



PORT OF BRISBANE PTY LTD

Water and Wastewater Interface Requirements

AUGUST 2025

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PBPL Permit to Work Requirements (All Locations)

Where any interface/connection, temporary isolation or scheduled isolation is required on Port of Brisbane Pty Ltd (PBPL) utility assets (located outside of a Principal Contractor controlled site or a site where PBPL is not the PCBU) such as but not limited to water, wastewater, and sewer, a PBPL Permit to Work will be required. This permit shall be granted through the nominated PBPL Representative or responsible person for the associated works.

The Permit to Work documentation required can be accessed from the Port of Brisbane's website using the following link [PBPL Inductions & Permits](#).

The permit to work is required every time a 'specified high risk task' is performed at the Port in accordance with the following tasks:

- Plant Isolation
- Excavation and digging
- Confined space
- Hot work
- High voltage switching
- Live electrical work

A PBPL permit to work will be required before any authorisation will be granted to work on or operate any PBPL asset that forms part of the tasks outlined above. The steps to be followed when obtaining a permit to work can be access from the following link [PBPL Permit to Work Procedure](#).

It should be noted that additional approvals or permits may be required by PBPL where a connection to or works on a PBPL utility assets are associated with developments completed directly by a Proponent and hence, do not have an associated PBPL Project Manager or Engaging Person. Where this occurs, further direction should be sought from the nominated contact on the associated PBPL Development Consent Notice.

PBPL Induction Requirements

All personnel working on PBPL assets are required to complete the PBPL induction which can be accessed at [PBPL Contractor Induction](#)

This induction is required if working on any PBPL assets regardless of a site-specific construction induction has been completed.

PBPL-Low Pressure Sewer System (LPSS)

- Every land-user/lessee shall have their own single-user pump station that will connect to the PBPL sewer infrastructure.
- The maintenance responsibilities of the single-user pump station will reside with the Design and construct builder until the DLP (Defects Liability Period) has expired and at which time the land-user/lessee will be transferred the maintenance responsibilities, unless agreed otherwise by the nominated PBPL representative
- The land-user / lessee shall be responsible for maintaining the pump station in line with the manufacturer's recommendations (including frequency and scope of any inspection and servicing that is outlined), with inspection and servicing records to be made available to PBPL upon request.
- PBPL will have the option to control the operation of the pump station.
- The optimum pump out rate from a land-user/lessee sewer pump station will be 2 L/s, unless advised otherwise by PBPL.
- The onsite pump station shall have sufficient capacity and flow control to ensure the optimum flow rate outlined above, is maintained.
- The land-user/lessee shall have a minimum storage capacity separate to the pump station of 24 hours Average Dry Weather Flow (ADWF).
- All modelling results and pumping heads calculated represent only the pumping head required at the interface with PBPL owned assets (at the road).
- Flow rates, head pressure and associated calculations shall be presented to PBPL upon application for connection to PBPL water and sewer services. The nominated pumps to be installed on Port West sites are to be conventional centrifugal pumps equivalent to Flygt NP 3085 SH3 – Adaptive 253.
- All connections to PBPL water and sewer services shall only be conducted via a PBPL permit to work system with prior notifications and planning. Please refer to [Permit to Work Procedure](#)
- All new land development sites or expansions that require additional sewer connections shall have a dedicated comms conduit from the onsite telemetry cabinet to the nearest PBPL comms pit on the road corridor, noting that a new road corridor pit may need to be installed to accommodate the new development. No access to the PBPL comms network is permitted without prior approval and permit to work from Port of Brisbane Pty Ltd.

Low Pressure Sewer System (LPSS) SCADA Requirements

Any connection to the Low-Pressure Sewer System located at Port West sites will require a connection to PBPL Supervisory Control and Data Acquisition (SCADA) system. Port West (LPSS) has discharge limitations, which means that no two sites will be allowed to pump at the same time. To control this, Port of Brisbane Pty Ltd require telemetry to be installed to each pump station for ongoing monitoring of the system and duty cycling (via an inhibit relay system), in order to manage the discharge limitation on the Port west precinct wastewater network. Port of Brisbane Pty Ltd is to be contacted regarding the specification requirements of this system.

Each site shall have an independent pump station that is located adjacent to the PBPL inhibit and monitoring cabinet. The PBPL monitoring cabinet shall be in a separate cabinet to the pump station control cabinet. These two cabinets shall have 2 x 20mm conduit links between them (Liquid tight conduit (anaconda) or PBPL approved equivalent).

The PBPL monitoring cabinet is to be connected to a minimum 50mm communications conduit that terminates back to the nearest PBPL roadside communications pit. This conduit connection shall be roped and ready for connection upon completion of work. Please note that connection to a third party telecommunications pit will not be accepted and subsequent additional work will be at the expense of the Principal Contractor. Where access to a PBPL roadside pit is inaccessible or exceeds 100M, an additional roadside pit is to be installed. If an additional pit is required, permission and access must be sought from the nominated PBPL representative, and no assumptions shall be made on the pit location or type.

Once the new property development has been connected to the nearest PBPL communications pit, a fibre optic cable shall be installed between the PBPL inhibit monitoring cabinet and the nominated PBPL roadside pit. This fibre is to be minimum 12 core single-mode fibre optic cable. The fibre optic cable shall be left unterminated on both ends with minimum 4 metre-long service loop in both locations.

Commissioning and connection to PBPL Ignition SCADA system shall be conducted by the relevant PBPL representative for the works who will in turn liaise with PBPL internal IT team to arrange SCADA and visualisation connectivity.

PBPL-Vacuum Sewer System

- Every land-user/lessee shall have their own collection pit and vacuum interface valve unless advised otherwise by PBPL representative.
- PBPL require all interface valves to be provided outside collection chamber in separate pits.
- Composite lids are acceptable in non-trafficable locations.
- The collection pit and vacuum interface valve shall be located outside of the lease boundary for maintenance purposes.
- The maintenance responsibilities of collection pit and vacuum interface valve will reside with the Design and construct builder until the DLP (Defects Liability Period) has expired and at which time the land-user/lease will be transferred the maintenance responsibilities. However, PBPL will have the option to control the operation of the vacuum system.
- It is required to raise the collection chamber and valve pit above FSL to prevent stormwater ingress (SEQ-VAC-1202)
- The optimum flowrate from a land-user/lessee collection pit to vacuum sewer main is 0.5 L/s
- Each site should be constructed with 24hr storage of the Average Dry Weather Flow (ADWF), unless otherwise accepted by PBPL as part of the Development Application for the respective site.
- All connections to PBPL water and sewer services shall only be conducted via a PBPL permit to work system with prior notifications and planning. Please refer to [Permit to Work Procedure](#)
- Port of Brisbane Pty Ltd will require telemetry be installed to each Vacuum interface valve. The Port of Brisbane is to be contacted regarding the specification requirements of this system. General guidelines are provided below regarding telemetry and SCADA requirements; however, all proposed connections shall be reviewed by PBPL representative before connection details are finalised.

Vacuum Sewer System SCADA Requirements

All existing vacuum sewer interface valves are currently connected to a central telemetry control panel which enables remote monitoring on PBPL's SCADA system. Any proposed new connection to the Vacuum sewer system shall be reviewed by PBPL to help determine telemetry requirements. In some cases, it may be permissible to utilise existing cabling where additional capacity is afforded.

In the case of a new connection, a suitably designed and sized screened instrumentation control cable (minimum 4 pair) shall be installed back to the nearest PBPL telemetry cabinet (location TBD by PBPL representative). The termination of these cables at the cabinet end is to be completed by PBPL.

The terminations at the interface valve end are to be completed by the construction contractor. Within the interface valve chamber, an IP68 junction box shall be installed where all cores of the instrumentation cable shall be correctly terminated and labelled. The instrumentation is to have stainless steel etched labels installed with each individual core labelled on both ends.

The interface valve is to have a Schmersal magnetic reed switch installed (Part #: 101055844) or equivalent which captures the valve count of the interface valve. The holding brackets for these will be free issued from PBPL. A Schmersal (Part #: BN 75-11Z-1391) or equivalent level switch will also need to be installed in the adjacent holding tank (wet well) which relays a high-level alarm back to the SCADA in the event of a blocked or failed interface valve. The height and calibration requirements of the level switch shall be determined by PBPL.

Final detailed commissioning of this system and connection to the nominated telemetry control cabinet must be witnessed and signed off by PBPL representative.

PBPL-Gravity Sewer System

- All connections to the Port of Brisbane gravity sewer system shall be compliant with SEQ Sewerage Code.
- All connections to PBPL water and sewer services shall only be conducted via a PBPL permit to work system with prior notifications and planning. Please refer to [Permit to Work Procedure](#).

Gravity Sewer System SCADA Requirements

Connection to the PBPL gravity sewer system does not require any SCADA connection or interface. However, it is required that a provisional 50mm communications conduit is run from the onsite pump station controller and the nearest PBPL roadside communications pit. This conduit connection shall be roped and ready for connection upon completion of work. Please note that connection to a third party telecommunications pit will not be accepted and subsequent additional work will be at the expense of the contractor. Where access to a PBPL roadside pit is inaccessible or exceeds 100 metres, an additional roadside pit is to be installed. If an additional pit is required, permission and access must be sought from the nominated PBPL representative, and no assumptions shall be made on the pit location or type.

PBPL-Water Connection

During construction, water supply is not to be gained from fire main connections (within this site or any other site, including street hydrants) without the installation of an appropriate temporary or permanent metered connection, as permitted by PBPL. PBPL shall be consulted prior to the installation of any water connections associated with the site and / or works, and installation is carried out in accordance with their standards. This section details the procedure for ensuring property water connections and construction water usage are carried out in accordance with PBPL requirements.

General design considerations

Design of water service connection to be undertaken and certified by an RPEQ (hydraulic engineer) in accordance with the latest revision of PBPL Standard Drawing 137508 and SEQ Code standard drawings, where applicable.

All water service connections for the property shall be metered in accordance with aforementioned standards, including fire water connections. It should be noted that additional property connections for a single site will incur higher service charges for the occupier of the site.

Any potable water top-up connections for water tanks must be connected to the site's domestic water feed and sub-metered, with metering consistent with the requirements of PBPL's standard water meter arrangement.

The Proponent must ensure that water quality within PBPL's water network will not be adversely affected by the prolonged detention of water in large diameter, low volume mains on the site. The Proponent should consider using ring mains and avoid dead ends.

The Proponent is required to install backflow devices on all water lines in accordance with AS3500.

Smartpipes – Managing Standpipe Usage During Construction

The Proponent has the option to either install a temporary construction meter for the duration of the construction phase or obtain a loan Smartpipe (remote metered standpipe) for use during construction. This section outlines the conditions and procedure for obtaining a Smartpipe from PBPL. If the proponent opts for the installation of a temporary construction meter, please refer to the subsequent section.

PBPL will play a direct role in the administration and use of Smart standpipes on Brisbane Core Port Land (unless otherwise informed by PBPL).

During construction, water supply is not to be gained from fire main connections (within this site or any other site) without the use of a PBPL-issued metered Smartpipe, unless a contractor-supplied metered standpipe is approved by PBPL prior to the commencement of works.

All Smart standpipes provided by PBPL are on a loan-basis prior to the commencement of construction, for the duration of the project

PBPL require operators to have the minimum requirements completed:

- a. documented completion of training prior to using a Standpipe – administered by a PBPL representative at handover of Smartpipe;
- b. Smartpipe application completed, submitted and approved by PBPL
- c. a deposit paid and received by PBPL;

The device readings will be used for monthly usage recovery by PBPL (or details will be forwarded to Urban Utilities where applicable; for construction projects outside of PBPL's service area).

Each Smartpipe operator must complete and keep a log of:

- each fire hydrant use;
- each delivery location and purpose of water use; and
- take and record a meter reading for each instance of fire hydrant use

The Smartpipe Permit Holder must ensure all requirements are met by all Smartpipe operators.

Interface procedure for installation of property connection

1. Prior to commencement on the property connection - the Proponent is required to:
 - a. Submit For-Construction details for PBPL review via PBPL Project Manager at least two weeks prior to commencing work on connection
 - b. Determine extent of isolation required to install property connection and affected adjacent properties – PBPL can assist with these details
 - c. Submit a PBPL Permit to Work request for a minimum of 4 business days prior to commencing property connection including details of isolation.
2. During work on property connection – unless the installation of a property connection is previously agreed to be self-executed by PBPL, the Proponent is required to:
 - a. ensure that all property water service connections are installed by a qualified and competent plumbing or civil contractor in accordance with PBPL approved For-Construction plan from step 1 a
 - b. ensure all conditions of PBPL Permit to Work obtained in Step 1 are adhered to
 - c. take a photographic reading of the meters upon installation, ensuring meter serial number is clearly visible and photo is time and date stamped
3. At completion of connection but prior to backfilling any excavation – the Proponent is required to:
 - a. facilitate site inspection with a PBPL representative to inspect connection detail against approved For-Construction plans from step 1 a
 - b. ensure all conditions of PBPL Permit to Work obtained in Step 1 are adhered to
 - c. ensure all below ground pipework and fittings are surveyed and recorded for submission in accordance with PBPL's conditions (please refer to [Appendix B & C of Technical Standards](#)).
4. After completion of property connection work – the Proponent is required to:
 - a. Submit to PBPL Project Manager the photographic readings of meters taken in step 2 c
 - b. Liaise with PBPL's provider of remote meter monitoring for the installation of remote monitoring devices (see below).
 - c. Close out PBPL Permit to Work and return all required documentation to PBPL Project Manager

Remote water meter monitoring requirements

The Proponent is required to coordinate the connection of all newly installed meters (including fire meters) to the existing water meter monitoring dashboard through PBPL's service provider SUMS+. The initial purchase of metering hardware will be at the cost of the Proponent (as is the case for the entire metering assembly, unless otherwise agreed with PBPL) and the ownership of the remote monitoring devices shall pass on to PBPL at Practical Completion. Ongoing portal and sim card fees shall be at PBPL's cost from the date of Practical Completion.

PBPL-Sewerage connection

Design of sewer service connection to be undertaken and certified by RPEQ (hydraulic engineer) in accordance with SEQ code standard drawings.

Submit For-Construction details for PBPL review via PBPL project manager at least two weeks prior to commencing work on connection.

Submit a PBPL Permit to Work request for a minimum of 4 business days prior to commencing property connection including details of isolation.

The Proponent must ensure that all sewer services are installed by a qualified and competent contractor.

The Proponent is to ensure that all infrastructure for sewerage complies with Urban Utilities' standards (except for vitrified clay material which is not permitted).

The responsibility for design of onsite sewer infrastructure up to the PBPL connection point resides with the land-user/lessee noting that this interface point may be outside of the leased area and on PBPL Land.

These requirements take precedence if there is any discrepancy between these requirements and SEQ Sewerage Code.

Required Commissioning checklist

Sewer Pump Stations:

Sewer pump stations' commissioning checklist should be included in the commissioning plan and be clearly noted who's the responsibility it will be to inspect, complete, issue, and approve them.

The lists will consist of the checks that will need to be conducted during the functional testing stage. They will cover all systems, equipment, and components that will be installed, set up, and commissioned on the sewer pump stations.

PBPL representative to be notified to oversee the measurements/connection during commissioning/before backfilling.

To make it efficient, utilize the following standard lists of checks:

Table 1: Sewer Pump station commission checklist

Tenant Name:		Tenant Address:			
Station location on site plan (mark-up):					
Item	Measurement	Unit	Function		
			Yes	No	NA
Power available					
Provision of sufficient water for testing					
Switchboard test completed					
Telemetry points list supplied					
Telemetry comms verified					
Verify the rising main connection to sewer main provided in accordance with SEQ code standard drawings					
Verify there is no leakage (well, pipeline, fittings)					
Verify accessibility to equipment for maintenance is provided					
Duty pump cut in level		m			
Duty pump cut out level		m			
time between duty pump start-stop		minutes			
Standby pump cut in		m			
Low level alarm		m			
High level alarm		m			
spill alarm (HH)		m			
Duty pump operational head		m			
Duty pump operational flowrate		L/s			
Duty Pump motor current (amp)		Amps			
Standby pump motor current (amp)		Amps			
Inside diameter of wet well		m			

Water connection

Table 2: Water Connection commissioning checklist

Tenant Name:		Tenant Address:			
Connection location on site plan (mark-up):					
Photograph/s of the connection details:					
Item	Measurement	Unit	Function		
			Yes	No	NA
Verify the connection to water main provided in accordance with SEQ code standard drawings and PBPL's standard drawing for water connection (Drawing 137508- 1 Rev 3 accessible via port website)					
Verify there is no leakage (pipeline, fittings)					
Test and commission backflow prevention devices as per AS3500					

Sewerage connection

Table 3: Sewer Connection commissioning checklist

Tenant Name:		Tenant Address:			
Connection location on site plan (mark-up):					
Photograph/s of the connection details:					
Item	Measurement	Unit	Function		
			Yes	No	NA
Verify the connection to Sewer main provided in accordance with SEQ code standard drawings					
Verify there is no leakage (pipeline, fittings)					
Verify vacuum system provided in accordance with PBPL’s standard drawing (Flovac is the brand of Vacuum system we typically install)					

Trade waste agreement

Where applicable, a Trade Waste Agreement certified by Urban Utilities must be ratified by PBPL prior to the commencement of any activity on site. The Port of Brisbane Trade Waste Management Plan is accessible via the link below, under Policies and Standards:

[Water and Sewerage Services - Port of Brisbane - portbris.com.au](http://portbris.com.au)

Handover documentation

On completion, all associated works to be supplied in accordance with PBPL ADAC standards. "As Constructed" records of the installation are to be supplied in CAD/PDF and DWG formats that agree with the surveyed pickups.

- Drawings and as-constructed details captured in accordance with Appendix B & C of PBPL [Technical Standards "Supply of As Constructed Deliverables"](#)
- O&M Manuals for each piece of equipment

- Performance and Asset information (Pump curves, Factory testing results, etc)
- Defect liability and Warranties
- Inspection Test plans
- Testing certificates for backflow prevention devices
- SCADA connection required details
 - RTU and Modbus address
 - Scaling
 - Available points for trending