

4.4.1 History and brief description of the system installed within the Barbican residential blocks.

- 4.4.1.1 The waste disposal strategy for the Barbican Estate is designed around the Garchey system. This system, designed in 1927, was an innovative method of waste disposal for use in mass housing and commercial applications. The system solved the problem of refuse collection on large estates where typically a dry chute method was relied upon. The dry chute method of waste disposal was associated with unhygienic and foul smelling hoppers with equally undesirable communal hopper rooms and refuse collection areas. The Garchey system in contrast relied on a sealed system thus reducing the smell and vermin problems, and its ability to transport waste material further away from the source helped with separating the refuse collection points from the immediate vicinity of residential blocks. There were variations within the generic Garchey system and adaptations were made to suit specific needs of the various building types.
- 4.4.1.2 The system installed for the Barbican residential blocks relies on the refuse being directly flushed from kitchen sinks through to refuse stations from where it is vacuum pumped to retention vessels ready for collection and disposal off site via specialist containers. The system relies on a totally enclosed and water sealed system of pipes allowing for a minimum of manual intervention. It provides a clean and efficient method of disposing of kitchen waste as well as tins and bottles of a certain size. The infrastructure pipework also serves for the disposal of waste water and surface run-off.
- 4.4.1.3 In 2005 when the Guidelines were first adopted, it was reported that the system was in good working order and reportedly had many more serviceable years before a complete service and system overhaul is programmed. The standard of hygiene in terms of vermin control has reportedly been significantly higher than other estates of comparable size that rely on conventional open chute systems of refuse disposal.
- 4.4.1.4 It is, however, important that the system is comprehensively assessed to ascertain its viability and sustainability both in environmental and technical terms. The Report of the Managing Director of the Barbican Estate [to the Barbican Residential Committee - 15 January 1998] recommended that the system be retained and serviced accordingly and called for a further assessment after a 5-year period. A further assessment is due in 2011/ 2012 and will require consideration in the light of these guidelines
- 4.4.1.5 The report noted that the system had been unpopular with some of the residents but estimated that the majority of the households still retained the system (1600 households -1998). In October 2011, it was estimated that 1070, or 54%, of the flats still retained the Garchey waste disposal units (Garchey Condition Report, October 2011).
- 4.4.1.6 There are various reasons why the system is considered unpopular with some households. One of the key reasons is that the Garchey evacuation tank housed below the kitchen sink effectively takes up a whole kitchen cabinet thereby reducing the storage capacity of the compact kitchens. Other reasons cited are; difficulty of operation, instances of blockage of the system and back flowing - especially in the tower blocks, and lack of information and guidelines for correct use of the system discouraging new residents from using it. Changes in lifestyle and food preparation together with new food packaging techniques and separation of refuse types for recycling purposes have also contributed to perceived difficulties in using the Garchey.
- 4.4.1.7 In the last five years there has been a significant diminution of waste disposal using this system. Whereas in 2006, 30.70 tonnes of Garchey waste was removed; in the latest 12 months, to the end of September 2011, this has fallen to 13.49 tonnes, a fall of 56% from the 2006 figure (Garchey Weights Calender Year, Barbican Estate Office, October 2011).

4.4.1.8 An assessment of the implications of the decommissioning and abandonment of the system would need to consider the impact that this would have on waste management and the conservation management of the Estate as a whole. The benefits in retaining the current method of waste disposal may outweigh its decommissioning. It is integral to the design of the residential blocks, eliminating the need for chutes and hoppers, disposal holds, and labour intensive door step collections. The undesirability of introducing refuse holds or bin enclosures within the hard landscaped communal walkways and external spaces is self-evident and is the subject of restrictive guidance elsewhere in this document (Section 3.1 – especially 3.1.5.4).

4.4.2 Best practice guidelines.

4.4.2.1 Pending the current review of the system by the Garchey Working Party and its anticipated findings, it is recommended that the system is maintained in a good working order for the time being. All aspects of maintenance, renewal or alterations would however need to be assessed within a listed building context. No strategic decisions on the future of the system should be taken without full consideration of the architectural consequences and impact on the character of the Estate that would result from its abandonment.

4.4.2.2 The following check list is intended for guidance before carrying out any works to the system whether at the point of use within residential units or to the infrastructure and disposal apparatus managed by the landlord.

Removal of Garchey waste disposal bowls from the dwellings:

- Removal of Garchey terminals from the kitchens should only be undertaken by qualified plumbers who have knowledge of the system and who carry out the works according to approved Barbican Estate Office protocols.

Such works must always be notified to the Estate Office prior to commencement and upon completion.

- Removal of Garchey terminals does not necessitate the removal of the typical original kitchen sink. This sink can remain and its waste adapted to suit normal waste connection to the main system. The replacement or retention of the kitchen sink is the resident's prerogative.

Alterations, remedial works or removal of whole or parts of the Garchey disposal system outside of the dwellings

- Any works with an external manifestation in the external or internal areas will need to be checked against potential impact on the architectural character and special interest of the residential blocks. Guidance should be sought in each and every case from the Planning Authorities prior to implementation of any works.

See Sections 3.1 and 3.2 of the Guidelines.

- Any alteration, remedial works or removal of whole or part of the Garchey waste disposal system should only be carried out by appropriately qualified and accredited professional contractors with full knowledge of the system.

4.4.2.3 Should it become advisable to decommission the Garchey system, the following should be carefully considered:

- The possible retention of the Garchey Waste Disposal Units in the Heritage flats,
- The retention and storage (for a possible museum) of at least three selected Garchey Waste Disposal Units,
- The disconnection and isolation but retention in good viewing order of any compressors, vacuum pumps, other minor pumps, motor sets, chemical dosing plants, air receivers, scrubber units and control panels; as well

- as any distinctive hoses, brackets and appurtenances in the Garchey truck bays, and
- The retention of at least one set of paper documentation for the system (for a possible museum).