



Frequently Asked Questions

Used Water

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General Enquiries

1. What is a public sewerage system?

Singapore has two separate systems to collect rainwater and used water. Used water is collected through a separate, underground sewerage system, before it is channeled to the water reclamation plant.

The public sewerage system includes:

- a) Sewerage network constructed by the government for public use;
- b) Private sewers handed over to PUB for control and maintenance.

2. Can the new sewers (which are to be handed over to PUB for maintenance) be laid within private property or state land?

No. New sewers that will serve more than 1 development or 1 lot (single landed) shall be constructed within the road reserve, outside any private lands or state land as far as possible. For cases where it is technically infeasible to lay the sewers within the road reserve, PUB will review them on a case-by-case basis.

3. What is greywater recycling?

Greywater is used water generated from showers, basins and laundries. It excludes discharges from water closets (WCs), urinals and kitchen sinks.

Greywater recycling is the treatment of greywater for non-potable use such as landscape irrigation, floor washing, toilet flushing and cooling tower makeup.

Read more on recycling requirements at <https://www.pub.gov.sg/savewater/atwork/alternatesources>

4. Why are there public sewers/manholes within premises of landed property?

There are several reasons for public sewers/manholes being sited within the premises of landed properties.

- a) In old housing estates, some developers may have laid sewers within the private land to serve a particular row of houses. Typically located at the back of the houses, these sewers facilitate the connection of sanitary drainlines from kitchen and toilets to the public sewerage system.
- b) Sometimes, the ground topology (e.g. public roads on higher ground level than the connecting manholes), disallows gravity flow. To avoid pumping, small sections of the sewers/manholes are sited in a manner to allow for gravity flow.
- c) Changes in land parcellation may result in public sewer network being stranded in private

lands.

There may be strong restrictions in laying sewers within road reserve (e.g. tree protection zone, existing cables).

5. Can the public sewer/manhole within my premises/lot be shifted to outside my property?

The public sewer within your premise is a common utility serving your house and the adjacent houses. Thus, it cannot be completely removed from your property.

However, the owner of the property may realign the existing public sewer within his premises at his/her cost. This would be subject to a technical feasibility study of the realignment proposal in conjunction with any proposed re-construction or building extension works.

It is mandatory for an owner to engage a Qualified Person (QP - who is either a Registered Architect or Professional Engineer) to submit a sewer diversion proposal with his/her proposed redevelopment plans for PUB's approval.

Queries associated with sewer connections

1. When re-developing or reconstructing a building, can the existing sewer connection line be reused?

To reuse an existing sewer, all the following criteria must be met.

a. It is not feasible to construct a new sewer connection within the existing road reserve

Where it is not feasible to lay new sewer connections within the existing road reserve, the property owner may reuse the existing sewer connection.

b. The existing sewers have adequate capacities to serve the proposed re-development

The existing sewers need to have sufficient capacities to serve the current (from other plots) and proposed re-developments' used water discharge flows. If the change in the use/redevelopment of site results in higher discharge of used water, the property owner shall be responsible for upgrading the existing sewer connections.

c. The existing sewer must be in good condition, before it can be reused.

To determine this, the QP needs to engage a PUB registered CCTV contractor to carry out pre-construction inspection. The inspection shall cover the stretch of sewer from the last inspection chamber to the public sewer/manhole. Thereafter, the QP needs to submit the CCTV report to PUB for evaluation. If the sewer is found to be in poor condition, the owner of the property shall be required to fix them, before reusing the existing sewers. .

The Qualified Person (QP) will have to make an evaluation and submit an application to

PUB for clearance. PUB shall hold the rights to decide if the application is permissible

2. Can a sewer connection be constructed to the inspection chamber or manhole (public sewer) at the neighbouring premises?

New Development

For new developments or proposed redevelopments, sewer connection shall be made only to a public sewer or manhole located outside the private land/development site.

Single Landed

Single landed premises refer to landed premises or proposed new landed developments, which includes detached, semi-detached or terraced house/shop/factory on single or subdivided lots. If there are multiple lots within a site, each lot shall have individual and separate sanitary drain-line connection directly to the public sewer or public manhole within the road reserve. As above, new sewers that serve more than one lot (e.g. terrace houses) shall be constructed within the road reserve.

3. What can a property owner do if the only available public sewer/manhole is located within a neighbouring lot?

Where the only available public sewer/manhole is located in a neighbouring lot, a consent letter from its land owner is required for connection to the public sewer/manhole within his/her premises.

Following that, the Qualified Person (QP) shall submit this consent letter to PUB Building Plan Unit (BPU) together with the Development Control plan. Work on the new sewer connection can start only after CBPD has issued clearance.

However, if the owner of the neighbouring lot withdraws his/her consent before completion of works, the QP has to find an alternate route to link up to the nearest public sewer within the road reserve.

4. Do I need to provide a manhole at the connection point to the public sewer?

The individual sewer connection from a single landed residential house can be connected to the public sewer via raised "Y-junction, e.g. without a manhole at the connection point.

For non-residential development (e.g. landed factory or shops) or strata building development such as cluster housing or condominium/apartment or commercial/industrial complex, the internal sanitary drainline shall be connected to the public sewers via manholes.

5. Can an in-drop connection be provided for the sewer connection to the public manhole?

Use of an in-drop for permanent connection to the public manhole is not allowed as it will cause

noise nuisance and also reduces the available working space for maintenance works in the manhole.

Where the sewer connection line is less than 1.5m higher than the invert of the manhole, a tumbling bay connection shall be provided.

If the difference in level between the sewer connection line and the invert of the manhole is more than 1.5m, a backdrop shall be provided. Vortex drop is also needed for all sewers greater than 450mm diameter, regardless of differences in levels.

Please see details at:

<https://www.pub.gov.sg/Lists/SanitaryWorksDrawings/Attachments/4/SanDrgNo3-4.pdf>

6. Can construction site or trade fair use a holding tank temporarily on site to store used water when public sewer is available?

When access to a public sewer is available, the temporary toilet/sanitary facilities shall be discharged to the public sewer. No temporary used water tank shall be allowed.

A temporary used water holding tank is only allowed when there is technical constraint connecting to public sewer or when public sewer is not available. Please note that PUB's related requirements shall apply.

The National Environment Agency's Licensed Waste Collector (LWC) shall be engaged to dispose of the used water stored in the holding tank to a designated Water Reclamation Plant (WRP).

7. What are the sewerage and sanitary related requirements for converting an existing carpark lot into a car washing bay?

The requirements for designated car washing bay are as follows:

- Used water from car washing activity has to be discharged to sewerage system via gully trap
- Wash area has to be sheltered and kerbed to prevent rain water from entering to the public sewer system

For existing premises who like to have additional/ new sanitary works, you are advised to engage the contractor/ plumber to make an online Form F (Application for carrying out New Sanitary Works at Existing Premises/Shops) via PUB website at <https://bpu.pub.gov.sg/Forms/EForms> to PUB-Singapore National Water Agency for approval. Site/location plan, layout plans /section plans show the connection to the sewerage system are to be attached with the submission.

Protection of Sewers

1. Can there be any building or structure over an existing public sewer?

There shall not be any building or any structure over an existing public sewer as this may hinder repair/maintenance works.

2. What is the required setback of a building/structure from a public sewer?

Any building/structure located near a public sewer needs to observe a minimum setback as stipulated in the Code of Practice on Sewerage and Sanitary Works at <https://www.pub.gov.sg/compliance/industry/codeofpractice>.

3. When is a reinforced concrete trench needed?

If a building/structure cannot meet the minimum setback requirement from a public sewer, a reinforced concrete trench shall be constructed to protect the sewer. The trench will need to allow the public sewer to be accessed from the top (e.g. via removable slabs) for maintenance and repair. Refer to Figure 1 for illustration.

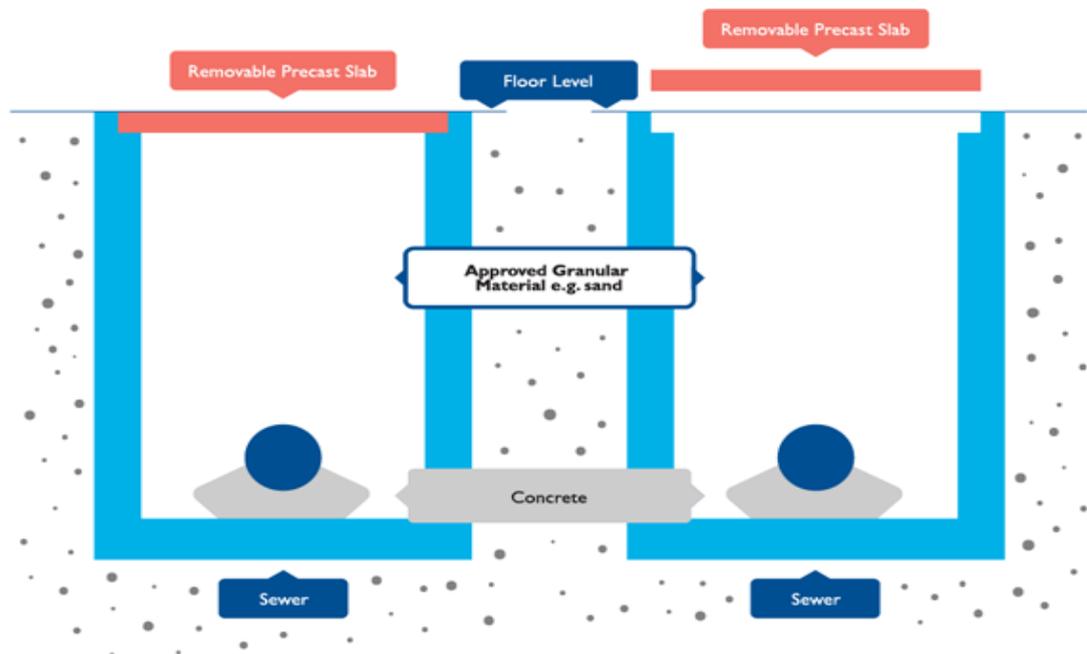


Figure 1. Schematic Diagram for RC Trench

4. If it is not feasible to build a reinforced concrete trench, what is the required vertical height clearance for proposing to build an external structure over a public sewer?

This request will have to be evaluated on a case-by-case basis depending on the external structure (e.g. link bridge) over the public sewer and the depth of sewer. The Qualified Person may be required to provide a minimum height clearance of 4.5m above the finished floor level or more. A greater height clearance may be required if there are exceptional site constraints such as when the affected public sewer is very deep.

5. Can the removable slabs of the reinforced concrete trench for the public sewer be tiled over?

It is not advisable to tile over the concrete slabs as it restricts accessibility to the public sewer. When carrying out maintenance, the tiles may be damaged in the process. However, if tiling is necessary the individual slab piece should be separately tiled allowing it be removed piece by piece without cracking or breaking any surrounding tiles.



6. Can a manhole (public sewer) be located within the building?

No manhole of the public sewer shall be sited within a building.

Typically, public sewer network serves a large number of premises. Public sewers shall be kept free-flowing at all times to channel away used water. If a sewer is damaged and/or blocked, used water may overflow causing public health issues, contamination of the environment, odour nuisance and economic losses.

Due to the possible dire consequences of a damage/blockage of the public sewer, no building/structure can be built over or near public sewers without PUB's approval. This helps to ensure the needed accessibility when carrying out urgent repairs for damaged/blocked sewers.

All buildings/structures located near a public sewer needs to observe a minimum setback as stipulated in the Code of Practice on Sewerage and Sanitary Works at <https://www.pub.gov.sg/compliance/industry/codeofpractice>.

7. Can I pave over the manhole (public sewer) within my premises?

All manholes shall be made easily accessible for maintenance and repair purposes. They shall not be covered up or paved over with cement, concrete, tar, slab or any hard material without the prior approval of PUB.

Preventing Used Water Backflow

1. Why must the top level of an inspection chamber be higher than the connecting public sewer manhole level?

The top level of an inspection chamber should be higher than that of a connecting public sewer manhole level to ensure there is no risk of used water backflow. Refer to Figure 2.

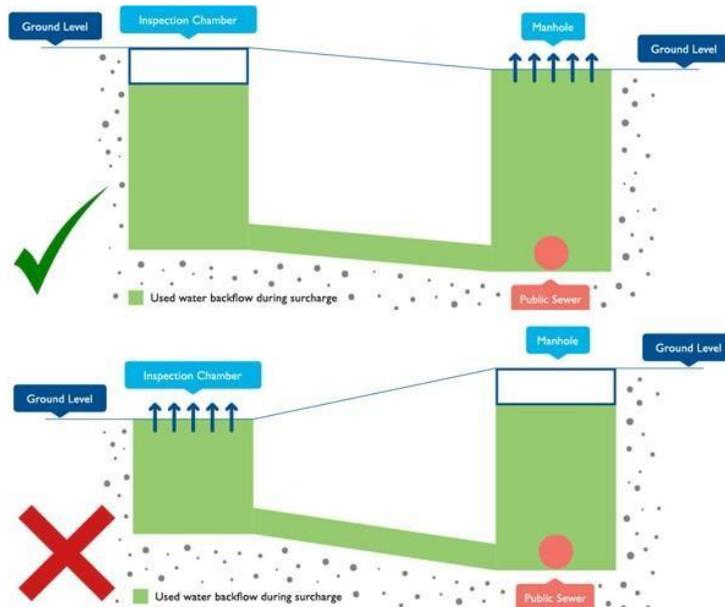


Figure 2. Schematic Diagram of used water backflow

2. Can Sanitary facilities/toilets in the basement* connect directly to the public sewer via gravity?

*finished floor level of basement lower than top level of connecting manhole

The Code of Practice on Sewerage and Sanitary Works requires an ejector system or other appropriate pumping system to be provided for the basement toilet/sanitary facilities to prevent the basement from being flooded by used water backflow from the sewer.

This is because a direct gravity sewer connection of the basement sanitary system to the public sewer may pose a potential risk of backflow of sewage from the public sewerage system into the basement of the house in the event of blockage or high flow in the public sewer.

The risk of a backflow is high for basement due to the small difference in depth between the basement toilet floor level and the depth of the public sewer.

Used Water Discharge from F&B Outlets

1. How do I dispose of used water from a mobile food wagon?

All mobile food wagons must come with a used water holding tank. Used water stored in it must be disposed of at designated disposal point connected to public sewer at a back-up kitchen.

For application of a mobile food wagon please refer to the NEA Website at <http://www.nea.gov.sg/docs/default-source/public-health/food-hygiene/mobile-food-wagon-application-form.pdf>. As required by NEA, it is mandatory for food wagons to have a wastewater holding tank with at least 1.5 times the volume of the potable water tank.

2. Do kitchens of food stall, café and restaurant need to install a greasetrap?

Yes, kitchens of restaurants, food stalls, cafes or catering outlets where food is prepared, cooked or served are required to install grease traps or grease interceptors.

This is to avoid having excessive discharge of oil and greasy waste from the kitchen sinks into the sanitary system. The grease waste can clog up the internal sanitary pipes and the public sewers resulting in used water overflow.

Note: Grease traps/interceptors may not be required with PUB's permission for "Non-Cooking F&B outlets" such as cafes, confectioneries, snack bars etc., which contain little or no grease in the used water discharge.

3. Who is responsible for the maintenance of greasetrap or grease interceptor?

Grease traps or grease interceptors are installed, owned and maintained by the eateries/food retail outlets. The owners of the grease traps or grease interceptor are to conduct regular checks to ensure that the grease traps/interceptors are in good condition, secure, and do not pose any health risk or safety hazard to the public.

4. Why does PUB require applicant to seek NEA's approval for proposed grease trap at food outlets before submitting Form F to PUB?

PUB and NEA work hand-in-hand to ensure compliance in public health and environmental hygiene. To ensure compliance with NEA's Code of Practice on Environmental Health at <http://www.nea.gov.sg/public-health/food-hygiene/code-of-practice-on-environmental-health>, an applicant needs to clear the grease trap's proposed layout with NEA before sending it to PUB using Form F.

Submission Procedures (for QPs)

1. What are the guidelines for removing an unused sewer within a development site?

You will need to seek approval from PUB to remove, abandon or seal up any sewers within a development site.

To verify the status of an “unused sewer” at a site, a Qualified Person (QP) has to purchase the Sewer Information Plan (SIP) at <https://www.pub.gov.sg/compliance/qualifiedpersonsportal/eservices/requestforservicesplans> and consult PUB for details.

Before starting work, all thorough inspection shall be conducted to identify the positions of all existing sewers. You shall ensure that there is proper reconversion of sewerage in the sewer marked for disposal.

The QP for your development site shall submit a proposal to divert, abandon or remove any sewers via PUB’s Development Control submission. A clearance certificate shall be obtained before any commencement of works.

For details, refer to “Standard requirement for sealing of sewer connection, abandoned sewer, manhole and pumping main”.

2. What are the types of minor sanitary works that do not require approval from PUB?

The following minor sanitary works do not require any approval from PUB.

- a. Repair, replacement or removal of existing sanitary facilities (bathroom, toilets, facilities for washing) in a building;
- b. Addition of sanitary appliance (washbasin, bathtub, sink, urinal, toilet bowl) within the existing sanitary facilities in a building.

3. What is the simplified Building Plan (BP) submission?

The simplified Building Plan is a shortened submission system which excludes technical clearance from PUB at the BP submission and the CSC (Certificate of Statutory Completion) application stage. It is applicable only to addition and alteration of existing landed houses.

To qualify for the simplified BP submission, a proposal shall satisfy the following requirements:

- c. No public sewer within the development lot or the proposed building/structure extension is not built over/across the sewer or less than the required sewer setback from the public sewer;

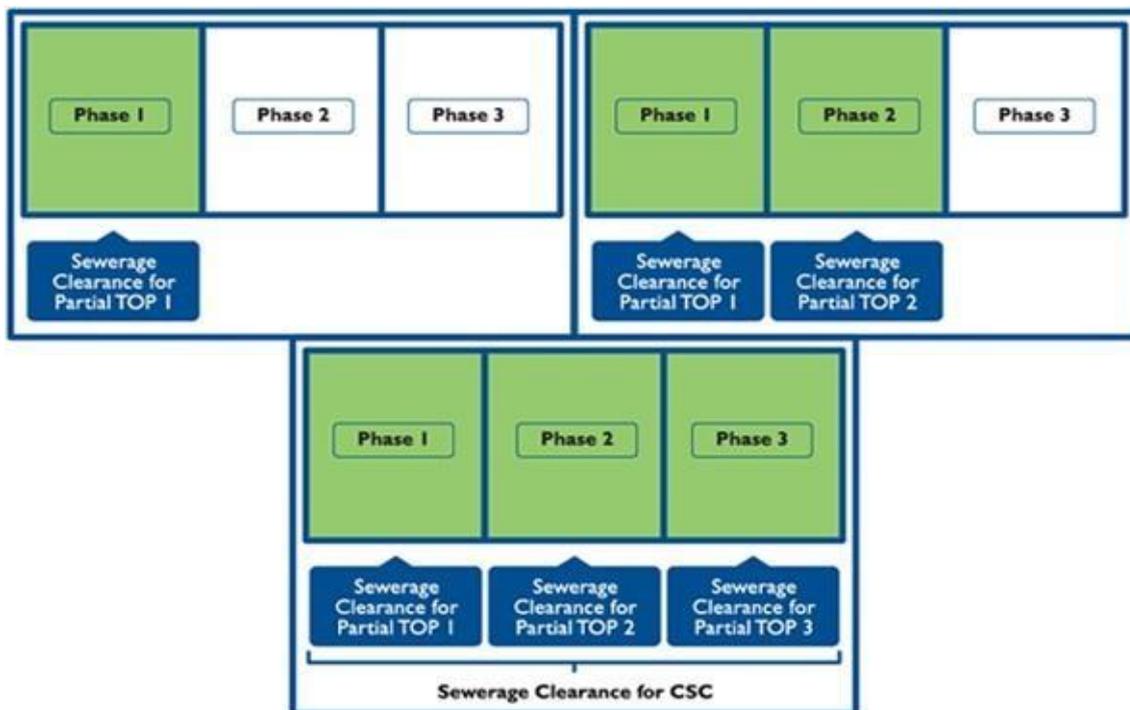
- d. No new sewer connection to public sewer outside the development lot.
- e. No new minor sewer extension works or diversion/abandoning of the existing public sewer.

For more details, QP can refer to the BCA's Internet webpage at https://www.bca.gov.sg/BuildingPlan/addition_ alteration_ landed.html

4. Can a partial Temporary Occupation Permit (TOP) be given before the completion of the entire development?

Yes. The Qualified Person (QP) can split the development into phases and apply for partial TOP for each phase of the completed works. QP needs to clearly show the demarcation of the phases of completion in the Building/Detailed plans or as-built plans.

Sewerage Clearance for partial TOP can be given if the sewerage/sanitary system serving the phase completed works/buildings is completed to satisfaction and connected to the public sewer. Sewerage Clearance for Certificate of Statutory Completion (CSC) can be considered only after all the phases are completed.



5. Do we need to seek approval from PUB for raising or lowering the top of the existing manholes to the finished platform or road level?

Yes, for building and development project where NEA's Central Building Plan Department (CBPD) clearance certificate is required, the existing manholes which need to be raised or lowered shall be clearly indicated in the Development Control (DC) plan & Detailed Plan for

the sanitary/sewerage works. A notification shall be sent to PUB at Zulhilmi_MOHD_ARIF@pub.gov.sg to arrange for a site meeting/checking before commencement of works.

For infrastructure project such as road widening or road resurfacing, landscaping works, etc. which will require raising/lowering of manhole, the agency or consultant shall also send the proposal to PUB at Zulhilmi_MOHD_ARIF@pub.gov.sg to seek approval before work commencement.

6. Whom is responsible for applying to NEA for permits to install temporary toilets/sanitary facilities for construction sites?

The Qualified Person in charge of temporary works for a construction site shall submit the plans on environment health for provision of temporary toilets/sanitary facilities to NEA's Central Building Plan Department (CBPD) for registration and to obtain the Clearance Certificate.

The NEA's Clearance Certificate shall be submitted together with the Form E (Application for Connection of the temporary toilets/sanitary facilities to Sewerage System) to PUB.

7. What is the procedure/requirement for taking over an existing temporary toilets/sanitary facilities from another contractor?

The contractor who takes over the Singapore Power (SP) Services' Utilities Account from another contractor shall be responsible for the proper maintenance of an existing temporary toilets/sanitary facilities. He shall proceed to make applications to proceed lim_siew_kee@pub.gov.sg and/or mary_yan@pub.gov.sg with a Letter of Undertaking for the existing temporary toilets/sanitary facilities.

8. Is there a need to re-apply to PUB for approval if there is a change to the public sewer connection, after Form E has been approved?

Yes, a new Form B (Application for Works in Public sewerage System), download at <https://www.pub.gov.sg/Documents/SD-FormB.pdf>, together with the amendment plan showing new point of sewer connection shall be resubmitted to PUB for approval. Works can only commence after approval has been sought.

9. What is the procedure for applying for temporary water supply for construction related activities (eg. pipe jacking, dust control) that do not have temporary toilets?

The applicant shall apply to PUB (Water Supply Network) for temporary water supply. If the applicant shall confirm that there will be no discharge of used water into the drains, soil and surrounding environment, PUB will process the application after evaluation.

10. What are the purposes of Forms E, F and I used?

Form F (<https://bpu.pub.gov.sg/Forms/EForms/Instruction?form=FormF>) Form

E (<https://bpu.pub.gov.sg/Forms/EForms/Instruction?form=FormE>)

Form I (<https://bpu.pub.gov.sg/Forms/EForms/Instruction?form=FormI>)

For minor sanitary works, the Owner/Occupier of the premises or the plumbing contractor shall submit the Form F online together with the layout/detailed plan showing the proposed sanitary works for PUB's approval.

For temporary toilet/sanitary facilities at a construction site or trade fair site, the plumbing contractor shall make an online application using Form E (for construction site) or Form I (for Trade Fair). Information like detailed plans showing the proposed connection of the temporary toilets/sanitary facilities to public sewers/holding tanks shall be submitted for approval. Commencement of works shall only be allowed upon issuing of approval.

11. Whom is responsible for making the application to PUB for works affecting the public sewerage system?

Qualified Person (QP) is responsible: For works which require approved plans by the Building Control Authority under the Building Control Act, the QP who has obtained the Building Control Authority's approval must apply to PUB and prepare all necessary plans of works.

Professional Engineer (PE) is responsible: For works which do not require the approved plan by the Building Control Authority under the Building Control Act, an appropriate PE must apply to PUB unless PUB has determined that it is not necessary.

The responsible QP for the works/activity shall submit the relevant detailed technical/engineering plans to PUB to obtain a written approval before commencing such works/activity.

CCTV Requirements

1. What is the procedure for conducting a CCTV sewer inspection?

A Builder/Qualified Person is required to carry out pre-construction CCTV inspection of sewers/manholes, whenever their proposed works or activities are near or adjacent to public sewers/manholes. A report with CCTV video shall be submitted to PUB along with an application form, thereafter.

Upon completion of the development or building works, post-construction CCTV inspection is now needed. Builder/Qualified Person is required to submit the CCTV report and video to PUB, before seeking issuance of Temporary Occupation Permit (TOP)/Certificate of Statutory Completion (CSC).

For proposed small redevelopment/A&A works in a single landed property (terrace, semi-detached and detached house), only post-construction CCTV sewer inspection is required. The Qualified Person is required to make the necessary post-construction CCTV inspection.

As of 1 Jan 2013, PUB only accepts CCTV inspection and reports from PUB's Registered CCTV contractors at <https://www.pub.gov.sg/Documents/RegisteredCCTVContractor.pdf>.

Starting from 1 Oct 2017, all CCTV submissions shall be made online to PUB via www.sewv.sg. The CCTV contractors will make the submissions to this website, on behalf of the Qualified Persons.

2. If an A/A works involve only construction works within the building without excavation or structure works outside the building or near the public sewers, do I need to carry out a CCTV inspection of the public sewer/manhole within the lot?

Generally, CCTV sewer inspection is not required where there is no proposed works, such as excavation, soil investigation, piling, tunneling, structure either permanent or temporary, etc., would take place at the ground level in the vicinity of any existing public sewers/pumping mains within the development site.

You are advised to consult PUB if any works or activities are to be carried out within the public sewer corridor.

3. Do we need to seek PUB's approval before rectifying the defects that are shown in the post-construction CCTV sewer inspection report?

Yes. The QP shall, after reviewing the pre-construction and post-construction CCTV sewer inspection reports/DVDs, certify any changes to the sewer conditions such as alignment, functional and structural conditions or defects before and after the works.

If there are new defects to be rectified, the QP shall submit Form B at <https://www.pub.gov.sg/Documents/SD-FormB.pdf> and notify PUB before carrying out any works in the sewerage system. Upon completion of the rectification works, the QP shall submit a post-rectification CCTV sewer inspection report to confirm that the defects have been satisfactorily rectified.

4. Do we need to carry out post-construction CCTV sewer inspection if pre-construction CCTV sewer inspection has not been conducted before commencement of works?

Pre-construction and post-construction CCTV sewer inspection will protect the owner/developer from liability for any pre-existing defects in the public sewers.

If no pre-construction CCTV sewer inspection was conducted before the commencement of works, the responsible Qualified Person (QP) / Professional Engineer (PE) and the contractor will be liable for all the defects found in the public sewers, unless proven otherwise.

Sanitary Drainage & Plumbing System

1. Can the unsheltered shower area, open balcony and open roof terrace be connected to the sanitary/sewerage system?

No, the sewerage system is designed to convey used water only. Therefore, unsheltered shower area, open balcony and open roof, which will collect rainwater, cannot be connected to the sanitary/sewerage system.

Rainwater from the unsheltered shower area, open balcony and open roof, with or without taps, shall be discharged via downpipes to the storm water drains.

2. Where the toilet or wet area at the unit is above the dry area (bedroom, living room, etc.) of the unit below, can the sanitary pipes/fittings be run at the ceiling of such dry area?

For strata buildings, the sanitary discharge pipes/stack or floor trap shall not be installed or located at the ceiling of bedrooms, living rooms, dining rooms and cooking areas. Leakage of sanitary discharge pipes/stacks in these places can bring about serious health concerns to the occupants.

3. In a strata building, what are the requirements for sanitary pipes serving a wet area located on a dry area of the unit below?

No sanitary pipes/fittings shall be located or installed at the ceiling of any dry areas of the unit below. The Qualified Person shall provide a trench or recessed floor slab to house sanitary pipes/fittings serving the wet area such that the sanitary pipes/fittings are within the upper floor strata space.

Alternatively, the use of approved shallow floor traps (non-kitchen use) where the discharge pipe can be encased in the floor slab and horizontal (or wall) outlet WC with P-trap connection of the WC wastepipe to the vertical discharge stack at the unit is recommended.

4. Can a shallow floor trap be used instead of the conventional S-type or P-type floor trap?

Approved shallow floor traps can be used to receive used water discharged from only washbasins, bathtubs or showers. It shall not be used to receive used water from kitchen sink or washing machine.

A shallow floor trap shall be individually and directly connected to the discharge stack. The WC and shallow floor trap shall not be connected to a common discharge pipe.

Shallow floor traps shall meet the performance requirements as specified in BSEN 1253-1999

[-Gullies for Buildings- Part 1 (test requirements) & Part 2 (test Methods)] and shall also comply with the following requirements:

Description	Standard Requirements
Depth of Water Seal	Min 50mm
Passage Clearance	Min 25mm
Outlet Diameter	Min 75mm
Floor Trap (Water Compartment)	Shall be integral type, removable trap is not allowed.
Floor Trap Grating and Anti-Mosquito Valve	Shall incorporate an approved type of floor trap grating and anti-mosquito valve
Service Plug in the Floor Trap (if provided)	To provide permanent instruction label to the service plug.

The waste pipe from washbasin/bathtub/shower connecting to the shallow floor trap shall not be less than 40mm in diameter (alternatively, 2 no. of 25mm diameter waste pipe may be used).

5. What is the purpose of a ventilating pipe or ventilating stack? Is an Air Admittance Valve (AAV) allowed at the outlet of a discharge/ventilating stack or ventilating pipe (50mm) for the floor trap and WC?

Ventilating pipe or ventilating stack

The key function of a ventilating pipe is to maintain equilibrium of pressure within a plumbing system and prevent loss of water seal caused by siphonage or compression.

Ventilating pipes from sanitary appliances and floor trap shall be connected to a ventilating stack which shall be terminated at the highest point of the building.

The outlet of the ventilating stack to atmosphere shall be positioned in such a way that the foul air does not cause a nuisance.

Air Admittance Valve (AAV)

AAV is designed to relieve only negative pressure by allowing air into the stack. However, it prevents air from being expelled if positive pressure builds up in the stack. Hence, it is not allowed to be used at the outlet of any ventilating stack which has to remain open at all times to maintain equilibrium of pressure in the plumbing system.

In special cases where it is not possible to link 50mm ventilating pipe to sanitary appliance and floor trap, AAV may be used subject to the approval of PUB.

AAV, if approved, shall be installed above the spill-over level of the highest appliance served

within the toilet compartment. It shall not be fixed at the waste/discharge pipe at the ceiling of the unit below.

6. Can several ventilating stacks be combined into a single stack to be terminated above the roof?

It is permissible to combine a few ventilating stacks to a single large vent stack for extension and termination above the roof. The size of the combined vent stack shall be determined based on the total number of fixture units connected to the stacks in accordance with Table 7-5 of the Uniform Plumbing Code.

7. Can the outlet of the ventilating stack and vent cowl be concealed?

The outlet of the ventilating stack & vent cowl may be concealed in service duct or chamber provided the outlet of the ventilating stack/cowl is unobstructed and still open to the atmosphere to ensure air circulation.

8. What are the considerations for positioning the outlet of the ventilating stack?

The outlet of the ventilating stack to atmosphere should be positioned such that foul air does not cause nuisance. It shall not be terminated in any private premises, private roof areas or roof garden that is meant for use by the occupants; or less than 3m away from any window or opening of adjoining building.

The recommended height of the ventilating stack above the roof is shown in the standard sanitary drawings in the Code of Practice on Sewerage and Sanitary Work.

Developers should consider carefully the creation of roof terrace/garden as the termination of the ventilating stack at the roof could result in some foul smell at the roof garden/terrace.

9. What is the maximum allowable depth for the floor trap?

The maximum depth of a floor trap shall not exceed 600mm to facilitate maintenance.

If, due to site conditions, a deeper floor trap is absolutely unavoidable, the depth of the floor trap shall not be more than 1m. A sump can be provided for deeper floor trap.

10. Does PUB license the plumber/contractors for sanitary works? Who can carry out sanitary works?

From 1 April 2018, only PUB Licensed Plumbers (LPs) licensed under the Licensed Plumber Scheme (2018) are required to carry out regulated (water service and sanitary) works. However, there are simple plumbing works that are exempted from engaging license plumber. To find out more, please refer to <https://www.pub.gov.sg/watersupply/plumbingWorks/homeowners>.

The new Licensed Plumber scheme will see both water service and sanitary plumbers operating under one common license and be competent in executing both types of plumbing work.

You may wish to use [PUB's E-Service](#) to [search for a Licensed Plumber](#).

Alternatively, you may also wish to contact the Singapore Plumbing Society (Tel: 62920111) or the NTUC Home Services (Tel: 67888788).

HDB dwellers can also contact their respective Town Councils to seek the Town Council's assistance to engage its term contractor's PUB-licensed water service plumber.

For more information, please refer to

<https://www.pub.gov.sg/watersupply/plumbingWorks/homeowners>

Residents are advised to approach a few plumbers to obtain a fair quotation.

11. Is food waste grinder (disposer) allowed to be installed?

Food waste grinders (or disposers) are not allowed to be installed in both residential and commercial sinks. The grinders will introduce excessive grit and organic loading into the public sewerage network, which was not designed to handle this.