

Summary Overview of Specialist Inspections
Four Estates - Isle of Dogs

for

One Housing

of

Kedge House (Barkantine Estate)

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1.0 Introduction

Following the completion of the Four Estates stock condition survey and presentation of our report to residents and stakeholders in March 2018, Hunters were instructed by One Housing in August 2018, to provide a summary report for each of the individual blocks where a specialist survey had been undertaken.

The specialist surveys were targeted to include the high rise blocks only as these blocks are generally different in construction, (together with their building services) compared to the medium/ low rise blocks across the estates, e.g. construction is generally concrete and they typical include communal services such as heating/ water/ lighting/ Fire Alarms and lifts. This is the reason specialists were asked to advise on their condition in support of the overall stock condition survey.

The type of work the specialist consultants looked at included:

1. Mechanical and Electrical engineers (MCCE Ltd) – Surveys typically covered, communal electrics, heating and pipework, waste and rainwater pipes, lifts and below ground drainage systems.
2. Structural Engineers (Kirk Saunders) – Investigated the building structure (walls and floors) and concrete panels to assess their condition.
3. Refuse Chutes (Hardall UK) – They are a specialist in refuse chute furniture e.g. refuse hoppers and bin chute areas, assessing their current condition and performance.

This report summaries the detail of each of the above specialists.

Everything contained within this block report was included within the Hunters final report together with the costs, which were presented to One Housing, their customers and Stakeholders at the individual estate exhibitions held in March 2018.

The full detail of these summaries is included within the individual reports provided to One Housing and stakeholders and it is these reports that must be read to obtain a detailed understanding of the work required and their recommendations.

Specialist reports were provided for the following seven estate blocks with a separate report by CPT of the Sumuda estate underground car park:

Samuda Estate –	Kelson House
Barkantine Estate –	Bowsprit, Knighthead, Midship and Topmast Point Blocks and Kedge House
St John's Estate -	Alice Shepherd House

2.0 Summary of Specialist Observations and Associated Costs

The surveys include costs for replacement only and not regular daily repairs. These repair costs were included within One Housing Groups day to day budgets and cyclical works programmes included on the exhibition boards at the open evenings and form part of their wider options appraisal of the estate costs.

The table below shows the summary of the specialist costs inclusive of preliminaries (expenses that will be incurred during the construction, which are directly related to the running of the project by the contractor. Exclusive of professional fees and VAT). These cover the summarised work rereferred to, under the individual specialist consultant's headings below.

Block Costs by Specialist (all see Appendix A at the end of this block report).

Specialist	Component	Year 1	Year 2	Year 3	Year 4	Year 5	Yrs 06-10	Yrs 11-15	Yrs 16-20	Yrs 21-25	Yrs 26-30	Yrs 1-30
Refuse Chutes	Refuse Chutes	8,705	0	0	0	0	0	1,125	0	1,125	0	10,955
M&E	Heating System	0	0	175,000	0	0	0	200,000	0	0	300,000	675,000
M&E	Water Distribution Services	0	0	375,000	0	0	37,500	50,000	0	0	0	462,500
M&E	Soil & Waste Services	4,375	0	60,000	0	0	0	0	0	0	0	64,375
M&E	Ventilation (No Central System)	0	0	0	0	0	0	0	0	0	0	0
M&E	Fire Alarms	28,125	0	0	0	0	0	0	3,125	0	0	31,250
M&E	CCTV system	0	0	0	0	12,500	0	0	0	0	0	12,500
M&E	Door Entry	0	0	0	0	12,500	0	0	0	0	0	12,500
M&E	Communal Wiring	100,000	0	0	0	0	0	300,000	0	0	0	400,000
M&E	Communal Lighting	0	0	0	38,750	0	0	0	0	0	0	38,750
M&E	Lift	3,125	0	0	0	0	0	300,000	0	0	0	303,125
Structural Engineer	Structural Frame	3,000	0	0	0	8,400	10,800	10,800	10,800	10,800	10,800	65,400
Structural Engineer	External Panels	3,000	0	0	0	8,400	10,800	10,800	10,800	10,800	10,800	65,400
Structural Engineer	Structural Floors	1,500	0	0	0	4,200	5,400	5,400	5,400	5,400	5,400	32,700
Structural Engineer	Disproportionate collapse	22,500	22,500	0	0	0	0	0	0	0	0	45,000
Structural Engineer	Abseiling Inspections	6,000	0	0	0	12,000	18,000	18,000	18,000	18,000	18,000	108,000
Total Specialists		180,330	22,500	610,000	38,750	58,000	82,500	896,125	48,125	46,125	345,000	2,327,455

Refuse Chutes (Hardall UK)

The survey of the refuse chutes concentrated on two main parts; the Refuse hoppers/ doors and the Discharge Section (The area at the bottom of the chute where the rubbish is stored).

Their report highlighted that the above do not comply with current building regulations or Fire regulations for new buildings. The specialist has therefore recommended they are replaced with immediate effect. For the purposes of the report format, these costs have been included in year 1. In future years they have included for regular inspections for compliance and extend warranty of the new installations.

Mechanical & Electrical to Include Lifts and below Ground Drainage (MCCE Ltd)

There are many mechanical and electrical systems which when added together make up the overall cost of capital replacement for the building over 30 years. To summarise all these individual services, we have taken the same headings found in the specialist reports and listed the typical items of work which are included under each of these headings.

Mechanical and Electrical Main Headings and work items

- **Heating System** – Includes; Central plant, pumps, heating pipe distribution, Heating control units and individual flat radiators and pipework all feed from communal system
- **Water Distribution** – Drinking/ cold water pipework, valves, booster pumps/ controls and tanks
- **Soil and waste Services** – Toilet and sink waste, above and below ground
- **Ventilation** –No central ventilation system
- **Fire Alarms** – Panel and detection heads
- **CCTV System** – Block cameras
- **Door Entry** – Entry phones/ buzzers
- **Communal Wiring** – Mains wiring communal (Incoming electrics, Rising mains, dwelling feeds, landlord services and dwelling consumer units.
- **Communal Lighting** – Wiring
- **Lifts** – Lift surveys were undertaken by a specialist lift consultant and managed by the Mechanical and Electrical engineers.

The costs of these works are added together and are included in the table of costs “Block Costs by Specialist” on page 3.

Below is a summary of the work necessary over the next 30 Years.

Many of the systems at Kedge House have undergone a refurbishment since the building was constructed but are approaching the end of their economic life.

Heating System

The central heating system to Kedge House is served from the Barkantine Heat & Power district heating system. The condition of the pipework and the system within the dwellings is good but initial capacity calculations show that the pipework is undersized.

It is recommended that the following works are carried out:

Replacement of Pumps – No access to plant area estimate only. Year 3

Heating Pipe Distribution & Ancillaries – Due to age. Years 26-30

HIUs – Due to capacity. Year 3

Radiators, HWS and dwelling pipework – Due to age. Years 11-15

Electrical Supply

Much of the incoming supply was not visible but the rising bus bar system is no longer manufactured and may be difficult to obtain spares.

Incoming electric distribution Not Seen

Landlord's services – Due to age of components. Not Seen

Lighting – Communal

The lighting system has been replaced in excess of 15 years ago and all fittings appeared operational with good light coverage. There were no recommended works but a budget has been allowed for a replacement system at the anticipated life cycle end of these fittings.

Wiring Year 4

Internal fixtures Year 4

External fixtures Year 4

Above Ground Drainage

There was limited access to inspect the main soil stacks but they are unlikely to fracture as they are internally mounted. Connections to the services may have been altered during Kitchen and Bathroom fit-outs. The new connections are often carried out to a poor standard using fittings that are not suitable for Cast Iron connections.

The recommendation is for all dwellings to be reviewed and the connections to the soil stack be made good. The budget allows for the works to be carried out at the same time as the Water Services works as the soil stack and water pipe share the same riser.

Replacement of surface PVC drain connections to kitchen and bathrooms due to previous poor installation. Year 3

Water Supply

The system pipe material was unclear from the survey but is expected to be formed of Galvanised Steel. Sections cut for buildings of this age within the Tower Hamlets area show significant corrosion internally and the recommendation is that following a section slice to prove the condition that the pipework system be replaced.

Replacement of pipework & valves – Due to internal corrosion Year 3

Booster pumps & controls – Due to age Year 6

Tanks - In dwelling – Due to age – Years 11-15

Fire Alarm System

There is no Fire alarm at Kedge House. The recommendation is to provide a new system that serves the building.

System Panel – Due to Coverage Year 1

Heads & Wiring – Due to Coverage Year 1

Smoke Head replacement – Cyclical replacement due to age Years 16-20

Door Entryphone

The door entry phone system is an audio only system appears to have been installed late 1995. The manufacturer appears to no longer exist as there are a number of components missing. In addition, the system is now in excess of 20 years old and is passed its economic life. It is recommended that the system be replaced

CCTV System

The system appears to have been installed in 2010 and is partially operational with several cameras not operational. A budget has been put forward for the replacement of the system in year 5 when the system would have reached its anticipated economic life although some repairs are likely to be required to get the system fully operational immediately.

Below Ground Drainage

The survey indicated some drains silted up and a recommendation for a jet clean and re-check has been proposed.

Lifts

Current disabled standards are not met and a number of upgrades/ tests for compliance for signage and guarding's in motor rooms. These are included in year 1 costs and replacement of lifts Years 11-15.

Structural Surveys (Kirk Saunders)

The structural engineer has surveyed and reported on their surveys under the following three headings:

- Structural Frame
- External Panels
- Structural Floors

The costs of this work is shown included in the table of costs "Block Costs by Specialist" on page 3.

Below is a summary of the work necessary over the next 30 Years.

The building comprises a 10 storey residential block of flats. Anecdotal evidence indicates the building was constructed in or around the period between 1968-1970.

The structure is believed to be a large panel precast construction of the Larsen-Nielsen system. This form of construction has precast concrete floors supported by precast wall panels similar, but possibly not identical to, the system used at Ronan Point which was subject to accidental damage failure in 1968.

No archive record information relating to the original design or construction is held by the current building owners. Search at the London Borough of Tower Hamlets (LBTH) did not discover any original technical documentation or designs.

However, drawings, reports and structural calculations dated 1980 and pertaining to the installation of remedial brackets to interconnect and tie walls to floor were available and inspected at LBTH. The data indicates that these works were undertaken in order to give the building enhanced resistance to progressive or disproportionate collapse in the event of accidental damage due to a gas explosion. No documentary evidence was seen to indicate the works were completed and “signed off” by Building Control.

Intrusive investigations in common areas of Kedge House and in flat 13 revealed evidence of such works having been carried out, however it is not possible within the constraints of such discreet and isolated inspections to confirm or establish the full extent, condition or conformity to the 1980 design submissions or to strengthening works carried out to other similar types of building post-Ronan Point.

No visible structural defects of concern were apparent in the areas surveyed, for further details of specific areas / locations accessed refer to main report, together with a factual report by Constructive Evaluation on the results of their intrusive investigations.

In situ tests for carbonation and laboratory tests for chloride ion content on samples obtained from various locations indicate that there are no issues for concern at the present time. These conditions are considered unlikely to significantly alter or deteriorate for some considerable time into the future and it is suggested that further testing could be deferred for at least 10 to 15 years.

A detailed assessment of the robustness of the existing structure is beyond the scope of our brief and this report. Notwithstanding the documentary and physical evidence of strengthening work it is not possible to determine the extent of compliance with current design requirements so the assumption is taken that it is unlikely to comply.

Appendix A

Block Costs by Specialist

Block Summary cashflows

Specialist	Component	Year 1	Year 2	Year 3	Year 4	Year 5	Yrs 06-10	Yrs 11-15	Yrs 16-20	Yrs 21-25	Yrs 26-30	Yrs 1-30
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M&E	Soil & Waste Services	4,375	0	60,000	0	0	0	0	0	0	0	64,375
M&E	Ventilation (No Central System)	0	0	0	0	0	0	0	0	0	0	0
M&E	Fire Alarms	28,125	0	0	0	0	0	0	3,125	0	0	31,250
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