INSTALLED DOWNSTREAM OF ACCESS.
- 3) THE CONTRACTOR SHALL INSPECT THE PUBLIC ROADS ADJACENT TO THE SITE DAILY AND MANUALLY REMOVE ANY SEDIMENT DEPOSITS (BY SWEEPING NOT WASH DOWN).

I. STABILISATION

- 1) UNDERTAKE PROGRESSIVE STABILISATION OF DISTURBED GROUND SURFACES AS THEY ARE COMPLETED RATHER THAN AT THE END OF THE WORKS PROGRAM (REFER TO TABLES 1 AND 2).
- 2) FINAL STABILISATION IS TO ACHIEVE THE C-FACTORS (GROUND COVER) DETAILED IN TABLES 1 AND 2.
- 3) FINAL REHABILITATION IS TO BE IN ACCORDANCE WITH THE LANDSCAPING / REHABILITATION PLANS.
- 4) AREAS TO BE REVEGETATED ARE TO BE TOPSOILED FIRST. TOPSOIL IS TO BE SPREAD EVENLY TO AT LEAST 75MM. REFER TO STANDARD DRAWING (SD 4-2) FOR INSTRUCTIONS REGARDING TOPSOIL REPLACEMENT.
- 5) TOPSOIL IS TO BE TESTED PRIOR TO REVEGETATION TO CONFIRM TREATMENT (AMELIORATION / FERTILISATION) REQUIREMENTS INCLUDING TESTING FOR DISPERSION, PH, TRACE NUTRIENTS, EC AND CEC.
- 6) APPROPRIATE SEEDBED PREPARATION SHOULD BE CARRIED OUT WHEN REVEGETATING LANDS (SEE STANDARD DRAWING (SD 7-1).
- 7) AS MUCH AS POSSIBLE, AVOID HANDLING TOPSOILS WHEN THEY ARE TOO WET OR TOO DRY. THIS HELPS PRESERVE SOIL STRUCTURE.
- 8) AVOID BLENDING FRESH MULCH WITH TOPSOIL, AS THIS LEADS TO DE-NITRIFICATION.
- 9) TO HELP PRESERVE SOIL STRUCTURE, AVOID EXCESSIVE COMPACTION OF TOPSOILS.
- 10) GYPSUM SHOULD BE APPLIED TO SUBSOILS (AS CLAY BREAKER) AT AROUND 0.5kg/m² FOR GENERAL SURFACES AND BATTERS. RATES TO BE CONFIRMED PRIOR TO REVEGETATION WITH SOIL TESTING.
- 11) ALL FLOW AREA SUBSOILS (DRAINAGE LINES, WATERWAYS, DIVERSION DRAINS, CHANNELS, BASINS) SHOULD BE GYSPUM TREATED AT A RATE OF 1.5kg/m².
- 12) TOPSOILS SHOULD BE AMELIORATED WITH LIME TO ADJUST PH IF FIELD TESTING SHOWS pH IS BELOW 6.5.
- 13) TOPSOILS MAY BENEFIT FROM AN APPLICATION OF NPK FERTILIZER PLUS TRACE ELEMENTS (S, CA AND MO). SOIL TESTING PRIOR TO RE-SPREADING CAN CONFIRM THE APPROPRIATE RATE.
- 14) PERMANENT DRAINS ARE TO BE STABILISED IN ACCORDANCE WITH ENGINEERING DESIGN BUT MUST ACHIEVE THE C-FACTORS (GROUND COVER) DETAILED IN TABLE 1. SOIL TESTING OF SUBSOILS AND TOPSOILS IS TO BE UNDERTAKING TO POTENTIAL SOIL TREATMENT / STABILISATION REQUIREMENTS.
- 15) TEMPORARY DIVERSION DRAINS / BUNDS ARE TO BE STABILISED TO ACHIEVE THE C-FACTORS AS DETAILED IN TABLES 1 AND 2, USING SEEDING + VITAL P47 + JUTE MESH/MATTING OR ALTERNATIVELY GEOTEXTILE FABRIC. ROCK OR TRM. SUBSOILS ARE TO BE TREATED FIRST BY LIGHTLY RIPPING GYPSUM INTO THE SURFACE AT A RATE OF APPROX. 1.5kg/m². REFER TO THE PLANS FOR SPECIFIC DETAILS. ALSO REFER TO STANDARD DRAWINGS (SD 5-6 AND SD 5-7).
- 16) REFER TO THE 'SOIL STRIPPING AND STOCKPILING' NOTES FOR STABILISATION REQUIREMENTS ON STOCKPILES. ALSO REFER TO TABLES 1AND 2 AND STANDARD DRAWING (SD 4-1).
- 17) SEDIMENT BASIN INLETS / OUTLETS ARE TO BE STABILISED IN ACCORDANCE WITH PERMANENT ENGINEERING DESIGN (WHERE APPLICABLE) OR WITH GEOTEXTILE UNDERLAY AND ROCK IN ACCORDANCE WITH RECOMMENDATIONS FOR "HIGH FLOW" AREAS ON TABLE 1 AND AS DETAILED ON THE PLAN.
- 18) HIGHLY TRAFFICKED AREAS SUCH AS LAYDOWN / STORAGE AREAS, HAUL ROADS / ACCESS TRACKS AND SITE COMPOUNDS WILL BE FORMED IN ACCORDANCE WITH ENGINEERING SPECIFICATIONS AND STABILISED WHERE NECESSARY AND AS MUCH AS PRACTICABLE TO MINIMISE EROSION AND PROVIDE A TRAFFICABLE SURFACE. STABILISATION OF THESE AREAS WILL BE ACHIEVED WITH SUITABLE TRAFFICABLE MEASURES (E.G. WITH HEAVY BOUND DGB (CEMENT STABILISED), AGGREGATE, CRUSHED ROCK, ROAD BASE OR A HEAVY DUTY TRAFFICABLE SOIL STABILISER) AND RE-GRADING / RE-SURFACING AS NECESSARY.
- 19) AS SURFACES ARE STABILISED (AT LEAST 90% OF ANY FINISHED AREA HAS AT LEAST 70% GROUND COVER) AND PERMANENT DRAINAGE MEASURES ARE INSTALLED, TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AND WATER MANAGEMENT STRUCTURES CAN BE REMOVED (E.G. DIVERSION DRAINS).
- 20) TEMPORARY STABILISATION OF EXPOSED SURFACES ON HIGH RISK AREAS (I.E. STEEP SLOPES >5%), BATTERS, SURFACES NOT DRAINING TO SEDIMENT BASINS AND WORKS IN/NEAR WATERWAYS) WILL BE UNDERTAKEN PRIOR TO RAINFALL IN ACCORDANCE WITH THE 'RAINFALL PREPARATION PROCEDURE' NOTES AND THE INSTRUCTIONS ON THE PLAN.
- 21) ALL EXPOSED LANDS WHERE WORKS ARE NOT ACTIVELY OCCURRING (FOR 20 DAYS OR MORE) ARE TO BE TEMPORARILY STABILISED WITH A TEMPORARY GROUND COVER (I.E. A SOIL BINDER (E.G. VITAL STONEWALL), MATTING, GEOFABRIC OR EQUIVALENT).
- 22) WHEREVER POSSIBLE, RE-USE CLEARED/MULCHED VEGETATION FOR EITHER TEMPORARY OR PERMANENT STABILISATION OF DISTURBED AREAS.

J. SITE INSPECTION, MONITORING AND MAINTENANCE

- 1) REGULAR SITE INSPECTIONS ARE TO BE CONDUCTED BY THE SITE ENVIRONMENT MANAGER (OR THEIR REPRESENTATIVE):
- AT LEAST WEEKLY DURING NORMAL CONSTRUCTION HOURS; AND
  - PRIOR TO FORECAST RAINFALL (SEE ABOVE); AND
  - DAILY DURING RAIN EVENTS (IF SAFE TO DO SO); AND
  - WITHIN 24 HOURS OF THE CESSATION OF A RAIN EVENT THAT CAUSES RUNOFF.
- 2) MINIMUM MONTHLY AUDITS / SITE INSPECTIONS ARE ALSO TO BE CONDUCTED BY A CPESC TO ENSURE ALL OF THE REQUIRED OUTCOMES AND WATER QUALITY TARGETS ARE BEING MET AND WHERE NECESSARY PROVIDE ADVICE AND MODIFICATIONS TO THIS PLAN TO ENSURE ONGOING COMPLIANCE.
- 3) RECORDS OF THE SITE INSPECTIONS/AUDITS ARE TO BE KEPT FOR THE DURATION OF CONSTRUCTION AND FOR A MINIMUM OF 12 MONTHS FOLLOWING THE COMPLETION OF CONSTRUCTION WORKS.
- 4) THE CONTRACTOR WILL AS A MINIMUM CONDUCT EACH INSPECTION IN LINE WITH THE FOLLOWING
- RECORD TYPE OF DEVICE/CONTROL MEASURE BEING INSPECTED AND ITS LOCATION;
  - RECORD THE CONDITION OF EVERY CONTROL MEASURE;
  - RECORD MAINTENANCE REQUIREMENTS FOR EVERY CONTROL DEVICE;
  - RECORD SEDIMENT VOLUMES REMOVED FROM SEDIMENT TRAPPING DEVICES;
  - RECORD DETAILS OF SEDIMENT BASIN TREATMENT, FLOCCULANT DOSAGE AND CLEANOUT;
  - RECORD SEDIMENT DISPOSAL PROCEDURES AND LOCATION.
- 5) SITE SPECIFIC PROGRESSIVE ESCPS WILL BE PREPARED AND / OR UPDATED AS REQUIRED.
- 6) SEDIMENT OR ROCKS TRACKED FROM THE SITE WILL BE REMOVED FROM PUBLIC ROADS AS SOON AS POSSIBLE (E.G. WITH STREET SWEEPERS).
- 7) AFTER RAINFALL, SEDIMENT ACCUMULATED IN TRAPPING DEVICES (E.G. BASIN, SEDIMENT FENCE) WILL BE REMOVED TO A SECURE LOCATION WHERE IT CAN'T WASH OR BLOW OFFSITE (PREFERABLY TO AN ACTIVE STOCKPILE).
- 8) WEATHER CONDITIONS WILL BE MONITORED ONSITE AND DAILY RAINFALL WILL BE RECORDED. A RAINFALL GAUGE WILL BE INSTALLED AT THE SITE COMPOUND.
- 9) SAFE STORAGE AREAS FOR WASTES, FUELS, EXCESS CONCRETE AND OTHER POTENTIAL CONTAMINANTS ARE TO BE DELINEATED BY THE SITE MANAGER.
- 10) ADEQUATE SUPPLIES OF EROSION CONTROL MEASURES (E.G. GEOFABRIC ROLLS, JUTE MATTING, HYDRAULIC SOIL BINDERS) ARE TO BE MAINTAINED IN THE SITE COMPOUND FOR RAPID DEPLOYMENT AS REQUIRED.
- 11) WATER TREATMENT CHEMICAL(S) AND EQUIPMENT ARE TO BE MAINTAINED ONSITE.
- 12) REPAIRS AND MAINTENANCE OF ALL DEVICES AND MEASURES INCLUDING DIVERSION CHANNELS SHALL BE UNDERTAKEN AS REQUIRED, ENSURING ALL MEASURES ARE FULLY FUNCTIONAL AT ALL TIMES.
- 13) ENSURE SEDIMENT LADEN WATER HAS NOT BEEN DIVERTED AROUND DEVICES.
- 14) REPAIR SCOUR DAMAGE TO SEDIMENT CONTROL MEASURES AFTER RAINFALL EVENTS AND REINSTATE DEVICES AS NECESSARY.
- 15) SEDIMENT FENCES WILL REQUIRE CLEANING WHEN SEDIMENT REACHES 300MM DEPTH OR ONE-HALF THE HEIGHT OF THE FILTER FABRIC AND ALL OTHER SEDIMENT TRAPS WILL REQUIRE CLEANING OUT WHEN 30% OF DESIGN CAPACITY IS REACHED.
- 16) ALL INLET AND GULLY TRAPS TO BE CLEANED NOT HOSED AFTER EVERY RAINFALL EVENT, (1>5mm) OR AT LEAST ON A WEEKLY BASIS.
- 17) SEDIMENT REMOVED FROM ANY TRAPPING DEVICE TO BE RELOCATED, ENSURING FURTHER POLLUTION TO DOWNSTREAM ENVIRONMENTS WILL NOT OCCUR.
- 18) ALL SEEDING, HYDROSEEDING AND TURFING REQUIRES REGULAR WATERING, UNTIL EFFECTIVE COVER ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. WATERING SHOULD VARY DEPENDING ON WEATHER AND SOIL CONDITIONS.
- 19) WATERING SHOULD START IMMEDIATELY AFTER PLANTING AND SHOULD COMPLY WITH THE FOLLOWING AS A MINIMUM:
- |            |                    |
|------------|--------------------|
| WEEK 1:    | 3 WATERINGS / WEEK |
| WEEK 2-6:  | 2 WATERINGS / WEEK |
| WEEK 7-12: | 1 WATERING / WEEK  |
- 20) EXCESSIVE VEGETATION GROWTH WILL BE CONTROLLED THROUGH MOWING OR SLASHING.
- 21) IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE INSPECTION, MAINTENANCE AND TESTING OF DEVICES IS UNDERTAKEN ON SITE.

|       |                         |          |            |  |        |                 |          |          |                                                       |                                                                                                                                                                           |
|-------|-------------------------|----------|------------|--|--------|-----------------|----------|----------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                         |          | Bar Scales |  | Client | Scales          | Drawn    | LM       | Project                                               | Civil Engineers and Project Managers                                                                                                                                      |
|       |                         |          |            |  |        | N.T.S.          | Designed | TM       | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | <div>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</div> |
|       |                         |          |            |  |        | Grid            | GDA 2020 | Checked  | AM                                                    |                                                                                                                                                                           |
|       |                         |          |            |  |        | Height<br>Datum | AHD      | Approved |                                                       |                                                                                                                                                                           |
|       |                         |          |            |  |        |                 |          |          | Title                                                 |                                                                                                                                                                           |
|       |                         |          |            |  |        |                 |          |          | GENERAL NOTES<br>SHEET 3                              |                                                                                                                                                                           |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |            |  |        |                 |          |          |                                                       | Status                                                                                                                                                                    |
| Issue | Description             | Date     |            |  |        |                 |          |          |                                                       | FOR CONSTRUCTION                                                                                                                                                          |
|       |                         |          |            |  |        |                 |          |          |                                                       | A1                                                                                                                                                                        |
|       |                         |          |            |  |        |                 |          |          | Project - Drawing No.                                 | Issue                                                                                                                                                                     |
|       |                         |          |            |  |        |                 |          |          | 20-776-C10004                                         | 01                                                                                                                                                                        |



- 22) THE CONTRACTOR TO KEEP DETAILED AND LEGIBLE RECORDS OF ALL INSPECTION AND MAINTENANCE UNDERTAKEN ON THE EROSION AND SEDIMENT CONTROL DEVICES.
- 23) ALL SITE WASTE INCLUDING GENERAL RUBBISH TO BE DISPOSED OF IN AN ENVIRONMENTALLY RESPONSIBLE MANNER IN ACCORDANCE WITH THE POEO (WASTE) REGULATION 2014.
- 24) THE CONTRACTOR SHALL CONSTRUCT AND IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO ENSURE PROTECTION OF DOWNSTREAM ENVIRONMENTS.

**K. SEDIMENT BASINS**

- 1) SEDIMENT BASIN LOCATIONS AND SIZING ARE PRESENTED ON THE PLANS.
- 2) ADDITIONAL VOLUME CAN BE PROVIDED IN SEDIMENT BASINS FOR STORING WATER IF SO DESIRED (I.E. THEY CAN BE MADE BIGGER THAN IS REQUIRED BY THIS ESCP). MARKERS WILL NEED TO BE INSTALLED WITHIN BASINS TO INDICATE THE VARIOUS VOLUMES.
- 3) SEDIMENT BASINS ARE TO ACHIEVE AT LEAST 3:1 LENGTH:WIDTH FROM THEIR INLET(S) TO THEIR SPILLWAY. IF THIS IS NOT ACHIEVED THROUGH THE NATURAL SHAPE OF THE BASIN, A BAFFLE IS TO BE INCLUDED.
- 4) SEDIMENT BASIN FLOORS AND WALLS ARE TO BE WELL COMPACTED TO MINIMISE INFILTRATION TO ENGINEERING DETAIL.
- 5) SEDIMENT BASIN WALLS, INLETS AND SPILLWAY OUTLETS ARE TO BE GYPSUM TREATED AT A RATE OF 1.5kg/m² TO PROMOTE SEDIMENT SETTLING AND MINIMISE DISPERSION.
- 6) WITHIN 5 CALENDAR DAYS OF THE CONCLUSION OF ANY RAINFALL EVENT THAT CAUSES RUNOFF, THE SEDIMENT BASINS ARE TO BE EMPTY, READY FOR THE NEXT RAINFALL EVENT. THIS MIGHT INCLUDE TESTING WATER, TREATING (E.G. FLOCCULATING), DE-WATERING AND DE-SILTING BASINS. SEE THE 'DIRTY WATER AND DISCHARGE REQUIREMENTS' NOTES BELOW REGARDING DE-WATERING. IF RAINFALL (CAUSING RUNOFF) OCCURS AGAIN WITHIN 5 DAYS OF THE PREVIOUS RAIN EVENT, THE 5-DAY REQUIREMENT RE-SETS.
- 7) DIRTY WATER ACCUMULATING IN SEDIMENT BASINS CAN BE USED ONSITE FOR DUST SUPPRESSION OR CONSTRUCTION PURPOSES. IF THIS OCCURS IT DOES NOT NEED TO BE TREATED TO THE STANDARD REQUIRED FOR DISCHARGE. NOTE THAT THE 5-DAY MAINTENANCE REQUIREMENT FOR BASINS TO BE EMPTIED STILL APPLIES.
- 8) THE CONTRACTOR SHALL KEEP DETAILED AND ACCURATE RECORDS OF THE MONITORING, TREATMENT, TESTING AND MAINTENANCE OF THE SEDIMENT BASIN INCLUDING RECORDED RAINFALL VOLUME AND FLOCCULATING AGENTS USED.
- 9) ALL CHEMICAL DOSING AND WATER TESTING TO BE UNDERTAKEN BY A SUITABLY QUALIFIED PERSON.
- 10) ALL LABORATORY TESTING TO BE UNDERTAKEN BY A NATA ACCREDITED LABORATORY.
- 11) ALL WATER PUMPED FROM THE SEDIMENT BASIN SHALL BE TESTED FOR ENVIRONMENTAL COMPLIANCE AGAINST THE RELEASE CRITERIA IN THE TABLE BELOW (AS A MINIMUM), UNLESS ALTERNATIVE (MORE STRINGENT) STANDARDS ARE SPECIFIED BY THE LOCAL AUTHORITY PRIOR TO RELEASE.

| PARAMETER              | RELEASE CRITERIA              |
|------------------------|-------------------------------|
| TOTAL SUSPENDED SOLIDS | 50 mg/l MAX                   |
| pH                     | WITHIN THE RANGE OF 6.5 – 8.5 |
| VISUAL AMENITY         | NO VISIBLE PLUME              |

- 12) WATER TESTING TO BE UNDERTAKEN USING EITHER A HANDHELD PH/TURBIDITY METER OR SAMPLES COLLECTED FOR LABORATORY TESTING PRIOR TO ANY MANUAL BASIN DEWATERING.
- 13) THE TREATED BASIN SHALL BE DEWATERED WITH A PUMP SYSTEM WITH A FLOATING INLET TO ENSURE SETTLED SEDIMENT IS NOT ENTRAINED AND DISCHARGED.
- 14) DIRTY WATER ACCUMULATING IN EXCAVATIONS/CUT SECTIONS CAN BE PUMPED OR CARTED TO A SEDIMENT BASIN PROVIDING ADEQUATE CAPACITY IS AVAILABLE AND THE BASIN WON'T OVERFLOW AS A RESULT. NOTE THAT THE 5-DAY MAINTENANCE REQUIREMENT FOR BASINS TO BE EMPTIED STILL APPLIES
- 15) SEDIMENT BASINS WILL REQUIRE DEWATERING AND SEDIMENT CLEANOUT WHENEVER SEDIMENT ACCUMULATES TO MORE THAN 70% OF THE SEDIMENT STORAGE VOLUME. SEDIMENT REMOVED FROM THE BASIN CAN BE TAKEN TO A STOCKPILE AREA, BURIED ONSITE OR USED AS GENERAL FILL. ENSURE SEDIMENT REMOVED FROM BASINS IS NOT PLACED WHERE IT COULD WASH, BLOW OR FALL OFFSITE.
- 16) A MARKER PEG (OR SIMILAR) IS TO BE INCLUDED IN EVERY BASIN SHOWING THE LEVEL OF THE SEDIMENT STORAGE VOLUME.
- 17) CAPTURED SEDIMENT WILL BE DISPOSED OF IN AN ENVIRONMENTALLY RESPONSIBLE MANNER AS TO NOT CAUSE FURTHER CONTAMINATION OR DOWNSTREAM POLLUTION. SEDIMENT SHOULD NOT BE DISPOSED OF IN CONCENTRATED FLOWS, WHERE IT CAN BE RE-ENTRAINED OR WHERE THE RECEIVING WATER HAS A PH OF < 5.5.

- 18) THE BASIN AND ALL OTHER CONTROL DEVICES WILL BE MAINTAINED IN AN OPERATIONAL STATE UNTIL SITE STABILISED.
- 19) REPAIR ANY SCOUR DAMAGE TO THE SEDIMENT BASIN BATTERS AND EMERGENCY SPILLWAY FOLLOWING RAINFALL EVENTS.
- 20) SEDIMENT BASIN SHOULD NOT BE CONSTRUCTED WITH SMOOTH INTERNAL SLOPES AND BASIN BATTERS SHOULD NOT BE STEEPER THAN 2(h):1(V).
- 21) BASINS SHOULD BE APPROPRIATELY FENCED AND MARKED BY WARNING SIGNS IF UNSUPERVISED PUBLIC ACCESS IS LIKELY AND PUBLIC SAFETY IS AT RISK.
- 22) THE SEDIMENT BASINS ARE TO INCLUDE OUTLETS (WEIR OVERFLOW/SPILLWAY) SIZED TO HAVE A CAPACITY TO PASS THE 100 YEAR PEAK FLOW. OUTLETS ARE TO BE ONTO STABLE LANDS OR INTO A STABLE WATERWAY.
- 23) ALL INLET CHUTES TO BE FORMED FROM DUMPED ROCK PLACED OVER GEOTEXTILE LINER (BIDIM A34 OR EQUIVALENT). ROCK USED TO BE CRUSHED, CLEAN, HARD DURABLE AND MINIMUM AVERAGE SIZE (d<sub>50</sub>) =150mm
- 24) PERMEABLE INTERNAL BAFFLES CAN ALSO BE USED TO ENSURE UNIFORM FLOW THROUGH A SEDIMENT BASIN. THESE PERMEABLE BAFFLES CAN ASSIST PERFORMANCE OF ALL BASIN TYPES EVEN IN STANDARD BASIN SHAPES. PERMEABLE IN-LINE BAFFLES CAN TYPICALLY BE CONSTRUCTED USING A FIXED OR FLOATING SYSTEM. FIXED SYSTEMS WILL TYPICALLY INCORPORATE POSTS MOUNTED IN THE FLOOR AND WALL OF THE BASINS WITH A MESH ATTACHED TO THE POSTS. THE HEIGHT OF THE POSTS AND MESH SHOULD BE AT APPROXIMATELY THE SAME HEIGHT AS THE BASIN SPILLWAY TO AVOID A CONCENTRATED FLOW ON THE UPPER LAYER OF THE WATER COLUMN ABOVE THE BAFFLE. AN ALTERNATIVE OPTION IS TO USE A BAFFLE INCORPORATING FLOATS TO KEEP THE MESH ON THE TOP OF THE WATER COLUMN AND WEIGHTING TO FIX THE BAFFLE TO THE FLOOR OF THE BASIN. THIS CAN GENERALLY BE ACHIEVED BY UTILISING PROPRIETARY SILT CURTAINS.
- 25) A CRITICAL COMPONENT OF IN-LINE PERMEABLE BAFFLES IS THE OPEN AREA OF THE PRODUCT. TOO TIGHT A WEAVE AND THE BAFFLES WILL ACTUALLY HINDER PERFORMANCE, WITH TOO OPEN A WEAVE PROVIDING LITTLE BENEFIT. A 75% WEAVE SHADE CLOTH (OR EQUIVALENT) OPEN AREA IS RECOMMENDED FOR IN-LINE PERMEABLE BAFFLES. NOTE THIS IS SIGNIFICANTLY MORE OPEN THAN TYPICAL SILT CURTAINS USED ON CONSTRUCTION SITES.

**L. DRAIN / BUND STABILISATION AND LINING**

- 1) SOIL PREPARATION PRIOR TO LINING DRAINS:
- a. GYPSUM SHALLOW/LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF 500g/m² (E.G., RIP IN USING GRADER OR EXCAVATOR BUCKET TINES (TEETH)).
- b. PLACE TOPSOIL OVER ENTIRE DRAIN SURFACE TO A MINIMUM DEPTH OF 75mm. (SOIL PREPARATION ALSO APPLIES TO TEMPORARY DRAINS IN PLACE FOR <6 MONTHS)
- 2) DRAIN LINING:
- a. SEEDING + VITAL P47 (OR VITAL STONEWALL) + JUTE MATTING:
- b. (VITAL P47/ STONEWALL TO BE APPLIED AT A MAXIMUM DILUTION OF 1:10 (VITAL:WATER)
- c. SEEDING TO BE A COMBINATION OF A COVER CROP (E.G., RYE GRASS FOR WINTER MONTHS / JAPANESE MILLET FOR SUMMER MONTHS) AND A SUITABLE PERENNIAL (LONG TERM) LOCAL NATIVE GRASS MIX.
- 3) WATERING:
- a. REGULAR WATERING REQUIRED WHERE RAINFALL IS INSUFFICIENT.
- b. ENSURE WATER IS APPLIED GENTLY (NOT WITH A PRESSURE SPRAY).
- c. ENSURE OVERWATERING DOES NOT OCCUR AND IS MINIMISED TO ONLY WHAT IS NECESSARY FOR PLANTS TO THRIVE.
- 4) LINING OF TEMPORARY DRAINS (IN PLACE FOR <6 MONTHS) – LINE WITH GEOTEXTILE (BIDIM A24 MIN. OR EQUIVALENT).

**M. DIRTY WATER TREATMENT AND DISCHARGE REQUIREMENTS**

**THE DEVELOPMENT MUST COMPLY WITH SECTION 120 OF THE PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997 (POEO ACT), WHICH PROHIBITS THE POLLUTION OF WATERS (EXCEPT AS EXPRESSLY PROVIDED FOR IN AN ENVIRONMENTAL PROTECTION LICENCE). THE FOLLOWING REQUIREMENTS ARE TO BE ADHERED TO:**

- 1) WATER ACCUMULATING IN SEDIMENT BASINS, TRAPS, EXCAVATIONS OR IN ANY OTHER LOW POINTS ONSITE CAN EITHER BE:
- a. RE-USED FOR DUST SUPPRESSION OR CONSTRUCTION PURPOSES; OR
- b. TREATED (IF REQUIRED) AND TESTED IN SITU, THEN RELEASED OFF SITE ONCE IT MEETS THE REQUIRED WATER QUALITY DISCHARGE CRITERIA (SEE BELOW); OR
- c. PUMPED INTO A TANK, TRUCK OR OTHER HOLDING AREA FOR LATER TREATMENT.

- 2) ANY ACTIVE DISCHARGE OF WATER FROM THE PROJECT (I.E. WHERE WATER IS MOVED OFFSITE VIA DIRECT ACTION SUCH AS PUMPING RATHER THAN FLOWING OFF THE PROJECT AS A RESULT OF HEAVY RAINFALL) IS TO ACHIEVE:
- a. 50 mg/L OR LESS TOTAL SUSPENDED SOLIDS (TSS); AND
- b. PH BETWEEN 6.5 AND 8.5; AND
- c. NO VISIBLE TRACE OF OIL AND GREASE.
- 3) ADEQUATE WATER QUALITY CAN BE ACHIEVED BY USING GYPSUM AT A RATE OF APPROXIMATELY 30 KG/100 m3 OF STORMWATER. ALTERNATIVE FLOCCULATING AGENTS CAN ONLY BE USED IF THEY DO NOT CAUSE ENVIRONMENTAL HARM WHEN DISCHARGED. REFER TO MANUFACTURERS GUIDELINES FOR DOSAGE DETAILS.
- 4) SPREAD THE TREATMENT AGENT EVENLY OVER THE ENTIRE POND SURFACE FOR PROPER TREATMENT OF WATER.
- 5) THESE DE-WATERING REQUIREMENTS APPLY TO DIRTY WATER ACCUMULATING IN ANY SORT OF EXCAVATION, SUMP, OR OTHER PONDED WATER BODY ON THE PROJECT.
- 6) IF THE WATER IS GOING TO BE USED WITHIN THE CONSTRUCTION SITE FOR DUST-SUPPRESSION OR CONSTRUCTION PURPOSES AND WILL DRAIN BACK INTO THE SEDIMENT CAPTURE SYSTEM IT DOES NOT REQUIRE TREATMENT.

**N. RAINFALL PREPARATION PROCEDURE**

- 1) THE WEATHER FORECAST IS TO BE MONITORED REGULARLY (AT LEAST DAILY AND HOURLY WHEN RAINFALL IS IMMINENT) BY THE SITE ENVIRONMENTAL MANAGER (OR THEIR REPRESENTATIVE).
- 2) PRIOR TO FORECAST RAINFALL (> 70% CHANCE OF 5MM OR MORE OVER 24 HOURS) AND SITE CLOSURE OF MORE THAN 2 DAYS, THE FOLLOWING WILL OCCUR:
- 3) THE SITE ENVIRONMENT MANAGER (OR THEIR REPRESENTATIVE) IS TO INSPECT THE CONDITION OF ALL EROSION AND SEDIMENT CONTROLS AND ACTION ANY URGENT REPAIR, MAINTENANCE OR IMPROVEMENT. THEY ARE TO KEEP A RECORD ALL FINDINGS (INCLUDING DETAILS OF ACTIONS AND THEIR CLOSE OUTS).
- 4) SLOPE BREAKS / CONTOUR BERMS WILL BE PUSHED UP OR CUT IN ACROSS LARGE, EXPOSED AREAS TO SLOW DOWN FLOWS AND MINIMISE EROSION. SLOPE LENGTHS ARE TO BE RESTRICTED TO 40M INTERVALS ACROSS ALL EXPOSED SURFACES PRIOR TO AND DURING RAINFALL. DIVERSION BUNDS/DRAINS, LOW FLOW EARTH BANKS (STANDARD DRAWING SD 5-5) OR SANDBAGS / EQUIVALENT SHOULD BE INSTALLED PRIOR TO RAINFALL EVENT TO ACHIEVE THIS WHERE REQUIRED. NOTE THAT SLOPE BREAKS / CONTOUR BERMS ARE NOT REQUIRED TO BE IN PLACE DURING ACTIVE CONSTRUCTION WORKS WHEN RAINFALL IS NOT FORECAST / OCCURRING. AS WORKS PROGRESS LOCATIONS FOR SLOPES BREAKS WILL CHANGE AND THESE ARE TO BE UPDATED ON PROGRESSIVE ESCPS.
- 5) TEMPORARY DIVERSIONS AROUND CULVERT WORKS ARE TO BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS TO TAKE UPSLOPE CLEAN WATER FLOWS AROUND / THROUGH THE WORKS - REFER TO THE PLANS AND TO DETAIL 1 FOR SPECIFIC INSTRUCTIONS.
- 6) ALL EXPOSED SURFACES OF HIGH RISK AREAS (I.E. STEEP SLOPES (5%)), BATTERS, SURFACES NOT DRAINING TO SEDIMENT BASINS AND WORKS IN / NEAR WATERWAYS AND FLOW AREAS) WILL BE STABILISED WITH TEMPORARY GROUND COVERS LIKE VITAL P47/STONEWALL, GEOTEXTILE OR BLACK PLASTIC (SECURELY PINNED OR EQUIVALENT).
- 7) CHECK DAMS ARE TO BE PROVIDED WITHIN ALL DRAINAGE DEVICES INCLUDING ROADSIDE TABLE DRAINS AT 40m INTERVALS.
- 8) PRIOR TO FORECAST HIGH RAINFALL (> 70% CHANCE OF 10mm OR MORE OVER 24 HOURS) AND SITE CLOSURE OF MORE THAN 2 DAYS, THE FOLLOWING WILL OCCUR IN ADDITION TO THE ABOVE:
- a. WINDROWS / BUNDS ARE TO BE PROVIDED ALONG THE TOP EDGE OF FILL
- b. BATTERS TO PROTECT FILL BATTERS. LOCATIONS AND DETAILS ARE TO BE CONFIRMED ONSITE AS WORKS PROGRESS AND DOCUMENTED ON SITE SPECIFIC PROGRESSIVE ESCPS. THEY ARE NOT REQUIRED FOR INITIAL STRIPPING WORKS. THEY ARE TO BE FORMED AS COMPACTED EARTH BERMS (MIN. 600MM HIGH) ALONG THE TOP EDGE OF FILL PLATFORMS PRIOR TO RAINFALL AND SITE CLOSURE (2 DAYS). THEY ARE NOT REQUIRED DURING DRY WEATHER. ADDITIONAL WINDROWS AND GEOFABRIC LINED BATTER CHUTES AT REGULAR INTERVALS MAY NEED TO BE PROVIDED AS THE WORKS PROGRESS - LOCATIONS AND DETAILS ARE TO BE PROVIDED ON SITE SPECIFIC PROGRESSIVE ESCPS. REFER TO PHOTO 6 ON ESCP006 FOR A BATTER CHUTE EXAMPLE.
- 7) PRIOR TO FORECAST RAINFALL (~70% CHANCE OF 60mm OR MORE OVER A 5 DAY PERIOD) AND SITE CLOSURE OF MORE THAN 2 DAYS, THE FOLLOWING WILL OCCUR IN ADDITION TO THE ABOVE:
- a. SEDIMENT BASIN AND SEDIMENT TRAP INLET POINTS WILL BE PRELOADED WITH GYPSUM.
- b. MAJOR DIRTY WATER DIVERSION DRAINS WILL HAVE GYPSUM, BIOPOLYMER GEL SOCKS (OR EQUIVALENT) PLACED WITHIN THEM OR REPLENISHED AT 80M INTERVALS (IF NOT ALREADY IN PLACE).

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Q. SALINITY AND SODICITY CONSIDERATIONS

TO MINIMISE IMPACTS ASSOCIATE WITH SALINE AND SODIC (DISPERSIVE) SOILS DURING THE CONSTRUCTION PHASE OF WORKS THE FOLLOWING MEASURES ARE TO BE IMPLEMENTED:

- 1) TOPSOIL IS TO BE TESTED PRIOR TO REVEGETATION TO CONFIRM TREATMENT REQUIREMENTS.
- 2) ENSURE TOPSOIL IS SPREAD OVER AREAS TO BE REVEGETATED TO AT LEAST 75MM.
- 3) WATERING OF NEWLY REVEGETATED AREAS IS TO BE MINIMISED TO ONLY WHAT IS NECESSARY FOR PLANTS TO THRIVE.
- 4) AVOID OVER-WATERING WHICH COULD EXACERBATE CATCHMENT SALINITY.
- 5) THE FLOOR AND WALLS OF EACH SEDIMENT BASIN IS TO BE WELL COMPACTED TO MINIMISE INFILTRATION.
- 6) SWALE / DIVERSION DRAINS ARE TO BE GYPSUM-DUSTED AND LINED WITH MATTING AS NOTED TO PROMOTE FLOW AND REDUCE PONDING AND EROSION.
- 7) AVOID PONDING WATER ACROSS THE SITE IN AREAS WHERE SHALE OR CLAY FILL MATERIALS HAVE BEEN PLACED.
- 8) REHABILITATION AND REVEGETATION OF COMPLETED EARTHWORKS IS TO BE UNDERTAKEN PROGRESSIVELY AS EACH AREA IS FINISHED.

THE ABOVE LIST OUTLINES GENERAL STRATEGIES FOR MINIMISING THE POTENTIAL SALINITY RISK DURING CONSTRUCTION. REFER TO THE PROJECT'S SALINITY MANAGEMENT PLAN FOR DETAILED RECOMMENDATIONS.

P. OTHER MATTERS

- 1) ACCEPTABLE RECEPTORS AND DISPOSAL PRACTICES WILL BE USED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHERS, LITTER AND GENERAL WASTE MATERIALS.
- 2) ANY EXISTING TREES WHICH ARE NOT REQUIRED OR APPROVED TO BE CLEARED FOR THE WORKS AND/OR FORM PART OF THE FINAL LANDSCAPING PLAN SHOULD BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
  - a. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THEIR DRIP LINE.
  - b. ENSURING NOTHING IS NAILED TO THEM.
  - c. PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN DRIP LINE.
- 3) ALL VEHICLE AND EQUIPMENT WASHING SHOULD BE CONTAINED IN SPECIFIC BUNDED AREAS, DISCONNECTED FROM CONCENTRATED FLOW PATHS AND THE STORMWATER SYSTEM.
- 4) ANY NECESSARY VEHICLE OR EQUIPMENT REFUELING SHOULD BE UNDERTAKEN AWAY FROM CONCENTRATED FLOW PATHS AND PREFERABLY WITHIN A BUNDED AREA.
- 5) ANY ONSITE FUEL STORAGE AREAS SHOULD BE COVERED AND BUNDED.

Q. LIMITATIONS TO ACCESS DURING CONSTRUCTION

| LAND USE                                      | LIMITATION                                                                                                                 | COMMENT                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CONSTRUCTION AREAS                            | LIMITED TO 5 (PREFERABLE 2) METRES FROM THE EDGE OF ANY ESSENTIAL CONSTRUCTION ACTIVITY AS SHOWN ON THE ENGINEERING PLANS. | ALL SITE WORKERS SHOULD CLEARLY RECOGNISE THESE AREAS THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) OR SIMILAR MATERIALS.                                                                                                                              |
| ACCESS AREAS                                  | LIMITED TO A MAXIMUM WIDTH OF 5 METRES                                                                                     | THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON SITE. THEY CAN VARY IN POSITION SO AS TO BE BEST CONSERVE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE BOUNDARIES. |
| ALL LANDS (INCLUDING WATERWAYS AND STOCKPILES | ENTRY PROHIBITED EXCEPT FOR ESSENTIAL MANAGEMENT WORKS                                                                     | THINNING OF GROWTH MAY BE NECESSARY (E.G., FOR FIRE RISK REDUCTION OR WEED REMOVAL). ALL THINNING ACTIVITIES MUST BE APPROVED PRIOR TO COMMENCEMENT.                                                                                                                                                             |

|       |                         |            |                                                                                                                                                                                    |                                                                                       |              |          |          |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    |             |
|-------|-------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------|----------|----------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----|-------------|
|       |                         | Bar Scales | THIS DRAWING CANNOT BE<br>COPIED OR REPRODUCED IN<br>ANY FORM OR USED FOR ANY<br>OTHER PURPOSE OTHER THAN<br>THAT ORIGINALLY INTENDED<br>WITHOUT THE WRITTEN<br>PERMISSION OF AT&L |  | Scales       | Drawn    | LM       | Project<br>SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | Civil Engineers and Project Managers                                                                                                                                                                                                                            |                                        |    |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | N.T.S.       | Designed | TM       |                                                                  |  <div>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</div> | Status<br>FOR CONSTRUCTION             | A1 |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | Grid         | GDA 2020 | Checked  |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    | AM          |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | Height Datum | AHD      | Approved |                                                                  | Title<br><br>GENERAL NOTES<br>SHEET 5                                                                                                                                                                                                                           | Project - Drawing No.<br>20-776-C10006 |    | Issue<br>01 |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |              |          |          |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |              |          |          |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |              |          |          |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    |             |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25   |                                                                                                                                                                                    |                                                                                       |              |          |          |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    |             |
| Issue | Description             | Date       |                                                                                                                                                                                    |                                                                                       |              |          |          |                                                                  |                                                                                                                                                                                                                                                                 |                                        |    |             |



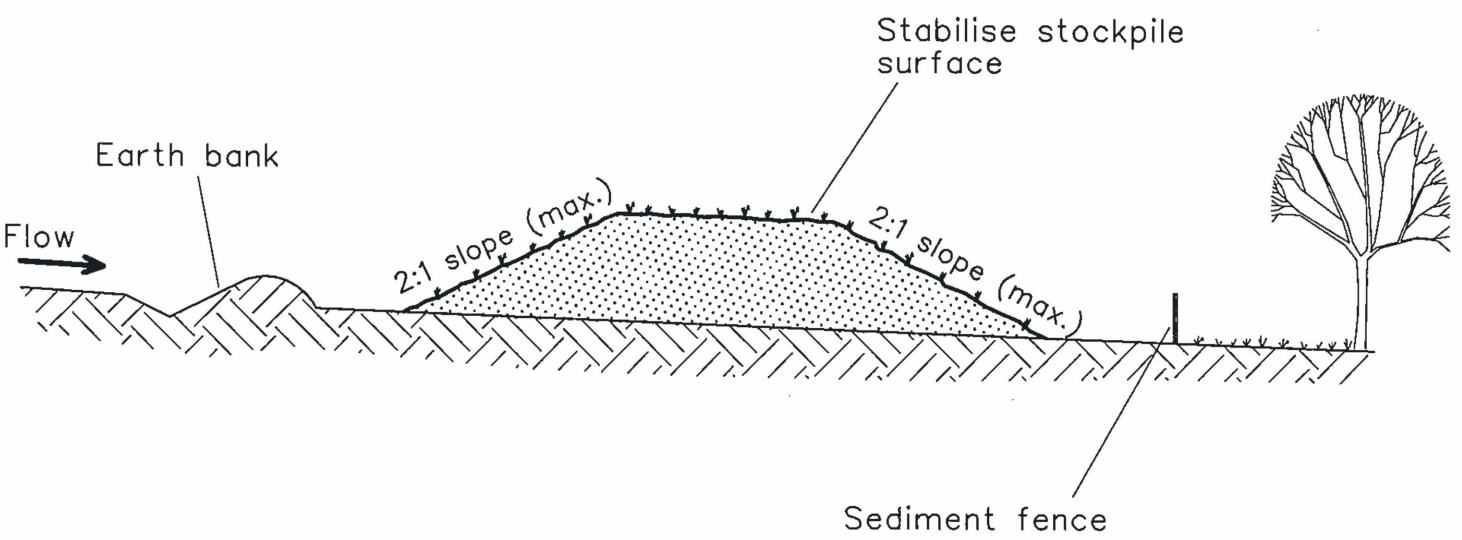
| TABLE 1 – STABILISATION REQUIREMENTS AND TREATMENT METHODS<br>DURING CONSTRUCTION (TEMPORARY STABILISATION) |                                                                    |                                                                                                                  |                                                                            |                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAND TYPE                                                                                                   | STABILISATION REQUIREMENT                                          | TIMEFRAME                                                                                                        | TREATMENT METHODS / PRODUCTS                                               | REMARKS                                                                                                                                                                                                                                                                                 |
| HIGH RISK AREAS SOIL LOSS<br>CLASS 6 OR ABOVE LANDS<br>(WHERE APPLICABLE)                                   | C-FACTOR = 0.1 (60% GRASS<br>COVER OR EQUIVALENT GROUND<br>COVER)  | APPLIES PRIOR TO RAINFALL AND AFTER 10<br>WORKING DAYS OF INACTIVITY (EVEN THOUGH<br>WORKS MIGHT CONTINUE LATER) | SOIL BINDER (i.e.: VITAL P47/STONEWALL OR EQUIVALENT)                      | STABLISE ALL EXPOSED SOILS BY SPARYING SURFACES WITH VITAL P47/STORMWATER OR EQUIVALENT<br>VITAL DILUTION RATE = 1:10 (VITAL MIXTURE).<br>-RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.                                                                   |
|                                                                                                             |                                                                    |                                                                                                                  | GEOTEXTILE, JUTE MATTING, BLACK PLASTIC (SECURELY PINNED)<br>OR EQUIVALENT | COVER ALL EXPOSED SOILS.<br>RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.                                                                                                                                                                                  |
| ALL LANDS (INCLUDING<br>WATERWAYS AND STOCKPILES)                                                           | C-FACTOR = 0.15 (50% GRASS<br>COVER OR EQUIVALENT GROUND<br>COVER) | APPLIES PRIOR TO RAINFALL AND AFTER 20<br>WORKING DAYS OF INACTIVITY (EVEN THOUGH<br>WORKS MIGHT CONTINUE LATER) | SOIL BINDER (i.e.: VITAL P47/STONEWALL OR EQUIVALENT)                      | STABLISE ALL EXPOSED SOILS BY SPARYING SURFACES WITH VITAL P47/STORMWATER OR EQUIVALENT<br>VITAL DILUTION RATE = 1:10 (VITAL MIXTURE).<br>RE-APPLY / MAINTAIN AS NECESSARY (APPROX. EVERY 3-6 MONTHS WITHOUT SUITABLE VEGETATION COVERAGE)<br>TO ENSURE THE REQUIRED COVER IS PROVIDED. |
|                                                                                                             |                                                                    |                                                                                                                  | GEOTEXTILE, JUTE MATTING, BLACK PLASTIC (SECURELY PINNED)<br>OR EQUIVALENT | COVER ALL EXPOSED SOILS.<br>RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.                                                                                                                                                                                  |

| TABLE 2 – STABILISATION AND TREATMENT METHODS<br>POST CONSTRUCTION (FINAL STABILISATION) |                                                                                 |                                                                                                                                     |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAND TYPE                                                                                | STABILISATION REQUIREMENT                                                       | TIMEFRAME                                                                                                                           | TREATMENT METHODS / PRODUCTS                                                                    | REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| WATERWAYS, DRAINAGE LINES<br>AND CONCENTRATED FLOW<br>AREAS                              | C-FACTOR = 0.05 (70% GRASS<br>COVER OR EQUIVALENT GROUND<br>COVER)              | APPLIES AFTER 10 WORKING DAYS FROM<br>COMPLETION OF FORMATION AND BEFORE THEY<br>ARE ALLOWED TO CARRY CONCENTRATED<br>FLOWS.        | LOW FLOW –<br>JUTE MESH, SEEDING AND SOIL BINDER (I.E., VITAL P47 /<br>STONEWALL OR EQUIVALENT) | COMPLETE SUBSOIL TREATMENT (E.G. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF 15 t/ha) – TESTING<br>TO CONFIRM TREATMENT RATES.<br>PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM.                                                                                                                                                                                                                                                                                                                              |
|                                                                                          |                                                                                 |                                                                                                                                     | LOW TO MODERATE FLOW – JUTE MATTING (350GSM) AND<br>SEEDING (OR EQUIVALENT)                     | COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING<br>INSTALL MATTING IN ACCORDANCE WITH SD 5-7.                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                          |                                                                                 |                                                                                                                                     | MODERATE FLOW – TURF REINFORCEMENT MATTING (TRM)                                                | SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT.<br>VITAL DILUTION RATE = 1:10 (VITAL:WATER).<br>APPLICATION RATE = 1L/m² OF DILUTED VITAL MIXTURE.<br>RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.                                                                                                                                                                                                                                                      |
|                                                                                          |                                                                                 |                                                                                                                                     | HIGH FLOW – ROCK LINING                                                                         | SAME AS ABOVE, PLUS:<br>INSTALL ROCK ARMORING TO THE DEPTH AND SIZE AS SPECIFIED ON THE CIVIL DRAWINGS                                                                                                                                                                                                                                                                                                                                                                                                         |
| STOCKPILES                                                                               | C-FACTOR = 0.10 (60% GRASS<br>COVER OR EQUIVALENT GROUND<br>COVER)              | APPLIES AFTER 10 WORKING DAYS FROM<br>COMPLETION OF FORMATION                                                                       | SEEDING AND SOIL BINDER (i.e. VITAL P47/STONEWALL OR<br>EQUIVALENT)                             | APPLY SEED TO ALL STOCKPILE SURFACES (NOTE: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS<br>PRESENT).<br>SPRAY ALL STOCKPILE SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT¹.<br>VITAL DILUTION RATE = 1L / m² OF DILUTED VITAL MIXTURE.<br>RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.                                                                                                                                                                      |
|                                                                                          |                                                                                 |                                                                                                                                     | GEOTEXTILE, JUTE MATTING, BLACK PLASTIC (SECURELY PINNED)<br>OR EQUIVALENT                      | COVER ALL EXPOSED SOILS.<br>RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.                                                                                                                                                                                                                                                                                                                                                                                                         |
| GENERAL SURFACES                                                                         | C-FACTOR = 0.10 / 0.05<br>(60% / 70% GRASS COVER OR<br>EQUIVALENT GROUND COVER) | C-FACTOR = 0.1 APPLIES AFTER 10 WORKING DAYS<br>FROM COMPLETION OF FORMATION<br>C-FACTOR = 0.05 APPLIES WITHIN A FURTHER 60<br>DAYS | TOPSOIL, SEEDING AND SOIL BINDER (VITAL P47/STONEWALL OR<br>EQUIVALENT                          | -REFER TO SD 7-1<br>-COMPLETE SUBSOIL TREATMENT (i.e. GYPSUM LIGHTLY RIPPED INTO SURGRADE AT A RATE OF 15 TONNES/ha).<br>TESTING TO CONFIRM TREATMENT RATES.                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                          |                                                                                 |                                                                                                                                     | HYDROMULCH OR EQUIVALENT                                                                        | - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75MM.<br>- APPLY ANY FERTILISERS REQUIRED.<br>- APPLY SEED TO ALL SURFACES (Note: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS PRESENT).<br>- INSTALL MATTING IN ACCORDANCE WITH SD 5-7.<br>- SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT¹.<br>- VITAL DILUTION RATE = 1:10 (VITAL:WATER).<br>- APPLICATION RATE = 1L / 7m² OF DILUTED VITAL MIXTURE.<br>- RE-APPLY / MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED. |

|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                            |                                      |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |
|-------|-------------------------|----------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------|----|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|--|
|       |                         |          | Bar Scales | THIS DRAWING CANNOT BE<br>COPIED OR REPRODUCED IN<br>ANY FORM OR USED FOR ANY<br>OTHER PURPOSE OTHER THAN<br>THAT ORIGINALLY INTENDED<br>WITHOUT THE WRITTEN<br>PERMISSION OF AT&L | <div>Client</div> <div></div> | <div>Scale</div> <div>N.T.S.</div>         | <div>Drawn</div> <div>Designed</div> | LM | Project<br>SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | <div>Civil Engineers and Project Managers</div> <div></div> <div>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</div> |    |  |  |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                            |                                      |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                            |                                      |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    | <div>Grid</div> <div>GDA 2020</div>        | <div>Checked</div>                   | AM | Title<br>GENERAL NOTES<br>SHEET 6                                | Status<br>FOR CONSTRUCTION                                                                                                                                                                                                                                                                                                 | A1 |  |  |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                            |                                      |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    | <div>Height<br/>Datum</div> <div>AHD</div> | <div>Approved</div>                  |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |            |                                                                                                                                                                                    |                                                                                                                    |                                            |                                      |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |
| Issue | Description             | Date     |            |                                                                                                                                                                                    |                                                                                                                    |                                            |                                      |    |                                                                  |                                                                                                                                                                                                                                                                                                                            |    |  |  |

100mm on Original





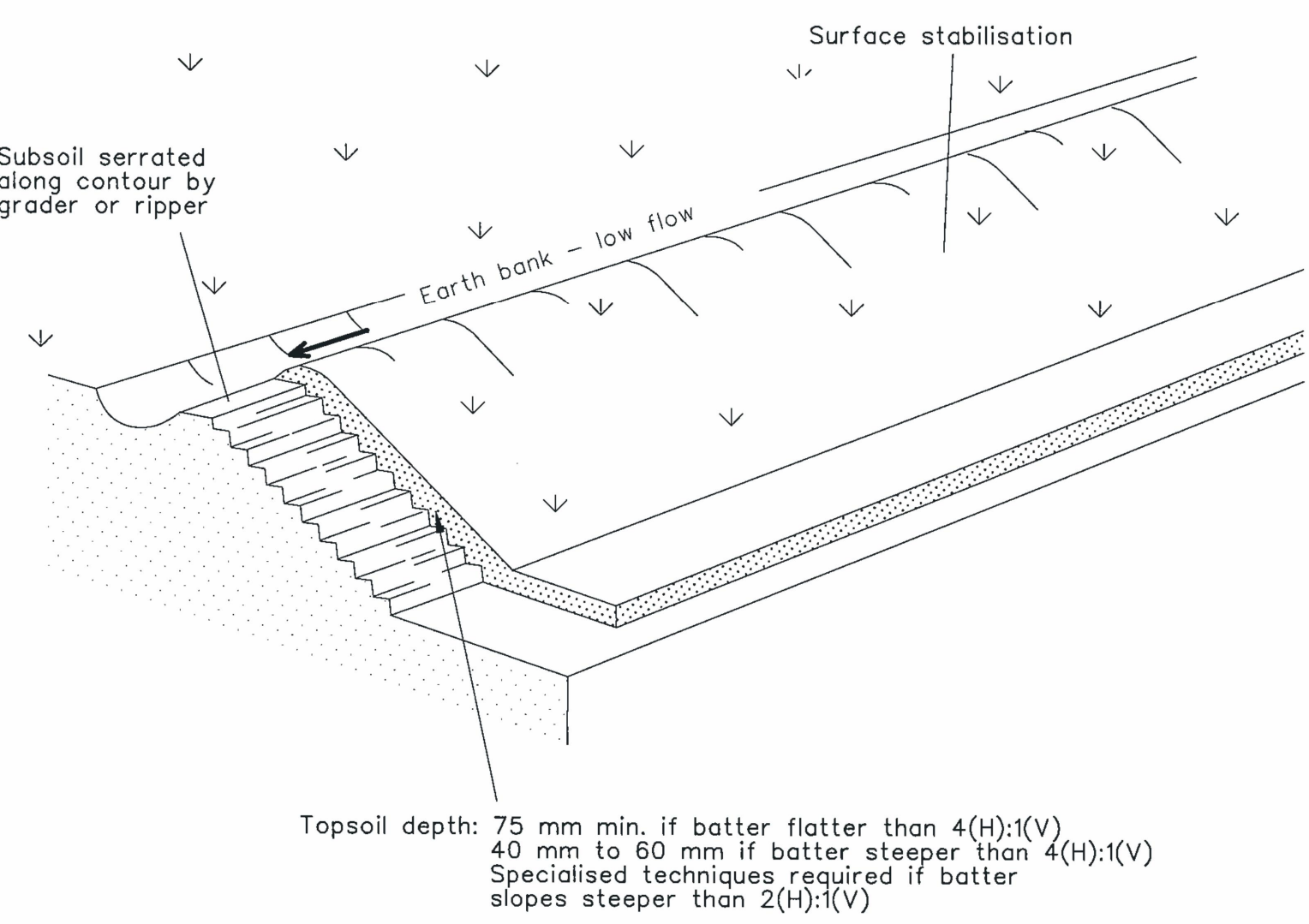
**Construction Notes**

- Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
- Construct on the contour as low, flat, elongated mounds.
- Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
- Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
- Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES

SD 4-1

4-5



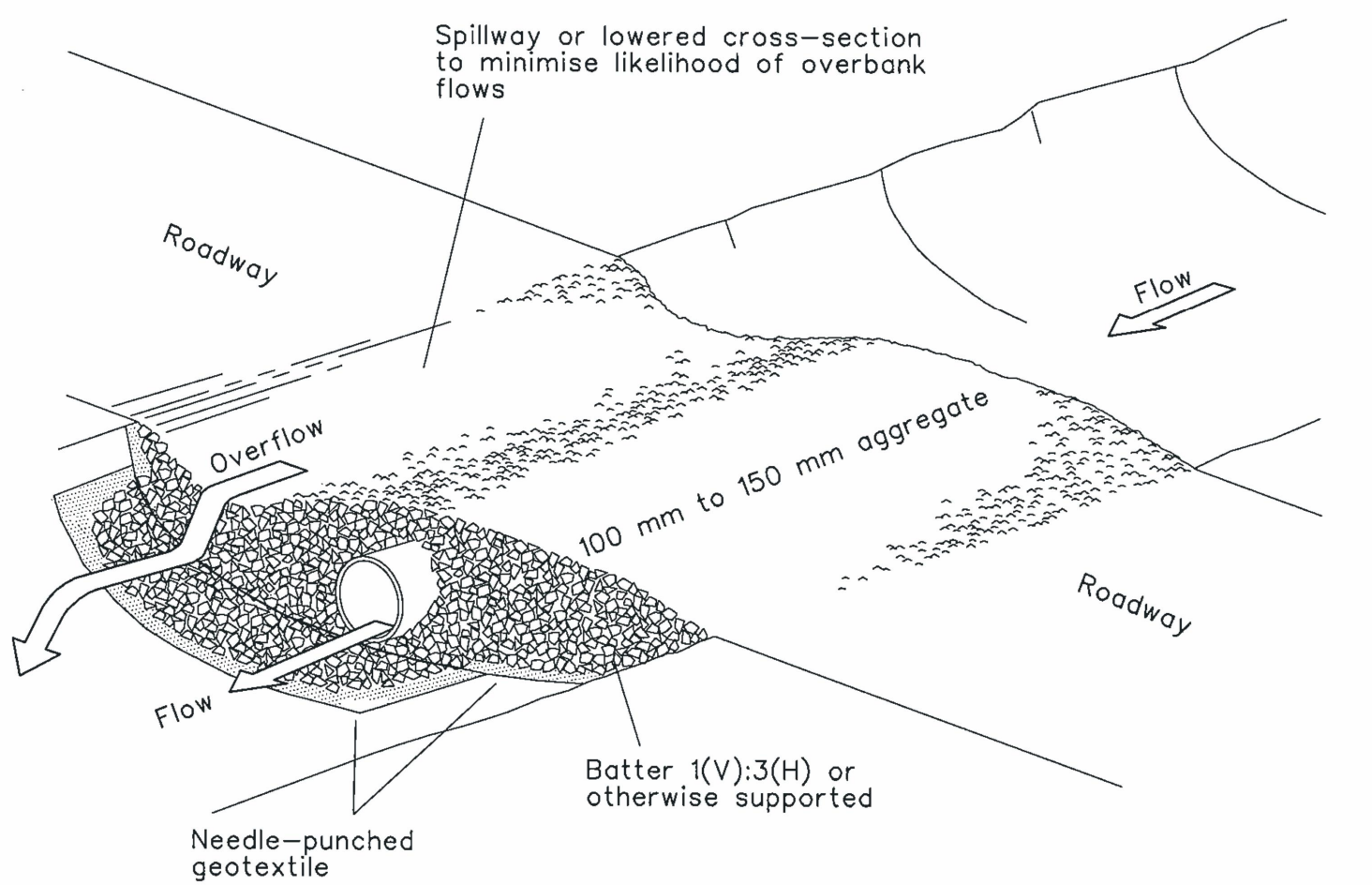
**Construction Notes**

- Scarify the ground surface along the line of the contour to a depth of 50 mm to 100 mm to break up any hardsetting surfaces and to provide a good bond between the respread material and subsoil.
- Add soil ameliorants as required by the ESCP or SWMP.
- Rip to a depth of 300 mm if compacted layers occur.
- Where possible, replace topsoil to a depth of 40 to 60 mm on lands where the slope exceeds 4(H):1(V) and to at least 75 mm on lower gradients.

REPLACING TOPSOIL

SD 4-2

4-6



**Construction Notes**

- Prohibit all traffic until the access way is constructed.
- Strip any topsoil and place a needle-punched textile over the base of the crossing.
- Place clean, rigid, non polluting aggregate or gravel in the 100 mm to 150 mm size class over the fabric to a minimum depth of 200 mm.
- Provide a 3-metre wide carriageway with sufficient length of culvert pipe to allow less than a 3(H): 1 (V) slope on side batters.
- Install a lower section to act as an emergency spillway in greater than design storm events.
- Ensure that culvert outlets extend beyond the toe of fill embankments.

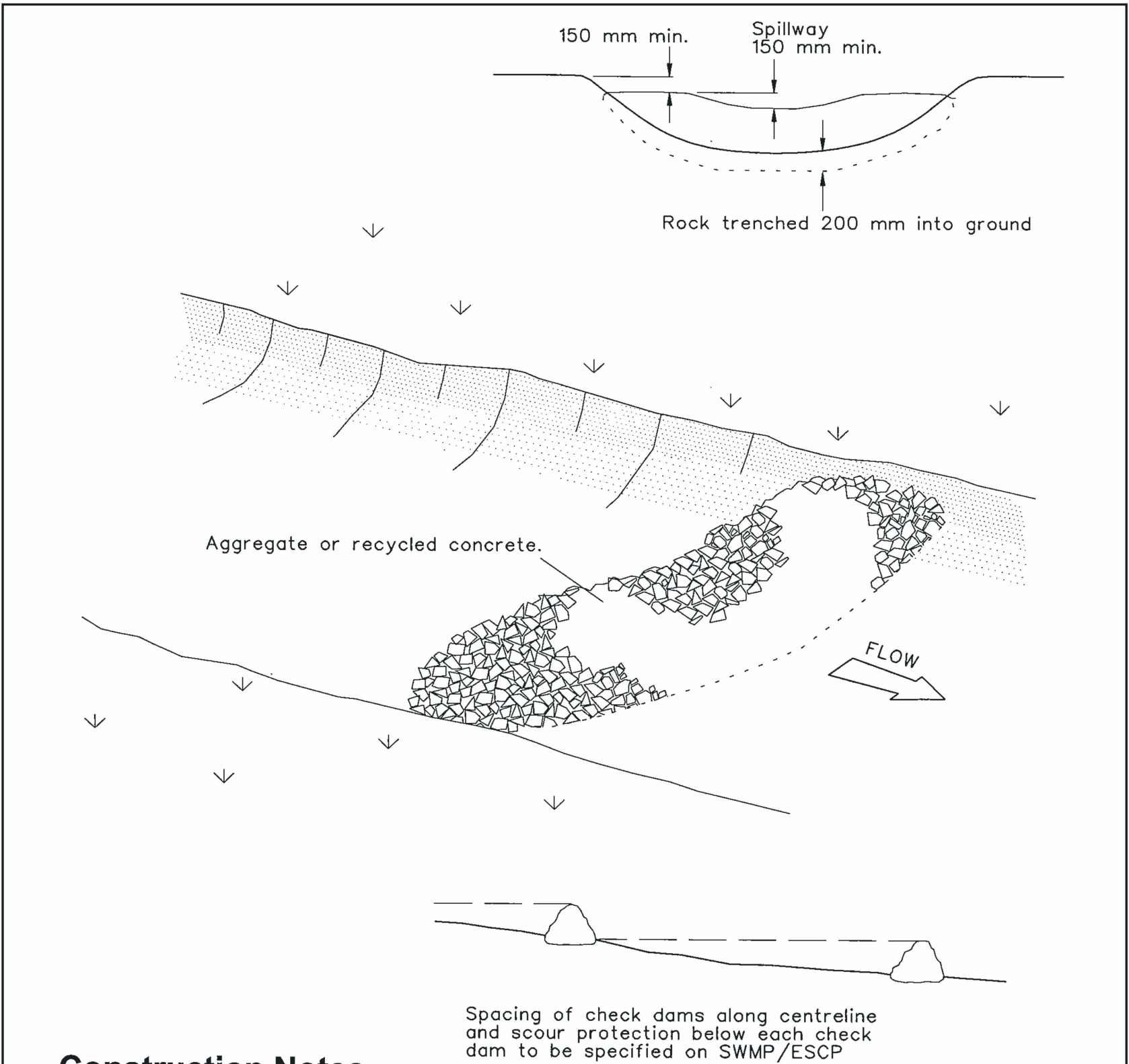
TEMPORARY WATERWAY CROSSING

SD 5-1

5-14

|       |                         |            |                                                                                                                                                                                    |                                                                                       |                 |          |          |                                                                  |                                                                                       |                                                                                                                                                          |             |
|-------|-------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|----------|----------|------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|       |                         | Bar Scales | THIS DRAWING CANNOT BE<br>COPIED OR REPRODUCED IN<br>ANY FORM OR USED FOR ANY<br>OTHER PURPOSE OTHER THAN<br>THAT ORIGINALLY INTENDED<br>WITHOUT THE WRITTEN<br>PERMISSION OF AT&L |  | Scales          | Drawn    | LM       | Project<br>SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | Civil Engineers and Project Managers                                                  |                                                                                                                                                          |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | N.T.S.          | Designed | TM       |                                                                  |  | Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | Grid            | GDA 2020 | Checked  |                                                                  |                                                                                       |                                                                                                                                                          | AM          |
|       |                         |            |                                                                                                                                                                                    |                                                                                       | Height<br>Datum | AHD      | Approved |                                                                  |                                                                                       |                                                                                                                                                          |             |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |                 |          |          | Title                                                            | GENERAL NOTES<br>SHEET 7                                                              | Status<br>FOR CONSTRUCTION                                                                                                                               | A1          |
| 01    | ISSUED FOR CONSTRUCTION |            |                                                                                                                                                                                    |                                                                                       | 23-07-25        |          |          |                                                                  |                                                                                       | Project - Drawing No.<br>20-776-C10008                                                                                                                   | Issue<br>01 |
| Issue | Description             | Date       |                                                                                                                                                                                    |                                                                                       |                 |          |          |                                                                  |                                                                                       |                                                                                                                                                          |             |





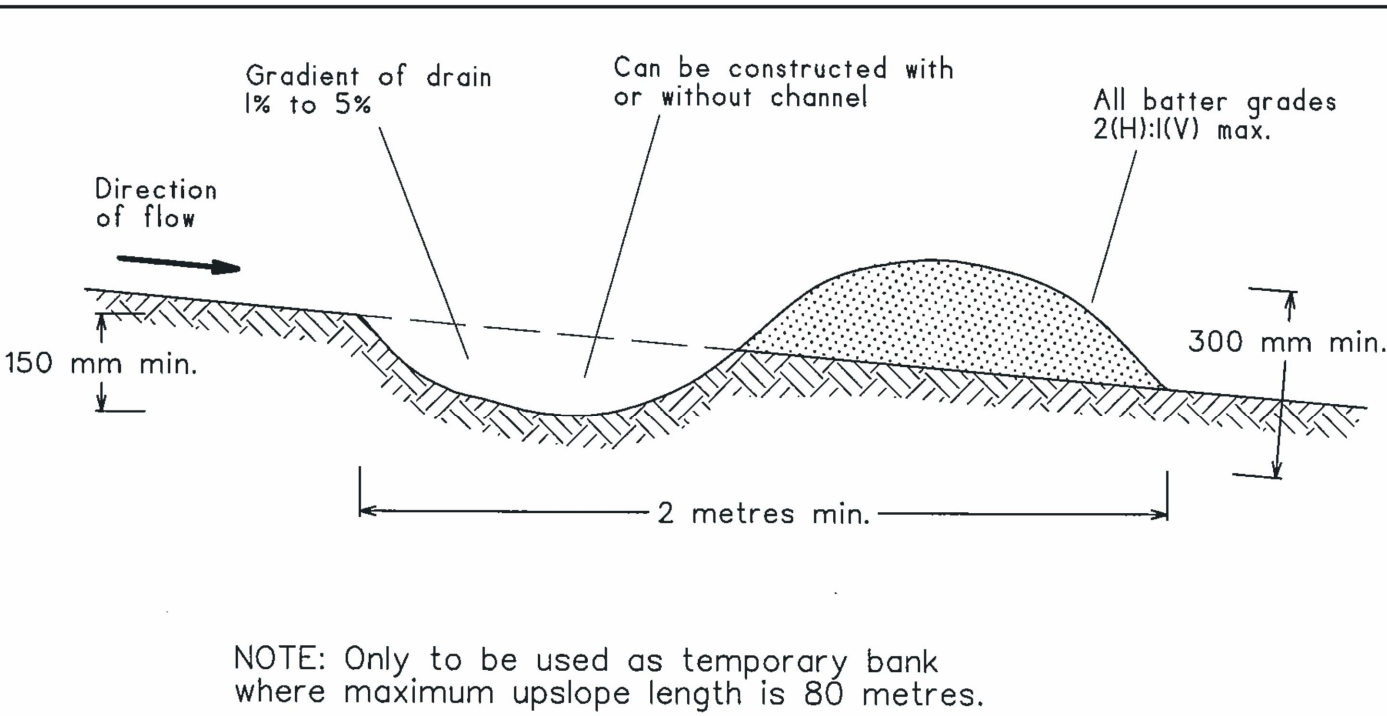
Construction Notes

- Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
- Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
- Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
- Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM

SD 5-4

5-22



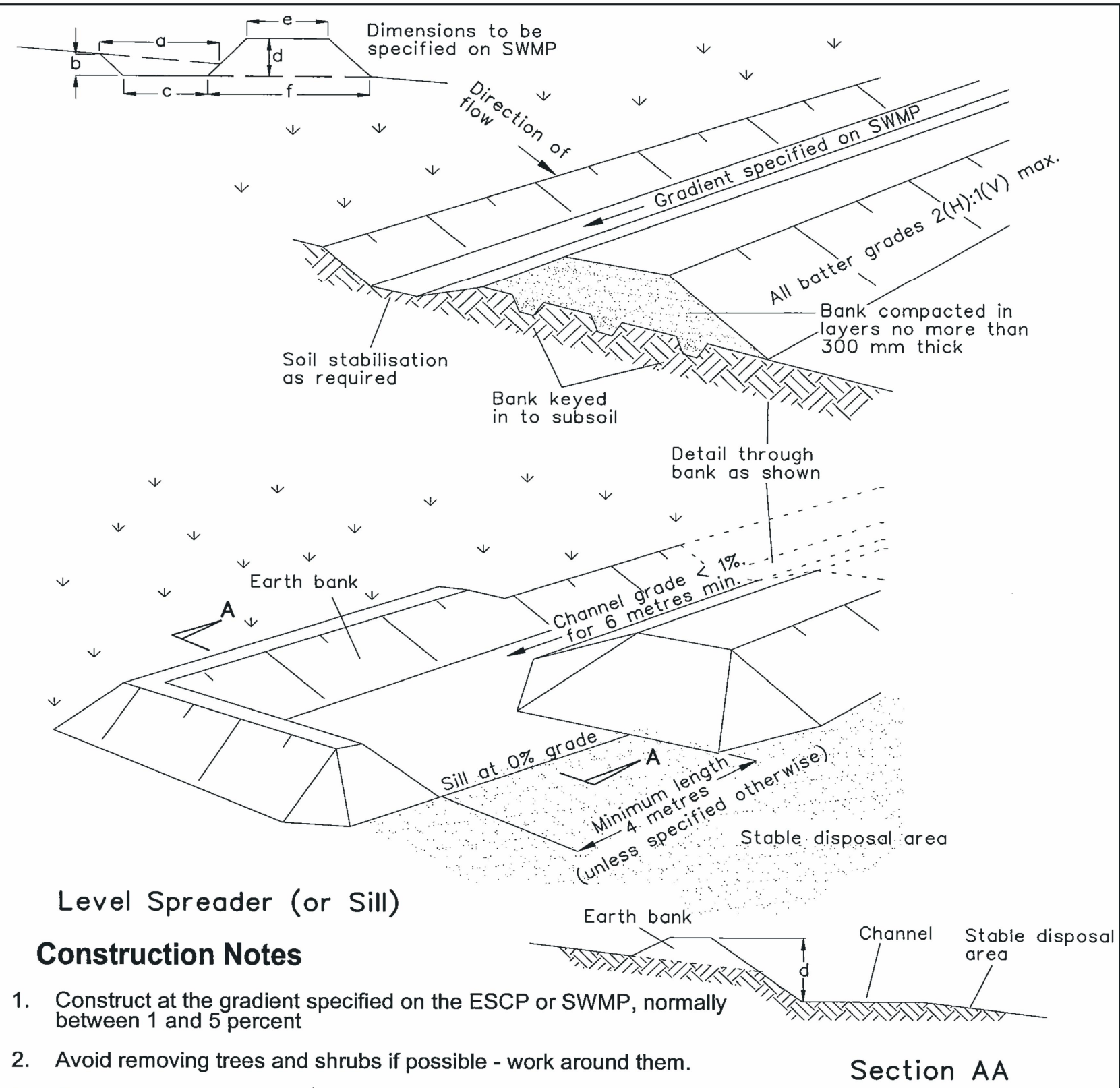
Construction Notes

- Build with gradients between 1 percent and 5 percent.
- Avoid removing trees and shrubs if possible - work around them.
- Ensure the structures are free of projections or other irregularities that could impede water flow.
- Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
- Ensure the banks are properly compacted to prevent failure.
- Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW)

SD 5-5

5-25



Level Spreader (or Sill)

Construction Notes

- Construct at the gradient specified on the ESCP or SWMP, normally between 1 and 5 percent
- Avoid removing trees and shrubs if possible - work around them.
- Ensure the structures are free of projections or other irregularities that could impede water flow.
- Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
- Ensure the banks are properly compacted to prevent failure.
- Complete permanent or temporary stabilisation within 10 days of construction following Table 5.2 in Landcom (2004).
- Where discharging to erodible lands, ensure they outlet through a properly constructed level spreader.
- Construct the level spreader at the gradient specified on the ESCP or SWMP, normally less than 1 percent or level.
- Where possible, ensure they discharge waters onto either stabilised or undisturbed disposal sites within the same subcatchment area from which the water originated. Approval might be required to discharge into other subcatchments.

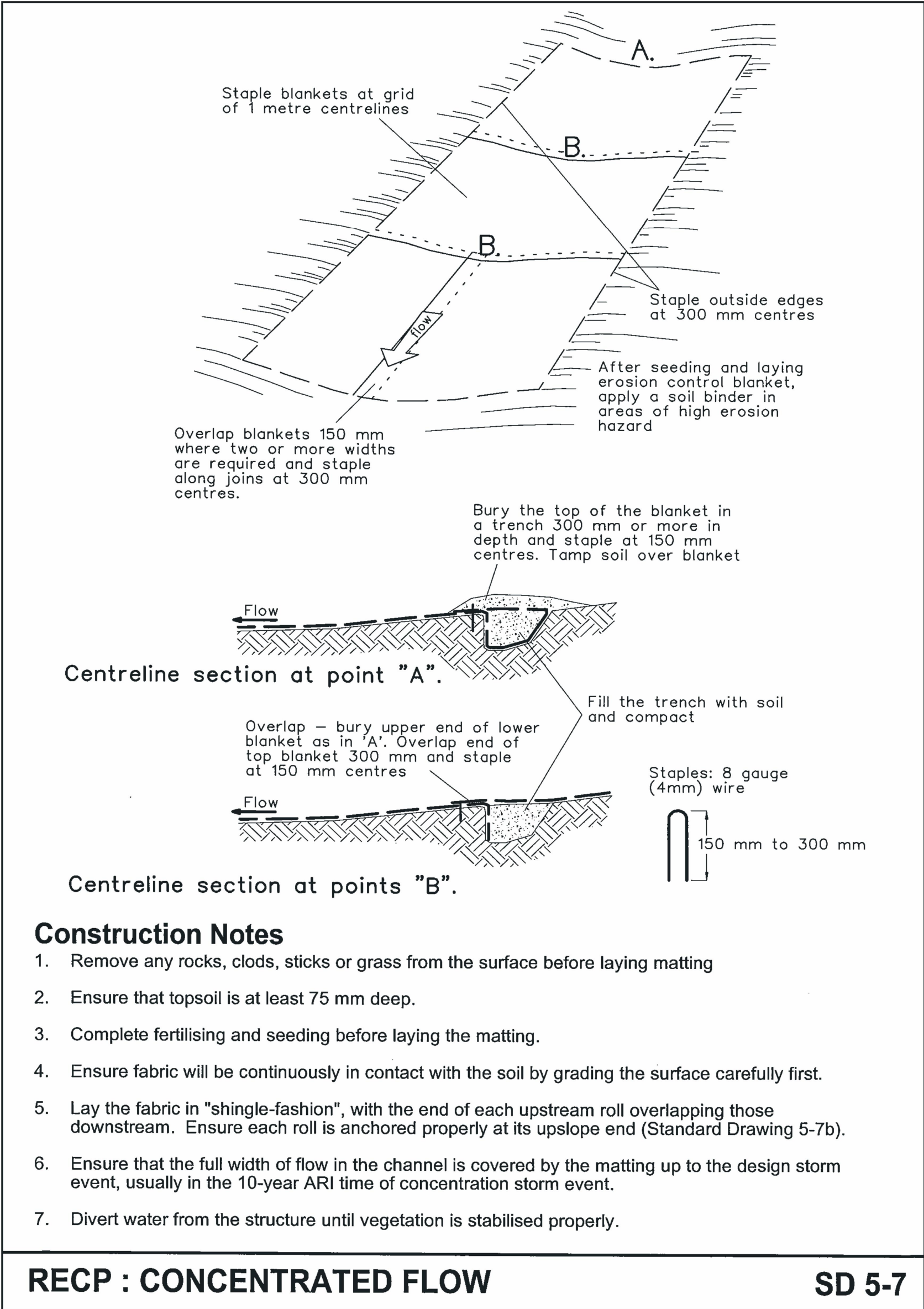
EARTH BANK (HIGH FLOWS)

SD 5-6

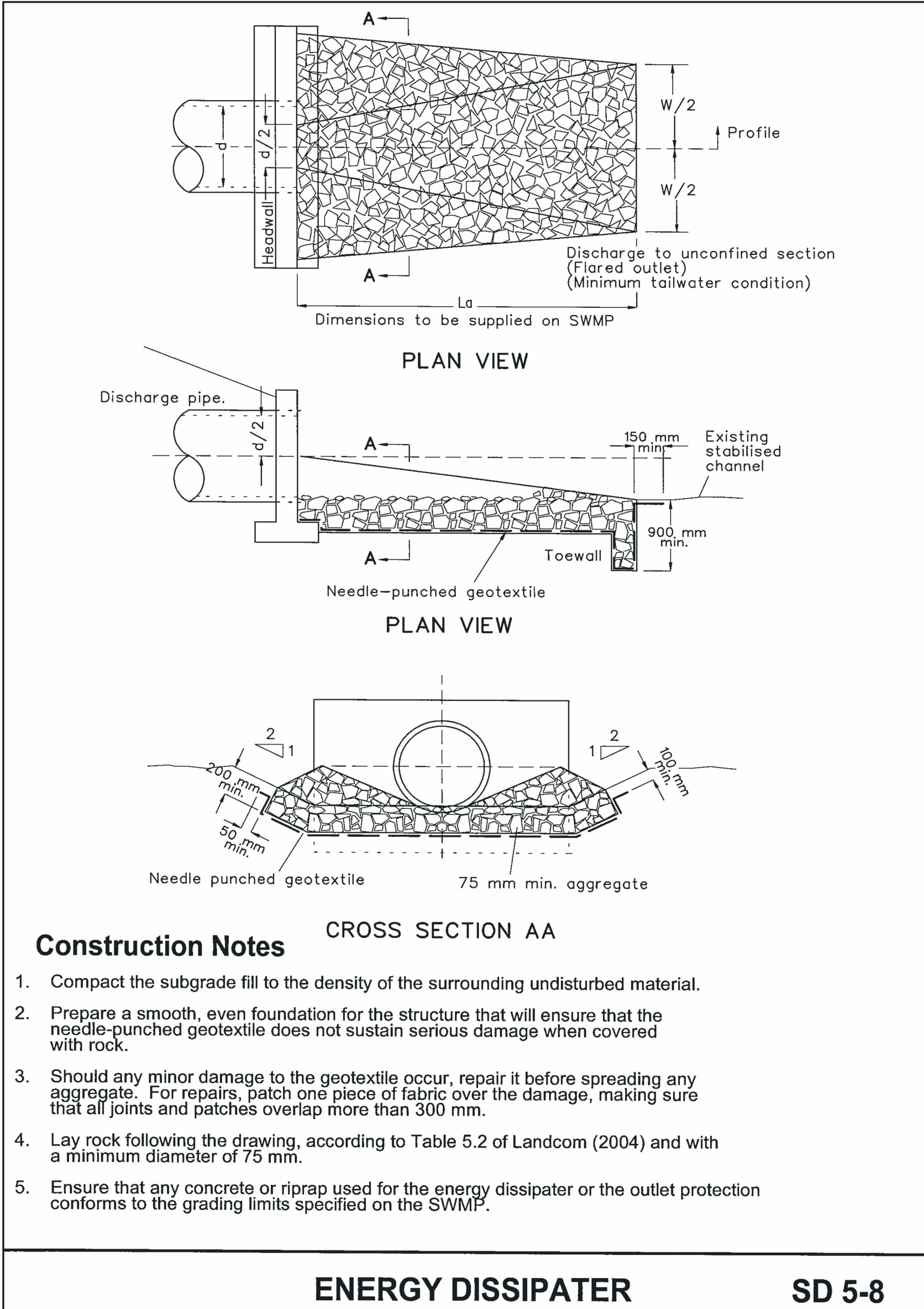
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|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  |                                                                                       |                                                                                                                                                          |  |
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|       |                         | Bar Scales | THIS DRAWING CANNOT BE<br>COPIED OR REPRODUCED IN<br>ANY FORM OR USED FOR ANY<br>OTHER PURPOSE OTHER THAN<br>THAT ORIGINALLY INTENDED<br>WITHOUT THE WRITTEN<br>PERMISSION OF AT&L |  | Client | Scales<br>N.T.S.<br><br>Grid<br>GDA 2020<br><br>Height<br>Datum<br>AHD | Drawn<br>LM<br>Designed<br>TM<br>Checked<br>AM<br>Approved | Project<br>SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK | Civil Engineers and Project Managers                                                  |                                                                                                                                                          |  |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  |  | Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |  |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  |                                                                                       |                                                                                                                                                          |  |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  |                                                                                       |                                                                                                                                                          |  |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  |                                                                                       |                                                                                                                                                          |  |
|       |                         |            |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  |                                                                                       |                                                                                                                                                          |  |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25   |                                                                                                                                                                                    |                                                                                       |        |                                                                        | Title<br>GENERAL NOTES<br>SHEET 8                          |                                                                  | Status<br>FOR CONSTRUCTION                                                            | A1                                                                                                                                                       |  |
| Issue | Description             | Date       |                                                                                                                                                                                    |                                                                                       |        |                                                                        |                                                            |                                                                  | Project - Drawing No.<br>20-776-C10009                                                | Issue<br>01                                                                                                                                              |  |

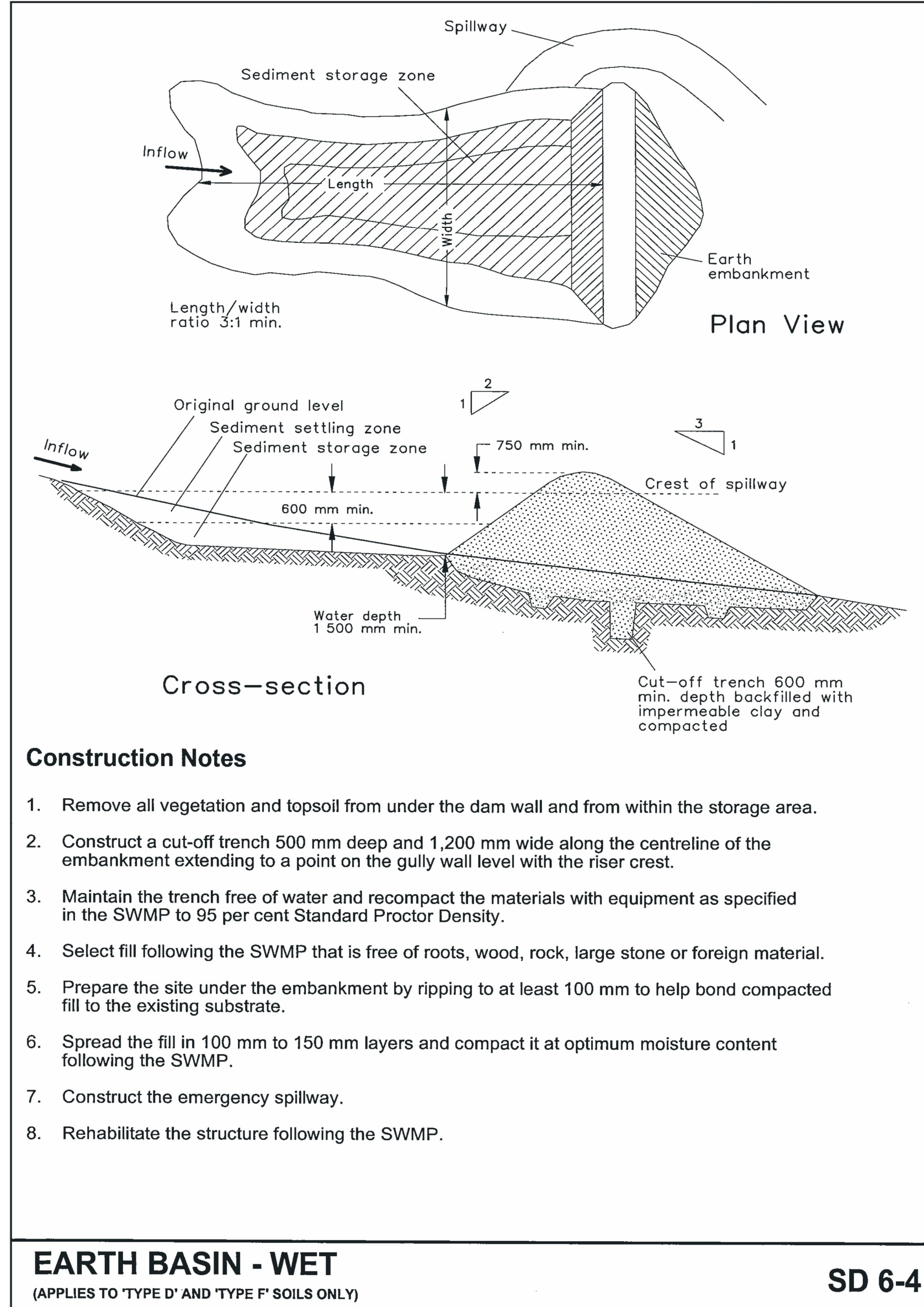




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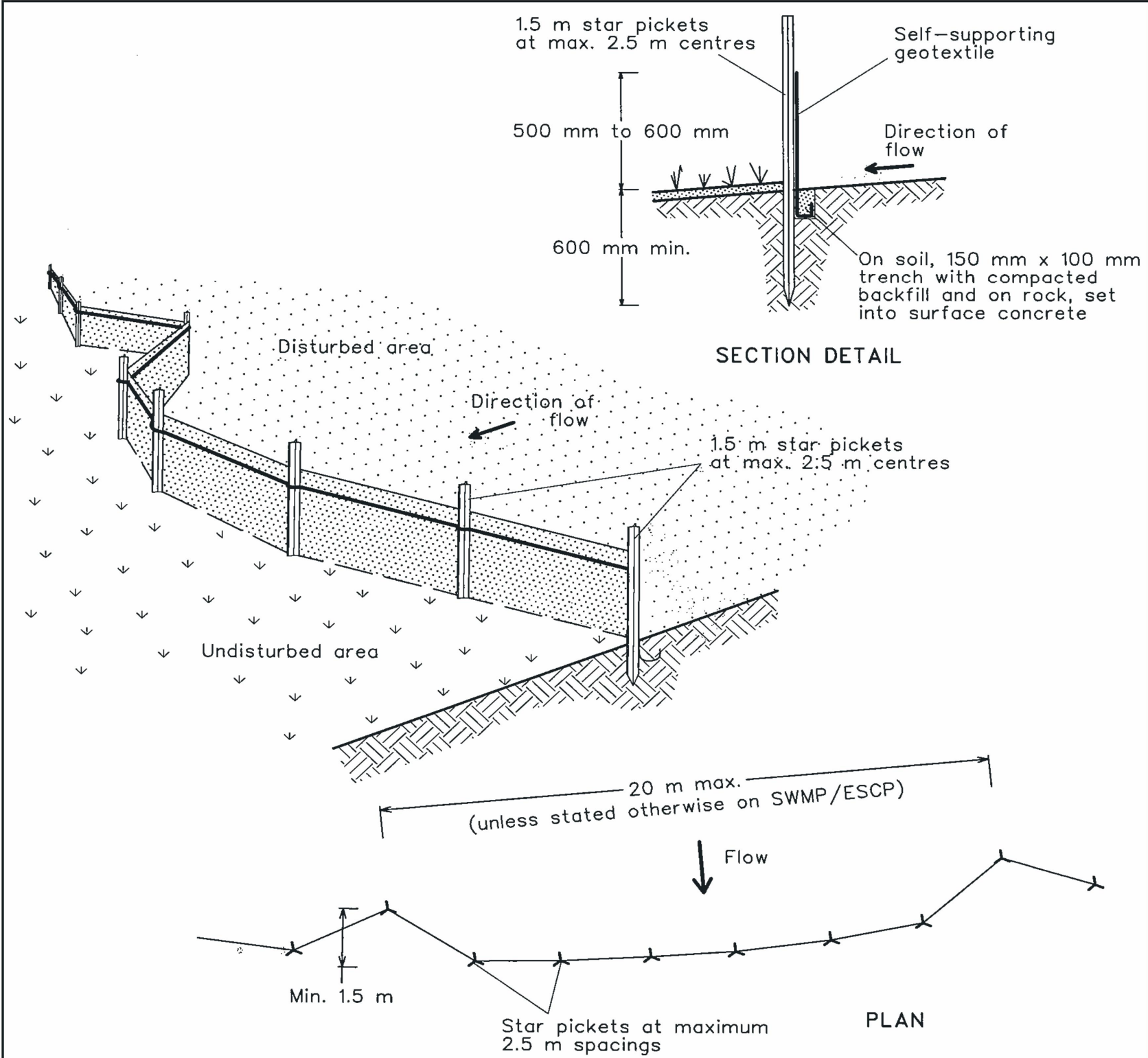
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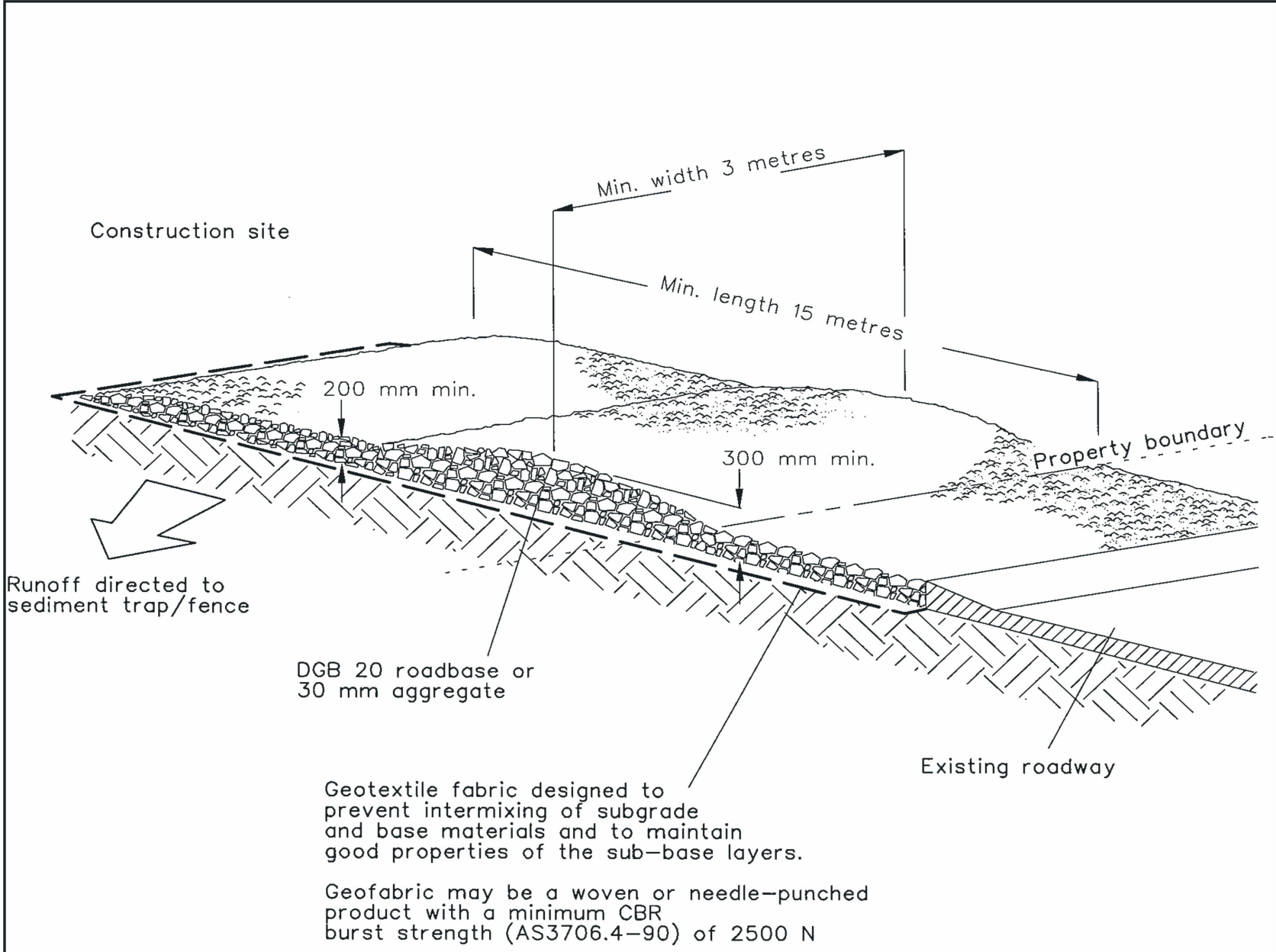
Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE

SD 6-8

6-36



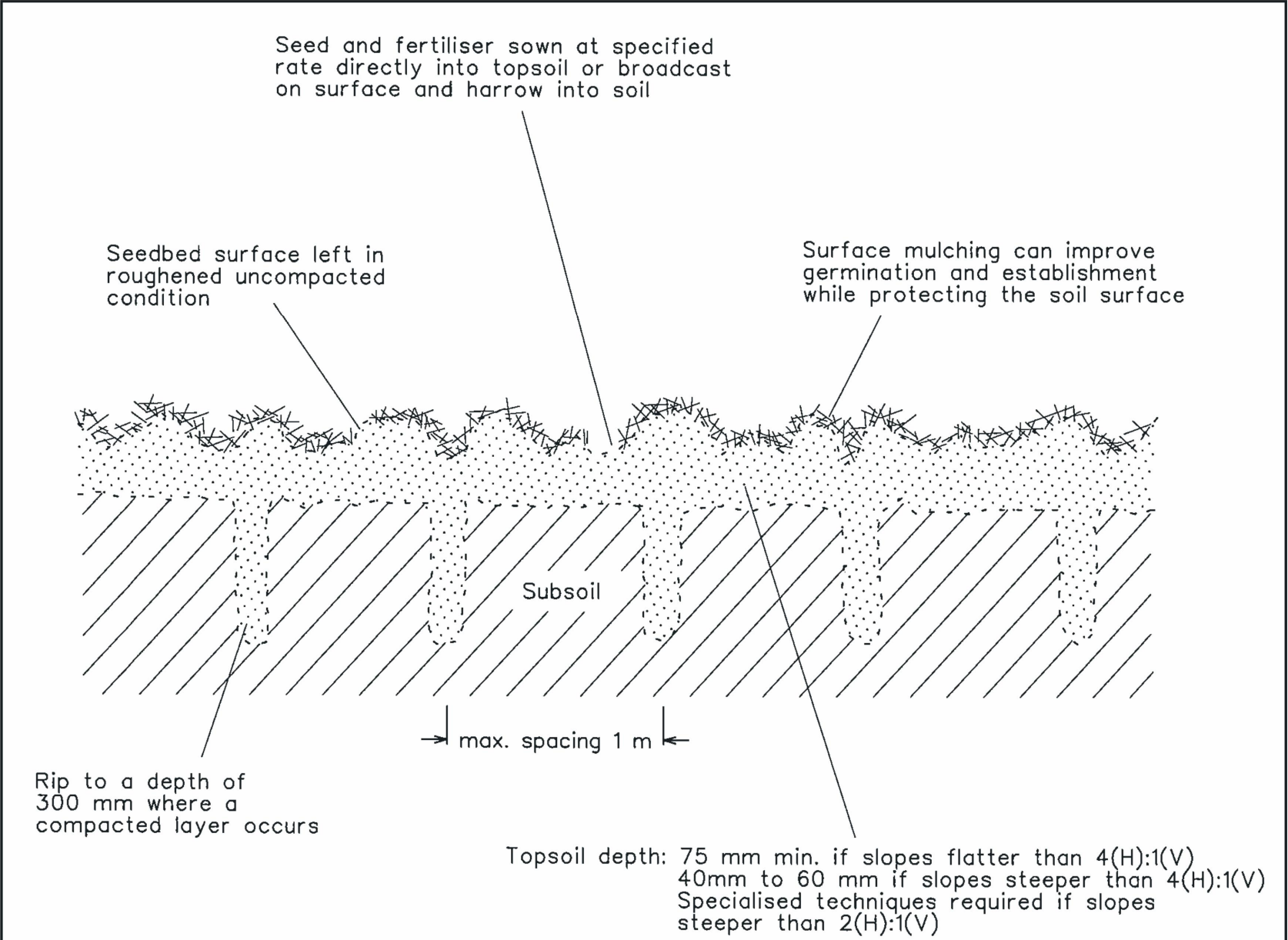
Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

STABILISED SITE ACCESS

SD 6-14

6-48



Construction Notes

1. Loosen compacted soil before sowing any seed. If necessary, rip the soil to a depth of 300 mm. Avoid rotary hoe cultivation.
2. Work the ground only as much as necessary to achieve the desired tilth and prepare a good seedbed.
3. Avoid cultivation in very wet or very dry conditions.
4. Cultivate on or close to the contour where possible, not up and down the slope.

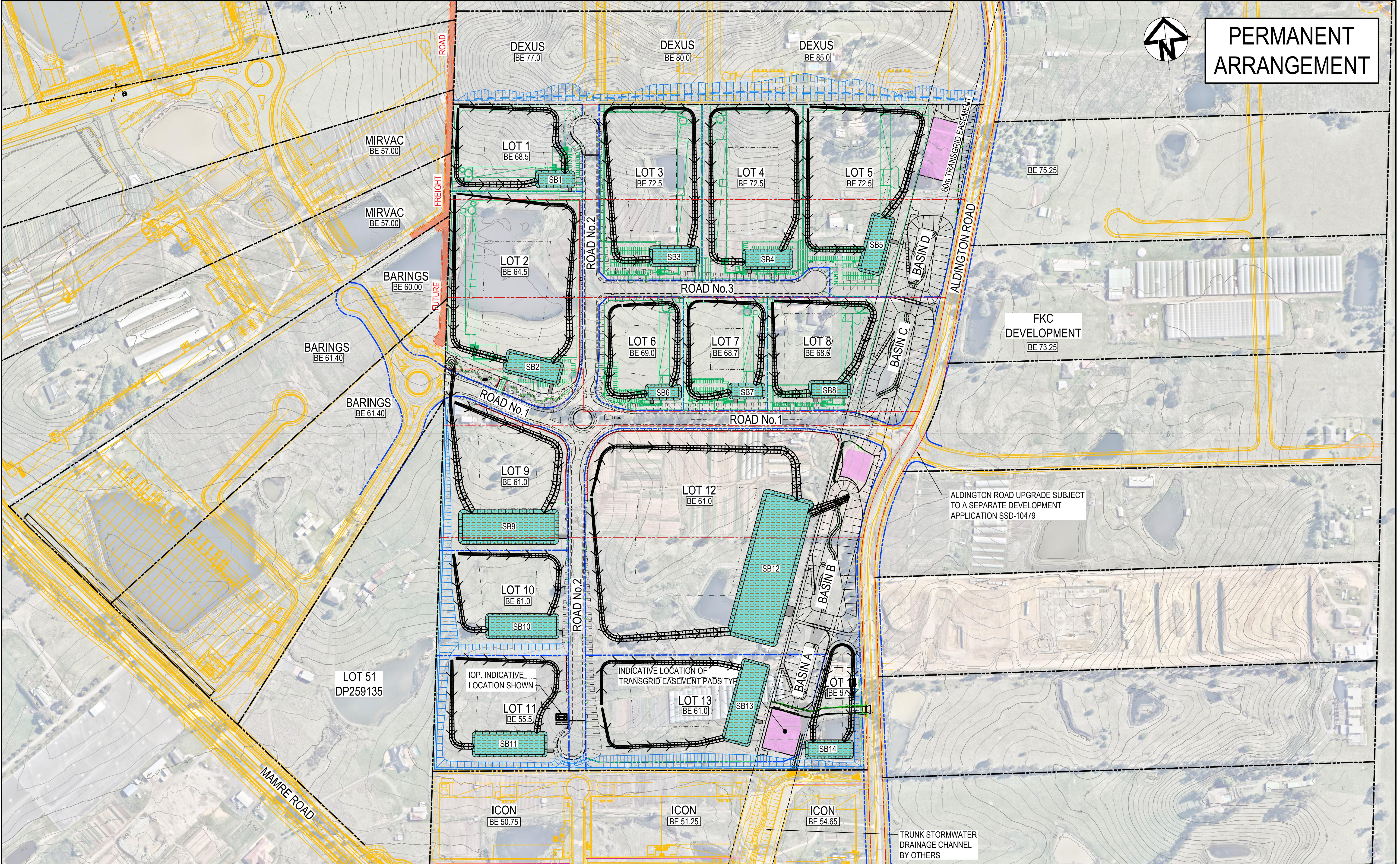
SEEDBED PREPARATION

SD 7-1

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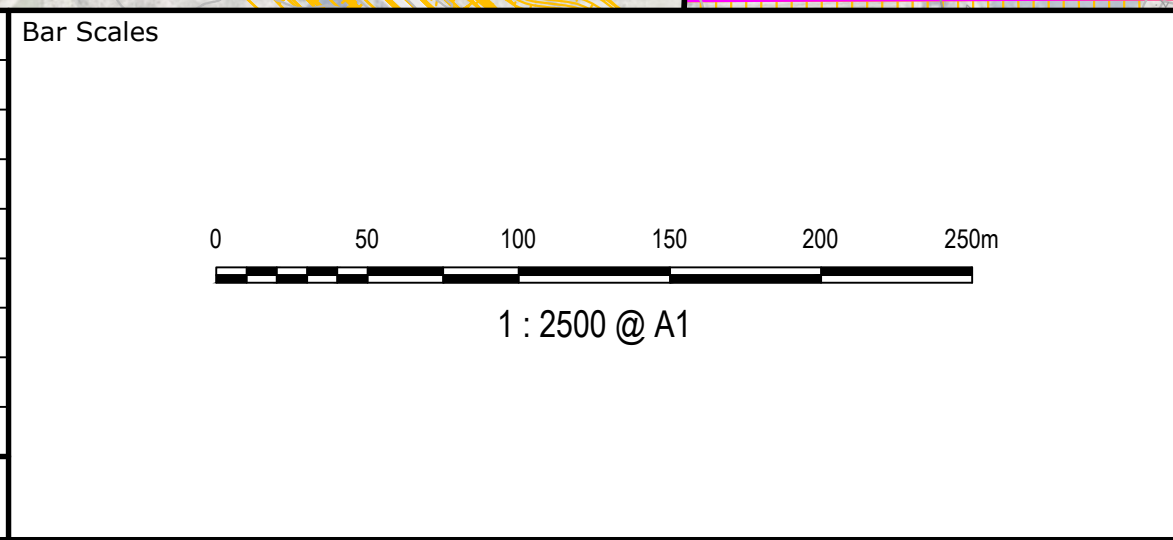
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PERMANENT  
ARRANGEMENT

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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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 **FRASERS  
PROPERTY**

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| Scales       | 1 : 2500 | Drawn    | LM |
| Grid         | GDA 2020 | Designed | TM |
| Height Datum | AHD      | Checked  | AM |
|              |          | Approved |    |

Project

SSD-17552047  
155-251 ALDINGTON ROAD  
KEMPS CREEK

Title

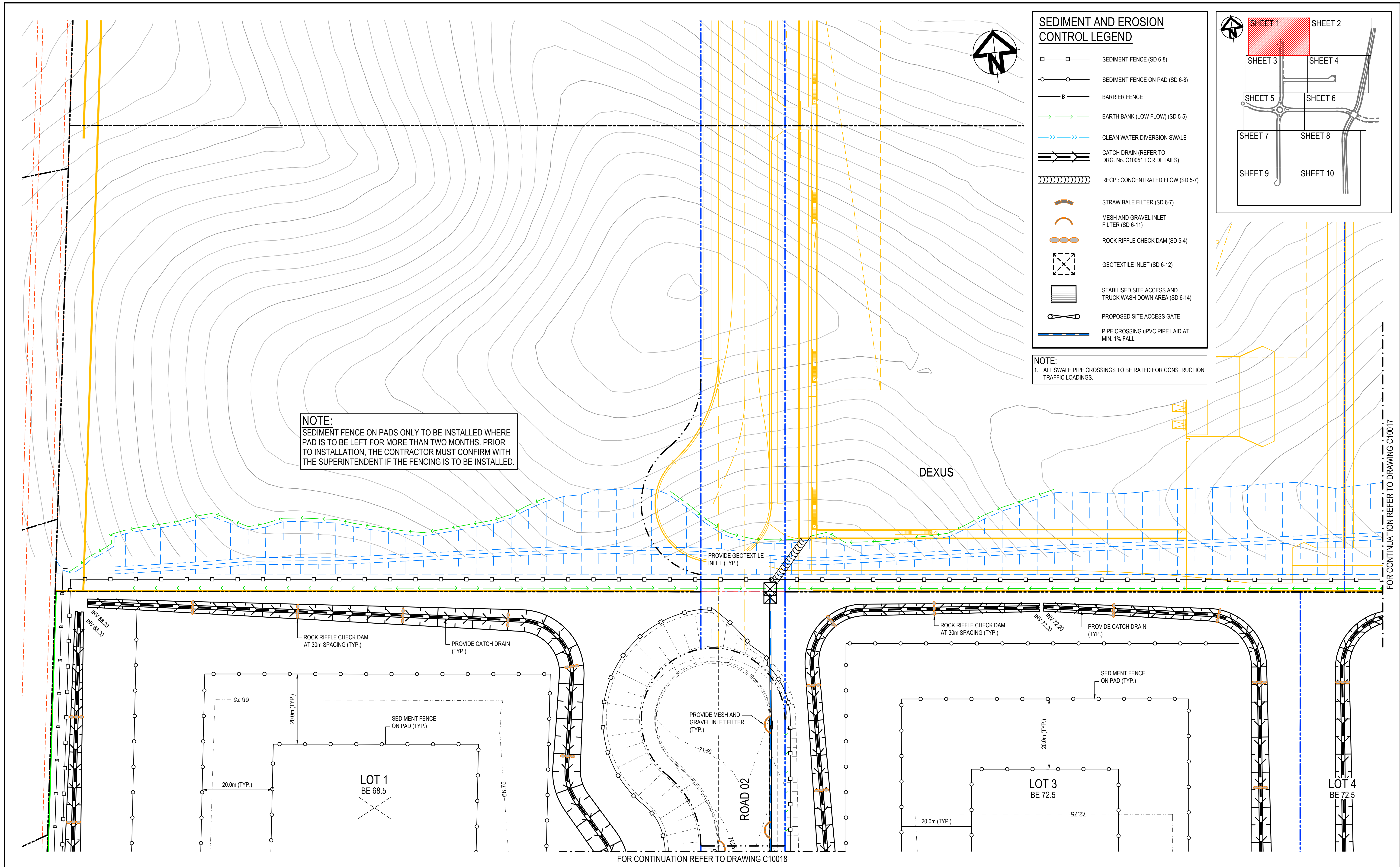
PERMANENT ARRANGEMENT  
EROSION & SEDIMENT CONTROL  
GENERAL ARRANGEMENT PLAN

Civil Engineers and Project Managers

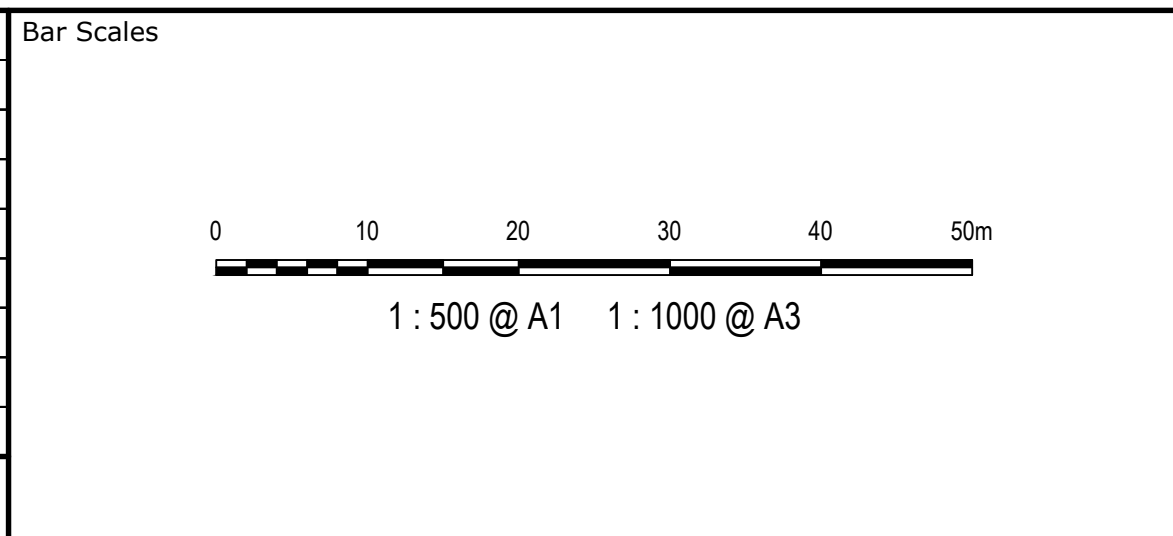
 Level 7, 153 Walker Street  
North Sydney NSW 2060  
ABN 96 130 882 405  
Tel: 02 9439 1777  
Fax: 02 9923 1055  
www.atl.net.au  
info@atl.net.au

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| Status                | FOR CONSTRUCTION | A1    |
| Project - Drawing No. | 20-776-C10015    | Issue |
|                       |                  | 01    |





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| Issue | Description             | Date     |



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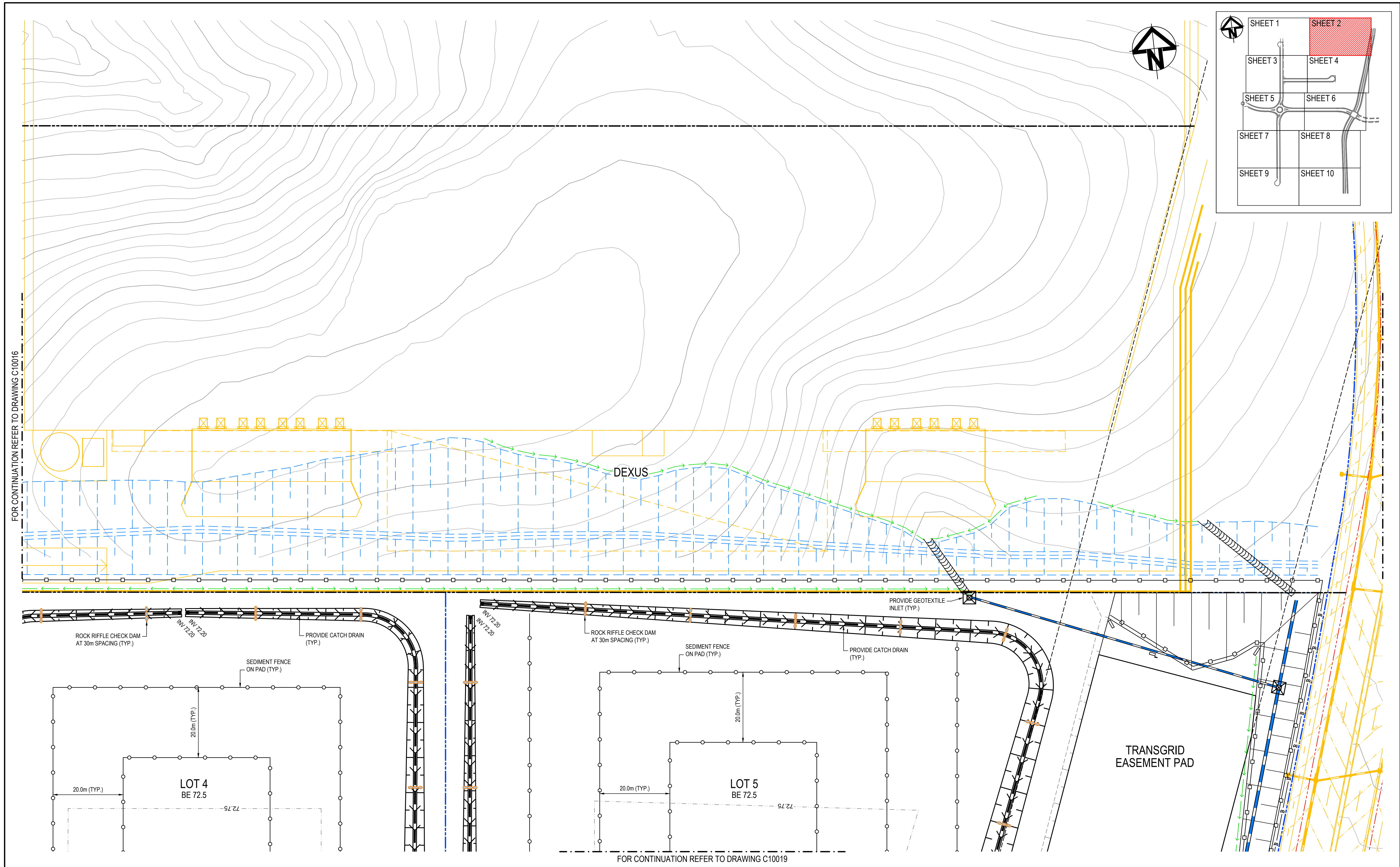


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| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

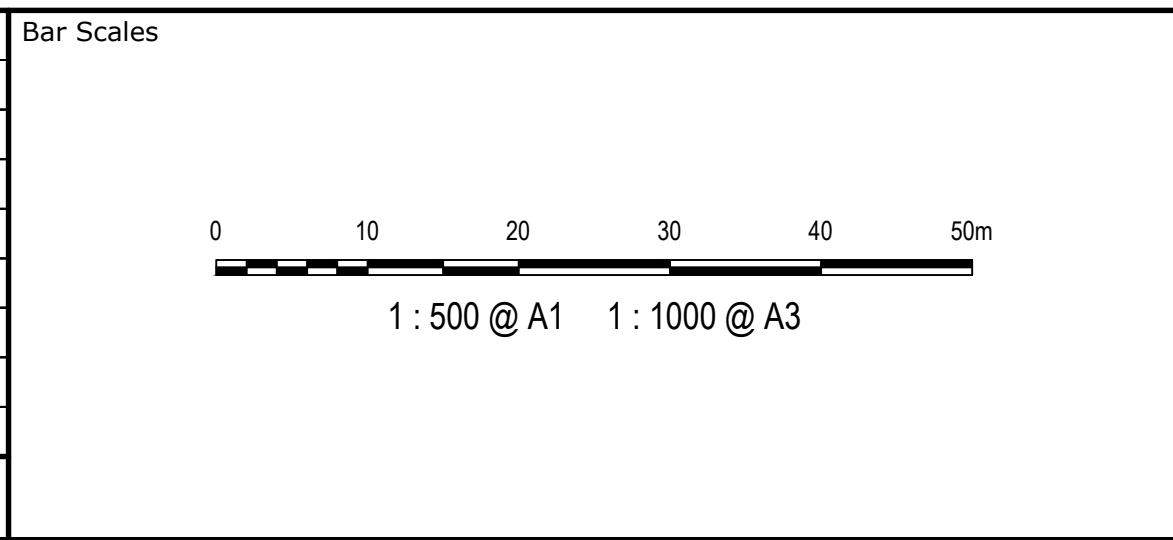
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|---------|--------------------------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK                    |
| Title   | PERMANENT ARRANGEMENT<br>EROSION AND SEDIMENT<br>CONTROL PLAN<br>SHEET 1 |

|                                                                                                                                                          |                  |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|
| Civil Engineers and Project Managers                                                                                                                     |                  |       |
|                                                                     |                  |       |
| Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |                  |       |
| Status                                                                                                                                                   | FOR CONSTRUCTION | A1    |
| Project - Drawing No.                                                                                                                                    | 20-776-C10016    | Issue |
|                                                                                                                                                          |                  | 01    |





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| Issue | Description             | Date     |



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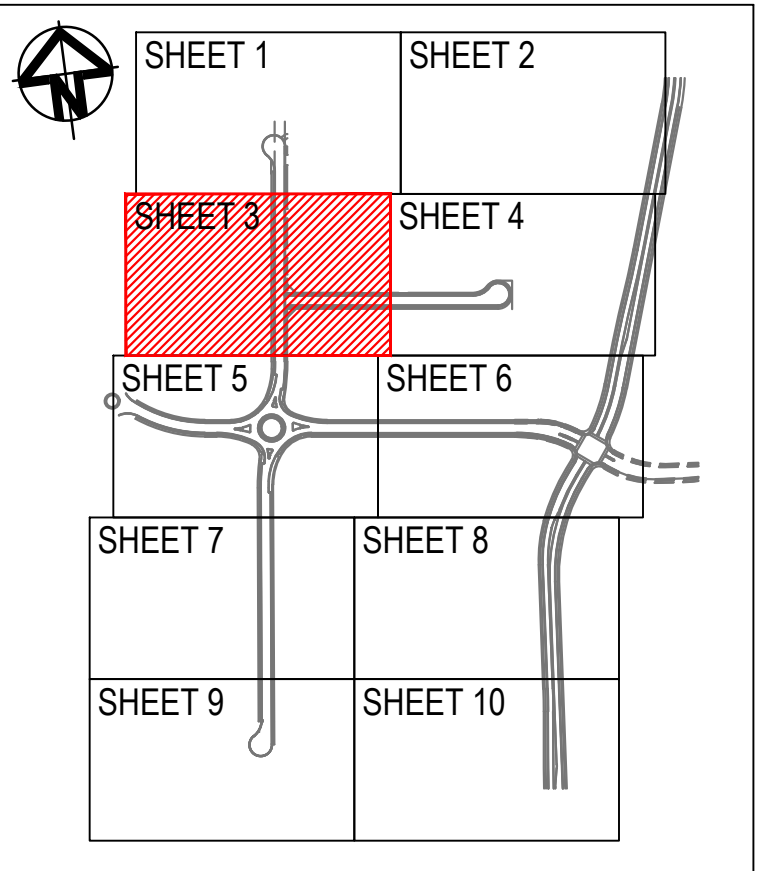
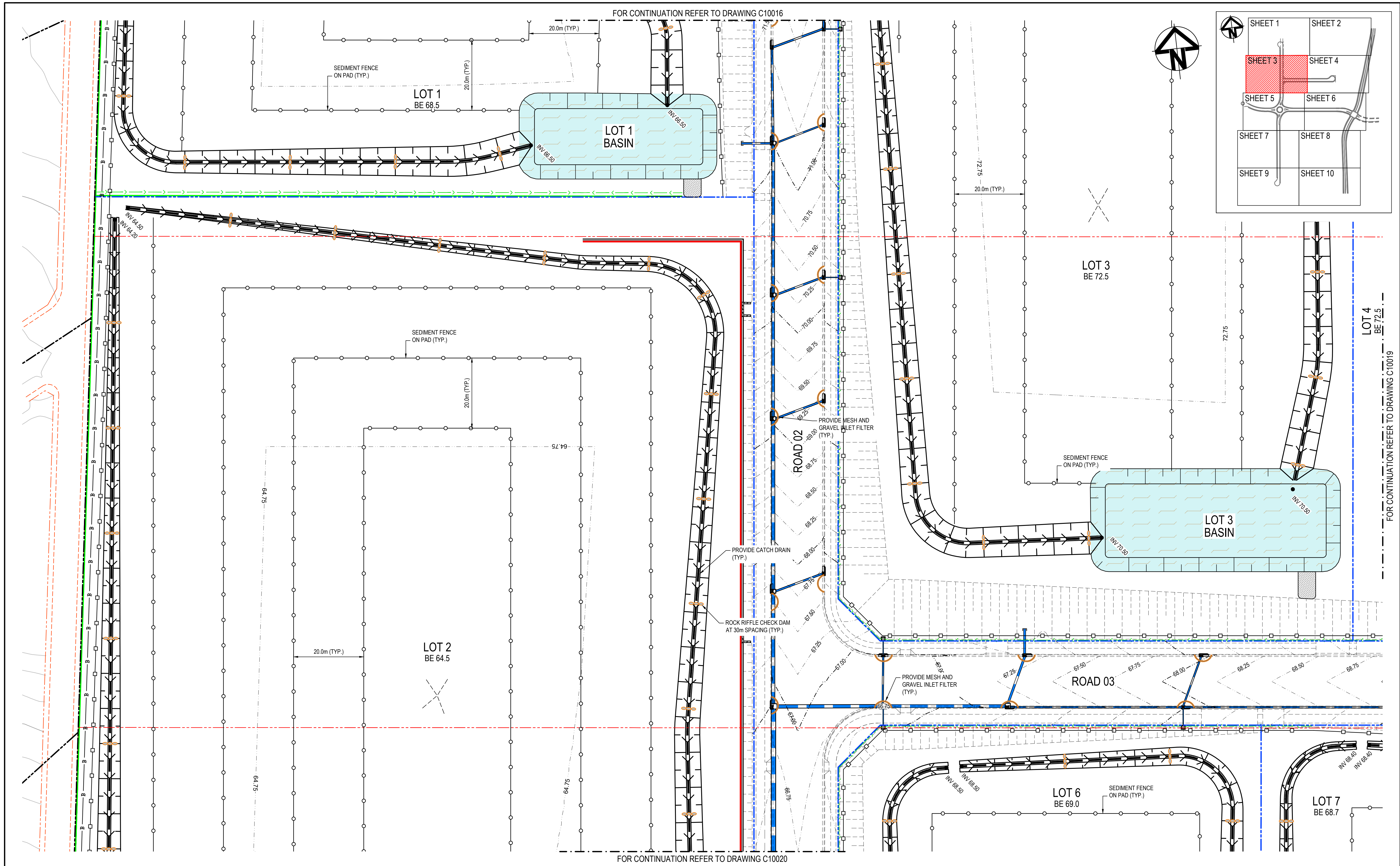


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| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

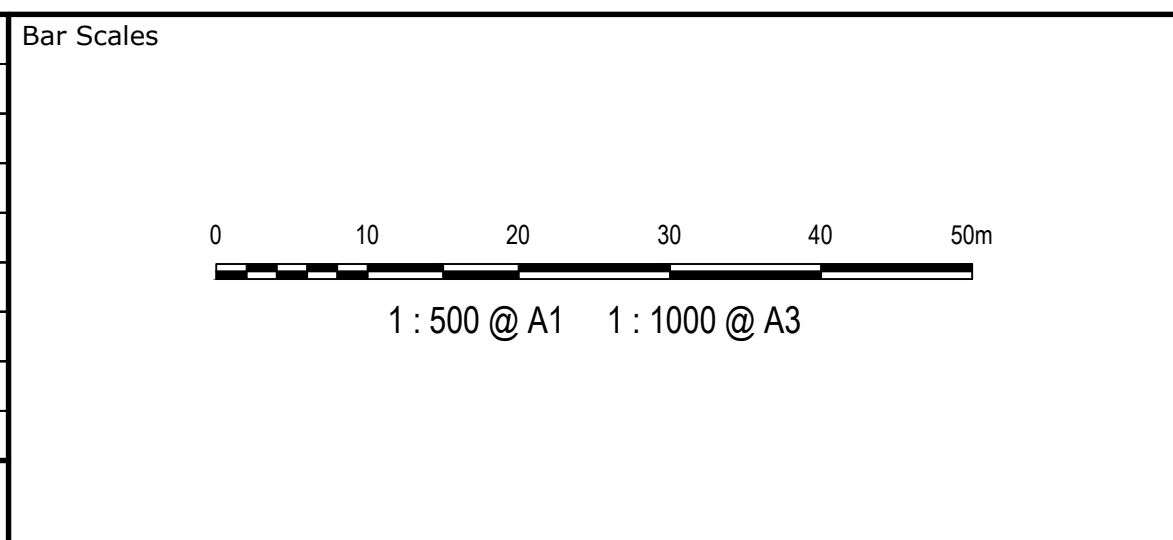
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|---------|--------------------------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK                    |
| Title   | PERMANENT ARRANGEMENT<br>EROSION AND SEDIMENT<br>CONTROL PLAN<br>SHEET 2 |

|                                                                                                                                                          |                  |       |
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| Civil Engineers and Project Managers                                                                                                                     |                  |       |
|                                                                     |                  |       |
| Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |                  |       |
| Status                                                                                                                                                   | FOR CONSTRUCTION | A1    |
| Project - Drawing No.                                                                                                                                    | 20-776-C10017    | Issue |
|                                                                                                                                                          |                  | 01    |





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| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
|              |          | Approved |    |
| Height Datum | AHD      |          |    |

Project

SSD-17552047  
155-251 ALDINGTON ROAD  
KEMPS CREEK

Title

PERMANENT ARRANGEMENT  
EROSION AND SEDIMENT  
CONTROL PLAN  
SHEET 3

Civil Engineers and Project Managers

Level 7, 153 Walker Street  
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ABN 96 130 882 405  
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info@atl.net.au

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| Status                | FOR CONSTRUCTION | A1    |
| Project - Drawing No. | 20-776-C10018    | Issue |
|                       |                  | 01    |





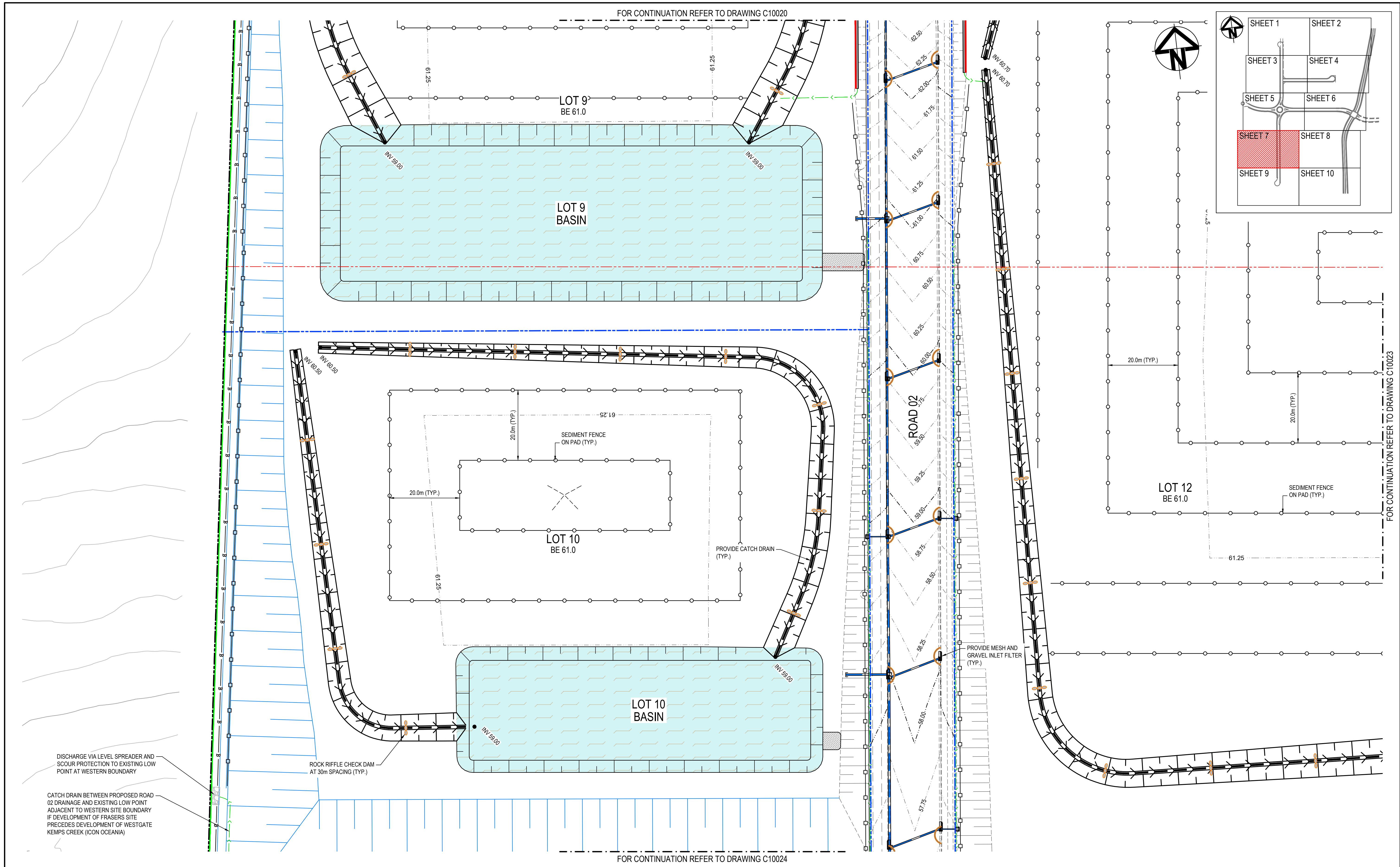






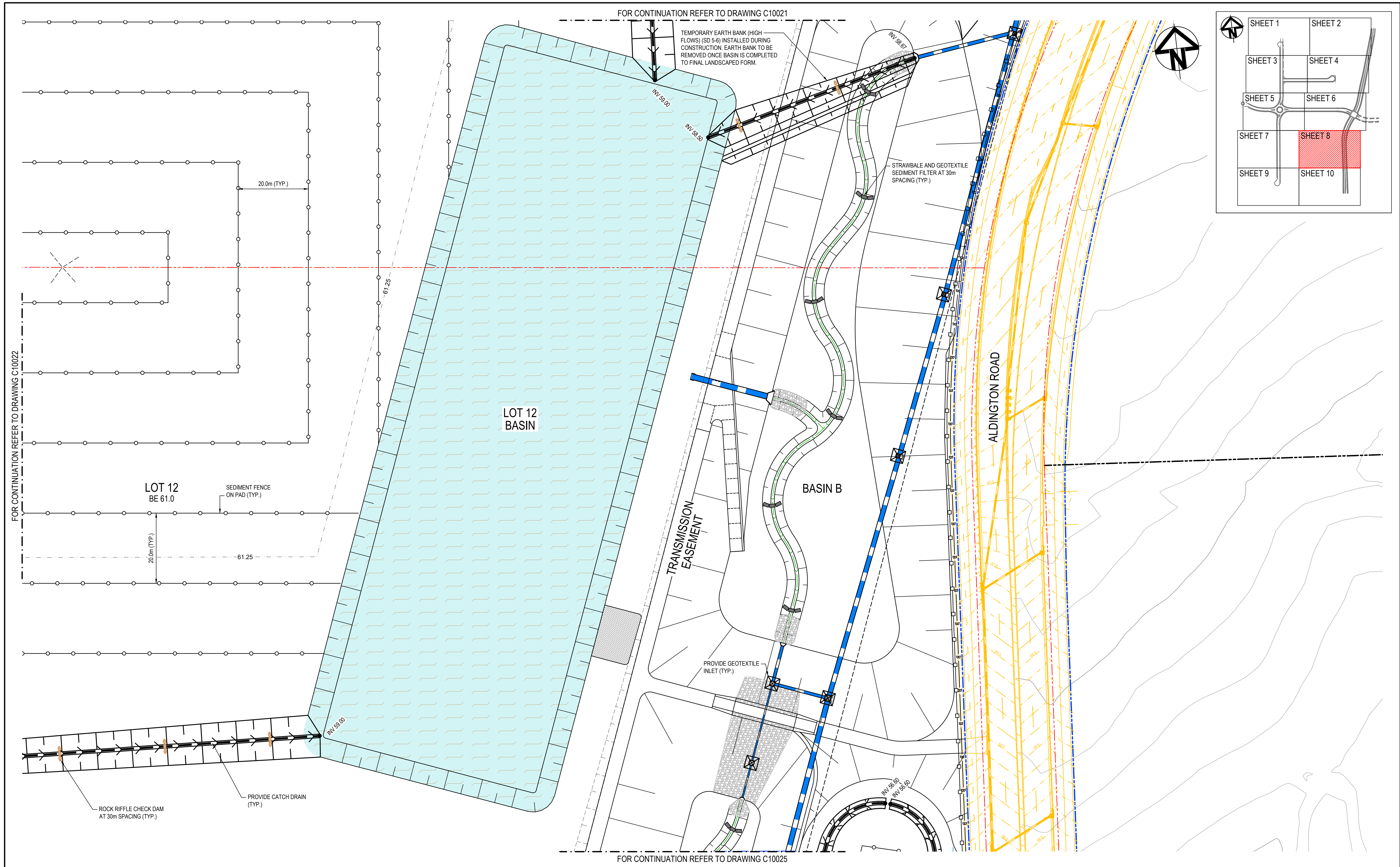






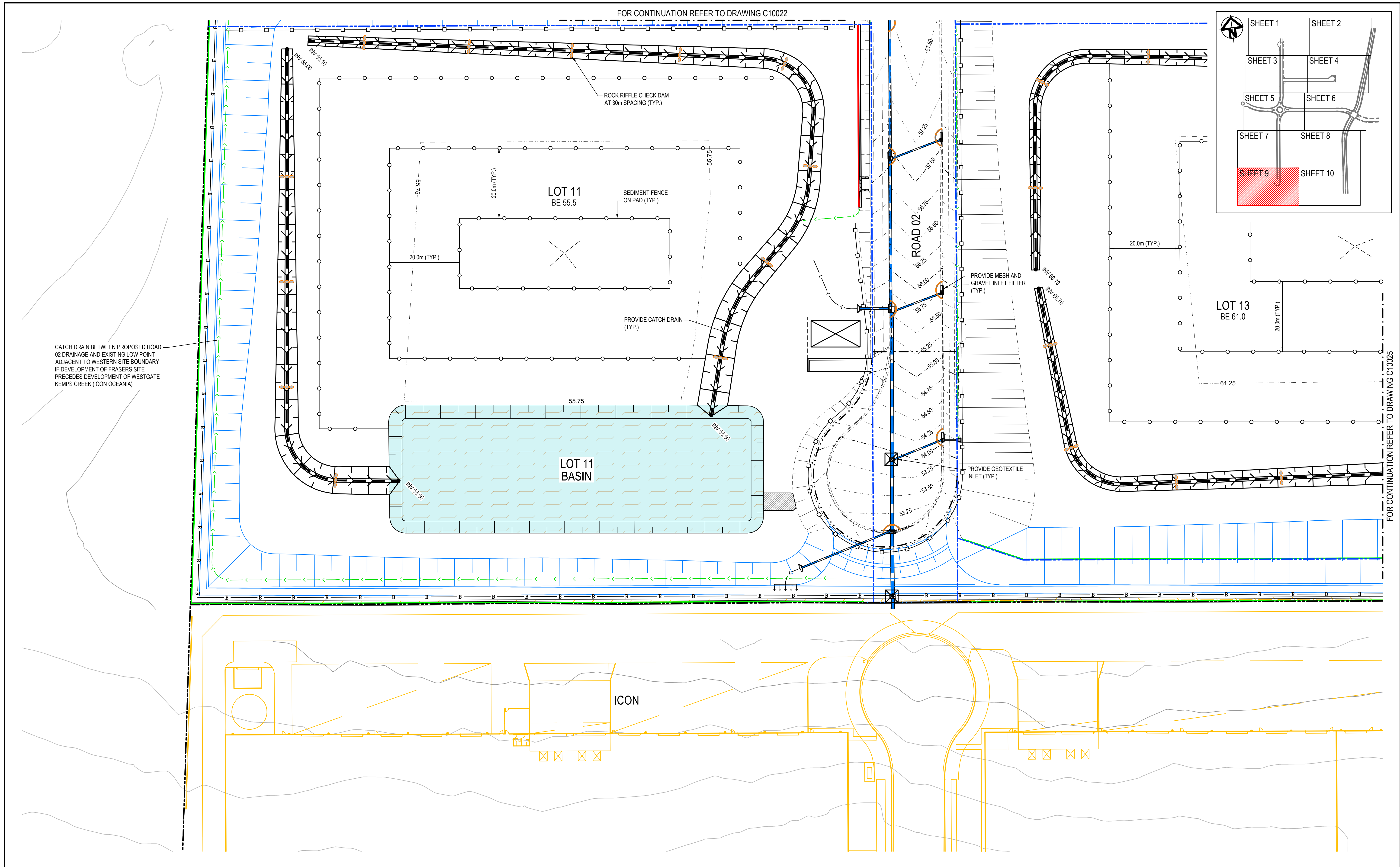
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|--|--|----------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------|--|----------|--|-------|--|------------------------|--|--------------------------------------|--|
|  |  | Bar Scales                 |  | THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L |  | Client |  | Scales   |  | Drawn |  | Project                |  | Civil Engineers and Project Managers |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  | 1 : 500  |  | LM    |  | SSD-17552047           |  | Level 7, 153 Walker Street           |  |
|  |  | 1 : 500 @ A1 1 : 1000 @ A3 |  |                                                                                                                                                                  |  |        |  | GDA 2020 |  | TM    |  | 155-251 ALDINGTON ROAD |  | North Sydney NSW 2060                |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  | AHD      |  | AM    |  | KEMPS CREEK            |  | ABN 96 130 882 405                   |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | PERMANENT ARRANGEMENT  |  | Tel: 02 9439 1777                    |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | EROSION AND SEDIMENT   |  | Fax: 02 9923 1055                    |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | CONTROL PLAN           |  | www.atl.net.au                       |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | SHEET 7                |  | info@atl.net.au                      |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | FOR CONSTRUCTION       |  | Status                               |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | 20-776-C10022          |  | Project - Drawing No.                |  |
|  |  |                            |  |                                                                                                                                                                  |  |        |  |          |  |       |  | 01                     |  | Issue                                |  |
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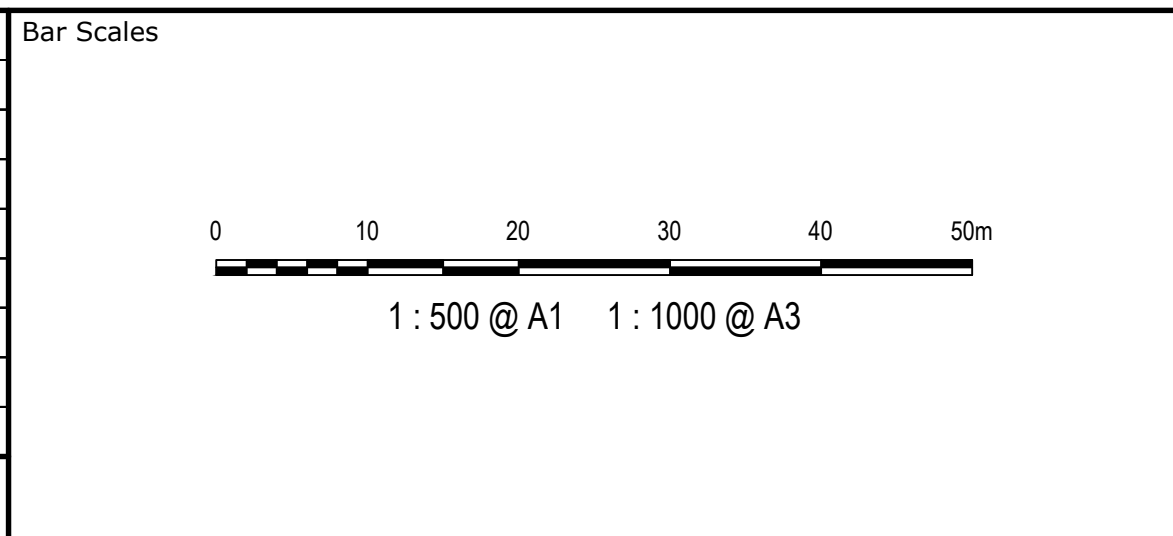


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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

|         |                                                                          |
|---------|--------------------------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK                    |
| Title   | PERMANENT ARRANGEMENT<br>EROSION AND SEDIMENT<br>CONTROL PLAN<br>SHEET 9 |

|                                                                                                                                                          |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Civil Engineers and Project Managers                                                                                                                     |                  |
|                                                                     |                  |
| Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |                  |
| Status                                                                                                                                                   | FOR CONSTRUCTION |
| Project - Drawing No.                                                                                                                                    | 20-776-C10024    |
| Issue                                                                                                                                                    | 01               |

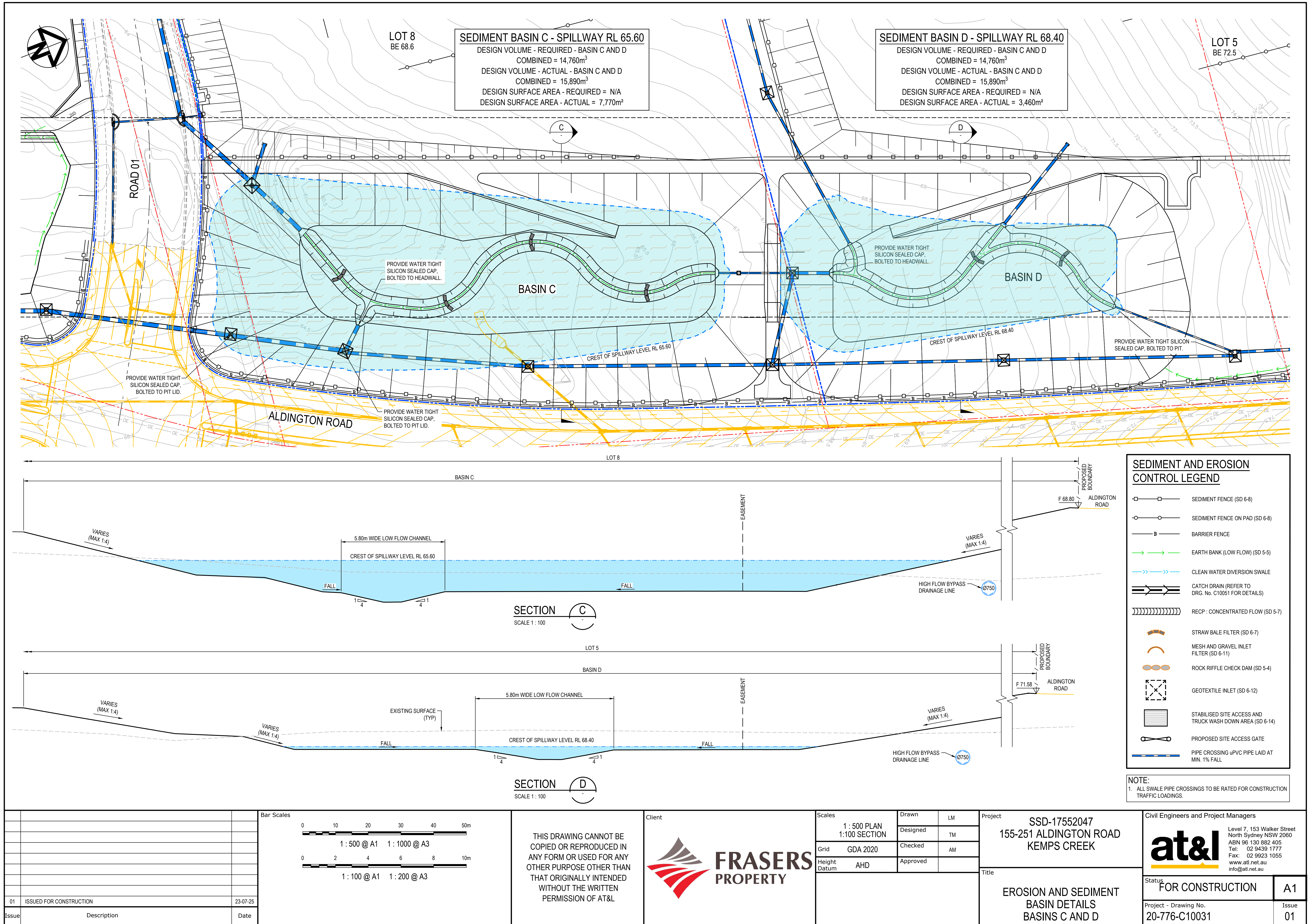




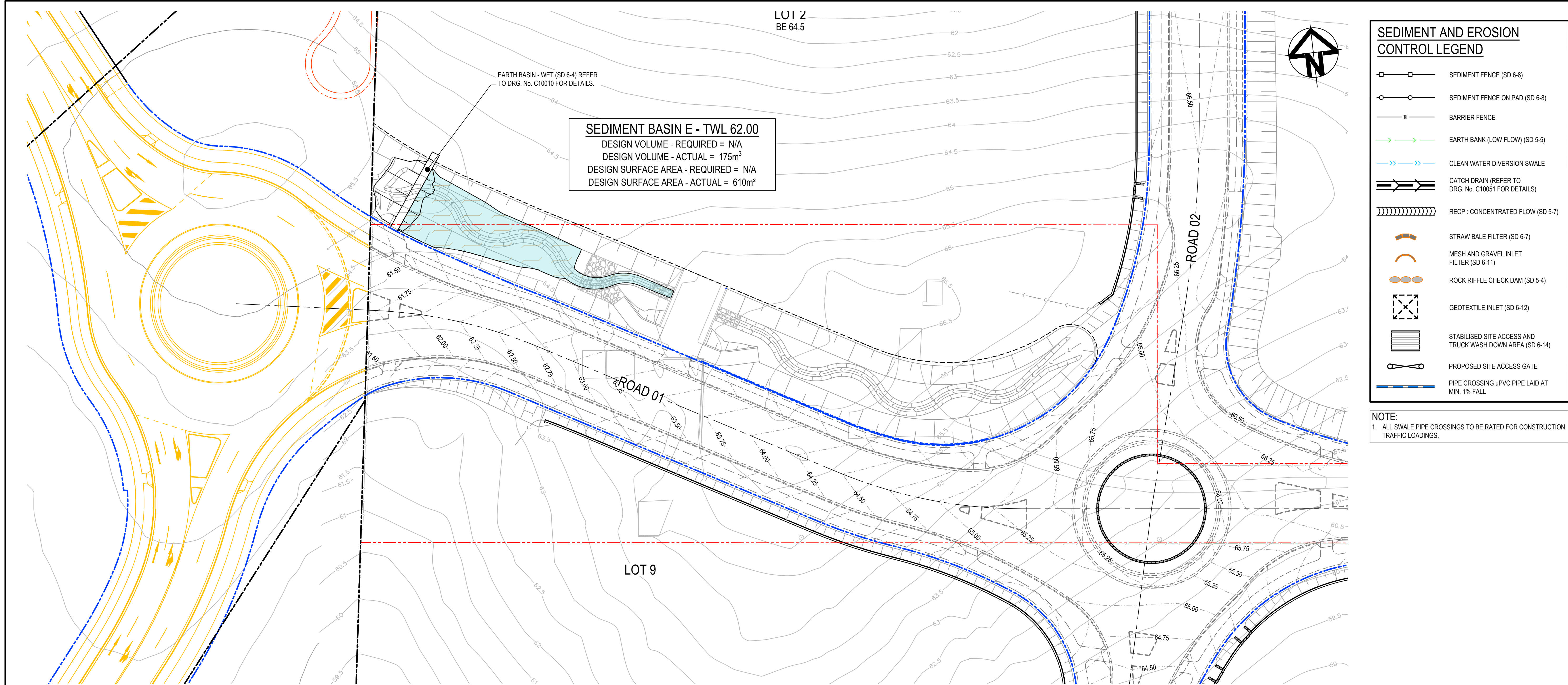










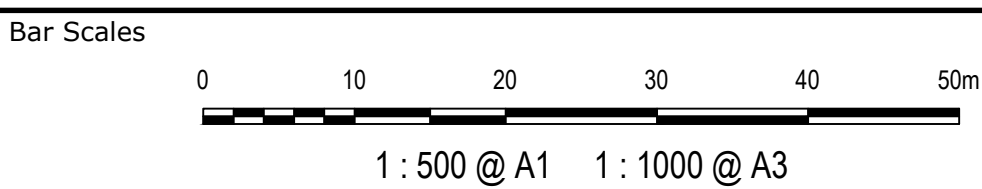


SEDIMENT AND EROSION  
CONTROL LEGEND

- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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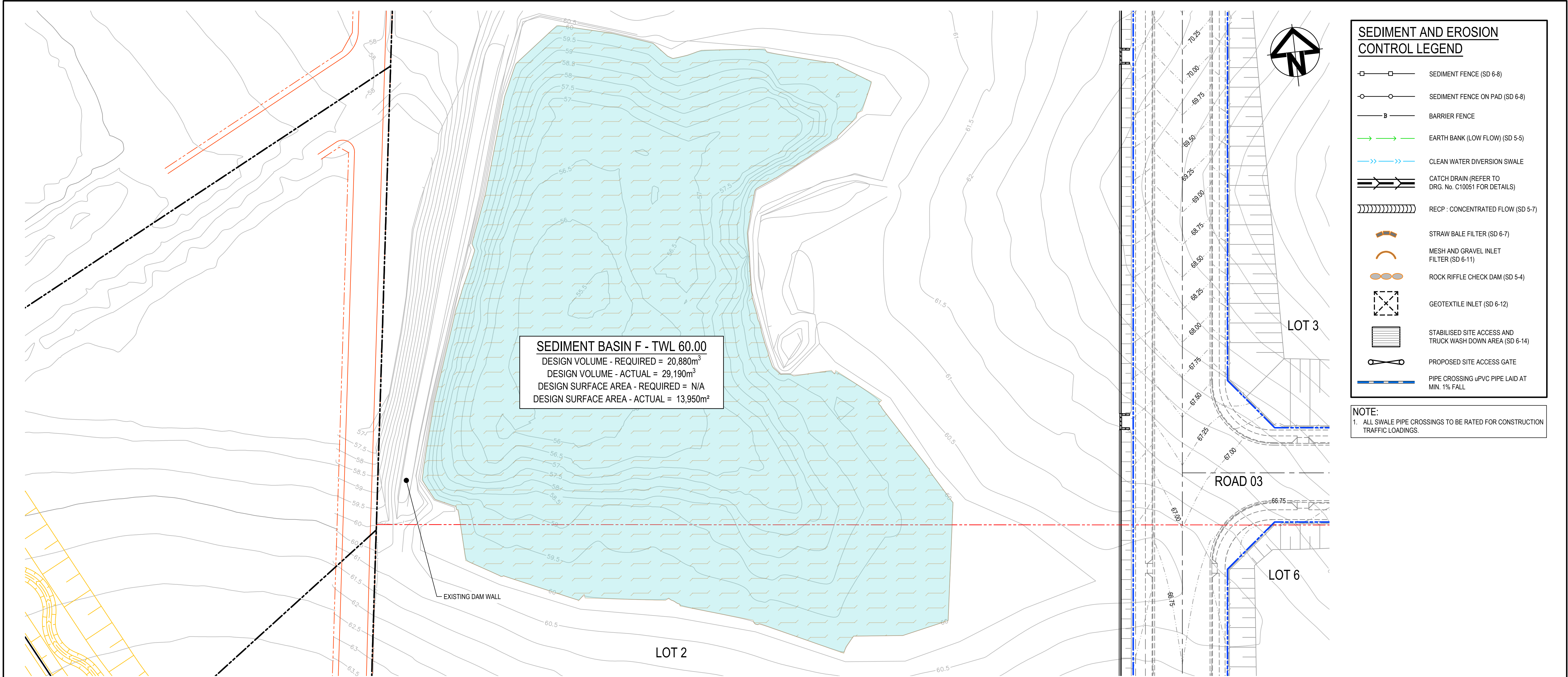


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| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

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|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN E      |

|                                      |                  |       |
|--------------------------------------|------------------|-------|
| Civil Engineers and Project Managers |                  |       |
|                                      |                  |       |
| Status                               | FOR CONSTRUCTION | A1    |
| Project - Drawing No.                | 20-776-C10032    | Issue |
|                                      |                  | 01    |



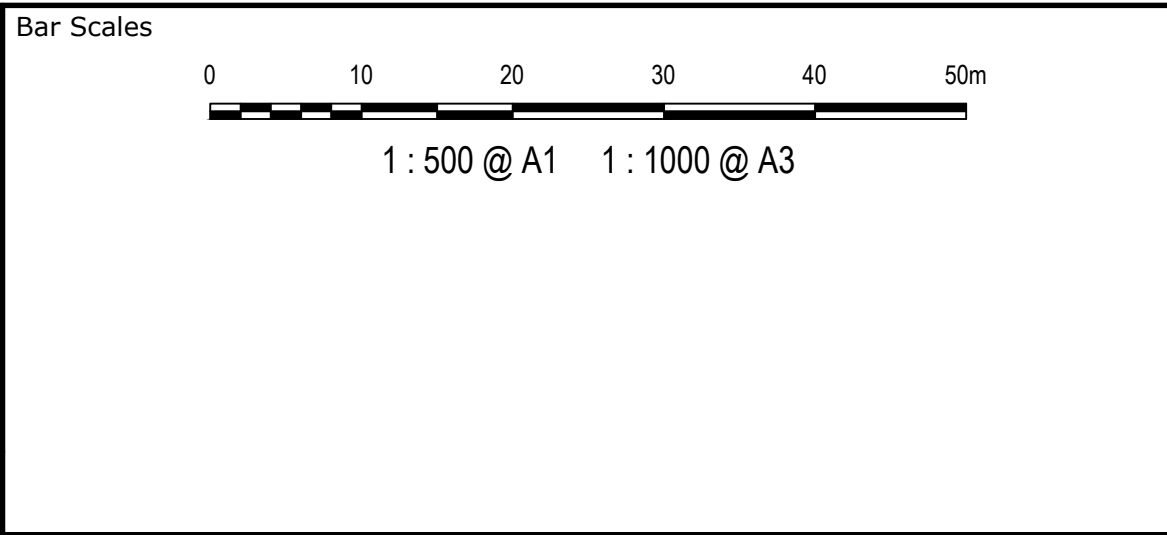


**SEDIMENT BASIN F - TWL 60.00**  
DESIGN VOLUME - REQUIRED = 20,880m<sup>3</sup>  
DESIGN VOLUME - ACTUAL = 29,190m<sup>3</sup>  
DESIGN SURFACE AREA - REQUIRED = N/A  
DESIGN SURFACE AREA - ACTUAL = 13,950m<sup>2</sup>

- SEDIMENT AND EROSION CONTROL LEGEND**
- SEDIMENT FENCE (SD 6-8)
  - SEDIMENT FENCE ON PAD (SD 6-8)
  - BARRIER FENCE
  - EARTH BANK (LOW FLOW) (SD 5-5)
  - CLEAN WATER DIVERSION SWALE
  - CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
  - RECP : CONCENTRATED FLOW (SD 5-7)
  - STRAW BALE FILTER (SD 6-7)
  - MESH AND GRAVEL INLET FILTER (SD 6-11)
  - ROCK RIFFLE CHECK DAM (SD 5-4)
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  - PROPOSED SITE ACCESS GATE
  - PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

**NOTE:**  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

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| Issue | Description             | Date     |



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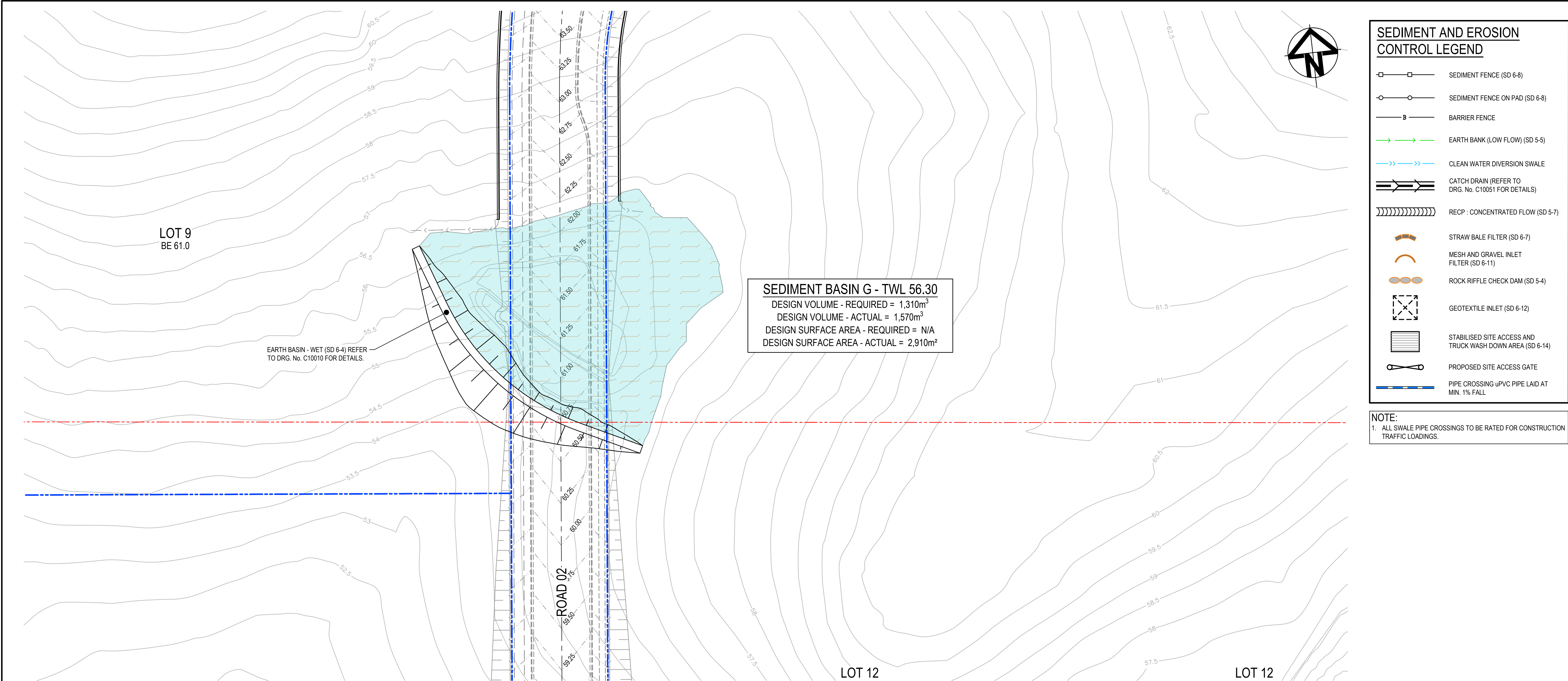


|              |          |          |    |
|--------------|----------|----------|----|
| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

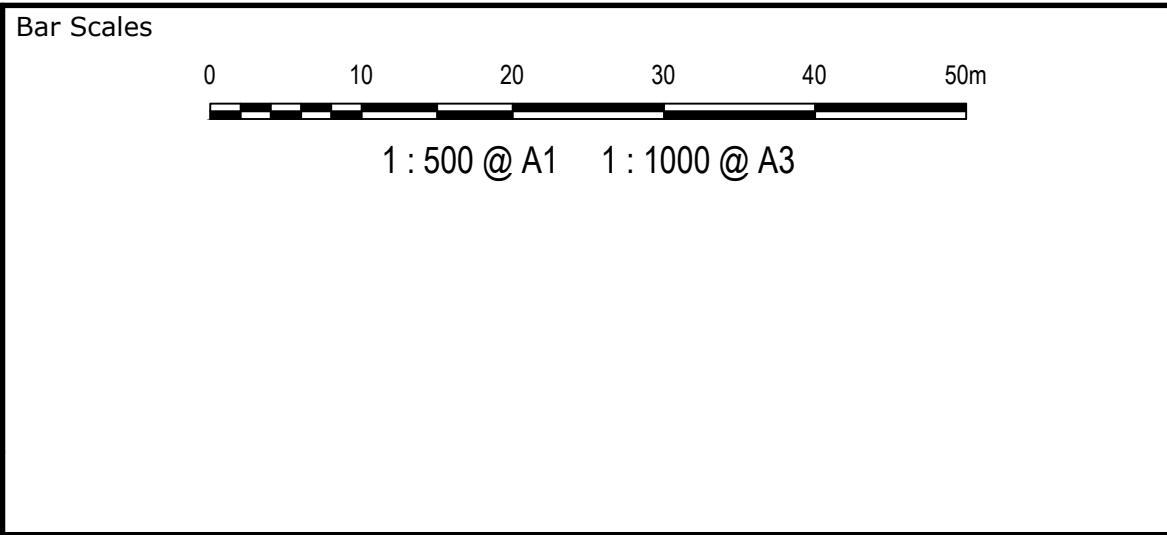
|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN F      |

|                                      |                  |       |
|--------------------------------------|------------------|-------|
| Civil Engineers and Project Managers |                  |       |
|                                      |                  |       |
| Status                               | FOR CONSTRUCTION | A1    |
| Project - Drawing No.                | 20-776-C10033    | Issue |
|                                      |                  | 01    |





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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L

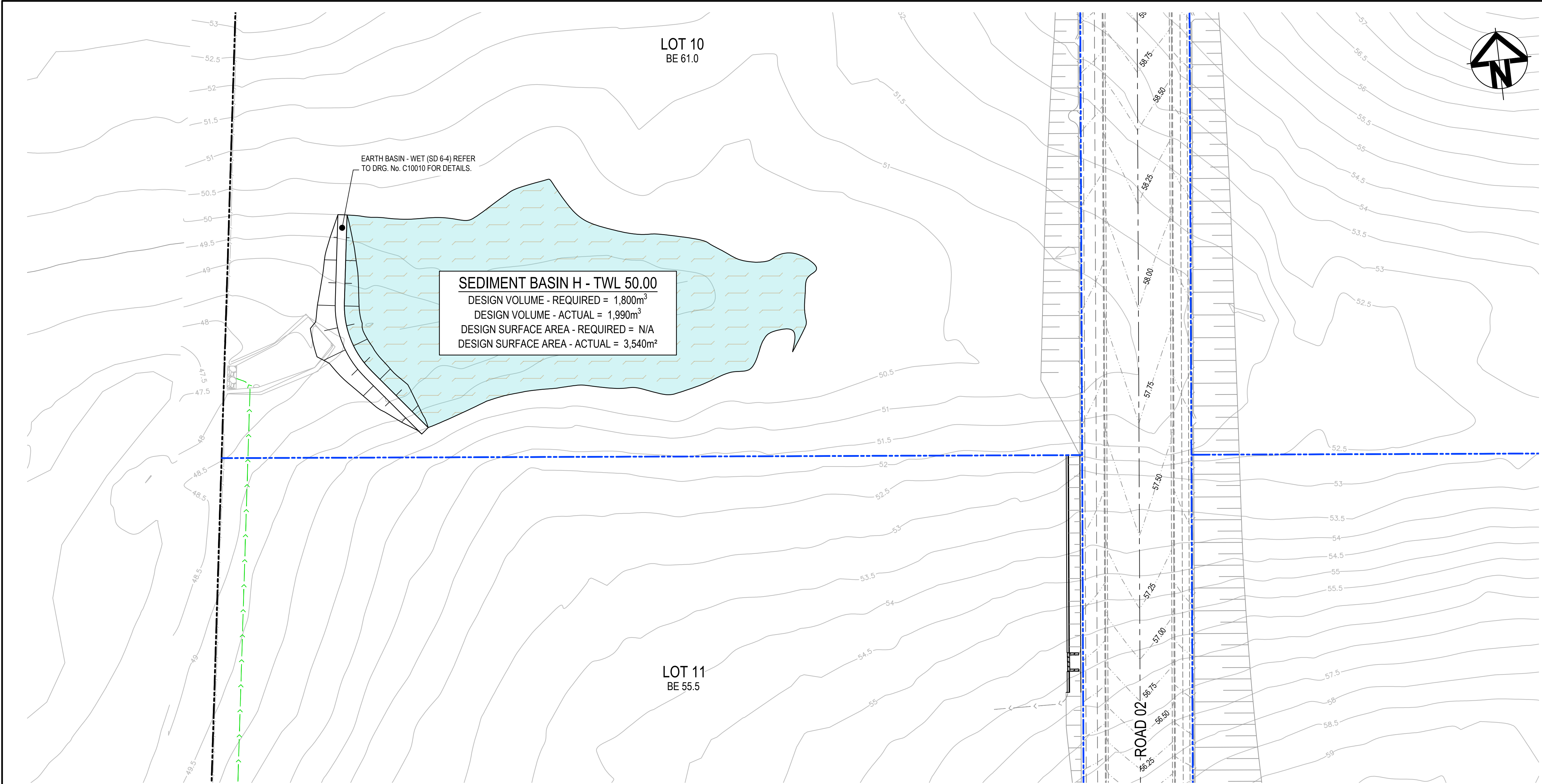


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| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN G      |

|                                                                                                                                                          |                  |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|
| Civil Engineers and Project Managers                                                                                                                     |                  |             |
|                                                                                                                                                          |                  |             |
| Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |                  |             |
| Status                                                                                                                                                   | FOR CONSTRUCTION | A1          |
| Project - Drawing No.                                                                                                                                    | 20-776-C10034    | Issue<br>01 |



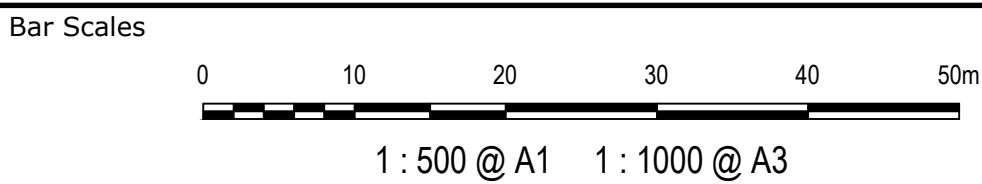


SEDIMENT AND EROSION  
CONTROL LEGEND

- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

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|       |                         |          |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



THIS DRAWING CANNOT BE  
COPIED OR REPRODUCED IN  
ANY FORM OR USED FOR ANY  
OTHER PURPOSE OTHER THAN  
THAT ORIGINALLY INTENDED  
WITHOUT THE WRITTEN  
PERMISSION OF AT&L

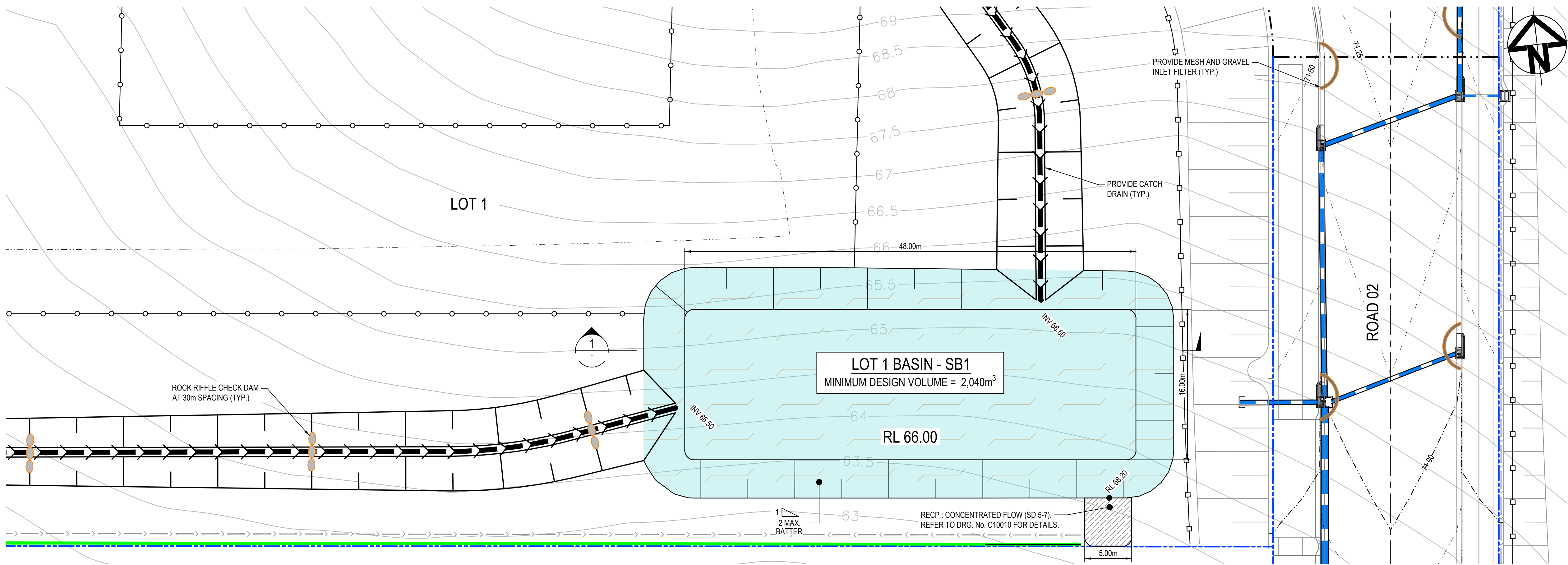


|              |          |          |    |
|--------------|----------|----------|----|
| Scales       | 1 : 500  | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN H      |

|                                      |                  |          |
|--------------------------------------|------------------|----------|
| Civil Engineers and Project Managers |                  |          |
|                                      |                  |          |
| Status                               | FOR CONSTRUCTION | A1       |
| Project - Drawing No.                | 20-776-C10035    | Issue 01 |

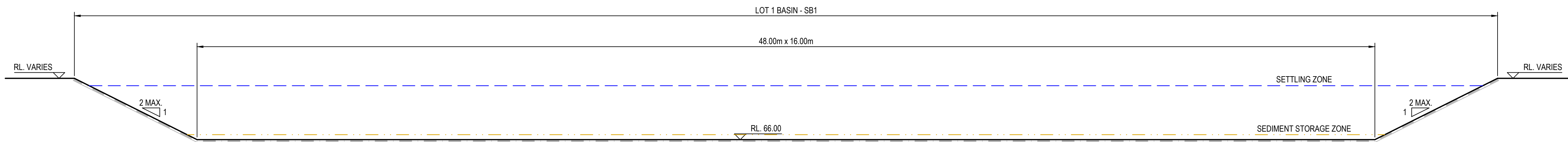




### SEDIMENT AND EROSION CONTROL LEGEND

- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

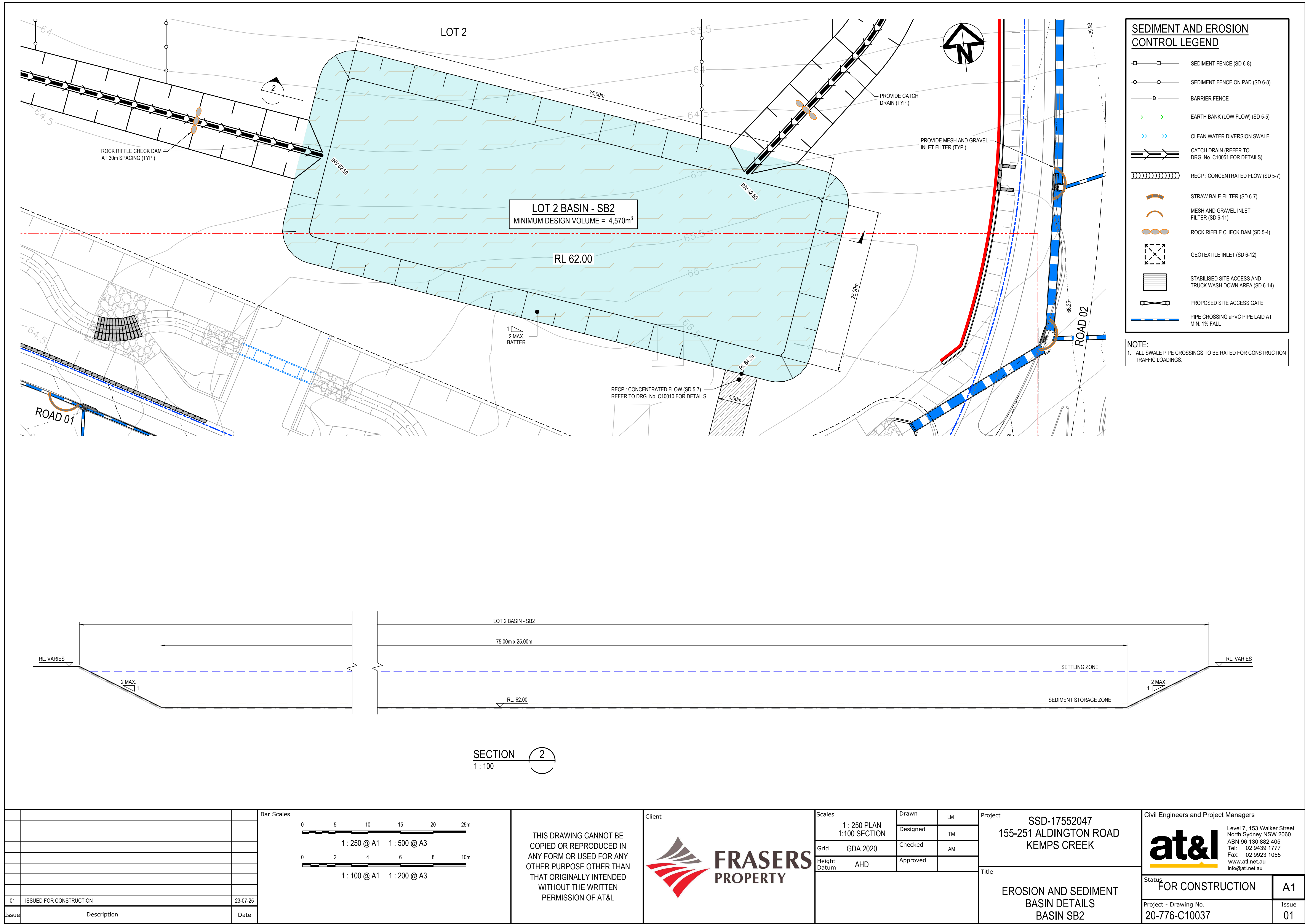
NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



SECTION 1  
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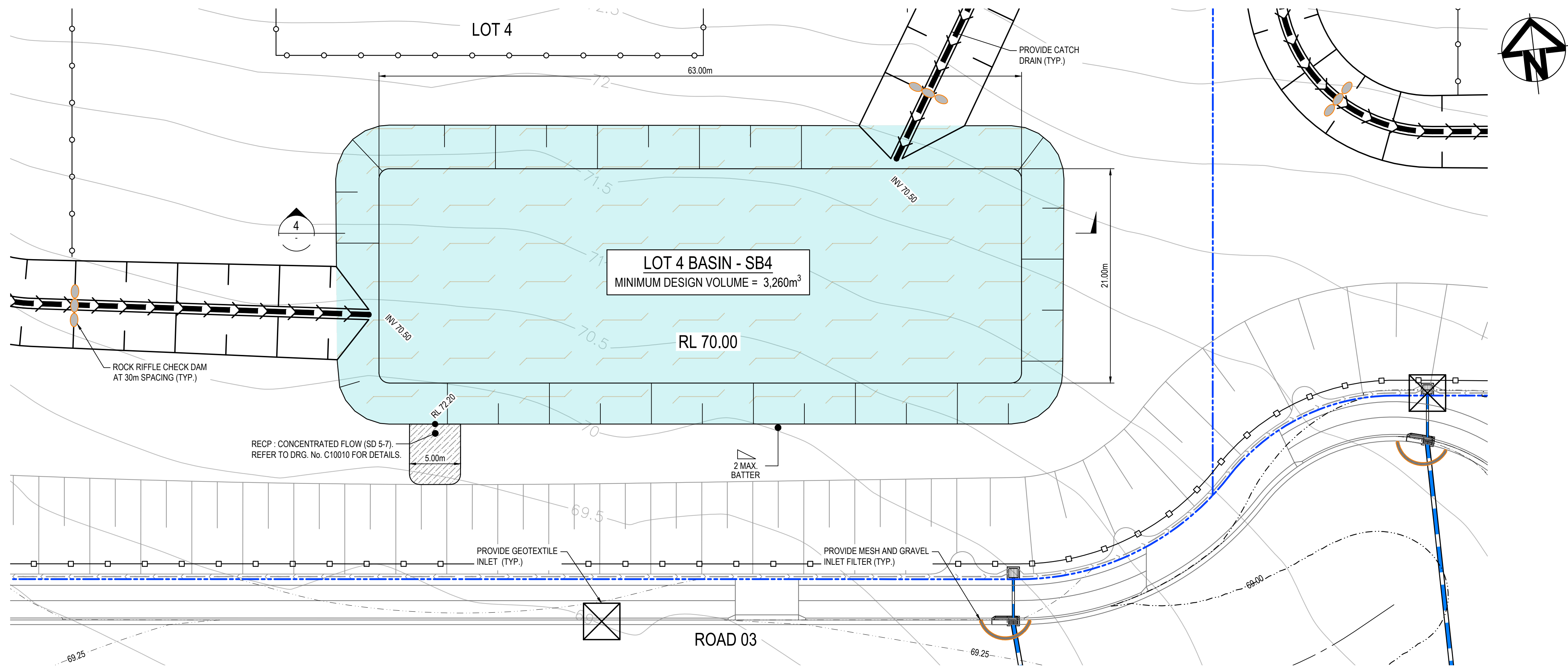








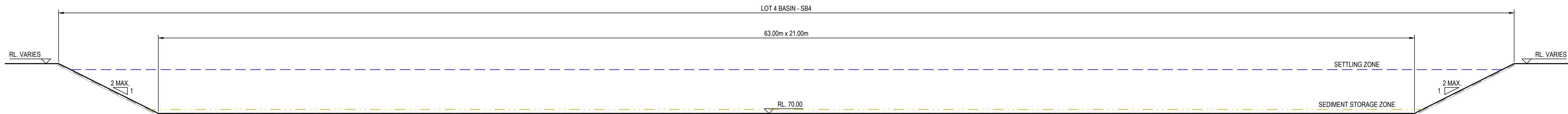




### SEDIMENT AND EROSION CONTROL LEGEND

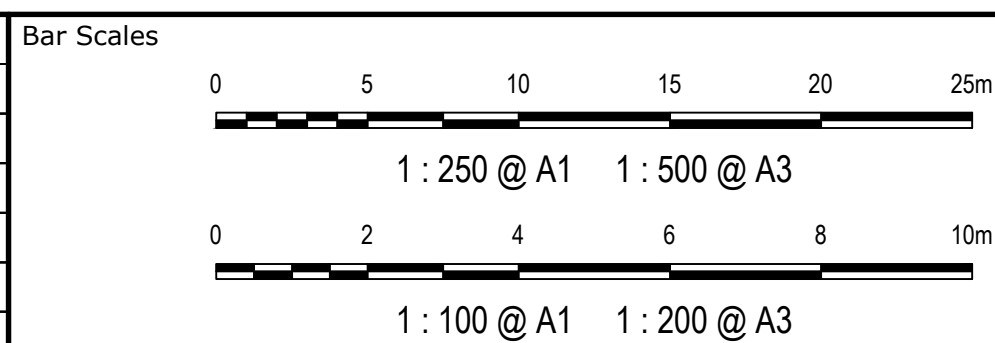
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECIP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



SECTION 4  
1 : 100

|       |                         |          |
|-------|-------------------------|----------|
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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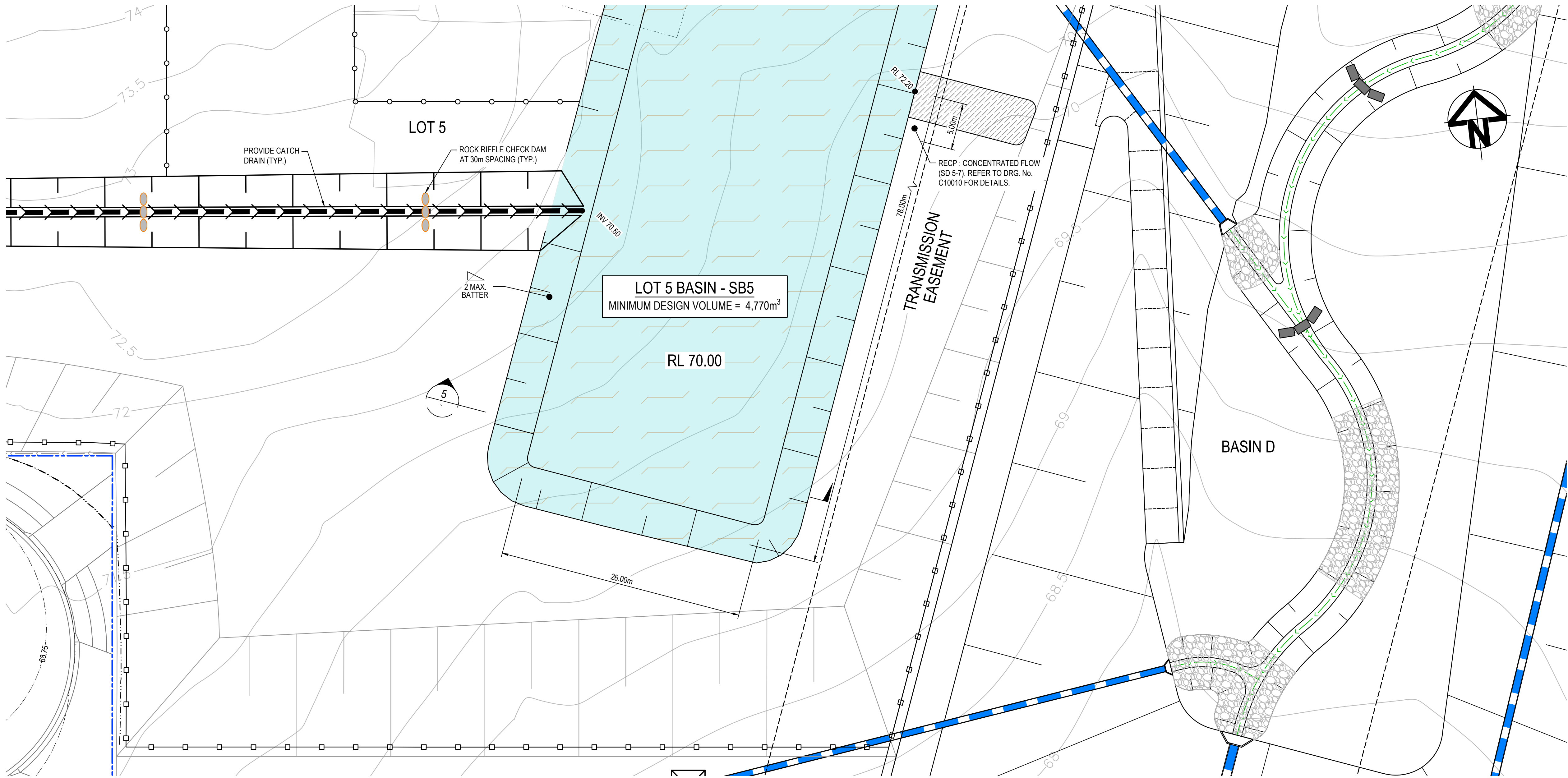


|              |                               |          |    |
|--------------|-------------------------------|----------|----|
| Scales       | 1 : 250 PLAN<br>1:100 SECTION | Drawn    | LM |
| Grid         | GDA 2020                      | Designed | TM |
| Height Datum | AHD                           | Checked  | AM |
|              |                               | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN SB4    |

|                                                                                       |                                                                                                                                                                                                                                   |       |    |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|
| Civil Engineers and Project Managers                                                  |                                                                                                                                                                                                                                   |       |    |
|  | Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br><a href="http://www.atl.net.au">www.atl.net.au</a><br><a href="mailto:info@atl.net.au">info@atl.net.au</a> |       |    |
|                                                                                       |                                                                                                                                                                                                                                   |       |    |
|                                                                                       |                                                                                                                                                                                                                                   |       |    |
|                                                                                       |                                                                                                                                                                                                                                   |       |    |
|                                                                                       |                                                                                                                                                                                                                                   |       |    |
| Status                                                                                | FOR CONSTRUCTION                                                                                                                                                                                                                  | A1    |    |
| Project - Drawing No.                                                                 | 20-776-C10039                                                                                                                                                                                                                     | Issue | 01 |

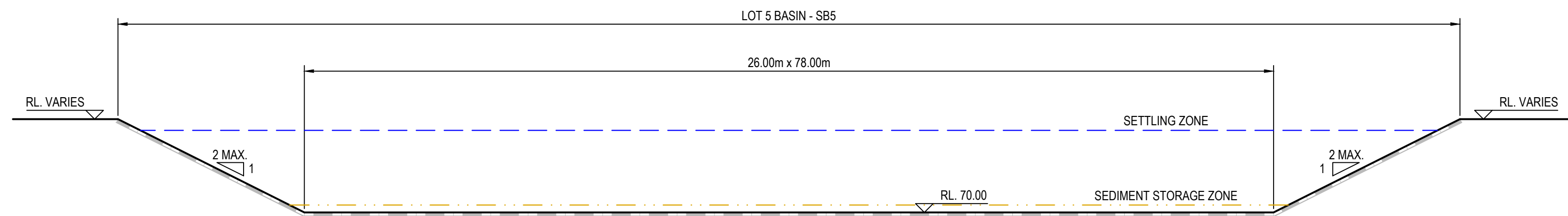




### SEDIMENT AND EROSION CONTROL LEGEND

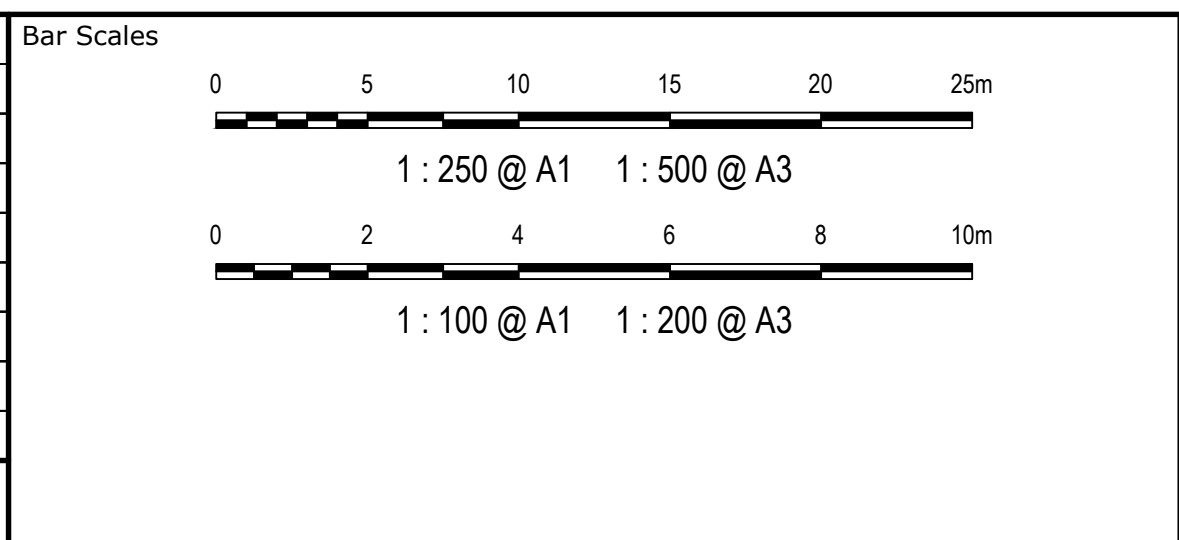
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECIP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



SECTION 5  
1 : 100

|       |                         |          |
|-------|-------------------------|----------|
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|       |                         |          |
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|       |                         |          |
|       |                         |          |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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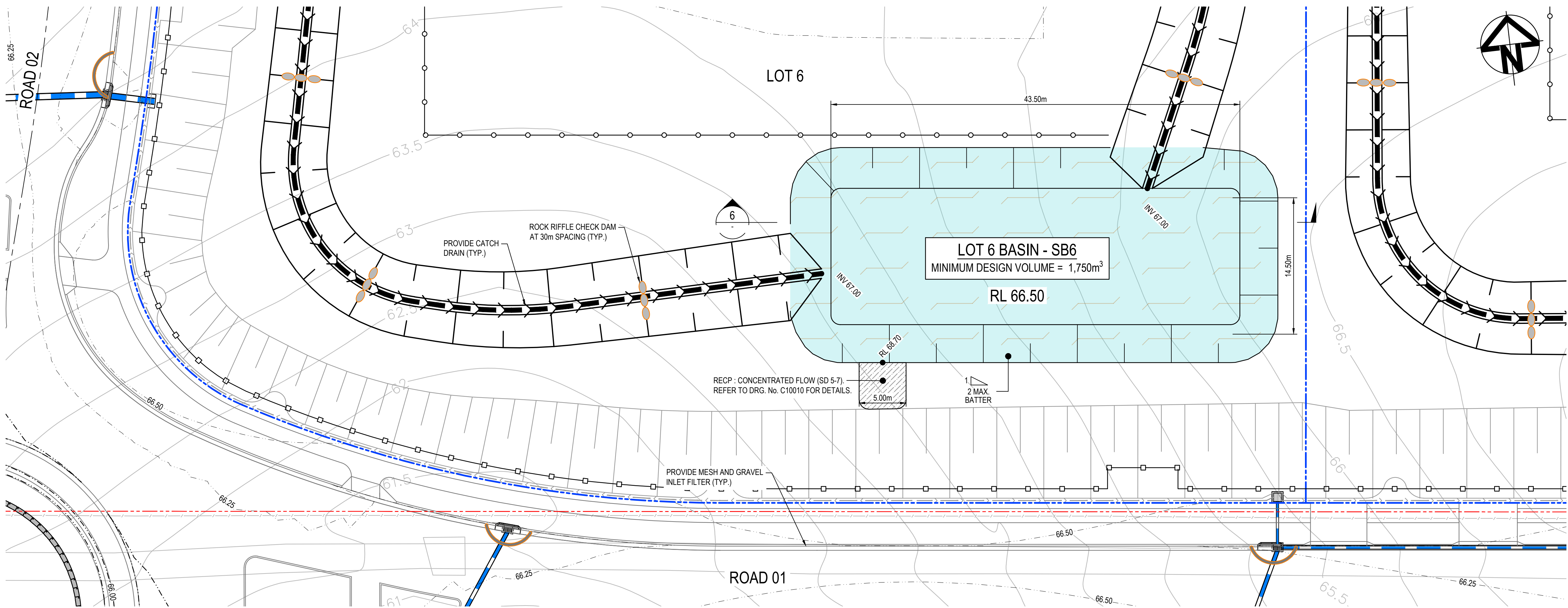


|              |                               |          |    |
|--------------|-------------------------------|----------|----|
| Scales       | 1 : 250 PLAN<br>1:100 SECTION | Drawn    | LM |
| Grid         | GDA 2020                      | Designed | TM |
| Height Datum | AHD                           | Checked  | AM |
|              |                               | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN SB5    |

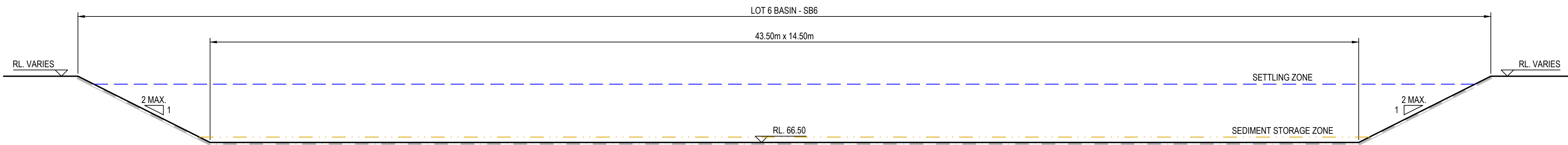
|                                                                                       |                                                                                                                                                          |       |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Civil Engineers and Project Managers                                                  |                                                                                                                                                          |       |
|  | Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |       |
|                                                                                       |                                                                                                                                                          |       |
| Status                                                                                | FOR CONSTRUCTION                                                                                                                                         | A1    |
| Project - Drawing No.                                                                 | 20-776-C10040                                                                                                                                            | Issue |
|                                                                                       |                                                                                                                                                          | 01    |





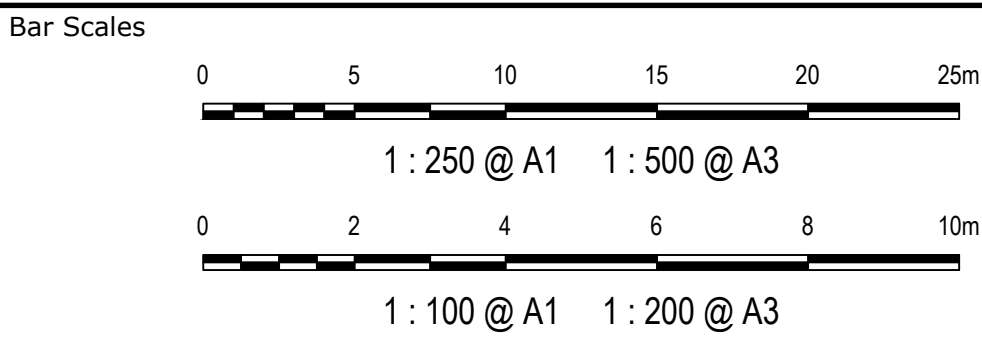
- SEDIMENT AND EROSION CONTROL LEGEND**
- SEDIMENT FENCE (SD 6-8)
  - SEDIMENT FENCE ON PAD (SD 6-8)
  - BARRIER FENCE
  - EARTH BANK (LOW FLOW) (SD 5-5)
  - CLEAN WATER DIVERSION SWALE
  - CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
  - RECP : CONCENTRATED FLOW (SD 5-7)
  - STRAW BALE FILTER (SD 6-7)
  - MESH AND GRAVEL INLET FILTER (SD 6-11)
  - ROCK RIFFLE CHECK DAM (SD 5-4)
  - GEOTEXTILE INLET (SD 6-12)
  - STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
  - PROPOSED SITE ACCESS GATE
  - PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

**NOTE:**  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



**SECTION 6**  
1:100

|       |                         |          |
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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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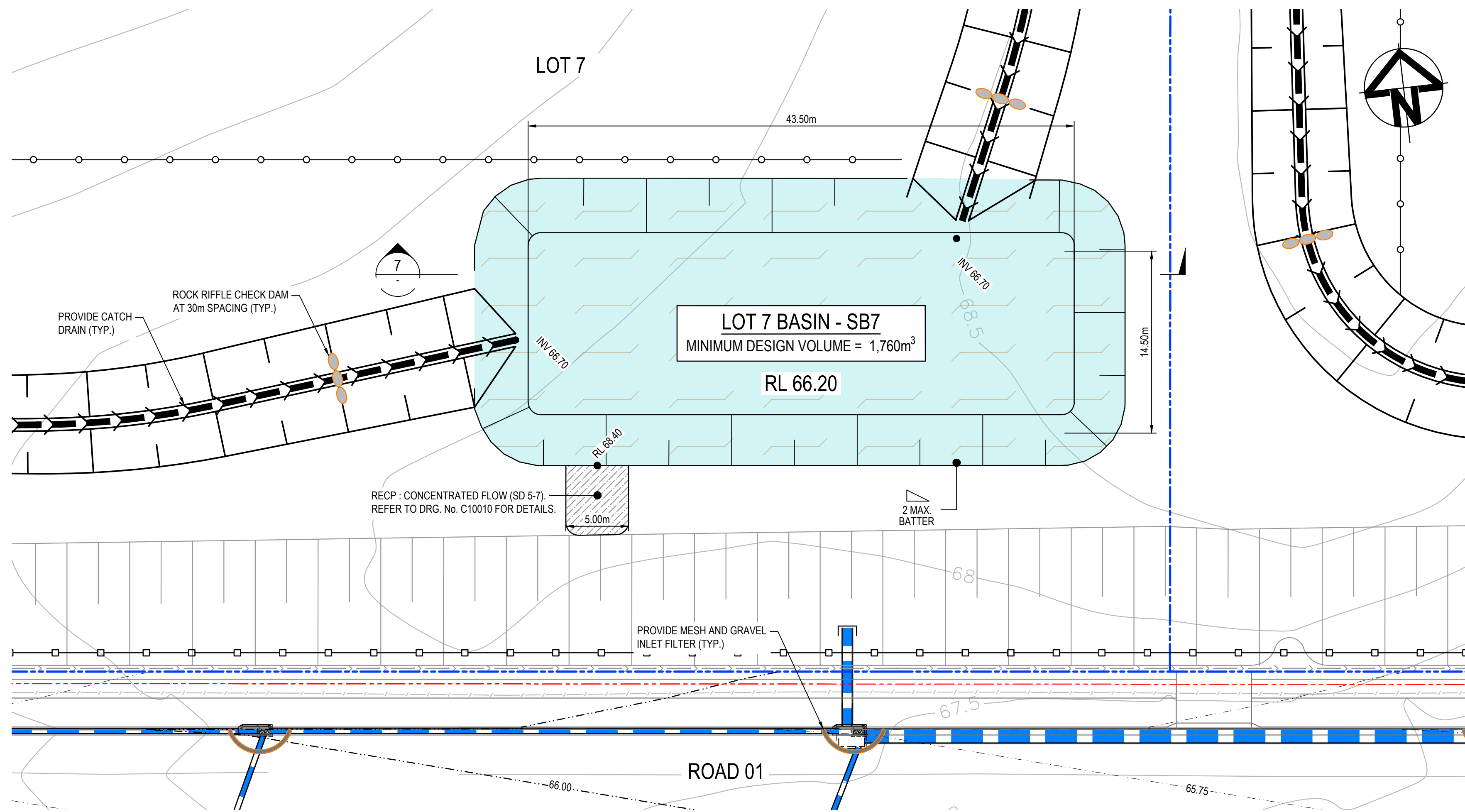


|              |                               |          |    |
|--------------|-------------------------------|----------|----|
| Scales       | 1 : 250 PLAN<br>1:100 SECTION | Drawn    | LM |
|              |                               | Designed | TM |
| Grid         | GDA 2020                      | Checked  | AM |
| Height Datum | AHD                           | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN SB6    |

|                                                                                                                                                                             |                  |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|
| Civil Engineers and Project Managers                                                                                                                                        |                  |       |
| <b>at&amp;l</b><br>Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |                  |       |
| Status                                                                                                                                                                      | FOR CONSTRUCTION | A1    |
| Project - Drawing No.                                                                                                                                                       | 20-776-C10041    | Issue |
|                                                                                                                                                                             |                  | 01    |

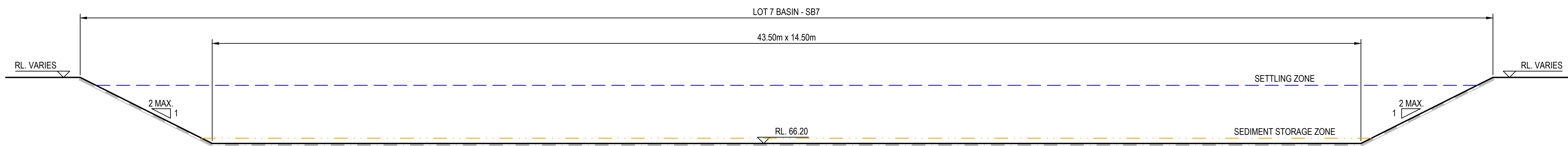




### SEDIMENT AND EROSION CONTROL LEGEND

- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



SECTION 7  
1:100

|       |                         |          |
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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |

|                  |                       |
|------------------|-----------------------|
| Bar Scales       |                       |
| 0 5 10 15 20 25m | 1:250 @ A1 1:500 @ A3 |
| 0 2 4 6 8 10m    | 1:100 @ A1 1:200 @ A3 |

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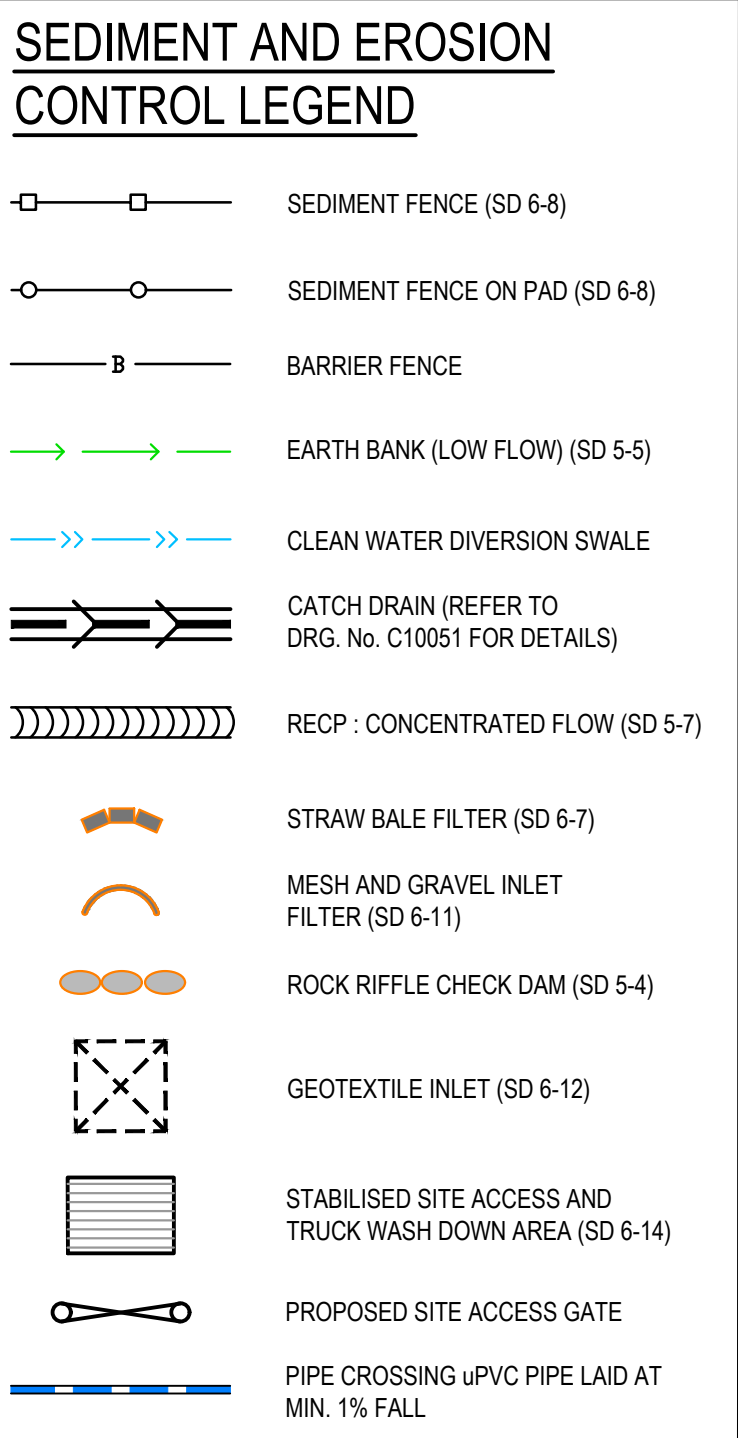


|              |            |               |
|--------------|------------|---------------|
| Scales       | 1:250 PLAN | 1:100 SECTION |
|              | Grid       | GDA 2020      |
| Height Datum | AHD        |               |

|         |                                    |
|---------|------------------------------------|
| Project | SSD-17552047                       |
|         | 155-251 ALDINGTON ROAD             |
| Title   | KEMPS CREEK                        |
|         | EROSION AND SEDIMENT BASIN DETAILS |
| Status  | FOR CONSTRUCTION                   |
|         | 20-776-C10042                      |

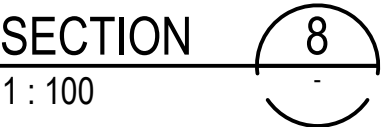
|                                                                                                                                                          |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Civil Engineers and Project Managers                                                                                                                     |    |
| at&l                                                                                                                                                     |    |
| Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |    |
| Issue                                                                                                                                                    | 01 |



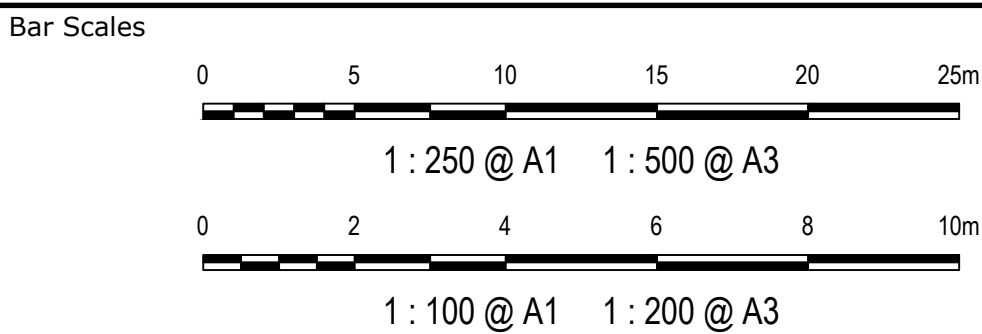


NOTE:

1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
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| Issue | Description             | Date     |



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|-----------------------------------------|----------|----|
| Scales<br>1 : 250 PLAN<br>1:100 SECTION | Drawn    | LM |
|                                         | Designed | TM |
| Grid GDA 2020                           | Checked  | AM |
| Height Datum AHD                        | Approved |    |

Project **SSD-17552047**  
**155-251 ALDINGTON ROAD**  
**KEMPS CREEK**

Title

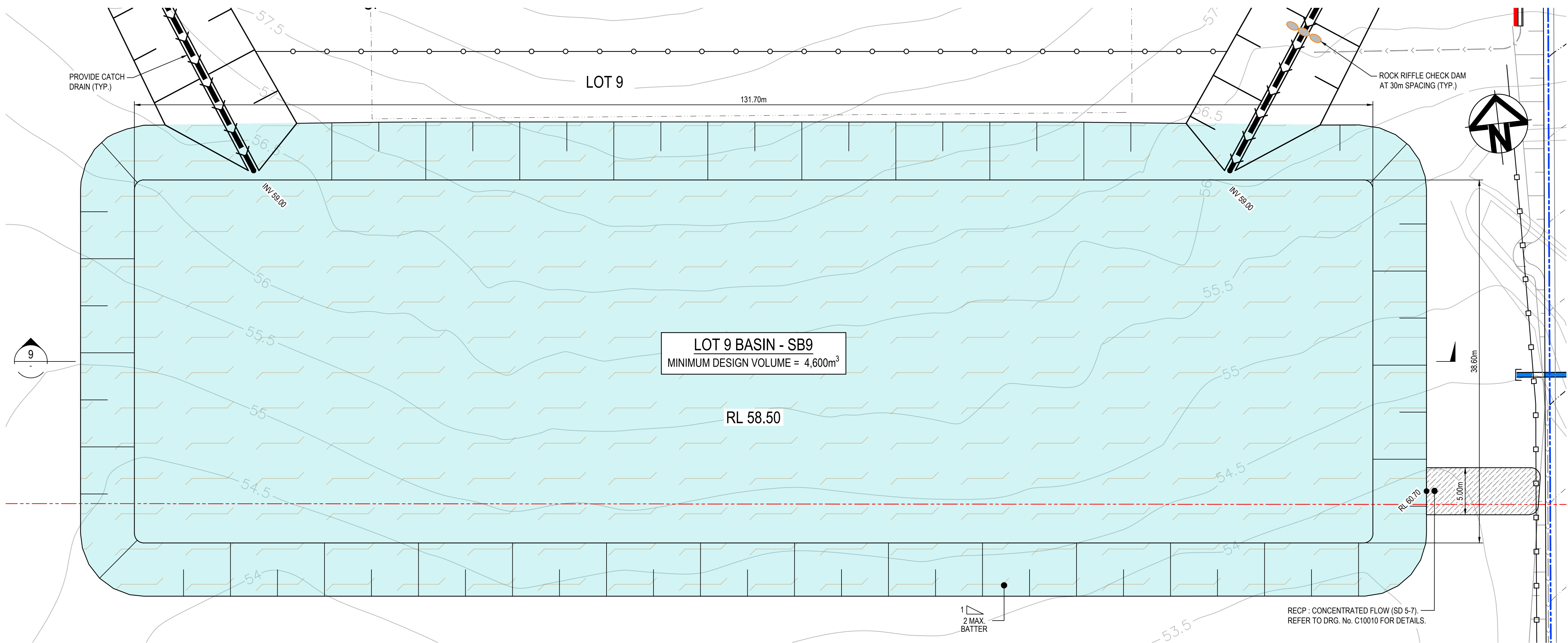
EROSION AND SEDIMENT  
BASIN DETAILS  
BASIN SB8

Civil Engineers and Project Managers



|                       |                  |       |
|-----------------------|------------------|-------|
| Status                | FOR CONSTRUCTION | A1    |
| Project - Drawing No. | 20-776-C10043    | Issue |
|                       |                  | 01    |



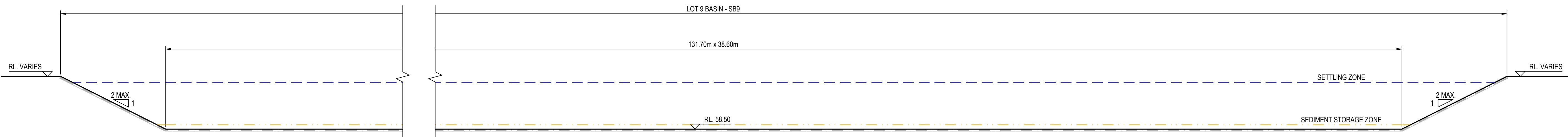


### SEDIMENT AND EROSION CONTROL LEGEND

- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECIP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

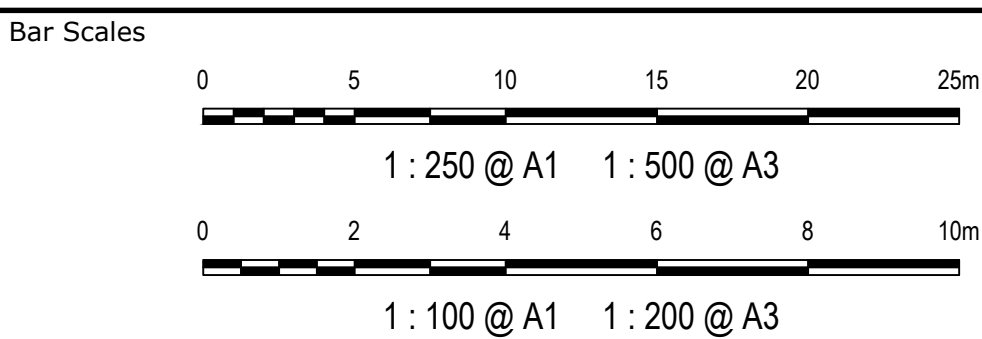
NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

NOTE:  
LOT 9 BASIN WILL ALSO FUNCTION AS AN INTERIM RETENTION POND FOR HARVESTING AND IRRIGATION OF UNDEVELOPED LAND SOUTH OF ROAD 01. THE BASIN HAS BEEN SIZED TO SATISFY BOTH CONSTRUCTION PHASE AND INTERIM OPERATIONAL PHASE WATER QUALITY AND FLOW VOLUME CONTROLS.



SECTION 9  
1 : 100

|       |                         |          |
|-------|-------------------------|----------|
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| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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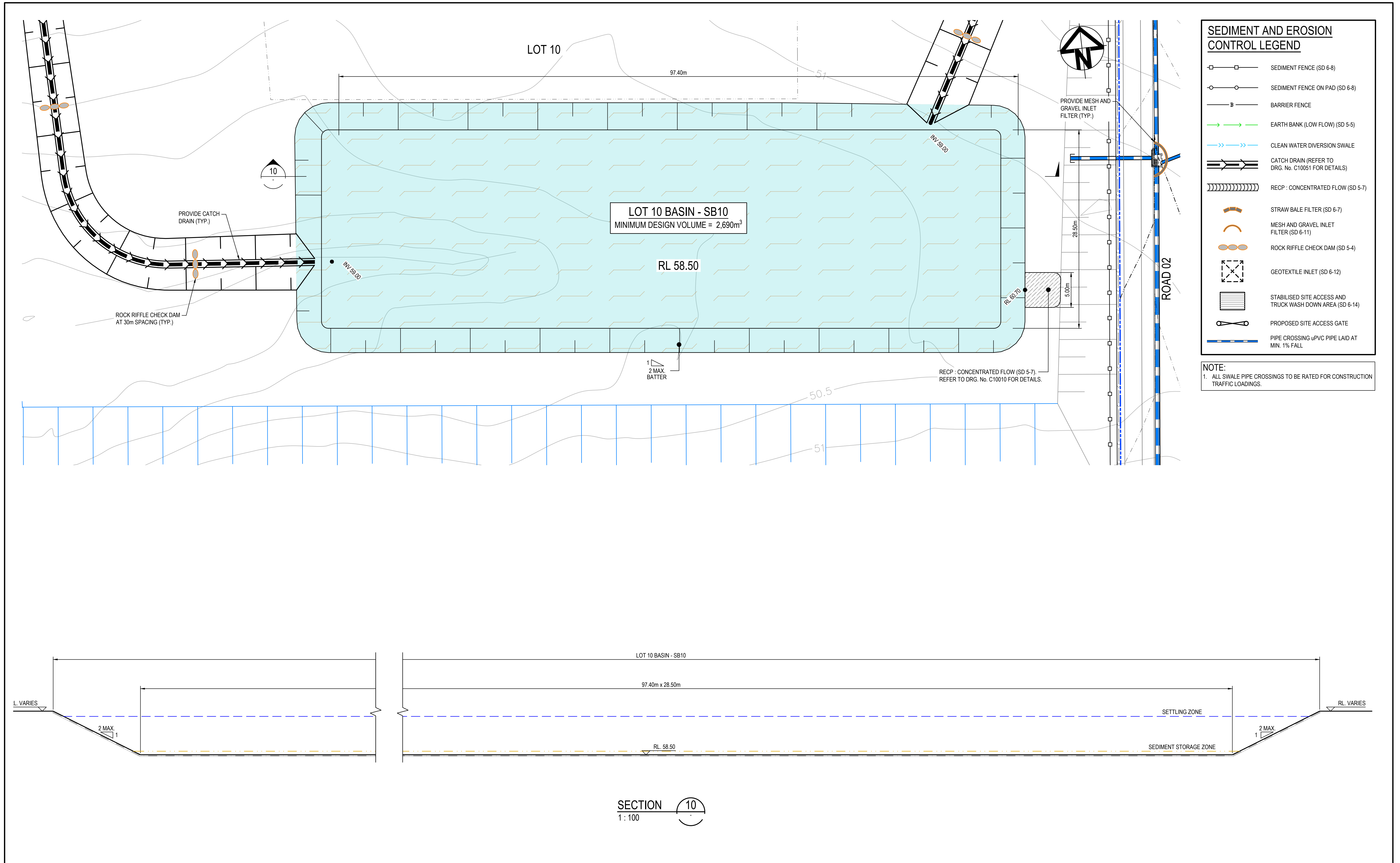


|              |                               |          |    |
|--------------|-------------------------------|----------|----|
| Scales       | 1 : 250 PLAN<br>1:100 SECTION | Drawn    | LM |
|              |                               | Designed | TM |
| Grid         | GDA 2020                      | Checked  | AM |
| Height Datum | AHD                           | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN SB9    |

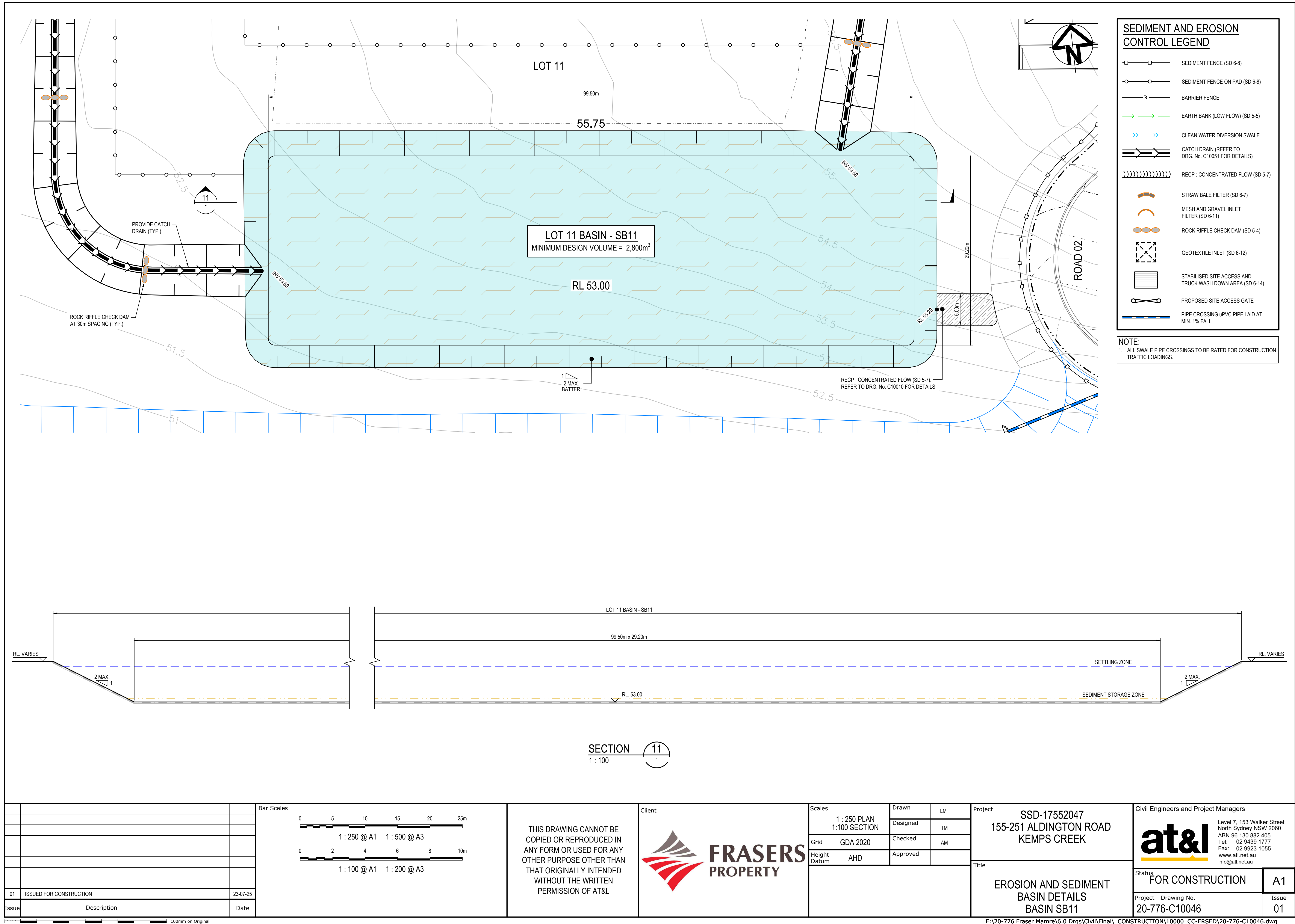
|                                                                                                                                                                             |                  |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|
| Civil Engineers and Project Managers                                                                                                                                        |                  |       |
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| Status                                                                                                                                                                      | FOR CONSTRUCTION | A1    |
| Project - Drawing No.                                                                                                                                                       | 20-776-C10044    | Issue |
|                                                                                                                                                                             |                  | 01    |



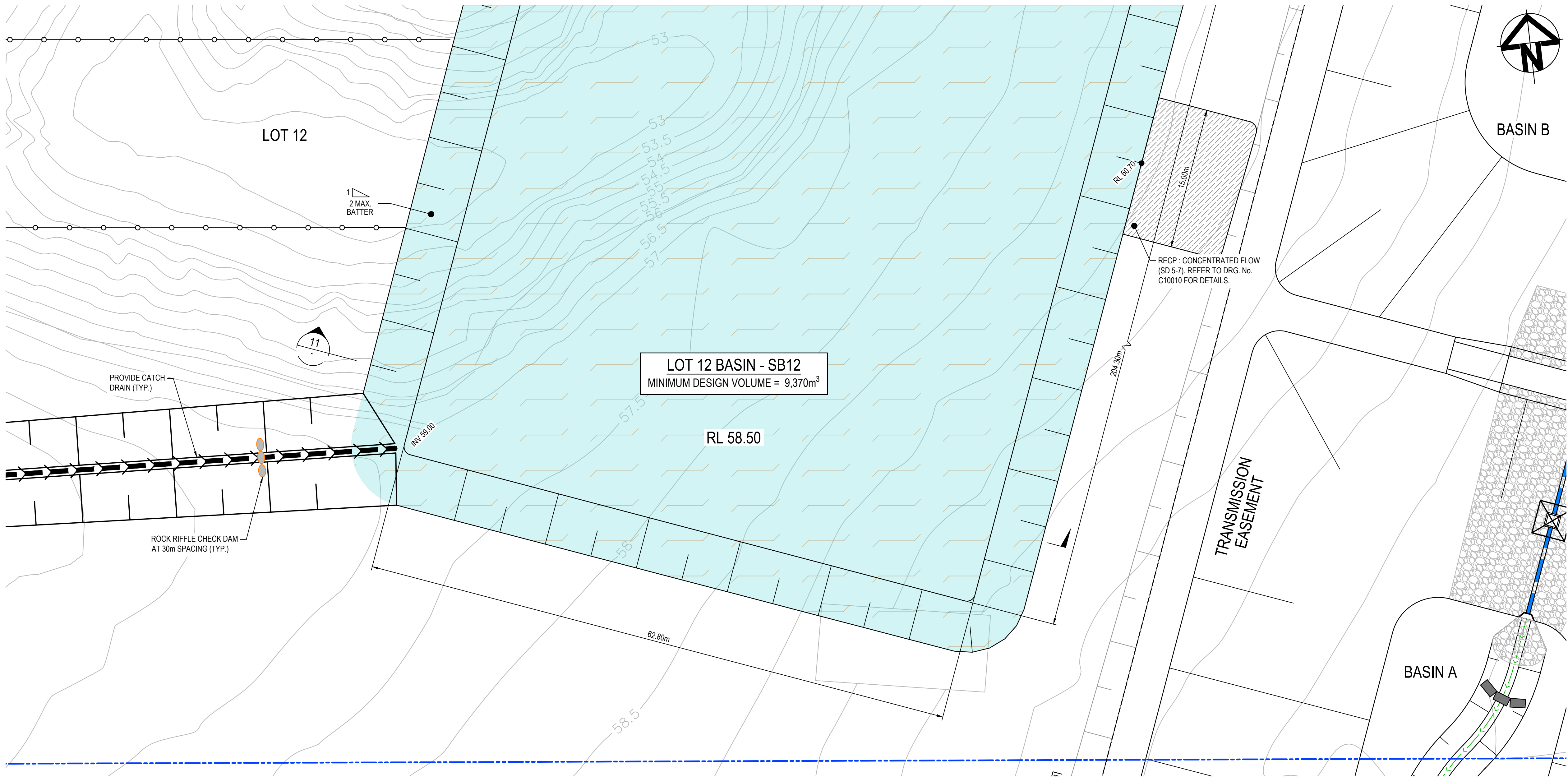


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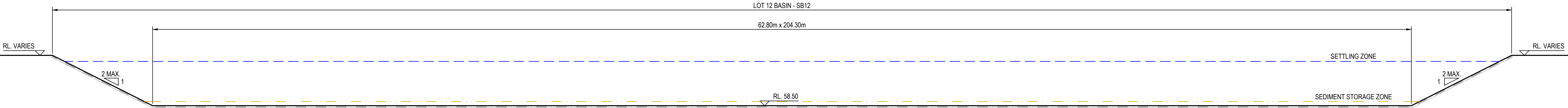




- SEDIMENT AND EROSION CONTROL LEGEND**
- SEDIMENT FENCE (SD 6-8)
  - SEDIMENT FENCE ON PAD (SD 6-8)
  - BARRIER FENCE
  - EARTH BANK (LOW FLOW) (SD 5-5)
  - CLEAN WATER DIVERSION SWALE
  - CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
  - RECP : CONCENTRATED FLOW (SD 5-7)
  - STRAW BALE FILTER (SD 6-7)
  - MESH AND GRAVEL INLET FILTER (SD 6-11)
  - ROCK RIFFLE CHECK DAM (SD 5-4)
  - GEOTEXTILE INLET (SD 6-12)
  - STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
  - PROPOSED SITE ACCESS GATE
  - PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

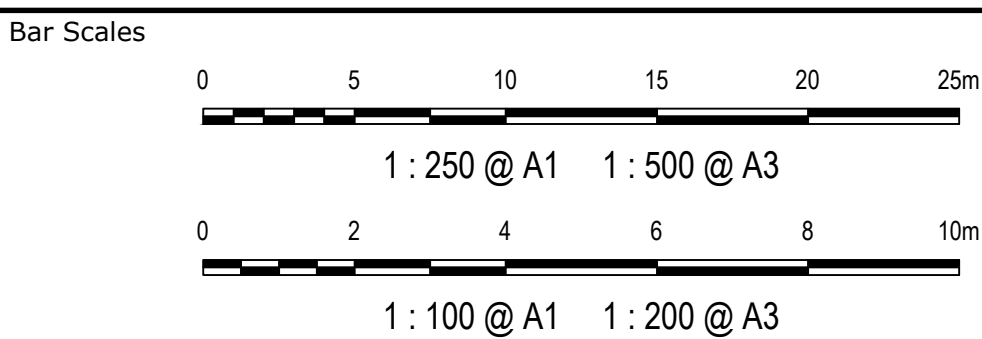
**NOTE:**  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.

**NOTE:**  
LOT 12 BASIN WILL ALSO FUNCTION AS AN INTERIM RETENTION POND FOR HARVESTING AND IRRIGATION OF UNDEVELOPED LAND SOUTH OF ROAD 01. THE BASIN HAS BEEN SIZED TO SATISFY BOTH CONSTRUCTION PHASE AND INTERIM OPERATIONAL PHASE WATER QUALITY AND FLOW VOLUME CONTROLS.



**SECTION 12**  
1:100

|       |                         |          |
|-------|-------------------------|----------|
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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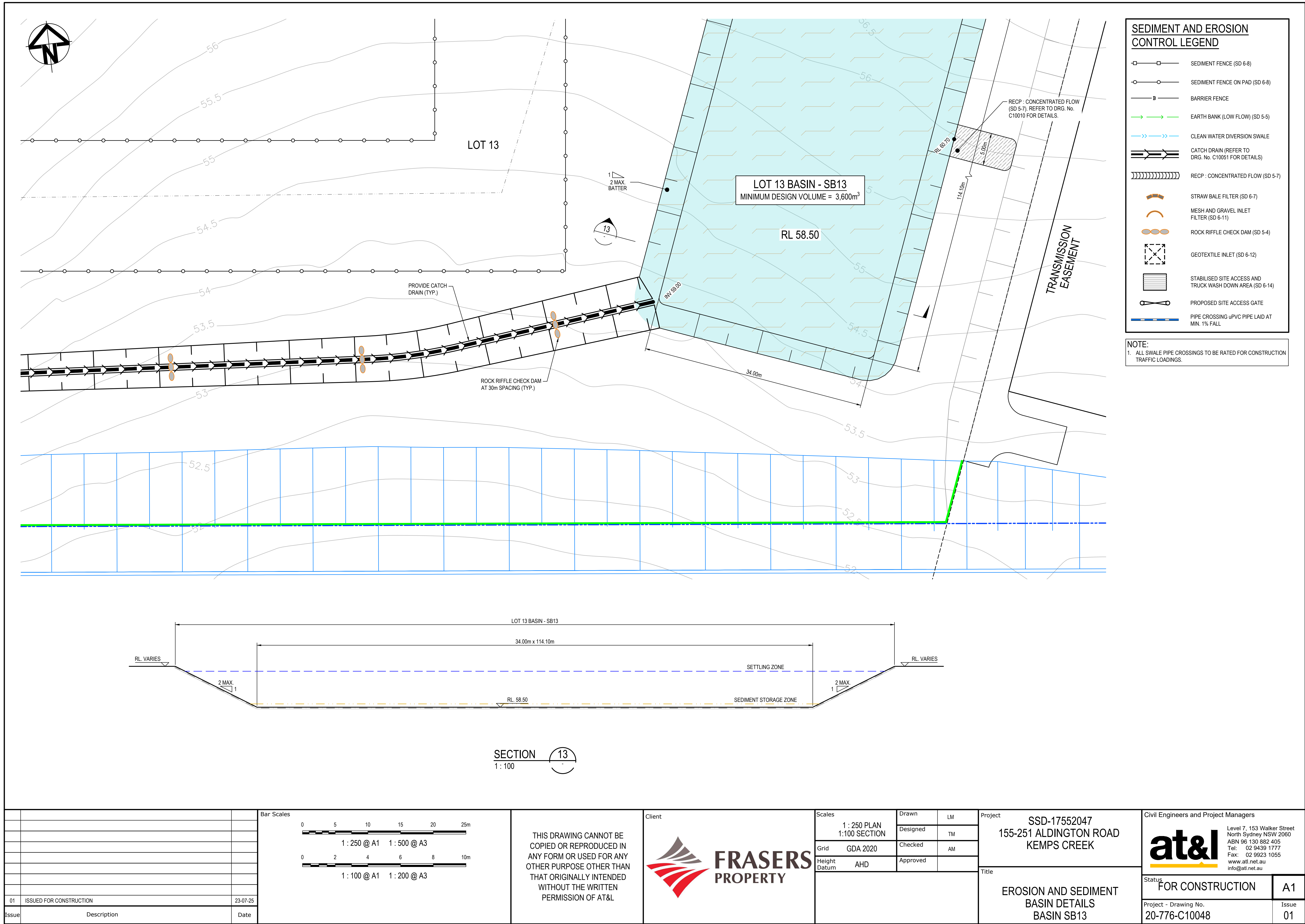


|              |                               |          |    |
|--------------|-------------------------------|----------|----|
| Scales       | 1 : 250 PLAN<br>1:100 SECTION | Drawn    | LM |
| Grid         | GDA 2020                      | Designed | TM |
| Height Datum | AHD                           | Checked  | AM |
|              |                               | Approved |    |

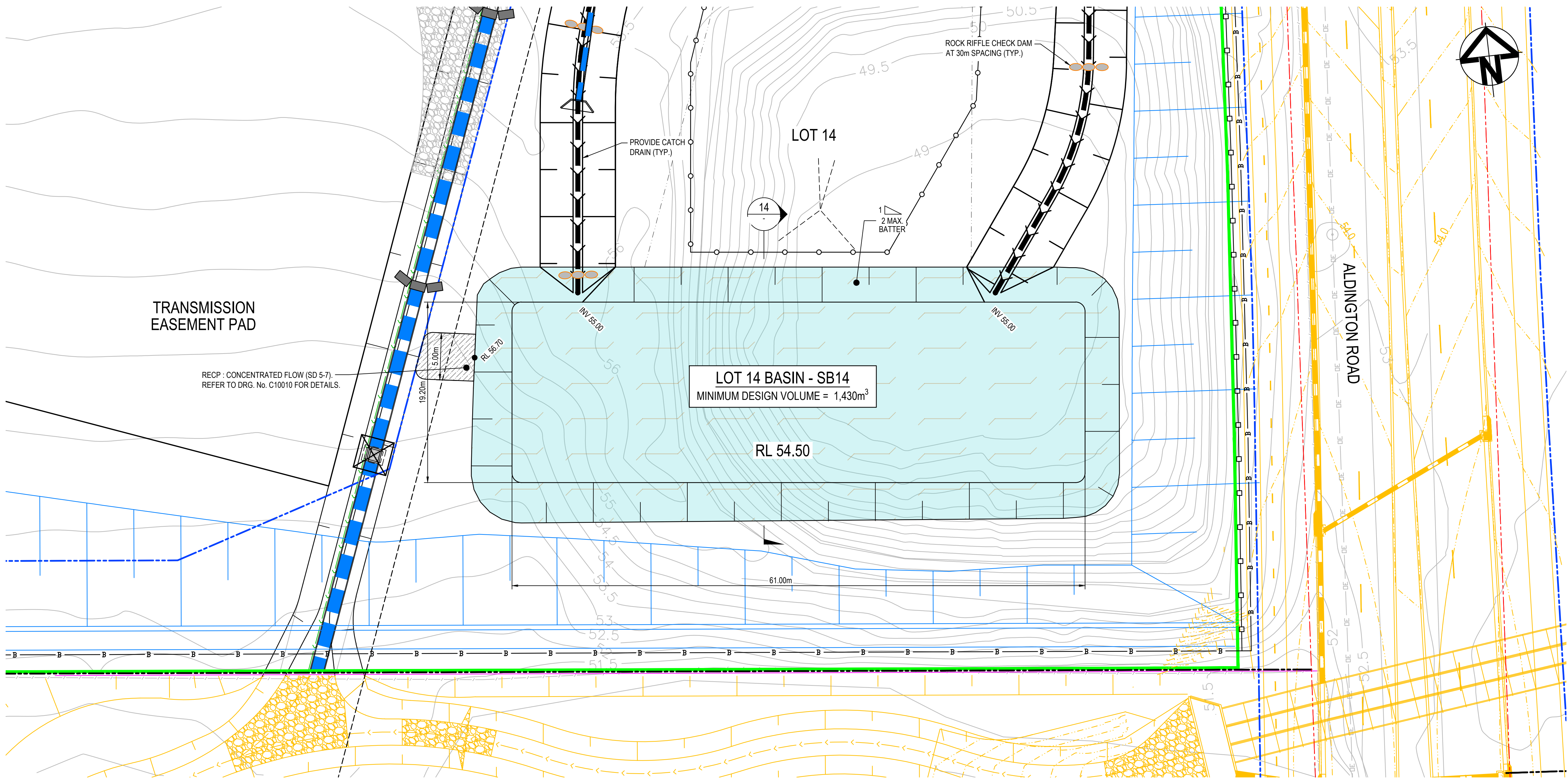
|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN SB12   |

|                                                                                       |                                                                                                                                                          |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Civil Engineers and Project Managers                                                  |                                                                                                                                                          |
|  | Level 7, 153 Walker Street<br>North Sydney NSW 2060<br>ABN 96 130 882 405<br>Tel: 02 9439 1777<br>Fax: 02 9923 1055<br>www.atl.net.au<br>info@atl.net.au |
|                                                                                       |                                                                                                                                                          |
| Status                                                                                |                                                                                                                                                          |
| FOR CONSTRUCTION                                                                      | A1                                                                                                                                                       |
| Project - Drawing No.                                                                 | Issue                                                                                                                                                    |
| 20-776-C10047                                                                         | 01                                                                                                                                                       |





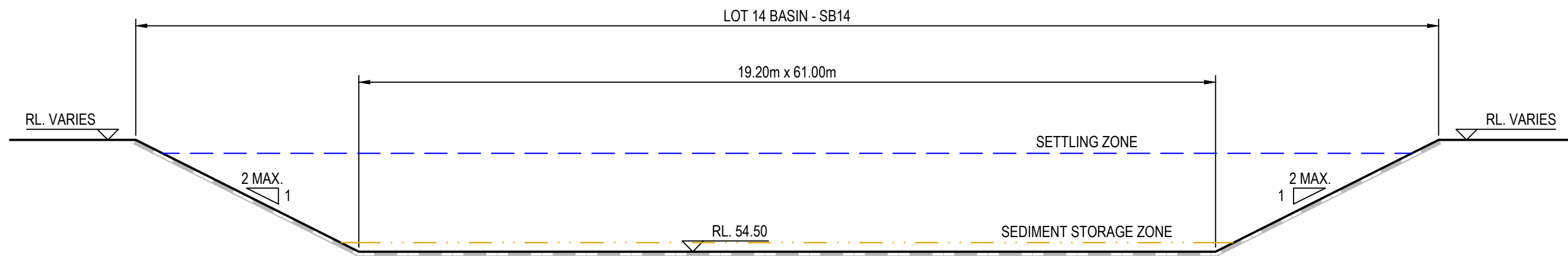




### SEDIMENT AND EROSION CONTROL LEGEND

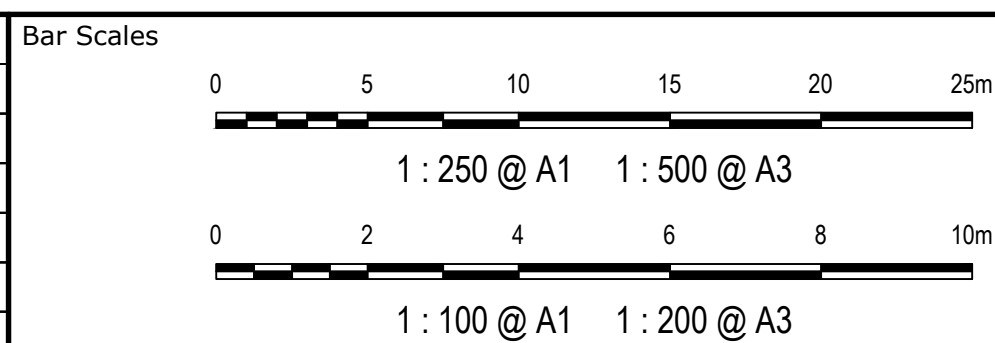
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT FENCE ON PAD (SD 6-8)
- BARRIER FENCE
- EARTH BANK (LOW FLOW) (SD 5-5)
- CLEAN WATER DIVERSION SWALE
- CATCH DRAIN (REFER TO DRG. No. C10051 FOR DETAILS)
- RECP : CONCENTRATED FLOW (SD 5-7)
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- ROCK RIFFLE CHECK DAM (SD 5-4)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)
- PROPOSED SITE ACCESS GATE
- PIPE CROSSING uPVC PIPE LAID AT MIN. 1% FALL

NOTE:  
1. ALL SWALE PIPE CROSSINGS TO BE RATED FOR CONSTRUCTION TRAFFIC LOADINGS.



SECTION 14  
1:100

|       |                         |          |
|-------|-------------------------|----------|
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |
| Issue | Description             | Date     |



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|              |                             |          |    |
|--------------|-----------------------------|----------|----|
| Scales       | 1:250 PLAN<br>1:100 SECTION | Drawn    | LM |
| Grid         | GDA 2020                    | Designed | TM |
| Height Datum | AHD                         | Checked  | AM |
|              |                             | Approved |    |

|         |                                                       |
|---------|-------------------------------------------------------|
| Project | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title   | EROSION AND SEDIMENT<br>BASIN DETAILS<br>BASIN SB14   |

|                                      |  |                                                                                                                                                                                                                                                             |             |
|--------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Civil Engineers and Project Managers |  |  <p>Level 7, 153 Walker Street<br/>North Sydney NSW 2060<br/>ABN 96 130 882 405<br/>Tel: 02 9439 1777<br/>Fax: 02 9923 1055<br/>www.atl.net.au<br/>info@atl.net.au</p> |             |
| Status                               |  | FOR CONSTRUCTION                                                                                                                                                                                                                                            | A1          |
| Project - Drawing No.                |  | 20-776-C10049                                                                                                                                                                                                                                               | Issue<br>01 |



| MINIMUM BASIN DIMENSIONS AT BASE                                                                         |                        |                                                                |                                              |                      |                                 |
|----------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------|----------------------------------------------|----------------------|---------------------------------|
|                                                                                                          | CATCHMENT AREA<br>(ha) | ADOPTED DEEMED TO<br>COMPLY BASIN VOLUME<br>(900m3/ha)<br>(m3) | LENGTH AT BASE<br>(m)                        | WIDTH AT BASE<br>(m) | SURFACE AREA AT<br>BASE<br>(m2) |
| STAGE 1                                                                                                  |                        |                                                                |                                              |                      |                                 |
| BASIN E                                                                                                  | 1.60                   | 1440                                                           | STORAGE WITHIN FUTURE TRUNK DRAINAGE CHANNEL |                      |                                 |
| BASIN F                                                                                                  | 23.20                  | 20880                                                          | STORAGE WITHIN EXISTING FARM DAM             |                      |                                 |
| BASIN G                                                                                                  | 1.45                   | 1310                                                           | STORAGE WITHIN EXISTING FARM DAM             |                      |                                 |
| BASIN C                                                                                                  | 12.70                  | 11430                                                          | STORAGE WITHIN PROPOSED OSD BASIN            |                      |                                 |
| STAGE 2                                                                                                  |                        |                                                                |                                              |                      |                                 |
| BASIN H                                                                                                  | 6.50                   | 5850                                                           | STORAGE WITH EXISTING AUGMENTED FARM DAM     |                      |                                 |
| BASIN D                                                                                                  | 3.70                   | 3330                                                           | STORAGE WITHIN PROPOSED OSD BASIN            |                      |                                 |
| STAGE 3                                                                                                  |                        |                                                                |                                              |                      |                                 |
| SB1                                                                                                      | 2.26                   | 2040                                                           | 48.0                                         | 16.0                 | 768                             |
| SB2                                                                                                      | 5.08                   | 4570                                                           | 75.0                                         | 25.0                 | 1875                            |
| SB3                                                                                                      | 3.68                   | 3320                                                           | 63.0                                         | 21.0                 | 1323                            |
| SB4                                                                                                      | 3.62                   | 3260                                                           | 63.0                                         | 21.0                 | 1323                            |
| SB5                                                                                                      | 5.30                   | 4770                                                           | 78.0                                         | 26.0                 | 2028                            |
| SB6                                                                                                      | 1.93                   | 1750                                                           | 43.5                                         | 14.5                 | 631                             |
| SB7                                                                                                      | 1.95                   | 1760                                                           | 43.5                                         | 14.5                 | 631                             |
| SB8                                                                                                      | 2.45                   | 2210                                                           | 51.0                                         | 17.0                 | 867                             |
| SB9                                                                                                      | 5.11                   | 4600                                                           | 75.0                                         | 25.0                 | 1875                            |
| BASIN B                                                                                                  | 12.30                  | 11070                                                          | STORAGE WITHIN PROPOSED OSD BASIN            |                      |                                 |
| STAGE 4                                                                                                  |                        |                                                                |                                              |                      |                                 |
| BASIN A                                                                                                  | 0.75                   | 680                                                            | STORAGE WITHIN PROPOSED OSD BASIN            |                      |                                 |
| SB10                                                                                                     | 2.98                   | 2690                                                           | 57.0                                         | 19.0                 | 1083                            |
| STAGE 5                                                                                                  |                        |                                                                |                                              |                      |                                 |
| SB11                                                                                                     | 3.11                   | 2800                                                           | 57.0                                         | 19.0                 | 1083                            |
| SB12                                                                                                     | 10.41                  | 9370                                                           | 111.0                                        | 37.0                 | 4107                            |
| SB13                                                                                                     | 4.00                   | 3600                                                           | 66.0                                         | 22.0                 | 1452                            |
| SB14                                                                                                     | 1.58                   | 1430                                                           | 39.0                                         | 13.0                 | 507                             |
| NOTES:                                                                                                   |                        |                                                                |                                              |                      |                                 |
| HIGHLIGHTED CELLS DENOTE BASINS WITH NON-UNIFORM GEOMETRY, REFER TO PLANS FOR ARRANGEMENT AND DIMENSIONS |                        |                                                                |                                              |                      |                                 |
| UNLESS NOTED OTHERWISE, THE FOLLOWING GEOMETRIC PROPERTIES APPLY TO ALL PROPOSED SEDIMENT BASINS         |                        |                                                                |                                              |                      |                                 |
|                                                                                                          | LENGTH TO WIDTH RATIO  | 3:1 (MEASURED AT BASE OF BASIN)                                |                                              |                      |                                 |
|                                                                                                          | INTERNAL BATTER SLOPE  | 1V:2H                                                          |                                              |                      |                                 |
|                                                                                                          | SEDIMENT STORAGE DEPTH | 0.20m                                                          |                                              |                      |                                 |
|                                                                                                          | SETTLING ZONE DEPTH    | 2.00m                                                          |                                              |                      |                                 |
|                                                                                                          | SPILLWAY WIDTH         | 5m U.N.O                                                       |                                              |                      |                                 |
|                                                                                                          | SPILLWAY FREEBOARD     | 0.3m                                                           |                                              |                      |                                 |

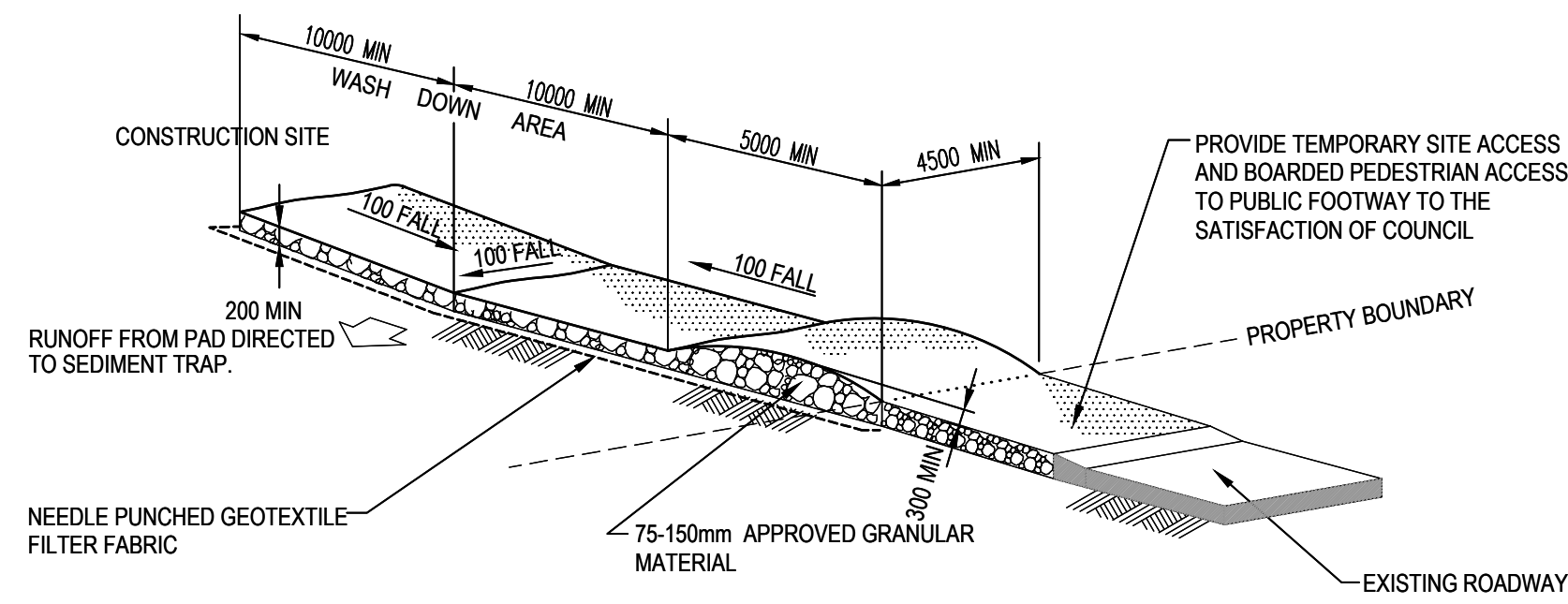
NOTE:  
1. ENLARGED TYPE-D SEDIMENT BASINS WITH A VOLUME OF 900m3 PER HECTARE OF CONTRIBUTING CATCHMENT HAVE BEEN ADOPTED IN LIEU OF HIGH EFFICIENCY SEDIMENT BASINS (TYPE A OR B).

|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|-------|-------------------------|----------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        | <div>Designed</div> <div>TM</div> |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        | <div>Checked</div> <div>AM</div>  |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    | <div>Height Datum</div> <div>AHD</div> | <div>Approved</div>               | <div>Title</div> <div>EROSION AND SEDIMENT<br/>BASIN SPECIFICATIONS</div>                           |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
|       |                         |          |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
| 01    | ISSUED FOR CONSTRUCTION | 23-07-25 |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
| Issue | Description             | Date     |            |                                                                                                                                                                                    |                                                                                                                    |                                        |                                   |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |

100mm on Original

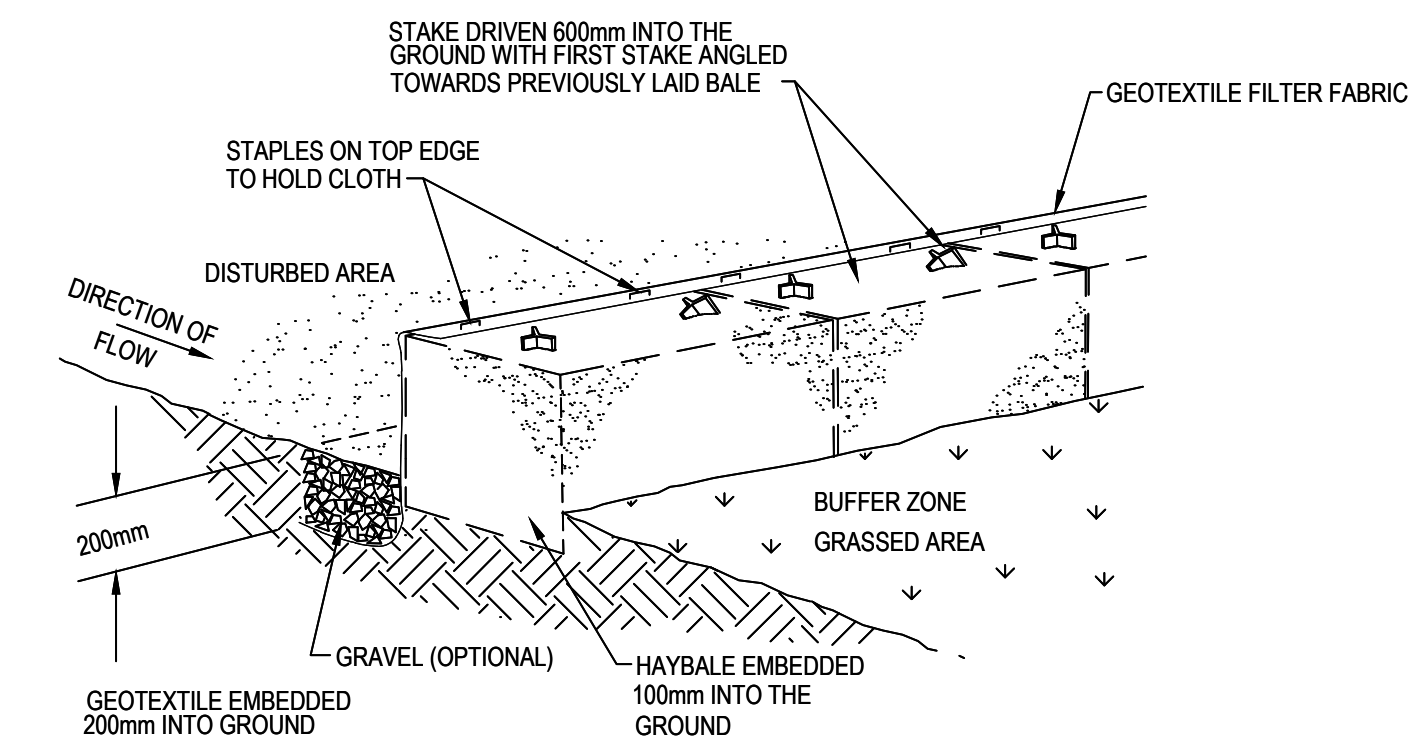
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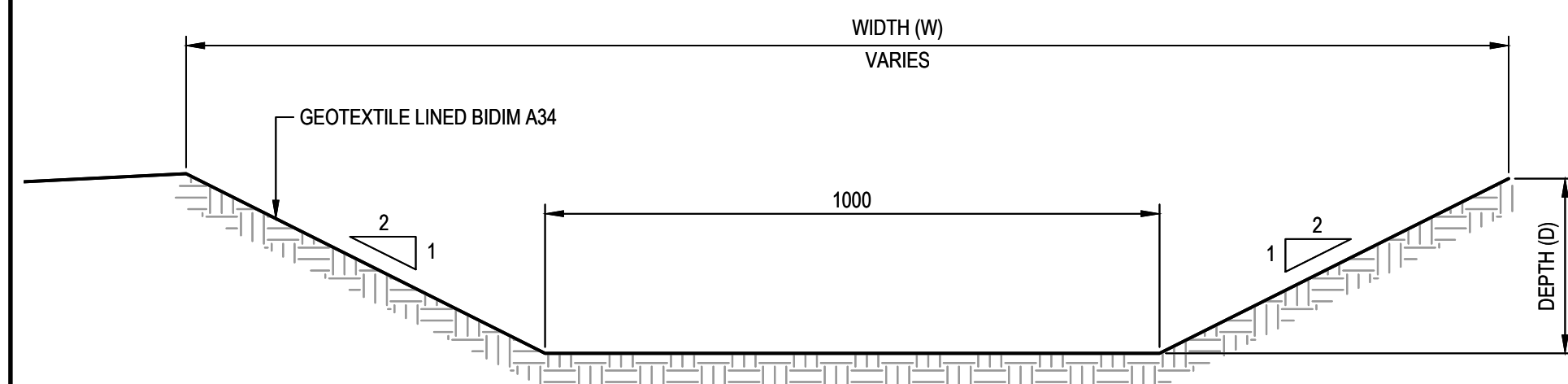
**STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA**

NTS



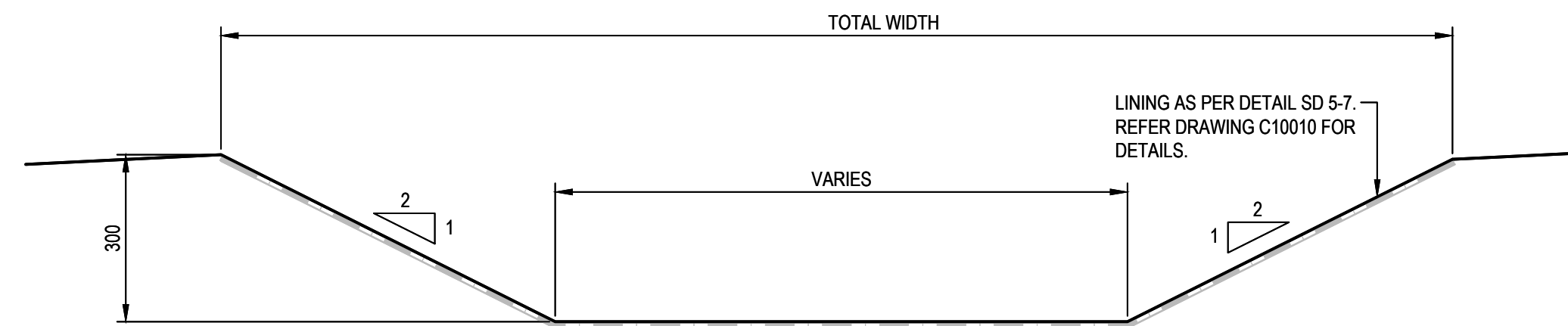
**HAYBALE AND GEOTEXTILE SEDIMENT FILTER**

NTS



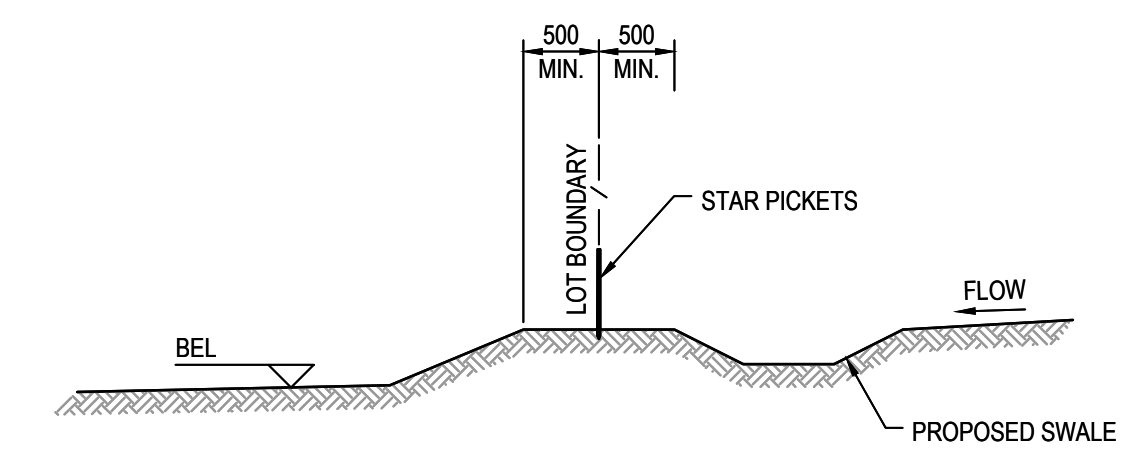
**CATCH DRAIN - (DIRTY WATER)**

SCALE 1:10



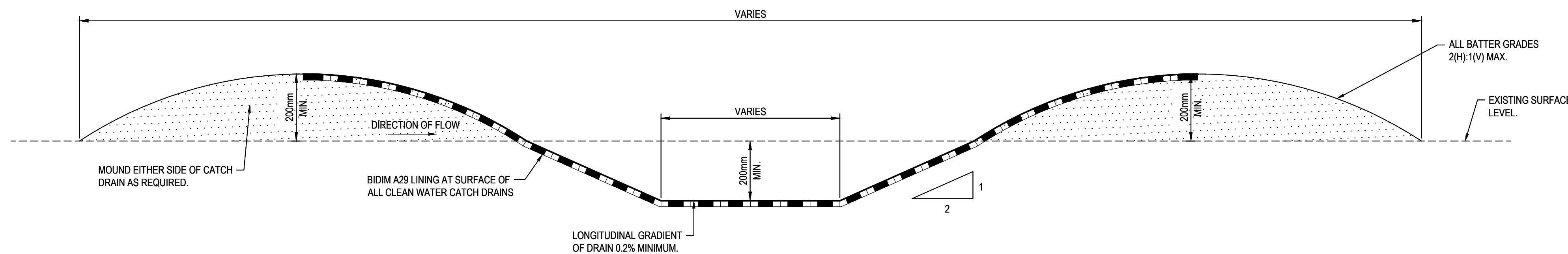
**SPILLWAY DETAIL - (DIRTY WATER)**

SCALE 1:10



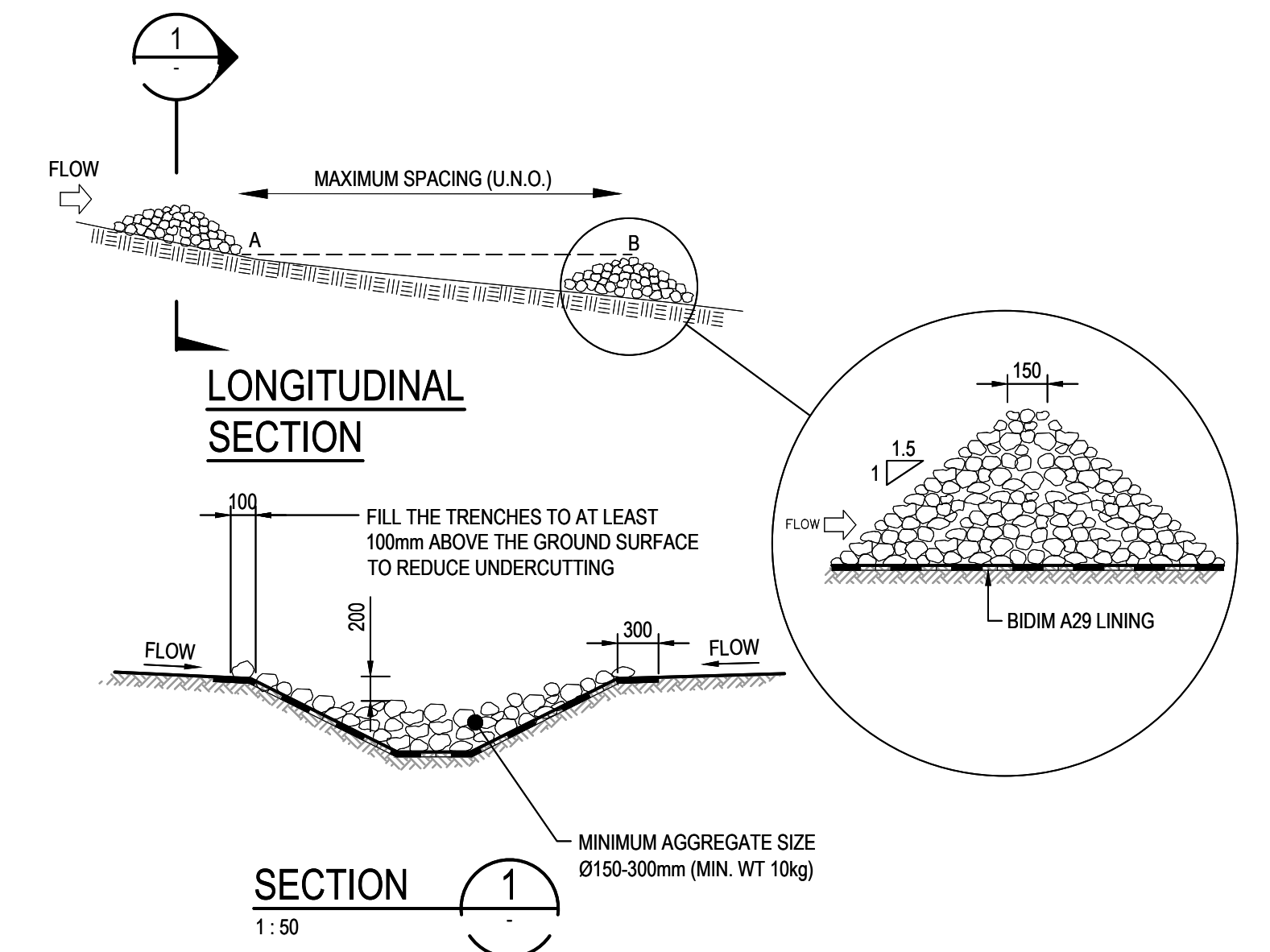
**TYPICAL LOT BOUNDARY DETAIL**

SCALE 1:50



**DIVERSION SWALE - (CLEAN WATER)**

SCALE 1:10



**ROCK RIFFLE CHECK DAM (SD 5-4)**

SCALE 1:50

|       |                         |          |
|-------|-------------------------|----------|
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| Scales       | AS SHOWN |
| Grid         | GDA 2020 |
| Height Datum | AHD      |

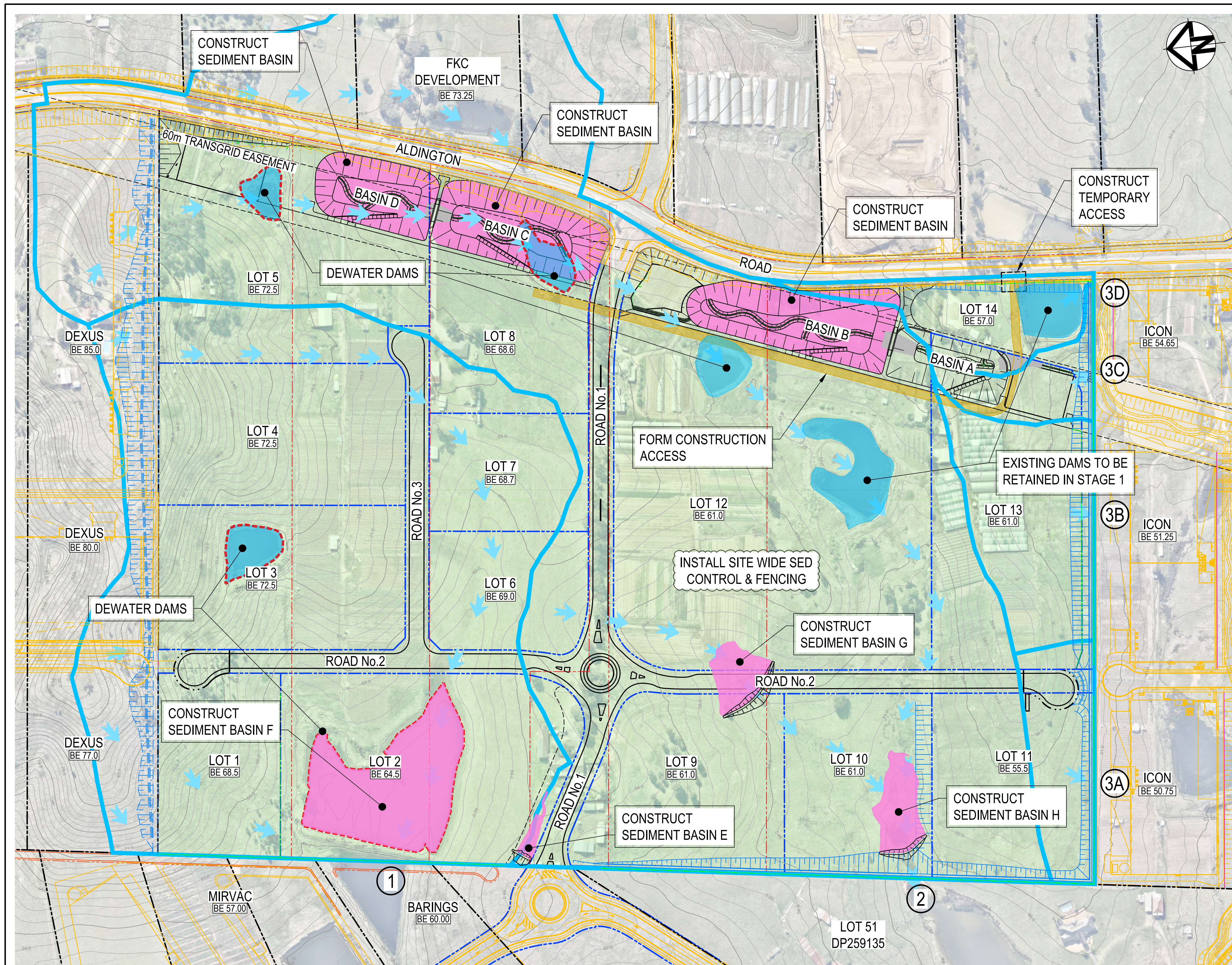
|          |    |
|----------|----|
| Drawn    | LM |
| Designed | TM |
| Checked  | AM |
| Approved |    |

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Project               | SSD-17552047<br>155-251 ALDINGTON ROAD<br>KEMPS CREEK |
| Title                 | EROSION AND SEDIMENT<br>CONTROL DETAILS<br>SHEET 1    |
| Status                | FOR CONSTRUCTION                                      |
| Project - Drawing No. | 20-776-C10051                                         |
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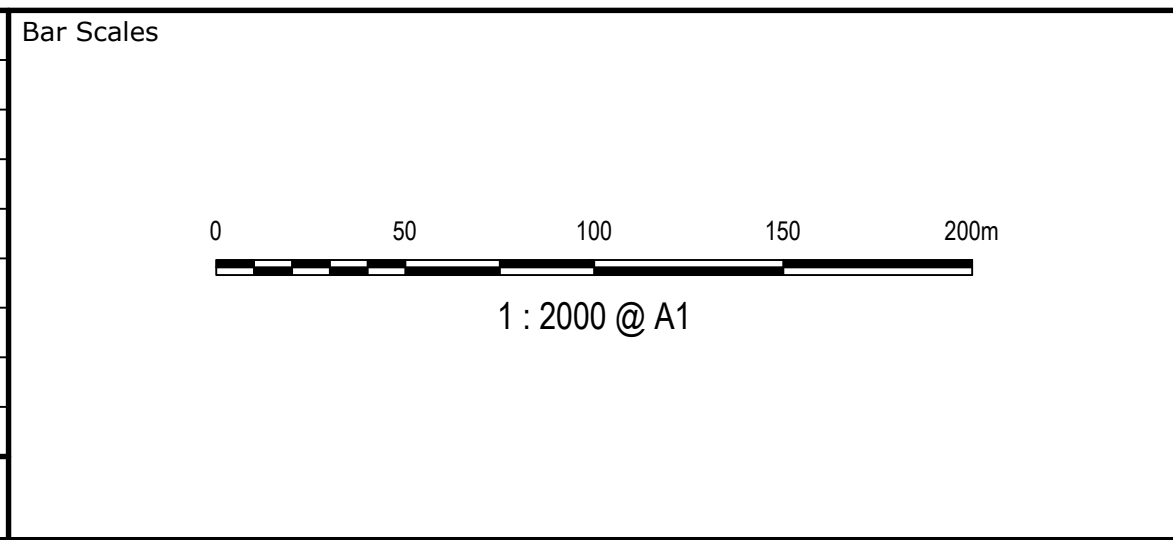
STAGE 1

**LEGEND**

- CATCHMENT BOUNDARY
- EARTHWORKS IN PROGRESS
- EARTHWORKS COMPLETE
- INFRASTRUCTURE COMPLETE
- INFRASTRUCTURE IN PROGRESS
- UNDISTURBED AREA
- SEDIMENT BASIN TO BE CONSTRUCTED

| CATCHMENTS (ha) |                    |
|-----------------|--------------------|
|                 | EXISTING CATCHMENT |
| 1               | 24.397             |
| 2               | 44.177             |
| 3A              | 1.573              |
| 3B              | 2.815              |
| 3C              | 0.971              |
| 3D              | 1.738              |
| TOTAL           | 75.671             |

|       |                         |          |
|-------|-------------------------|----------|
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| Issue | Description             | Date     |



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|--------------|----------|----------|----|
| Scales       | 1 : 2000 | Drawn    | LM |
| Grid         | GDA 2020 | Designed | TM |
| Height Datum | AHD      | Checked  | AM |
|              |          | Approved |    |

Project

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155-251 ALDINGTON ROAD  
KEMPS CREEK

Title

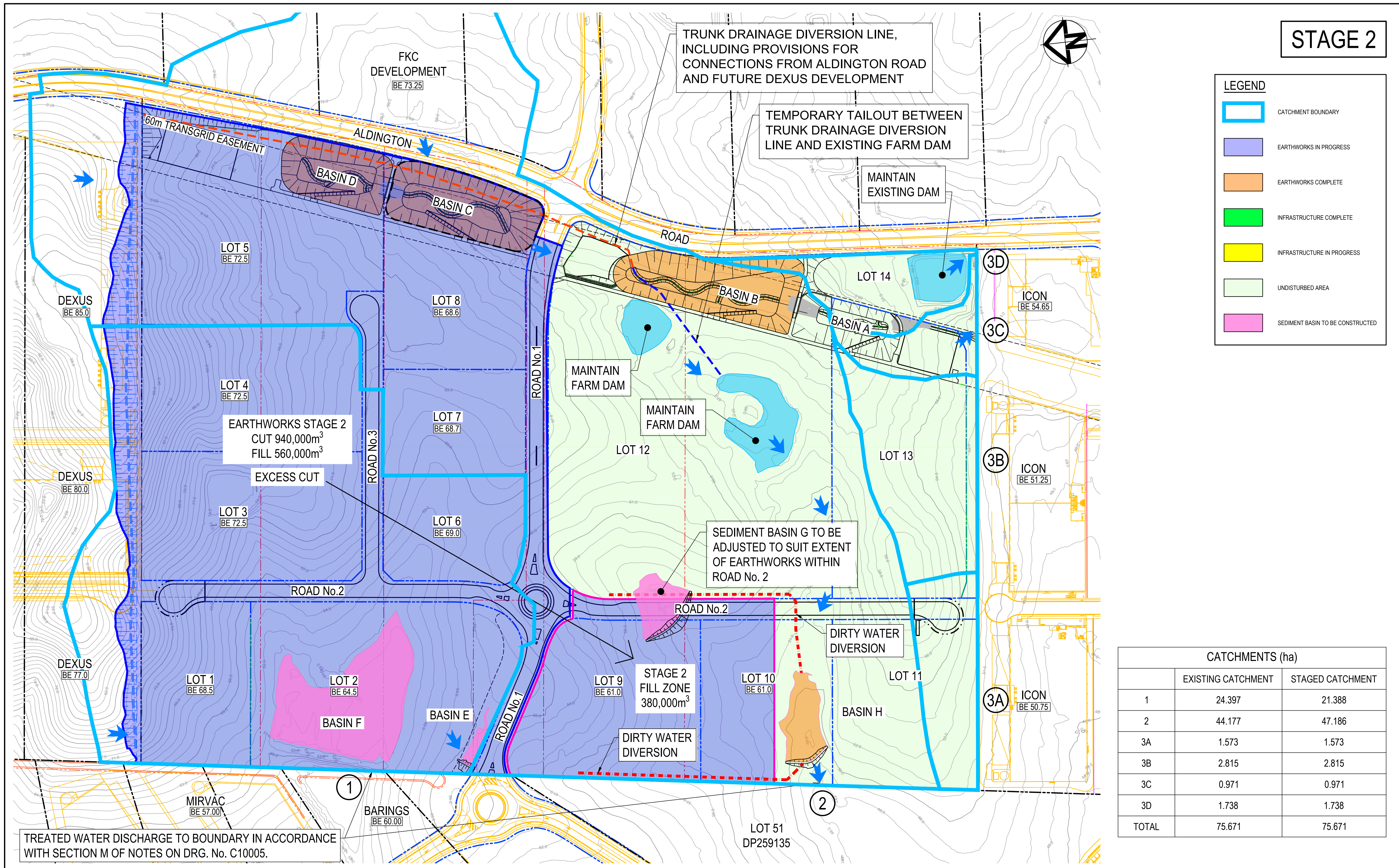
CONSTRUCTION STAGING  
PLAN  
STAGE 1

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| Status                | FOR CONSTRUCTION | A1    |
| Project - Drawing No. | 20-776-C10061    | Issue |
|                       |                  | 01    |





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23-07-25

Issue Description Date

Bar Scales

0 50 100 150 200m

1 : 2000 @ A1

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Scales

1 : 2000

Grid GDA 2020

Height Datum AHD

Drawn LM

Designed TM

Checked AM

Approved

Project

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155-251 ALDINGTON ROAD  
KEMPS CREEK

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Status

FOR CONSTRUCTION

Issue

A1

Project - Drawing No.

20-776-C10062

Issue

01

CONSTRUCTION STAGING  
PLAN  
STAGE 2

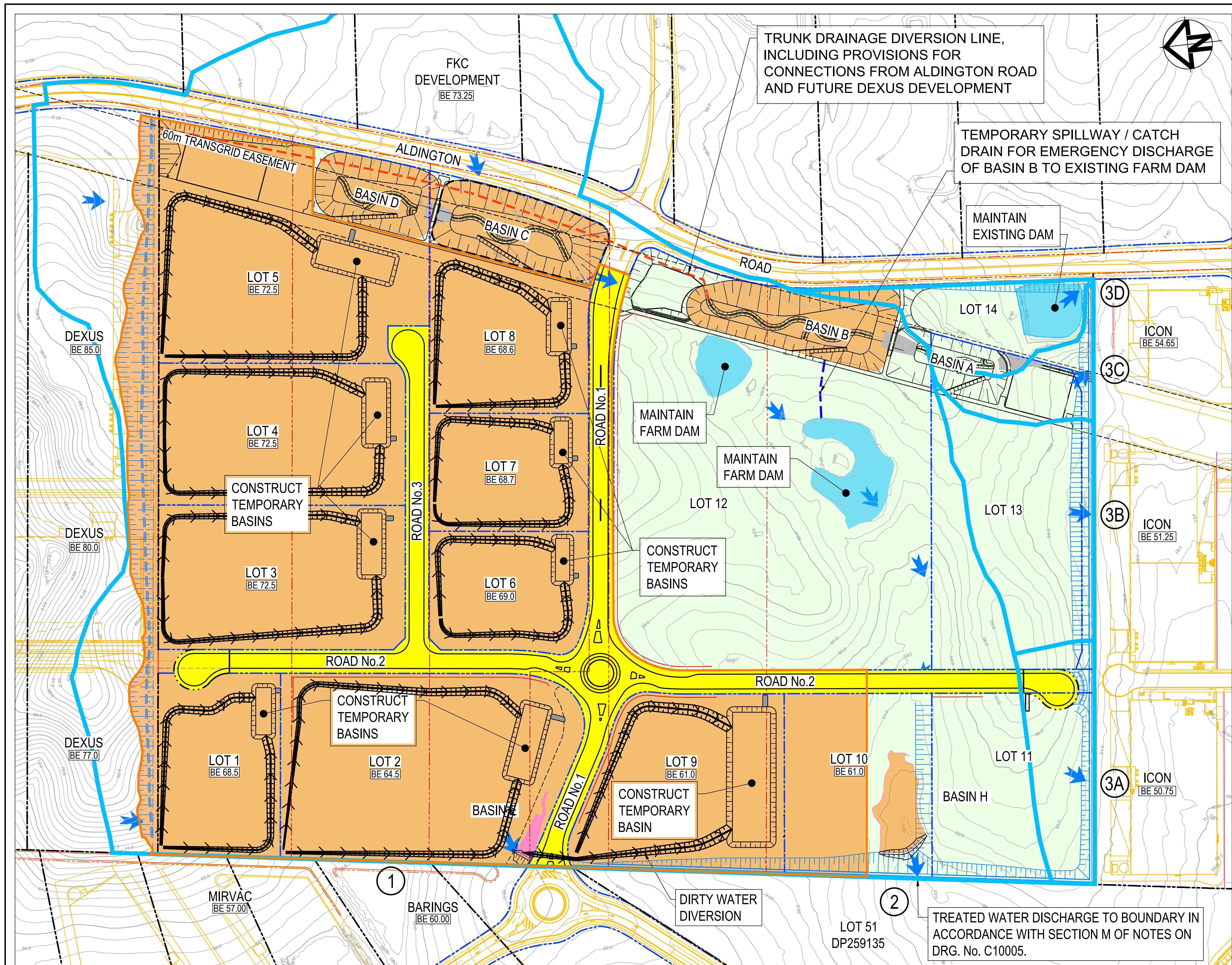
Project - Drawing No.

20-776-C10062

Issue

01



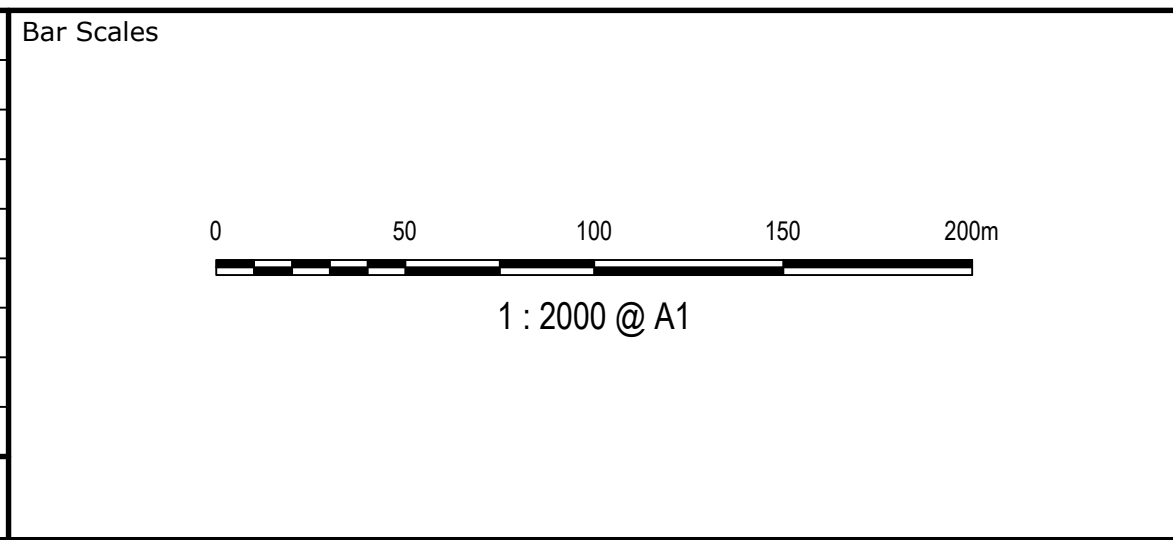


STAGE 3

| LEGEND |                                  |
|--------|----------------------------------|
|        | CATCHMENT BOUNDARY               |
|        | EARTHWORKS IN PROGRESS           |
|        | EARTHWORKS COMPLETE              |
|        | INFRASTRUCTURE COMPLETE          |
|        | INFRASTRUCTURE IN PROGRESS       |
|        | UNDISTURBED AREA                 |
|        | SEDIMENT BASIN TO BE CONSTRUCTED |

| CATCHMENTS (ha) |                    |                  |
|-----------------|--------------------|------------------|
|                 | EXISTING CATCHMENT | STAGED CATCHMENT |
| 1               | 24.397             |                  |
| 2               | 44.177             | 68.574           |
| 3A              | 1.573              | 1.573            |
| 3B              | 2.815              | 2.815            |
| 3C              | 0.971              | 0.971            |
| 3D              | 1.738              | 1.738            |
| TOTAL           | 75.671             | 75.671           |

| Issue | Description             | Date     |
|-------|-------------------------|----------|
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|--------------|----------|----------|----|
| Scales       | 1 : 2000 | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

Project

SSD-17552047  
155-251 ALDINGTON ROAD  
KEMPS CREEK

Title

CONSTRUCTION STAGING  
PLAN  
STAGE 3

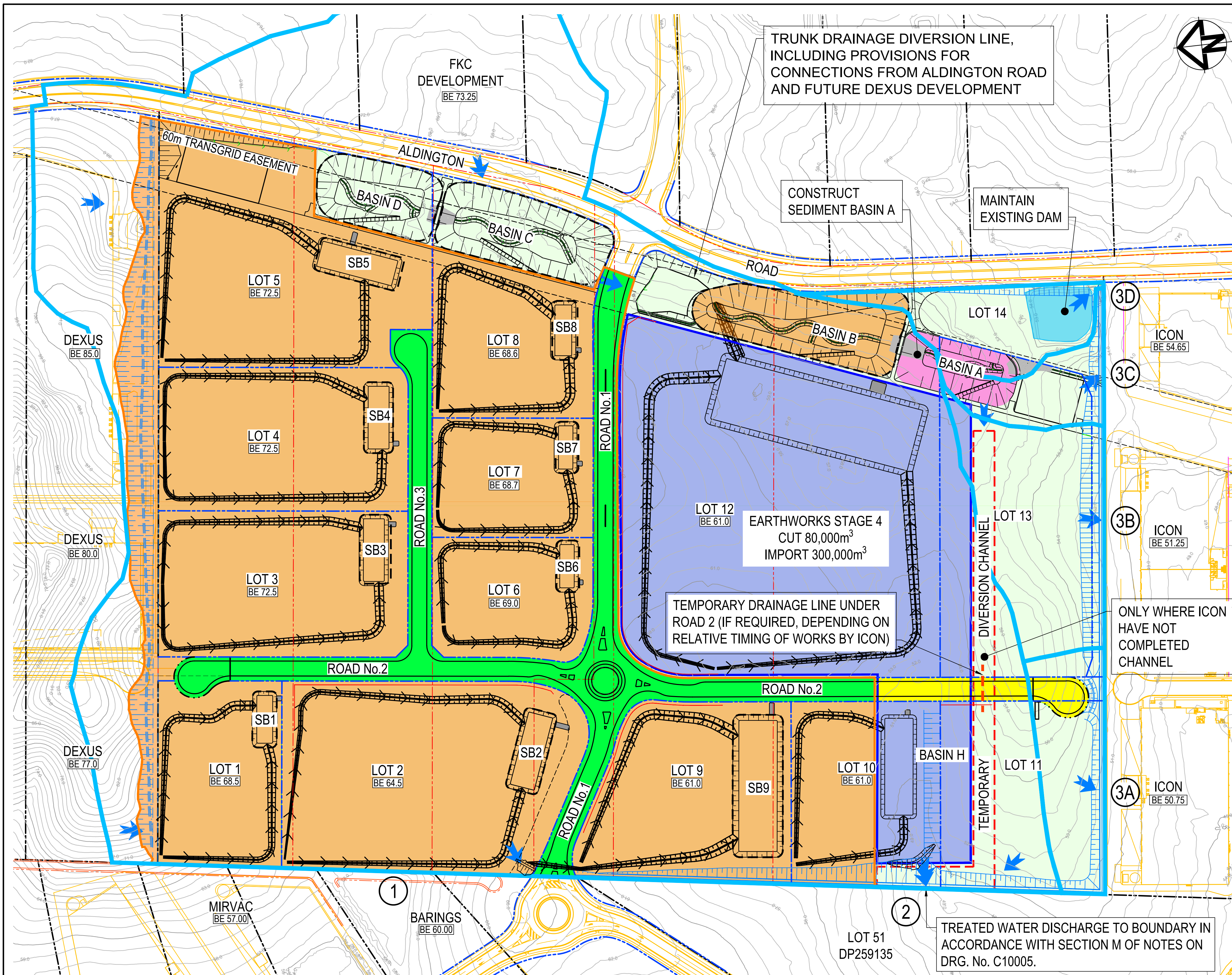
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| Project - Drawing No. | 20-776-C10063    | Issue |
|                       |                  | 01    |



## STAGE 4



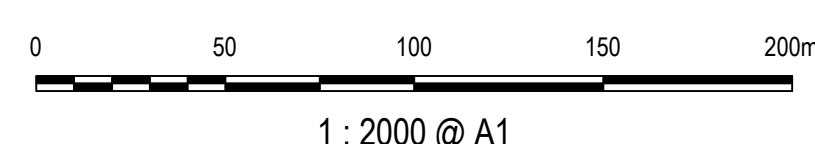
## LEGEND

- |                                                                                     |                                  |
|-------------------------------------------------------------------------------------|----------------------------------|
|  | CATCHMENT BOUNDARY               |
|  | EARTHWORKS IN PROGRESS           |
|  | EARTHWORKS COMPLETE              |
|  | INFRASTRUCTURE COMPLETE          |
|  | INFRASTRUCTURE IN PROGRESS       |
|  | UNDISTURBED AREA                 |
|  | SEDIMENT BASIN TO BE CONSTRUCTED |

| CATCHMENTS (ha) |                    |                  |
|-----------------|--------------------|------------------|
|                 | EXISTING CATCHMENT | STAGED CATCHMENT |
| 1               | 24.397             |                  |
| 2               | 44.177             | 68.574           |
| 3A              | 1.573              | 1.573            |
| 3B              | 2.815              | 2.815            |
| 3C              | 0.971              | 0.971            |
| 3D              | 1.738              | 1.738            |
| TOTAL           | 75.671             | 75.671           |

|       |                         |          |
|-------|-------------------------|----------|
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| Issue | Description             | Date     |

Bar Scales



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|        |          |
|--------|----------|
| Scales | 1 : 2000 |
|--------|----------|

|      |          |
|------|----------|
| Grid | GDA 2020 |
|------|----------|

|        |     |
|--------|-----|
| Height | ΔHD |
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| Drawn | IM |
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|          | LW |
| Designed |    |

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| Designed | TM |
| Checked  |    |

|         |    |
|---------|----|
| Checked | AM |
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|  | Project |
|--|---------|

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155-251 ALDINGTON ROAD  
KEMPS CREEK

|  | Title |
|--|-------|
|--|-------|

CONSTRUCTION STAGING  
PLAN  
STAGE 4

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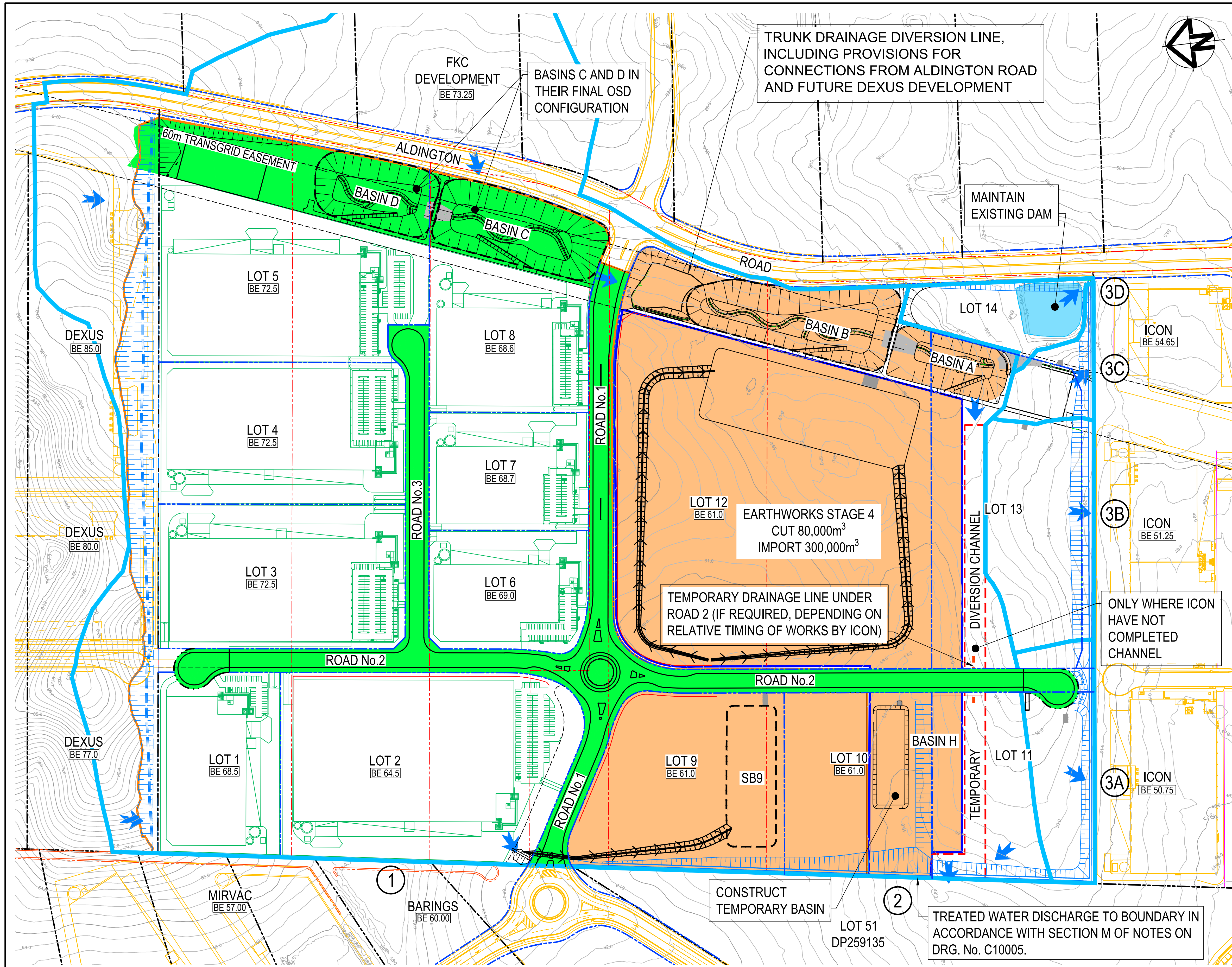
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20-776-C10064

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| A1 |  |
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|-------|----|
| Issue | 01 |
|-------|----|



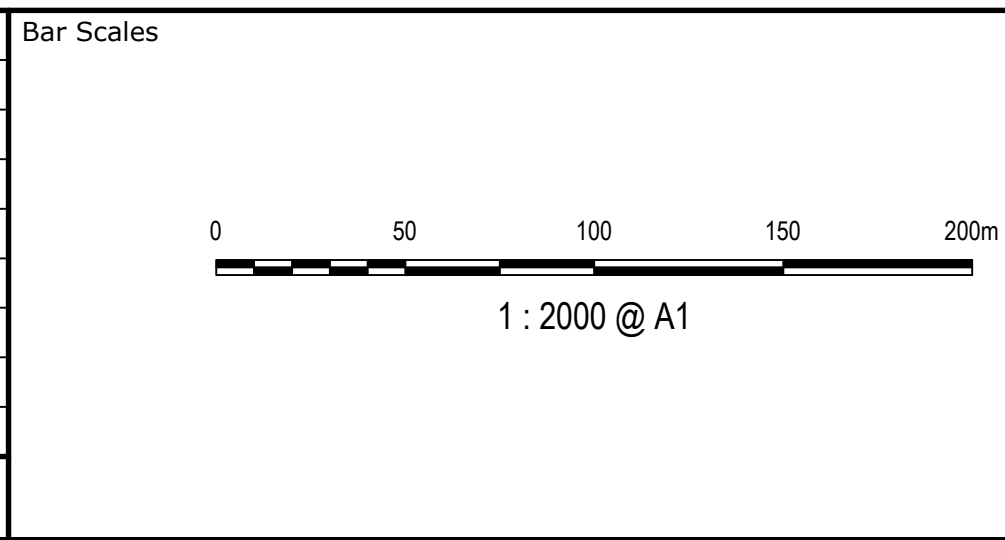


STAGE 4a

| LEGEND |                                  |
|--------|----------------------------------|
|        | CATCHMENT BOUNDARY               |
|        | EARTHWORKS IN PROGRESS           |
|        | EARTHWORKS COMPLETE              |
|        | INFRASTRUCTURE COMPLETE          |
|        | INFRASTRUCTURE IN PROGRESS       |
|        | UNDISTURBED AREA                 |
|        | SEDIMENT BASIN TO BE CONSTRUCTED |

| CATCHMENTS (ha) |                    |                  |
|-----------------|--------------------|------------------|
|                 | EXISTING CATCHMENT | STAGED CATCHMENT |
| 1               | 24.397             |                  |
| 2               | 44.177             | 69.903           |
| 3A              | 1.573              | 1.573            |
| 3B              | 2.815              | 2.396            |
| 3C              | 0.971              | 0.683            |
| 3D              | 1.738              | 1.116            |
| TOTAL           | 75.671             | 75.671           |

| Issue | Description             | Date     |
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|--------------|----------|----------|----|
| Scales       | 1 : 2000 | Drawn    | LM |
|              |          | Designed | TM |
| Grid         | GDA 2020 | Checked  | AM |
| Height Datum | AHD      | Approved |    |

Project

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155-251 ALDINGTON ROAD  
KEMPS CREEK

Title

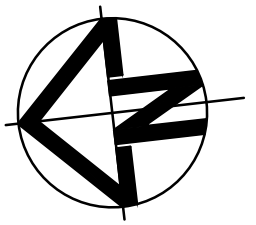
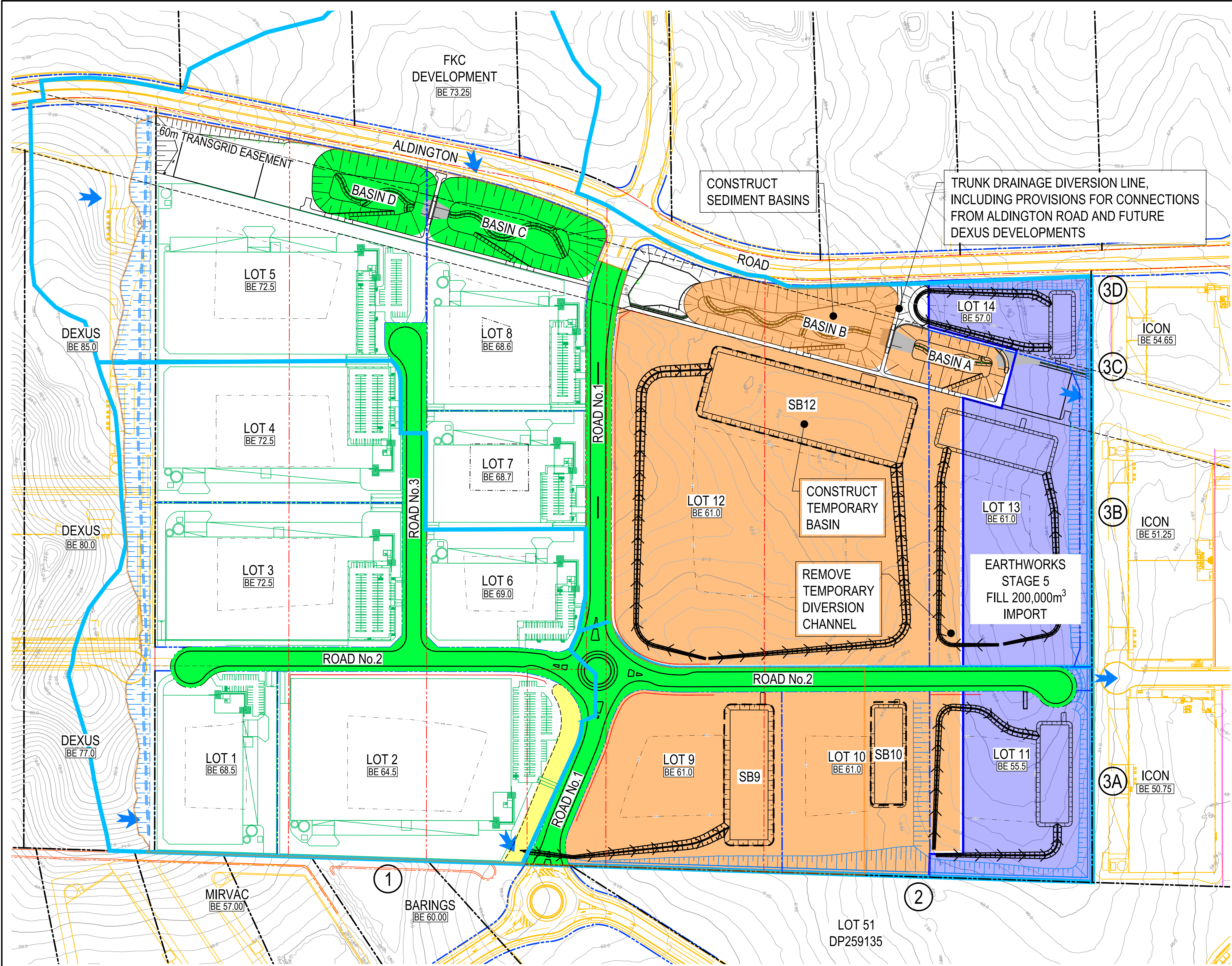
CONSTRUCTION STAGING  
PLAN  
STAGE 4a

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|                       |                  | 01    |





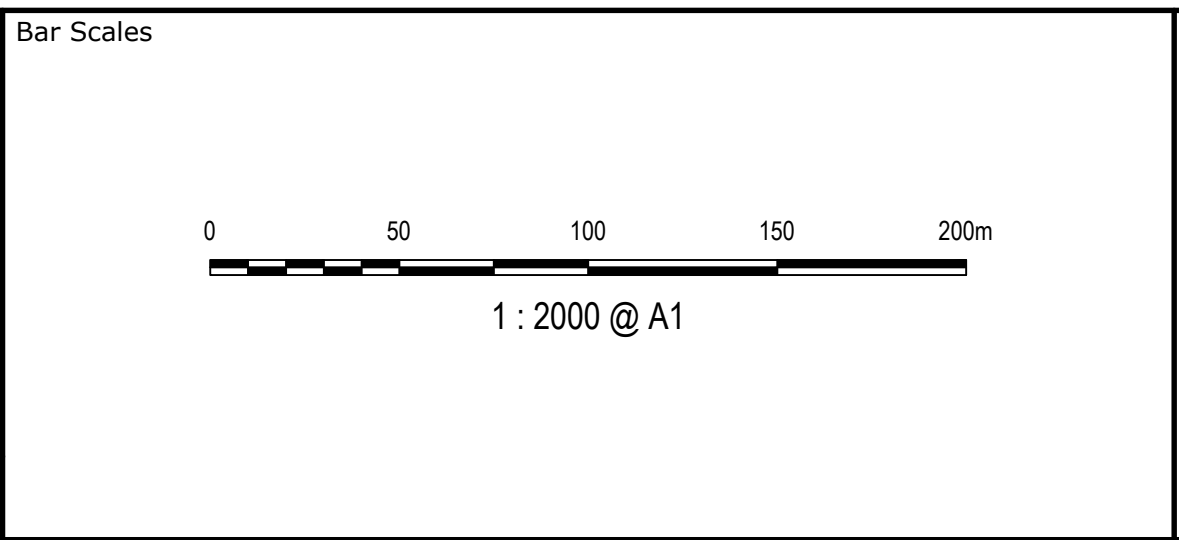
STAGE 5

**LEGEND**

- CATCHMENT BOUNDARY
- EARTHWORKS IN PROGRESS
- EARTHWORKS COMPLETE
- INFRASTRUCTURE COMPLETE
- INFRASTRUCTURE IN PROGRESS
- UNDISTURBED AREA
- SEDIMENT BASIN TO BE CONSTRUCTED

| CATCHMENTS (ha) |                    |                  |
|-----------------|--------------------|------------------|
|                 | EXISTING CATCHMENT | STAGED CATCHMENT |
| 1               | 24.397             | 21.384           |
| 2               | 44.177             | NIL              |
| 3A              | 1.573              | 11.508           |
| 3B              | 2.815              | NIL              |
| 3C              | 0.971              | 42.779           |
| 3D              | 1.738              | NIL              |
| TOTAL           | 75.671             | 75.671           |

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| Issue | Description             | Date     |



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|--------------|----------|----------|----|
| Scales       | 1 : 2000 | Drawn    | LM |
| Grid         | GDA 2020 | Designed | TM |
| Height Datum | AHD      | Checked  | AM |
|              |          | Approved |    |

Project

SSD-17552047  
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KEMPS CREEK

Title

CONSTRUCTION STAGING  
PLAN  
STAGE 5

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|-----------------------|------------------|-------|
| Status                | FOR CONSTRUCTION | A1    |
| Project - Drawing No. | 20-776-C10066    | Issue |
|                       |                  | 01    |



[The page contains a large, faint, and mostly illegible watermark or bleed-through from the reverse side. The text is mirrored and difficult to decipher, but appears to be a formal document or letter. Some faint words like "SIR" and "Yours faithfully" are visible.]





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28 July 2025

**Subject: SSD-17552047 The Edge Estate – Erosion and Sediment Control Consultation (B24(b))**

In accordance with Condition B24 (b), which requires the Erosion and Sediment Control Plan (ESCP) *be prepared in consultation with CPHR, Sydney Water and include written evidence of the outcomes of the consultation process and how the recommendations have been incorporated into the ESCP*; this letter provides record and evidence of compliance to this condition.

A summary of consultation with CPHR is outlined in the table below, and supporting documents provided in Appendix A.

| Date      | Description                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------------------|
| 20-Jun-25 | AT&L Email - submission of full design package to CPHR for final consultation which includes ESC package. |
| 1-Jul-25  | AT&L Email following up on CPHR consultation                                                              |
| 7-Jul-25  | Frasers Email following up on CPHR consultation                                                           |
| 10-Jul-25 | CPHR Email - advising ESC still under assessment due to heavy workload.                                   |
| 10-Jul-25 | Frasers Email notifying CPHR that consultations will close on 11/7/25 (3 weeks from submission)           |
| 16-Jul-25 | CPHR Email - provides advice and comments on the ESCP Review.                                             |
| 24-Jul-25 | Frasers Email and AT&L CPESC Response letter to address CPHR comments on 16/07/25.                        |

A summary of consultation with Sydney Water is outlined in the table below, and supporting documents provided in Appendix B.

| Date      | Description                                                                                                                                                                                              |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11-Jul-25 | Meeting held with Sydney Water, Frasers and AT&L to discuss stormwater and ESC matters. The ESC plan was shared with Sydney Water during the meeting and no concerns were raised regarding the ESC plan. |
| 18-Jul-25 | Secondary Meeting held with Sydney Water regarding safety in design, no issues were raised on the ESC plans.                                                                                             |
| 21-Jul-25 | Frasers Email, sharing updated design package which have addressed outstanding matters. Email confirms ESC remains unchanged - no issues raised.                                                         |

Regards,

**Monica Ngo**  
Project Engineer

**Frasers Property Industrial Australia**

[monica.ngo@frasersproperty.com.au](mailto:monica.ngo@frasersproperty.com.au)  
02 9767 2240



**Appendix A: CPHR Consultation Documentation**



## Monica Ngo

---

**From:** Ahmad Ghalayini  
**Sent:** Thursday, 10 July 2025 2:06 PM  
**To:** Susan Harrison; OEH ROG Greater Sydney Region Planning Unit Mailbox  
**Cc:** Pamela Morales; Angela Stewart; Samantha Wilson  
**Subject:** RE: SSD-17552047 BCS ESCP review

Hi Susan,

Thank you for your email.

Though we are closing consultations on 11/07/25, we remain happy to receive your feedback on the package submitted 20/06/25 and ensure our plans align with your expectations so please advise an expected response time.

We will therefore proceed with administering the remaining requirements under conditions B24 & B28 with DPHI.

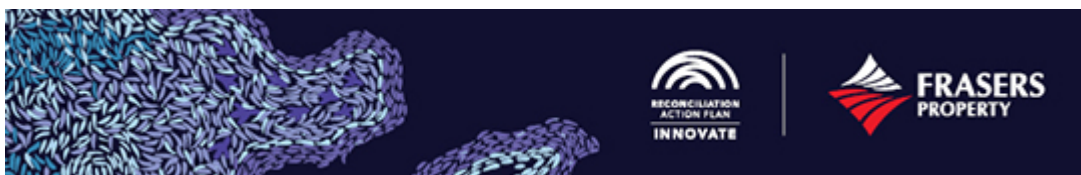
We are more than happy to organise a session where our consultants can present the content of the submission and facilitate the consultation process.

Regards,

**Ahmad Ghalayini**  
Project Manager - Infrastructure  
**Frasers Property Industrial**

**T** +61 2 9767 2197 **M** +61 475 592 689  
**E** [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)

Level 15, 180 George Street, Sydney NSW 2000  
[FrasersPropertyIndustrial.com](https://www.frasersproperty.com.au)



At Frasers Property, we acknowledge the Traditional Custodians of the land on which we operate and pay respects to Elders past, present, and future.

Our email signature artwork, Flow, created by Maddison Gibbs, a proud Barkindji woman, deeply resonates with our values. The piece represents the connection of land, sea, sky, and time - honouring both the past and looking toward the future

**From:** Susan Harrison <[Susan.Harrison@environment.nsw.gov.au](mailto:Susan.Harrison@environment.nsw.gov.au)>  
**Sent:** Thursday, 10 July 2025 9:39 AM  
**To:** Ahmad Ghalayini <[ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)>  
**Cc:** Pamela Morales <[pamela.morales@planning.nsw.gov.au](mailto:pamela.morales@planning.nsw.gov.au)>; Angela Stewart <[angela.stewart@environment.nsw.gov.au](mailto:angela.stewart@environment.nsw.gov.au)>  
**Subject:** SSD-17552047 BCS ESCP review

You don't often get email from [susan.harrison@environment.nsw.gov.au](mailto:susan.harrison@environment.nsw.gov.au). [Learn why this is important](#)

**EXTERNAL EMAIL:** Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hello Ahmad



Thank you for your email. The Edge Estate ESCP review is still currently under assessment. The Branch has a heavy workload and items for response are dealt with in the order they are received. We work as quickly as possible to respond.

If you have any further queries, please email [rog.gsrplanning@environment.nsw.gov.au](mailto:rog.gsrplanning@environment.nsw.gov.au)

Regards  
Susan

**Susan Harrison**  
Senior Team Leader Planning, Greater Sydney  
Regional Delivery  
**Conservation Programs, Heritage and Regulation**  
**Department of Climate Change**  
**Energy, the Environment and Water**

E [susan.harrison@environment.nsw.gov.au](mailto:susan.harrison@environment.nsw.gov.au)

[dcceew.nsw.gov.au](http://dcceew.nsw.gov.au)

Level 14, 4 Parramatta Square,  
Parramatta



I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

---

**From:** Ahmad Ghalayini <[ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)>  
**Sent:** Monday, 7 July 2025 4:55 PM  
**To:** Angela Stewart <[angela.stewart@environment.nsw.gov.au](mailto:angela.stewart@environment.nsw.gov.au)>  
**Cc:** Monica Ngo <[monica.ngo@frasersproperty.com.au](mailto:monica.ngo@frasersproperty.com.au)>; OEH ROG Greater Sydney Region Planning Unit Mailbox <[rog.gsrplanning@environment.nsw.gov.au](mailto:rog.gsrplanning@environment.nsw.gov.au)>; Matthew Murphy <[matthew.m@atl.net.au](mailto:matthew.m@atl.net.au)>; Samantha Wilson <[samantha.wilson@frasersproperty.com.au](mailto:samantha.wilson@frasersproperty.com.au)>  
**Subject:** RE: SSD-17552047 BCS ESCP review (DOC24/801778)

Hi Angela,

Tried to call and left a message today as we are after an update on the below email.

I note we aim to close consultation on conditions B24 & B28 of SSD17552047 by Friday 11/07/25.

Kind Regards,

**Ahmad Ghalayini**  
Project Manager - Infrastructure  
**Frasers Property Industrial**

T +61 2 9767 2197 M +61 475 592 689  
E [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)

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Our email signature artwork, Flow, created by Maddison Gibbs, a proud Barkindji woman, deeply resonates with our values. The piece represents the connection of land, sea, sky, and time - honouring both the past and looking toward the future

**From:** Matthew Murphy <[matthew.m@atl.net.au](mailto:matthew.m@atl.net.au)>

**Sent:** Tuesday, 1 July 2025 8:55 AM

**To:** OEH ROG Greater Sydney Region Planning Unit Mailbox <[rog.gsrplanning@environment.nsw.gov.au](mailto:rog.gsrplanning@environment.nsw.gov.au)>

**Cc:** Angela Stewart <[angela.stewart@environment.nsw.gov.au](mailto:angela.stewart@environment.nsw.gov.au)>; Ahmad Ghalayini

<[ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)>; Monica Ngo <[monica.ngo@frasersproperty.com.au](mailto:monica.ngo@frasersproperty.com.au)>

**Subject:** RE: SSD-17552047 BCS ESCP review (DOC24/801778)

---

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Hi Angela

Just following up to see if you have any feedback on the email below, I tried to call to discuss.

Please call me to discuss when you have some time.

Kind regards,

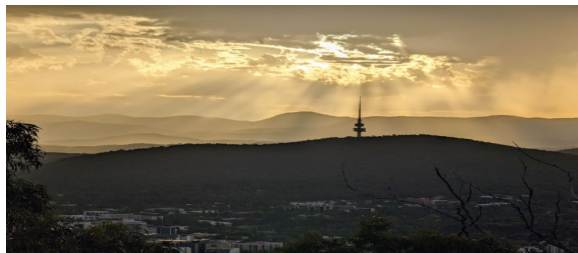
**Matthew Murphy**  
Senior Project Manager



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**Telstra Tower, Canberra NSW**  
**Photo by our Senior Civil Engineer - Suzanne Mustafa**

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---

**From:** Matthew Murphy

**Sent:** Friday, 20 June 2025 3:39 PM

**To:** OEH ROG Greater Sydney Region Planning Unit Mailbox <[rog.gsrplanning@environment.nsw.gov.au](mailto:rog.gsrplanning@environment.nsw.gov.au)>

**Cc:** Angela Stewart <[angela.stewart@environment.nsw.gov.au](mailto:angela.stewart@environment.nsw.gov.au)>; [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au); Monica Ngo <[monica.ngo@frasersproperty.com.au](mailto:monica.ngo@frasersproperty.com.au)>

**Subject:** RE: SSD-17552047 BCS ESCP review (DOC24/801778)

Hi Angela



As discussed, we have recently received the SSD consent for the development along Aldington Rd, this has allowed access to the portal as noted in your email below.

Per our discussion as part of the consent there is a final consultation with CPHR for Conditions 24 and 28.

Package includes the following items

- SSD consent
- ESCP package (10,000)
- Infrastructure package (30,000)
- Trunk channel package (40,000)
- Landscape package (Coco)
- Drains models
- Approved SSD staging plans

 [Frasers CPHR review](#)

As agreed this consultation process would be best managed over emails rather than through the Portal, with the final documents loaded to the Portal once agreed.

Can I ask for you and your team to please review the attached information and confirm if these details are consistent with the consent and CPHR requirements to allow our private certifier to issue a Subdivision Works Certificate.

Let me know if you have any questions.

Kind regards,

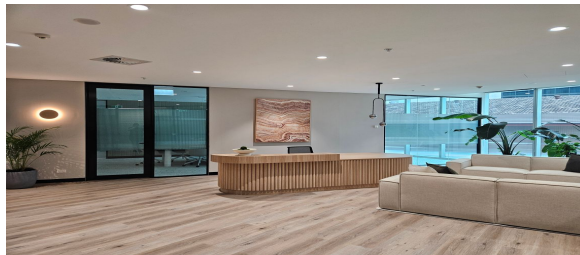
**Matthew Murphy**  
Senior Project Manager



Sydney | Melbourne | Brisbane  
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**New Parramatta Location:**  
**Suite 1.02, Level 1, 60 Station St, Parramatta, NSW, 2150**

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---

**From:** Angela Stewart <[angela.stewart@environment.nsw.gov.au](mailto:angela.stewart@environment.nsw.gov.au)>

**Sent:** Wednesday, 18 December 2024 2:03 PM

**To:** Matthew Murphy <[matthew.m@atl.net.au](mailto:matthew.m@atl.net.au)>

**Cc:** OEH ROG Greater Sydney Region Planning Unit Mailbox <[rog.gsrplanning@environment.nsw.gov.au](mailto:rog.gsrplanning@environment.nsw.gov.au)>; Wafaa Wasif <[Wafaa.Wasif@environment.nsw.gov.au](mailto:Wafaa.Wasif@environment.nsw.gov.au)>; Anthony McLandsborough <[anthony.m@atl.net.au](mailto:anthony.m@atl.net.au)>; [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au); [samantha.wilson@frasersproperty.com.au](mailto:samantha.wilson@frasersproperty.com.au)

**Subject:** RE: SSD-17552047 BCS ESCP review (DOC24/801778)



Good afternoon Matthew,

Thanks for your email.

Could you please send the revised ESCP via the Major Projects Portal. Please refer to the attached instructions (Steps 1-9) which can also be accessed here: [Frequently Asked Questions | Planning Portal - Department of Planning and Environment \(nsw.gov.au\)](#)

Kind Regards,

**Angela Stewart**  
**Senior Conservation Planning Officer – Greater Sydney Branch**

Regional Delivery  
Biodiversity, Conservation and Science  
Department of Climate Change, Energy, the Environment and Water  
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4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150  
Working days Monday to Friday  
[dcceew.nsw.gov.au](http://dcceew.nsw.gov.au)

---

**From:** Matthew Murphy <[matthew.m@atl.net.au](mailto:matthew.m@atl.net.au)>

**Sent:** Wednesday, 18 December 2024 11:09 AM

**To:** Marnie Stewart <[Marnie.Stewart@environment.nsw.gov.au](mailto:Marnie.Stewart@environment.nsw.gov.au)>

**Cc:** Wafaa Wasif <[Wafaa.Wasif@environment.nsw.gov.au](mailto:Wafaa.Wasif@environment.nsw.gov.au)>; Anthony McLandsborough <[anthony.m@atl.net.au](mailto:anthony.m@atl.net.au)>; Ahmad Ghalayini <[ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)>; [samantha.wilson@frasersproperty.com.au](mailto:samantha.wilson@frasersproperty.com.au)

**Subject:** SSD-17552047 BCS ESCP review (DOC24/801778)

Hi Marnie

I am working with Frasers on the development of the project at 141-251 Aldington road Kemps Creek (SSD-17552047), we have now received consent conditions that require consultation with BCS regarding the ESCP for the proposed development.

See below the specific consent conditions that relate to BCS consultation under **SSD-17552047**.

#### **Condition B26 Erosion and Sediment Control**

B26. Prior to the commencement of any earthworks or other surface disturbance, the Applicant must prepare an Erosion and Sediment Control Plan (ESCP) to the satisfaction of the Planning Secretary. The ESCP must:

- (a) be prepared by a CPESC specialist whose appointment has been approved by the Planning Secretary;
- (b) **be prepared in consultation with BCS**, Sydney Water and include written evidence of the outcomes of the consultation process and how the recommendations have been incorporated into the ESCP;
- (c) be independently reviewed and verified by the ER prior to submission to the Planning Secretary;
- (d) comply with the detailed technical specifications in the Technical guidance for achieving Wianamatta South Creek stormwater management targets (DPE 2022) (the Technical Guidance) or its latest version and the performance criteria in Appendix 3 in this consent;
- (e) detail measures to protect passively irrigated street trees during construction works, if these are installed before construction is completed; and
- (f) be included in the CEMP required by conditions C2 and C5.



See attached link to detailed plans of the proposed ESCP package, including previously agreed staging plans for approval as part of the consultation requirements of the consent.

 [Fraser BCS ESCP pack](#)

We request your feedback by COB 15<sup>th</sup> January 2024 so we can incorporate into a final set of drawings for construction.

Please call me if you have any questions on the above.

Kind regards,

**Matthew Murphy**  
Senior Project Manager



**Merry Christmas & Happy New Year!**  
**Wishing you all the very best this holiday season and beyond.**

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[www.atl.net.au](http://www.atl.net.au)

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North Sydney NSW 2060

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0410 571 109

**AT&L Christmas Closure**  
**23rd December 2024 - 3rd January 2025**

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E [info@atl.net.au](mailto:info@atl.net.au)  
ABN 96 130 882 405  
[www.atl.net.au](http://www.atl.net.au)

24 July 2025

**Frasers Property**

Level 15  
180 George Street  
Sydney NSW 2000

**Your Ref:**

**Our Ref:** LTR014-01-20-776 Response to CPHR re  
ESCP.docx

**Attention:** Ahmad Ghalayini

**Email:** [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)

Dear Ahmad,

**RE: EDGE ESTATE – 155-251 ALDINGTON ROAD, KEMPS CREEK**  
**SSD-17552047 – RESPONSE TO CPHR GROUP LETTER REGARDING ESCP**

This letter outlines a response to comments received from the NSW Conservation Programs, Heritage and Regulation (CPHR) Group in their letter to Frasers Property Industrial dated 15 July 2025 in relation to the Erosion and Sediment Control Plan (ESCP) for The Edge Estate.

Please refer to the enclosed ESCP report, which contains a series of erosion and sediment control drawings in Appendix A.

The table below outlines AT&L's response to the comments provided by CPHR Group.

| CPHR Group Comment (15 July 2025)                                                                                                                                                    | AT&L Response                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Review the Technical Guidance for Achieving Wianamatta-South Creek stormwater management targets that outlines what is required in an ESCP, specifically pages 6 and 11.          | AT&L has prepared the attached Erosion and Sediment Control Plan (ESCP) and associated drawings (contained in Appendix A of the ESCP) generally in accordance with the requirements of the <i>Technical guidance for achieving Wianamatta-South Creek stormwater management targets</i> . Deviations from the Technical guidance are explained and justified in the ESCP. |
| 2. The ESCP is developed and certified by a Certified Professional in Erosion and Sediment Control (CPESC) or an equivalent qualification with at least 5 years' relevant experience | The ESCP has been developed and certified by Tim Michel of AT&L (CPESC No. 11555).<br>Refer to page 2 of the ESCP report for details and certification.                                                                                                                                                                                                                   |
| 3. Provide an ESCP report that:                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                           |
| a. includes relevant sections such as introduction, site characteristics, catchments and drainage, erosion and sediment control strategy, and erosion and sediment control details   | Refer to the attached ESCP report inclusive of and introduction (Section 1), site characteristics / conditions (Section 2), catchments (Section 5.3 and Figure 3), ESC strategy (Section 5), and control measures (Section 5.1 to 5.4) and supporting figures and appendices.                                                                                             |



| CPHR Group Comment (15 July 2025)                                                                                                                                                                                                                                                                                                                                                                                               | AT&L Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>b. quantifies and confirms the stormwater targets during the construction phase have been met</i></p> <p><i>i. This will be deemed to be achieved when high efficiency sediment basins are provided in accordance with Best Practice Erosion and Sediment Control – Appendix B (International Erosion Control Association 2018). For alternative solutions, modelling will be required to demonstrate compliance.</i></p> | <p>Enlarged Type D sediment basins have been proposed based on <a href="#">advice received by BCS on the application for the development at 113-153 Aldington Road</a>, a summary of which is provided below:</p> <p><b>Issue: Erosion and Sediment Control</b></p> <p>The Erosion and Sediment Control Plan (ESCP) document seems to restate requirements rather than detail specific strategies, while the plan (sheet C1101) is only applicable once final earthworks levels are reached. <b>The proposed approach of enlarged Type-D basins in lieu of high-efficiency basins is valid but presents additional challenges due to the space requirements (~900m<sup>2</sup>/ha).</b></p> <p><b>Information required</b></p> <p>Provide a revised ESCP which addresses the requirements of the Mamre Road Precinct DCP Section 4.4.2 and <i>Technical guidance for achieving Wianamatta–South Creek stormwater management targets</i> (DPE, 2022), which demonstrates achievement of the targets listed in Table 5 of the DCP. The revised ESCP is to specifically address the following:</p> <ul style="list-style-type: none"> <li>• Provide plans for each major phase of works, including clearing and grubbing, bulk earthworks (existing and final levels), civil works, and stabilisation/practical completion.</li> </ul> <p style="text-align: right;">2</p> <hr/> <ul style="list-style-type: none"> <li>• Identify the type of sediment basin and provide details for all functional components (e.g., forebay, level spreader, spillway, dosing system, flocculant type). Note that if enlarged Type-D basins are proposed then a space allowance of 900m<sup>2</sup>/ha should be provided.</li> <li>• <b>Provide sediment basin calculations demonstrating compliance with the DCP Table 5 targets (or adopt 900m<sup>2</sup>/ha).</b></li> <li>• Provide catchments plans identifying the sub catchments for all major drainage and sediment controls for each phase of works.</li> <li>• Provide calculation tables and sizing/dimensions for all major controls during all phases of works.</li> <li>• Provide a construction sequence identifying the order and timing for both the implementation and decommissioning of all controls, relative to specific site activities/hold points.</li> <li>• Provide details on the timing, methods and performance requirements for stabilisation of each area of site disturbance.</li> <li>• Provide specific advice in relation to dispersive soil management – particularly in relation to excavated drainage controls.</li> <li>• Provide details on how discharges from each basin will be managed so as not to reduce the hydrologic effectiveness of other basins (currently several basins are shown as inter-connected).</li> </ul> <p>It is noted that the Dexu development at 113-153 Aldington Road is located directly north of The Edge Estate, and both sites are located within the same soil landscape (Luddenham), meaning both are characterised by the presence of Type D (dispersive) soils.</p> <p>Refer to Section 5.3 of the attached ESCP report for more details on sediment basins.</p> <p>We note that in previous submissions to BCS Group (now CPHR Group), the use of enlarged type-D basins on the Edge Estate was mentioned such as in LTR013 dated 12/3/25 by AT&amp;L. CPHR Group advice dated 21/3/25 noted AT&amp;L’s response as reasonable, thereby deeming the use of enlarged type-D basins acceptable.</p> |
| <p><i>c. outlines any soil testing that should be undertaken or provide conservative soil parameters to be adopted. Specific advice on how dispersive soils have been considered and will be managed is also required.</i></p>                                                                                                                                                                                                  | <p>Dispersive soil management principles are outlined in Section 4.4 of the ESCP report.</p> <p>As outlined in Section 6.2 of the ESCP, testing of sediment laden surface water runoff should be undertaken to determine the most appropriate coagulant and/or flocculant type and dosage.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><i>d. include signed certification by a CPESC or equivalent qualification.</i></p>                                                                                                                                                                                                                                                                                                                                           | <p>Refer to Document Registration in the ESCP report for certification.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| CPHR Group Comment (15 July 2025)                                                                                                                                                                                                                                                                                  | AT&I Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>4. Provide ESCP construction staging plans that show:</p> <p>a. existing catchments, pre-development contours plan and arrows that indicate the direction of flow</p> <p>b. staging of earthworks</p> <p>c. final catchments, contours plan with earthworks and arrows that indicate the direction of flow.</p> | <p>Refer to catchment plans and staging plans in Appendix A of the ESCP</p> <p>Refer to Section 2.1 (Figure 2) of the ESCP showing pre-development catchment delineation</p> <p>Refer to drawings 20-776-C10061 to C10066 (last six pages of Appendix A)</p> <p>Refer to Figure 4 on page 11 of the ESCP report.</p>                                                                                                                                                                |
| 5. Provide ESCP construction staging plans that:                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| a. represent each phase of works including clearing, earthworks (including existing and final levels), civil construction and landscaping                                                                                                                                                                          | Refer to drawings C10061 to C10066 inclusive in Appendix A of the ESCP for construction phasing.                                                                                                                                                                                                                                                                                                                                                                                    |
| b. show erosion, drainage, and sediment controls for each phase                                                                                                                                                                                                                                                    | Erosion, drainage and sediment controls for each major construction phase are presented in Appendix A of the ESCP                                                                                                                                                                                                                                                                                                                                                                   |
| c. identify external catchments and clean water drains                                                                                                                                                                                                                                                             | <p>External catchments are presented in the construction phasing plans.</p> <p>The nature of the works and the external catchments is such that clean water diversion around work areas is not considered feasible. Based on this, sediment basins have been sized to treat external catchment areas that will drain through the site (limited to a portion of the Dexu development to the north of The Edge Estate and part of Aldington Road to the east of The Edge Estate).</p> |
| d. show flow of clean water around the site and flow of dirty water within the site                                                                                                                                                                                                                                | <p>Dirty water diversion drains are presented in the ESCP drawings in Appendix A.</p> <p>As noted above, no clean water diversions are proposed within or around the site due to limitations including existing and proposed topography, extent of bulk earthworks to facilitate the proposed development, and external works (upgrade of Aldington Road) adjacent to The Edge Estate.</p>                                                                                          |
| e. provide sizing for major drainage and sediment control including basins                                                                                                                                                                                                                                         | Sizing of major drainage and sediment controls is presented in drawing C10050 in Appendix A of the ESCP.                                                                                                                                                                                                                                                                                                                                                                            |
| f. quantify compliance with the stormwater targets.                                                                                                                                                                                                                                                                | <p>Confirmation of compliance against the construction phase stormwater quality targets is outlined in Section 3 (Table 1), Section 5.3 and Section 6.2 of the ESCP report.</p> <p>In addition, contingency management measures are outlined in Section 8 of the ESCP report.</p>                                                                                                                                                                                                   |

\*\*\*\*\*



Should you have any questions, please don't hesitate to contact the undersigned.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Tim Michel', with a stylized, cursive script.

**Tim Michel**

Associate Technical Director | Urban Water Management

0402 253 865

[tim.m@atl.net.au](mailto:tim.m@atl.net.au)



**Appendix B: Sydney Water Consultation Documentation**



## Monica Ngo

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**From:** Ahmad Ghalayini  
**Sent:** Monday, 21 July 2025 4:13 PM  
**To:** Craig Bush  
**Cc:** Naiem Teghlobi; Lubna Thalib; Darren Galia; Matthew Murphy; Monica Ngo  
**Subject:** RE: [External] RE: Frasers OSD/channel maintenance  
**Attachments:** SSD-17552047 Instrument of Determination.pdf

Hi Craig,

Thanks again for organising the SiD workshop on Friday, it was a very productive session.

I have now updated the shared folder (  [03. Shared with SWC](#) ) as follows:

- **Trunk drainage set** updated based on latest meeting addressing items such as handrails on headwalls and rip rap around drop structure (Requiring satisfaction of Sydney Water B28 & B30 of SSD17552047 – approval attached for reference)
- **Erosion and Sediment Control Plan** (previously accepted in principle and requiring consultation with Sydney Water per condition B24 of SSD17552047) – no change from last review
- Basins DWG file for irrigation design review as agreed on Friday
- Latest landscaping design – no change from last review
- Estate roads stormwater set – included in infrastructure set labelled C30000

Hoping we are still on track for finalising your design review this week.

Kind Regards,

**Ahmad Ghalayini**

Project Manager - Infrastructure

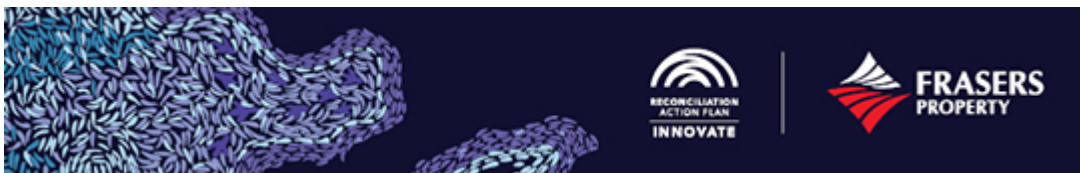
**Frasers Property Industrial**

T +61 2 9767 2197 M +61 475 592 689

E [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)

Level 15, 180 George Street, Sydney NSW 2000

[FrasersPropertyIndustrial.com](http://FrasersPropertyIndustrial.com)



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Our email signature artwork, Flow, created by Maddison Gibbs, a proud Barkindji woman, deeply resonates with our values.

The piece represents the connection of land, sea, sky, and time - honouring both the past and looking toward the future

---

**From:** Craig Bush <[Craig.Bush@sydneywater.com.au](mailto:Craig.Bush@sydneywater.com.au)>

**Sent:** Wednesday, 16 July 2025 2:44 PM

**To:** Ahmad Ghalayini <[ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)>

**Cc:** Naiem Teghlobi <[Naiem.Teghlobi@frasersproperty.com.au](mailto:Naiem.Teghlobi@frasersproperty.com.au)>; Lubna Thalib <[LUBNA.THALIB@sydneywater.com.au](mailto:LUBNA.THALIB@sydneywater.com.au)>; Darren Galia <[Darren.Galia@sydneywater.com.au](mailto:Darren.Galia@sydneywater.com.au)>

**Subject:** Re: [External] RE: Frasers OSD/channel maintenance



**EXTERNAL EMAIL:** Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Ahmad,

I'll pass them onto our commercial team and ask for an estimated timeframe for when they would expect the review to be completed.

On the design review I would assume by the end of next week should be fine, but I'll have a chat to the team tomorrow timeframes to confirm.

Speak soon.

## Craig Bush

Wianamatta Stormwater Lead

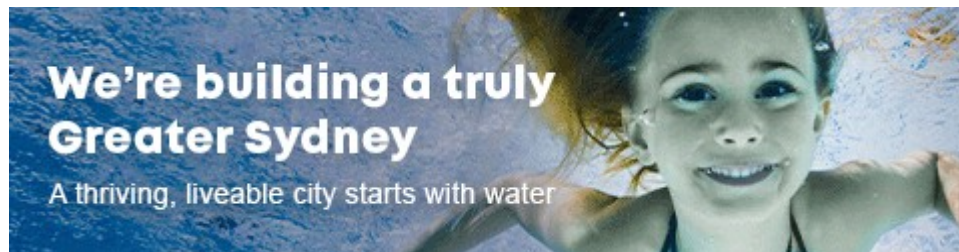
Business Development

**Mobile** 0475 063 488

1 Smith Street  
Parramatta NSW 2150

[craig.bush@sydneywater.com.au](mailto:craig.bush@sydneywater.com.au)

I'm in the office Monday and Thursday



Sydney Water respectfully acknowledges the traditional custodians of the land and waters on which we work, live and learn. We pay respect to Elders past and present.

[Read more](#) about our commitment to reconciliation.



---

**From:** Ahmad Ghalayini <ahmad.ghalayini@frasersproperty.com.au>

**Sent:** Tuesday, July 15, 2025 11:39 AM

**To:** Craig Bush <Craig.Bush@sydneywater.com.au>

**Cc:** Naiem Teghlobi <Naiem.Teghlobi@frasersproperty.com.au>; Lubna Thalib



<LUBNA.THALIB@sydneywater.com.au>; Darren Galia <Darren.Galia@sydneywater.com.au>

**Subject:** RE: [External] RE: Frasers OSD/channel maintenance

Hi Craig,

As discussed, please find attached the marked-up Stormwater Developer Works Agreement and the accompanying Key Issues List prepared by our legal team for The Edge Estate (SSD-17552047). We are submitting these now to allow your review in parallel with your team's design assessment.

Could you please confirm an indicative timeframe for your feedback on these documents? We'd appreciate your guidance so we can align program expectations on our side. Notwithstanding the agreement execution being a requirement for a S73 and not design approval, we are aiming to ensure the civil contractor is informed of and aligned with the contents of this agreement.

Once the design is approved, we'll be sending a BoQ template for your review and approval based on which we will get 3 contractor prices. Since we are having our safety in design workshop this Friday, I am targeting we secure your acceptance of the design next week.

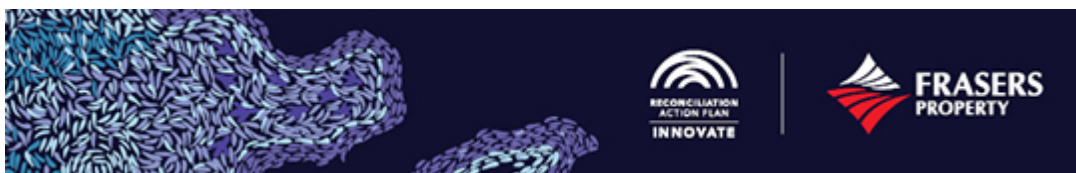
Let me know if you require anything further.

Kind Regards,

**Ahmad Ghalayini**  
Project Manager - Infrastructure  
**Frasers Property Industrial**

**T** +61 2 9767 2197 **M** +61 475 592 689  
**E** [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)

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---

**From:** Craig Bush <Craig.Bush@sydneywater.com.au>

**Sent:** Tuesday, 1 April 2025 10:06 AM

**To:** Ahmad Ghalayini <ahmad.ghalayini@frasersproperty.com.au>; 'Matthew Murphy' <matthew.m@atl.net.au>; Lubna Thalib <LUBNA.THALIB@sydneywater.com.au>; Darren Galia <Darren.Galia@sydneywater.com.au>

**Cc:** Naiem Teghlobi <Naiem.Teghlobi@frasersproperty.com.au>

**Subject:** RE: [External] RE: Frasers OSD/channel maintenance

---

**EXTERNAL EMAIL:** Do not click links or open attachments unless you recognise the sender and know the content is safe.

---

Hi Ahmad,

Thanks for the email. I've updated the below based on some feedback from our commercial lead regarding the timing of the Stormwater DSP to confirm the assumptions in the email are correct. I have added some text below in red adding detail/confirming information.

Note we still need to work out the maintenance responsibilities of the trunk drainage channel. I'm not around until after easter, I would suggest we organise a specific meeting to through that to confirm the arrangement in early May. Noting that the channel in the OSD will need to be maintained by Frasers for 2 years post practical completion (which doesn't include interim works – such as sediment basins etc.) so we do have time but it would be good to get a formal agreement.

If you have any questions, please give me a call.

Regards,

**Craig Bush**

Acting Wianamatta Stormwater Lead

Western Sydney Development

**Mobile** 0475 063 488

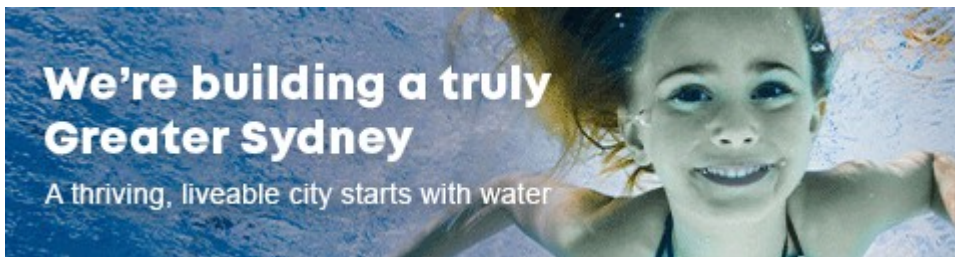
1 Smith Street  
Parramatta NSW 2150

[craig.bush@sydneywater.com.au](mailto:craig.bush@sydneywater.com.au)

I'm in the office Monday and Thursday

**Sydney**  
**WATER**





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[Read more](#) about our commitment to reconciliation.



---

**From:** Ahmad Ghalayini <ahmad.ghalayini@frasersproperty.com.au>

**Sent:** Monday, 31 March 2025 5:20 PM

**To:** 'Matthew Murphy' <matthew.m@atl.net.au>; Craig Bush <Craig.Bush@sydneywater.com.au>; Lubna Thalib <LUBNA.THALIB@sydneywater.com.au>; Darren Galia <Darren.Galia@sydneywater.com.au>

**Cc:** Naiem Teghlobi <Naiem.Teghlobi@frasersproperty.com.au>

**Subject:** RE: [External] RE: Frasers OSD/channel maintenance

Hi Everyone,

Thank you for your time on Friday. A recap on what has been discussed:

Agreed Points:

- Procurement requirements:
  - FPI shall provide Sydney Water with 3 quotes for the works in the western channel and for the open channel component of the chain of basins in the Transgrid easement to enable reimbursement.
    - Prior to going out to quote the developer is to:
      - Receive Sydney Water endorsement of the final design, including staging (I understand these OSD systems and the western channel are going to be used as sediment basins as well, noting we will not be covering any costs associated to interim works). If these are provided in the link below great but we'll need to provide endorsement that that are satisfactory before you go to quote.
        - We can get formal approval of the "for construction set" in the period prior to construction through the E-Developer process.
      - Ensure the BOQ for the proposed construction works clearly articulates the components to be funded by Sydney Water and those covered by developer. These are to be provided to Sydney Water for endorsement before going out to quote.
      - Prepare procurement documentation as per our procurement policy
      - Go out to market to a minimum of 3 suitable contractors.
  - Sydney Water will elect the price based on the above, FPI can choose the contractor. **Correct**



- This price is to be use the developer works agreement along with a clear scope of the works for Sydney Water reimbursement
- The Final “for Construction” design set and Inspection and Test Plan for the works provided to Sydney Water for endorsement prior to construction commencing.
- Only vegetation within channels will be reimbursed, landscaped irrigation spaces outside the channels will not be included in the reimbursement area – **Correct**.
- Irrigated spaces outside the channels can be landscaped per FPI’s landscaping guidelines. **Correct, however it would still need to reflective the approved DCP planting list, which includes the Airport requirements to reduce bird strike (assuming to be signed off by Council/DPHI).**
- Stormwater DSP is not required for a road dedication administrative S73 but will need to be paid prior to an Occupation certificate or an Industrial Lot Subdivision certificate.
  - The stormwater DSP is to be paid prior to a building/Lot receiving a Section 73 certificate and OC (this will include any associated local road or other areas developed).
  - For the Frasers the Edge development the only components exempt from DSP payment include the electrical easement, the trunk drainage channel, and the corrector road (Aldington Road to Barings). The rest of the Edge is Developable and, in our calculations, to be confirmed once requesting DSP formally, would include a total of 53.222ha of DSP (which is \$46.7m using the current rate of \$877,200/ha).
- Sydney Water confirmed adjusting the boundaries of the FPI/Barrings western channel is acceptable as long as the conveyance width and max flow line is not impacted and the total area reduction is less than a 1,000 m2. **Correct**

#### Other Queries:

- What is the timing of payment of the PW, RW & WW contributions/DSPs, are they also prerequisites for OC and Industrial Lot subdivision?
  - As indicated above the stormwater/RW DSP is to be paid as a prerequisite to OC.
  - For PW and WW there may be one amount collected on subdivision (to cover potential permissible use) and then a later amount collected to cover the final building's actual demand, this is to be confirmed by Lubna and the WSC.
- Can we stage the stormwater DSP payments as per the subdivision or the occupation certification staging?
  - Yes, but it will need to be paid prior to receiving S73 for any building. So, if there is 10 lots/buildings the DSP will need to be paid for each lot/building and associated areas (including local roads or landscaped areas) at that time.

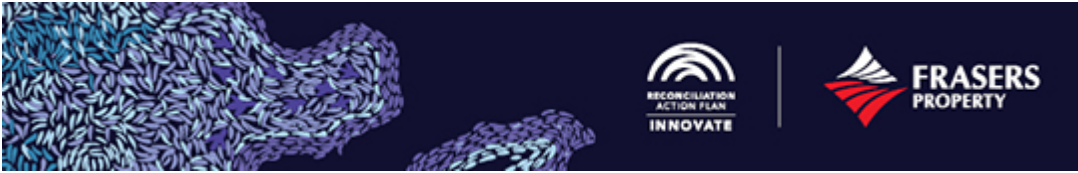
I note that our drawings have been submitted per the below link and the truck drainage civil set has been submitted in the attached email @'Matthew Murphy', would appreciate if you can share with Sydney Water a consolidated updated set covering the latest discussions inclusive of the coordination with Barings.

 [03. Shared with SWC](#)

Kind Regards,  
**Ahmad Ghalayini**  
 Project Manager - Infrastructure  
**Frasers Property Industrial**

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 E [ahmad.ghalayini@frasersproperty.com.au](mailto:ahmad.ghalayini@frasersproperty.com.au)  
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---

**From:** Ahmad Ghalayini

**Sent:** Tuesday, 25 March 2025 9:59 PM

**To:** 'Craig Bush' <[Craig.Bush@sydneywater.com.au](mailto:Craig.Bush@sydneywater.com.au)>

**Cc:** 'Lubna Thalib' <[LUBNA.THALIB@sydneywater.com.au](mailto:LUBNA.THALIB@sydneywater.com.au)>; 'Matthew Murphy' <[matthew.m@atl.net.au](mailto:matthew.m@atl.net.au)>

**Subject:** RE: [External] RE: Frasers OSD/channel maintenance

Hi Craig,

Thank for your time last week with Barings, looking forward to your feedback on potential for adjusting channel geometry as discussed.

Can we meet this Friday at 2 pm for the following:

- Channel Landscaping reimbursed by Sydney Water
- Irrigation areas planting reimbursement
- Irrigation coverage areas

I will put in a placeholder and happy to cancel/reschedule to suit.

Kind Regards,

**Ahmad Ghalayini**

Project Manager - Infrastructure

**Frasers Property Industrial**

**T** +61 2 9767 2197 **M** +61 475 592 689

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