

## **Executive Summary Direct Investigation Report**

### **Government's Enforcement against Defective Sewage Works of New Territories Exempted Houses**

#### **Introduction**

In rural areas where no public sewers are available, septic tank systems are often installed in New Territories Exempted Houses ("NTEHs") for sewage treatment.

2. Defective sewage works of NTEHs, such as rupture or leakage of septic tanks, may cause serious environmental pollution and nuisance and even spread diseases. To address complaints about defective sewage works of NTEHs, the Environmental Protection Department ("EPD") enforces the Water Pollution Control Ordinance from the perspective of identifying any pollution caused to the waters of Hong Kong or sewage discharged into stormwater drains; the Food and Environmental Hygiene Department ("FEHD") investigates the existence of any nuisance specified in the Public Health and Municipal Services Ordinance; the Lands Department ("LandsD") takes lease enforcement action, where appropriate, after examining whether the defects are in breach of the sewage provisions in the land leases.

3. After scrutinising the work of EPD, FEHD and LandsD, this Office has the following comments and recommendations.

#### **Our Findings**

##### ***Inadequate Inter-departmental Collaboration in Complaint Handling***

4. The construction of NTEHs is subject to the approval of LandsD. In the certificate of exemption in respect of drainage works issued by LandsD, standard health requirements are imposed on the sewage facilities of NTEHs. EPD and FEHD are the major enforcement authorities for environmental pollution or hygiene nuisance caused by defective sewage works.

5. EPD's information showed that between 2016 and 2022, more than 60% of the complaints received by it involved other departments, i.e. most were inter-departmental cases. Our investigation found that EPD, FEHD and LandsD have different views on the division of responsibilities. Case studies also revealed inadequacies on the part of the three departments in referring and following up on complaints. Despite the long existence of NTEHs, the three responsible departments still do not have a clear understanding of the actions that can be taken by and the enforcement constraints of one another in respect of sewage works. There are also no established guidelines among them on how to pursue this type of complaints under different scenarios. Without a

common understanding, each department refers and handles complaints merely based on its own knowledge of the other departments' duties. As a result, problems remain unresolved even after repeated shuffling among departments. The situation is indeed unsatisfactory.

6. This Office recommends that EPD, FEHD and LandsD set up an inter-departmental working group to provide a communication platform regarding their respective functions and constraints, with a view to complementing each other; the working group can also discuss solutions to complicated cases at an early stage to achieve synergy.

7. To enhance the effectiveness of enforcement, EPD, FEHD and LandsD should draw up operational guidelines for frontline staff specifying concrete follow-up and referral actions in typical scenarios of complaints, thereby rationalising the responsibilities and procedures for inter-departmental cases.

8. Meanwhile, EPD and FEHD focus on whether they can enforce the Water Pollution Control Ordinance and the Public Health and Municipal Services Ordinance respectively and seldom consider joint enforcement actions. For cases of sewage discharged into stormwater drains, apart from handling by EPD pursuant to the Water Pollution Control Ordinance, FEHD should be able to follow up from the perspective of environmental hygiene. This Office reckons that the two departments should explore room for enforcement cooperation, such as identifying the circumstances for taking joint actions to enhance the effectiveness.

### ***No Mechanism for Information Exchange***

9. Our investigation revealed no established mechanism for information exchange among EPD, FEHD and LandsD and this may compromise the enforcement efficiency. EPD and FEHD, as the enforcement authorities, have no mechanism for exchanging information and results (e.g. dye-tracing tests) obtained during investigation to facilitate appropriate actions by each other. Some cases also revealed that the departments were not fully aware of the types of information held by others.

10. We are pleased to note that after the launch of our investigation, EPD and FEHD have started discussion to strengthen cooperation on areas including information exchange. In our view, LandsD should also participate in the mechanism for information exchange. This is because as the approving authority for construction of NTEHs, LandsD knows the as-built condition of NTEHs and their sewage works, and such information may facilitate the investigation of EPD and FEHD. On the other hand, LandsD may take lease enforcement action in case of non-compliance, subject to the provision of findings by EPD and FEHD. This Office recommends that the three departments devise a proper mechanism for information exchange through the inter-departmental working group proposed above, so as to enhance the effectiveness and efficiency of complaint handling.

### ***LandsD Should be More Proactive in Taking Lease Enforcement Action and Monitoring Case Progress***

11. Our case studies revealed that LandsD merely focuses on referring complaints to EPD and FEHD without fully discharging its enforcement role. Moreover, LandsD has only recorded the total number of complaints received without any breakdown or further statistics, such as the number of inspections, the number of cases with action taken and the average number of processing days. Without data analysis, it is indeed difficult for LandsD to monitor the progress of complaint cases effectively. The situation is far from satisfactory. This Office urges LandsD to formulate a monitoring mechanism for complaint cases, conduct data analysis and proactively assist other departments where necessary; if a breach of land lease provisions is confirmed, LandsD should take lease enforcement action decisively.

### ***Training of LandsD's Staff Should be Strengthened***

12. LandsD is responsible for approving the construction of NTEHs including their sewage works. LandsD claimed that it is not a professional department specialising in sewage works. District Lands Offices' staff would inspect an NTEH during its construction, and conduct further inspection before issuing a certificate of compliance/letter of no objection to occupy, including checking by visual inspection whether sewage generated from the toilet and kitchen is discharged into the septic tank and reviewing items on the "Installation of Drainage Works" checklist.

13. Our case studies revealed various kinds of misconnected or faulty sewage works. In our view, it is particularly crucial to ensure the proper construction and connection of NTEH sewage works. Otherwise, these facilities would not only cause pollution easily, but also require more frequent maintenance and repairs afterwards, and involve a higher risk of damage. As a matter of fact, as the approving authority for the construction of NTEHs, LandsD has no expertise in sewage facilities. This inevitably casts doubt on its ability to make an accurate assessment of the compliance of NTEH sewage works during the approval process.

14. If complaints about defective sewage works are received after occupation of an NTEH, the investigation and enforcement work will be led by EPD and FEHD. The two departments should have certain experience and know-how in dealing with the pollution and environmental hygiene nuisance caused by faulty construction and misconnection of sewage works. This Office recommends that LandsD strengthen the training of District Lands Offices' staff through experience sharing by EPD and FEHD, such that they are well equipped to inspect sewage works upon the completion of NTEHs to prevent possible environmental hygiene problems at root.

### ***Problems Caused by Improper Alteration of Sewage Pipes***

15. LandsD explained that depending on site constraints or where applicable, prior to the granting of approval by the District Lands Office for the construction of NTEH

or issuing a certificate of exemption in respect of drainage works, applicants might need to submit drainage plans or drainage proposals as required by the Drainage Services Department (“DSD”) and implement the drainage facilities to the satisfaction of DSD. If drainage plans or drainage proposals were submitted to DSD upon application for the construction of an NTEH, its owner would need to obtain prior permission from DSD for any alteration to sewage pipes after occupation; otherwise it might constitute a breach of the relevant provisions under the certificate of exemption. If submission of drainage plans or drainage proposals is not required by DSD upon construction of an NTEH, then DLO would not normally ask the applicant to submit such plans for approval; after occupation, the owner would not need prior permission from LandsD or DSD for alteration to sewage pipes.

16. Our case studies revealed that pollution caused by misconnection or improper alteration of sewage pipes was not uncommon. In this light, we consider LandsD should step up publicity and education on the environmental hygiene problems caused by improper alteration of sewage pipes. On one hand, NTEH owners should be reminded to obtain prior permission from relevant departments, where applicable under the prevailing requirements, for any alteration of sewage pipes for monitoring by the departments; on the other hand, even where no prior permission from departments is required, owners should be advised to seek assistance from professionals to ensure proper alterations.

#### ***Need to Explore Measures Urging Owners to Fulfil Maintenance Responsibility***

17. Sewage provisions are normally included in the land grant documents of NTEHs. LandsD asserted that according to prevailing requirements, NTEH owners are responsible for proper treatment and disposal of sewage, as well as periodic inspection of sewage works. However, under the prevailing regulatory regime, no substantive measures are in place to ensure NTEH owners’ fulfilment of their responsibility for proper sewage treatment and maintenance of sewage works.

18. LandsD stressed that EPD and FEHD take the lead in enforcement against pollution and environmental hygiene nuisance caused by defective sewage works of NTEHs. Nevertheless, EPD and FEHD each have constraints in enforcement. Given that most NTEHs had sewage works installed underground, any defect or disrepair might remain undetected until problems emerge and by then a considerable level of environmental pollution or nuisance might have already been caused. After all, enforcement is only a remedial response. It is indeed more crucial to take preventive measures.

19. This Office urges LandsD to explore formulating concrete measures to ensure NTEH owners know how to effectively fulfil their responsibility for proper sewage treatment and maintenance of sewage works in order to comply with the requirements of the land lease and the certificate of exemption.

### ***Publicity and Public Education on Correct Use and Maintenance of Septic Tanks Should be Stepped up***

20. NTEH owners have undeniable responsibility for proper maintenance of their sewage works. Information on the correct use and maintenance of septic tanks is mainly provided in the Guidance Notes on Discharges from Village Houses issued by EPD. The document is rather technical and difficult for laymen to grasp the essential points.

21. Following the launch of our direct investigation, EPD initiated a publicity campaign in late 2022 targeting villages not yet connected to public sewerage systems. In particular, EPD has created a new webpage and produced publicity materials with a QR code linking to the webpage, listing the points to note when using septic tank systems and details of desludging contractors.

22. This Office recommends that EPD further utilise electronic means and social media, produce promotional videos, etc. to raise NTEH owners' awareness of the importance of the correct use and proper maintenance of septic tanks and related information.

### ***Application of Technology***

23. EPD and FEHD often use the traditional method of dye-tracing test to track the pollution source but the test has certain limitations. We note that EPD has introduced new technology as an additional investigative tool. Its use of ground penetrating radar, coupled with augmented reality technology, for locating the source of water seepage not only reduces the inconvenience to households caused by making entry of their premises to apply dyes, but also produces strong evidence to convince NTEH owners to carry out proper repairs. EPD's active use of innovative technology is commendable. As the new technology is still in an initial stage of application, we opine that EPD may consider its more extensive use in due course for more effective detection of the seepage source, with a view to enhancing the effectiveness of complaint handling and investigation.

### **Recommendations**

24. The Ombudsman has made the following recommendations to EPD, FEHD and LandsD:

#### ***EPD, FEHD and LandsD***

- (1) set up an inter-departmental working group to provide a communication platform regarding their respective functions and constraints, with a view to complementing one another and discussing solutions to complicated cases at an early stage to achieve synergy;

- (2) draw up operational guidelines for frontline staff specifying concrete follow-up and referral actions in typical scenarios of complaints, thereby rationalising the responsibilities and procedures for inter-departmental cases;
- (3) devise a proper mechanism for information exchange so as to enhance the effectiveness and efficiency of complaint handling;

### ***EPD and FEHD***

- (4) for cases of sewage discharged into stormwater drains, explore room for enforcement cooperation, such as identifying the circumstances for taking joint actions to enhance the effectiveness;

### ***LandsD***

- (5) formulate a monitoring mechanism for complaint cases, conduct data analysis and proactively assist other departments where necessary; if a breach of land lease provisions is confirmed, take lease enforcement action decisively;
- (6) strengthen the training of District Lands Offices' staff through experience sharing by EPD and FEHD, such that they are well equipped to inspect sewage works upon the completion of NTEHs to prevent possible environmental hygiene problems at root;
- (7) step up publicity and education on the environmental hygiene problems caused by improper alteration of sewage pipes. On one hand, NTEH owners should be reminded to obtain prior permission from relevant departments, where applicable under the prevailing requirements, for any alteration of sewage pipes for monitoring by the departments; on the other hand, even where no prior permission from departments is required, owners should be advised to seek assistance from professionals to ensure proper alterations;
- (8) explore formulating concrete measures to ensure NTEH owners know how to effectively fulfil their responsibility for proper sewage treatment and maintenance of sewage works in order to comply with the requirements of the land lease and the certificate of exemption;

### ***EPD***

- (9) further utilise electronic means and social media, produce promotional videos, etc. to raise NTEH owners' awareness of the importance of the correct use and proper maintenance of septic tanks and related information; and

- (10) consider more extensive use of new technology in due course for more effective detection of the seepage source, with a view to enhancing the effectiveness of complaint handling and investigation.

**Office of The Ombudsman**  
**August 2023**

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