

hunters

Condition Report of the Building Services Installation.

Kelson House

Prepared by MCCE on behalf of Hunter & Partners for One Housing

February 2018



MCCE

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1. Introduction

1.1 Background

Kelson House was built approximately 1970 by the former LCC and forms part of a larger Housing Estate on the Isle of Dogs. The block has evidence of some refurbishment since it's construction but many of these services have come to the end of the economic life expectancy.

Kelson House consist of 25 storeys containing 145 dwellings. The entrance, concierge office and plant areas occupy the ground floor with a single dwelling. Most of the dwellings are duplex with the numbers to each floor as shown in the photo.



Kelson House	
Ground	Flat 1a
Floor 1	Flats 1-6
Floor 3	Flats 7-18
Floor 5	Flats 19-30
Floor 7	Flats 31-42
Floor 9	Flats 43-54
Floor 11	Flats 55-66
Floor 13	Flats 67-78
Floor 15	Flats 79-90
Floor 17	Flats 91-102
Floor 19	Flats 103-114
Floor 21	Flats 115-126
Floor 23	Flats 127-144

1.2 Project Brief

The project brief from One Housing, relevant to MCCE's services, was to review the condition of the services and to advise on any immediate works required and any further works related to current health & safety regulations.

In addition, works budget forecast has been produced to detail estimated costs for the future works required on the building. These budgets have been based on today's values and no account has been taken for future inflation.

Mechanical & Electrical Services covered by this report

1. Heating distribution and dwellings.
2. Electrical Intake and Distribution
3. Communal Lighting
4. Ventilation System
5. Above Ground Drainage
6. Water Supply Services
7. Fire Alarm System
8. Door Entryphone
9. CCTV System
10. Below Ground Drainage
11. Wet Riser
12. Lifts/Lift Motor Room – Detailed within a separate document

1.3 **Survey**

Several surveys were carried out between November 2017 and early February 2018.

The underground drainage was surveyed by a specialist company using CCTV equipment to two of the four blocks in order to obtain a good representation of the general condition of the drainage.

All other services surveys were visual and subject to access. These were carried out within all blocks accessing plant areas and dwellings where possible.

2. Executive Summary

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

However, where replacement systems have been put in place the old systems have not been removed and there is a significant amount of redundant services within the building.

Below is a summary of the condition of the systems reviewed by this report and the recommended works to each of them.

2.1 Heating System

The central heating system to Kelson House is served by a roof top boiler house. The boilers feed a radiator system throughout the building using a combination of risers both within dwellings and in the central areas.

The age and routing of the pipework system is of concern as the pipes are corroding and serve a single radiator in a dwelling before entering the adjacent apartment with a flow pipe in one and the return in another.

It is recommended that the following works are carried out:

Heating System Works	Year
Central Plant – Boilers, Pumps etc – Due to age.	8
Heating Pipe Distribution & Ancillaries – Due to age.	5
Radiators, HWS and dwelling pipework – Due to replacement of system and valves.	5

2.2 Electrical Supply

Much of the incoming supply was not visible but the rising bus bar system has been modified with a new tap off serving the dwellings and appears servicable. There are redundant services which appear to include wiring and we would recommend that these be removed.

Electrical System Works	Year
Incoming electric distribution	Not Seen
Landlord's services – Due to age of components.	Not Seen
Dwelling consumer unit – Due to the non-compliant installation	1

2.3 Lighting – Communal

The lighting system has been replaced some 10 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.

Communal Lighting	Year
Wiring	5
Internal fixtures	5
External fixtures	5

2.4 Ventilation System

The ventilation system serves the WC/Bathroom vent within Kelson House. The extract fan units were not located during the surveys but as the WC's and Bathrooms are enclosed some system must be present.

The WC/ Bathroom vent required an amount of immediate maintenance to improve operation.

Fire protection measures are recommended to WC/Bathroom Vent to prevent the spread of fire.

Ventilation System Works	Year
Fans – Replacement estimate	6
Ductwork - Clean	1
Installation of Fire dampers	1

2.5 Above Ground Drainage

The main soil stacks appear to be in good condition and are unlikely to fracture as they are internally mounted. Many of the connections to the services 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.

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

2.6 Water Supply

This report reviews the water distribution pipe and pumps only.

The system is formed of Galvanised Steel which appears to have been installed with the buildings construction with an anticipated life of 35 years. Sections cut for an identical building within the Tower Hamlets area shows significant corrosion internally and the recommendation is that following a section slice to prove the condition that the pipework system be replaced.

Water Supply System Works	Year
Replacement of pipework & valves – Due to internal corrosion	3
Booster pumps & controls – Due to age	11-15
Tanks - In dwelling (allowance for 50%) – Due to age	5

2.7 Fire Alarm System

The Fire alarm only serves the ground floor areas and there is not detection in the communal areas rising up through the building. The recommendation is to provide a new system that serves the entire building.

Fire Alarm System Works	Year
System Panel – Due to age	1
Heads & Wiring – Due to age	1
Smoke Head replacement – Cyclical replacement due to age	16-20

2.8 Door Entryphone

The door entry phone system is an audio only system appears to have been installed late 1997. The manufacturer no longer exists and spares are difficult to obtain. 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

2.9 CCTV System

The system appears to have been installed in 2010 and is partially operational with low quality images and one camera 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.

2.10 Below Ground Drainage

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

3. Mechanical & Electrical Services

3.1 Heating

3.1.1 Description of System

Kelson House has its own central boiler system located to the roof plant area.

The heating is piped from the roof level through service rises within the dwellings to serve the radiators and local open vented hot water cylinders.

There is no single means of isolation to the dwellings and the flow pipe is routed separately from the return pipe making the system difficult to trace.

Dwellings have single radiators served from the adjacent apartment with the flow pipe in one dwelling and the return in another. There were only three radiators serving each of the dwellings surveyed located in the Lounge and the two Bedrooms.



Boiler Plant



Single Pipe Riser
Next to Soil Pipe

Radiator valve and
pipework into adjacent
dwelling through wall.



Any changes to radiators or hot water cylinder within the dwellings will have an effect on the system within the entire block as there is no separation in the system.

Individual radiators cannot easily be isolated past the radiator valve which makes modify the size or relocating a radiator a specialist job which may require access to an adjacent dwelling.

It is imperative that the system as currently installed remain the Landlords responsibility and that no works are carried out by residents as this could affect the entire blocks operation and water quality / treatment.

3.1.2 Heating System Condition

The main boilers were manufactured in 2006 and much of the central plant installation appeared to be of this age. The pipework system is much older

The pipework risers are mostly within the dwellings with some of the main pipework in service risers in the communal areas. The pipework was in reasonable external condition for its age but this is estimated at some 48 years.



Pipework Riser in communal Area



Pipework Corrosion

The dwellings appear to have had the radiators replaced within the last 10 years but the pipework appears to be as old as the distribution pipework.



Typical radiator and pipework system with flat No.s 16 & 51.



The HWS cylinder in flat No.51 has been replaced a modern pre-insulated type. No cylinder was located in flat No.16.

HWS cylinder Tank in Flat 51



The cold feed tanks had been replaced in one of the dwellings inspected with an original galvanised steel tank in the other unit.



Cold Feed
Tank in Flat 51



Cold Feed
Tank in Flat 16

The system may provide limited pressure to the taps but has the advantage of providing each dwelling with some water storage and a local means for the open vented hot water cylinder to expand to.

3.1.3 Sizing and Compliance

The heating system was reviewed for its ability to serve Kelson House.

The boiler installation has six boilers of 325kW each totally 1,950kW. Our preliminary calculations for Kelson House has determined a heating load 10kW / dwelling inclusive of the HWS load, equating to a total load of 1,450kW.

The system appears to be suitably sized for the buildings usage and has standby capacity should a boiler fail.

The heating system appeared non-compliant with current regulations relating to metering and control as there is no central location to meter the heat to each apartment and no form of overall control within the dwelling i.e. you cannot turn the system off from a timer or reduce the temperature globally from a single point.

3.1.4 Heating System Recommendations and Budget

This section relates to main plant replacement and does not include for routine maintenance items. Below is a description of the works and how the anticipated date has been established. As with all services good maintenance is essential for extended life expectancies to be achieved. Economic life expectancy values have been taken from the CIBSE Guide M but used in conjunction with MCCE's experience and judgement following the visual survey.

Central Plant – Boiler House Services etc.

The central boiler plant was installed in 2006 and has some 8 years remaining on its anticipated economic life expectancy. Our budget allows for the replacement in year 8 however, this may be brought forward should a decision to replace the system is made.

Heating Distribution Pipework

The heating distribution pipework was in poor condition with external pipework corrosion clearly visible. CIBSE Guide M states that the life expectancy for steel pipework is 25 years and we believe the system to be up to the age of the building circa 48 years.

The budget allows for the significant difficulty in the renewal of the system as every dwelling will be affected and the renewal may decide to enhance the system with kitchen and bathroom heating as well as HIUs for control and metering.

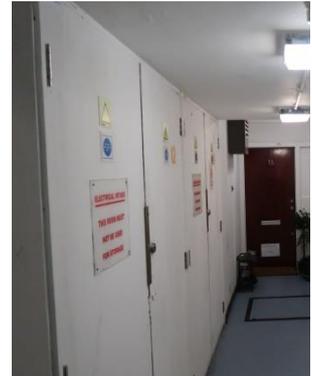
The budget below is an extract from main spreadsheet specific to the heating system and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 5	Year 8
<u>Heating System</u>		
Central Plant – Boilers, Pumps etc	0	305,000
Heating Pipe Distribution & Ancillaries	870,000	0
Radiators, HWS and dwelling pipework	725,000	0

3.2 Electrical Supply

3.2.1 General Electrical System Description

The incoming supply enters the building at the ground floor intake room access from the corridor off the main entrance lobby. Access was not gained to this area.



3.2.2 Landlords Services

The Landlords distribution boards are located with the main intake and were not accessed during the surveys.

The local distribution to plantrooms and the lateral mains to the dwellings have been used as a guide to the condition of the services.

3.2.3 Communal Lateral Mains

From the main intake room the rising bus bars are fed. These rise through the building in the service risers and have tap offs periodically to serve the dwellings on alternate levels.

PHASE	CIRC No. 1	CIRC No. 2	CIRC No. 3	CIRC No. 4
L1	118	116	117	115
L2	119	120	121	122
L3	123	124	125	126



3.2.4 Electrical Installation Condition

The condition of the electrical system cannot be globally summarised as there are many facets of the system that require attention and many that have been addressed.

The main electrical intake was not inspected.

The rising bus bar system is obsolete as the manufacturer went out of business in 2004. However, this model of bus bar has options for new generic components to be fitted and has already had new tap off serving the laterals to each dwelling replaced in SWA cabling.

The consumer units within the dwellings have been modified to fit a recessed space above the electric meter. This does not comply with the IET regulations and removes any conformity that the consumer unit had.

The consumer unit shown here is typical of the units we have seen in the two dwellings and in other tower block buildings.

The board has been cut away at both ends to the rear to fit the contours of the space. The two faces are held together by metal screws.

This unit could fit above the recessed space or the area could be expanded to accept the larger consumer unit.



3.2.5 Sizing and Compliance

The electrical services appear to be suitably sized for the buildings load.

The bus bars have some external superficial damage to some of the covers but all were in place.

The main intake connection to the bus bar chamber was not inspected and we can make no comment at this stage as remedial works could have been completed with the lateral mains upgrades.

The single largest non-compliant area is the dwelling consumer units. These as shown in section 3.2.4 have been cut to make fit in the old meter cupboard. In our opinion these should be immediately removed and replaced.

3.2.6 Electrical System Recommendations and Budget

Incoming electric distribution

No works have been shown until an inspection has been completed.

Landlords Services

No works have been shown until an inspection has been completed.

Dwelling consumer unit

The budget allows for the replacement of the consumer unit to all dwellings relocating new units to a suitable location without the need for modification. As this is essential work we have shown this for all dwellings including leaseholders.

The budget below is an extract from main spreadsheet specific to the Electrical system and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 1
Communal Wiring	
Incoming electric distribution	
Landlord's services	
Dwelling consumer unit	290,000

3.3 Lighting – Communal

The lighting to the main communal areas has been replaced with fluorescent lighting.

Coverage through all communal areas is more than adequate with very good visual uniformity.



3.3.1 Communal Lighting System Recommendations and Budget

The fittings are estimated to be approximately 10 years old with an anticipated life of 15 years. It was unclear from the survey if the wiring had been replaced with the fittings and so the budget below allows for a complete system replacement in year 5.

The budget below is an extract from main spreadsheet specific to the Communal Lighting system and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 5
<u>Communal Lighting</u>	
Wiring	78,750
Internal fixtures	157,500
External fixtures	15,000

3.4 Ventilation System

The central ventilation system extracts air from the bathrooms and WC's. Grilles and a redundant warning panel were located during the survey but the central plant was not located.

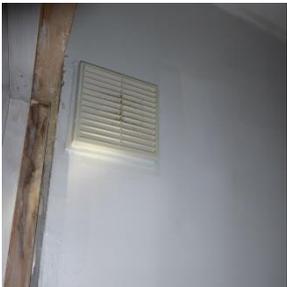
Redundant Central Plant Alarm Panel Including Extract Fan System.



The grilles are ducted to a builderswork shafts which is routed to all levels adjacent to the bathrooms. From the shaft a duct serves the Bathroom and WC area with grilles cut directly into the shaft.



WC Vent in Flat 16



WC Vent in Flat 51

3.4.1 Ventilation Systems Recommendations and Budget

Fans

This budget covers replacement of the Extract fan units in year 6. However the fans were not located and it is unclear if this system is still active or the actual condition of the fans which may vary the timing of the replacement.

Ductwork Clean

The cleaning of the ductwork and more specifically the internal grilles is necessary for the systems operation and to reduce the risk of fire. As access is required into all dwellings, it has been budgeted for the these works to be carried out in conjunction with the Fire Damper Installation detailed below to avoid additional costs.

Fire Dampers

There was no visible fire compartmentation between the extract duct and the bathrooms. This budget allows for the installation of fire barriers as the ducts enter each dwelling.

The builders work shaft is likely to have sufficient fire resistance to meet the requirements but this will need to be checked. The budget below relating to the fire dampers is not shown in the M&E costs but are shown in the Fire Risk Assessment budget.

As access is required into all dwellings, it has been budgeted for these works to be carried out in conjunction with the Ductwork Cleaning detailed above to avoid additional costs.

The budget below is an extract from main spreadsheet specific to the Ventilation systems and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 1	Year 6
<u>Ventilation</u>		
Fans	0	10,000
Ductwork - Clean	72,500	0
Fire dampers – (shown in Fire Risk Budget)	290,000	0

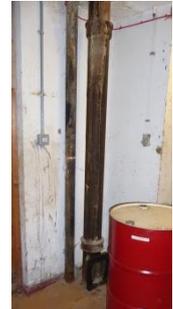
3.5 Above Ground Drainage

3.5.1 Above Ground Drainage Description and Condition

Several 100mm Cast Iron soil stacks serve the buildings' above ground drainage system. Some these increase to 150mm drains at the lower levels. Some of the soil pipes have 75mm vents also formed in Cast Iron.



150mm CI Soil Pipe in Plant Area.



150mm CI Soil Pipe & 75mm Vent Pipe in Plant Area.

The local drains to the appliances within each dwelling were originally formed in copper. Many of these have been replaced using uPVC pipe and fittings with a variety of connections to the main soil stack.

Life expectancy of Cast Iron soil pipes is listed within CIBSE Guide M at 35 years although many manufacturers quote life expectancies of up to 100 Years.

As the main soil stack does not provide consumable services, internal corrosion is not a consideration in its replacement and we consider the pipework usable until it leaks. Furthermore, the system is internally mounted and not subject to weather extremes, extending its life expectancy.

From the survey of the two dwellings No.16 & 51 and MCCES experience within similar blocks with Cast Iron soil stacks, leakages are caused by the poor connection rather than the main soil stack failures.

The photo shows a typical new connection to the stack from the Kitchen using a white compression fitting onto the original copper joining the stack from a yellowing waste pipe. The fittings have been mastic sealed to reduce leakage as the fittings do not connect "square".



3.5.2 Above Ground Drainage Recommendations and Budget

The works below is an allowance to enter each dwelling and replace the drainage connection to the main soil stack with a connection that is designed to be used with a Cast Iron Stack. The connection will be linked to the resident's system external to the riser allowing the resident make modifications in the future without entering the riser.

As access is required into all dwellings, it has been budgeted for the these works to be carried out in conjunction with the Water Services Installation detailed below to avoid additional costs.

The budget below is an extract from main spreadsheet specific to the Above Ground Drainage systems and excludes the preliminaries which were shown as a global addition to the works shown in each year.

There are no works shown for the main stacks as these do not appear in poor condition and should remain serviceable for the 30 year extent of the budget.

Component of Work	Year 3
<u>Soil & Waste Services</u>	
Above Ground (Central stacks)	0
Above Ground (Dwelling drainage)	174,000

3.6 Water Services Installation

3.6.1 Water Services System Description

The water supply enters the building and feeds a plant room at the ground floor. The mains feed serves a number of storage tanks which act as a break tanks for two sets of booster pumps. From the booster the water is piped to the roof level. It appears from the survey that boosters feed the following services:

- Roof plant room storage tanks
- Cold Water Down Services supplying water to in dwelling break tanks and the WC cistern.
- Drinking Water Services feeding the kitchen cold outlets

Within the dwellings there is a small storage tank serving the Hot Water Cylinders and the cold taps within the Bathroom.

The pipework is formed in Galvanised Steel and is routed within the risers with the Soil Waste pipework adjacent to the bathroom in each dwelling.



Main Cold Water Storage tank –
This tank is a split tank to allow for maintenance whilst maintaining the service.



Drinking Water Storage tanks –
There are 2 tanks located over the booster set.



Roof Plant Area Cold
Water Storage tanks.
There are 4 of these
within the plant area.

3.6.2 Water Services System Condition

All the tanks are of a modern GRP pre-insulated construction. The CWDS storage tanks to both the ground and roof plant areas appear to have been installed in 2011. The drinking water storage tanks appear to have been installed in 2005.

The internal condition of the pipework cannot be confirmed without cutting a section out for examination. However, galvanised pipework does corrode over time and the pipework is in excess of 45 years old. The CIBSE Guide M states that Galvanised pipework has a life expectancy of 35 years.

It is reasonable to expect the internal surfaces to be failing and any internal corrosion will start a snowball effect and cause the pipework to contaminate the pipework and water supply at an increasing rate.



The photo is of pipework from the building MCCE are currently working on to replace the water Services pipework. This building is within the Tower Hamlets area and is of a similar age to Kelson House.

Additional evidence of pipe corrosion can be found in the storage tanks. The original Galvanised tanks have all been replaced with new GRP tanks, shown above, due to the internal corrosion.

As the Water Services is a consumable service we consider the pipework condition critical.

The CWDS booster pumps were installed in 2011 with the storage tanks and appear to be in good operational condition.



The Drinking Water booster pumps were installed in 2005 with the storage tanks and appear to be in good operational condition.



During the last of our surveys there were notes posted relating to the disruption of the Water Supply but we were unable to establish the cause or nature of the disruption.

The individual pumps can be replaced on an ad-hoc basis but the set will eventually require complete replacement.

3.6.3 Water Services System Condition Recommendations and Budget

Pipework & valves

This budget covers the complete renewal of the water services pipework system from ground to roof level serving. Before this work is carried out a sample of the pipework should be taken to confirm the expected condition of the pipework system. This can easily be carried out within the dwellings during a tank replacement but a large diameter section of pipe should also be cut for inspection.

The works are extensive and disruptive expecting to take between 10-12 months to complete due to the complex nature of the block and specifically the dwelling layout.

As access is required into all dwellings, it has been budgeted for the these works to be carried out in conjunction with the Above Ground Drainage Services Installation detailed below to avoid additional costs.

Within the dwellings are individual water tanks serving the HWS cylinders and cold taps to the WC and Bathrooms. Of the two apartments inspected one had a tank replace and the other had the original galvanised steel tank. Based on this an allowance for 50% of the tanks to be replaced has been made.

The budget below is an extract from main spreadsheet specific to the Water Services systems and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 3	Year 5	Yrs 11-15
<u>Water Distribution Services</u>			
Pipework & valves	1,087,000	0	0
Booster pumps & controls	0	0	50,000
Tanks - In dwelling (allowance for 50%)	0	72,500	

3.7 Fire Alarm System

The Fire Alarm system within Kelson House serves the entire building and is linked to opening smoke vents.

The system is dated and appears to be in excess of 15 years old.

It is unclear if the opening vents still operate. One of the mechanisms inspected kept the window open.



We have allowed within our budget for a system to serve all communal areas. The smoke heads are shown twice as they are to be replaced every 15 years.

The budget below is an extract from main spreadsheet specific to the Fire Alarm systems and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 1	Yrs 16-20
<u>Fire Alarms</u>		
System Panel	15,000	0
Heads & Wiring	99,000	33,000

3.8 Door Entryphone

The door entry phone is an audio only entry phone system. The system uses identical handsets to those in the Point Blocks but access to the system controls was not available to fully establish the manufacturer and age.

The system is fed from the ground floor corridor with the electrical intake to each apartment with intermediate panels located to the floors.

Status no longer exist and spares for the control modules will be difficult to get. Furthermore the system has exceeded its anticipated life expectancy of 15-20 years and has been budgeted for complete replacement.

The budget below is an extract from main spreadsheet specific to the Door Entry systems and excludes the preliminaries which were shown as a global addition to the works shown in each year.



Component of Work	Year 1	Yrs 26-30
<u>Door Entry</u>	36,200	36,250

3.9 CCTV System

The CCTV system covers most of the entrance, ground floor communal areas of the building and the external perimeter of each building.

The system is housed in the concierge's office and is estimated to have been installed in 2010 although there are a number of components that have been replaced. There is only one of the cameras visible that appear non-operational.

The images are of low quality but the system appears to have some cameras non-operational.



CCTV Monitor.

Within the budget we have allowed for the replacement of the system in year 5 although it may be some consideration should be given to the quality of the images from the existing cameras and potentially have an upgraded system earlier than a system failure.

The budget below is an extract from main spreadsheet specific to the CCTV systems and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 5
<u>CCTV system</u>	10,000

3.10 **Below Ground Drainage**

The below Ground Drainage Systems for Kelson House have had a CCTV survey carried out. The detailed report for the block is shown in appendix A together with a schematic of the drain runs.

The drains were found to have some build-up of silt blocking the view of the camera. The recommendation is that the drains be jet cleared and re-checked.

The budget below is an extract from main spreadsheet specific to the Below Ground Drainage system and excludes the preliminaries which were shown as a global addition to the works shown in each year.

Component of Work	Year 1
<u>Soil & Waste Services</u>	
Below Ground – Jetting and recheck with CCTV	2,500

3.11 Wet Riser

Kelson House has a Wet Riser system to assist with firefighting.

The pump and tanks are located with the Cold water storage tanks in the ground floor plant room.

The pump has a diesel generator and serves landing valves on each floor of the building.



This system is not part of the project brief and has not been included in the remedial or renewal works budget.

Appendix A – Below Ground Drainage Specialist Report

WATERGUARD (LONDON) LTD

WATER QUALITY SPECIALISTS

15A Valley Side Parade Chingford, London, E4 8AJ

Tel: 020 8559 3881 Fax: 020 8559 3643 Mobile: 07960 466168/169

E-mail: waterguardwqs@aol.com

MCCE

The Biscuit Factory

Tower Bridge Business Complex,

100 Clements Road,

Se16 4DU

Tel 020 7237-4865

info@mcce-ltd.co.uk

05-02-18

F.A.O Mike Cookman

DRAIN SURVEY 04

KELSON HOUSE STEWART ST E14 3JL

OBSERVATION

On inspection of drain survey, material of main drain is 300mm Earthenware and is in very good condition Lateral branches are 100mm. Inspection chambers benching is also in good condition. Main survey due to excessive amount of water visual is impeded.

Inspection Chamber 1-4

Inspection chambers 1-4 have heavy build up of debris which indicates they are no longer in use.

SUMMARY

Due to condition of total drain run and inspection chambers I would suggest high pressure jetting of total run and greasing of chamber frames only.

Carryout re-survey on completion of jetting.



Chamber number 4



Chamber number 5



Chamber number 6



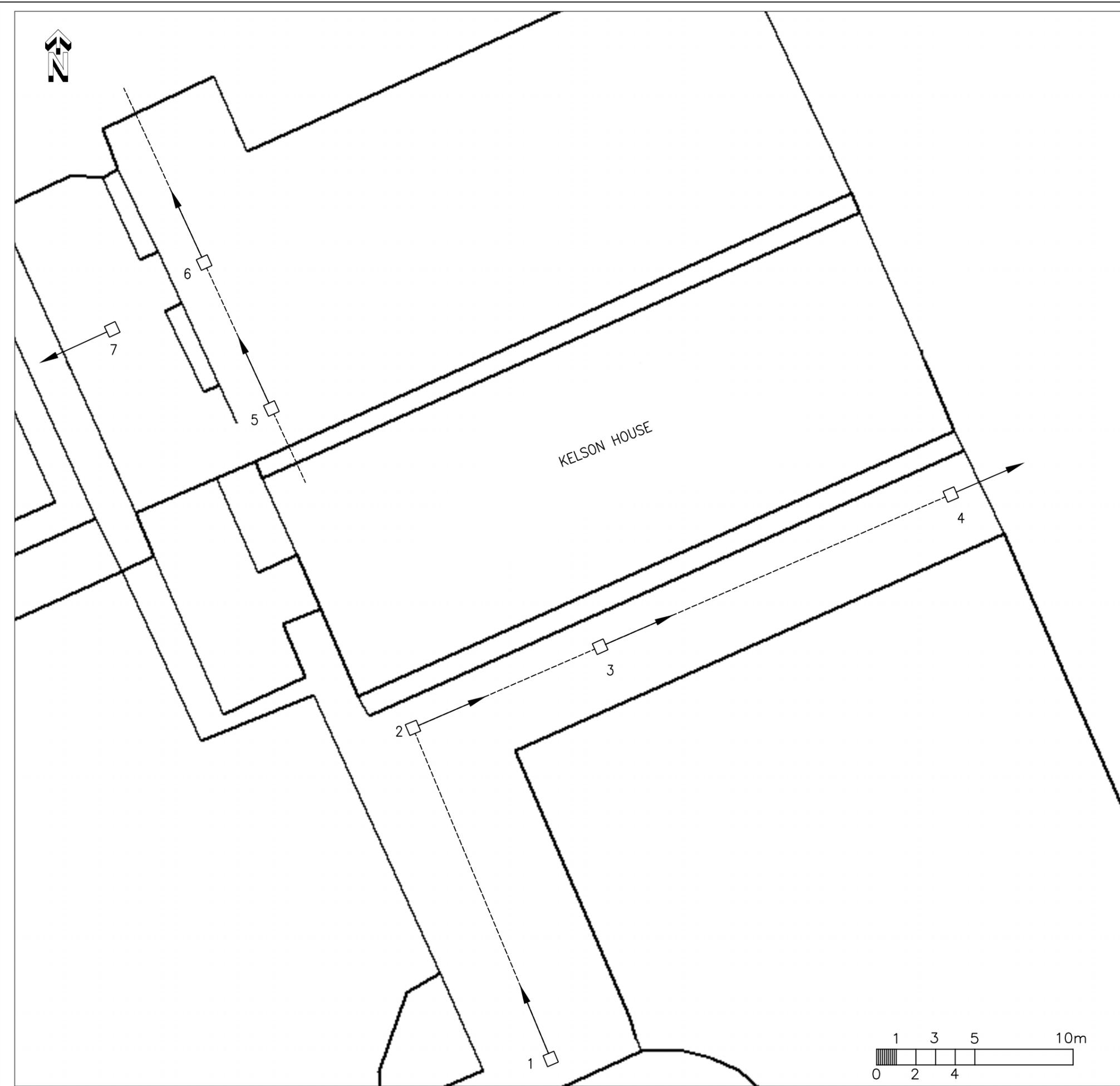
Chamber number 7



Chamber number 7

A D Street
R P Williams

UTR NO: 63480 19915
COMPANY REG NO: 6004845
VAT REG NO: 761338921



Notes
DO NOT SCALE THIS DRAWING.

MAIN DRAIN = \varnothing 300mm
OUTLET SIZE = \varnothing 150mm

MANHOLE	No. OUTLETS	RUN LENGTH /m
1	0	BLOCKED - NOT IN USE
2	1	BLOCKED - NOT IN USE
3	1	BLOCKED - NOT IN USE
4	2	BLOCKED - NOT IN USE
5	2	9.10 (TO MH No. 6)
5		7.90 (TO BLOCK)
6	0	17.00 (TO ROAD)
7	0	11.10 (TO DAGMAR Ct)

A	.	.	yy.zz
Rev.	Description	By	Date
Status			
SURVEY			
Title			
BELOW GROUND DRAINAGE & MANHOLE LOCATION PLAN			
Project			
KELSON HOUSE STEWART STREET LONDON E14 3JL			
Client			
Drawing No.		Scale(s) At A3	Rev.
0095/004		1:200	.
Date	Drawn	Checked	
JAN 2018	J.B.	M.C.	
J103 The Biscuit Factory Tower Bridge Business Complex 100 Clements Road London SE16 4DU T 020 7237 4865 E info@mcce-ltd.co.uk			
			

Appendix B – Budget Costs

Below is the budget cost spreadsheet for Kelson House.

This section relates to main plant replacement and does not include budgets for routine maintenance items. As with all services good maintenance is essential for extended life expectancies to be achieved. Economic life expectancy values have been taken from the CIBSE Guide M but used in conjunction with MCCE's experience and judgement following the visual survey.

Component of Work		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Yrs 11-15	Yrs 16-20	Yrs 21-25	Yrs 26-30	Yrs 1-30		
Heating System																		
Boilers		0	0	0	0	0	0	0	180,000	0	0	0	0	0	0	0	180,000	Incl Leaseholders
Pumps & Press Unit		0	0	0	0	0	0	0	50,000	0	0	0	0	0	0	0	50,000	Incl Leaseholders
Controls & Electrics		0	0	0	0	0	0	0	75,000	0	0	0	0	0	0	0	75,000	Incl Leaseholders
Heating Pipe Distribution & Ancillaries		0	0	0	0	870,000	0	0	0	0	0	0	0	0	0	0	870,000	Incl Leaseholders
Radiators, HWS and dwelling pipework		0	0	0	0	725,000	0	0	0	0	0	0	0	0	0	0	725,000	Incl Leaseholders
Water Distribution Services																		
Pipework & valves		0	0	1,087,500	0	0	0	0	0	0	0	0	0	0	0	0	1,087,500	Incl Leaseholders
Booster pumps & controls		0	0	0	0	0	0	0	0	0	0	50,000	0	0	0	0	50,000	Incl Leaseholders
Tanks - In dwelling (Est 50% Galv)		0	0	0	0	72,500	0	0	0	0	0	0	0	0	0	0	72,500	Incl Leaseholders
Soil & Waste Services																		
Above Ground (Central stacks)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Incl Leaseholders
Above Ground (Dwelling drainage)		0	0	174,000	0	0	0	0	0	0	0	0	0	0	0	0	174,000	Incl Leaseholders
Below Ground - Jetting & Review		2,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,500	Incl Leaseholders
Ventilation																		
Fans		0	0	0	0	0	10,000	0	0	0	0	0	0	0	0	0	10,000	Incl Leaseholders
Ductwork - Clean		72,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72,500	Incl Leaseholders
Fire Alarms																		
System Panel		15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,000	Incl Leaseholders
Heads		99,000	0	0	0	0	0	0	0	0	0	0	33,000	0	0	0	132,000	Incl Leaseholders
CCTV system																		
		0	0	0	0	10,000	0	0	0	0	0	0	0	0	0	0	10,000	Incl Leaseholders
Door Entry																		
		36,250	0	0	0	0	0	0	0	0	0	0	0	0	0	36,250	72,500	Incl Leaseholders
Communal Wiring																		
Incoming electric distribution		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rising mains		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Landlord's services		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dwelling consumer unit		290,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	290,000	Incl Leaseholders
Communal Lighting																		
Wiring		0	0	0	0	78,750	0	0	0	0	0	0	0	0	0	0	78,750	Incl Leaseholders
Internal fixtures		0	0	0	0	157,500	0	0	0	0	0	0	0	0	0	0	157,500	Incl Leaseholders
External fixtures		0	0	0	0	15,000	0	0	0	0	0	0	0	0	0	0	15,000	Incl Leaseholders
Sub-Total		515,250	0	1,261,500	0	1,928,750	10,000	0	0	0	0	50,000	33,000	0	36,250	3,834,750		
Preliminaries 25%		128,813	0	315,375	0	482,188	2,500	0	0	0	0	12,500	8,250	0	9,063	958,688		
Total		644,063	0	1,576,875	0	2,410,938	12,500	0	0	0	0	62,500	41,250	0	45,313	4,793,438		
Cost Split																		
																		Per Dwelling
																		Per Annum Yrs 1-30
OH Rented	114	506,366	0	1,239,750	0	1,895,496	9,828	0	0	0	0	49,138	32,431	0	35,625	3,768,634	1,102	33,058
Leaseholders	31	137,696	0	337,125	0	515,442	2,672	0	0	0	0	13,362	8,819	0	9,688	1,024,804	1,102	33,058
Total	145	644,063	0	1,576,875	0	2,410,938	12,500	0	0	0	0	62,500	41,250	0	45,313	4,793,438		

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