

標丁學堂 KNOW YOUR BUILDING

認識樓宇排水家族

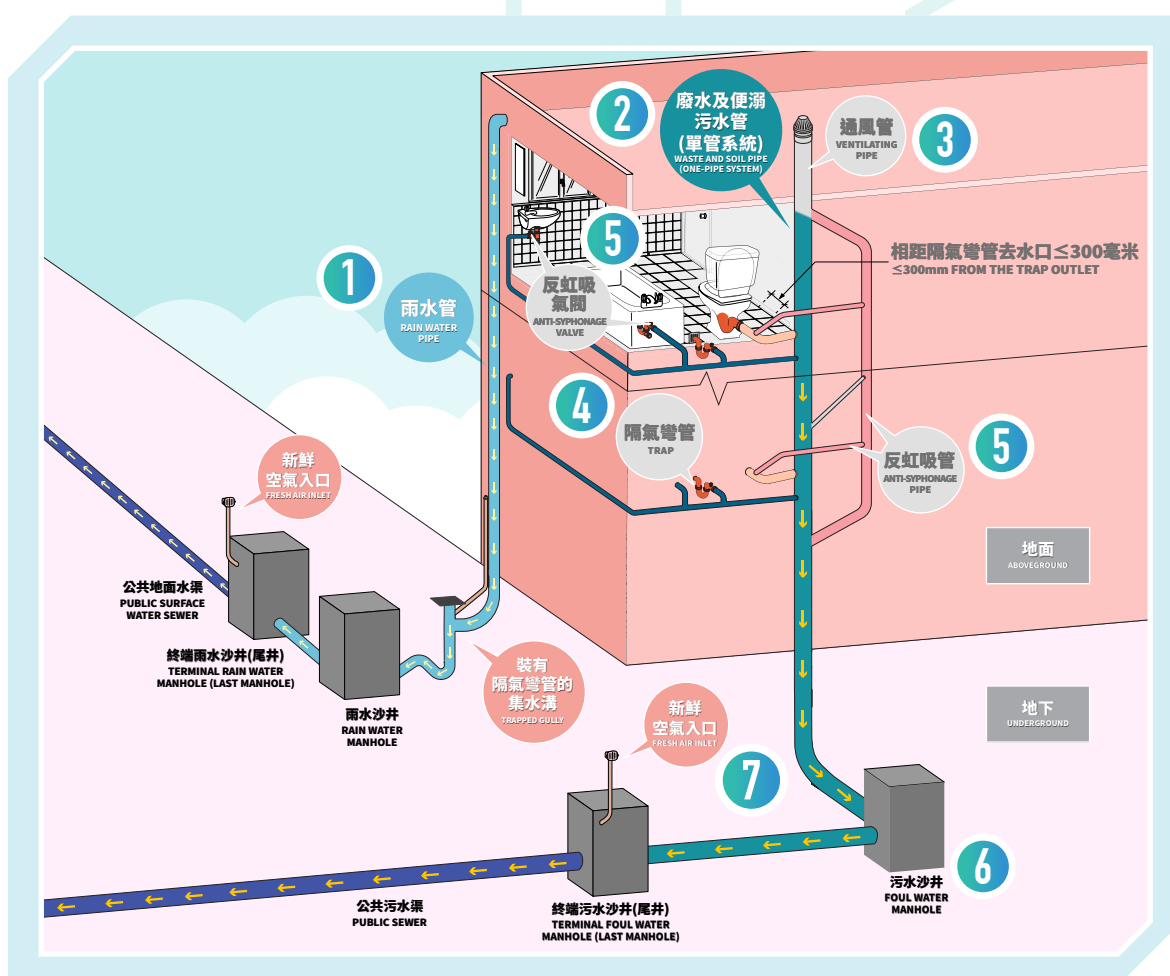
UNDERSTAND THE DRAINAGE SYSTEM OF A BUILDING

相信大家都知道，樓宇的排水系統猶如樓宇的腸道，負責將雨水、污水從樓宇帶到公共排水渠。如不妥善保養及使用，有機會造成渠管破損而影響環境衛生，危害健康。所謂預防勝於治療，只要我們於日常生活中多加注意渠管健康，可有效避免在問題發生時需要花費大量時間及金錢，進行大規模維修。

整個排水系統設計包括不同部分，各有不同作用，以確保雨水、污水能夠妥善處理及排放。這次阿標、阿丁將帶你認識排水系統，了解各個部分的作用，學懂保養渠管時所需要的知識。

As you surely know, the drainage system of a building is like its intestines—it is responsible for carrying surface water and foul water from the building to the public sewer. Improper maintenance and use may result in defective drainage pipes which will affect environmental hygiene and pose health hazard. As the saying goes, “prevention is better than cure”. If we pay more attention to the health of the drains in our daily lives, we can largely avoid the need for time-consuming and costly large-scale maintenance when problems arise.

The drainage system design consists of different parts, each with different functions to ensure that surface water and foul water are properly treated and discharged. In this issue, you will learn about different parts of the drainage system and their functions as well as the essential knowledge for drain maintenance.



1 雨水管 RAIN WATER PIPE

排放天台、平台及露台的雨水；

It discharges rain water from rooftops, flat roofs and balconies.

接駁到地下雨水沙井，再駁往公共排水渠。

It is connected to an underground surface water manhole connected to the public sewer.

2 廢水／便溺污水管 WASTE / SOIL PIPE

廢水管排放洗手盆／洗碗盆、浴缸／企缸、地台去水及洗衣機的廢水；

A waste pipe discharges waste water from wash basins/wash-up sinks, bathtubs/shower trays, floor drains and washing machines.

便溺污水管排放坐廁的便溺污水；

A soil pipe discharges soil water from water closets.

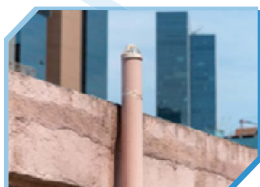
接駁到地下污水沙井，再駁往公共污水渠。

It is connected to an underground terminal foul water manhole connected to the public sewer.

3 通風管 VENTILATING PIPE

於排水系統最高處讓新鮮空氣流入及流出，為排水系統提供通風；

It allows fresh air to enter and exit at the highest point of the drainage system, providing ventilation for the drainage system.



讓空氣可經反虹吸管流入所接駁的分支排水管内，平衡虹吸效應*造成的氣壓差，防止隔氣彎管內的水封流失；(*詳情請參閱樓宇安全通訊第19期)

It allows air to move towards the connected branch pipe through the anti-syphonage pipe to balance the differential air pressure brought by the syphonage effect*. It thus prevents loss of the water seal in the trap. (*Please refer to Issue 19 of Building Safety Quarterly for details.)

須伸延至樓宇天台不少於1米之上，不可密封。

It must be unsealed and extended to more than 1 metre above the roof.

4 隔氣彎管 TRAP

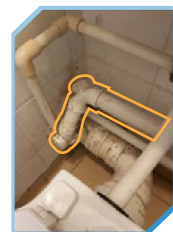
透過貯水形成水封，阻隔排水管內的臭氣進入室內。

When a trap is filled with water, a water seal is formed and prevents foul odour in drainage pipes from entering the premises.



5 反虹吸管／反虹吸氣閥 ANTI-SYPHONAGE PIPE / ANTI-SYPHONAGE AIR VALVE

接駁隔氣彎管，平衡分支渠管內因虹吸效應造成的負氣壓，防止隔氣彎管內的水封流失，確保隔氣彎管有效運作。



It is connected to the trap to balance the negative air pressure brought by the syphonage effect in the branch pipe. It prevents loss of the water seal in the trap and ensures the proper functioning of the trap.

6 沙井 MANHOLE

讓檢查人員進入地底檢查、測試、維修及清除地下渠的堵塞物。

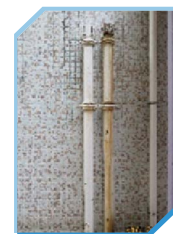
It provides underground access for inspection staff to carry out inspection, testing, repair and clearance of obstructions in underground drains.



7 新鮮空氣入口 FRESH AIR INLET

設於終端污水沙井及終端雨水沙井，於排水系統最低處讓新鮮空氣流入，為排水系統提供通風。

It is provided at a foul water terminal manhole and a rain water terminal manhole to allow fresh air to enter at the lowest point of the drainage system, providing ventilation for the drainage system.



須離地面不少於2.5米。

It should have a minimum clearance of 2.5 metres above the ground.

猜猜看 CAN YOU GUESS?

污水排放系統可分為單管或雙管系統。單管系統以同一排水管排放廢水及便溺污水，雙管系統則以不同排水管分開排放廢水及便溺污水。哪一種設計較好？

The drainage system designs for foul water comprise one-pipe and two-pipe systems. The one-pipe system allows both waste and soil water to be disposed of through the same pipe, while the two-pipe system discharges waste and soil water through separate pipes. Which design is better?

答案 | ANSWER

兩種各有好處！Each has its own merits!

- 單管設計可利用廢水沖洗排水管，減少便溺物質黏附在水管內壁的機會。

One-pipe design facilitates cleansing of a drainage pipe with waste water to prevent soil from adhering to the inner wall of the pipe.

- 雙管設計則可防止廢水及便溺污水在到達地下污水沙井前混合，減少臭氣經由已流失水封的隔氣彎管（例如地台去水口）進入室內的機會。

Two-pipe design separates waste from soil before they reach the underground foul water manhole to avoid foul odour from entering the premises via dried traps (e.g. the floor drain).

3大地方你要CHECK!

DRAINAGE INSPECTION: 3 HOTSPOTS FOR CHECK-UP

標丁提醒你，業主、業主立案法團及物業管理公司應定期檢查樓宇的排水系統，以確保排水系統得到妥善保養並可正常運作，如發現樓宇的排水系統欠妥，屋宇署會根據《建築物條例》第28條，向有關業主送達命令，要求業主進行勘测及／或修葺工程。各位物業管理人員／業主要定期留意以下3大地方：

Building owners, owners' corporations and property management companies should conduct regular inspection on the drainage systems of their buildings to ensure that they are properly maintained and in working condition. If the drainage systems of the building are found to be defective, the Buildings Department (BD) may serve an order under section 28 of the Buildings Ordinance requiring the owners to carry out investigation and/or repairs. Property management personnel/building owners should check the following 3 hotspots regularly:

1 室內 INDOOR

- 檢查與衛生設備相連的排水管、反虹吸管／反虹吸氣閥及通風管有否滲漏或破損、出現異味、喉管接駁位移位／鬆脫、去水淤塞。
- Inspect whether drainage pipes connected to the sanitary fittings, anti-syphonage pipes/anti-syphonage air valves and ventilating pipes have seepages or cracks, foul odour, displaced/loosened pipe connexions or blockage.

2 外牆或喉管槽 EXTERNAL WALLS OR PIPE DUCTS

- 檢查排水管及通風管有否滲漏或破損、出現異味、喉管接駁位移位／鬆脫、喉碼生鏽或鬆脫；
- 有否違例接駁渠管，將廢水／便溺污水管接駁至雨水管。
- Inspect whether the drainage pipes and ventilating pipes have seepages or cracks, foul odour, displaced/loosened pipe connexions, or corroded or loosened pipe brackets.
- Inspect whether there are expedient connections of waste/soil pipes to rain water pipes.

資訊站 INFOSTATION

錯駁排水系統可能會引致渠管淤塞及發出異味，污染水道／海港，令環境變差。

有需要時屋宇署會根據《建築物條例》第24條向有關業主發出清拆令。

Misconnection of the drainage system may cause blockages and create foul odour, as well as pollution of watercourses/harbour that will lead to deterioration of the environment. BD will serve removal orders to the building owners concerned under section 24 of the Buildings Ordinance when necessary.

3 地下排水渠及沙井 UNDERGROUND DRAINAGE PIPES AND MANHOLES

- 檢查地下渠管有否斷裂或內壁生鏽發脹；
- 有否垃圾堆積或污垢積聚在渠管內壁；
- 有否違例接駁渠管，將污水沙井接駁至雨水沙井。
- Inspect whether the underground drainage pipes are fractured or that their inner walls are corroded and bulged.
- Inspect whether there is accumulation of refuse or dirt on the inner walls of the pipes.
- Inspect whether there are expedient connections of foul water manholes to surface water manholes.

要有安全及健康的居住環境，業主切勿擅自改動樓宇排水系統，並妥善保養渠管，委聘合資格的專業人士或承建商檢查，如發現渠管有滲漏或破損，須盡快安排維修。業主可申請屋宇署的貸款及市區重建局的資助，詳情請瀏覽屋宇署網頁。

To create a safe and healthy living environment, building owners should not illegally modify the drainage systems. They should maintain the drainage pipes properly and engage qualified professionals or contractors to carry out inspection. Repairs should be arranged immediately if there are seepages or cracks. Owners can apply for loans from BD or assistance from the Urban Renewal Authority. Please refer to BD's website for details.



不要擅自改裝
樓宇排水系統
Do not alter drainage
system haphazardly



定期保養渠管
Maintain drainage
pipes regularly



聘請合資格
專業人士或承建商
Appoint qualified
professionals or
contractors



業主可申請貸款或資助
進行檢查及維修
Owners may apply
loans or subsidies for
inspection and repair



註冊專業人士
或承建商名單
List of Registered
Professionals or Contractors



財政支援計劃
Financial
Assistance Schemes



妥善保養渠管短片
Educational Videos
(Chinese Version Only)

特別呼籲 SPECIAL REMINDER

颱風季節臨近，各位物業管理人員／業主須特別留意樓宇結構是否安全，並提前採取預防措施，避免因颱風而造成樓宇安全事故。
As the typhoon season is approaching, property management personnel/building owners should pay special attention to the structural safety of their buildings and take precautionary measures to avoid building safety incidents caused by typhoons.

6大防風貼士

6 TIPS ON PRECAUTIONARY MEASURES AGAINST TYPHOONS

護門窗 INSPECT WINDOWS

為所有處於空曠位置的窗、玻璃門及玻璃面板加上保護物料或裝置，並關好窗戶。

Provide protection materials or devices for windows, glass doors and glass panels in exposed positions and close the windows.

理斜坡 INSPECT SLOPES

檢查物業負責範圍內斜坡及擋土牆，確保沒有裂縫及排水管阻塞等異常狀況。

Inspect slopes and retaining walls within your properties to identify any anomalies, e.g. cracks and blocked drains.

穩棚架 SECURE SCAFFOLDING

確保大廈外牆裝置（如棚架、招牌及裝飾）穩固及安全。
Ensure all installations at the building exteriors (e.g. scaffolding, signage and decoration) are in secure and safe conditions.

通渠井 CLEAR DRAINS AND MANHOLES

確保天台、平台及地庫（包括停車場）的排水渠及雨水沙井暢通及運作正常。

Ensure rain water drains and surface water manholes serving rooftops, flat roofs and basements (including car parks) are in good working order without blockage.

顧樹木 MANAGE TREE RISK

封閉可能有樹木倒下的地方及移走可能受倒下樹木波及的物件。
Restrict access/cordon off the area within the possible tree fall zone and relocate potential objects that may be hit by a fallen tree.

繫吊船 SECURE GONDOLAS

確保大廈吊船已返回安全位置，並已適當地穩固。
Ensure that gondolas are parked at safe locations and properly secured.

棚架安全

SCAFFOLDING SAFETY

竹棚架暴露於日曬雨淋的天氣或強風之下，有機會對公眾構成危險。物業管理公司應熟悉及遵守有關竹棚架的安全要求，亦應提醒大廈業主立案法團及業主，以及敦促職員和承建商，注意竹棚架安全的重要性。

Bamboo scaffolding may pose danger to the public under exposed weather or strong winds. Property management companies should familiarise and ensure compliance with the safety requirements for bamboo scaffolds. They should also advise owners and owners' corporations of the properties under their management and impress upon their staff and contractors of the importance of the safety of bamboo scaffolds.

- 1 安排定期檢查及維修竹棚架*，以確保其安全穩固。
（*請參閱由勞工處發出的《竹棚架工作安全守則》）
Arrange regular inspections and maintenance of bamboo scaffolds* to ensure their structural safety and stability.
(*Please refer to the Code of Practice for Bamboo Scaffolding Safety issued by the Labour Department)
- 2 在維修或修葺工程完成後或無需再用竹棚架時，必須立刻拆除。
Dismantle bamboo scaffolds immediately upon completion of the maintenance or repair works or when they are no longer needed.
- 3 發現棄置的竹棚架時須通知屋宇署。
Report to the Buildings Department upon identification of any abandoned bamboo scaffolds.



更多颱風季節期間公眾及樓宇安全預防措施：
For more precautionary measures for public and buildings safety during typhoon season:
<https://qr.go.page.link/4wW67>



屋宇署網站
Buildings Department Website
www.bd.gov.hk



樓宇齊愛護專題網站
Care for Your Building Website
www.careyourbuilding.bd.gov.hk