Attachment 13

Assessment of Effects Associated with Industrial and Trade Activities and Stormwater Discharges prepared by Beca Limited

Assessment of Effects Associated with ITA and Stormwater Discharges

Bledisloe North Wharf and Fergusson North Wharf Extension

Prepared for Port of Auckland Ltd
Prepared by Beca Limited

4 February 2025

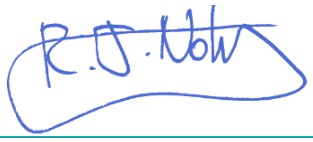
Contents

Appendices

Revision History

Revision Nº	Prepared By	Description	Date
A	Peifen Chua / Hamish Dallas	Draft for Client Review	9.12.24
B	Hamish Dallas	Final Issue	4.02.2025

Document Acceptance

Action	Name	Signed	Date
Prepared by	Hamish Dallas		4.02.2025
Reviewed by	Richard Noble		4.02.2025
Approved by	Andy Harvey		4.02.2025
on behalf of	Beca Limited		

1 Introduction

1.1 Background

The Port of Auckland is situated on the southern shore of the Waitemata Harbour adjoining the Central Business District (CBD) of Auckland City. The main commercial port activities are concentrated between the Bledisloe and Fergusson Terminals.

1.2 Purpose of the Assessment

The purpose of this document is to describe the quantity, extent, characteristics and likely environmental effects of discharges of stormwater and contaminants from a proposed extension to Fergusson North (FN) Wharf and a new Bledisloe North (BN) Wharf, including considerations for stormwater management. The proposed mitigation measures recognise the need to avoid, remedy or mitigate any adverse effects on the surrounding environment. This assessment also describes likely monitoring requirements.

1.3 Description of the Proposal

Port of Auckland Ltd (PoAL) propose to extend the existing FN Wharf and construct a new BN Wharf in the Port of Auckland. The FN Wharf extension will improve operational efficiencies and enable quay crane accessibility. The new BN wharf will provide additional berthing for cruise ships over 300m length and roll-on/ roll-off vessels.

The proposed FN extension is approximately 45m to the east of the existing wharf, with an adjacent infill triangular wharf area (approximately 15m x 15m). Refer to **Figure 1**. It will comprise a reinforced concrete main deck, supported on reinforced concrete steel-cased bored piles. The deck will be accessible to quay cranes and container handling equipment for container loading and unloading, and light commercial vehicles.

The proposed BN wharf is approximately 330m long and 27.5m wide. Refer to **Figure 2**. It will comprise of a combination of precast and insitu reinforced concrete main deck, supported on reinforced concrete steel-cased bored piles The deck will be accessible to light commercial vehicles, and to cargo handling equipment for cargo loading and unloading.

There will be no hazardous substances or hazardous cargo stored on the wharves.

The peak stormwater discharge from the surface of the FN wharf extension for a 10-year return period rainfall event is approximately 52l/s (estimated using the 10-minute rainfall intensity). The peak stormwater discharge from the surface of the BN wharf for a 10-year return period rainfall event is approximately 285l/s (estimated using the 10-minute rainfall intensity).

Drawings of the BN and FN wharves are included in **Appendix A**.

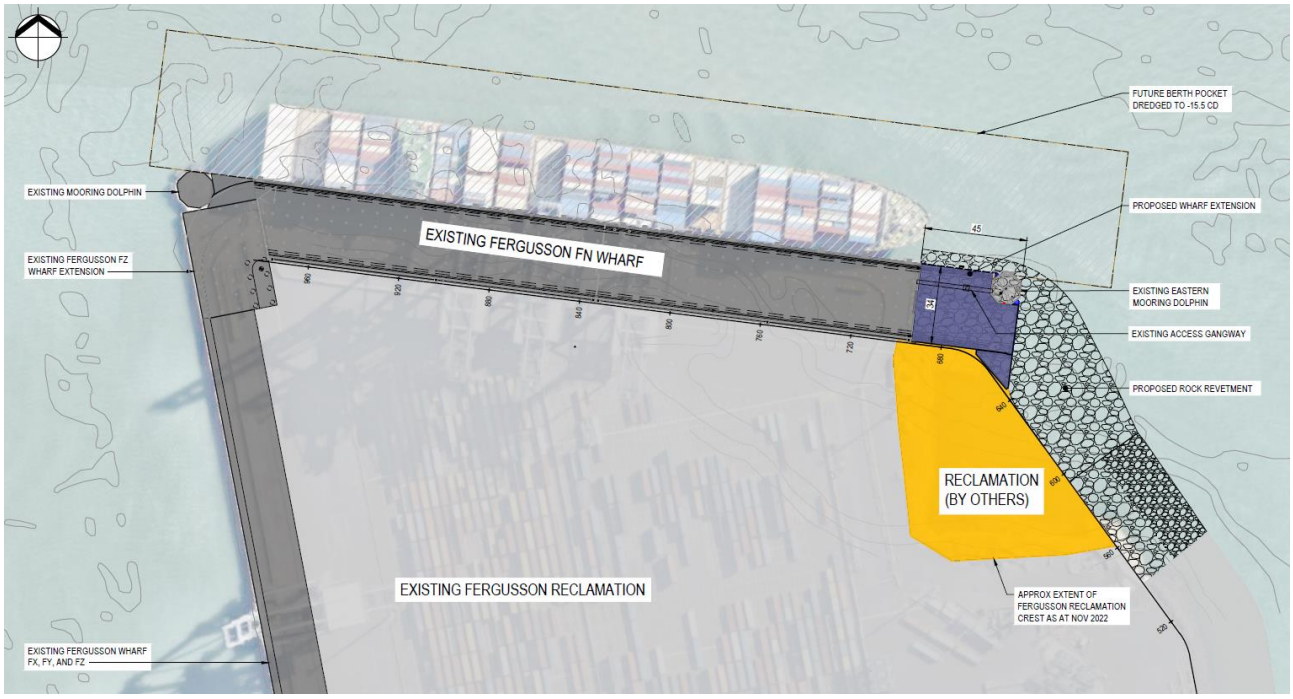


Figure 1: Existing Fergusson wharves indicated in grey. Proposed FN extension indicated in blue.

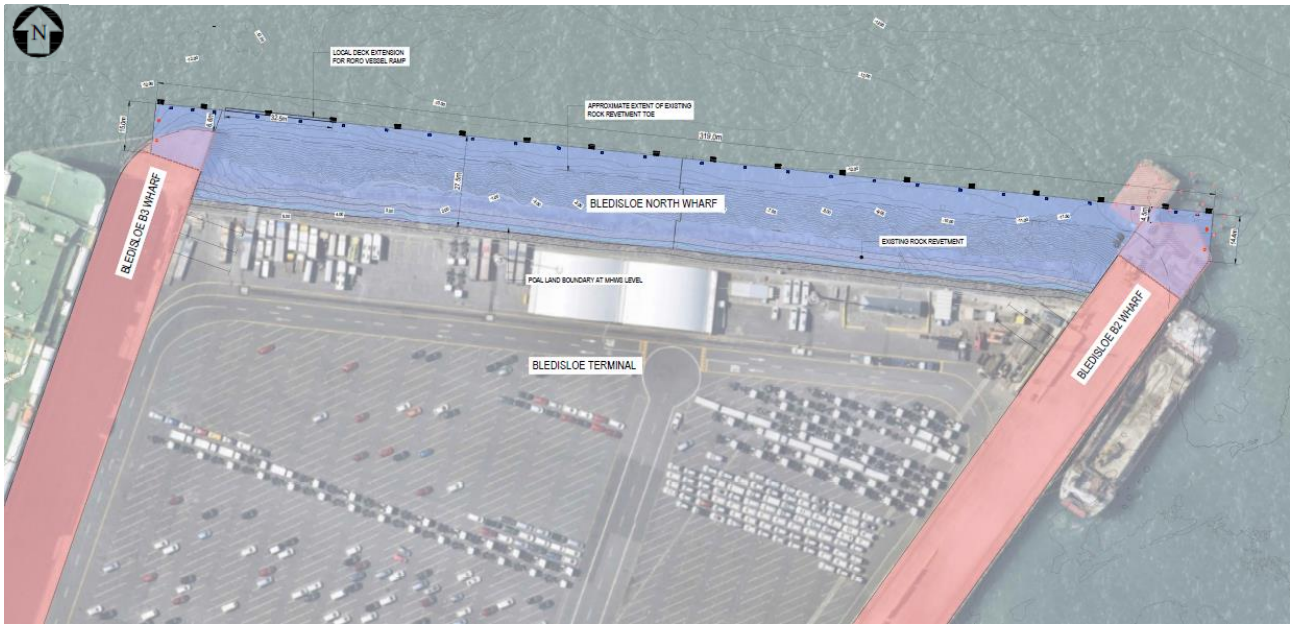


Figure 2: Existing B2 and B3 wharves indicated in red. Proposed Bledisloe North wharf indicated in blue.

A Best Practicable Option (BPO) approach is proposed to address stormwater discharges from the FN wharf extension and BN wharf. The approach includes:

- Management practices, such as waste disposal, for source control of contaminants deposited on the structure. These practices are set out in POAL's existing Standard Operating Procedures (SOPs). The relevant SOP is included in **Appendix B**.
- Emergency spill response procedures. POAL's existing spill procedures will apply to the facility. A copy of the spill procedures is also included in **Appendix B**.
- Stormwater collection and treatment. Stormwater from the deck areas (approximately 1,800m^2 for FN wharf extension and 8,500m^2 for BN wharf) will be collected via drains and conveyed to a treatment device before being discharged into the harbour. The treatment device for BN will use a proposed Jellyfish Filter by Stormwater360 in a concrete manhole located on the landside reclamation, the

treatment device for the FN extension will utilise the existing treatment system for the Fergusson North berth which comprises of a Stormwater360 Jellyfish chamber. These systems will provide sufficient capacity for the water quality design storm in accordance with Auckland Council's *Stormwater Management Devices in the Auckland Region: Guideline Document, Version 1, December 2017,* to remove contaminants from the stormwater. The stormwater treatment devices will be maintained in accordance with the manufacturer's instructions.

1.4 POAL Industrial Trade Activity consent

POAL has a port wide ITA consent (No 25179) granted on 19 February 2010. As a requirement of that consent POAL has an existing Environmental Management Plan: Stormwater (EMP:S) which sets out how stormwater is managed within the Port. Any changes to the management and discharge of stormwater within the Port are incorporated into the EMP:S under the ITA consent. It is proposed that the management of stormwater for the FN wharf extension structure and the new BN wharf structure will be incorporated into the existing EMP:S. This ensures that all stormwater is managed within the single management document. The additions to the EMP:S will be provided to Auckland Council for certification. The EMP:S is reviewed and updated annually and the updates submitted to Council.

2 Existing Environment

The Waitemata Harbour is the receiving environment for stormwater discharges from the Port. The footprint of the Port is approximately 70ha, or 0.2% of the total land area draining into the Waitemata Harbour.

Water quality within the Port area reflects the overall nature of the Waitemata Harbour catchment and the physical location of the Port. Historical data indicates that water quality is generally good with mean total suspended sediment levels less than 10g/m^3. During storm conditions, increases in the sediment concentration on the ebb tide can be expected. Water clarity within the Port area improves with distance from the shore and with depth, particularly around the larger Auckland Council stormwater discharges. The Port zone receives all stormwater flows from the landside Port area and significant stormwater flows from Auckland's CBD.

Sediment quality reflects the historical uses of the downtown waterfront area and the material carried in stormwater from the CBD and Port. Most of the sediment carried by stormwater flows settles out of suspension in the Port basins. The sediment in the Fergusson and Bledisloe areas is coarser than that in the basins. As a result of these factors, sediment quality in the Bledisloe and Fergusson areas is slightly better than in the Port basins (details of sediment quality in the Port basins are covered in the five yearly sediment quality surveys carried out as a requirement of Consent N°34673. The most recent surveys were carried out in 2016-2017 (survey by Golder Associates) and 2021 (survey by KEL). Reports have been provided to Auckland Council. Sediment quality has also been examined off Bledisloe terminal and the FN wharf as part of this project with the results summarised in KEL (2025). Indications from sediment monitoring within the Port are that sediment quality has remained relatively consistent over time or improved in the case of some contaminants The key sediment contaminants aretrace elements, such as copper and zinc, and organic compounds such as polyaromatic hydrocarbons all of which are sourced urban stormwater and vessel antifouling systems.

The Port has been created over the past 140 years by reclamation, dredging and construction, which have highly modified the intertidal and marine habitat. The surface of the seabed is muddy shelly sand, regularly mobilised by vessels using the Port. Based on previous ecological studies, ecology in the Fergusson and Bledisloe areas is expected to be dominated by polychaete worm and sea cucumber communities, which are also found in the Rangitoto Channel. The species in these communities are common to other parts of the lower Waitematā Harbour and Channel Seabed ecology adjacent to both BN and FN is reviewed in the supporting ecological assessment prepared by KEL (2025).

KEL 2025. Bledisloe North wharf and Fergusson North wharf extension construction works – Effects on ecological environment. Prepared by Kennedy Environmental Limited for Ports of Auckland Limited, February 2025.

3 Discharge Effects and Mitigation Measures

3.1 Water Quality, Flow and Discharge

Rainwater and atmospheric particulates will be deposited in the harbour regardless of the presence of the proposed wharf extensions.

A number of factors reduce the potential effects of the discharges from the extension:

- No additional stormwater will be discharged into the harbour as a result of the new berth and extension. All the stormwater discharges into the harbour naturally from these current areas.
- The proposed BN wharf and FN wharf extension will have a hard concrete surface catchment only, which will produce little sediment. The runoff will not travel over sealed roads which mitigates the roading metal being captured in the Stormwater system.
- Traffic over the extension's impervious surfaces will be limited to cargo handling equipment (for cargo loading and unloading) and stevedores assisting with vessel berthing. On occasion, trucks may access the berth to drop off provisions to ships, such as food supplies. Particulates (e.g. tyre particles) and hydrocarbons deposited from vehicles will be at low levels because of the limited traffic.
- There is no permanent storage of environmentally hazardous substances on the new berth and extension. If there is any temporary storage of hazardous substances, they will be stored in an appropriate container with spill response procedures implemented to address the minor potential for spills.
- No logs are processed on either the new berth or extension, reducing loose organic material being located within the catchment.
- The area of the proposed new Bledisloe North berth and Fergusson North extension is very small (BN of 0.85ha and FN of 0.18ha) compared to the area of the harbour (18000ha).
- The proposed stormwater discharges will be substantially diluted after reasonable mixing within the wider harbour into which the stormwater will be discharged.
- Flows generated from new wharf areas will be captured and treated via proprietary treatment devices as outline in section 3.2 below.

3.2 Stormwater Treatment

A Best Practicable Option (BPO) approach is proposed to further mitigate potential effects. This approach adds additional stormwater treatment devices to the present management and procedural measures used on the Port. The full suite of mitigation measures proposed for the extension comprises:

- Management practices to provide source control of contaminants.
- Spill response procedures to address the minor potential for spills. These will apply on the proposed structure.
- Collection and treatment of stormwater from the deck area in accordance with GD01.
- Design of the stormwater system in accordance with GD01, with sufficient capacity for the "water quality design storm" and the total new impervious area of the structures (8,500m^2 and 1,800m^2). The systems will use proprietary Jellyfish devices. The Bledisloe North Jellyfish preliminary design has been undertaken as per the Stormwater360 calculations. The Jellyfish device indicative arrangement is indicated on drawing 3237885-BN-3000. The stormwater treatment device for Bledisloe North has been sized in accordance with GD01 and considers variations in levels between the existing and new wharf structures. While localised areas at the interface may not fully drain to the treatment system, the overall design meets project requirements by achieving at least 75% TSS removal for the newly introduced catchment area.

- The Jellyfish Filter utilises multiple membrane filtration cartridges. Each cartridge consists of removable cylindrical filtration “tentacles”. The filtration tentacles provide a large filtration surface area, resulting in high flow and high pollutant removal capacity.
- Documentation of the measures will be incorporated into the existing Environmental Management Plan: Stormwater (EMP:S) for the Port of Auckland. This is considered to be appropriate from both an operational and monitoring perspective. The EMP:S will include the minimum of the following:
  - The identification of the specific activities conducted on site and the identification of potential contaminants associated with the activities conducted on the site.
  - The methods used to manage environmental risks from site activities and ensure that contaminants identified avoid contacting stormwater runoff as far as practicable.
  - The emergency spill response plan.
- The up-to-date and accurate site drainage plan showing the location of the final discharge point of the site stormwater management works.
  - The identification of appropriate auditing requirements to ensure performance of all components of the updated EMP:S.
- An Operation and Maintenance Plan shall be prepared for the stormwater treatment which is to include
  - A programme for regular maintenance and inspection of the stormwater management works.
  - A programme for the collection and disposal of debris and sediment collected by the stormwater management works or practices
  - A programme for post storm/post spill maintenance
  - A general inspection checklist for all aspects of the stormwater management works
  - Details of the people will hold responsibility for long-term maintenance, or the stormwater management works and the organisational structure which will support this process.

Effects from the ITA activity and the ITA and stormwater discharges are therefore considered insignificant, given the above factors and mitigation.

3.3 Erosion and Scour Effects

There will be no scour and erosion effects from the discharge as the discharge occurs directly to the water, and the Port shoreline adjacent to the discharge locations are protected by a designed rock revetments.

The current discharge from the Bledisloe reclamation has been undertaken with no noticeable scour visible around the outlet structure.

3.4 Flooding Effects

The BN Wharf and FN Extension are situated outside of any overland flow paths or flood-prone areas. There is no potential for flooding of, or damage or nuisance to, other properties because the Waitemata Harbour is the immediate receiving environment and the site is at the downstream limit of the catchment and any excessive stormwater accumulation onsite will naturally drain into the harbour. The existing stormwater infrastructure, including catchpits, slot drains, and subsurface pipes, effectively channels stormwater away, minimizing the risk of overflow and ponding. Consequently, the likelihood of flooding at the wharf and its extension is low.

3.5 Sediment Quality

Effects on sediment quality will be insignificant, consistent with the very low level of additional material potentially discharged into the harbour. As noted above, this is due to the proposed surfacing, low traffic volumes, small catchment area, and proposed management practices, spill procedures and stormwater collection and treatment.

3.6 Sedimentation

Sedimentation will increase beneath the proposed wharf extensions, due to water flows being reduced by the piles and other structures. Sedimentation in these areas is broadly considered to be beneficial to sedimentation in the wider area as the collection of sediment in this location removes sediment more generally from harbour waters and hence the effects are considered insignificant.

3.7 Ecology

Ecological effects are second-order impacts linked to changes in water and sediment quality. Effects on ecology will be insignificant given the level of water quality and sediment quality impacts.

3.8 Construction

With an effective construction management plan (CMP) in place, the risk of specific contaminant discharges to the Harbour from wharf construction and associated stormwater is expected to be low to very low.

Best-practice procedures for these activities should be outlined in the Construction Management Plan (CMP) to minimise the entrapment of fine sediments in runoff, and/or to provide measures for their interception, containment, or treatment. Similarly, protocols for preventing or containing accidental spills, particularly during wharf construction, should be prioritised.

The construction activities should adhere to the limits and standards approved under the consent, and establish management procedures and construction methods aimed at avoiding, remedying, or mitigating potential adverse effects caused by construction activities.

4 Monitoring and Proposed Conditions

Compliance monitoring is proposed, consistent with the existing EMP:S. The berth extension and new berth will be included in the Port-wide programme for monitoring compliance with SOPs. Spot audits will be carried out for activities requiring SOPs. In addition, annual audits will be undertaken to review compliance with the EMP:S elements for the extension.

Proposed conditions have been drafted for consent. Under these conditions:

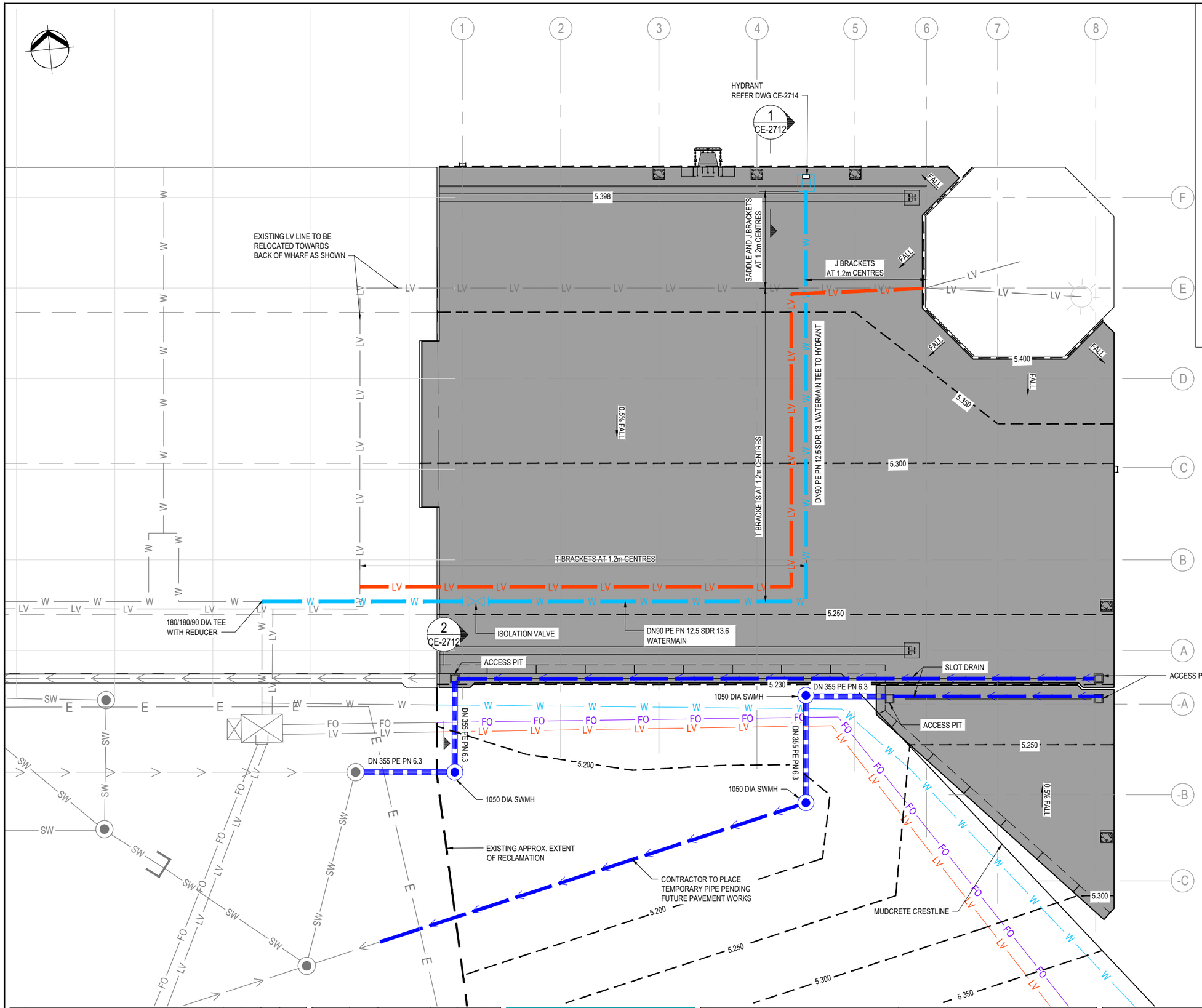
- The stormwater system will be designed with sufficient capacity for the design storm and the total new impervious area (8,500m^2 and 1,800m^2) in accordance with the requirements of Stormwater Management Devices in the Auckland Region (GD01)
- A post-construction meeting will be undertaken, and as-built documents provided to Council to confirm the construction has taken place in accordance with the design.

No further monitoring or conditions are considered necessary.

A

Appendix A – Drawings

Drawing Plotted: 01 Aug 2024 10:56 am



LEGEND

- PROPOSED WATERMAIN - WHARF
- PROPOSED LV DUCTING - WHARF
- PROPOSED WATERMAIN - PAVEMENT (FUTURE WORKS)
- PROPOSED LV DUCTING - PAVEMENT (FUTURE WORKS)
- PROPOSED FIBRE OPTIC (FUTURE WORKS)
- PROPOSED SLOT DRAIN
- PROPOSED STORMWATER LINE
- PROPOSED SW MANHOLE
- PROPOSED HYDRANT
- PROPOSED ISOLATION VALVE
- EXISTING STORMWATER LINE
- EXISTING WATERMAIN LINE
- EXISTING LV LINE
- EXISTING FIBRE OPTIC LINE
- DESIGN CONTOUR
- EXISTING CONTOUR

NOTES:

1. REFER DWG CE-2712 FOR TYPICAL SECTIONS
2. REFER DWGS CE-2713 & CE-2714 FOR SERVICES DETAILS.
3. THIS CONTRACT INCLUDES THE WHARF STORMWATER COLLECTION SYSTEM ONLY. LANDSIDE PAVEMENT, STORMWATER AND SERVICES ARE BY OTHERS AND NOT PART OF THIS CONTRACT.

ORIGINAL DRAWING IN COLOUR

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	VDLT	PC	AH	02.08.24

Original Scale (A1)	1:125	Reduced Scale (A3)	1:250

Design	PC	01.08.24	Approved For Construction*
Drawn	VDLT	01.08.24	
Dsg Verifier	AH	01.08.24	
Drg Check	PC	01.08.24	Date

* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: FERGUSSON FN WHARF EASTERN EXTENSION

Title: WHARF STORMWATER AND SERVICES LAYOUT PLAN

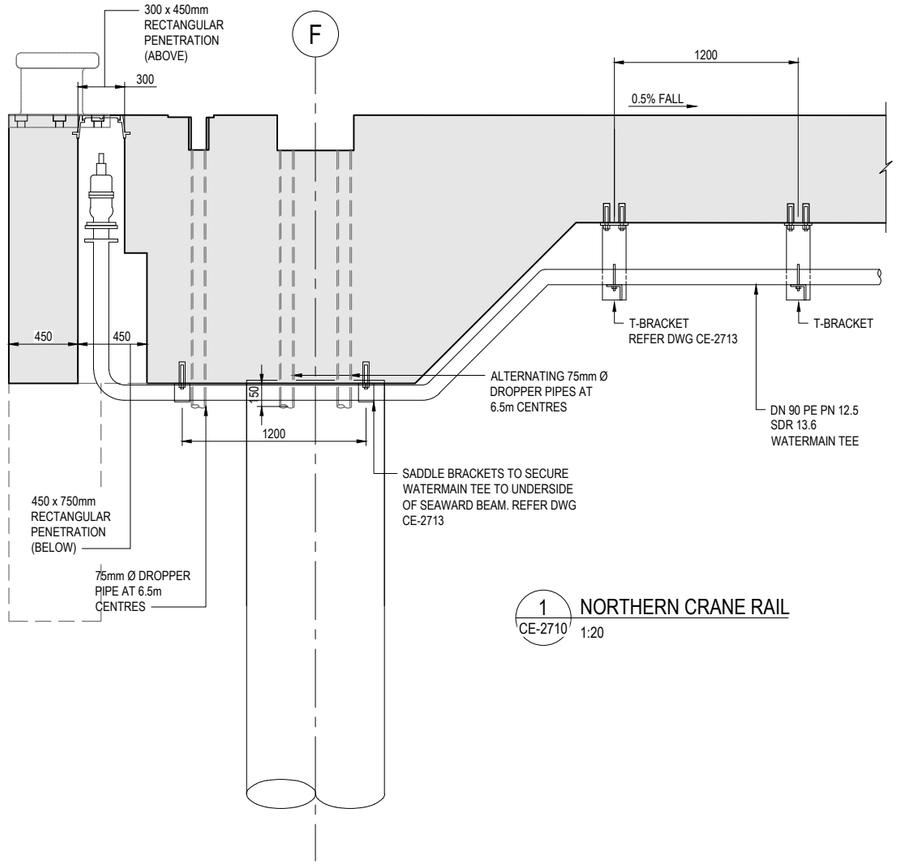
Discipline: CIVIL ENGINEERING

Drawing No.: 3237885-CE-2710

Rev.: A

Document No. 3237885-CE-2710.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS



1 CE-2710 NORTHERN CRANE RAIL
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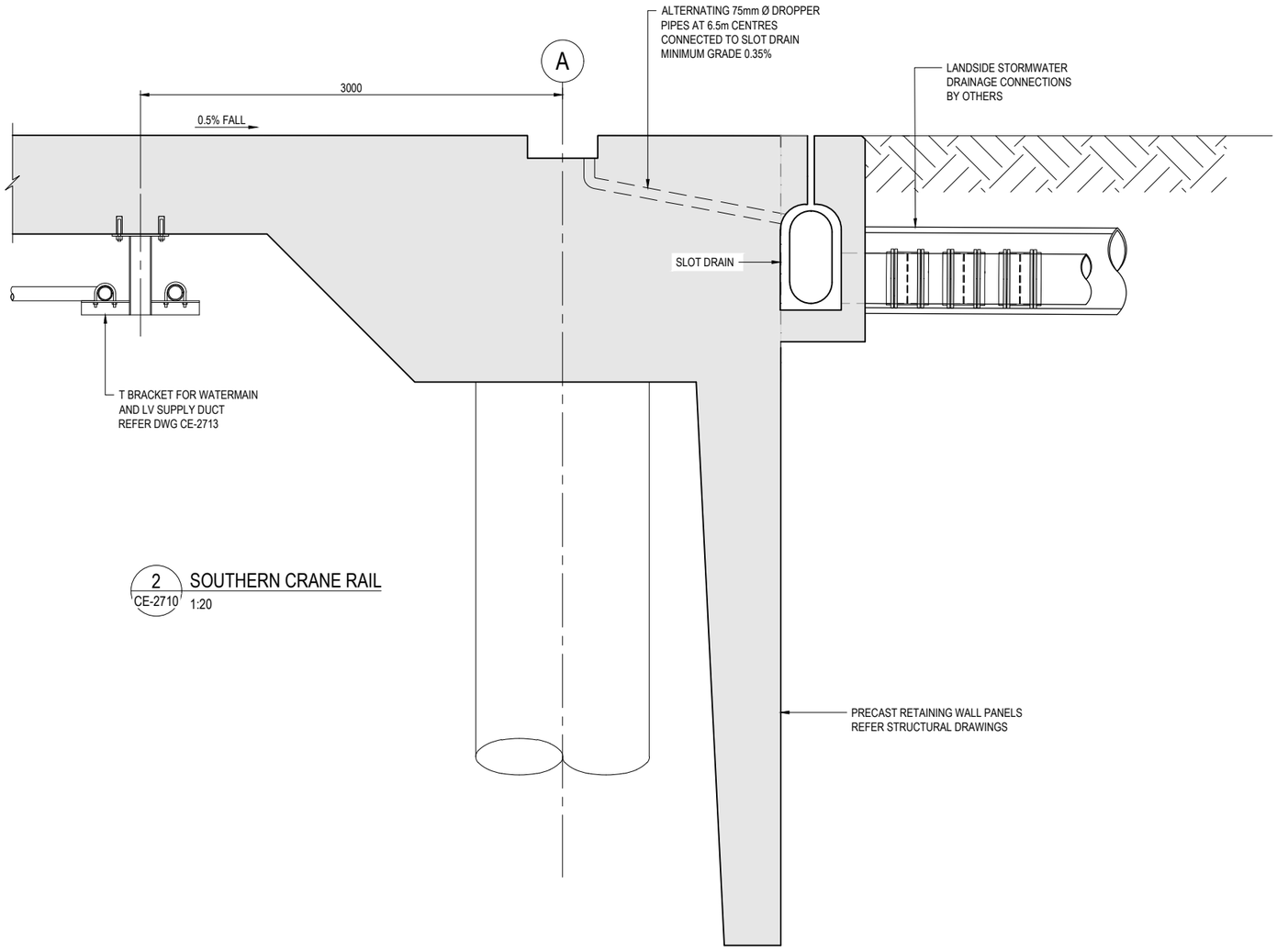

2 CE-2710 SOUTHERN CRANE RAIL
1:20

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	VDLT	PC	AH	02.08.24

Original Scale (A1) 1:20	Design	PC	01.08.24
	Drawn	VDLT	01.08.24
Reduced Scale (A3) 1:40	Dsg Verifier	AH	01.08.24
	Drg Check	PC	01.08.24

Approved For Construction* Date

* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: FERGUSSON FN WHARF EASTERN EXTENSION

Title: WHARF TYPICAL SECTION

Discipline: CIVIL ENGINEERING

Drawing No.: 3237885-CE-2712

Rev.: A

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Document No. 3237885-CE-2712.DWG

STORMWATER SET OUT CO-ORDINATES		
STRUCTURE	EASTING	NORTHING
SWMH1	1758156.15	5921404.09
SWMH2	1758227.67	5921396.64
SWMH3	1758293.51	5921389.80
SWMH4	1758357.32	5921383.12
SWMH5	1758297.51	5921389.38
SWMH6	1758295.31	5921391.71
JELLYFISH	1758300.09	5921391.19
CP1	1758156.33	5921407.55
CP2	1758228.09	5921400.09
CP3	1758293.85	5921393.29
CP4	1758357.61	5921386.67

NOTES:

1. ALL STOMRWATER PIPES SHALL BE RCRRJ CLASS 4, UNLESS STATED OTHERWISE

LEGEND

- EXISTING FIBRE OPTIC DUCT
- EXISTING WATERMAIN
- EXISTING STORMWATER PIPE
- EXISTING LOW VOLTAGE DUCTING
- EXISTING COMMUNICATIONS DUCT
- EXISTING SEWER
- EXISTING HIGH VOLTAGE DUCT
- NEW STORMWATER PIPE
- NEW SLOT DRAIN
- NEW STORMWATER MANHOLE
- EXISTING WHARF
- PROPOSED WHARF
- NEW WATERMAIN

EXISTING PIPE 625Ø OUTLETS TO BE EXTENDED THROUGH EDGE BEAM, OUTLET TO HAVE FLAP GATE INSTALLED. EXISTING

NEW WHARF EDGE

5 BN-8020

EXISTING 600Ø STORMWATER PIPE TO BE REPLACED WITH A NEW Ø750 PIPE. PIPE OUTLET TO HAVE FLAP GATE INSTALLED. OUTLET IL=1.71m CD

DN90 PE PN 12.5 SDR 13.6 WATERMAIN

GILLIES TYPE MEDIUM HYDRANT

FOR DETAILS SURROUNDING THE OUTLET REFER TO DWG BN-3003.

A BN-8012

DN180 PE PN 12.5 SDR 13.6 WATERMAIN

BLEDISLOE B3 WHARF

BLEDISLOE NORTH WHARF

BLEDISLOE B2 WHARF

BLEDISLOE TERMINAL

OUTLET IL = 2.716

CP1 IL = 4.39m CD

IL = 4.36m CD

DN300

Ø1050 MANHOLE SWMH1

TOP OF EXISTING PIPE ASSUMED AT 3.41m CD, PROPOSED PIPE INVERT AT 4.02m CD

0.5% FALL

OUTLET IL = 2.864

CP2 IL = 4.39m CD

IL = 3.64m CD

IL = 3.63m CD

DN350

Ø1050 MANHOLE SWMH2

ACO 350 QMAX SLOT DRAIN REFER TO DWG BN-3001 FOR DETAILS

Ø1800 MANHOLE SWMH3

CP3

IL = 3.78m CD

Ø1800 MANHOLE SWMH5

Ø2300 MANHOLE SWMH6

EXISTING STORMWATER NETWORK

NEW STORMWATER JELLYFISH TREATMENT SYSTEM. DN1800 / 54" FILTERS 6. DETAILS AS PER STORMWATER360 DRAWINGS

0.5% FALL

ALL SLOT DRAIN CHAMBERS ARE D400 Q-SLOT RECESS COVER AND FRAME, REFER TO BN-3001 FOR DETAILS

CP4

IL = 4.39m CD

DN300

Ø1050 MANHOLE SWMH4

IL = 4.36m CD

ISOLATION VALVE TO BE PLACED WITH EXISTING RECLAMATION TO CONNECT INTO EXISTING NETWORK

ORIGINAL DRAWING IN COLOUR

PRELIMINARY NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	HD	VM	AH	9.12.24

Original Scale (A1)	Design	HD	09.12.24
	Drawn	HD	09.12.24
Reduced Scale (A3)	Dsg Verifier	VM	09.12.24
	Drg Check	AH	09.12.24

Approved For Construction* Date

* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: BLEDISLOE NORTH WHARF

Title: STORMWATER PLAN

Discipline: CIVIL ENGINEERING

Drawing No.: 3237885-BN-8000

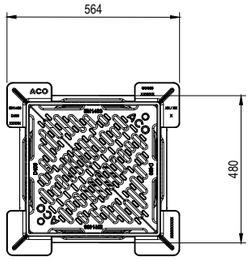
Rev.: A

Document No. 3237885-BN-8000.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS

NOTES:

1. ACO DRAIN TO HAVE SLOPED BASED TO ACHIEVE A FALL OF 0.5%.
2. ACO DRAIN FLOW DIRECTION IS SHOWN ON DRAWING BN-8000.
3. ACO DRAIN CONCRETE SURROUND IS SHOWN INDICATIVELY, AS WILL BE CAST IN-SITU INTO WHARF STRUCTURE.
4. ALL ACCESS PITS ARE TO HAVE PE DN300 PIPES DISCHARGING TO NEARBY MANHOLES



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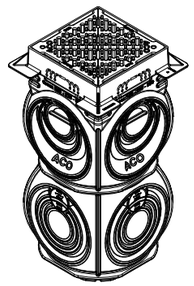

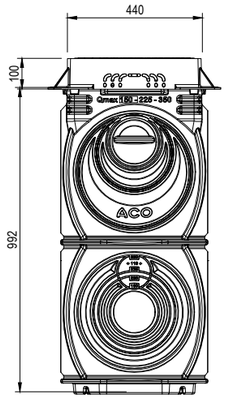

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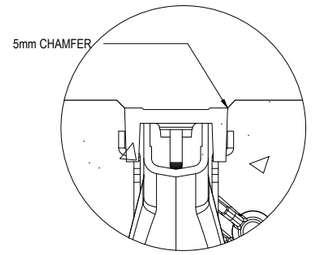

D SLOT ENTRY DETAIL
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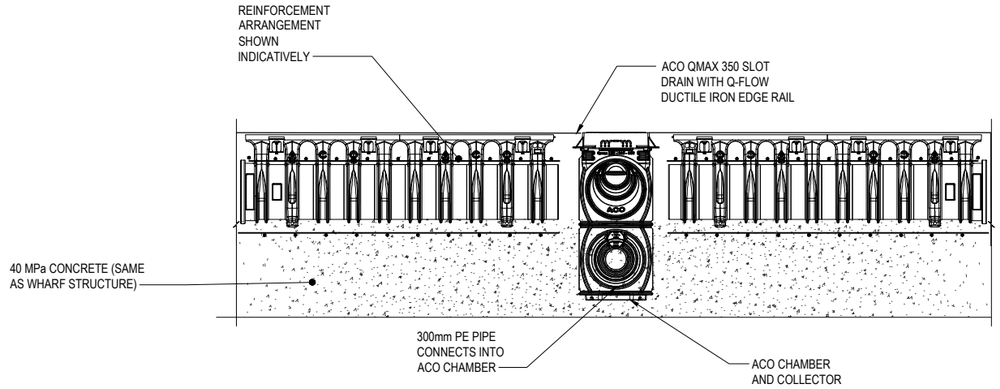

E ACO QMAX 350 DETAILS
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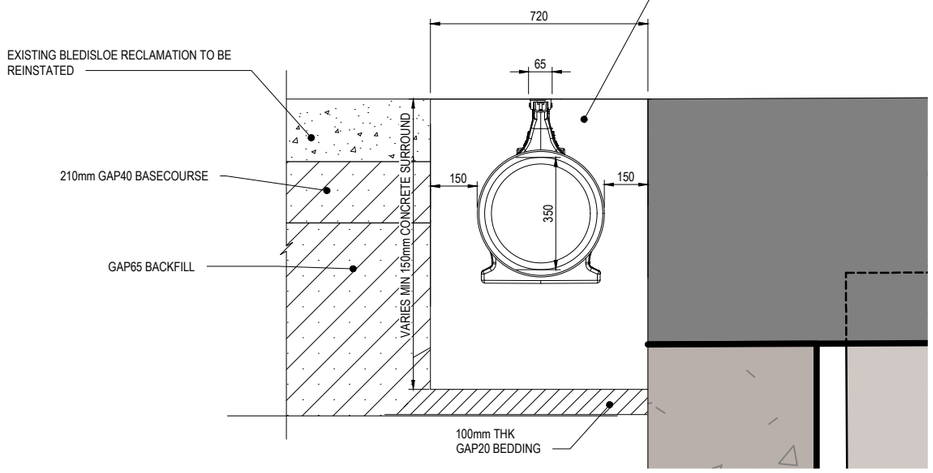

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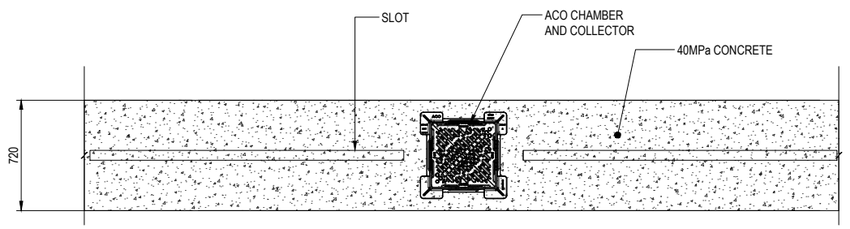


F ACO QMAX 350 DETAILS
SCALE 1:20 (A1)

ORIGINAL DRAWING IN COLOUR

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	HD	VM	AH	9.12.24

Original Scale (A1) / Reduced Scale (A3)				
	Design	HD	9.12.24	Approved For Construction*
	Drawn	HD	9.12.24	
	Dsg Verifier	VM	9.12.24	
	Drg Check	AH	9.12.24	Date

* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: BLEDISLOE NORTH WHARF

Title: STORMWATER DETAILS SHEET 1

Discipline: CIVIL ENGINEERING

Drawing No.: 3237885-BN-8010 Rev.: A

Document No.: 3237885-BN-8010.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS

NOTES:

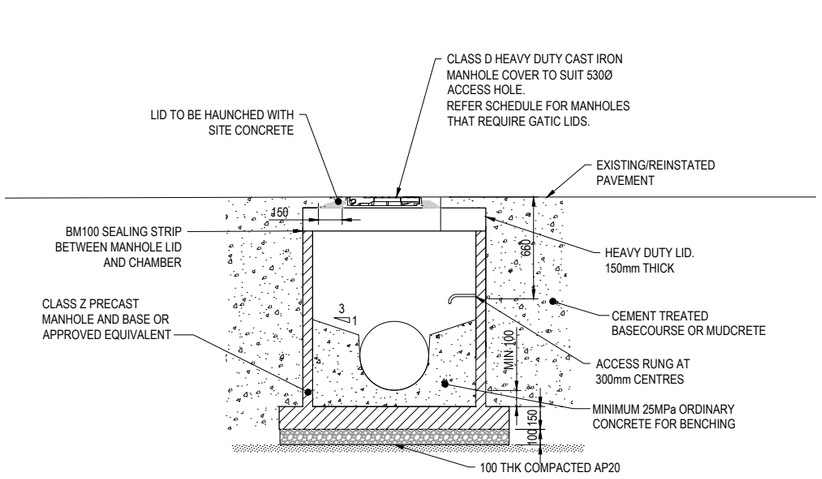
1. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. GROUND LEVEL TOLERANCES:
   PAVEMENT +0mm, -5mm
   BERM +5mm, -5mm
   FOOTPATH +10mm, -0mm
3. MANHOLE LID AND FRAME TO FOLLOW GROUND PROFILE
4. THE ENGINEER TO APPROVE THE CONDITION OF ANY PIPES, CATCHPITS AND MANHOLES PRIOR TO REUSE AND REINSTALLATION.

MANHOLE NOTES:

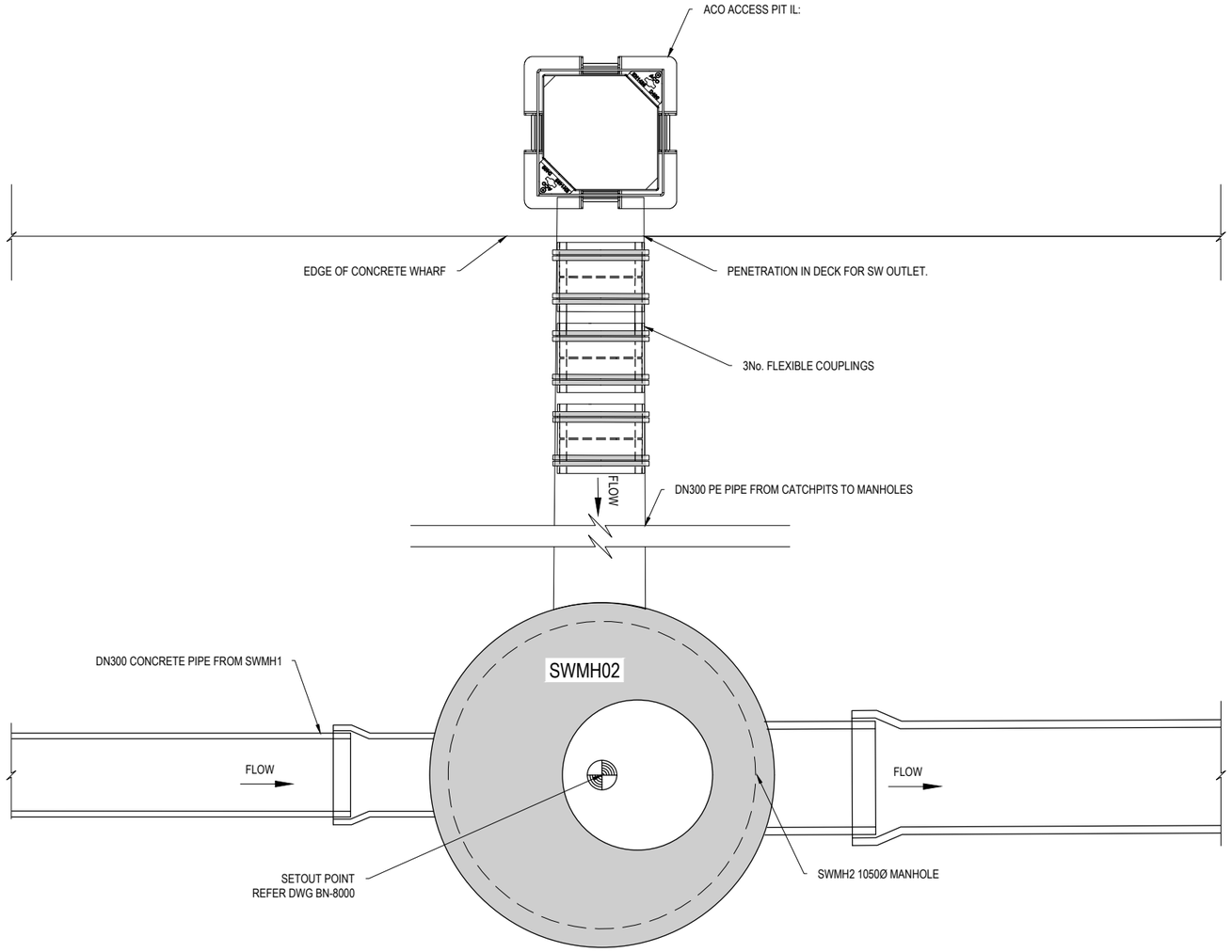
1. SAFE LANDING IS REQUIRED ON BENCHING AT BASE OF RUNGS.
2. ACCESS TO THE MANHOLE SHALL BE CLEAR OF ANY INCOMING PIPES.
3. MANHOLE PRECAST RISERS TO BE 1050mm DIA MINIMUM.
4. FOR ALL RCRRJ PIPES, FLEXIBLE JOINTS REQUIRED FOR PIPES EXTENDING OUT OF WHARF DECK.
5. MANHOLES SHALL BE ORDERED TO USE THE MINIMUM NUMBER OF RISERS AND THE MINIMUM RISER HEIGHT SHALL BE 300mm. NO RISERS SHALL BE CUT DOWN TO HEIGHT.
6. WHERE HALF-ROUND CHANNELS ARE NOT AVAILABLE, THE CHANNEL SHALL BE FORMED WITH 25MPa CONCRETE, VIBRATED AND FINISHED SMOOTH. PLASTERING IS NOT PERMITTED.
7. ALL MANHOLE OPENINGS TO BE CUT WITH CONCRETE SAW (NO SLEDGE HAMMER SHALL BE USED).
8. INSIDE OF MANHOLE THROAT TO BE PAINTED BLUE FOR STORMWATER.

PIPE TRENCH NOTES:

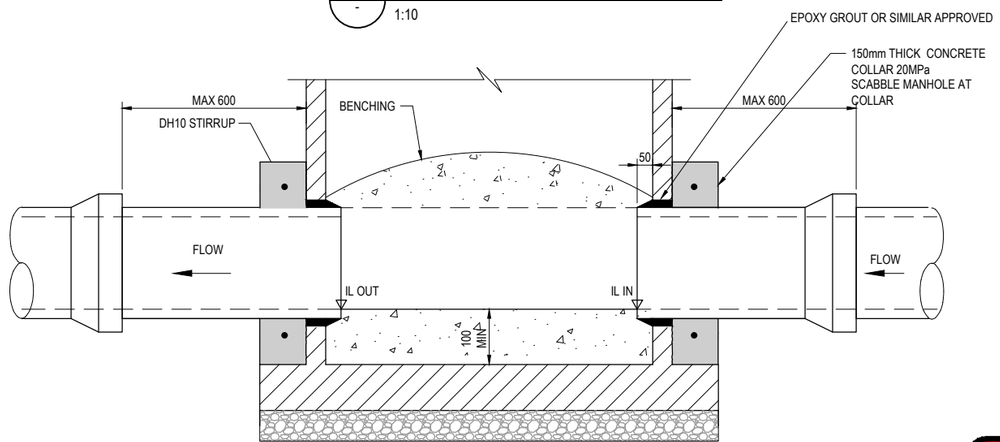
1. WHERE UNSUITABLE MATERIAL IS ENCOUNTERED IN TRENCH INVERT THE MATERIAL SHALL BE EXCAVATED TO DEPTH AS AGREED WITH THE ENGINEER AND REPLACED WITH CLEAN SAND OR GAP65 PLACED IN MAXIMUM 150mm LAYERS.
2. COMPACTED HARDFILL IN PIPE TRENCH AND AROUND STRUCTURES SHALL ACHIEVE 95% M.D.D. IN ACCORDANCE WITH TNZ B/2. (I.E. MEASURED BY CALIBRATED NUCLEAR DENSOMETER).
3. ALL MATERIAL AND COMPACTION REQUIREMENTS FOR BACKFILLING, INCLUDING BEDDING, HAUNCH AND SIDE ZONES ARE TO MEET THE REQUIREMENTS OUTLINED IN THE DRAINAGE SPECIFICATION AND AS/NZS 3725:2007 FOR INSTALLATION OF CONCRETE PIPES.
4. GENERALLY, MAXIMUM TRENCH WIDTH TO BE D+300 FOR D≤600 AND D+600 FOR D>600.



1 - PRECAST CONCRETE MANHOLE
1:20



2 - PRECAST CONCRETE MANHOLE 1050
1:10



3 - TYPICAL CONCRETE PIPE TO MANHOLE CONNECTION
1:10

ORIGINAL DRAWING IN COLOUR

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	HD	VM	AH	9.12.24

Original Scale (A1) / Reduced Scale (A3)	Design	HD	09.12.24
	Drawn	HD	09.12.24
	Dsg Verifier	VM	09.12.24
	Drg Check	AH	09.12.24

Approved For Construction* Date
* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: BLEDISLOE NORTH WHARF

Title: STORMWATER DETAILS SHEET 2

Discipline: CIVIL ENGINEERING

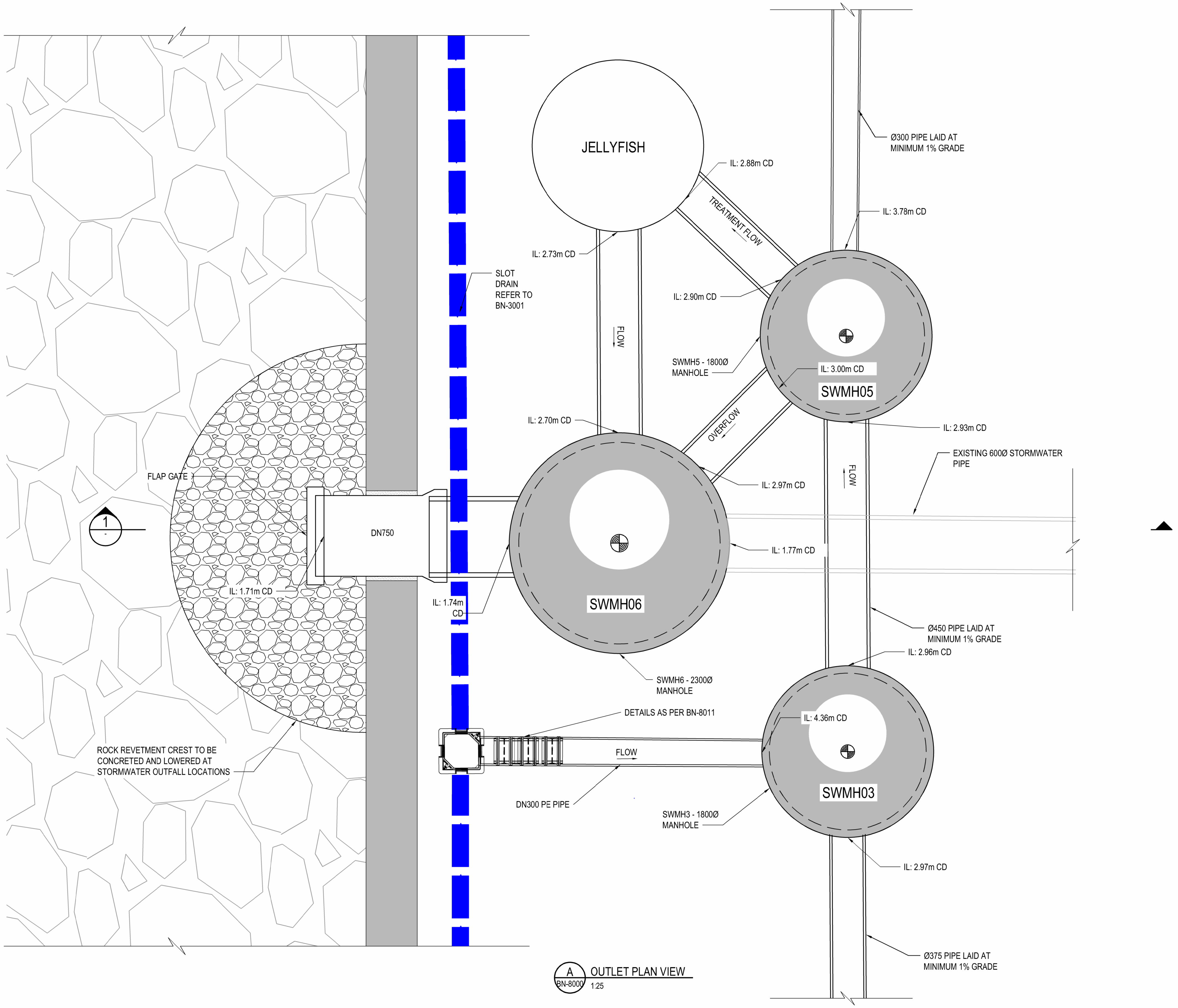
Drawing No.: 3237885-BN-8011 Rev.: A

Document No.: 3237885-BN-8011.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS

NOTES:

1. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. GROUND LEVEL TOLERANCES:
   PAVEMENT +0mm, -5mm
   BERM +5mm, -5mm
   FOOTPATH +10mm, -0mm
3. MANHOLE LID AND FRAME TO FOLLOW GROUND PROFILE
4. THE ENGINEER TO APPROVE THE CONDITION OF ANY PIPES, CATCHPITS AND MANHOLES PRIOR TO REUSE AND REINSTALLATION.



A OUTLET PLAN VIEW
BN-8000 1:25

ORIGINAL DRAWING IN COLOUR

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	HD	VM	AH	9.12.24

Original Scale (A1)	Design	HD	9.12.24
	Drawn	HD	9.12.24
Reduced Scale (A3)	Dsg Verifier	VM	9.12.24
	Drg Check	AH	9.12.24

Approved For Construction*
Date
* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: BLEDISLOE NORTH WHARF

Title: STORMWATER DETAILS SHEET 3

Discipline: CIVIL ENGINEERING

Drawing No.: 3237885-BN-8012 Rev. A

Document No. 3237885-BN-8012.DWG

NOTES:

1. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. GROUND LEVEL TOLERANCES:
   PAVEMENT +0mm, -5mm
   BERM +5mm, -5mm
   FOOTPATH +10mm, -0mm
3. MANHOLE LID AND FRAME TO FOLLOW GROUND PROFILE
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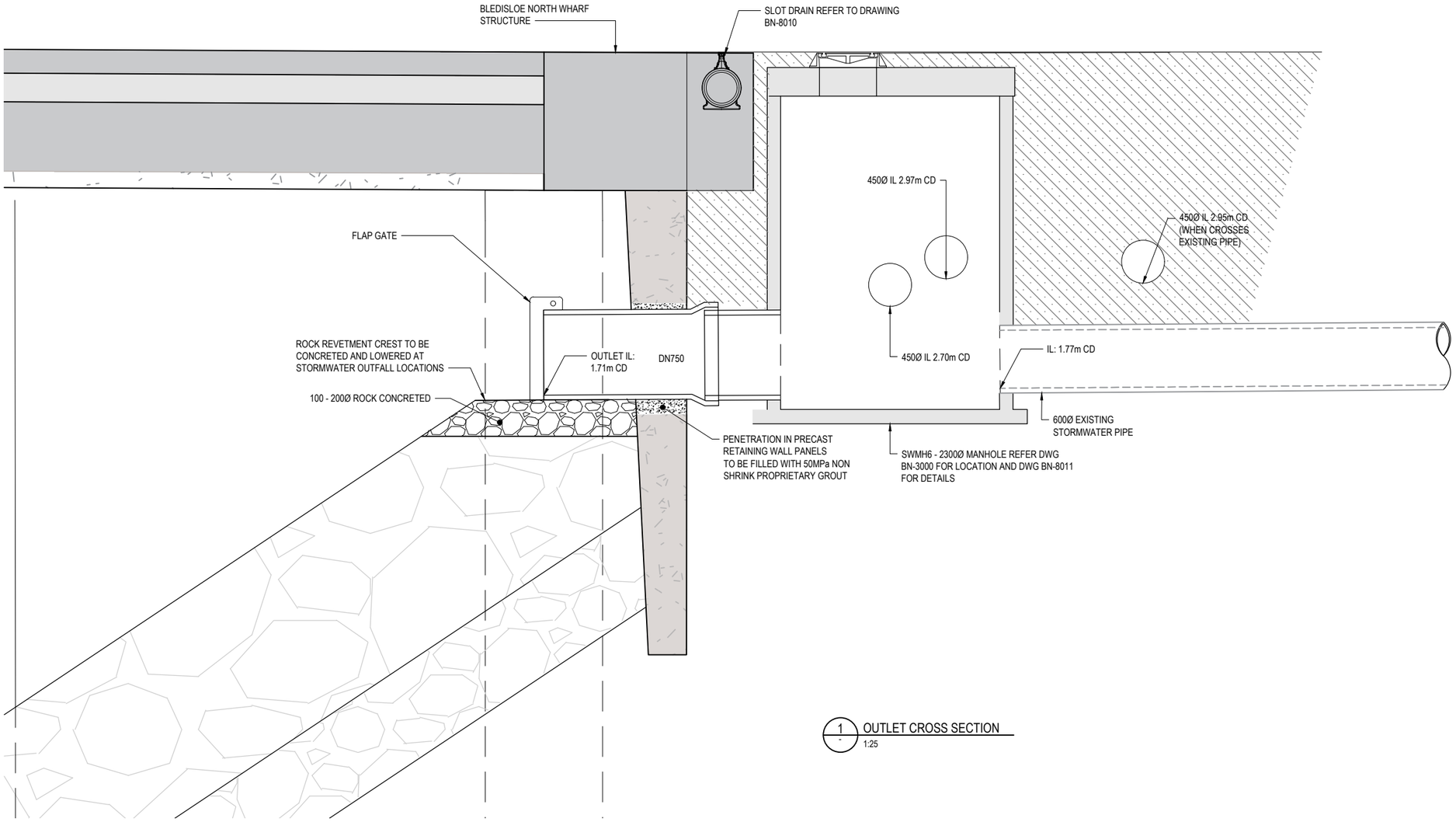


1 - OUTLET CROSS SECTION
1:25

ORIGINAL DRAWING IN COLOUR

PRELIMINARY
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	PRELIMINARY DESIGN	HD	VM	AH	9.12.24

Design	HD	9.12.24	Approved For Construction*	Date
Drawn	HD	9.12.24		
Dsg Verifier	VM	9.12.24		
Drg Check	AH	9.12.24		

Original Scale (A1)
Reduced Scale (A3)
* Refer to Revision 1 for Original Signature

Client: PORT OF AUCKLAND TĀMAKI HERENGA WAKA

Project: BLEDISLOE NORTH WHARF

Title: STORMWATER DETAILS SHEET 4

Discipline: CIVIL ENGINEERING

Drawing No.: 3237885-BN-8013

Rev.: A

Document No. 3237885-BN-8013.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS

B

Appendix B – Port of Auckland Standard Operating Procedures (SOP)

PORTS OF AUCKLAND
TĀMAKI HERENGA WAKA

SOPS, I&MS (2023)
Waitemata Port

Ports of Auckland

June 2023

PO Box 1281 Auckland
P: 09 348 5000

SOP 5 WASTE HANDLING AND DISPOSAL

Potential Contaminants and Nuisances:	Oils, metals, solvents, organic waste, litter, office rubbish.
Scope:	This SOP covers procedures for waste handling and disposal, including hazardous, non-hazardous wastes. The collection of gross litter before sweeping operations is detailed in SOP 14.
Responsible for SOP:	All Business Unit Managers (each responsible within own business unit area).
Applies to:	All port users.
Objective:	To ensure appropriate segregation of waste types, and to ensure that waste is contained and disposed of offsite safely and without risk of contaminants entering the stormwater system or harbour.

Instructions

Housekeeping Measures

- Empty waste receptacles frequently to keep storage of waste to a minimum and avoid overloaded disposal containers.
- Empty waste receptacles for organic waste (garbage) as soon as they are filled up.
- Compact waste (e.g., drums) as much as possible but ensure that no materials residues (e.g., paints, solvents) are present.
- Segregate and separate waste, especially hazardous and non-hazardous.
- Store oily wastes (e.g., oiled rags) separately from the rest of the solid waste. All waste oil should be disposed of in a waste oil-recycling facility.
- Clearly label hazardous waste and store separately.
- Hazardous materials or contaminated wastes are to be sealed in plastic bags prior to disposal [note there are a range of engineering cleaners that may degrade/dissolve plastic].
- Recycle waste material wherever possible (e.g., plastics, glass, paper/card, metals) and place into correct recycle storage bins, refer to figure 1 for locations.
- Keep lids of external bins closed.
- Keep waste / garbage storage areas and surroundings as clean as possible and perform regular housekeeping activities. Where practicable, these should coincide with operation area maintenance and cleaning schedules.
- Ensure waste handling, transport and disposal is carried out by licensed and competent organisations, and that, where required, waste disposal meets MAF/quarantine requirements. Waste contractors to record accurately waste disposal volumes for all waste removed from the Port.
- Ensure that waste management contracts involving outside waste disposal require proof of disposal to appropriate destination.
- Ensure that spill kits are located in proximity to all exterior waste storage areas.

Equipment

- Store solid waste either in watertight plastic wheelie bins with lids or in storage areas that are paved and protected from stormwater run-on and run-off, and covered where practicable.
- Store liquid waste in approved storage units. All units must be accurately labelled and carry appropriate Hazardous Substance labels if contents are hazardous.
- Inspect wheelie bins every three month for water tightness and every year for structural integrity. Repair/replace as necessary
- Keep open waste containers covered.
- Only use skips with plugged drain holes to prevent leaks from waste materials.
- Provide bins for hazardous and non-hazardous solid wastes for each work area.
- Ensure catch pits in and around waste handling and storage areas have suitable filtration devices fitted.

SOP 5 WASTE HANDLING AND DISPOSAL

Training

- Provide appropriate level of employee training in the following areas:
  - Waste reduction/ recycling hierarchy, including location of hazardous and non-hazardous waste bins.
  - Spill response and prevention, including the identification of materials, location and use of spill kits and appropriate disposal measures.
- Repeat training annually.

Relevant Information SOP 14 – Sweeping and Gross Litter Collection SOP 18 - Spillage Response Procedures

Figure 1; Recycling bin locations

SOP 10 PLANT AND EQUIPMENT WASHING/CLEANING

Potential Contaminants and Nuisances:	Organic materials oils, greases, detergents), inorganic dry materials and liquids (minerals, greases/oils) can produce a range of negative environmental effects in the harbour.
Scope:	This SOP covers washing activities carried out on vehicles, equipment and machinery that operate within the POAL site only, including quay cranes. It does not cover plant that is not exclusively working at the Port, such as haul trucks etc.
Responsible for SOP:	GM Operations, Manager Engineering, Container and Cargo Wash Supervisors.
Applies to:	All users of wash facilities, all contractors, all port users.
Objective:	To prevent any organic or inorganic contaminants entering the stormwater system or harbour.

Instructions

General:

- Undertake vehicle and equipment washing in designated areas (e.g., engineering workshop, heavy vehicle maintenance area).
- Do not hose down plant and equipment near open stormwater drains.
- Washing areas should be paved, and equipped with a treatment device.
- Prevent solid debris from entering the drains.
- Clean up immediately after dry washing and before wet washing.
- Use (as much as practicable) biodegradable detergents.
- Provide containment and well labelled areas for detergents.
- Do not overstock on cleaning products.
- Provide clearly labelled waste skips and dispose of waste as per SOP 5.

Quay Cranes:

- Use potable water for crane washdown.
- Place temporary bunds around foot of crane to capture washwater from spray gun cleaning of 'sill beams'.
- Dispose of bunded washwater to approved trade waste, or by sucker truck to waste treatment facility.
- Place waste grease material removed from cranes in covered buckets.
- Dispose of waste grease as soon as is practical as per SOP 5.
- Remove temporary bunding and any cleaning and waste materials before leaving the site.

Incident reporting

- All incidents involving loss of contaminated wash water are to be reported to the Supervisor overseeing the works and included in PortSafe.
- An incident is defined as a loss of washwater to the stormwater system or directly to the sea.

Relevant Information	I&M 1 – Bunding I&M 3 – Oil and Water Separator I&M 5 – Site Drainage	SOP 5 – Waste Handling and Disposal SOP 11 – Use and Storage of Hazardous Substances Used Onsite SOP 18 - Spillage Response Procedures

SOP 11 USE AND STORAGE OF HAZARDOUS SUBSTANCES USED ON-SITE

Potential Contaminants and Nuisances:	Chemicals such as oils, fuel, grease, solvents, paints, detergents
Scope:	This SOP covers the use and storage of hazardous substances used for everyday workshop and yard activities. Procedures for hazardous substances cargo are detailed in the POAL Hazardous Substances and Dangerous Goods Code of Practice.
Responsible for SOP:	GM Operations, Manager Multi-Cargo, Manager Marine, Manager Engineering, All Contractor Managers and Supervisors (each responsible for own activities/ area).
Applies to:	All port users.
Objective:	To safely store and use hazardous substances in order to prevent contamination of stormwater system or harbour.

Instructions

Storage Areas and Facilities

- Hazardous substances are to be on/off loaded from vehicles and stored on paved areas.
- Inspect paved areas regularly for cracks and seal any cracks discovered as soon as possible.
- Locate storage areas as far as practicable from stormwater drains, or in areas directed to trade waste drains.
- Label storage facilities clearly to show the hazardous substance stored in that location and maintain appropriate signage around facilities. Use approved HAZNO signage.
- Ensure storage facilities are contained, roofed and locked to prevent vandalism.
- Ensure storage containers/tanks for hazardous materials are clearly labelled for identification using approved HAZNO signage.
- Ensure storage containers/tanks are appropriate to their contents and environment to avoid corrosion.
- Store hazardous substance containers, bags and drums away from roadways/passageways to prevent accidental spills or ruptures by passing staff and vehicles.
- Bund storage areas in accordance with the following:
  - Incompatible substances shall be stored in separate bunds.
  - Bunded areas shall be covered to prevent the entrance of rainwater as far as possible.
  - Bunds shall also be able to cope with a rupture in or spill from the pumps, pipes, filling and decanting methods associated with the bunded container.
  - The volume of bunded areas shall be equivalent of 110% of the largest container.
- Ensure all hazardous substances and associated wastes are disposed of in a suitable and safe manner.
- Remove liquids in bunds as per I&M 1.
- Dispose of used hazardous substances and containers used for storing them in accordance with SOP 5.
- Drums containing hazardous substances shall be stored with secure lids to:
  - Prevent entry of rainwater, and
  - Prevent spillage if the drum is accidentally knocked over.

Registers

- All contractors / lessees and Port business units to prepare and maintain a current Hazardous Substances Inventory for any hazardous substances used / handled or stored on site
- Make the register available upon request by the POAL management team or Auckland Council.
- Update the register at least once per year and whenever there is a change in the type of hazardous substances stored on site.
- The register shall be in accordance with Health and Safety at Work Act – Hazardous Substances Regulations 2015 requirements.

Incident Reporting

- All incidents involving loss of product from any hazardous substance are to be reported to the Supervisor overseeing the works and included in PortSafe.
- An incident is defined as spillage of products or waste to pavement.

Training

- Ensure there are sufficient on-site approved handlers who are trained to handle hazardous substances.
- Provide appropriate level of employee training in the following areas:
  - Appropriate use and storage techniques of hazardous substances;
  - Safe disposal practices, and
  - Spillage response procedures.
- Repeat training annually.

Relevant Information	I&M 1 – Bunding SOP 5 – Waste Handling and Disposal	SOP 18 - Spillage Response Procedures POAL Hazardous Substances and Dangerous Goods Code of Practice

SOP 13 BUILDING AND GROUND MAINTENANCE

Potential Contaminants and Nuisances:	Oils, paint residues, solvents, metals, scrap metal, dust, cleaning agents.
Scope:	This SOP covers maintenance activities carried out on buildings, and ground works such as excavations. It includes buildings that are situated over water. It gives procedures to be put in place at each stage of the maintenance process.
Responsible for SOP:	Manager Engineering (Engineering Workshop), Supervisor Civil (all other areas).
Applies to:	All port employees and contractors undertaking building and ground maintenance.
Objective:	To prevent contaminants entering the harbour or migrating beyond the work area. To prevent any dust or litter from blocking the stormwater system.

Instructions

Site Preparation

- Locate any stormwater drains, including wharf deck drains, and signpost them, if necessary, to ensure they can be easily protected if a spill occurs.
- Secure all loose material and provide cover to prevent it from being blown out.
- Provide and clearly label storage space for cleaning agents, paints, paint strippers and other maintenance products (SOP 11).
- Dispose of non-hazardous maintenance wastes in accordance with SOP 5.
- Keep all materials needed for spill response close at hand. Appropriate equipment includes absorbent material, transportable bunds, shovels, bags and buckets.
- For any maintenance works requiring land disturbance, ensure spill and erosion and sediment control equipment (e.g. catchpit inserts) is installed to prevent release of pollutants likely to be generated through activities.

Maintenance Activities

- When undertaking any paint repair work on a building built before 1980, port staff or contractors must check paint for lead using appropriate lead paint test kit. If lead based paint is identified, maintenance work procedures should be adjusted accordingly (e.g. Worksafe matters and loss to environment).
- When undertaking any repair work on any building port staff or contractors must check POAL's Asbestos Register and develop an appropriate Asbestos Management Plan for the works if the register indicated the presence of Asbestos containing material within the work area. Use roller-brush painting rather than spraying where practicable.
- Where practicable, use environmentally sensitive alternatives to harmful substances (e.g., paint strippers etc.).
- Do not overstock on maintenance materials (e.g., paint).
- Place any open container or tray on a stable surface in a stable position so it is unlikely to spill.
- To reduce the occurrence of accidental spills, securely close cans, bottles and tins when not in use. At the end of each working day store them in the designated storage areas.
- Clean up any spillages of cleaning agents, paints and other maintenance products immediately as per SOP 18 - Spillage Response Procedures, and NEVER dispose of spills over the side of wharves into harbour waters.

Clean Up

- After cleaning operations, contain and mop up excess liquids and wastes (i.e., dry clean-up) as much as possible.
- Do not wash brushes and equipment or rinse empty containers by flushing them under running water where the water may drain into the sewer or stormwater system.
- Never empty washwater from water-based or solvent-based paints directly into a stormwater drain or onto pavement where it may enter a drain or the harbour.
- Dispose of solid and liquid waste, including from erosion and sediment control equipment, as per SOP 5.

SOP 13 BUILDING AND GROUND MAINTENANCE

Incident Reporting

- All incidents involving loss of product are to be reported to the Supervisor overseeing the works and included in PortSafe an incident is defined as spillage of products or waste to pavement, or loss to harbour.

Training

- Train employees to deal with spill control and response and pollution control (e.g. discard washdown water into trade waste NOT into stormwater drains, or through wharf deck drains). Ensure they are familiar with SOP 18 - Spillage Response Procedures.

Relevant Information

SOP 5 – Waste Handling and Disposal

SOP 11 – Use and Storage of Hazardous Substances

SOP 18 - Spillage Response Procedures

SOP 14 SWEEPING AND GROSS LITTER COLLECTION

Potential Contaminants and Nuisances:	Dust, sediment, litter
Scope:	This SOP covers procedures for sweeping of paved areas around the commercial port site and collection/removal of gross litter.
Responsible for SOP:	GM Port Infrastructure, Manager Multi-Cargo, Manager Engineering.
Applies to:	Contractors, stevedores, sweeping contractor.
Objective:	To prevent contaminants entering the harbour. To prevent any dust or litter from blocking the stormwater system.

Instructions

- Pick up accumulations of large material (gross litter e.g., packaging, steel banding etc.) daily, and prior to the pavement or wharf being swept, and place in rubbish skips. Dispose of organics (e.g., timber packing) to MAF-approved waste disposal.
- Cover rubbish skips at all times (unless rubbish is actively being placed into them).
- Empty rubbish skips and bins at least weekly, or when full.
- Locate rubbish skips and bins as shown on figure 2, attached, and in additional areas as directed from time to time by the Sustainability and Environmental Advisor.
- Undertake regular sweeping on all paved areas, both indoors and outdoors, as per the frequency shown in the Ports of Auckland current Sweeping Plan contained in the EMP:s
- Sweep after every handling operation involving dry bulk cargo.
- Use a sweeper truck regularly on all accessible outside paved areas. Use “dry” sweeping techniques.
- Sweep smaller material by broom away from the wharf edges and other areas to ensure the sweeper truck is able to pick it up.
- Use “dry” sweeping techniques for indoor paved areas.
- Dispose of sweepings and skip contents responsibly as per SOP 5 and **NEVER** over the side of wharves into harbour waters or into the stormwater network. Record quantity of material collected and disposed of by sweeper truck.

Incident Reporting

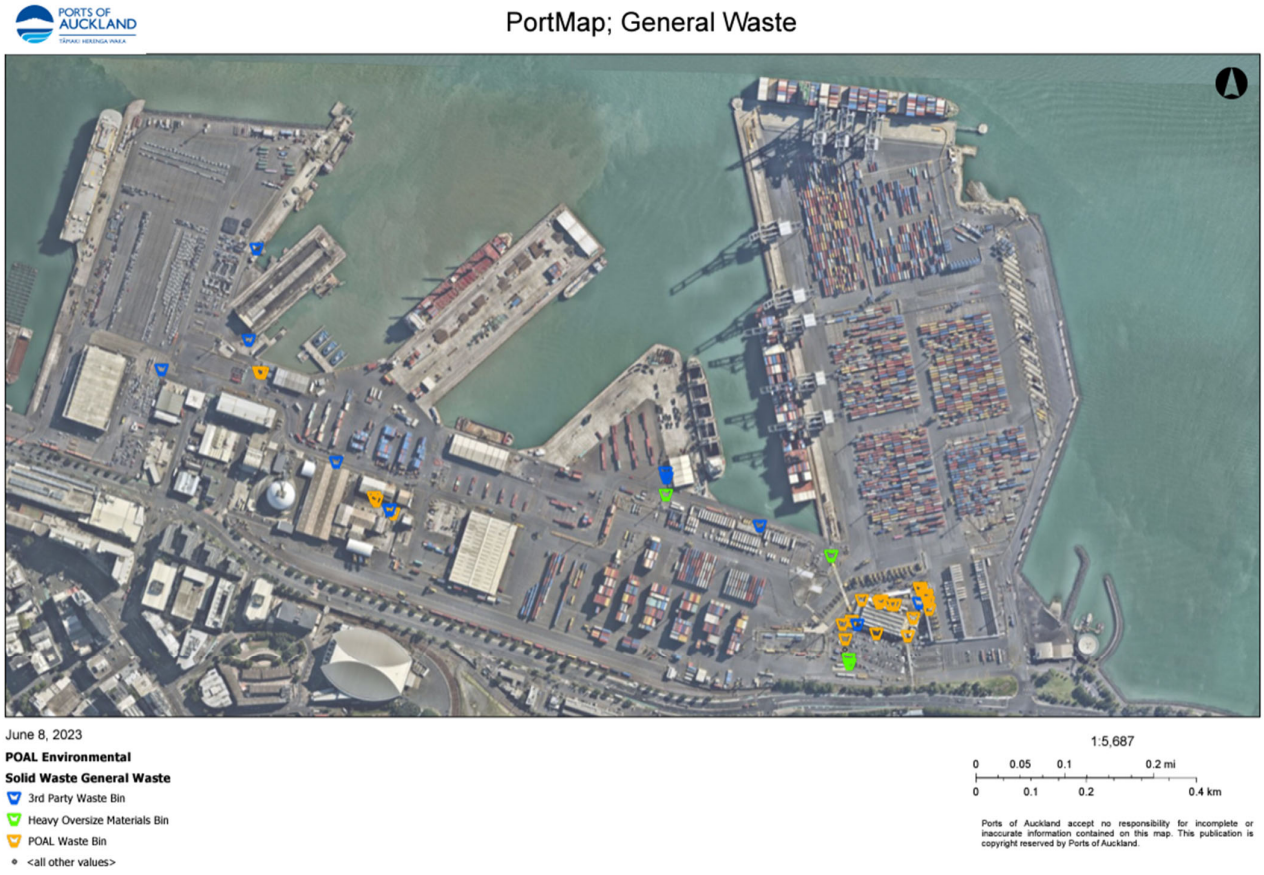
- All incidents involving loss of product are to be reported to MC Ops.
- An incident is defined as spillage of products or waste to harbour.

Training

- Provide appropriate level of staff training in the following areas:
  - Effects of litter and sediment on harbour water quality
- Repeat training annually.

Relevant Information	SOP 5 – Waste Handling and Disposal

Figure 2; General waste bin locations



SOP 17 CIVIL INFRASTRUCTURE CONSTRUCTION ACTIVITIES

Potential Contaminants and Nuisances:	Dust, general litter, building materials and building waste materials~~,~~
Scope:	This SOP covers procedures to be applied in the immediate vicinity of temporary construction activities undertaken at the commercial port site. Procedures for Dangerous Goods and Hazardous Substances are detailed in POALs Hazardous Substances and Dangerous Goods Code of Practice.
Responsible for SOP:	GM Port Infrastructure, Supervisor Civil, Contract Managers.
Applies to:	All port users and contractors undertaking construction works on site.
Objective:	To prevent contaminants entering the stormwater system, harbour or atmosphere as a result of construction activities at the Commercial Port.

Instructions

Pre-Start

- Before works can start, the Contractor must have an approved Construction Environmental Management Plan (CEMP).
- Workers on-site to be made aware of CEMP.
- Contractor must meet Resource Consent conditions required (if any) prior to works starting and during works.
- Approved CEMP to be kept on site and made available at all times.

Construction sediment management

- Identify and install mesh and filter cloths over all catch-pits in immediate vicinity (within 10 m) and downstream of construction works area (refer Auckland Council TP90 – erosion and sediment control).
- Truck tyres to be kept clean to avoid tracking debris off construction site
- Install dust 'shades' when undertaking works likely to produce dust, to limit spread into Harbour.
- Use a water truck at the construction site where appropriate to control dust.

Spill Response

- Provide and maintain adequate spill response equipment on-site.
- Deal with spills immediately as per SOP 18 Spillage Procedures.

Housekeeping

- Trucks involved in construction to use approved routes only.
- Contractor to provide bins and rubbish skips (where applicable) on-site.
- Pick up accumulations of large material (litter and building waste materials) daily and place into rubbish skips. Dispose of organics to MAF-approved waste disposal.
- If contaminated material is encountered or suspected (e.g., in excavation), notify POAL's Environmental Advisor immediately.
- Contaminated water to be contained and taken off-site for disposal.
- Sweeping and gross litter collected to be managed as per SOP 14.
- Stockpiles to be managed as per SOP 03 – Bulk Handling of Products Stockpiled on Wharf Deck. Waste handling and disposal as per SOP 5
- Sites to be kept tidy at all times.
- All debris and waste material to be cleaned from site at the end of each day.
- Cover rubbish skips at all times (refer to SOP 14).

Equipment

- Construction equipment to be certified and checked and maintained regularly by Contractor. Certification and inspection records to be made available (if required).

Products and Storage

- All hazardous chemicals are to be stored safely in a defined area (approved by POAL) in accordance with SOP 11: Use and Storage of Hazardous Substances Used Onsite.
- All hazardous chemicals stored on site to be recorded with up to date MSDS's.

SOP 17 CIVIL INFRASTRUCTURE CONSTRUCTION ACTIVITIES

Training

- Train employees to deal with spill control and pollution control. Repeat training annually.

Relevant Information	SOP 5 – Waste Handling and Disposal SOP 14 – Sweeping and Gross Litter Collection	SOP 11 - Use and Storage of Hazardous Substances Used Onsite-

SOP 18 SPILLAGE RESPONSE; RESPOND TO A (NON-EMERGENCY) SPILL INCIDENT

Potential Contaminants and Nuisances:	Organics, inorganics (hydrocarbons, minerals, greases/oils), detergents, disinfectants and cleaning agents, paint and solvents,-metal and scrap metal, dust.
Scope:	This SOP explains how to respond to a spillage of solid or liquid material, in order to prevent contaminants from entering the storm water drain or the harbour. A spill incident at POAL can occur at any of the following areas: • The wharf • The pavement • The road • Into the storm water drain • Over the edge of the wharf. ⓘ This SOP covers the immediate response to a (non- emergency) spillage3. For more information on how to manage a spill incident, refer to SOP 18 Manage a (Non-Emergency) Spill Incident.
Responsible for SOP:	GM Port Infrastructure, Contract Managers, Spill Manager
Applies to:	All port users and contractors undertaking construction works on site.
Objective:	To prevent contaminants entering the stormwater system, harbour or atmosphere as a result of construction activities at the Commercial Port.

All Port Users

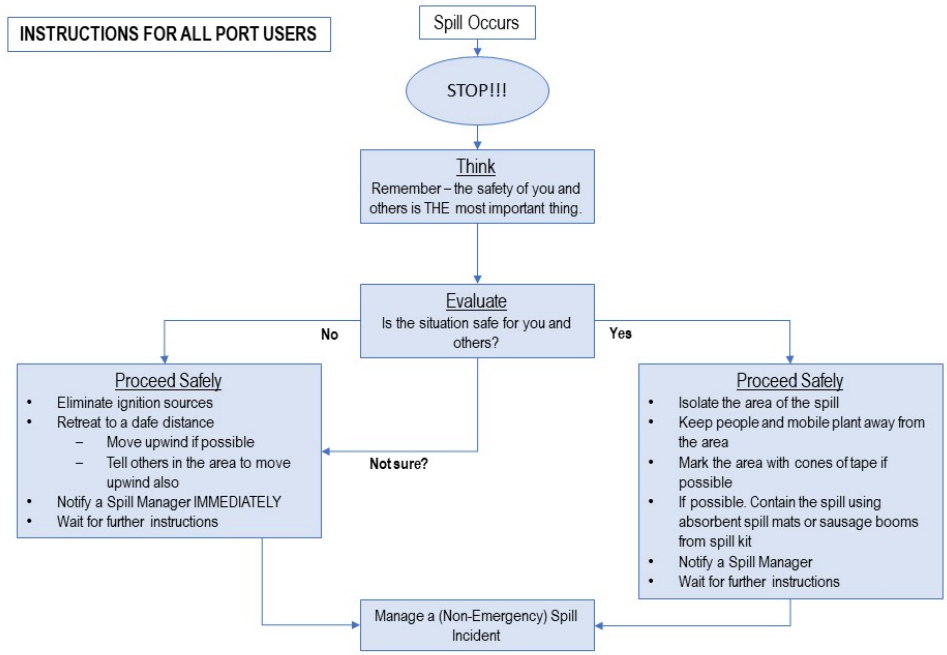
Before you begin, ensure you have completed the relevant training.

Step	Action
1	When a spill occurs, evaluate whether the situation is safe for you and other port users. Consider the following: - Can you hear, see, or smell any evidence of flames, smoke, vapour, gas, aerosols or sprays in the vicinity of the spillage? - Does the spill involve hazardous substances or dangerous goods - can you see red or orange warning diamonds on the containers or signs in the area? - Does the spill involve a quantity of liquid larger than can be contained immediately and safely? - Is the spill running onto port roadways, or over the wharf edge?
2	Choose one of the following: **If the spillage is …** — **Then …** Safe — Go to **Step 3 (Isolate-Contain-Notify)** Not safe — Go to **Step 5**
3	If the spillage is safe, **ISOLATE** the area by using cones or tape.
4	If possible, use a nearby spill kit to **CONTAIN** the spill, including: - Spread absorbent "kitty litter" on the spilled liquid to soak it up - Use sausage booms to contain the spill or to surround stormwater drains and catchpits, to prevent the spill from reaching the harbour - Place spill mats over stormwater catchpits to prevent the spill from entering the drainage system. Go to **Step 8.**

SOP 18	SPILLAGE RESPONSE; RESPOND TO A (NON-EMERGENCY) SPILL INCIDENT
5	If the spillage is not safe: - Shut down any equipment and stop any activity that involves potential sources of ignition - Advise others to also shut down their equipment.
6	If possible, to do so safely, make a note of any information that identifies what substance(s) have been spilled. This information could include details from the hazard pictograms.
7	Retreat to a safe distance upwind and advise others to do the same. Continue to **Step 8**.
8	**NOTIFY** - Report the situation to a **Spill Manager** immediately and follow instructions from Spill Manager. Spill Managers are trained in how to manage a spill and can be any one of the following: - Your immediate supervisor - Fergusson Shift Supervisor 09 348 5322. - The Engineering Shift Supervisor - Multi-Cargo Operations Co-ordinator 09 348-5346
9	**Training:** - All port users – environmental awareness training (online), including information on spill kits and how to use them in initial spill response. - Spill Managers – up to date training in spill management, provided by Health & Wellness Advisor.
10	**Equipment:** - Personal protective equipment - Cones and tape used to isolate spill areas - Spill kits - located around the site as shown on Spill Kit Plan - The Spill Kit Plan must include the location and type of spill kits and the details of the Manager responsible for inspecting the kits. Each spill kit must be inspected weekly by the Operations Area in which the kit is located. The purpose of the inspection is to ensure that each spill kit has the full quantity of necessary materials. Managers of each area are responsible for this and may use internal or external resources to inspect the spill kits.

SOP 18 SPILLAGE RESPONSE; RESPOND TO A (NON-EMERGENCY) SPILL INCIDENT

Flow Chart



Relevant Documents

Hazardous, Dangerous Goods and Spill Management Definitions

POAL Emergency Procedure 2 – Marine Oil Spill

POAL Emergency Procedure 8 – Dangerous Goods Release at Port

SOP 18 SPILLAGE RESPONSE; MANAGE A (NON-EMERGENCY) SPILL INCIDENT

Potential Contaminants and Nuisances:	Organics, inorganics (hydrocarbons, minerals, greases/oils), detergents, disinfectants and cleaning agents, paint and solvents, metal and scrap metal, dust.
Scope:	This SOP procedure explains how to manage to a spillage of solid or liquid material, in order to prevent contaminants from entering the storm water drain or the harbour. A spill incident at POAL can occur at any of the following areas: • The wharf • The pavement • The road • Into the storm water drain • Over the edge of the wharf. This SOP covers the management of a (non-emergency) spillage. For more information on how to respond to a spill incident, refer to SOP respond to a (non-emergency) spill incident
Responsible for SOP:	GM Port Infrastructure, Contract Managers, Spill Manager
Applies to:	All port users and contractors undertaking construction works on site.
Objective:	To prevent contaminants entering the stormwater system, harbour or atmosphere as a result of construction activities at the Commercial Port.

Spill Manager

Procedure

Step	Action	
1	Evaluate the safety of the situation:	
	If the spillage …	**Then …**
	Involves flames, smoke, vapour, aerosol, spray or gas	Immediately evacuate the area and notify **Emergency Services – Dial (1) -111**
	Involves hazardous substances or dangerous goods	Refer to POAL Emergency Procedure 8 – Dangerous Goods Release at Port
	Involves Marine Oil that has entered the harbour	Call HarbourMaster immediately and refer to POAL Emergency Procedure 2 - Marine Oil Spill
	Is not a danger to Port Users	Go to Step **2.**
2	If the spillage is not dangerous, assess whether the spill can be dealt with locally. Consider the following: - Has the source of the spill been stopped or can it be easily and safely stopped? - Is the spill likely to reach stormwater drains or the harbour? - Can the spill be cleaned up using a local spill kit? - Can the volume of substance that has been spilled be contained using the available spill kit materials?	
3	If not already done "Isolate" & "Contain", use a spill kit to contain the spill, including: - Spread absorbent "kitty litter" on the spilled liquid to soak it up	

SOP 18	SPILLAGE RESPONSE; MANAGE A (NON-EMERGENCY) SPILL INCIDENT
	- Use sausage booms to contain the spill or to surround stormwater drains and catchpits, to prevent the spill from reaching the harbour - Place spill mats over stormwater catchpits to prevent the spill from entering the drainage system.
4	Once the event is stabilised then **Evaluate:** - Who needs to be notified? Other port operations, Customs, MPI, the consignee, external contractor for spill response. If any substance has entered the stormwater drains or harbour Notify AT Harbourmaster immediately (09) 362 0397. - Confirm what clean-up actions are required
5	**Act:** - Absorb the material with neutral absorbent - Sweeping and collecting in appropriate contaminated material bins - Use of washing and sweeper/suction trucks or mobile sweeper Any material that enters the stormwater drains must be removed immediately Within 24 hours of containing the spill, clean up and dispose of all spillage and used spill kit materials. Dispose of these materials in the dedicated contaminated material disposal bins around the port. Ensure proper disposal of this contaminated material offsite (refer Spill Kit Maintenance)
6	**Monitor:** Over at least two days, monitor the effectiveness of the clean-up operations, including the following actions: - Arrange further cleaning as necessary - Re-stock and replace the spill kits - Dispose of contaminated waste material to approved site.
7	**Report:** Report the spill on PortSafe as Incident Category "Environmental" including: - The cause and nature of the spillage - The actions taken - The effectiveness and following of procedures - Your recommendations The report should be forwarded to all parties involved in the spill for comment
8	**Training:** - Spill Managers – up to date training in spill management, provided by Container Terminal Ops - All port users – environmental awareness training (online), including information on spill kits and how to use them in initial spill response

SOP 18 SPILLAGE RESPONSE; MANAGE A (NON-EMERGENCY) SPILL INCIDENT

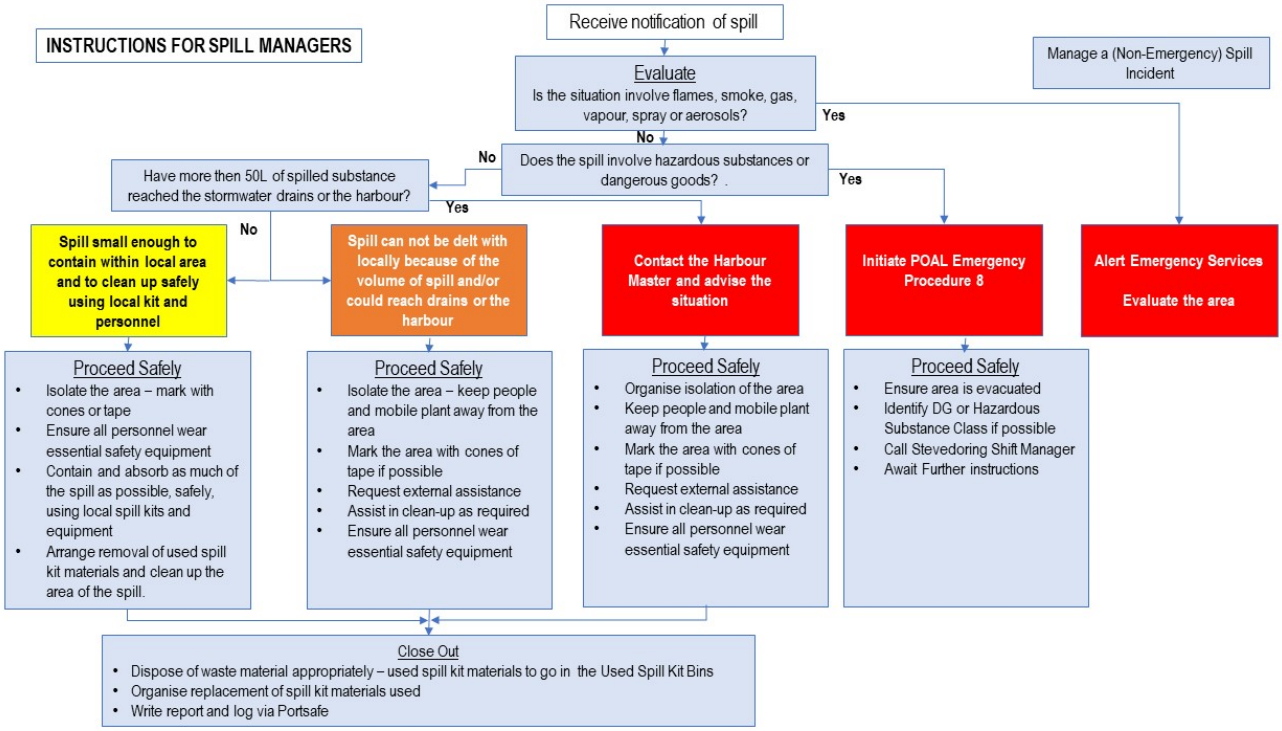
9 **Equipment:**

- Personal protective equipment
- Cones and tape used to isolate spill areas
- Spill kits - located around the site as shown on the Spill Kit Plan
- The Spill Kit Plan must include the location and type of spill kits and the details of the Manager responsible for inspecting the kits.

Each spill kit must be inspected weekly by the Operations Area in which the kit is located. The purpose of the inspection is to

- Ensure that each spill kit has the full quantity of necessary materials
- Contaminated material bins are emptied and material is disposed offsite to approved contaminated waste site.

- Managers may use internal or external resources to inspect the spill kits.



Relevant Documents

Hazardous, Dangerous Goods and Spill Management Definitions

POAL Emergency Procedure 2 – Marine Oil Spill

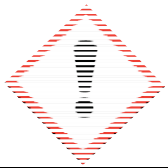
POAL Emergency Procedure 8 – Dangerous Goods Release at Port

Hazardous Substances, Dangerous Goods and Spill management Definitions

Hazardous Substances

Hazardous substances will display a pictogram on labels, cases, containers and/or on signage at areas where hazardous substances are stored or used.

A hazardous substance can be any material that has one or more of the following hazardous properties:

Hazardous Substances	Pictogram
Explosiveness	
Flammability	
Oxidising capacity	
Harmful	
Corrosiveness	
Toxicity	
Ecotoxicity	

The above list is not comprehensive. Other similar labels and signage might also be used.

Dangerous Goods

Dangerous goods are materials that are being transported, which have dangerous properties, including the hazardous properties listed for hazardous substances, but also including other properties, such as radioactivity. The transport and storage of Dangerous Goods is regulated by international laws and conventions, and by separate pieces of New Zealand legislation. Dangerous goods will display a pictogram on labels and signs of bulk containers or vehicle/vessel signage when the goods are being held or transported.

Dangerous Goods	Pictogram
Explosiveness	
Flammability	
Oxidising capacity	
Corrosiveness	
Toxicity	

The above list is not comprehensive. Other similar labels and signage might also be used.

Spill Manager

The person responsible for managing the response to a spill, and in particular for undertaking the relevant tasks outlined in the SOP.

Terminal	Spill Manager
Ferguson	Shift Supervisor
Multi-Cargo	Multi-Cargo Operations Coordinator or Fergusson Shift Manager, or Third-party stevedore on-site supervisor All PortSafe reporting for Multi-Cargo Spills to be done by the Multi-Cargo Operations Coordinator
Engineering	Engineering Shift Supervisor

All Spill Managers must complete relevant POAL training in spill response management.

All persons working on the port must have a trained Spill Manager within their team or reporting line, currently on site.

Spill Kit

A collection of items to be used in case of spill, leak or other discharge, to contain and/or absorb the spilled material and to prevent or reduce the possibility of it reaching the drainage system and/or the harbour.

The locations of spill kits at POAL are shown in the Spill Kit Plan.

There are two types of spill kit at Ports of Auckland:

Large Spill Kit	Mobile Spill Kit
- Moved by Forkhoist - Contains absorbent, catchpit rubber mats, and absorbent socks.	- Wheely bin kit - Contains absorbent pads, socks and pillows, PPE, disposal bags - Co-located with wheely bin of bulk absorbent material.
	

Some activities require additional spill kits to be located at the site of the activity. Where an approved activity requires a spill kit on site, POAL may order the activity to cease immediately if a spill kit is not available on site.

Each spill kit must be inspected weekly by the Operations Area in which the kit is located. The purpose of the inspection is to

- Ensure that each spill kit has the full quantity of necessary materials
- Contaminated material bins are emptied, and material is disposed offsite to approved contaminated waste site
- Ensure that spill kit is in the designated location, or the Spill Kit Location Plan is updated to reflect new location.

Managers may use internal or external resources to inspect the spill kits.

Port Spill Kit Locations

February 16, 2022

Spill Kit

1:4,514

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km