



Frequently Asked Questions

Drainage Planning

Drainage Planning FAQs

1. What are the requirements on vesting of Drainage Reserve?

A Drainage Reserve (DR) refers to land that is set aside for drainage works pursuant to development proposals approved by a competent authority. DRs shall be vested in the Government so that drainage works can be executed. The Qualified Person (QP) shall submit photographs to show that the DR is free from all encumbrances. The QP shall forward the following documents (copies) to PUB to facilitate the vesting of the DR: 1) URA's Written Permission with approved plan, 2) URA's approved subdivision plan and 3) Certified Plan with a clear demarcation of the land set aside for the DR.

2. Can the Drainage Reserve be integrated into the proposed development site or the existing premises?

The QP is required to obtain prior approval from URA and the landowner of the Drainage Reserve (E.g. SLA, if the Drainage Reserve is on State Land) before PUB would consider the proposal. Once approval is granted, the developer/owner is required to comply with the conditions for use of the Drainage Reserve, as stipulated in the Code of Practice on Surface Water Drainage, and any additional conditions imposed by PUB. There shall not be any structures built within the integrated Drainage Reserve (i.e. it can only be allowed for use as car parks, driveways, landscaped areas and similar amenities)

3. Can the developer divert an existing outlet drain with a Drainage Reserve?

The QP is required to obtain prior approval from URA and also the landowner of the Drainage Reserve prior to submitting details of the proposed drain diversion to PUB. The proposal must be technically and physically feasible, and must comply with technical requirements in the Code of Practice on Surface Water Drainage and any other conditions which PUB may impose. The developer/owner shall secure land for the new Drainage Reserve of the new drain alignment, and seek approval from URA and SLA. The new drainage reserve shall be delineated as a separate lot with a separate lot number in the DC plan to be vested in the Government.

4. Can the developer erect buildings over an outlet drain within the Drainage Reserve?

No building shall be erected over an outlet drain. However, PUB may allow elevated structures and at-grade structures, on a case-by-case basis. Prior approval from URA must also be obtained.

5. *Will PUB allow temporary use of the Drainage Reserve?*

The applicant shall obtain approval from the landowner (e.g. SLA, if the Drainage Reserve is State Land) for temporary use of the Drainage Reserve. PUB may consider allowing temporary use of the Drainage Reserve if the proposal does not impede maintenance of the drain and drainage improvement works. Depending on the type and duration of the temporary use, the applicant may be required to comply with requirements such as safeguarding the structural integrity of the drain by engaging a qualified person (QP) to assess the design and current structural condition of the drain to confirm that it is able to take the intended loading. The QP may also be required to submit reports on the structural integrity of the drainage structure during the period of occupation.

6. *Can I seek waiver from the Minimum Platform Level (MPL) specified by PUB?*

The MPL of a development site is the minimum ground level of the proposed development which is necessary for flood protection. Developments that do not comply with the MPL requirements will be subject to higher flood risks. Raising ground levels is the most effective way to protect new developments from flood risks as there will be no risk of mechanical failure (in the case of flood barrier). Notwithstanding, waiver for non-compliance of MPL may be considered strictly on a case-by-case basis under exceptional circumstances such as site constraints.

7. *I have a proposal to construct a new underpass linking an existing building to an existing MRT Station. Can I seek waiver for non-compliance with the required crest level for the existing or proposed entrance, exit or opening linking the existing building to the underground MRT system?*

All developments with underground linkages to the MRT system shall have the same crest protection requirements as that for the MRT system. Due to the critical function the MRTs serve in public transport, waivers for crest levels of any entrance linked to an underground MRT station will not be granted.

8. *Will PUB allow a change of the existing drainage discharge points within the development site?*

PUB has no objection provided the proposal does not significantly alter the existing drainage overland flow pattern of the site and give rise to flooding problems. The QP should avoid diverting flow from one catchment to another, as this may overload an existing drain and result in flooding.

9. *Can the existing box drain be used as an entrance culvert?*

PUB has no objection provided the Professional Engineer (Civil/Structural) certifies and endorses in the Detailed Plan that the existing box drain is capable of withstanding vehicular loadings or the intended loadings.

10. *Can the developer divert the existing roadside drain in front of his property?*

The developer can divert the roadside drain in front of his property to run within and abutting the current Road Reserve/Road Widening Line if LTA has no objection to the proposal.

11. *Can my client slab-over a short stretch of the open roadside drains in front of his meter compartment, to serve as an access for the meter reader?*

Yes. PUB can allow it provided your client undertakes to maintain the slab-over the drain, the independent supports of the slab and the safety railings. The client also has to undertake removing these at his own cost, when required to do so by PUB.

Your client would also need to seek approval from URA and the landowner.

12. *What are PUB's requirements if my client wishes to reconstruct or widen the existing entrance culvert?*

The QP should pre-consult PUB, on the required size of the entrance culvert and check whether the proposed work is affected by PUB's current drainage improvement projects for roadside drains and Estate Upgrading Programmes (EUP). If the entrance culvert in front of the property is to be rebuilt under PUB's drainage improvement projects, PUB will rebuild them according to the engineering details as shown in PUB's contract drawings and also PUB's work schedule. The QP is required to liaise with PUB to co-ordinate the work

13. Can my client fence in the drain which is receiving rainwater runoff from the neighbouring lots at the rear of his property?

PUB is in the midst of reviewing the policy pertaining to the fencing-in of drains, and, in the interim, such requests would need to be submitted to PUB for consideration.

14. Can the drain on my property be allowed to drain into neighbouring housing developments?

PUB requires that all runoff from a development shall be discharged directly into the public drainage system and not via an adjacent property or development. However, under exceptional circumstances relating to constraints due to site topography, PUB may allow a common backyard drain running from lot to lot in new land developments.

15. Will PUB allow the use of a conduit drain instead of a 450mm wide drain for common backyard drains?

PUB may allow conduit drain if it has an equivalent discharge capacity as the 450mm wide drain. However, there must be proper foundations to prevent settlement and sumps with gratings provided over the conduit drain to facilitate maintenance of the conduit drain.

16. Will PUB allow utility services to be laid across a drain?

Where there are constraints and valid reasons for not undercrossing a drain, PUB may consider allowing utility services to be laid across a drain if the proposal does not affect the conveyance capacity and impede the maintenance of the drain. PUB can allow services to be embedded within the top slab of the drain provided the thickening of the top slab (if any) is raised upwards and does not intrude into the drain flow area.

17. Can my client build ponds to collect rainwater for gardening and washing of the building premises?

PUB allows rainwater collection for non-potable use in one's own premise.

18. What are the DOs and DON'Ts while working on drainage projects which are in the vicinity of watermains?

DOs

1. Write in to PUB, Water Supply (Network) Department for the latest water mains plans.
2. Dig trial holes to identify the exact location of existing watermains.
3. Use manual excavation especially near watermains.
4. Use pipe locators with the assistance of valve chambers and hydrants to identify the location of existing watermains.
5. Consult PUB, Water Supply (Network) Department on the location of the existing watermains if you are unable to locate them.
6. Lay services such as cables and pipes with a separation distance of 500mm from existing watermains.
7. Have proper protection for our existing watermains during excavation (PE certification on design of supporting existing watermains is required).
8. Raise PUB valve chambers at worksites to prevent them from accidentally being covered over.

DON'Ts

1. Allow heavy machinery to move over PUB watermains without adequate protection (e.g. steel plate).
2. Use an excavator for trial holes to locate the existing watermains.
3. Lay sewer pipes on top of our existing watermains.
4. Construct any structures on top of our existing watermains.
5. Allow our valve chambers to be covered over with construction debris especially at worksites.