



EROSION AND SEDIMENT CONTROL PLAN

ONE SYDNEY HARBOUR

One Sydney Harbour Basement Works, Public Domain and Watermans Cove, Towers

9	03/03/2020	Revised to include works for Towers and to remove Remediation
8	04/09/2019	Revision includes diagram for the Cove insitu concrete pour
7	29/05/2019	Revision includes updated piling diagram for the Cove
6	08/02/2019	Revision includes updated Hickson Rd remediation stormwater management diagram
5	22/10/2018	Revision includes works for Public Domain and the Cove
4	01/06/2017	Revised issue for remediation works, and One Sydney Harbour Basement – Pile & Slab Construction for Early Piling and SW Accelerated Slab Area
3	18/03/2016	Revised issue for PRW construction
2	18/03/2016	Issue for PRW construction
1	11/03/2016	Issue for comment
<i>Revision</i>	<i>Date</i>	<i>Description</i>

1 INTRODUCTION

This Erosion & Sediment Control Plan provides measures to minimise and manage erosion and sedimentation during One Sydney Harbour Basement works, Public Domain and Associated works, and Towers works. It has been prepared based on consideration of water management across the following scope of works:

OSH Basement (SSD 6960)

- Remainder of building piles to R4B, R5 and car park.
- Construction works of the basement inclusive of piling, ground slabs, services and waterproofing.

Public Domain and Associated Works (SSD 7944)

- Construction works for public domain areas at Watermans Cove, including a public pier, Hickson Park, Watermans Quay, Wulugul Walk and a section of Barangaroo Avenue
- Site preparation
- Ground treatment, finishes and landscaping
- Civil and stormwater infrastructure and utility services
- Installation of furniture, fixtures, lighting and signage

Towers R1 (SSD 6964) & R2 (SSD 6965)

- Construction of the building and facade.
- Internal fitout

This plan forms part of the Water & Stormwater Management Sub-Plan (WSMP). Accordingly, it also forms part of the Lend Lease Building Environmental Management System, and should be read in conjunction with the Project EHS Plan. It does not include Stage 1A or Stage 1C works, as other plans relate to those areas. This plan does not address the management of groundwater, which is separately addressed in the WSMP.

The approach to erosion and sediment management, and the controls specified in this plan, are based on the requirements of *Managing Urban Stormwater – Soils & Construction Volume 1* (Landcom, 2004), otherwise known as the Blue Book.

This plan has been prepared to meet the requirements of:

- Condition B32 of the One Sydney Harbour Basement (SSD6960) development consent.
- Condition C17 of the Public Domain and Watermans Cove (SSD7944) development consent.
- Condition C8 of the Towers development consents.

This plan will be revised and updated as site conditions and construction works change.



2 Surface Water Catchments

This procedure covers the surface water from One Sydney Harbour Basement, Public Domain and Towers works.

2.1 Site Wide Catchment Details

The One Sydney Harbour site (including all temporary works areas) is approximately 5.7 hectares.

Due to its previous use as a port facility, the area was covered in hardstand (bitumen) with various sub-catchments. These sub-catchments were formed as part of the port facility stormwater network.

Some of these stormwater inlets were previously capped prior to construction commencing so that stormwater from the site cannot flow to the harbour.

Discharges to stormwater are via a connection to the existing stormwater which flows into the harbour. These stormwater outlets were designed to cater for flows from the existing site and also to allow for run-off from the eastern catchment, which includes the previous Hickson Road remediation zone, and other areas outside the One Sydney Harbour site.

Water from all areas will be treated appropriately prior to discharge to stormwater. Water from hardstand areas will be kept separate to water from any localised excavations. Sediment controls will be used to treat any water from localised excavations. Flows from hardstand areas may be treated using a basic treatment system depending on the quality of the water. This is discussed in the Water and Stormwater Management Plan. Certain erosion and sediment control measures are highlighted below.

Diagrams showing specific erosion and sediment controls, and important stormwater infrastructure are included in the appendices.

2.2 Final Water Treatment Plant area

While the final water treatment plant is operational, surface water from this area will be collected and treated through the plant before discharge to stormwater.

2.3 Watermans Cove

Localised sediment controls will be employed to minimise run-off impacting the Harbour depending on the works. This may include covering stockpiles, placing sediment socks around stockpiles, cleaning down areas regularly.

Sandstone blocks are cleaned before installation to minimise sediment entering the Harbour during the installation process. This occurs in a bunded location at a lower elevation than the waterfront edge. The bund is cleaned out regularly to minimise potential of sediment entering the Harbour during a flooding event. Once the first 2 rows of sandstone blocks are installed on the waterfront edge, they will function as a sediment barrier.

2.4 Towers

Surface water during Towers construction will generally be managed in accordance with the Water and Stormwater Management Plan. Clean water from hardstand areas will be diverted to stormwater.



3 Management Process

Surface water collected from the various areas within the site will be managed in accordance with a hierarchy of controls outlined in the table below.

Remediation works area - discharge hierarchy summary

Destination	Activity sequence
Re-use onsite	Remaining activities on site require high quality water, thus surface run-off cannot be reused.
Discharge to stormwater	During rainfall events, surface water will be appropriately treated prior to discharge.
Water treatment	Depending on water quality, water may be directed to treatment system prior to discharge. Treated water will be discharged in accordance with the Blue Book requirements. Water treatment is discussed in the Water and Stormwater Management Sub-Plan.

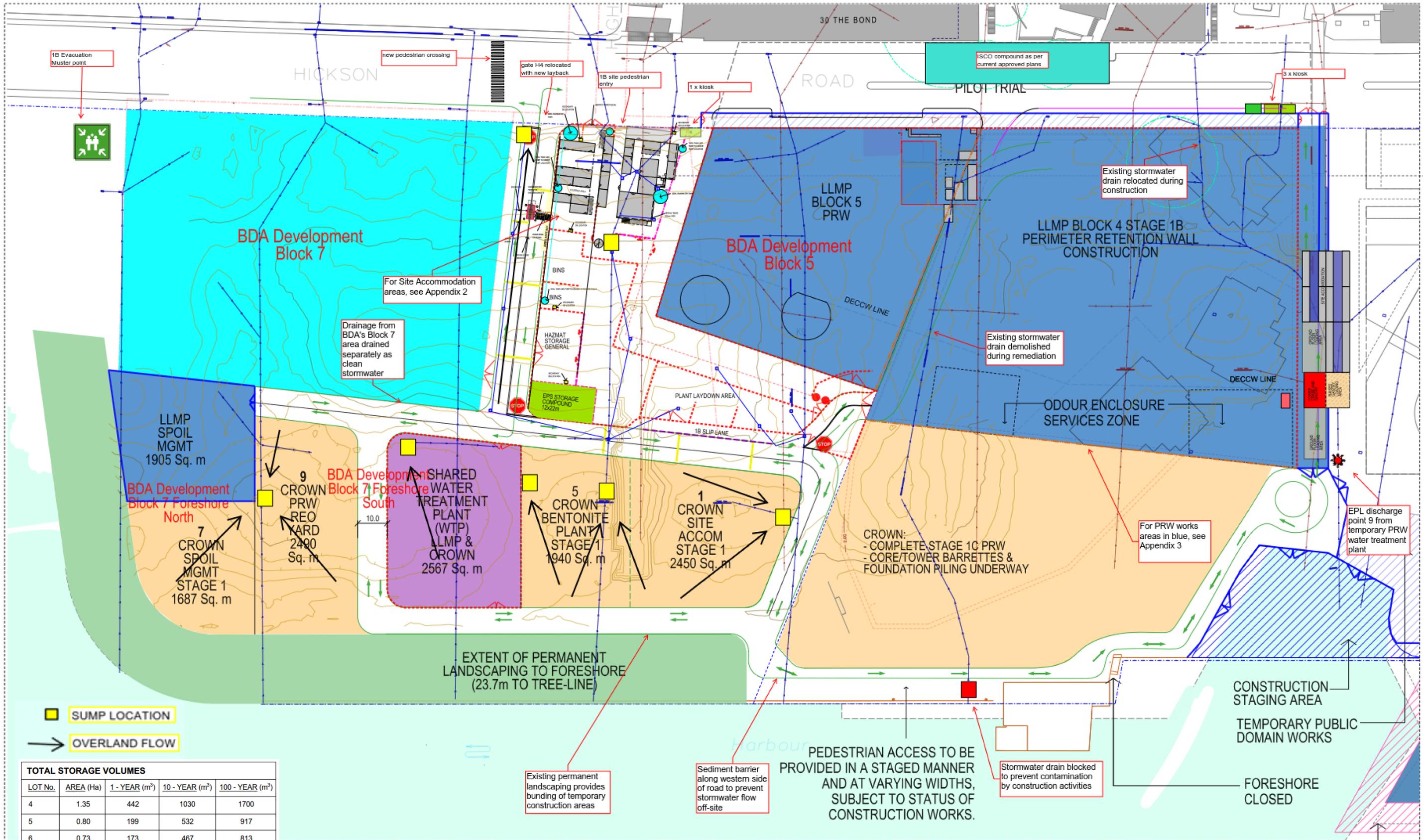
Note that discharge to sewer will not be used during construction.

Clean areas discharging to stormwater will be inspected weekly. The inspection will assess the condition of these areas according to the criteria above, and any areas that require separate draining.

If areas require cleaning or maintenance, the relevant Site Supervisor or Foreman will be requested to undertake relevant actions to make the area suitable.



APPENDIX 1: Site Wide Erosion and Sediment Controls



TOTAL STORAGE VOLUMES

LOT No.	AREA (Ha)	1 - YEAR (m³)	10 - YEAR (m³)	100 - YEAR (m³)
4	1.35	442	1030	1700
5	0.80	199	532	917
6	0.73	173	467	813
7	0.46	95	260	470
CROWN	2.40	894	1960	3150

NOTE:
 FOR PRELIMINARY DISCUSSION ONLY.
 FOR FURTHER REVIEW WITH LEND LEASE BUILDING, LLMP, CROWN AND BDA

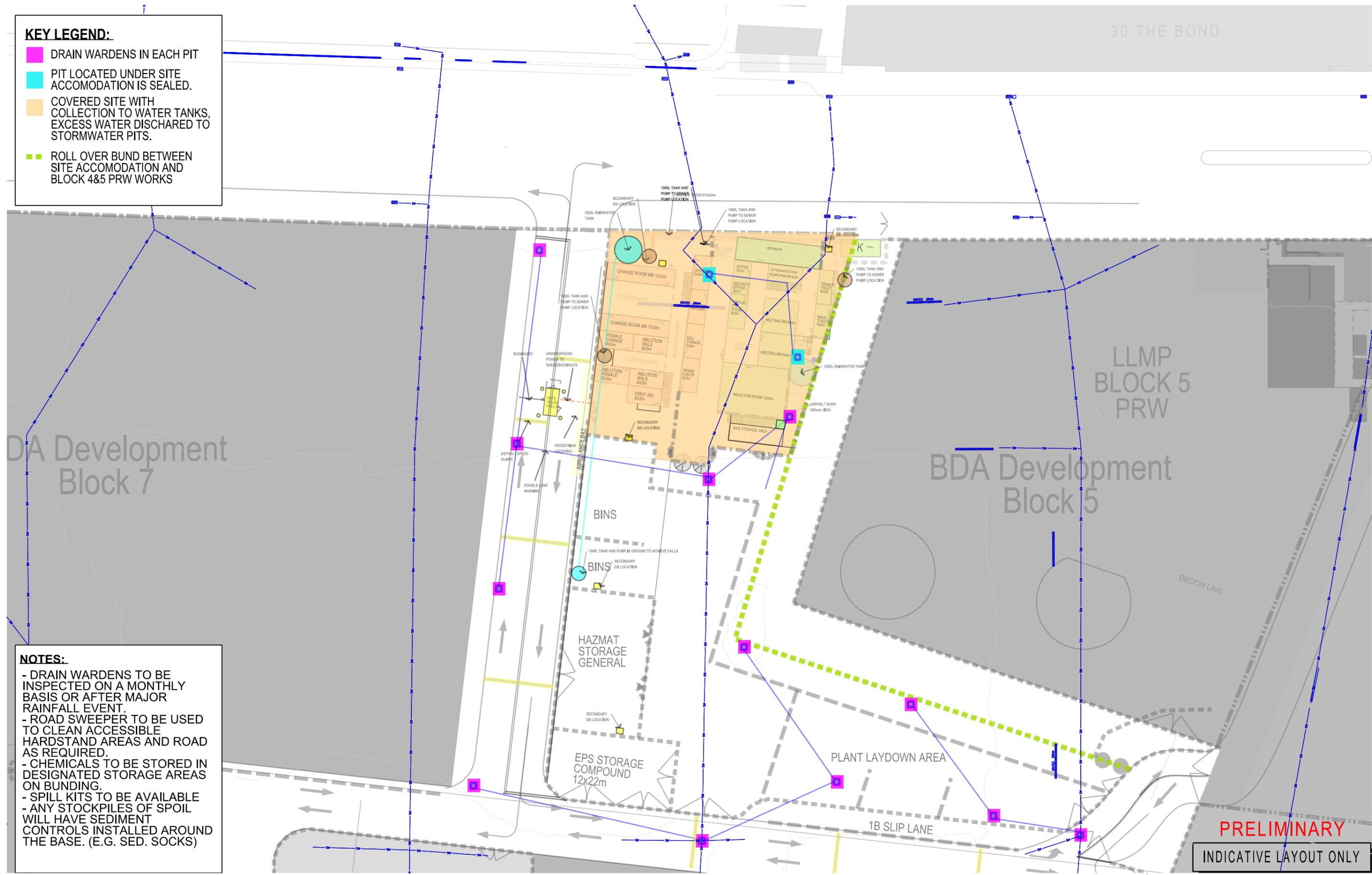
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APPENDIX 2: Site Accommodation Erosion and Sediment Controls

KEY LEGEND:

- DRAIN WARDENS IN EACH PIT
- PIT LOCATED UNDER SITE ACCOMODATION IS SEALED.
- COVERED SITE WITH COLLECTION TO WATER TANKS, EXCESS WATER DISCHARED TO STORMWATER PITS.
- ROLL OVER BUND BETWEEN SITE ACCOMODATION AND BLOCK 4&5 PRW WORKS



NOTES:

- DRAIN WARDENS TO BE INSPECTED ON A MONTHLY BASIS OR AFTER MAJOR RAINFALL EVENT.
- ROAD SWEEPER TO BE USED TO CLEAN ACCESSIBLE HARDSTAND AREAS AND ROAD AS REQUIRED.
- CHEMICALS TO BE STORED IN DESIGNATED STORAGE AREAS ON BUNDING.
- SPILL KITS TO BE AVAILABLE
- ANY STOCKPILES OF SPOIL WILL HAVE SEDIMENT CONTROLS INSTALLED AROUND THE BASE. (E.G. SED. SOCKS)

PRELIMINARY
INDICATIVE LAYOUT ONLY



APPENDIX 3: Block 4&5 Stormwater Management

One Sydney Harbour – ERSED Plan



■ Indicative location of important stormwater pit inlets with drain wardens installed



APPENDIX 4: Watermans Cove Erosion and Sediment Control

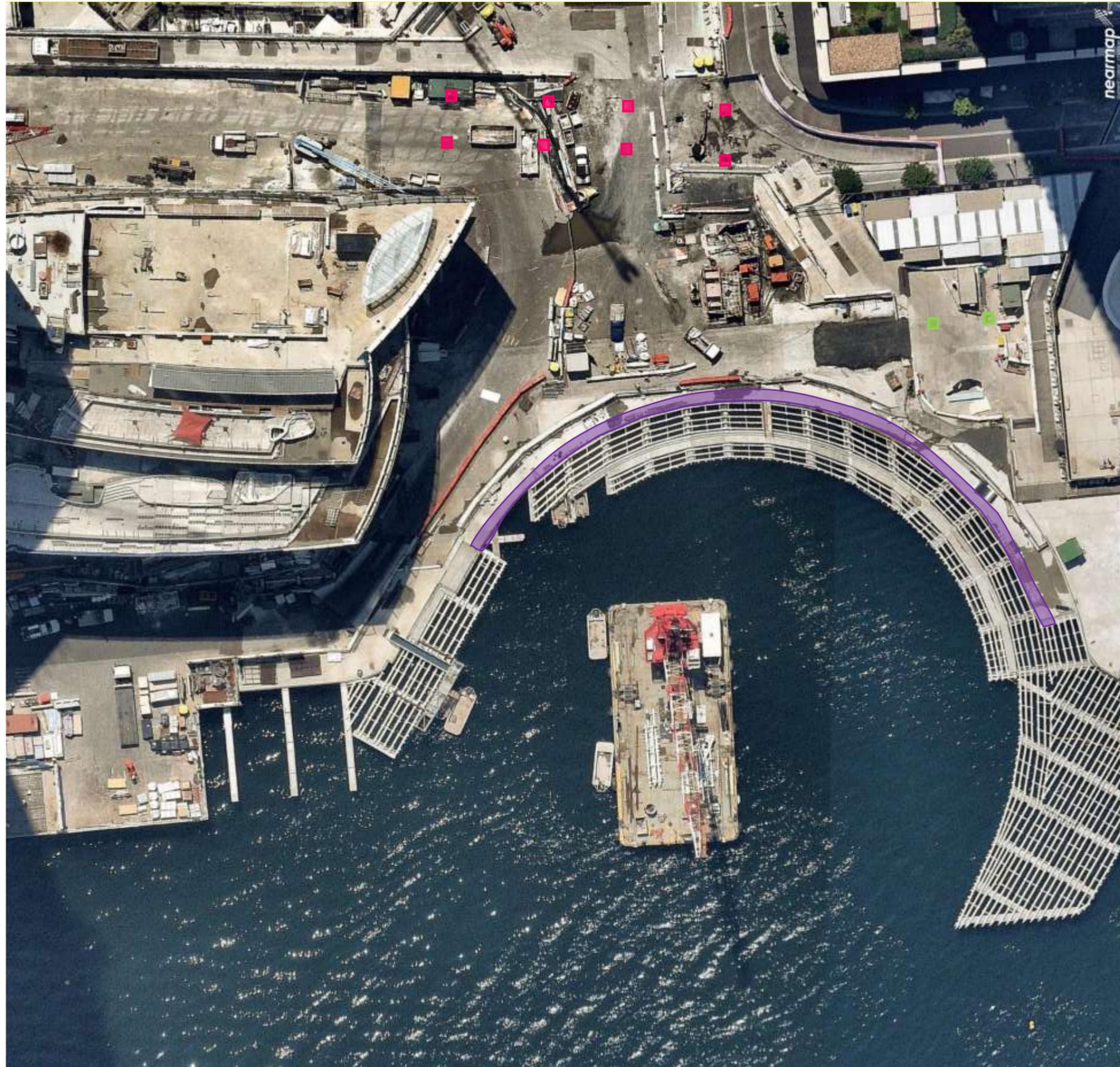
Watermans Cove – ERSED Plan

Indicative location of stormwater pit inlets which will be protected with standard sediment controls, e.g. sediment socks

Indicative location of sandstone blocks which will function as a sediment barrier once installed

Indicative location of current stormwater pit inlets which will be modified and then protected with standard sediment controls, e.g. sediment socks

Small excavations or other activities which generate loose material will have localised sediment controls





APPENDIX 5: Block 7 Stormwater Management

Block 7 – ERSED Plan

Stormwater in this hardstand area drains to Block 7 perimeter and is pumped to stormwater pit in the other half of Block 7.

Hardstand area is maintained in clean state.

Stormwater from this hardstand area flows to this stormwater pit. This has a drain warden.

Hardstand area is maintained in clean state.

Water and stormwater from the WSB tank area is appropriately treated before discharge to stormwater.



■ Important stormwater pit equipped with drain warden