

## FIVE WAYS TRIANGLE, CROWS NEST

391-423 Pacific Hwy, 3-15 Falcon St & 8 Alexander St  
Crows Nest NSW 2065

Cover Sheet

Re-Issue for Development Application  
Revision Date: 30/08/2024  
Revision: P5

DRAWING LIST	
DRAWING NUMBER	DRAWING TITLE
427623-003-MMD-DA-XX-DRG-C-0001	Cover Sheet
427623-003-MMD-DA-XX-DRG-C-0020	Sediment and Erosion Control Plan
427623-003-MMD-DA-XX-DRG-C-0021	Sediment and Erosion Control Details
427623-003-MMD-DA-XX-DRG-C-0030	Earthworks Cut and Fill Plan
427623-003-MMD-DA-XX-DRG-C-0035	Siteworks and Drainage Plan
427623-003-MMD-DA-XX-DRG-C-0050	Water Quality Catchment Plan
427623-003-MMD-DA-XX-DRG-C-0060	On-site Detention Section and Details
427623-003-MMD-DA-XX-DRG-C-0065	Combined Services Plan

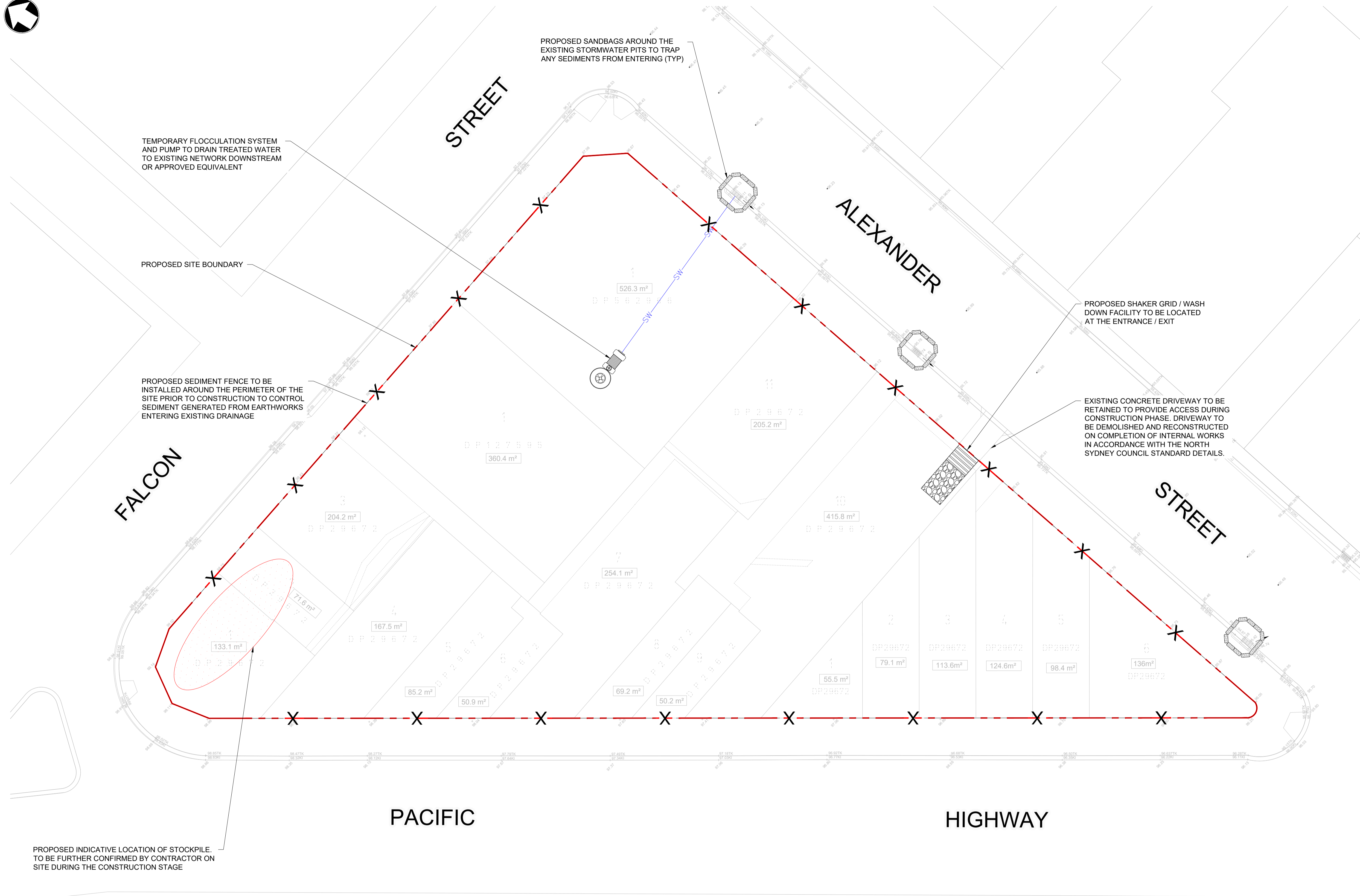


Locality Plan

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.


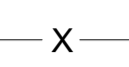
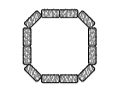
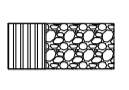
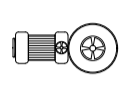
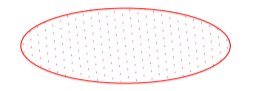

**PRELIMINARY NOT FOR CONSTRUCTION**

<p>Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com</p>	<p>P5 30/08/2024 ISSUE FOR SSDA AT DF</p> <p>P4 12/03/2024 RE-ISSUE FOR DEVELOPMENT APPLICATION AT DF</p> <p>P3 17/10/2023 RE-ISSUE FOR DEVELOPMENT APPLICATION AT DF</p> <p>P2 19/09/2023 ISSUE FOR DEVELOPMENT APPLICATION AT DF</p> <p>P1 24/08/2023 DRAFT ISSUE FOR INFORMATION AT DF</p>	<p>SCALE</p>	<p>CLIENT</p> <p>DEICORP</p>	<p>TITLE</p> <p>Five Ways Triangle Crows Nest, NSW, 2065 Cover Sheet</p>	<p>DRAWING INFORMATION</p> <p>Drawn: J.Garbo Designed: S.Saiara Checked: A.Tarshan Approved: D.Fettell</p> <p>Revision: P5 Status: FOR APPROVAL Security: STD</p>
	<p>Rev Date Description Ch'k'd App'd</p>	<p>DRAWING NUMBER</p> <p>427623-003-MMD-DA-XX-DRG-C-0001</p>	<p>FILE LOCATION: C:\Users\Wu107446\Mott MacDonald\Deicorp Civil Engineering - 6. Five Ways, Crows Nest\04 Working\01 Drafting\Civil\Drawings\427623-003-MMD-DA-XX-DRG-C-0001.dwg Sep 2, 2024 - 11:38AM GAR99190</p>	<p>ISO A1 594 x 841mm</p>	



**LEGEND**

SEDIMENT AND EROSION PLAN


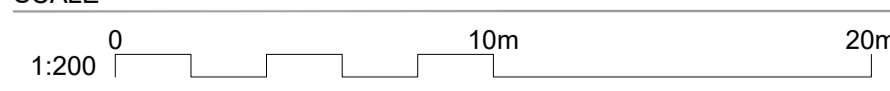

-  PROPOSED SITE BOUNDARY
-  CONSTRUCT TEMPORARY SEDIMENT FENCE
-  INSTALL SANDBAG SEDIMENT TRAPS
-  CONSTRUCT TEMPORARY STABILISED SITE ENTRY WITH SHAKER GRID
-  TEMPORARY FLOCCULATION AND PUMP SYSTEM
-  INDICATIVE LOCATION OF STOCKPILE
-  TEMPORARY DISCHARGE PIPE

**NOTES**

1. CONTRACTORS TO CONFIRM PUMP-OUT FROM DEEP BASEMENT EXCAVATION.
2. UPON INSTALLATION OF NEW STORMWATER PITS, SAND BAGS ARE TO BE PLACED AROUND THE PROPOSED PITS TO PREVENT ANY SEDIMENT RUNOFF TO THE PITS.
3. EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE PUBLICATION 'URBAN STORMWATER SOILS AND CONSTRUCTION 'THE BLUE BOOK' 2004 (4TH EDITION)' PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION, EXCAVATION OR CONSTRUCTION WORKS UPON THE SITE.
4. BUILDERS SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE BOUNDARIES. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (Eg. PROFAB SILT FENCE, OR SIMILAR) STANDING MINIMUM 500mm ABOVE GROUND AND EXTENDING 200mm BELOW GROUND.
5. GRASS VERGES AND VEGETATION SHALL BE MAINTAINED AS MUCH AS PRACTICAL AND SHALL NOT BE CLEARED FROM NEIGHBORING SITES TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
6. NO PARKING OR STOCK PILING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
7. VEHICLE ACCESS SHALL BE RESTRICTED TO ONE DESIGNATED POINT AS SHOWN, AND VEHICLE CROSSINGS ARE TO BE ADEQUATELY COVERED AT ALL TIMES WITH BLUE METAL OR THE LIKE.
8. TEMPORARY CONSTRUCTION ENTRY/EXIT SHALL BE AS PER DRAWING ON DRAWING 0021. BUILDER TO ENSURE ALL DROPPABLE SOIL AND SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE USING VEHICLE WHEEL WASH, CATTLE GRID, WHEEL SHAKER OR OTHER APPROPRIATE DEVICE. BUILDER SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING AND LEAVING THE SITE, DO SO, IN A FORWARD DIRECTION.
9. ALL STORMWATER INCIDENT ON THE CONSTRUCTION SITE MUST BE COLLECTED AND APPROPRIATELY DISPOSED OF IN A MANNER THAT DOES NOT INCREASE THE FLOOD RISK FOR THE CATCHMENT AREA OR DEGRADE THE QUALITY OF WATER BEING DISPOSED OF TO COUNCIL STORMWATER INFRASTRUCTURE.
10. MEASURES OUTLINED IN THE EROSION AND SEDIMENT CONTROL PLAN MUST BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING AND AFTER THE CONSTRUCTION WORKS.
11. ALL DISTURBED AREAS AND STOCKPILES TO BE STABILISED WITHIN 5 DAYS.
12. TOPSOIL TO BE STRIPPED STOCKPILED AND RE-SPREAD ON COMPLETION OF EARTHWORKS. NONE TO BE REMOVED.
13. NO DISTURBANCE OF THE SITE OTHER THAN IMMEDIATE AREA OF WORKS.

**NOTE:**  
THIS PLAN IS A CONCEPT ONLY. IT IS CREATED TO HIGHLIGHT SOME OF THE SEDIMENT AND EROSION CONTROL MEASURES WHICH MAY APPEAR. THE CONTRACTOR IS RESPONSIBLE FOR THE FINAL DESIGN AND ENSURING ALL MEASURES ARE TAKEN TO PROTECT THE ENVIRONMENT.

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

	Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Ch'k'd</th> <th>App'd</th> </tr> </thead> <tbody> <tr> <td>P5</td> <td>30/08/2024</td> <td>ISSUE FOR SSDA</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P4</td> <td>12/03/2024</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P3</td> <td>17/10/2023</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P2</td> <td>19/09/2023</td> <td>ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P1</td> <td>24/08/2023</td> <td>DRAFT ISSUE FOR INFORMATION</td> <td>AT</td> <td>DF</td> </tr> </tbody> </table>	Rev	Date	Description	Ch'k'd	App'd	P5	30/08/2024	ISSUE FOR SSDA	AT	DF	P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF	SCALE  1:200	CLIENT  <b>DEICORP</b>	TITLE <b>Five Ways Triangle          Crows Nest, NSW, 2065          Sediment and Erosion Control Plan</b>	DRAWING INFORMATION Drawn: J.Garbo Designed: S.Saiara Checked: A.Tarshan Approved: D.Fettell Revision: P5 Status: FOR APPROVAL Security: STD DRAWING NUMBER <b>427623-003-MMD-DA-XX-DRG-C-0020</b>
Rev	Date	Description	Ch'k'd	App'd																																
P5	30/08/2024	ISSUE FOR SSDA	AT	DF																																
P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF																																

# Soil and Water Management Notes

## General Instructions

**SWM01** These plans present a conceptual soil and water management plan (SWMP) only and shows a possible way of managing soil and erosion. The contractor shall be responsible for the establishment and management of the site and preparing a detailed plan and obtaining approval from the relevant authority prior to the commencement of any works.

**SWM02** This plan is to be read in conjunction with the engineering plans and any other plans, written instructions, specification or documentation that may be issued and relating to development of the subject site.

**SWM03** The contractor will ensure that all soil and water management works are consistent with 'Managing Urban Stormwater - Soils and Construction' - also known as 'The Blue Book'.

**SWM04** All builders and sub-contractors shall be informed of their responsibilities in minimising the potential for soil erosion and pollution to downslope lands and waterways.

## Erosion Control

**SWM05** Water shall be prevented from entering the permanent drainage system until sediment concentration is less than or equal to 50mg/L, ie the catchment area has been permanently landscaped and / or any likely sediment has been filtered through an approved structure.

**SWM06** 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.

**SWM07** Acceptable receptors will be constructed for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter.

**SWM08** 'Sediment' fencing will be installed as indicated on the plans and at the direction of site superintendent to ensure containment of sediment. The sediment fencing will outlet or overflow under stabilised conditions into the sediment basin, to safely convey water into a suitable filtering system should the pores in the fabric block.

**SWM09** Stockpiles should not be located within 5m of trees and hazard areas, including likely areas of concentrated or high velocity flows such as waterways, drainage lines, paved areas and driveways. Where they are within 5m from such areas, special sediment control measures should be taken to minimise possible pollution to downstream waters. Measures should also be applied to prevent the erosion of the stockpile.

**SWM10** All cut and fill batters are to be seeded and mulched within 14 days of completion of formation.

**SWM11** Any existing trees which form part of the final landscaping plan will be protected from construction activities by-

- Protecting them with barrier fencing or similar materials installed outside the drip line.
- Ensuring that nothing is nailed to them.
- Prohibiting paving, grading, sediment wash or placing of stockpiles within the drip line except under the following conditions,

- Encroachment only occurs on one side and no closer to the trunk than either 1.5 metres or half the distance between the outer edge of the drip line and the trunk, whichever is the greater,
- 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
- Care is taken.

**SWM12** During windy weather, large disturbed unprotected areas should be kept moist (not wet) by sprinkling with water to keep dust under control.

**SWM13** Temporary protection from erosive forces will be undertaken on lands where final shaping has not been completed but works are unlikely to proceed for periods of two months or more (eg. on topsoil stockpiles). This may be achieved with a vegetative cover. A recommended listing of plant species for temporary cover is -

- autumn/winter sowing
  - oats/ryecorn at 20 kg/ha
  - japanese millet at 10 kg/ha
- spring/summer sowing
  - japanese millet at 20 kg/ha
  - oats/ryecorn at 10 kg/ha

**SWM14** Diversion banks / channels will be rehabilitated as soon as possible and within 5 working days from their final shaping. Other than in the winter months, suitable materials include turf grasses such as Couch or Kikuyu. During winter, or at other times when temporary rehabilitation (more than 3 months) is required, it is suggested that hessian cloth is used but only if tacked with appropriate pegs and an anionic bitumen emulsion. Foot and vehicular traffic should be kept away from these areas.

**SWM15** 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.

## Construction Sequence

**SWM16** Where practical, the soil erosion hazard on the site should be kept as low as possible. To this end, works should be undertaken in the FOLLOWING SEQUENCE -

- Install inlet sediment traps to all gully pits fronting the site,
- Install a 1.8m chain wire fence around the boundaries and attach hessian cloth or similar to it on the windward side (ties at the top, centre and bottom and at 1m intervals or as instructed by the superintendent),
- Install geofabric sediment fence and sediment traps around all permanent stormwater reticulation structures as shown on the plan,
- Construct stabilised construction entrance as shown on the plan or to location as determined by superintendent,
- Install diversion banks along the boundary where required, rehabilitate disturbed lands downslope from the basins within 20 working days,
- Ensure that the sediment basin is directed onto a turfed area and drains to a suitable location. A temporary stormwater line may be necessary to convey the flows to this location. Construct diversion channels at the boundary to drain into the sediment basin as shown on plans,
- At completion stabilise site and decommission sediment basin and all erosion control devices.

**SWM17** Temporary soil and water management structures will be removed only after the lands they are protecting are rehabilitated.

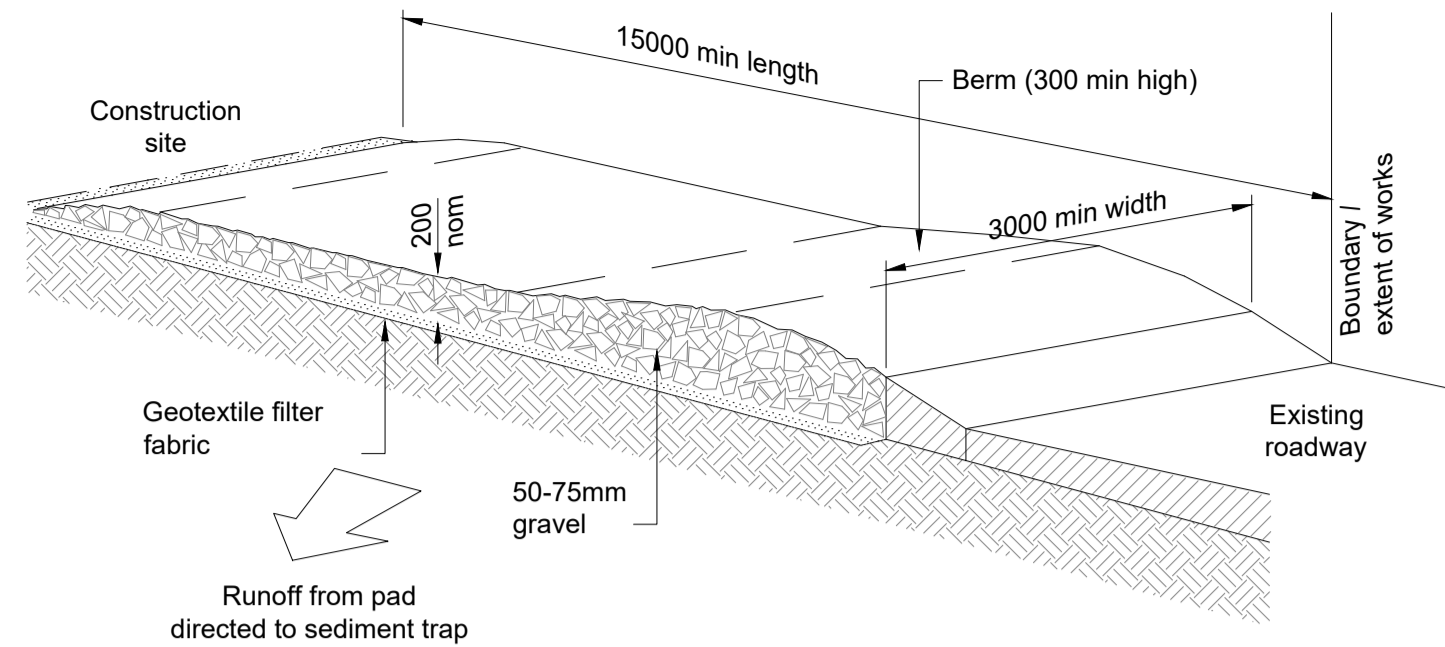
**SWM18** Final site landscaping will be undertaken as soon as possible and within 20 working days from completion of construction activities.

## Site Inspection and Maintenance

**SWM19** At least weekly and after every rain fall event, the contractor will inspect the site and ensure that -

- Drains and all sediment control devices operate effectively and initiate repair or maintenance as required,
- Receptors for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter are to be emptied as necessary. Disposal of waste shall be in a manor approved by the superintendent,
- Spilled sand (or other materials) is removed from hazard areas, including likely areas of concentrated or high velocity flows such as waterways, gutters, paved areas and driveways,
- Sediment is removed from basins and / or traps when less than 20m<sup>3</sup> of trapping capacity remain per 1000m<sup>2</sup> of disturbed lands, and / or less than 500mm depth remains in the settling zone. Any collected sediment will be disposed in areas where further pollution to down slope lands and waterways is unlikely,
- Rehabilitated lands have effectively reduced the erosion hazard and initiate upgrading or repair as appropriate.

**SWM20** The contractor shall provide all monitoring control and testing.

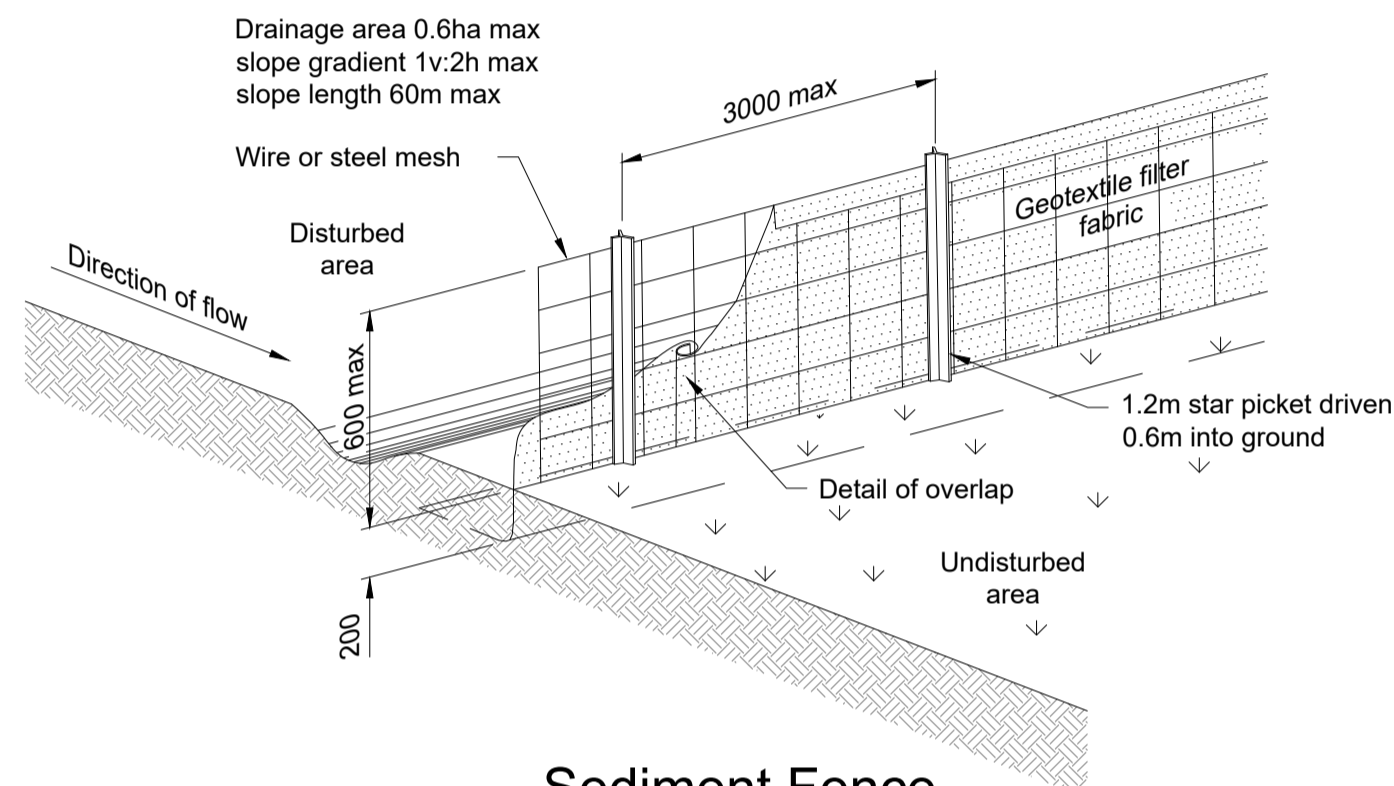


Temporary Site Entrance

NTS

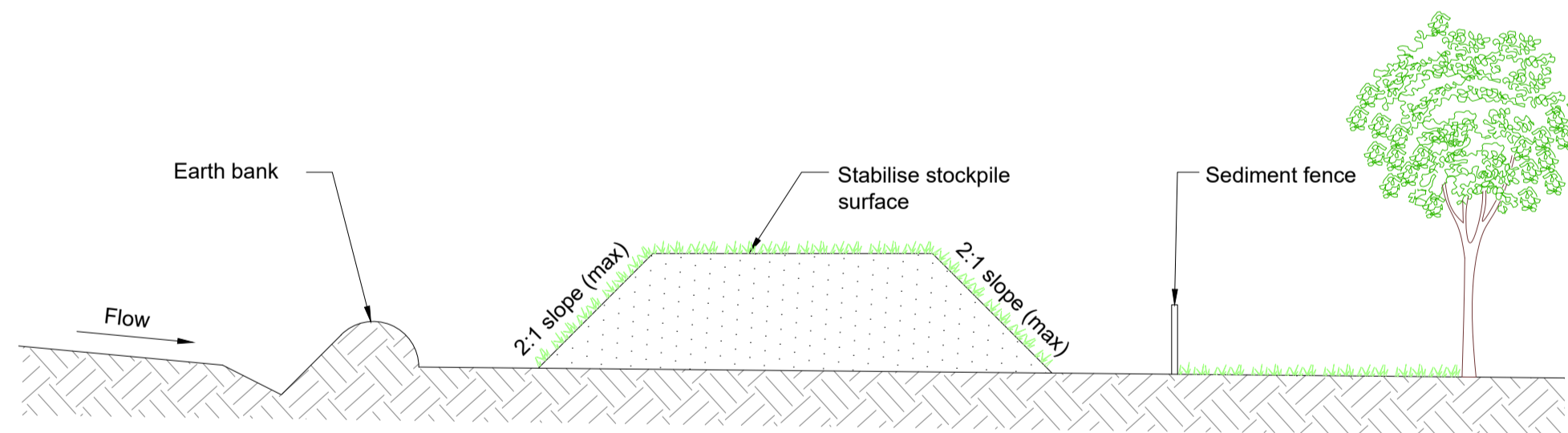
## Maintenance

- The temporary access shall be maintained in a condition that prevents tracking or flowing of sediment onto public rights of way.
- This may require periodic top dressing with additional gravel as conditions demand and repair and/or cleanout of any measures used to trap sediment.
- All sediment spilled, dropped, washed or tracked onto public rights of way must be removed immediately.



Sediment Fence (Geotextile Filter Fabric)

NTS

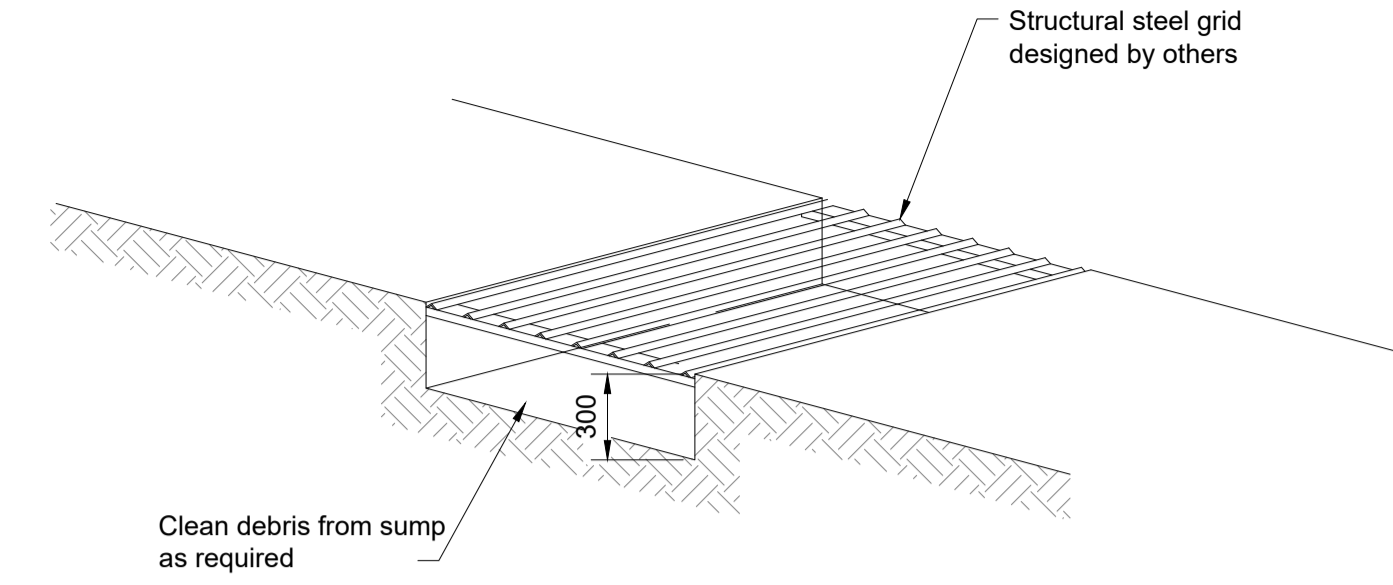


Stockpiles

NTS

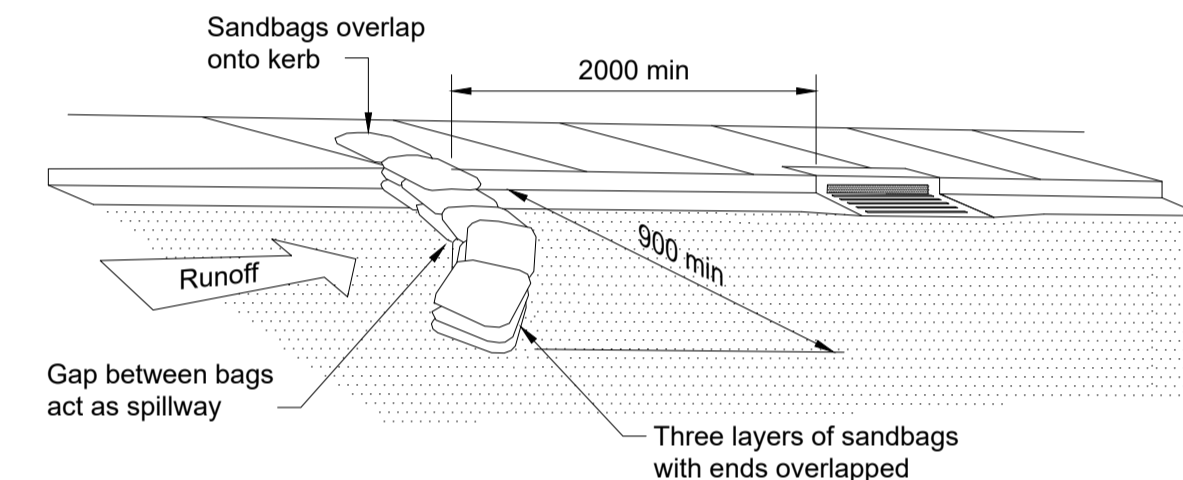
## Construction Notes

- 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 2m in height
- Where there 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) 1m to 2m downslope



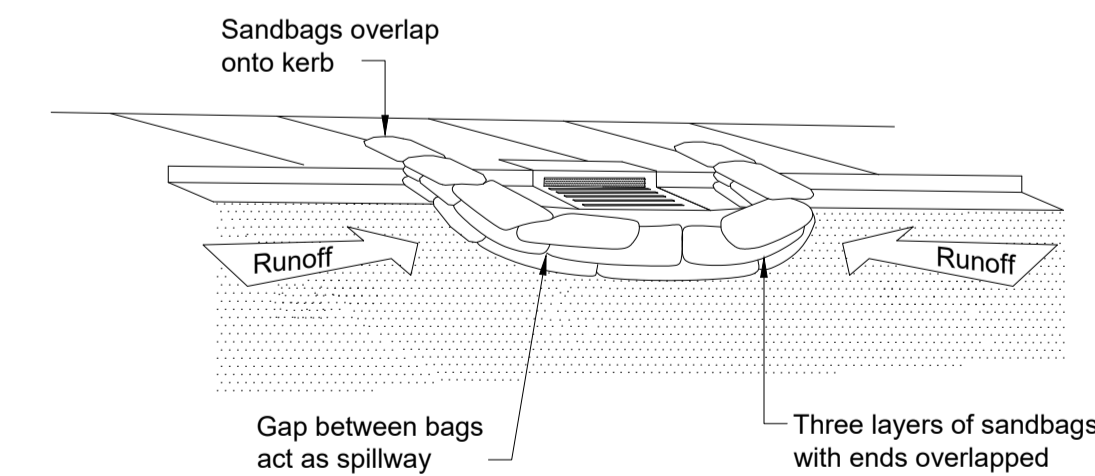
Shaker Pad

NTS



Sediment Trap for Kerb Inlet (On Grade - Sandbag)

NTS



Sediment Trap for Kerb Inlet (at Low Point - Sandbag)

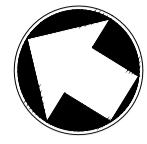
NTS

**Note:**  
This plan is a concept only. It is created to highlight some of the sediment and erosion control measures which may appear. The contractor is responsible for the final design and ensuring all measures are taken to protect the environment.

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

PRELIMINARY NOT FOR CONSTRUCTION

	Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com	P5 30/08/2024 ISSUE FOR SSSA P4 12/03/2024 RE-ISSUE FOR DEVELOPMENT APPLICATION P3 17/10/2023 RE-ISSUE FOR DEVELOPMENT APPLICATION P2 19/09/2023 ISSUE FOR DEVELOPMENT APPLICATION P1 24/08/2023 DRAFT ISSUE FOR INFORMATION	AT DF AT DF AT DF AT DF AT DF	SCALE	CLIENT	TITLE	DRAWING INFORMATION
		Rev Date Description Ch'k'd App'd		Five Ways Triangle Crows Nest, NSW, 2065 Sediment and Erosion Control Details	Drawn: J.Garbo Designed: S.Saiara Checked: A.Tarshan Approved: D.Fettell DRAWING NUMBER 427623-003-MMD-DA-XX-DRG-C-0021	Revision: P5 Status: FOR APPROVAL Security: STD	



**LEGEND**

- EARTHWORKS CUT AND FILL
- PROPOSED SITE BOUNDARY
  - SURVEY
  - PROPOSED AREA OF BASEMENT EXCAVATION

**EARTHWORK VOLUMES**

APPROXIMATE VOLUMES

- TOTAL CUT = -75,953 m<sup>3</sup>
- TOTAL FILL = 0.000 m<sup>3</sup>
- BALANCE = -75,953 m<sup>3</sup>

ASSUMPTIONS

- AVERAGE EXISTING GROUND LEVEL (CALCULATED) = 97.27 mAHD (BASED ON SURVEY SPOT ELEVATION - NO TIN PROVIDED)
- EXCAVATION LEVEL = 72.00 mAHD (1.5m BELOW BASEMENT 07 ELEVATION OF RL 73.50 mAHD)
- EXCAVATION DEPTH = 97.27 - 72 = 25.27m

**EARTHWORK VOLUMES**

ESTIMATED VOLUMES BETWEEN EXISTING SURFACE RL 97.27 AND 1.5m BELOW PROPOSED BASEMENT LEVEL 07 RL 73.50.

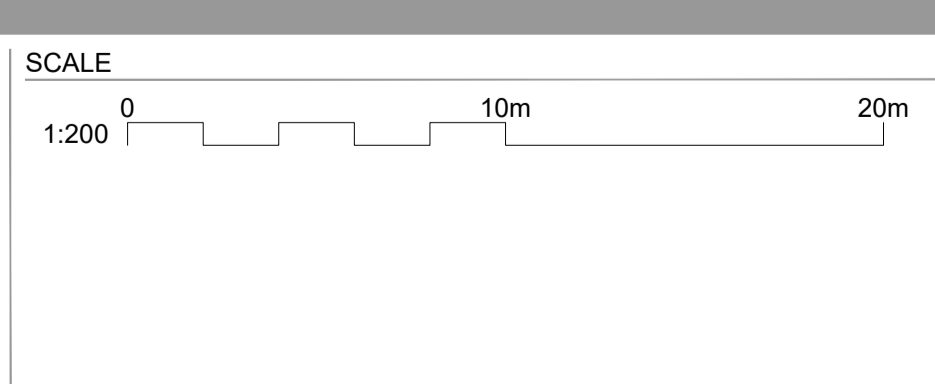
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL VOLUMES PRIOR TO CONSTRUCTION
- TOPSOIL STRIPPING HAS NOT BEEN INCLUDED WITHIN THE VOLUME CALCULATIONS
- NO ALLOWANCE HAS BEEN MADE FOR BUILDING SLABS
- NO ALLOWANCE HAS BEEN MADE FOR CONCRETE PAVEMENT
- NO ALLOWANCE HAS BEEN MADE FOR FOOTPATH PAVEMENT
- NO ALLOWANCE HAS BEEN MADE FOR RETAINING WALL FOOTINGS
- VOLUMES WITHIN STORMWATER TRENCHES HAS NOT BEEN CALCULATED
- NO BULKING FACTORS HAVE BEEN APPLIED

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

**M M**  
**MOTT MACDONALD**

Level 10, 383 Kent Street  
Sydney, NSW 2000  
Australia  
NSW 1230, Australia  
PO Box Q1678, QVB Sydney  
T +61 (0)2 9098 6800  
www.mottmac.com

Rev	Date	Description	Ch'k'd	App'd
P5	30/08/2024	ISSUE FOR SSSA	AT	DF
P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF
P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF
P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF
P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF



CLIENT

**DEICORP**

TITLE

**Five Ways Triangle  
Crows Nest, NSW, 2065  
Earthworks Cut and Fill Plan**

DRAWING INFORMATION

Drawn: J.Garbo	Revision: P5
Designed: S.Saiara	Status: FOR APPROVAL
Checked: A.Tarshan	Security: STD
Approved: D.Fettell	

DRAWING NUMBER

427623-003-MMD-DA-XX-DRG-C-0030

**PRELIMINARY NOT FOR CONSTRUCTION**

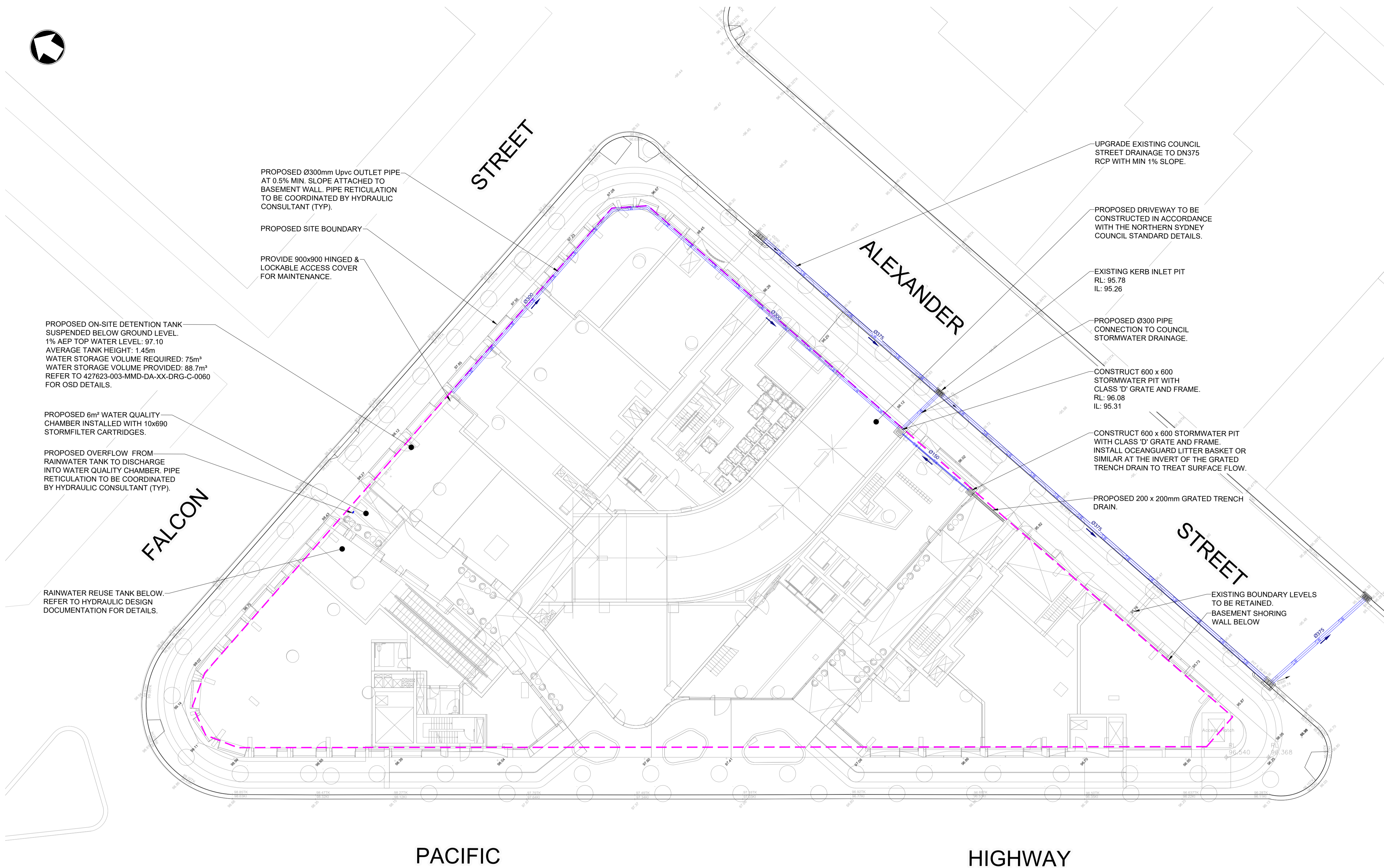


### LEGEND

#### SITWORKS AND DRAINAGE

- PROPOSED SITE BOUNDARY
- BASEMENT SHORING WALL
- EXISTING STORMWATER PIT
- PROPOSED STORMWATER PIT
- PROPOSED STORMWATER PIPE
- PROPOSED GRATED TRENCH DRAIN
- PIPE DIAMETER AND FLOW DIRECTION

**NOTE:**  
1. PERMISSIBLE SITE DISCHARGE CALCULATED TO DETAIN TO 1hr 1 IN 5 YEARS ARI STORM EVENT AS PER NORTH SYDNEY COUNCIL ENGINEER ADVICE.



PROPOSED Ø300mm Upvc OUTLET PIPE AT 0.5% MIN. SLOPE ATTACHED TO BASEMENT WALL. PIPE RETICULATION TO BE COORDINATED BY HYDRAULIC CONSULTANT (TYP).

PROPOSED SITE BOUNDARY

PROVIDE 900x900 HINGED & LOCKABLE ACCESS COVER FOR MAINTENANCE.

PROPOSED ON-SITE DETENTION TANK SUSPENDED BELOW GROUND LEVEL. 1% AEP TOP WATER LEVEL: 97.10 AVERAGE TANK HEIGHT: 1.45m WATER STORAGE VOLUME REQUIRED: 75m³ WATER STORAGE VOLUME PROVIDED: 88.7m³ REFER TO 427623-003-MMD-DA-XX-DRG-C-0060 FOR OSD DETAILS.

PROPOSED 6m³ WATER QUALITY CHAMBER INSTALLED WITH 10x690 STORMFILTER CARTRIDGES.

PROPOSED OVERFLOW FROM RAINWATER TANK TO DISCHARGE INTO WATER QUALITY CHAMBER. PIPE RETICULATION TO BE COORDINATED BY HYDRAULIC CONSULTANT (TYP).

RAINWATER REUSE TANK BELOW. REFER TO HYDRAULIC DESIGN DOCUMENTATION FOR DETAILS.

UPGRADE EXISTING COUNCIL STREET DRAINAGE TO DN375 RCP WITH MIN 1% SLOPE.

PROPOSED DRIVEWAY TO BE CONSTRUCTED IN ACCORDANCE WITH THE NORTHERN SYDNEY COUNCIL STANDARD DETAILS.

EXISTING KERB INLET PIT RL: 95.78 IL: 95.26

PROPOSED Ø300 PIPE CONNECTION TO COUNCIL STORMWATER DRAINAGE.

CONSTRUCT 600 x 600 STORMWATER PIT WITH CLASS 'D' GRATE AND FRAME. RL: 96.08 IL: 95.31

CONSTRUCT 600 x 600 STORMWATER PIT WITH CLASS 'D' GRATE AND FRAME. INSTALL OCEANGUARD LITTER BASKET OR SIMILAR AT THE INVERT OF THE GRATED TRENCH DRAIN TO TREAT SURFACE FLOW.

PROPOSED 200 x 200mm GRATED TRENCH DRAIN.

EXISTING BOUNDARY LEVELS TO BE RETAINED. BASEMENT SHORING WALL BELOW

## PACIFIC

## HIGHWAY

### NOTES:

1. ALL PROPOSED INTERNAL STORMWATER DRAINAGE DESIGN TO CATER FOR MINOR STORM EVENT OF 5% AEP.
2. SAFE OVERLAND FLOWPATH TO BE CATERED FOR MAJOR STORM OF 1% AEP.
3. ALL INTERNAL BUILDING DRAINAGE TO BE CONFIRMED BY HYDRAULIC CONSULTANTS. OSD TO BE DESIGNED IN ACCORDANCE WITH THE NORTH SYDNEY GUIDELINES AND STANDARDS.
4. ALL STORMWATER DRAINAGE DETAILS ARE TO BE IN ACCORDANCE WITH THE NORTH SYDNEY CITY COUNCIL GUIDELINES AND STANDARDS.
5. DOWNSTREAM TAILWATER LEVEL FOR 1% AEP CC WATER LEVEL OF 95.89m AHD HAS BEEN ADOPTED. REFER TO STORMWATER AND FLOODING REPORT UNDERTAKEN BY MOTT MACDONALD FOR FLOOD LEVEL INFORMATION.
6. PROVIDE 'OCEANPROTECT' STORMFILTER CARTRIDGES OR SIMILAR. FOR WATER QUALTY. REFER TO MANUFACTURES DETAIL.

CATCHMENT AREA (m²)	20% AEP STORM EVENT		1% AEP STORM EVENT	
	PRE-DEVELOPMENT FLOW (l/s)	POST-DEVELOPMENT (l/s)	POST DEVELOPMENT BYPASS FLOW (l/s)	TOTAL POST-DEVELOPMENT FLOW (l/s)
3201	106 l/s	83	12	95
Total Catchment (m²)	Bypassing Catchment (m²)	Bypassing Catchment %		
3201	164	5		

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

	Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com	<table border="1"> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Ch'k'd</th> <th>App'd</th> </tr> <tr> <td>P5</td> <td>30/08/2024</td> <td>ISSUE FOR SSDA</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P4</td> <td>12/03/2024</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P3</td> <td>17/10/2023</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P2</td> <td>19/09/2023</td> <td>ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P1</td> <td>24/08/2023</td> <td>DRAFT ISSUE FOR INFORMATION</td> <td>AT</td> <td>DF</td> </tr> </table>	Rev	Date	Description	Ch'k'd	App'd	P5	30/08/2024	ISSUE FOR SSDA	AT	DF	P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF	SCALE 	CLIENT 	TITLE <b>Five Ways Triangle</b> <b>Crows Nest, NSW, 2065</b> <b>Siteworks and Drainage Plan</b>	DRAWING INFORMATION Drawn: J.Garbo Designed: S.Saiara Checked: A.Tarshan Approved: D.Fetell Revision: P5 Status: FOR APPROVAL Security: STD
	Rev	Date	Description	Ch'k'd	App'd																															
P5	30/08/2024	ISSUE FOR SSDA	AT	DF																																
P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF																																
DRAWING NUMBER <b>427623-003-MMD-DA-XX-DRG-C-0035</b>																																				

PRELIMINARY NOT FOR CONSTRUCTION



LEGEND

- PROPOSED SITE BOUNDARY
- - - PROPOSED ROOF LINE OVER
- █ CATCHMENT BYPASSING OSD AND WATER QUALITY TREATMENT
- █ CATCHMENT BYPASSING OSD ONLY
- █ ROOF AREA
- █ PODIUM AREA - LEVEL 3

NOTE:  
 1. PERMISSIBLE SITE DISCHARGE CALCULATED TO DETAIN TO 1hr 1 IN 5 YEARS ARI STORM EVENT AS PER NORTH SYDNEY COUNCIL ENGINEER ADVICE

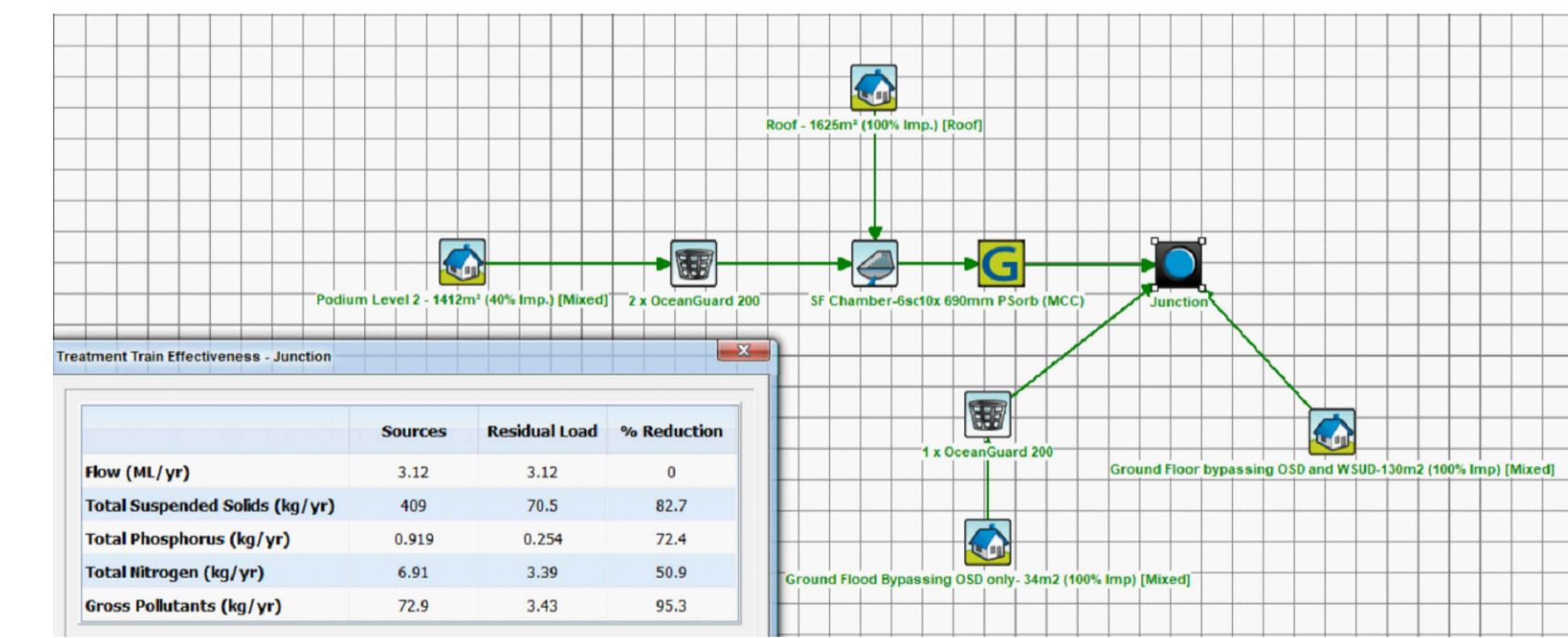
DESIGN NOTES

SITE PARAMETERS

CATCHMENT ID	AREA	UNITS
ROOF	1625	m2
PODIUM	1412	m2
AREA BYPASSING ON-SITE DETENTION AND WATER QUALITY TREATMENT	130	m2
AREA BYPASSING ON-SITE DETENTION ONLY	34	m2
TOTAL SITE AREA	3201	m2

WATER QUALITY REDUCTION TARGETS AS ADVISED BY COUNCIL ENGINEER

- 80% retention of the typical urban annual load for Total Suspended Solids (TSS)
- 45% retention of the typical urban annual load for Total Phosphorus (TP)
- 45% retention of the typical urban annual load for Total Nitrogen (TN)
- 70% retention of the typical urban annual load for gross pollutants (litter)

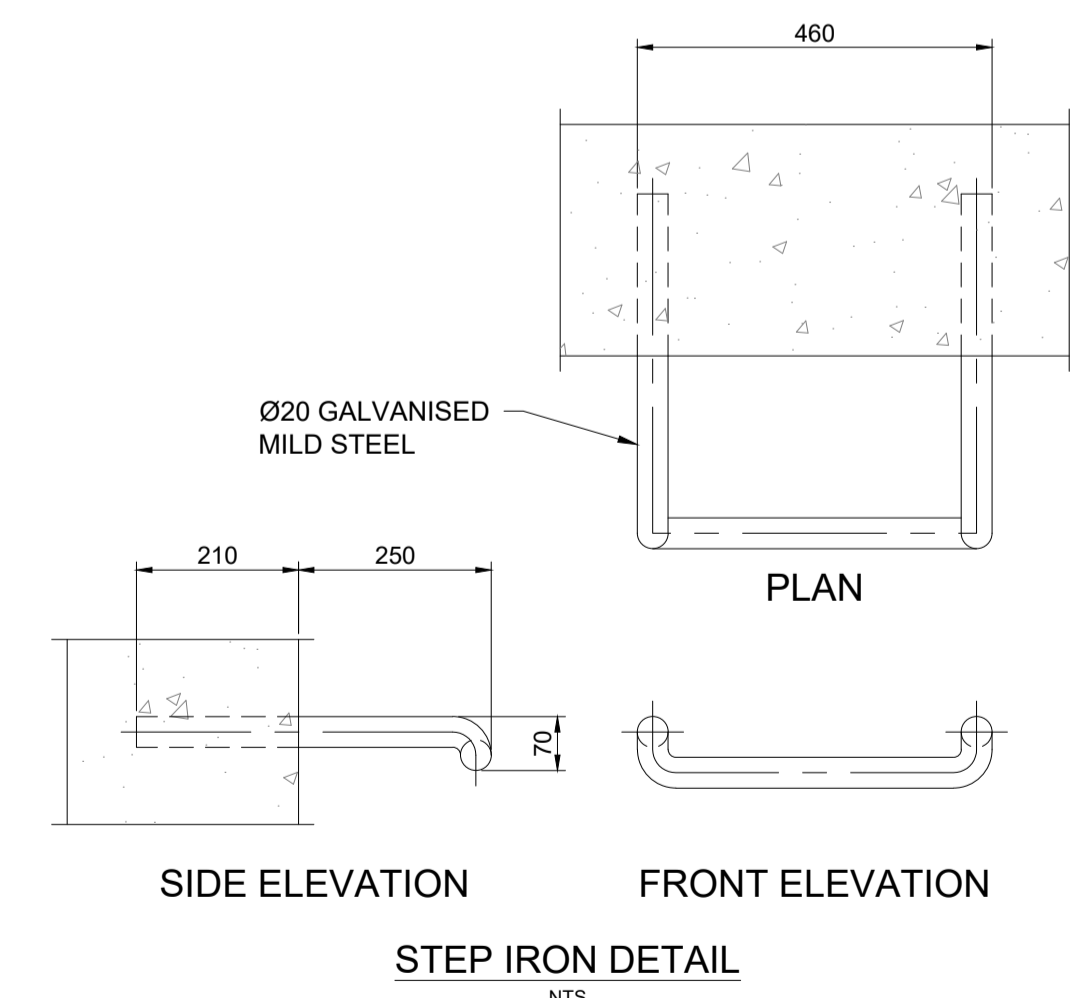
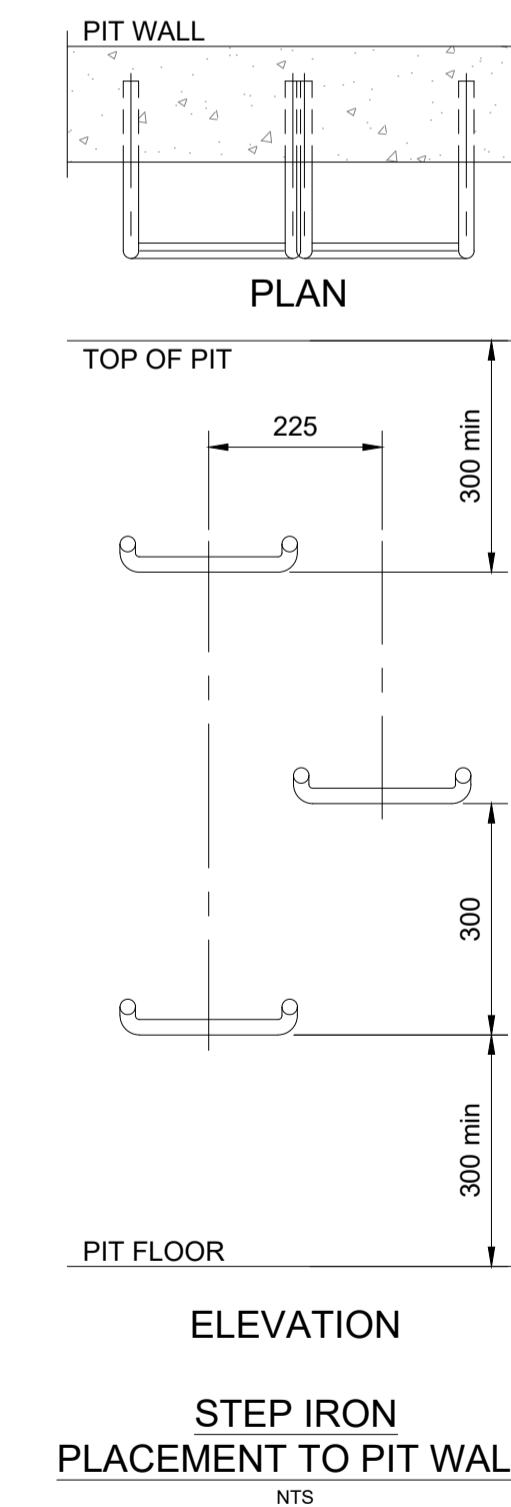
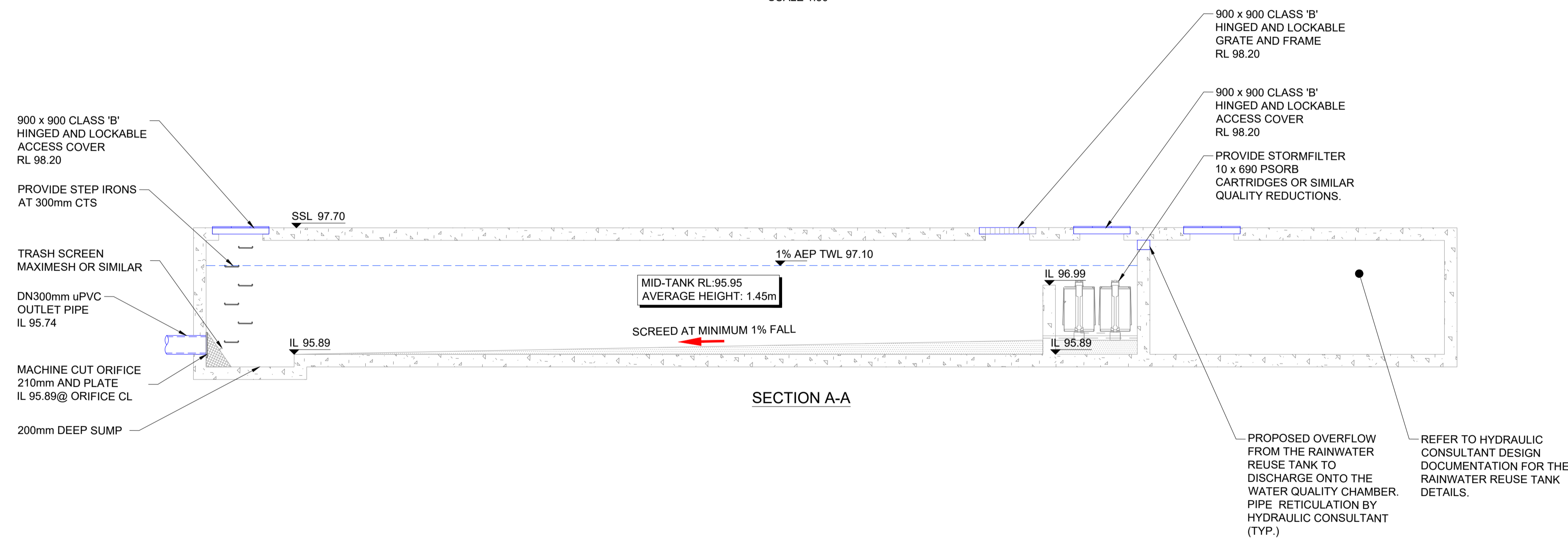
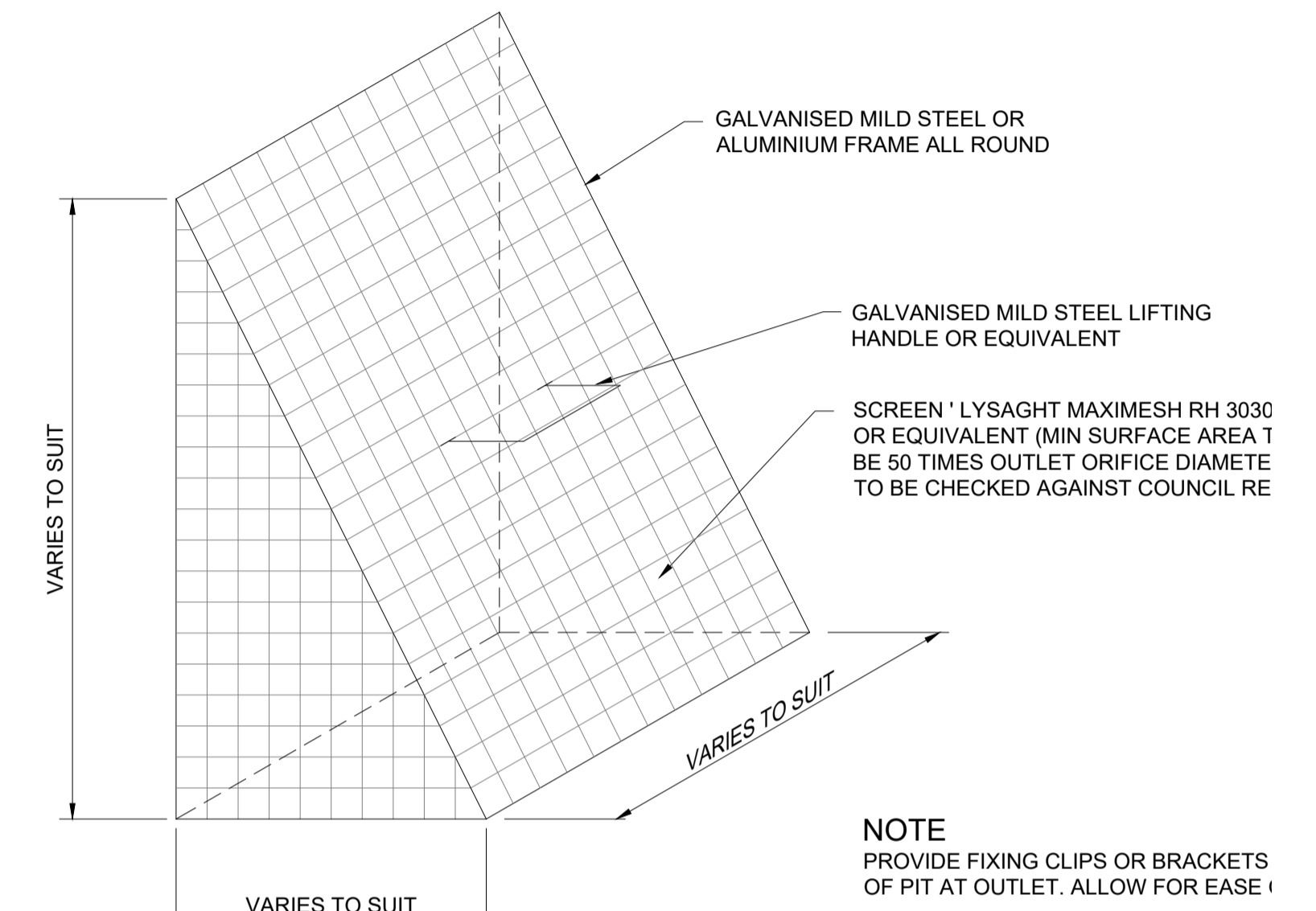
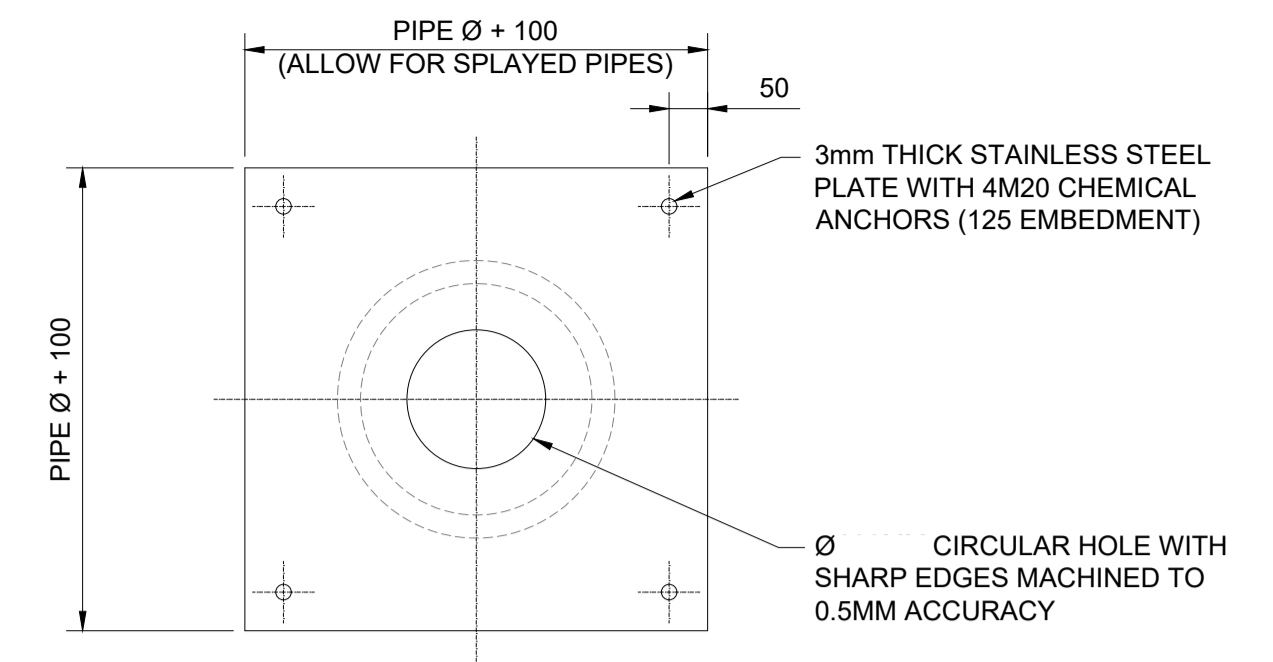
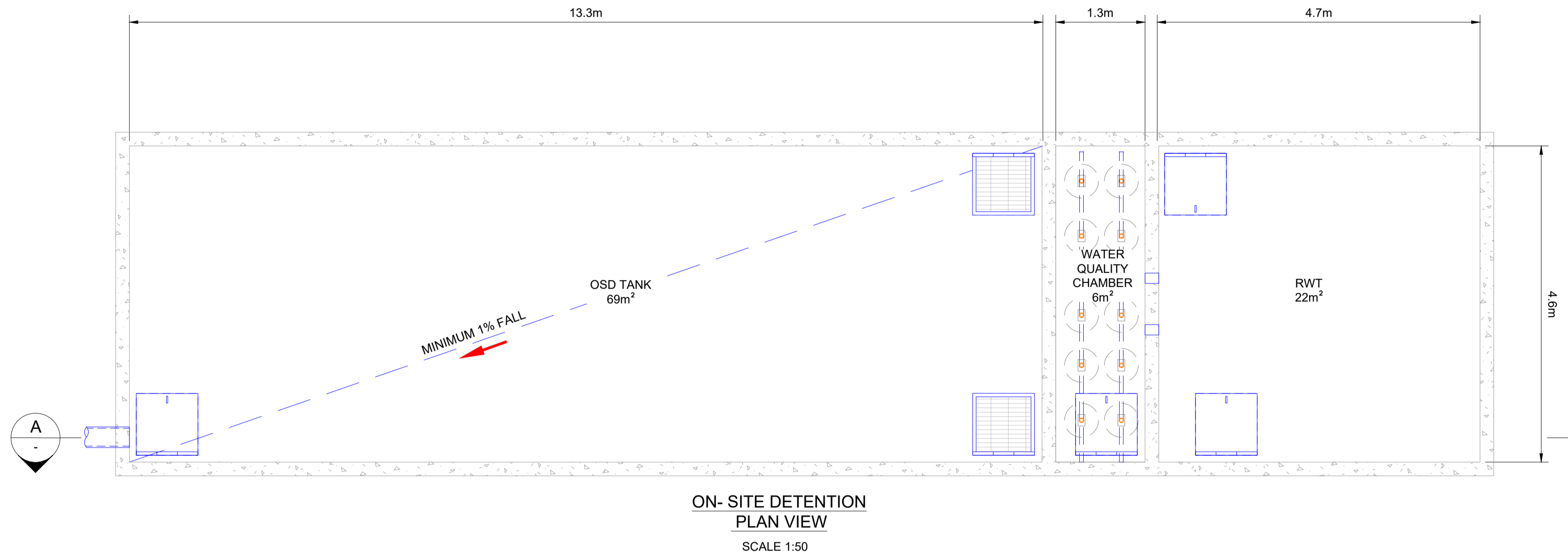


MUSIC MODELING ASSESSMENT RESULTS

PRELIMINARY NOT FOR CONSTRUCTION

©Mott MacDonald  
 This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

	Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com	<table border="1"> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Ch'k'd</th> <th>App'd</th> </tr> <tr> <td>P5</td> <td>30/08/2024</td> <td>ISSUE FOR SSDA</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P4</td> <td>12/03/2024</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P3</td> <td>17/10/2023</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P2</td> <td>19/09/2023</td> <td>ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P1</td> <td>24/08/2023</td> <td>DRAFT ISSUE FOR INFORMATION</td> <td>AT</td> <td>DF</td> </tr> </table>	Rev	Date	Description	Ch'k'd	App'd	P5	30/08/2024	ISSUE FOR SSDA	AT	DF	P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF	SCALE 1:200 	CLIENT 	TITLE <b>Five Ways Triangle          Crows Nest, NSW, 2065          Water Quality Catchment Plan</b>	DRAWING INFORMATION Drawn: J.Garbo Designed: S.Saiara Checked: A.Tarshan Approved: D.Fetell Revision: P5 Status: FOR APPROVAL Security: STD
	Rev	Date	Description	Ch'k'd	App'd																															
P5	30/08/2024	ISSUE FOR SSDA	AT	DF																																
P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF																																
FILE LOCATION: C:\Users\Wu107446\Mott MacDonald\Deicorp Civil Engineering - 6. Five Ways, Crows Nest\04 Working\01 Drafting\Civil\Drawings\427623-003-MMD-DA-XX-DRG-C-0050.dwg Sep 2, 2024 - 11:36AM WU107446		DRAWING NUMBER <b>427623-003-MMD-DA-XX-DRG-C-0050</b>		ISO A1 594 x 841mm																																

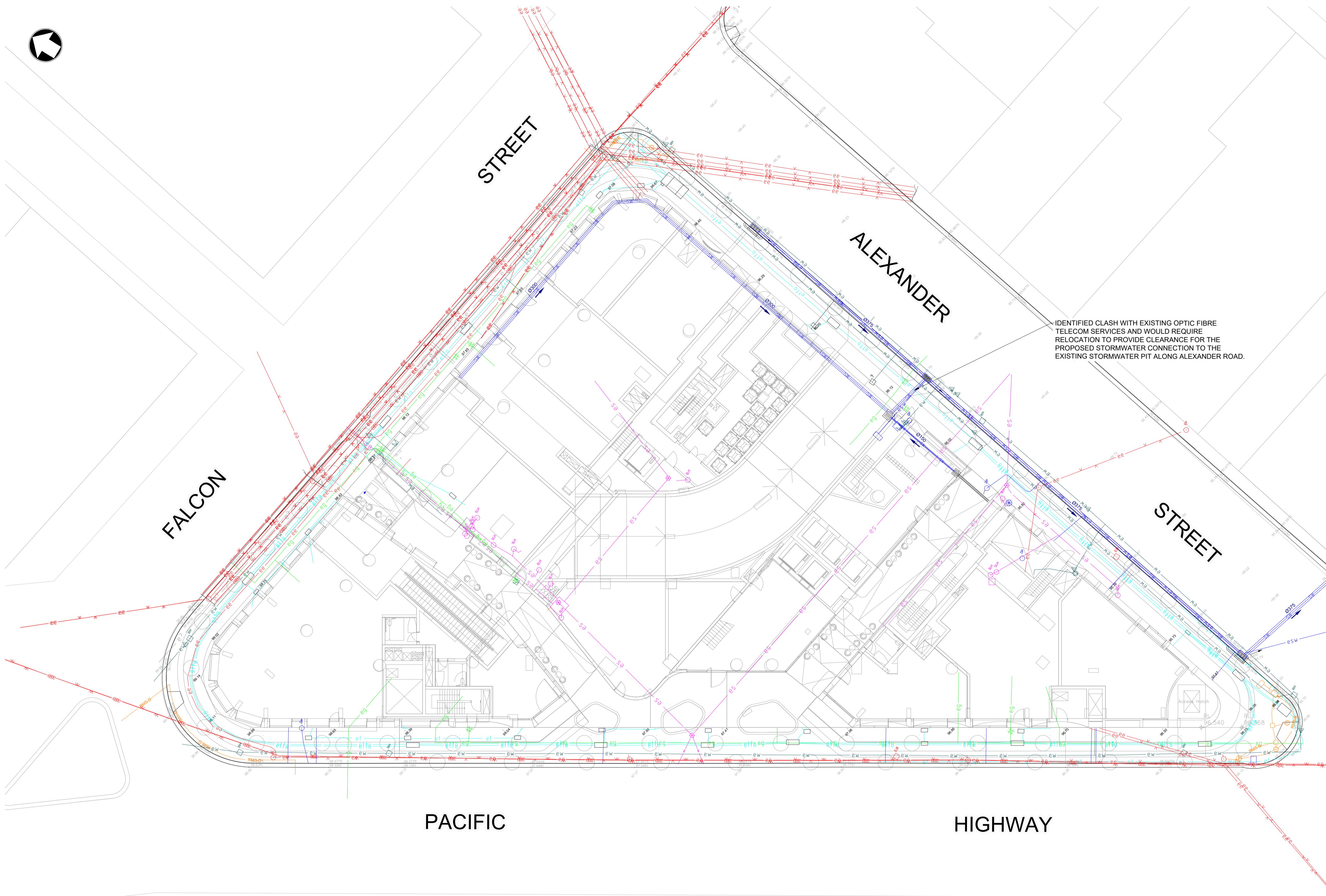


**PRELIMINARY NOT FOR CONSTRUCTION**

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

	Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com	<table border="1"> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Ch'k'd</th> <th>App'd</th> </tr> <tr> <td>P5</td> <td>30/08/2024</td> <td>ISSUE FOR SSDA</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P4</td> <td>12/03/2024</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P3</td> <td>17/10/2023</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P2</td> <td>19/09/2023</td> <td>ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P1</td> <td>24/08/2023</td> <td>DRAFT ISSUE FOR INFORMATION</td> <td>AT</td> <td>DF</td> </tr> </table>	Rev	Date	Description	Ch'k'd	App'd	P5	30/08/2024	ISSUE FOR SSDA	AT	DF	P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF	SCALE 1:50 	CLIENT 	TITLE <b>Five Ways Triangle</b> <b>Crows Nest, NSW, 2065</b> <b>On-site Detention Section and Details</b>	DRAWING INFORMATION Drawn: J.Garbo Designed: S.Saiera Checked: A.Tarshan Approved: D.Fettell Revision: P5 Status: FOR APPROVAL Security: STD DRAWING NUMBER <b>427623-003-MMD-DA-XX-DRG-C-0060</b>
	Rev	Date	Description	Ch'k'd	App'd																															
P5	30/08/2024	ISSUE FOR SSDA	AT	DF																																
P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF																																
FILE LOCATION: C:\Users\Wu107446\Mott MacDonald\Deicorp Civil Engineering - 6. Five Ways, Crows Nest\04 Working\01 Drafting\Civil\Drawings\427623-003-MMD-DA-XX-DRG-C-0060.dwg Sep 2, 2024 - 11:36AM GAR99190																																				

ISO A1 594 x 841mm



- LEGEND**  
COMBINED SERVICES
- PROPOSED SITE BOUNDARY
  - PROPOSED STORMWATER
  - x-x- EXISTING OVERHEAD ELECTRICITY
  - e-e- EXISTING ELECTRICITY
  - e1- EXISTING TELECOMMUNICATIONS
  - e1fo- EXISTING FIBRE OPTIC TELECOMMUNICATIONS
  - RMS-B- EXISTING RMS TRAFFIC QLD-B
  - RMS-D- EXISTING RMS TRAFFIC QLD-D
  - eg- EXISTING LOW PRESSURE GAS MAIN
  - es- EXISTING SEWER MAIN
  - esw- EXISTING STORMWATER
  - ew- EXISTING WATER MAIN
  - e?- EXISTING UNIDENTIFIED SERVICE
  - EXISTING ELECTRICAL CABLE JUNCTION BOX
  - EXISTING ELECTRICAL POLE
  - EXISTING ELECTRICAL POLE WITH LIGHT
  - EXISTING TRAFFIC SIGNAL JUNCTION BOX
  - EXISTING TRAFFIC CONTROL SIGNAL
  - EXISTING GAS VALVE BOX
  - EXISTING SEWER MANHOLE
  - EXISTING SEWER LAMPHOLE
  - EXISTING SEWER VENT PIPE
  - EXISTING DRAINAGE MANHOLE
  - EXISTING DRAINAGE DOWN PIPE
  - EXISTING WATER STOP VALVE
  - EXISTING WATER METER
  - EXISTING WATER HYDRANT

©Mott MacDonald  
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott MacDonald was commissioned. Mott MacDonald accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

PRELIMINARY NOT FOR CONSTRUCTION

	Level 10, 383 Kent Street Sydney, NSW 2000 Australia NSW 1230, Australia PO Box Q1678, QVB Sydney T +61 (0)2 9098 6800 www.mottmac.com	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>Ch'k'd</th> <th>App'd</th> </tr> </thead> <tbody> <tr> <td>P5</td> <td>30/08/2024</td> <td>ISSUE FOR SSDA</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P4</td> <td>12/03/2024</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P3</td> <td>17/10/2023</td> <td>RE-ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P2</td> <td>19/09/2023</td> <td>ISSUE FOR DEVELOPMENT APPLICATION</td> <td>AT</td> <td>DF</td> </tr> <tr> <td>P1</td> <td>24/08/2023</td> <td>DRAFT ISSUE FOR INFORMATION</td> <td>AT</td> <td>DF</td> </tr> </tbody> </table>	Rev	Date	Description	Ch'k'd	App'd	P5	30/08/2024	ISSUE FOR SSDA	AT	DF	P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF	P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF	SCALE 	CLIENT 	TITLE <b>Five Ways Triangle</b> <b>Crows Nest, NSW, 2065</b> <b>Combined Services Plan</b>	DRAWING INFORMATION Drawn: J.Garbo Designed: S.Saiera Checked: A.Tarshan Approved: D.Fettell Revision: P5 Status: FOR APPROVAL Security: STD
	Rev	Date	Description	Ch'k'd	App'd																															
P5	30/08/2024	ISSUE FOR SSDA	AT	DF																																
P4	12/03/2024	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P3	17/10/2023	RE-ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P2	19/09/2023	ISSUE FOR DEVELOPMENT APPLICATION	AT	DF																																
P1	24/08/2023	DRAFT ISSUE FOR INFORMATION	AT	DF																																
DRAWING NUMBER <b>427623-003-MMD-DA-XX-DRG-C-0065</b>																																				