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# Condition and PPM Report

**Lister House and Treves House  
Vallance Road  
London E1 5BG**

For

**Tower Hamlets**

By



May 2016

Version: A

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## KEY POINT SUMMARY

### Priority Status

We set out below our key point summary which should be read and considered in conjunction with the body of this report and its appendices. For ease of reference, we have provided a colour-coded priority status for general guidance and to aid focus against each key point item. The colour coding is as follows:

COLOUR KEY	DEFINITION
	Critical Issues / Action – Resolution or clarification required prior to a legal commitment to transact
	Important Issues / Actions – To be considered within the proposed transaction and addressed when appropriate
	No Current Issues – No further action is presently considered necessary within the transaction

In consideration of our inspections and information review, we would advise the following high level status. This status should be considered within the context of the overall report and the commentary it provides.

### Building Key Point Summary – Lister and Treves Houses

KEY ASPECT	STATUS	PRIORITY STATUS
Lister House - Roof	Roof with leaks and is at end of useful life	
Lister House – Lightning protection	Damaged current system	
Lister House - Cladding	Poor thermal protection and water and air ingress ...	
Lister House - Windows	Windows in derelict state and falling down	
Plant room in roof	Concrete remedial repairs necessary	
Lister House – Fabric and structure	Numerous cracks and carbonation probably present	

Lister House – Air Handling Units	AHU serving bathrooms and toilets have reached the end of their useful life	
Lister House – Gas	Gas pipework to be run at high level	
Lister House – Cold Water Tanks	Systems non compliant with ACoP L8 legislation.	
Lister House - Fire Safety – Compartmentation	Risers do not afford appropriate vertical and horizontal compartmentation in toilet areas	
Lister House – Fire Safety in Flats	No heat detectors in kitchens and some flats missing smoke detectors	
Lister House – Fire Safety – Communal Areas	No smoke detectors in communal areas, neither bells or sounders or call points	
Lister House – Fire Safety - Doors	Flat entrance doors not compliant and no fire/smoke proof. Security grilles need to be removed	
Lister House – Fire Safety – Communal Areas	Communal FE doors not fully complaint. No smoke seals and hard to open	
Treves House - Roof	Roof with leaks and is at end of useful life	
Treves House – Lightning protection	Damaged current system	
Treves House - Cladding	Poor thermal protection and water and air ingress ...	
Treves House - Windows	Windows in bad condition	
Treves House – Fire Safety in Flats	No heat detectors in kitchens and some flats missing smoke detectors	
Treves House – Fire Safety – Communal Areas	Communal FE doors not fully complaint. No smoke seals and hard to open	

## 1.0 THE PROPERTY AND EXTENT OF INSPECTION

### 1.1. The Development

The properties are two housing blocks adjacent to each other set out on a triangular shaped plot. Lister House is a 9 storey block of flats with some exposed brickwork panels and concrete frame elements as well as over cladding and glazing. The roof is of flat roof construction. Treves House is a long 4 storey block of maisonettes with a flat roof. This also has exposed concrete frame elements as well as brickwork panels/walls and over cladding. Lister House has 34 flats and Treves House 18 flats.

We understand the development was constructed circa 1970's

It appears that some maintenance and upgrading of services has been carried out over recent years and in order to ensure that current issues do not worsen, the following items would require attention. Appendix A aims to provide a budget costing and a lead time as to when such items would be necessary to be carried out.

The site on which Lister and Treves Houses are located is adjacent to Vallance Road which tee's off Whitechapel Road (A11), and are located close to Vallance Gardens. There are two separate entrances to the site, via Lomas Street and Trahorn Close.

The site includes large areas of soft landscape and paved areas around the blocks.

### 1.2. Consultants Team

This survey was carried out by a multidisciplinary team of consultants to enable to scrutinize most areas of the buildings including:

- The fabric of communal areas, flats, roof, basements, fire compartmentation issues
- Structure of the building
- Cladding
- M&E services including electric mains, lifts and flat boilers.

The team was composed of:

- Building Fabric, structure and fire risk evaluation : Luis Zarraoa and Graeme Manley from John Rowan & Partners Llp.
- Structure and cladding : Jim Rhind from Edas Structural Engineers.
- M&E Services : Arthur Chong from PinnacleESP.
- Fire Risk Assessment: Carl Dennis from C G Dennis Fire Safety Services Ltd.

### 1.3. Access - Limits on Inspection

- We only gained access to five of the flats (flats 26, 24 and 21 at Lister House and Flat No1 and 11 at Treves House) to carry out destructive testing on 19<sup>th</sup> April 2016.
- We only gained access to eleven further flats at Lister House (flats 11, 17, 24, 28, 12, 16, 23, 30, 5, 6 and 2) and seven further flats in Treves House (flats 10, 13, 17, 18, 8, 9 and 6) to carry out opening up on 19<sup>th</sup> April 2016.
- We have not been able to ascertain the nature and extent of the recent repairs, nor have we determined whether any guarantees exist.

- Those areas where it was not practical to access or which were covered, unexposed or otherwise inaccessible have not been inspected and we therefore cannot categorically state that they are free from defects.
- There is evidence of an intrusive survey having been carried out to the roofs on both blocks, but we have not had sight of the report.

#### 1.4. Supporting Documentation and Surveyors and Engineer's Reports

This report encompasses the findings from the surveyors, structural engineer's reports and mechanical and electrical engineer's reports. A conversation was also maintained with the surveyor who carried out intrusive tests to the roof more than 10 years ago.

The reports attached to the Appendix and for reference are:

- Structural Engineer's report EDA/11135/July 2014
- Structural Engineer's report EDA/11905/April 2016
- 14093 Martech Report : "Lister & Treves Houses, London – Concrete, Brickwork & Cladding Inspection & Testing" – dated: 31/07/2014
- M&E report P3427 : Mechanical and Electrical Services Condition Report 4<sup>th</sup> May 2016

#### 1.5. Condition Definitions

The survey report and its attachments contain condition category codes that are defined below. The condition category refers to the condition at the time of inspection.

Condition category definitions:

CATEGORY	DEFINITION	DESCRIPTION	LIKELY OUTCOME IF DEFERRED
A	Good condition	No works required	Deferment of repair or replacement over lifespan of property or element could result in lower standards and decrease of asset value.
B	Fair condition	Limited defects evident which will require repair in near future	Further deterioration and damage. Repair costs and running costs will increase with period of deferment.
C	Poor condition	Operational but requiring major work in the near future	Property or element will become unfit for its purpose. Maintenance and running costs will escalate. Inconvenient to property users.
D	Hazardous condition	Immediate works required to comply with Health and Safety or other Statutory obligations	Failure to meet legal responsibilities. Possible closure of section of property. Danger to property users and to public.

Note – For ease of reference the condition categories can be referenced at the foot of the cost schedule.

## **1.6. Instructions and Inspection Date**

In accordance with your recent instruction dated 29th March 2016, we have carried out a maintenance and condition survey on the properties known as Lister House and Treves House at Vallance Road, London E1 5BG, in order to report on their condition and expected lifespan, including a 1 year, 5 and 10 year Planned and Preventative Maintenance schedule which advises you of our recommendations for planned maintenance to enable you to budget for future costs.

The original terms of our appointment and scope of services were confirmed in our fee proposal to you dated 7<sup>th</sup> March 2016 and your subsequent instruction to proceed, dated 29<sup>th</sup> March 2016.

An inspection of the building fabric/engineering services/cladding was carried out on 19<sup>th</sup> April 2016. The weather at the time of our inspection was dry and sunny. A further inspection to visit specific flats was carried out on 12<sup>th</sup> May 2016.

We consider that it is more cost effective to deal with defects at an early stage, wherever possible, to prevent more serious and costly consequential problems from developing.

For the purposes of this report, the first maintenance year starts on April 2016, in line with the building's service charge year.

It is strongly recommended that this programme continues to be revised annually, to monitor the condition of the building and to re-appraise the programme of maintenance expenditure. It is proposed that this is carried out in time each year to allow for any discussion before your next budget becomes due.

This report is based upon a visual inspection only and describes the condition of the structure and the fabric at the time of the survey. We have not exposed all areas of the building and therefore cannot comment upon those elements or components that are concealed or inaccessible. However, where there is evidence to suggest that a defect is present, it is identified in the report. The survey was carried out in accordance with our standard Terms and Conditions

The aim of this report is to deal with the various elements concerning the building structure in a logical and easy to follow manner, to outline our findings and to comment as to whether further investigation or specialist reports are required.

The report is divided into sections, which we hope will enable you to readily pick out individual points to which you may wish to refer. It is important that the entire report is read, as each section is an integral part of it and defects may well be referred to at various stages within the report.

We are not aware of any Statutory or planning proposals likely to have an adverse effect upon the property in the foreseeable future. We know of no adverse environmental factors in the neighbourhood. However, for further and better advice in this regard you should consult with the Planning Officer of the Local Authority and the Environmental Agency. We would also recommend that you make enquiries to the relevant water authority with regard to the possibility and/or history of flooding.

We remind you that we have not inspected parts of the property which were covered, unexposed or inaccessible or not possible to inspect without removing carpets or fittings. We are therefore unable to report that such parts are free from rot or beetle infestation or concrete issues. We can accept no responsibility for any defects, which would have only been apparent to us if we had been able to freely inspect these parts of the property.

As far as the serviced installations (gas, electricity, mains water and drainage) are concerned, our inspection was limited to a superficial viewing and in the absence of any specific tests we cannot warrant their condition, design or efficiency.

## 1.7. Incidents on site

### Lister House

We are aware that there is currently ASB issues within the block and during the day of the survey, a couple of persons were seen to be exchanging a joint.

### Treves House

We are aware that flat 2 has hygiene issues as windows are covered with dust layers 2cm thick and flat 3 accumulates a load of material within the flat, to the front open space and to the rear garden.

The cladding beneath Flat 10 shows discolouration through three levels due to naked flame (fire) affecting it between top floor bedroom and Flat 1 top floor rear bedroom and the cladding to the rear elevation of Flat 2 also indicates a previous fire incident, due to smoke staining on the cladding.

Flat 3 rear garden



Source : John Rowan and Partners LLP

Flat 2 first floor front bedroom window



Source : John Rowan and Partners LLP

Flat 10 rear bedroom cladding



Source : John Rowan and Partners LLP

Flat 2 rear elevation –smoke staining to cladding from fire



Source : John Rowan and Partners LLP

## 2.0 Lister House and Treves House

Both blocks of flats are multiple residential dwellings of similar construction date and built in concrete frame with mixed cladding envelope. The blocks are 1970's construction.

### 2.1 Roof

#### Construction

The roof to Lister House is a flat roof with raised parapets similar to Treves House. The main access to the roof is via the communal staircase and through a locked metal door. The top floor flats incorporate a vertical ladder on the hallway leading up to a rooflight hatch which also allows access to the roof. The ladder is partially protected with a hinged panel locked with a FB keylock. No appropriate handle was available to open the rooflight hatch.

The roof is asphalt covering over solid concrete forming the decking to the entire building.

There is a structure above the main roof housing the lift machinery and water tanks.

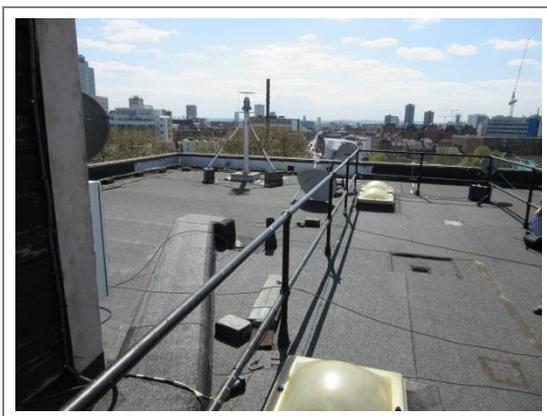
#### Condition

We had a conversation with a Langley Roofing Specialist surveyor who carried out an intrusive survey of the roof 10 years ago and recommended the roof for renewal. The roof has received over the last few years numerous patch repairs with mineral felt, liquid coatings and flash band repairs.

A number of flats, namely Flat 30, have suffered and are continuing leaks into the top floor bedroom and into the hallway/staircase ceilings.

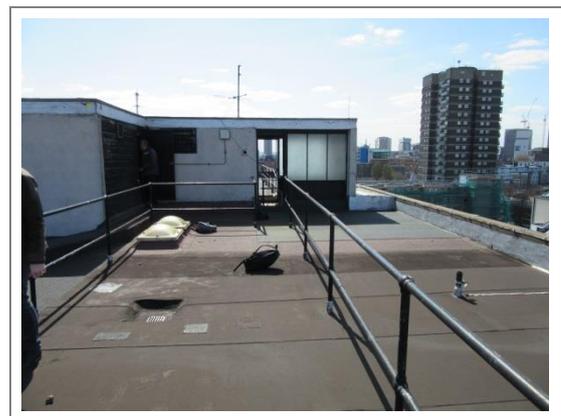
A number of residents have commented that people have gatherings and parties on the roof. This is likely to be occurring bearing in mind top floor flat residents have access to the roof. This is a dangerous activity as the roof has low parapets and the guardrails do not impede walking on the rest of the roof surface.

Roof Lister House – General View



Source : John Rowan and Partners LLP

Roof Lister House – General View



Source : John Rowan and Partners LLP

The asphalt coverings, where exposed, show deep creases and cracks. The flashing detail to flue outlets penetrating the roof are open by 5mm minimum.

There are a number of open lap joints to mineral felt and a particular felt covering has blocked a gully outlet. The laps between the asphalt and felt are beginning to open up. There are numerous examples of intrusive surveys having been carried out into the roof coverings.

There are numerous cables and items left on the roof allowing moss to build up and growing vegetation.

Patch repairs throughout the roof



Source : John Rowan and Partners LLP

Three different membranes on roof



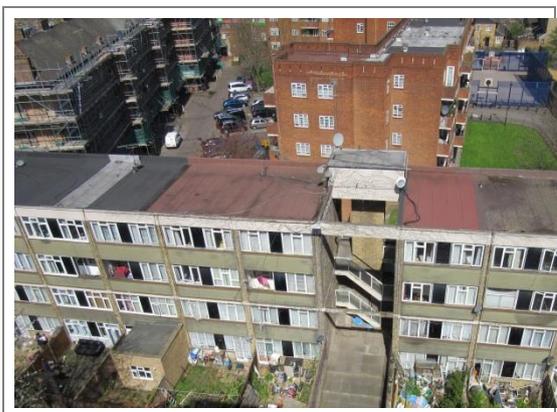
Source : John Rowan and Partners LLP

The structure protecting the lift machinery and water tanks is in poor condition. The metal door frames including the glass panelling are loose from their fixings to the fabric and wave approximately 50mm away from their fixings. The concrete to the structure is spalling in numerous places. The paintwork to the plant room housing is severely deteriorated and the lightning protection to the highest element is missing.

The roof to Treves House has also received numerous patch repairs and has reached the end of its useful life.

**Condition Category C**    
Treves House Roof

Creasing asphalt roof Treves House



Source : John Rowan and Partners LLP



Source : John Rowan and Partners LLP

## 2.2 Cladding

### Construction

The front and rear elevations to Lister House have full length window panels at each floor level with a metal clad panel below. The panels are supported on timber frames which are attached to the concrete up-stand wall behind. The cavity between metal cladding and concrete frame is filled with fibrous insulation.

The rest of the enclosure to the buildings are formed by cavity brickwork and painted concrete to other areas such as parapets.

The front and rear elevations to Treves House are divided in their length by the concrete access stair. On the front elevation the windows with a metal clad panel below are at first and third floor levels. The second floor has the access walkway enclosed by metal hand rails with glazed panels. On the rear elevation the glazing and metal clad panels are at all three floor levels. The panels are supported on timber frames which are attached to the concrete/block up-stand wall behind. The cavity between metal cladding and concrete frame is filled with fibrous insulation.

Lister House



Source : John Rowan and Partners LLP

Treves House



Source : John Rowan and Partners LLP

### Condition

The concrete elements are generally sound but requiring some remedial works in the form of local patch repairs and in some areas the application of a migrating corrosion inhibitor (Ferrogard 903 or similar will be required to provide protection against chlorides and advancing carbonation. All exposed concrete surfaces should have anti carbonation coatings applied. Generally those areas covered by the new EWI will need to be sound and durable to receive the insulation fixings.

Currently the outer brick face is not tied back to the inner blockwork skin and remedial wall ties will need to be installed across the panels to avoid collapse and to strengthen the base for a future EWI installation. The main brickwork panels are not adequate in their current form to support any EWI system.

The metal cladding does not incorporate insulation to conform to current Building Regulations. It is bent, stained in smoke and burnt to a large number of regions. The wind have lifted up sections of cladding.

The blocks currently do not afford appropriate thermal insulation due to the existence of cold bridges and minimal insulation available (eg beneath metal cladding).

It is recommended to remove the existing cladding and replace it with a new envelope, either External Wall Insulation system (EWI) or a rainscreen system. This systems would need to wrap both building blocks in their entirety to afford appropriate thermal improvements to the blocks.

**Condition Category C** 

## 2.3 Windows

### Construction

The windows to both blocks are crittal metal windows with casement panels externally hinged and opening outwards. The windows and their mainframes are fixed to a timber subframe affixed to the masonry.

The glass on most of these windows are 3 to 4mm single glazed panels.

A number of flats (approx. 60%) include secondary glazing formed in 4mm glass on aluminium frame.

Flat 1 at Treves House has recently replaced their windows for new PVC windows.

### Condition

The metal windows are mostly in a derelict condition. A number of the flats inspected has broken glass panels covered with clear plastic panelling. The broken glass were still in the window pane.

The beads to the glass inserted in the metal pane is completely deteriorated and lacking air and water seal.

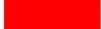
Many (approx. 90%) windows have stiff hinges due to weathering and corrosion which make it hard to open them. None of the windows have restrictors. Many window handles were found broken and levers fixed with clothe pieces and rope. All windows have many layers of peeling paintwork, and don't close shut properly. Many windows inspected are allowing water and air into the flats.

Many glass panels are lacking the internal flange to affix the glass in position and the glass has been refixed with pieces of softwood battens, which can be dislodged with strong winds. A number of window frames allow the passage of air through a 50mm gap between frame and fabric and in some cases a duct tape has been employed to avoid the frame from moving. A number of windows were found closed shut with unoperative locks.

The secondary glazing is stiff to operate a number of residents have advised that glass panels have slipped from the frame and fallen to the floor and on top of people.

The window frames are resting on timber cills which are deteriorated and rotten, and are not affording watertightness.

The windows need urgent replacement before any full or window part falls to the ground.

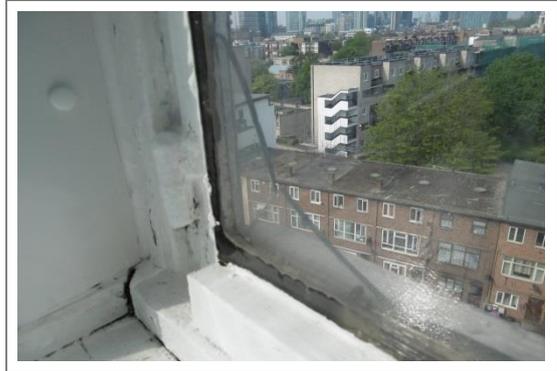
**Condition Category D** 

Typical crittal window



Source : John Rowan and Partners LLP

Broken glass left behind



Source : John Rowan and Partners LLP

Buckling timber cills



Source : John Rowan and Partners LLP

Falling internal cills strutted with battens



Source : John Rowan and Partners LLP

Glass refixed with softwood batten left hand side, and right hand glass is missing flange



Source : John Rowan and Partners LLP

Glass fixed to metal frame with softwood battens and nails



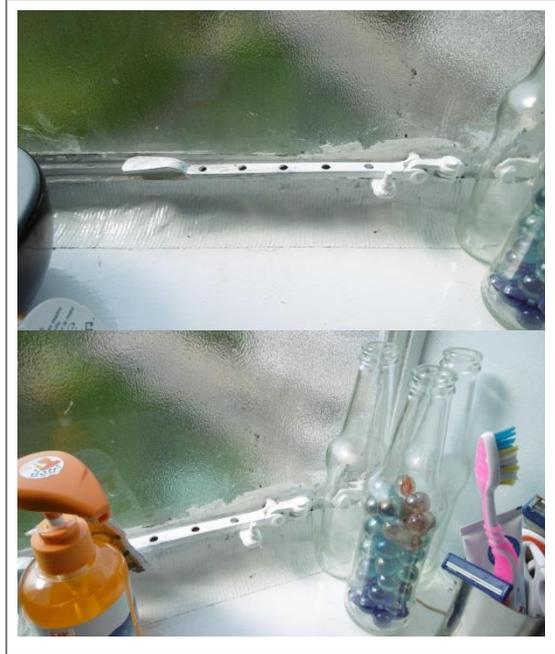
Source : John Rowan and Partners LLP

Metal window inappropriately repaired with battens



Source : John Rowan and Partners LLP

Window frame sealed and fixed with tape



Source : John Rowan and Partners LLP

Windows restraints replaced by clothe strings



Source : John Rowan and Partners LLP

Windows restraints replaced by clothe strings



Source : John Rowan and Partners LLP

Deteriorated external window cills



Source : John Rowan and Partners LLP

Duct tape around window frame to seal gaps



Source : John Rowan and Partners LLP

## 2.4 Flats

### Construction

The flats in Lister House are duplex flats laid out in the following way: flat entrance, dining room and kitchen on lower floor, bathroom WC and two bedrooms on upper floors. Two flats No1 and 2 are accommodated on the ground floor on a single level.

The flats in Treves House are duplex flats laid out in the following way: flat entrance, dining room and kitchen on lower floor, bathroom WC and three bedrooms on upper floors.

Flats 3 to 10 at Lister House gain their entry through the first floor of the building, flats 11 to 18 gain access through the third floor, flats 19 to 26 from the fifth floor and flats 27 to 34 from the seventh floor. The sixth floor incorporates an external walkway.

Flats 1 to 9 at Treves House are accessed externally from the public footpath and flats 10 to 18 from the external and open communal walkway.

The flats are formed with a mixture of concrete and block party walls separating flats between them and from communal areas. The internal partitioning is carried out in studwork and plasterboard.

The services to the flats run internally. The downpipes to the bathroom and WC toilet run in a riser behind the WC cistern. The downpipe to the kitchen is shared between two flats and located on a corner boxing.

### Condition

A number of flats visited shows artex to ceilings and walls and it would be advisable to check this for asbestos, bearing in mind the age of the building is related to asbestos containing artex material.

A resident to flat 28 commented that asbestos insulation was removed from his flat's staircase area a few years ago.

A number of health and safety issues related to crossing cable wires across halways, thin 2mm glass panels above kitchen partition is at foot reach from the staircase. Staircases at Lister lacked appropriate handrails.

Bathroom tubs and wash hand basins are separate from the WC toilet. It is current practice to combine these in a single room.

Top floor flats have and are still suffering roof leaks.

Many flats (10 of flats visited) have suffered a leak from the kitchen flat above due to a broken pipe, broken washing machine pipe, open tap, etc and water has quickly found its way to the flat below through electrical installation. Any water leaks is not contained within the flat owing to lack of vertical compartmentation which can also allow smoke to travel easily up and into flats.

A number of flats (25%) have complaint about mice and rats infestation and beetle in the kitchen.

Approximately 40% of flats have cold bridge issues and severe condensation around window reveals in bedrooms.

**Condition Category D** [REDACTED] Asbestos and H&S items

Water leak from flat above through light fitting



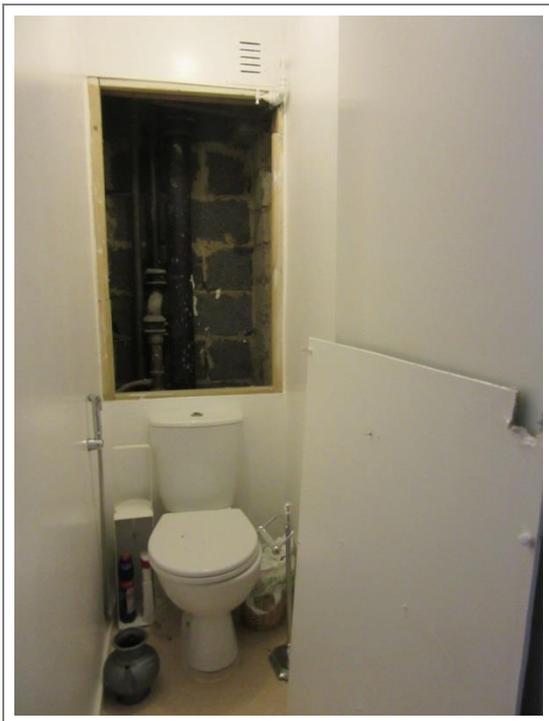
Source : John Rowan and Partners LLP

Typical textured ceilings (Artex?)



Source : John Rowan and Partners LLP

Riser behind WC



Source : John Rowan and Partners LLP

Riser behind WC



Source : John Rowan and Partners LLP

Mice trap in a flat at Lister House



Source : John Rowan and Partners LLP

Beetle found in Lister House



Source : John Rowan and Partners LLP

Severe condensation around windows



Source : John Rowan and Partners LLP

Severe condensation to bathrooms



Source : John Rowan and Partners LLP

## 2.5 Fire – Life – Safety Issues

### Lister House

The external sixth floor walkway is not accessible for flats 19 to 26 at Lister House. Such walkway is also filled with rubbish. The hard to open windows and the cill height make it impractical for any able-bodied person to climb and jump safely to the 6<sup>th</sup> floor walkway.

There is no vertical fire compartmentation to the risers behind the WC toilets. The panelling to the riser is not sealed and these are often breached with open grilles.

The flat entrance doors are not fire doors and none incorporate smoke seals or self-closing devices. Most flat doors incorporate metal security gates which can become death traps in the event of a fire. It has been noted in some instances for a resident to take 5 minutes or more to joggle with the key trying to open the security metal door.

The flats' kitchen do not incorporate heat detectors and carbon monoxide detectors in the kitchen. The boilers are located in the kitchen. The kitchen doors do not incorporate self-closing devices.

The only escape route to flats on third, fifth and seventh floor is the communal staircore located in the middle of the building. There is no alternative emergency exit route.

There is a need for smoke alarms and sounders to the communal areas. The policy to evacuate or stay put has to clearly be visible on a display cabinet onsite.

Staircases do not incorporate handrails and slips are frequent on a carpet flooring.

A number of communal doors do not incorporate spring closer mechanisms and are hard to operate.

Treves House

The flats appear to incorporate appropriate vertical and horizontal compartmentation, but we did not carry out an integrity test of the flats.

The flats' kitchen do not incorporate heat detectors and carbon monoxide detectors in the kitchen. The boilers are located in the kitchen. The kitchen doors do not incorporate self-closing devices.

Staircases to a number of flats (10%) do not incorporate handrails (have been removed) and slips are frequent on a carpet flooring.

**Condition Category D** ████████

External emergency walkway on 6<sup>th</sup> floor

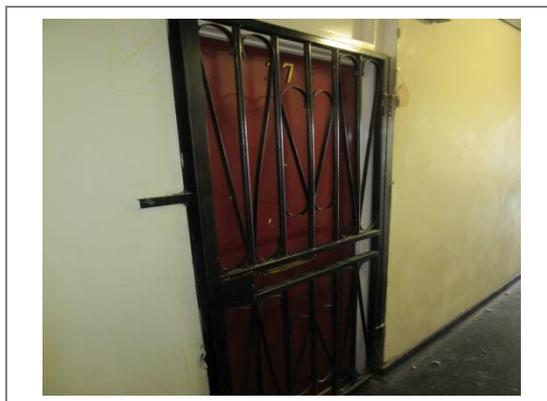


Source : John Rowan and Partners LLP

Dirty material on walkway



Source : John Rowan and Partners LLP



Lack of vertical compartmentation in WC risers to Lister House



Source : John Rowan and Partners LLP

Lack of vertical compartmentation in WC risers to Lister House



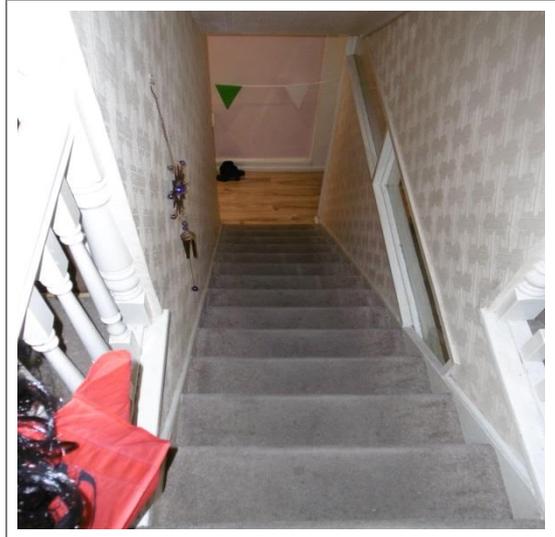
Source : John Rowan and Partners LLP

Grilles to open ventilation ductwork



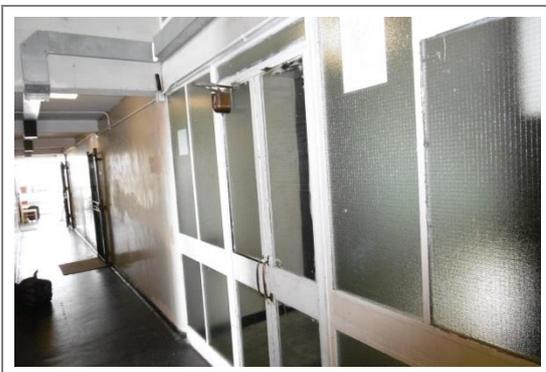
Source : John Rowan and Partners LLP

No handrails to flat staircases



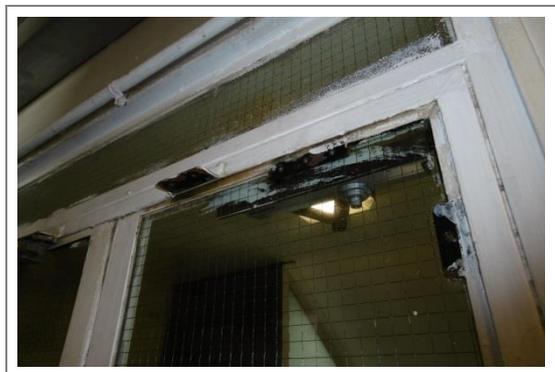
Source : John Rowan and Partners LLP

Communal doors leading to staircase



Source : John Rowan and Partners LLP

Missing door closer to separating doors



Source : John Rowan and Partners LLP

A Fire Risk Assessment Survey of communal areas can be found in Appendix D.

## 2.6 Building Structure

### Lister House

There were signs of cracking in the supporting beams and columns and severe spalling in places. These areas need to be repaired and coated to provide a sound structure beneath the block and throughout the block such as communal walkways and to the plant room in the roof.

A number of areas, such as top floor communal walkway and fifth floor communal walkway, there was found long horizontal cracks on partitions against flats.

Flats also showed long horizontal cracking to the building fabric, primarily beneath windows.

The communal areas are severely affected by ASB and all walls have numerous patch repairs to remedy punch holes and cracking on walls.

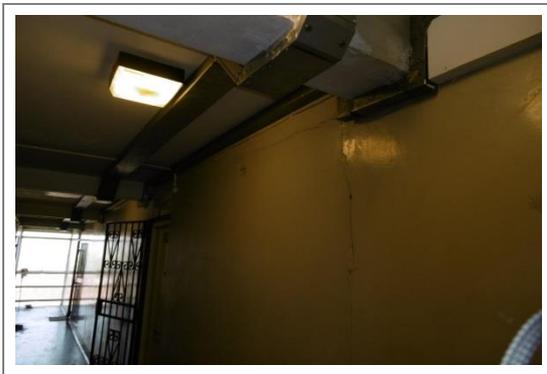
**Condition Category B** 

### Treves House

The block is generally in a sound condition and only limited amount of concrete and brickwork repairs will be required.

**Condition Category A** 

Cracking to structure internally – Lister House



Source : John Rowan and Partners LLP

Cracking to structure internally – Lister House



Source : John Rowan and Partners LLP

Cracking to structure externally – Lister House



Source : John Rowan and Partners LLP

Smaller issues at Treves House



Source : John Rowan and Partners LLP

### 3.0 Structural Engineer's Findings.

#### 3.1 Lister House

The concrete elements are generally sound but requiring some remedial works in the form of local patch repairs and in some areas the application of a migrating corrosion inhibitor (Ferrogard 903 or similar will be required to provide protection against EDA/11905/April 2016 chlorides and advancing carbonation. All exposed concrete surfaces should have anticarbonation coatings applied.

The internal structure previously identifying movement cracking and ASB issues will also need to be made good employing helifix ars and hard cement render being applied to withstand the impact damage it is suffering by anti-social behaviour.

**Condition Category C**

#### 3.2 Treves House

The block is generally in a sound condition and only limited amount of concrete and brickwork repairs will be required.

There are areas of concrete beams affected by overgrown ivy which might have encouraged the spalling of concrete.

**Condition Category B**

For the detailed survey report, see the attachment in Appendix B.

## 4.0 Mechanical & Electrical Engineer's Findings.

### 4.1 Lister House

Mechanical services identified within Lister House comprise centralised ventilation and cold water booster and storage equipment, cold water distribution pipework to flats, localised boilers and cylinders, heating distribution and hot and cold water services, gas meters and distribution, dry riser and foul public health services.

Gas pipework within the basement plantroom has been identified as badly corroded and would be recommended for immediate replacement.

The cold water storage tanks are incompliant with the Approved Code of Practice for water hygiene and legionella and are recommended for immediate replacement.

Extract ventilation systems and the plant room sump pump are nearing the end of their useful life expectancy and would be proposed for replacement within 2 to 5 years.

All other systems are in a satisfactory condition and if regularly serviced and maintained, would not be expected to require replacement or major remedial works within the next 5 years.

Electrical services identified within Lister House comprise mains, sub-mains, small power, lighting, fire alarm and access control systems.

All systems are within satisfactory condition and are not expected to require replacement or major refurbishment work within the next 5 years if regularly serviced and maintained.

### 4.2 Treves House

Mechanical services identified within Lister House comprise cold water storage equipment, cold water distribution pipework to flats, localised boilers, heating distribution and hot and cold water services, gas meters and distribution and foul public health services.

All systems are in a satisfactory condition and if regularly serviced and maintained, would not be expected to require replacement or major remedial works within the next 5 years.

Electrical services identified within Treves House comprise mains, sub-mains, small power, lighting and fire alarm systems.

All systems are within satisfactory condition and are not expected to require replacement or major refurbishment work within the next 5 years if regularly serviced and maintained.

For the detailed survey report, see the attachment in Appendix C.

## 5.0 Conclusions and Recommendations.

### 5.1 Lister House

Lister House has not received much attention in relation to maintenance and most work and budget employed on the building has been on a reactive basis. The remedial repairs to the roof carried out to date are localised but have also reached the end of their useful life.

Other items which have reached their end of useful life include the windows, which now pose a danger to flat residents and external passersby from bits of glass and metal which may fall any time.

The metal cladding and external envelope do not afford appropriate thermal comfort to the flats.

The fire safety issues identified and ASB in the building pose a real threat to residents which would be prudent to remedy as soon as possible.

The M&E services are tired, albeit there is a new mains electrical installation providing power to the flats. Approximately 10% of flats are still employing old 1970's fuseboards and require renewal along with a complete rewiring.

On the building fabric side, we would recommend that the roof is renewed to remedy the current roof leaks, renew the lightning protection system, replace all windows to make the building watertight, the exposed concrete structure to be repaired and install a new external wall insulation system to enhance the thermal comfort to the flats.

On the M&E side, we would recommend the replacement of cold water storage tanks and basement gas pipework at earliest opportunity, replacement of centralised ventilation system and ductwork and plant room sump pump. All other services are not envisaged to require replacement of major refurbishment works within the next 10 years if regularly serviced and maintained

On the Fire, Life and Safety area, we would recommend that all risers are fire and smoke sealed appropriately and flat entrance doors are upgraded or replaced with new fire door sets, including the removal of security metal gates. Flats would also benefit from heat detectors and carbon monoxide detectors, including smoke/heat detectors in the bin store.

### 5.2 Treves House

Treves House has not received much attention in relation to maintenance, but it is in a better condition than Lister House.

Roof, windows and cladding have reached the end of their useful life, but are still serviceable.

The bin store is located by the entrance to the top floor flats which can be cumbersome to residents.

On the building fabric side, we would recommend that the roof is renewed, renew the lightning protection system, replace all windows, and install a new external wall insulation system to enhance the thermal comfort to the flats.

On the M&E side, all services are not envisaged to require replacement of major refurbishment works within the next 10 years if regularly serviced and maintained.

On the Fire, Life and Safety area, we would recommend that flat entrance doors should be removed from their security metal gates. Flats would also benefit from heat detectors and carbon monoxide detectors and smoke detectors in the bin store.

## 6.0 Limitations of Inspection.

- 6.1 This report is not to be regarded as a building survey of the entire property. In accordance with normal practice we must state that we have not inspected any of the areas other than instructed. Those areas which it was not practical to inspect or which were covered, unexposed or otherwise inaccessible have not been inspected and we therefore cannot categorically state that they are free from defects.
- 6.2 We have not checked the building for the presence of high alumina cement, chlorides in the concrete or asbestos based products and cannot therefore guarantee that these materials are not present. The age of the property suggests these materials are unlikely to be encountered in the construction.
- 6.3 We have not been able to ascertain the nature and extent of the recent repairs, nor have we determined whether any guarantees exist.
- 6.4 Finally, this report is confidential to you for the specific purpose to which it refers. It may be disclosed to other professional advisers assisting Tower Hamlets in respect of that purpose, but we cannot accept liability to any third party who may act upon it.

## APPENDICES

# **APPENDIX B**

## **STRUTURAL ENGINEER'S REPORT**



**LISTER AND TREVES HOUSE**  
**VALLANCE ROAD, LONDON E1**  
**JOB No. 11905**  
**STRUCTURAL INSPECTION**

## **INTRODUCTION**

EDA were instructed by John Rowan & Partners to inspect the internal and external structure to the above two blocks. The inspection was to provide an overview of the general structural condition to allow formed judgment on the extent of the various repairs required and the suitability of over cladding with an EWI system.

The visit to site was carried out on the 19<sup>th</sup> April 2016

## **DESCRIPTION**

Lister House is a residential block of 9 stories, constructed of concrete columns, walls, beams and floor slabs with brickwork infill panels and glazing with metal cladding below and with a flat roof over. Concrete floor slabs are provided at each level with communal concrete stairs to each maisonette level.

Treves House is a residential block of 4 stories with load bearing wall construction with a concrete floor at second level forming the party wall floor and communal walkway. The intermediate floors of the maisonettes are of timber construction. Stability is provided by cross walls and brick piers. The gable walls are of solid brickwork construction. The roof is of flat roof construction.

EDA/Martech carried out external surveys of both blocks in July 2014 including limited opening up works to the cladding system and material sampling/testing. The results of these surveys are recorded on report EDA/11135/July 2014 and Martech report 14093.

## **REPORT**

The inspection was generally of a visual nature with three residents in Lister House allowing us entry and one in Treves House.

- Lister House
- The front and rear elevations have full length window panels at each floor level with a metal clad panel below. The panels are supported on timber frames which are attached to the concrete up-stand wall behind. The cavity between metal cladding and concrete frame is filled with fibrous insulation. (See drawing 11905/100)
- The concrete elements were generally in a fair condition although the coating to the exposed concrete elements had extensive deterioration. The instances of concrete spalling were found generally to the area above the main entrance.
- Many instances of cracking were found in the walls of the corridors. These are due to differential movement between the concrete frame and blockwork infill panels. The

three properties in which we gained access were all recently decorated to a good standard. The evidence of internal cracking was only visible in a unit situated next to the gable end. In this case it was movement between infill panel blockwork and concrete frame. (See drawing 11905/101)

- During our internal inspection it was noted that residents at 7th floor level had no access to the fire escape walkway (no doors provided within the elevation). The elevation had Crittal windows above a solid wall which was approximately 1metre high. The possibility of an elderly or infirm resident being able to climb out of the window on to the walkway is negligible. The rear elevation of Lister House does not have a fire escape walkway. We would recommend that the fire service is contacted to ascertain if this conforms with current regulations.
- The concrete staircase was found to be in fair condition with crazing/cracking to the screed on the landing levels.
- At roof level the tank and lift motor room had cracking to the render finish. The roof access door and large glazed panel attached had lost its fixings to the roof slab and could move.
- Brickwork panels on the gable elevations are as follows :-

Main full height brickwork panels are of stretcher bond construction with a blockwork inner leaf. The panels appeared generally free from defects. The cavities were generally 80mm wide with one area recording a 300mm cavity possibly a service duct. No cross cavity wall ties were detected in the panels. The ties where found were flat galvanized metal ties which were cast into the columns and bent down to lay in the mortar bed joints. Generally there are 5 to 6 ties either side of a panel.

- Treves House
- The front and rear elevations are divided in their length by the concrete access stair. On the front elevation the windows with a metal clad panel below are at first and third floor levels. The second floor has the access walkway enclosed by metal hand rails with glazed panels. On the rear elevation the glazing and metal clad panels are at all three floor levels. The panels are supported on timber frames which are attached to the concrete/block up-stand wall behind. The cavity between metal cladding and concrete frame is filled with fibrous insulation. (See drawing 11905/102)
- The concrete elements were generally in a fair condition although the coating to the exposed concrete elements had extensive deterioration. The carbonation has reached the reinforcement in some areas causing the spalling to exposed faces.
- The gable elevations are full height brickwork panels of solid bonded brickwork construction. The panels appeared generally free from defects.

## **CONCLUSIONS FOR LISTER HOUSE**

- Note in many instances where the concrete has been tested or removed there was a skim render coat, generally 2-4mm thick which will need to be made good.
- The concrete elements are generally sound but requiring some remedial works in the form of local patch repairs and in some areas the application of a migrating corrosion inhibitor (Ferrogard 903 or similar will be required to provide protection against

chlorides and advancing carbonation. All exposed concrete surfaces should have anti carbonation coatings applied. Generally those areas covered by the new EWI will need to be sound and durable to receive the insulation fixings.

- The main brickwork panels are not adequate in their current form to support the proposed EWI system. Currently the outer brick face is not tied back to the inner blockwork skin and remedial wall ties will need to be installed across the panels before the EWI is applied.
- Remedial wall ties will need to be installed on a grid pattern approximately 900mm across x 450mm vertical and in the center of the bricks. There is a possibility with this amount of ties that some internal damage may occur in the flats due to drill breakout. (see drawing 11905/103 for layout)
- When attaching the insulation to the walls the specialist contractor will need to map out the layout of bed joints and perpends to ensure that the panel fixings are located in the brick and not in the joints where pull out values are zero. We would suggest a trial area to confirm adequacy of this system.
- The use of a rain screen type insulation system should also be considered. The concrete structure is sound and would support the metal frame that carries the insulation. The extra cost of this system would be offset by the need for remedial wall ties, the EWI fixings and possible internal damage.
- Refer to the Martech report for section details through the existing cladding and windows. The condition of the up-stand walls may vary considerably and will only be known once the cladding is removed. Allow for skim render coat to all external up-stand walls at this stage.
- Access was available on this visit to inspect the basement area boiler room and there were signs of cracking in the supporting beams and columns and severe spalling in places. These areas need to be repaired and coated to provide a sound structure beneath the block.

## **CONCLUSIONS FOR TREVES HOUSE**

- The block is generally in a sound condition and only limited amount of concrete and brickwork repairs will be required.
- The construction of the metal cladding is similar to that of Lister House.



**LISTER AND TREVES HOUSE**  
**VALLANCE ROAD, LONDON E1**  
**JOB No. 11135**  
**STRUCTURAL INSPECTION**

## **INTRODUCTION**

EDA were instructed by Mace to inspect the external structure to the above two blocks. The inspection was to provide a comprehensive overview of the general structural condition to allow formed judgment on applying external insulation.

The works on site were carried out between the 7<sup>th</sup> and 11<sup>th</sup> July 2014

## **DESCRIPTION**

Lister House is a residential block of 9 stories, constructed of concrete columns, walls, beams and floor slabs with brickwork infill panels and glazing with metal cladding below with a flat roof over. Concrete floor slabs are provided at each level with communal concrete stairs to each maisonette level.

Treves House is a residential block of 4 stories with load bearing wall construction with a concrete floor at second level forming the party wall floor and communal walkway. The intermediate floors of the maisonettes are of timber construction. Stability is provided by cross walls and brick piers. The gable walls are of solid brickwork construction. The roof is of flat roof construction.

## **REPORT**

The inspection and testing were carried out using an industrial rope system. Refer to Martech report No 14093 for all details and photographs.

- Lister House:- The concrete elements were generally in a fair condition although the coating to the exposed concrete elements had extensive deterioration. Carbonation was found to be 10-15mm in depth with mean cover to the reinforcement of 22-34mm. Chloride test results showed a high risk reading in some areas. In the instances of concrete spalling (found generally to the area above the main entrance) this was due to low cover to the reinforcement.
- Brickwork panels on the gable elevations are as follows :-

Main full height brickwork panels are of stretcher bond construction with a blockwork inner leaf. The panels appeared generally free from defects. The cavities were generally 80mm wide with one area recording a 300mm cavity possibly a service duct. No cross cavity wall ties were detected in the panels. The ties where found were flat galvanized metal ties which were cast into the columns and bent down to lay in the mortar bed joints. Generally there are 5 to 6 ties either side of a panel.

- The Front & Rear elevations are as follows :-