

Legislative Council Panel on Housing

Maintenance and Replacement of Water Pipes in Public Housing Estates

Purpose

This paper advises Members on the arrangements for the maintenance and replacement of water pipes in the public housing estates of the Housing Authority.

Regular Inspection and Maintenance

2. The Housing Department attaches great importance to the proper functioning of plumbing systems in public housing estates. We seek to ensure supply of potable water meeting the established quality guidelines through regular inspections under the HomeCARE Programme, In-flat Repair-on-Demand Services, and replumbing of aged systems. Details are described in the following paragraphs.

HomeCARE Programme

3. Under the HomeCARE Programme, Housing Department's estate management staff patrol the common areas daily and carry out visual inspections on major building elements and systems including external water pipes according to a checklist. For the plumbing system in common areas including water tank and pump, our maintenance staff conduct regular technical inspections to assess their conditions and maintenance to ensure that they are functioning properly. If defects such as water seepage or rusting are identified, repair works involving repainting or replacement of the defective sections will be carried out expeditiously. Regular inspections facilitate early identification of pipe defects and damages, and reveal in time any need for replumbing.

In-flat Repair-on-Demand Service

4. For in-flat potable water supply, tenants should promptly report problems such as discolouration, rusty water pipes, etc. to estate management. On receipt of reports concerning water discolouration, estate management will take water samples from the flats. If on testing, the water sample shows presence of fine iron particles in excess of 15 degree of Lovibond Disc colour grading, which reflects excessive internal corrosion of water pipes, Housing Department will replace the pipes in those flats.

5. Since the launch of the Drainage Ambassador Scheme in May last year, Housing Department staff serving as Drainage Ambassadors have been, upon request, assisting tenants with special needs such as the elderly to check in-flat water supply during their inspection of the drainage system. The Housing Department will continue to provide such assistance.

Replumbing of Aged Systems

6. Before 1996, water pipes used in public housing estates were made of galvanized steel. This type of pipes, widely used in the industry, has a service life of around 12 years. On this basis, we have drawn up a replumbing programme covering 884 housing blocks with galvanized steel pipe systems of 12 years or more. The Housing Department conducts condition surveys on the aged plumbing systems included in the programme. The survey involves inspections and testings on water flow, water clarity, water pressure, pipe sample and external condition of the pipes. Based on the survey results, the Housing Department determines the priority of individual housing blocks for replumbing. Since the launch of the programme in 1995, 694 housing blocks have been replumbed and another 190 blocks are scheduled for replumbing within the next seven years. We will continue to conduct annual condition surveys on these blocks and review their priority on the programme having regard to their latest actual conditions. While the 12-year criterion is a planning parameter for formulating the replumbing programme, in practice the Housing Department closely monitors the conditions of plumbing systems approaching 10 years of age.

Shek Yam East Estate

7. In August 2003, some tenants in Shek Yam East Estate expressed concern about discolouration of water supply to their flats. The Housing Department therefore instructed the Drainage Ambassadors conducting in-flat inspections at Shek Yam East Estate to take the opportunity to carry out water checks. Such checks were conducted at 1 995 flats, representing 80% of the total of 2 492 flats in Shek Yam East Estate. The inspections showed that in 70 of the inspected flats, water discolouration had exceeded the guideline. The water pipes in these flats had already been replaced.

8. Members asked about the cost for complete replumbing of Shek Yam East Estate. The total cost, comprising replacement of the pipes in the common areas and the pipes for individual flats, is estimated to be \$6 million. As the number of flats having water discolouration problems is relatively small at only 2.8 % of total, most of the pipes in the flats should still be serviceable and could last a reasonable period. It will not be cost-effective to advance the timing of complete replumbing. Nonetheless, the Housing Department will

continue to carry out water checks in response to tenants' reports and replace any defective pipes as necessary. In future when the housing blocks are due for complete replumbing, these flats will be excluded, with corresponding deductions from the total costs.

Procedures for Water Sampling

9. Members have raised concern about the procedures by which water samples are taken for discolouration tests. We have consulted the Water Supplies Department on this technical point. The Water Supplies Department advised on 4 December 2003 at the Legislative Council Case Conference on Water Discolouration at Shek Yam East Estate that in order to take a water sample to represent the quality of the water supplied through the internal piping concerned, it is in order to draw water off from tap for a while first to eliminate stagnant water. Housing Department will consult the Water Supplies Department again with a view to establishing practical guidelines to assist estate management staff in this respect.

Conclusion

10. The three-pronged approach described above promotes a thorough and flexible regime to ensure the quality of potable water supply in public housing estates. In July 2002, the Water Supplies Department launched the Fresh Water Plumbing Quality Maintenance Recognition Scheme. Under the Scheme, Recognition Certificates will be issued to buildings with proper maintenance for their plumbing systems. The assessment criteria cover cleanliness of water tank, regular inspection by licensed plumbers or qualified professionals and compliance of recognised water standards in each annual water test. Our aim is to bring all our public housing blocks within the Scheme by 2006. This will give our tenants further third-party assurance over the quality of potable water supply in public housing estates.