Appendix H

Intrusive investigations and site visit reports

22nd October 2015
Ref: 1431-01
Visit by: Diego Teran & David Miller

Arthur Stanley House – Site Visit Report No.01

1. Roof extension construction and defects

1.1 Piloti columns (expressed external RC frames) used for the roof extension with exposed aggregate finish on all faces.

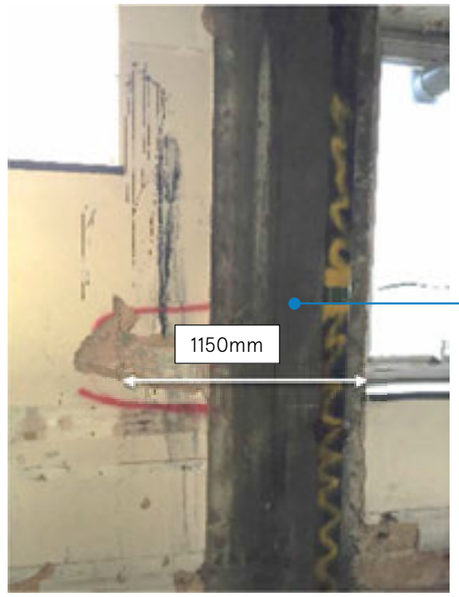
Some reinforcement links on the side columns are clearly exposed by washed off cover. The reinforcement has corroded throughout its exposed surface.

1.2 The roof level construction consist of autoclaved aerated concrete precast units.

The underside of a number of panels have lost some concrete areas leaving some of the reinforcement bars exposed.

Arthur Stanley House – Site Visit Report No.01

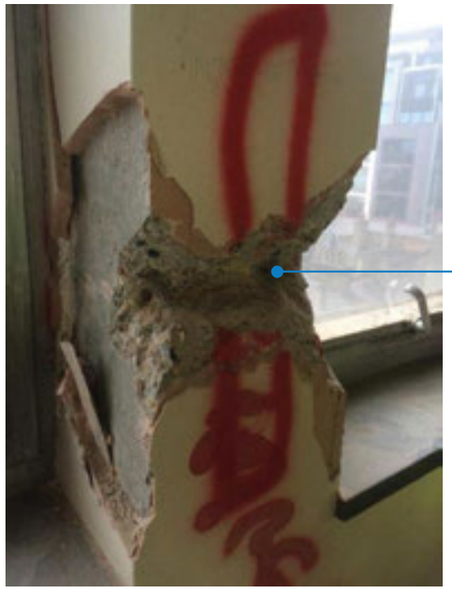
2. Sixth Floor findings



2.1 The column located at the end of the front façade that rises all the way up the building was identified as reinforced concrete. It was also measured from the inside to determine its overall width (see picture below).

2.2 The overall column width was measured to be 1150mm. Reinforcement bars and links are to be exposed and measured by HTS.

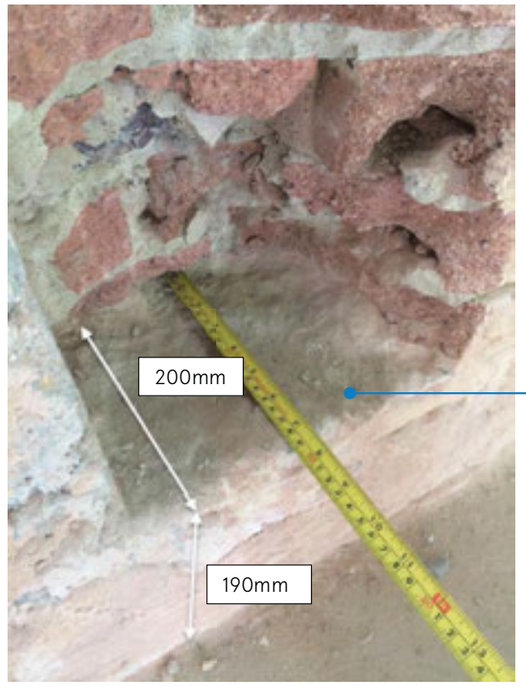
3. Fifth and fourth floor structure



3.1 Some RC perimeter columns show exposed reinforcement and will be further exposed to reveal main reinforcement bars and shear links.

3.2 RC upstand on front façade was found exposed at 5th floor level. Reinforcement bars and shear links are to be exposed and measured.

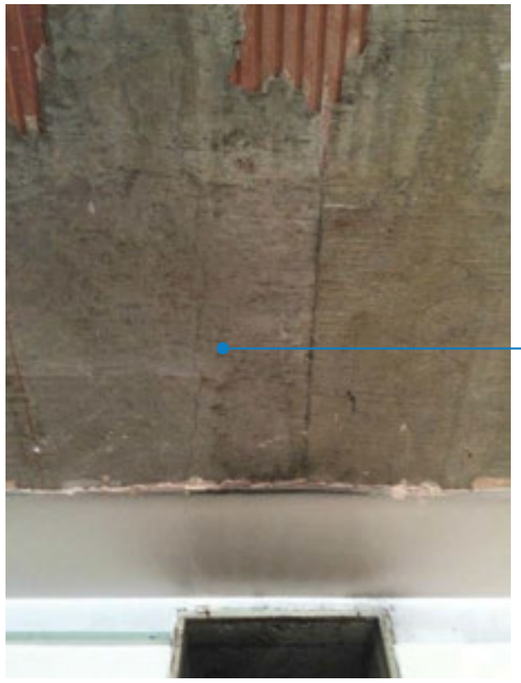
Arthur Stanley House - Site Visit Report No.01



3.3 RC upstand was measured to be 190mm high from SSL and at least 200mm wide. These dimensions are TBC.

4. Second floor findings

4.1 Services holes were present at the top of the spine beams at almost every level. These were pre-formed rather than post construction and formwork marks were identified on top and side edges.



4.2 Cracks were identified above two service holes on the spine beam on the central bay. The cracks propagates to both sides of the spine beam.

5. Front façade - exterior

5.1 Front façade build up is to be investigated and measured on week commencing the 26th of October. HTS to measure and record wall build up.

30th October 2015
Ref: 1431-02
Visit by: Diego Teran

HEYNE TILLETT STEEL

Arthur Stanley House – Site Visit Report No.02

1. Sixth floor opening up works

1.1 Reinforcement was exposed on the sixth floor end of façade column. Cover to reinforcement looked very consistent with six longitudinal bars on the inner face.

Confinement of concrete is well achieved with groups of links between main bars

1.2 Cover of internal column was also removed to expose reinforcing bars.

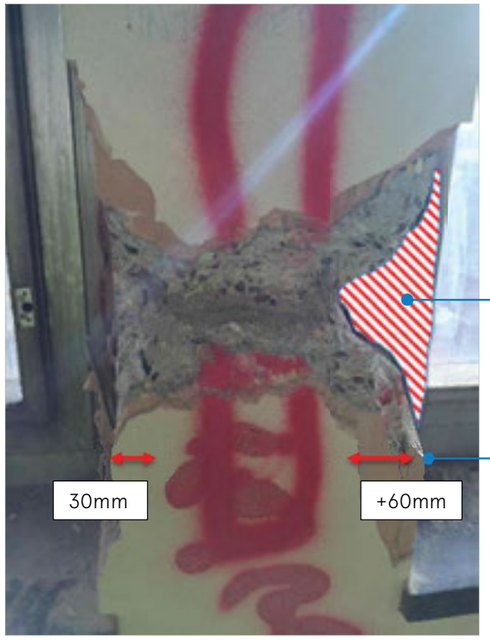
Cover to reinforcement is more than nominal in some of the column faces. This is due to poor workmanship during construction.

2. Fourth floor front façade column.

2.1 The column located at an inner bay in the front façade of the building has been heavily cored through in search of reinforcement bars.

This is not an ideal core since the column capacity is highly affected by loss of its section.

It is also important that column investigations are carried about a third high from the base level.



2.2 Loss of concrete around perimeter of the column which also extends towards top and bottom.

Cover to reinforcement varies between column faces. 30mm on one side and more than 60mm on the other.

2.3 Column's strength capacity has been highly affected by material removal of most of its sectional area near mid height.

Column is to be repaired following HTS's column repair sequence. See sketch SK009-01.

2.4 Column on second floor shows good practice example of cover removal and rebar exposure.

2.5 Reinforcement in internal façade upstand was exposed.

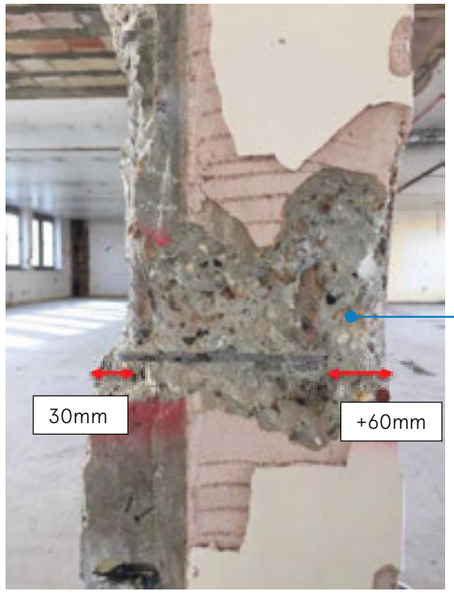
Shear links and longitudinal bars were identified close to the column edge.

Arthur Stanley House - Site Visit Report No.02

3. Cover differences throughout floors

3.1 Internal and façade columns at second floor were exposed to show reinforcement arrangement.

Arthur Stanley House - Site Visit Report No.02



Cover to reinforcement varies significantly on column sides.

This is due to poor workmanship during construction.

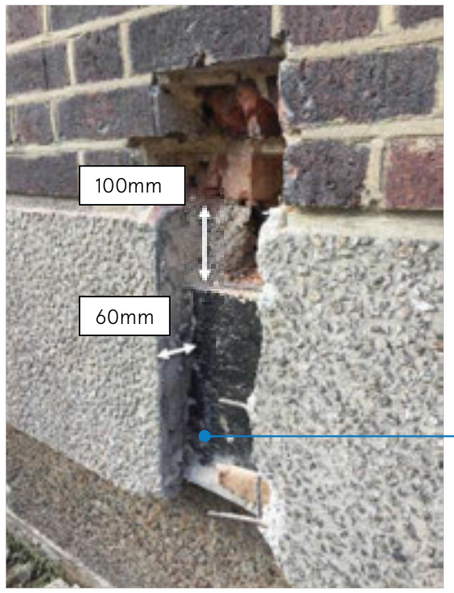
2nd November 2015
Ref: 1431-03
Visit by: Diego Teran

Arthur Stanley House – Site Visit Report No.03

1. **First floor façade opening up.** Refer to sketch 1431/SK010 for measured dimensions.

1.1 Façade wall investigation had been carried out from both inside and outside to determine the wall build-up, the upstand depth and width and the concrete fascia connection details.

Façade opening up at **first floor only.**



1.2 The precast concrete fascia is supported by a 100mm thick toe over the concrete edge and cast in metal brackets at the lower level.

There is a thin layer of mortar between the precast fascia and the concrete slab.

Refer to sketch 1431/SK010 for measured dimensions.

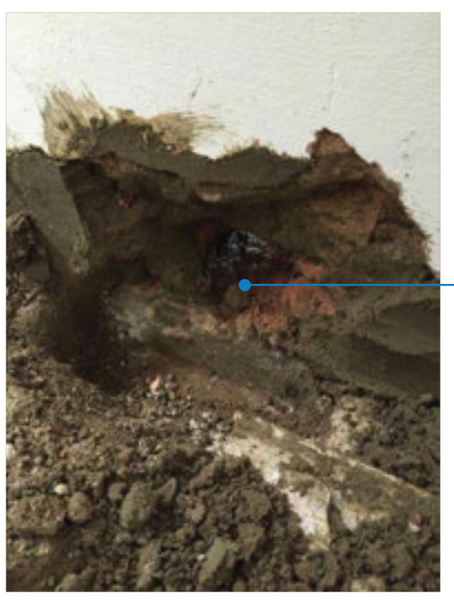
1.3 Cast in metal bracket connection into precast fascia.

1.4 Rebars within fascia were identified as diameter 6mm plain bars in the downstand and ribbed diameter 6mm within the toe.

Concrete upstand behind front face.

Arthur Stanley House – Site Visit Report No.03

1.5 Fascia view from below.



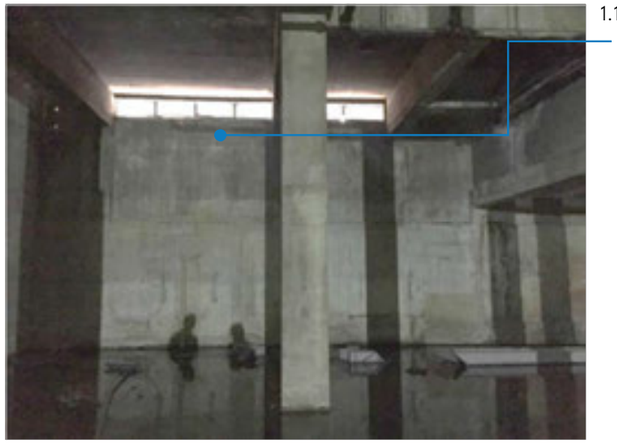
1.6 Upstand from inside was measured to be 60mm high from slab level.

Refer to sketch 1431/SK010 for measured dimensions

11th April 2017
Ref: 1431-04
Visit by: Diego Teran

Arthur Stanley House – Site Visit Report No.04

1. Basement view towards Tottenham Mews



1.1 The existing light well is to be lowered down from its current basement level.

The extent of retention of the existing RC wall at basement level will be determine by the proposed facade line of the residential building.

1.2 The interface between the residential and office building to be studied in further detail.

Arthur Stanley House – Site Visit Report No.04

2. Ground floor rear courtyard

2.1 Party wall crossing the site boundary constructed of 440mm thick brick pier.

Intersection with boundary walls and tying to be studied in further detail to understand demolition sequencing.

3. West core demolition extent

3.1 Design team to review the stair core and service riser space requirement for demolition extent coordination.

There is an existing band beam adjacent to the existing riser that might require full demolition

4. Screed removal and spot level survey

4.1 It is recommended that a spot level survey is carried out throughout the building to determine existing slab SSL.

The screed is bonded to the slab which would make its removal labour intensive and requiring repairs to the structural slab post demo.

09th May 2017
Ref: 1431-05
Visit by: Andrew Middlebrook & Diego Teran

HEYNE TILLETT STEEL

Arthur Stanley House – Site Visit Report No.05

1. General

1.01 HTS site visit to review existing structure and develop proposed scheme.

2. Existing Superstructure

2.01 Existing 7th Floor.

All existing structure is currently proposed to be demolished above 7th Floor. New roof structure – at a higher level than the existing – is proposed to be a concrete filled profile metal deck slab supported on steel beams, which span between steel columns.

The roof accommodation is proposed to be plant on the northern portion of the new roof deck and a terrace on the southern portion.

HTS to update load rundown to take into account new roof structure and accommodation and analyse capacity of existing columns to support new loads.

On the north elevation and above the central line of the building, steel columns supporting the new roof structure will be in the line of the concrete columns below the 7th Floor slab. Horizontal transfer structures at 7th Floor will therefore not be required.

2.02 On the south elevation, the new column line above 7th Floor is proposed to be inboard of the existing facade line below. The steel columns supporting the new roof structure will therefore not be in the line of the concrete columns below the7th Floor slab.

A horizontal transfer structure at 7th Floor will therefore be required.

2.03 The existing beam and pot slab at 7th Floor are unlikely to have the capacity to transfer vertical forces from the new column line to the existing column lines.

HTS to investigate capacity of existing beam and pot slab. If the slab does not have capacity to transfer loads, HTS to develop options for a proposed transfer structure.

2.04 Existing roof slab. This appears to be precast concrete floor slab units supported on in situ concrete beams.

2.05 The existing precast concrete floor units appear to be formed from autoclaved aerated concrete, which has potential to contain radioactive gas and could therefore be a deleterious material.

HTS will highlight CDM risk on demolition drawings. Material to be tested by future contractor prior to any demolition.

2.06 Central line of columns and downstand beams – 650mm below slab soffit – on a typical floor.

It is currently proposed to demolish the existing downstand beams and replace these with steel downstand beams either side of the existing concrete beam line. It is currently envisaged that the steel beams will be installed prior to the demolished of the concrete beam to avoid temporary works.

HTS to discuss the feasibility of this demolition methodology with demolition contractor.

The current structural proposals have the new steel beams spanning onto new steel columns either side of the existing concrete columns. However, it may be possible for the beams to span onto shelf angles fixed to the face of the concrete columns.

HTS to develop beam support detail.

The steel beams are currently proposed to be 203UC sections. Based on typical rules-of-thumb, it should be possible to form service penetrations up to 100mm deep through the webs of these beams.

GBuild to provide typical maximum dimensions of required services passing across the central column line. HTS to investigate whether these can pass through the currently proposed beam webs or whether a deeper beam will be required.

Arthur Stanley House – Site Visit Report No.05

2.07 At high level Ground Floor, the down stand beam is approx. 200mm below the slab soffit. The distance between the Ground Floor SSL and the beam soffit is therefore approx. 3.65m. It may therefore not be necessary to remove this beam and replace with steel beams.

AHMM to confirm.

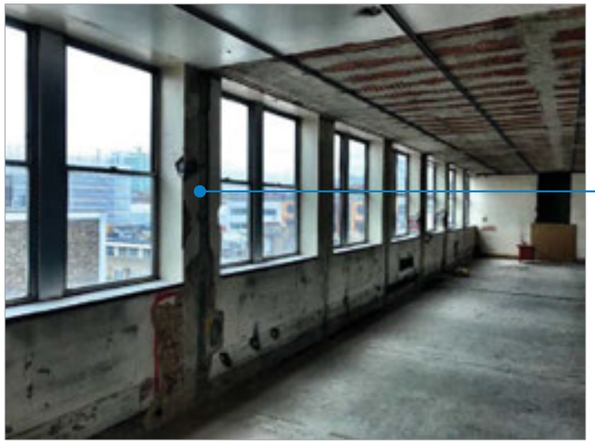
2.08 Existing concrete structure on typical floor.

Based on advice from Fire Risk Solutions, the required fire resistance period for the existing structural elements is 90mins.

Based on guidelines set out within BRE Report 128 *Guidelines for the construction of fire-resisting structural elements*, the existing structural elements have the following fire resistance periods:

- Slabs – 90mins
- Beams – 60mins
- Columns – 60mins

To attempt to increase the above figures HTS to research the fire design approach in the concrete design code that was current when the building was constructed and confirm the fire resistance periods for which the structure would appear to have been designed.



2.09 Existing column line on north elevation of building.

Every second existing concrete column is proposed to be removed. The upstand spandrel beams within the masonry façade will also be removed.

Downstand steel beam will be installed under the concrete slabs at every level to transfer slab loads back to the retained columns.

Downstand beams are currently proposed to be installed within the existing column line. This would require temporary works to prop the slab between the demolition of the columns and the installation of the beams.

HTS to investigate fixing downstand steel beams into the southern faces of the columns to avoid temporary propping.

Strengthening is currently proposed to column on the north elevation up to 4th Floor.

As per Item 2.01, HTS to update load rundown to take into account new roof structure and accommodation and analyse capacity of existing columns to support new loads and confirm extent of column strengthening.

2.10 External face of north elevation of the building above Ground Floor.

Level of existing 1st Floor slab.

Level of roof of previous structure on Ground Floor slab.

It is possible that the existing Ground to 1st Floor columns have been designed as restrained by the slab embedded in the wall at the level of the roof of the previous structure on the Ground Floor slab.

HTS to scope additional intrusive investigations arrangement of reinforcement in columns at the previous roof level.

Arthur Stanley House – Site Visit Report No.05

3. Existing Basement

3.01 Retained Ground Floor slab and supporting beams and columns at the north of the site at high level basement.

It is currently proposed to demolish all existing structure to the inner face of basement walls and slab.

HTS to circulate concept sketch of proposed structure if slab, beams and columns are retained to Ground Floor. Loads from columns in office grid above Ground Floor will need to be transferred to existing columns below Ground Floor.

3.02 Existing columns below Ground Floor at northern elevation of existing building.

It is proposed for diagonal struts between Ground Floor and Basement 2 to transfer forces from columns above to existing foundations at Basement 2.

3.03 Basement is currently flooded. Water level appears to correspond to groundwater level determined in URS *Ground Investigation Report*. It therefore appears that existing basement box is not sealed against groundwater ingress.

HTS to visit site when water is pumped out to attempt to locate points of water ingress and rate. This will inform proposed basement waterproofing design.

Existing drainage services at high level Basement 2. The CCTV drainage survey by JPD indicates that the level of the sewer under Tottenham Street above the level of the Basement 2 slab. The level of the outlet therefore corresponds to the level of a gravity discharge to the sewer.

A gravity discharge to the sewer would have to be at this level in the proposed case.

Design team to develop drainage.

The sewer under Tottenham Street is approx. min. 5.4m from site boundary; the sewer under Tottenham Mews is approx. min. 3.0m from site boundary. Although the basement is not being lowered, it is possible that Thames Water will request an Impact Study to assess the effects of the development on their sewers. This would need to be carried out and accepted prior to commencement on site.

HTS to contact Thames Water to establish whether an Impact Study will be required.

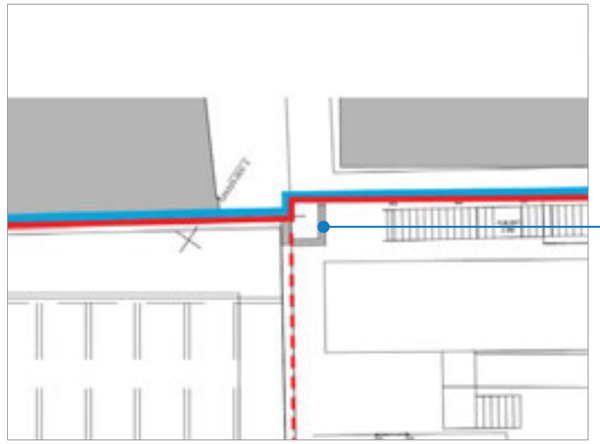
Arthur Stanley House – Site Visit Report No.05

4. Boundary Wall

4.01 Top of Ground Floor slab to the north of the site.

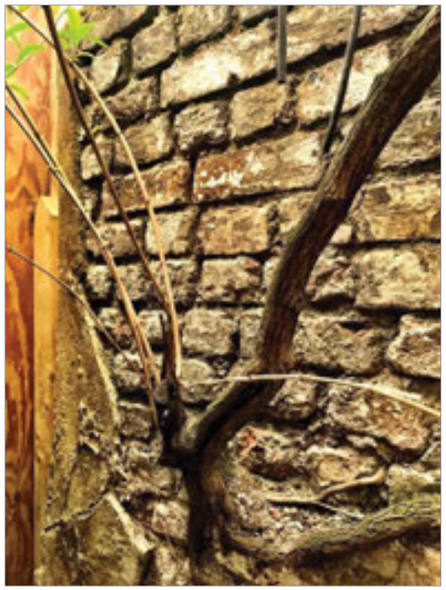
Boundary wall with UCLH day hospital on Tottenham Mews.

Dog leg in wall above Ground Floor slab.



4.02 Red line boundary for development.

Dog leg in wall is within site boundary.



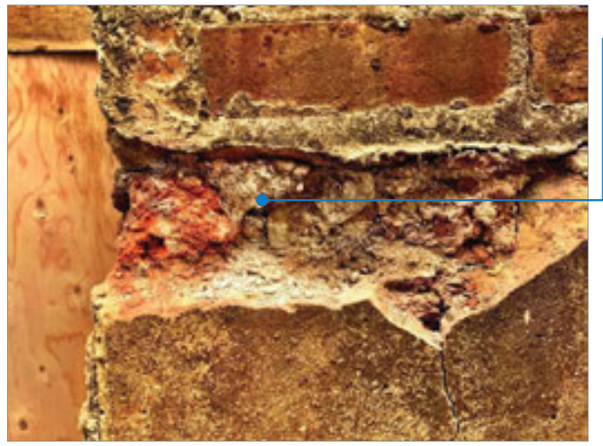
4.03 Face wall above Ground Floor slab. Wall appears to be constructed of solid masonry in an English bond.

The masonry wall is supported on what appears to be an RC upstand beam that lines up with a step in the Basement wall below.

4.04 On western side of wall there is a steel frame. A gap between beam end plates and the wall suggest that the frame does not appear to provide any support to wall.

Buttress on the eastern side of the wall. This spans to ground level on the UCLH side of the wall and would appear to provide support to the wall.

Arthur Stanley House – Site Visit Report No.05



4.05 Snapped off stretcher bricks at the end of the wall. It would appear that the wall originally continued into the site to form a boundary wall between the two previous separate titles.

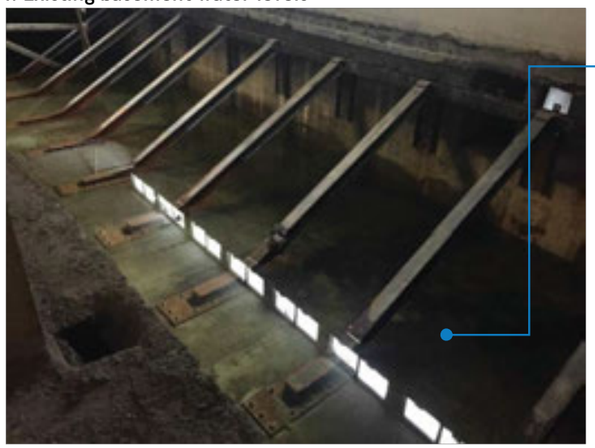
HTS to arrange for contractor to visit site to inspect wall and provide proposals to remove masonry above concrete upstand to boundary line.

hts.uk.com

14th June 2017
Ref: 1046
Visit by: Diego Teran

Arthur Stanley House – Site Visit Report No. 6

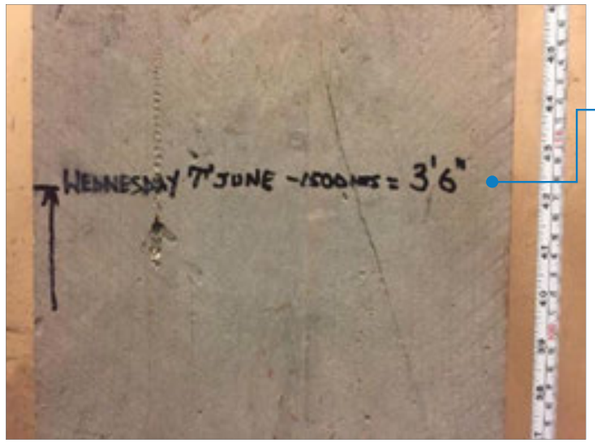
1. Existing basement water levels



1.1 Basement is currently flooded.

Maintenance contractor has been dewatering the basement since Wednesday the 7th of July and water levels have now reached the water table determined by URs on the *Ground Investigation Report.*

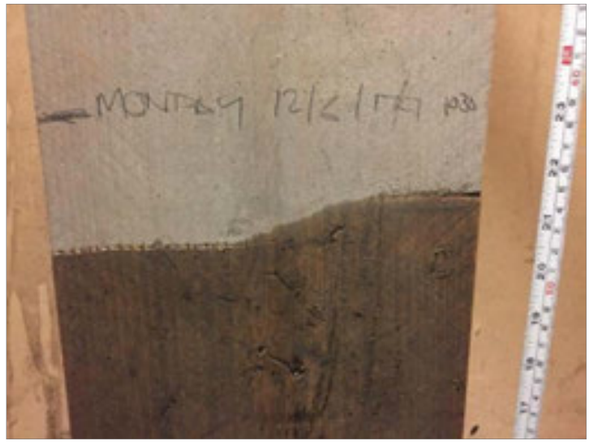
2. Groundwater level measurements



2.1 The maximum groundwater level was measured on the 7th of June just before dewatering started.

The level of water was recorded at 1065mm above basement slab level.

Arthur Stanley House – Site Visit Report No. 6



2.2 Measurements were undertaken on Wednesday the 14th of June and the approximate water level was recorded at 520mm from basement SSL level.

3. Existing pumps to be repaired

3.1 Maintenance contractor confirmed that once the basement level becomes accessible the previous pumps could be repaired or replaced.

3.2 HTS to visit site with maintenance contractor on Friday the 16th of June to review condition of basement.

Appendix I

Historic maps

HEYNE TILLETT STEEL

Published1875-1876

Published 1896

Published 1916

Published 1953

Published 1954

Published 1955

Published 1958-1964

Published 1958-1990

Published 1968-1970

Published 1973

Published 1973-1987

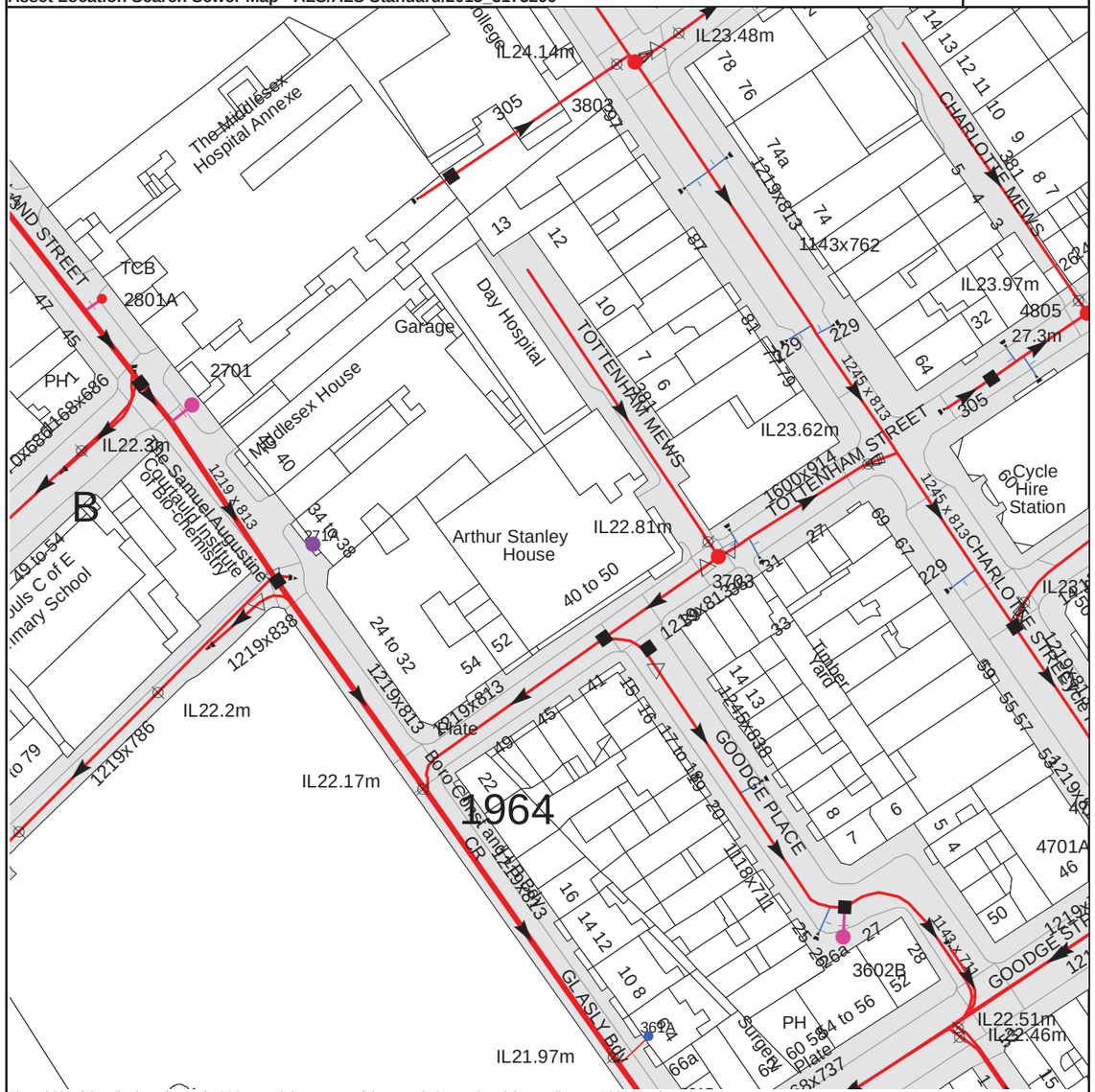
Published 1991-1995

Appendix J

Thames water asset plan

HEYNE TILLETT STEEL

Asset Location Search Sewer Map - ALS/ALS Standard/2015_3173299



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 529329,181759

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
4805	n/a	n/a
2801A	27.7	25.7
2701	27.05	n/a
271A	n/a	n/a
3803	27.34	23.12
3703	n/a	n/a
361A	n/a	n/a
3602B	n/a	n/a

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

Foul: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.

Surface Water: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.

Combined: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.

Trunk Surface Water

Trunk Foul

Storm Relief

Trunk Combined

Vent Pipe

Bio-solids (Sludge)

Proposed Thames Surface Water Sewer

Proposed Thames Water Foul Sewer

Gallery

Foul Rising Main

Surface Water Rising Main

Combined Rising Main

Sludge Rising Main

Proposed Thames Water Rising Main

Vacuum

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

- Air Valve
- Dam Chase
- Fitting
- Meter
- Vent Column

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

- Control Valve
- Drop Pipe
- Ancillary
- Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

- Outfall
- Undefined End
- Inlet

Other Symbols

Symbols used on maps which do not fall under other general categories

- Public/Private Pumping Station
- Change of characteristic indicator (C.O.C.I.)
- Invert Level
- Summit

Areas

Lines denoting areas of underground surveys, etc.

- Agreement
- Operational Site
- Chamber
- Tunnel
- Conduit Bridge

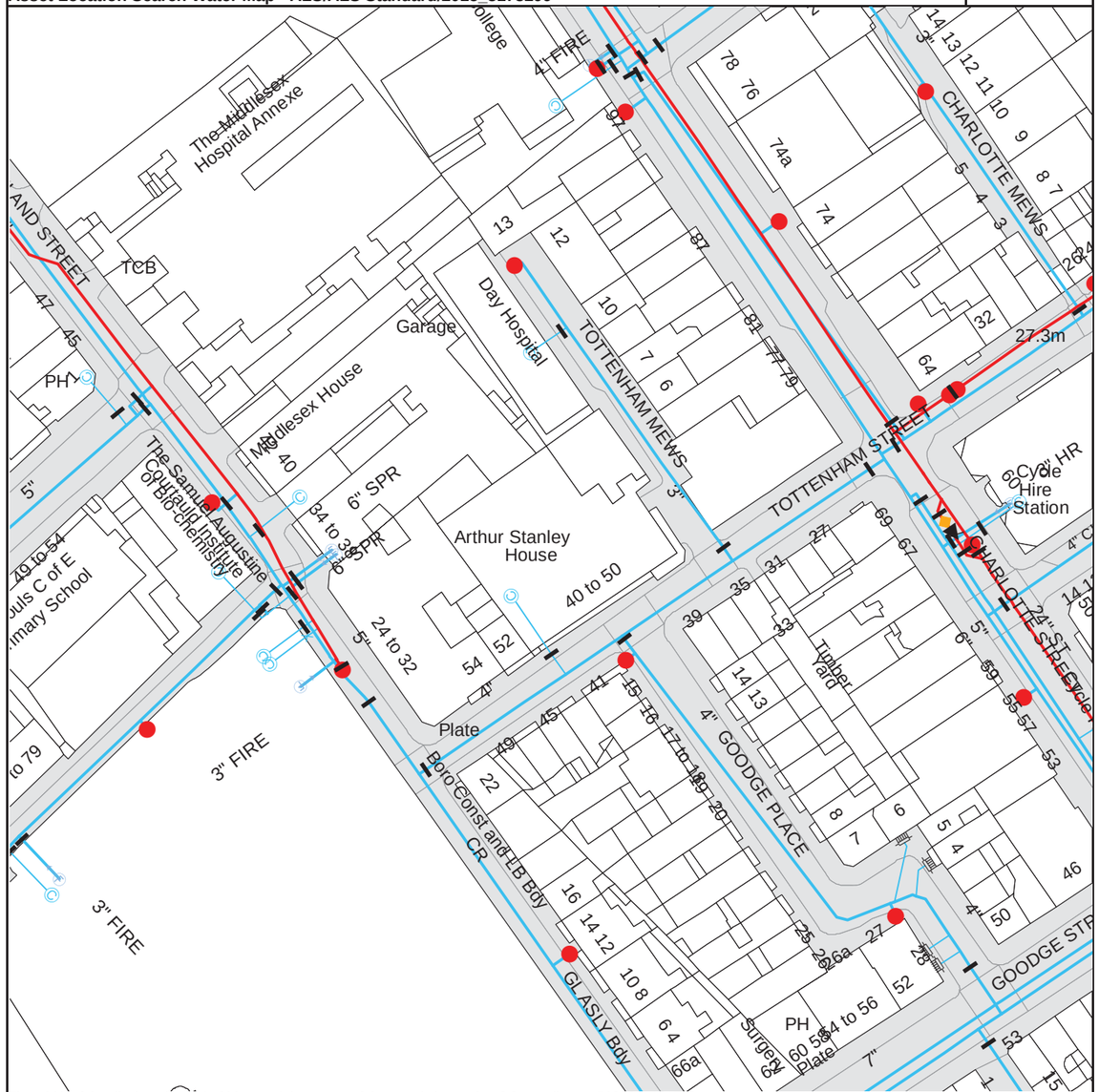
Other Sewer Types (Not Operated or Maintained by Thames Water)

- Foul Sewer
- Combined Sewer
- Culverted Watercourse
- Surface Water Sewer
- Gulley
- Proposed
- Abandoned Sewer

Notes:

1) All levels associated with the plans are to Ordnance Datum Newlyn.
2) All measurements on the plans are metric.
3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
5) 'na' or '0' on a manhole level indicates that data is unavailable.
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in milimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Insight on 0845 070 9148.

Asset Location Search Water Map - ALS/ALS Standard/2015_3173299



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 529329, 181759.

ALS Water Map Key

Water Pipes (Operated & Maintained by Thames Water)

4"

Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.

16"

Trunk Main: A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.

3" SUPPLY

Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.

3" FIRE

Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.

3" METERED

Metered Pipe: A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.

Transmission Tunnel: A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.

Proposed Main: A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger

Other Water Pipes (Not Operated or Maintained by Thames Water)

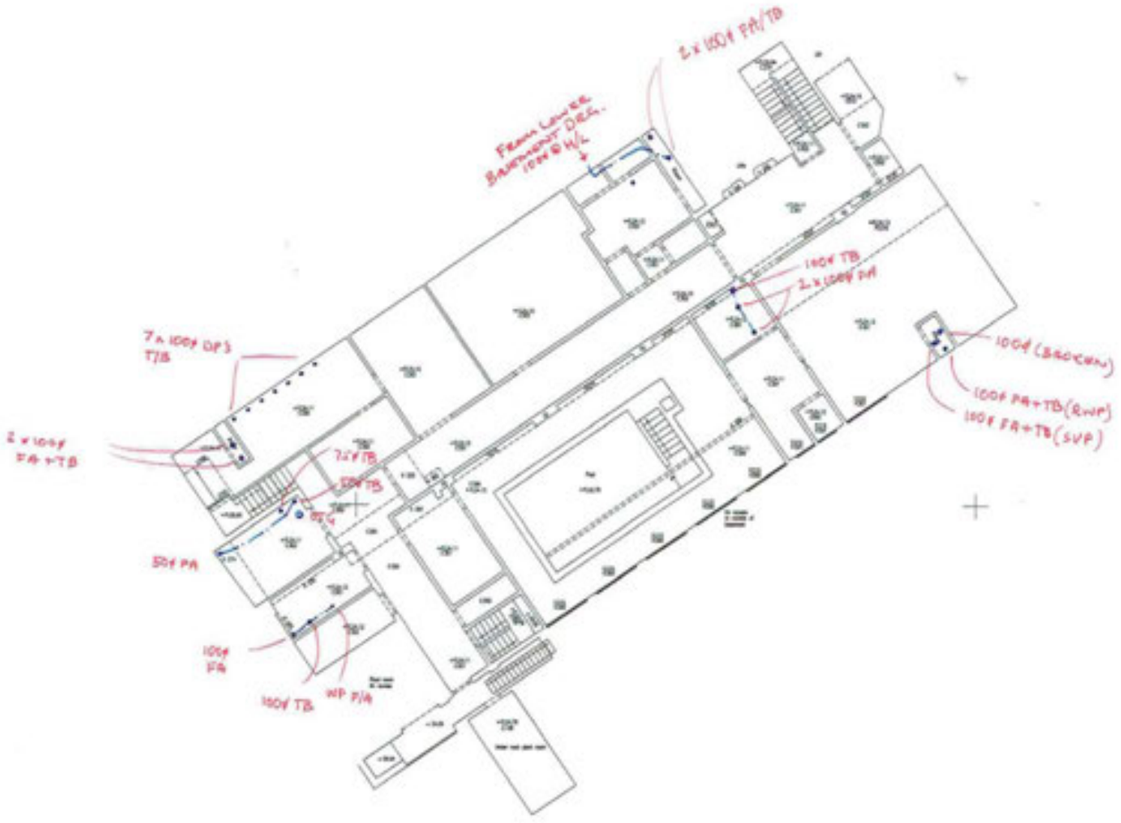
Other Water Company Main: Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.

Private Main: Indiates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

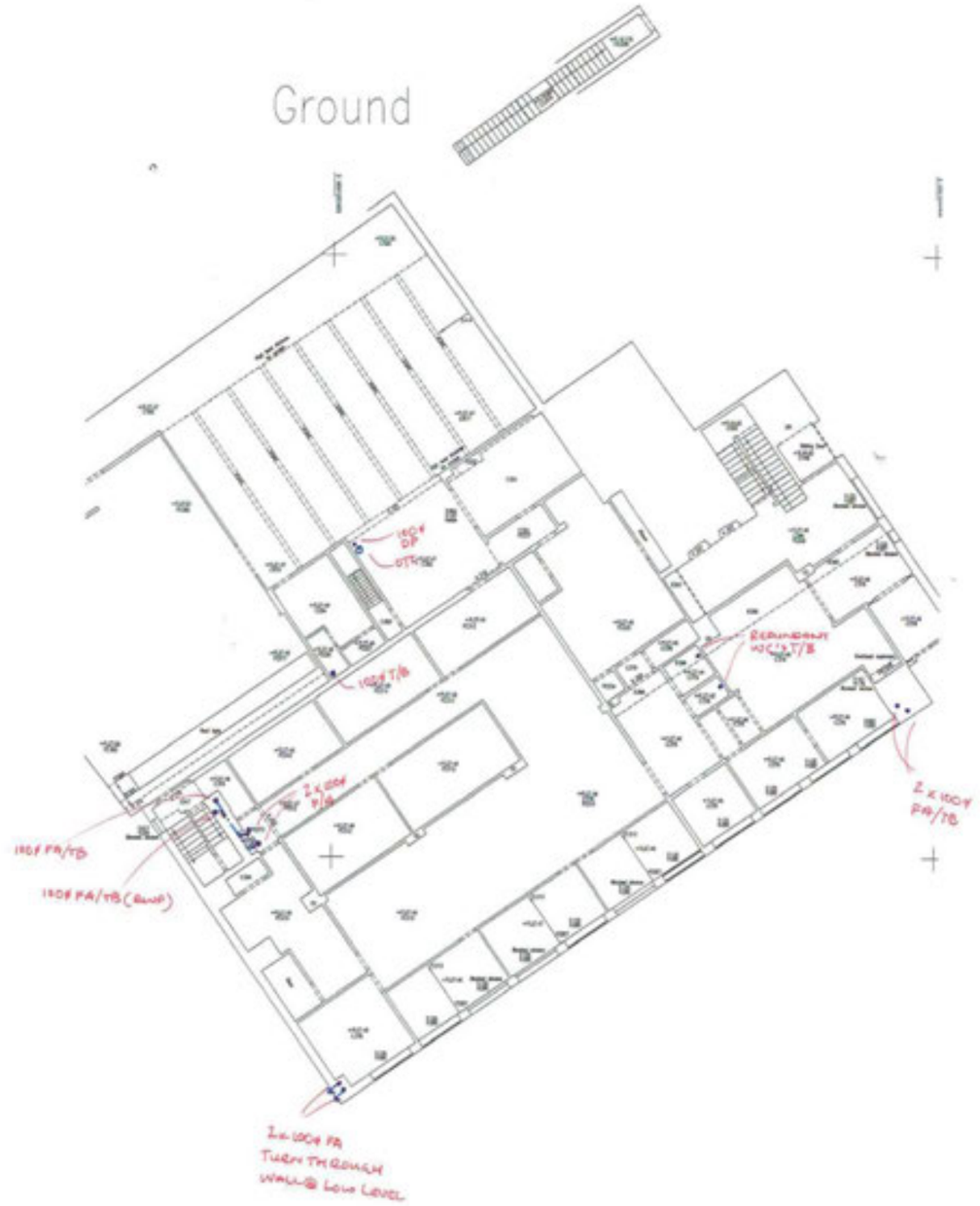
Appendix K

JPD CCTV Drainage survey

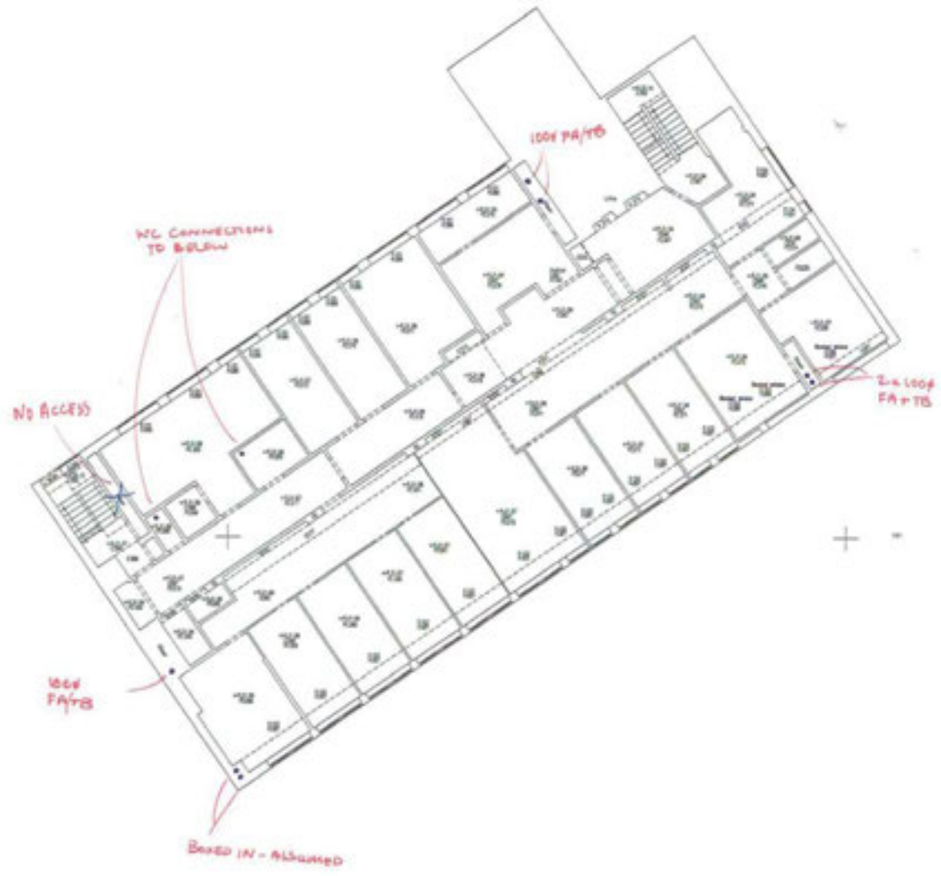
Basement



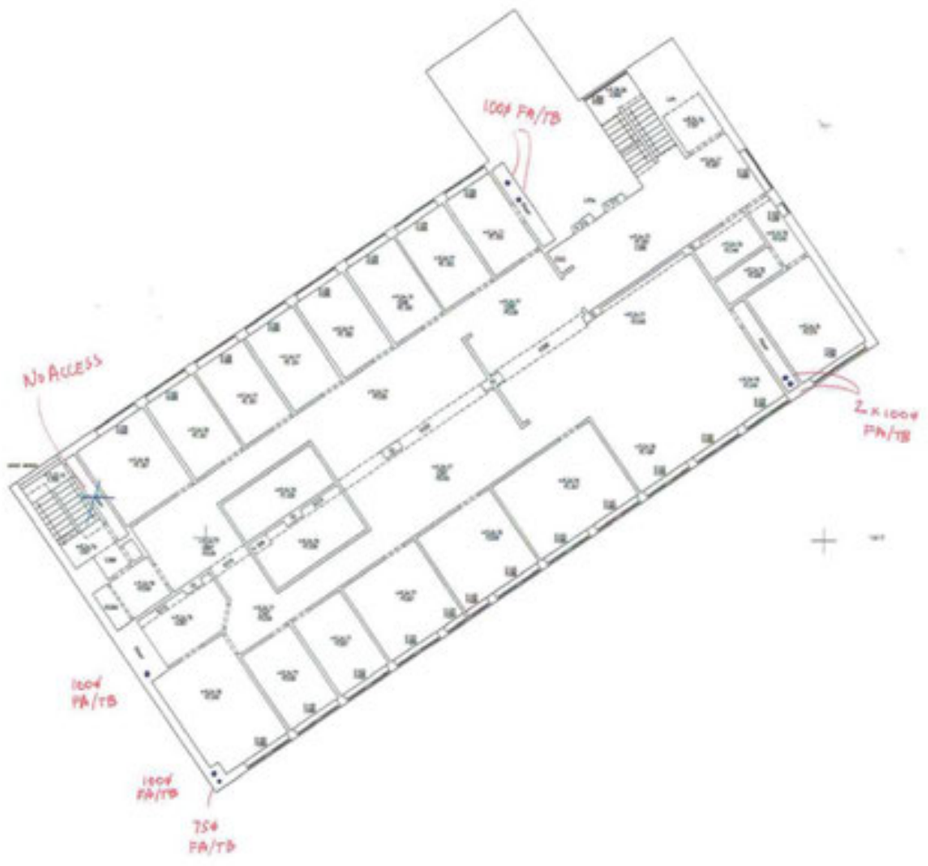
Ground



1st


100ø FA/TB
WC CONNECTIONS TO BELOW
NO ACCESS
2x 100ø FA+TB
100ø FA/TB
BOXED IN - ASSUMED

2nd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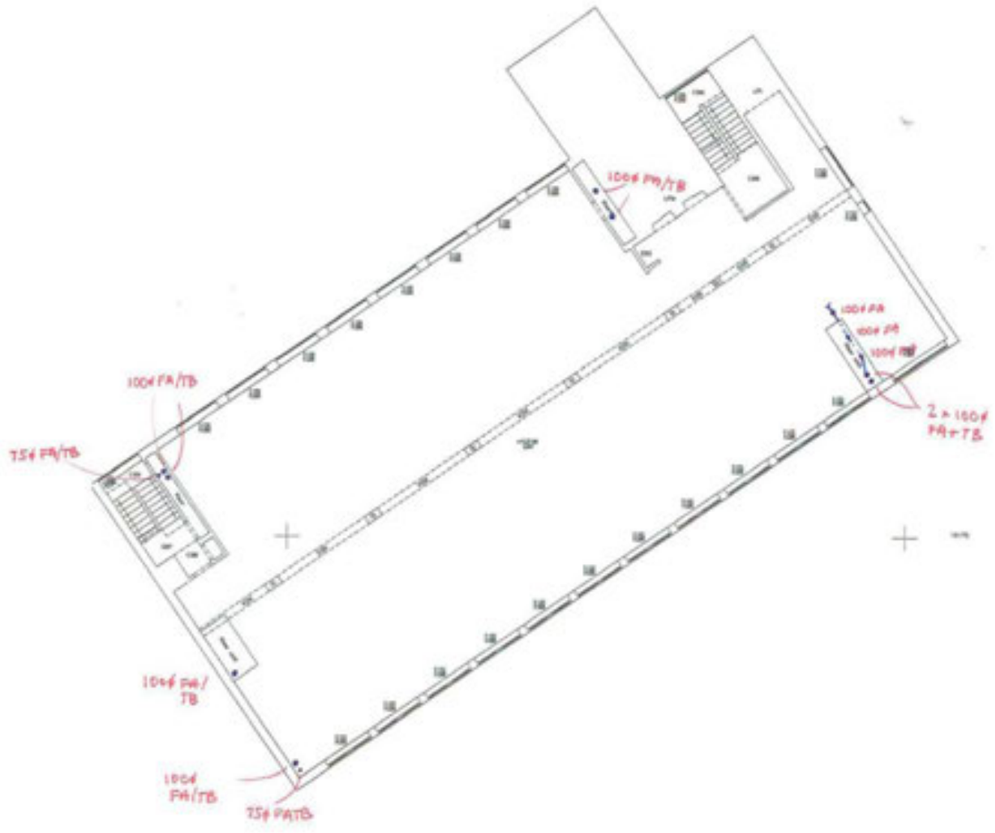
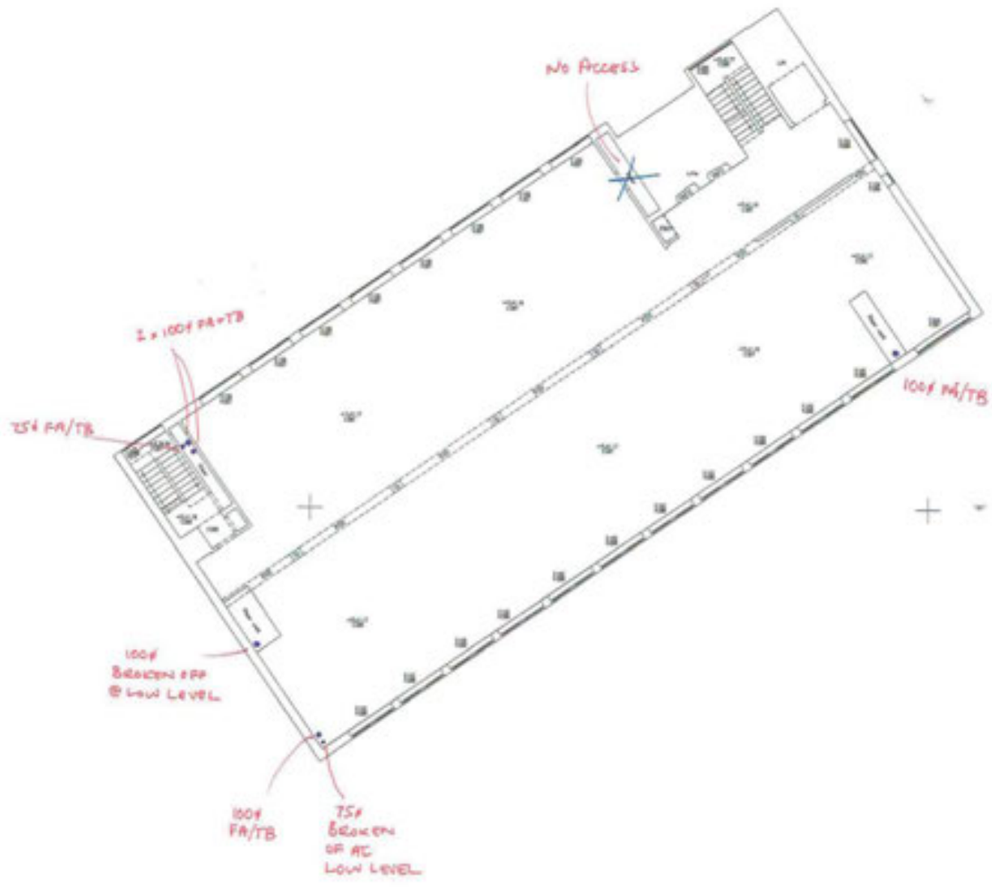
NO ACCESS
2x 100ø FA/TB
150ø FA/TB
100ø FA/TB
75ø FA/TB

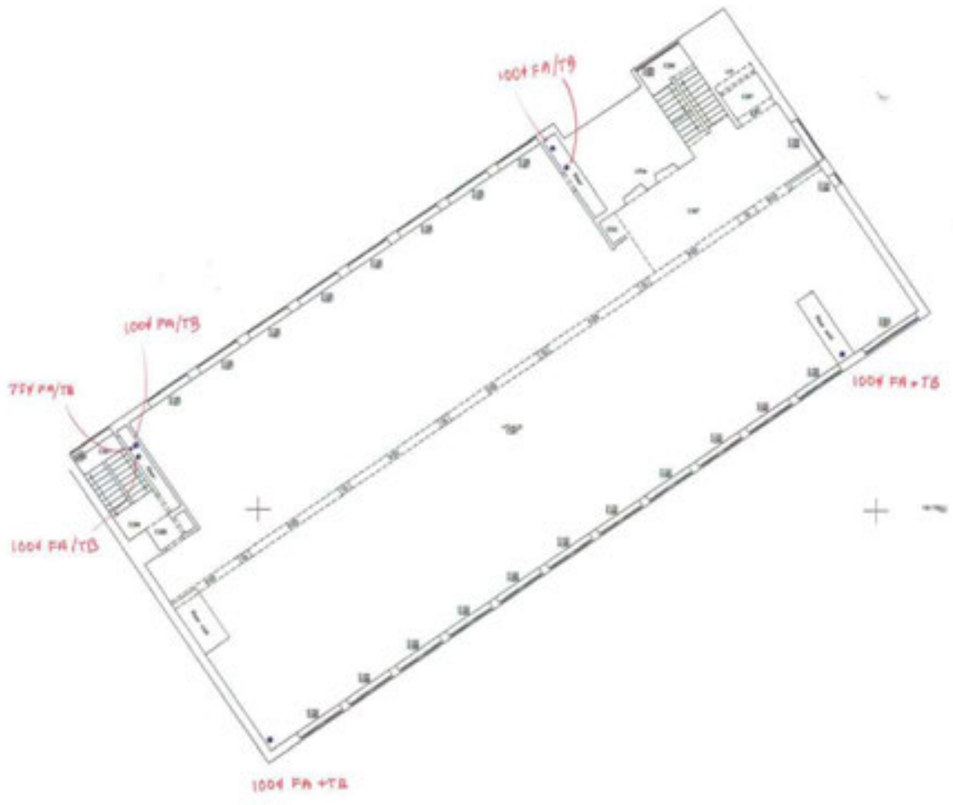
3rd


100ℓ FA/TB
75ℓ FA/TB
100ℓ FA/TB
100ℓ FA/TB
100ℓ FA/TB
75ℓ FA/TB
100ℓ FA
100ℓ FA
100ℓ FA
2 x 100ℓ FA+TB

4th


No Access
1 x 100ℓ FA+TB
75ℓ FA/TB
100ℓ FA/TB
100ℓ FA/TB
100ℓ BROKEN OFF @ LOW LEVEL
100ℓ FA/TB
75ℓ BROKEN OF AT LOW LEVEL

5th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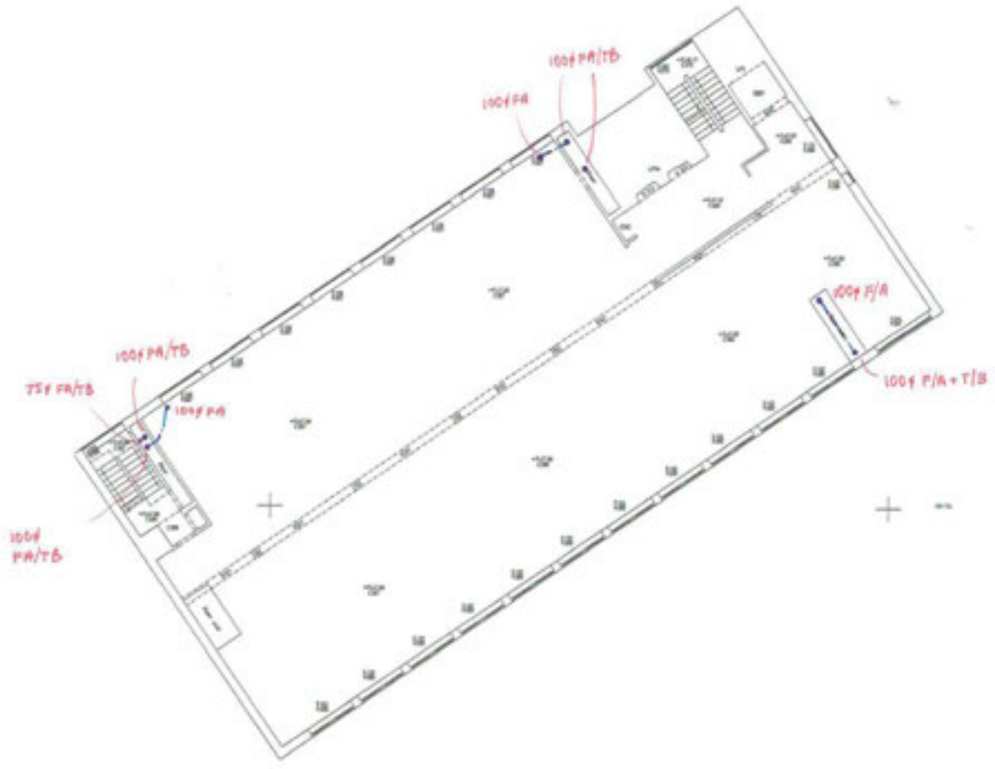
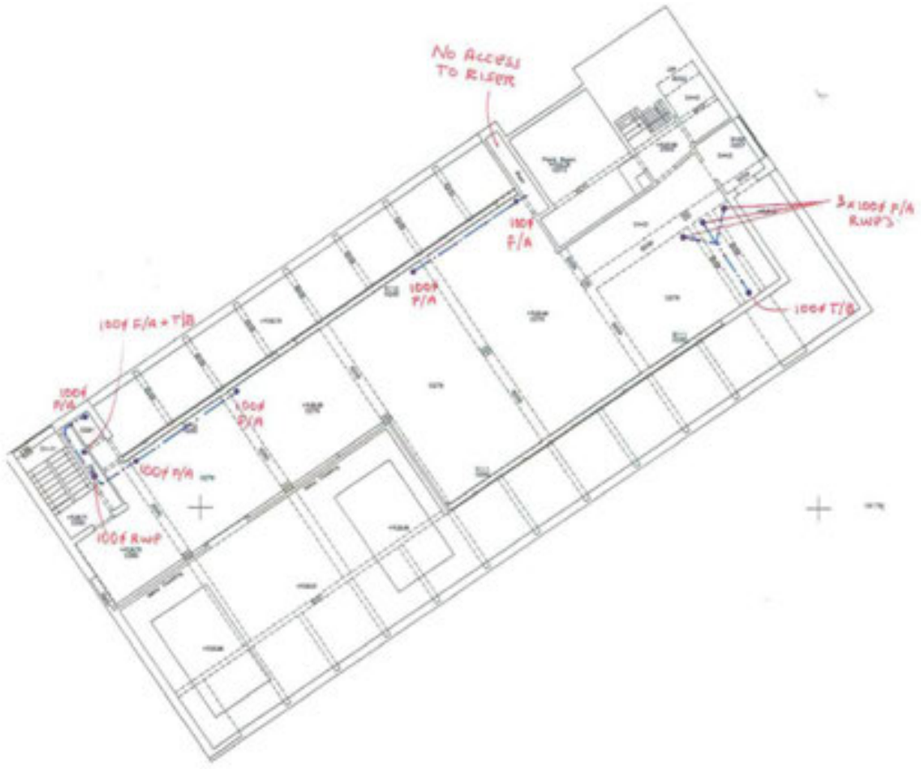
100# FA/TB
75# FA/TB
100# FA/TB
100# FA+TB

6th


100# FA
100# FA/TB
100# F/A
100# FA/TB
75# FA/TB
100# FA
100# FA/TB
100# F/A+T/B

7th


No Access To Riser
100ø F/A
100ø F/A
3 x 100ø F/A RWP's
100ø T/S
100ø F/A + T/S
100ø F/A
100ø F/A
100ø F/A
100ø Rwp

jpd technical services
PUBLIC HEALTH ENGINEERS SURVEY : DESIGN : CONTRACT

14 Fairdene Road
Coulsdon
Surrey
CR5 1RA
tel: 01737 555 054
email: jpdtekserv@hotmail.com
www.jpdtech.co.uk

7 December 2015

Heyne Tillett Steel
4 Pear Tree Court
London
EC1R 0DS

For the attention of Mr D Teran

Dear Sirs

ARTHUR STANLEY HOUSE, TOTTENHAM STREET, LONDON W1T

The tracking and CCTV survey of the existing drainage systems serving the above premises was carried out on the 3 December 2015.

The purpose of the CCTV survey was to establish the general layout and condition of the drainage systems serving the site.

1. Survey Information

For details of individual sections of drainage see survey notes (2), CCTV survey and survey photographs DVD and AutoCAD record drawing 4389/1 (Lower Basement Floor). Upper floor level sketch drawings also included.

2. Description of System

a.) Underground Drainage (Ground Water)

Our survey identified very little below ground drainage within the lower basement floor areas. Two small in-situ sumps (PC1 and PC2) appear to have been used as pump chambers and due to ground water infiltration, temporary pumps have been installed which connect to existing pump rising mains and in turn connect to the mid-level above ground gravity drainage system.

Ground water is continually penetrating the lower basement floor slab. Various holes have been core drilled into the slab with temporary pumps installed to remove the water. These pumps discharge to PC1 and PC2. All pumps within the lower basement floor are discharging at full bore at all times.

No further manholes or chambers could be located within the lower basement floor and we assume that if there are any, they may have been sealed or removed during the previous demolition works.

The external ground floor area to the rear of the building has also been demolished and no manholes or chambers could be identified in this area.

b.) Above Ground Drainage System

The above ground drainage system is combined and collects the foul and surface water discharge from the basement, ground, upper floors and roofs of the building before discharging to the TWA sewer in Tottenham Street via a 225dia cast iron (CI) outfall located at mid-level, lower basement floor.

Pipework was traced up through the building and at present the only 'live' sections of pipework are the rainwater pipes. All the building soil vent pipes have been broken out at various points on the upper floors.

A number of sections of pipework within the basement and lower basement areas have also been cut off in various places and these include the front lightwell gullies on the Tottenham Street elevation.

3. Summary

The 225dia cast iron sewer outfall was the only section of pipework CCTV surveyed and is in a fair condition, free flowing and with no structural defects noted.

An anti-flood flap has been installed at the point of connection to the TWA sewer and is seized open.

Temporary pumps and existing pump rising mains are working satisfactorily although new pumping equipment will be required in the new drainage scheme to remove the excessive site ground water.

We were informed that a pump contractor is visiting site regularly to maintain the present temporary system.

4. Recommendations

We recommend that the following remedial works are carried out as part of the proposed redevelopment or building alterations.

a. HV water jet and electro-mechanical cleaning will be required to remove encrustation, silt and debris from blocked soil stacks to establish a clear and free flowing condition. Alternatively depending on the development proposals the existing soil stacks to be removed and new pipework installed to connect to the existing lower basement sewer outfall

b. Any retained stacks to be tested for soundness prior to re-use.

c. New pumps and associated equipment to be installed as part of any new drainage scheme to remove the excess ground water from the site.

Should you require further information or assistance then please contact the undersigned.

Yours faithfully

T. Pengelly

Tom Pengelly
JPD Technical Services

J P Durkin Eng. Tech., M.I.P.H.E R.P - J M Durkin
VAT Reg No. 667 5320 19

NOTES:

1.

DP	DRAIN POINT
RWP	RAINWATER PIPE
WP	WASTE PIPE
WVP	WASTE VENT PIPE
VP	VENT PIPE
SVP	SOIL VENT PIPE
OTG	OPEN TRAPPED GULLY
OTBIG	OPEN TRAPPED BACK INLET GULLY
STBIG	SEALED TRAPPED BACK INLET GULLY
VCD	VITRIFIED CLAY DRAIN
I/T	INTERCEPTOR TRAP
PRM	PUMPED RISING MAIN
CI	CAST IRON
CID	CAST IRON DRAIN
G	GULLY
R/G	ROAD GULLY
B/D	BACKDROP
FA	FROM ABOVE
TB	TO BELOW
HL	HIGH LEVEL
LL	LOW LEVEL
ML	MID LEVEL
FWD	FOUL WATER DRAIN
SWD	SURFACE WATER DRAIN
BAC	BOLTED ACCESS CHAMBER
S/S	STUB STACK
UTS	UNABLE TO SURVEY

2. ABOVE GROUND MID LEVEL SVP SHOWN THUS
PUMPED RISING MAIN SHOWN THUS

529325.000 E

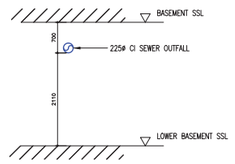
529350.000 E

181775.000 N

100ø @ HL
100ø @ HL
100ø @ HL
100ø @ HL
CAPPED
100ø @ HL
100ø FA
2xPUMP RISING MAINS WITH TEMPORARY PUMPS
PRM
PRM
PUMP CHAMBER 1 (PC1) 1800x580x3000P
100ø @ ML
100ø @ ML
100ø FA
TRAP
TRAP
100ø FA
OPEN END
100ø @ HL
100ø FA
100ø FA
TRAP
TRAP
100ø FA TURNS THROUGH WALL @ HL
4x FA 100ø
150ø @ ML
100ø @ ML
CAPPED
100ø FA
100ø FA
100ø FA
100ø FA
100ø FA
100ø FA
100ø FA
100ø FA
100ø FA
100ø FA
100ø @ ML
BAC
100ø @ ML
BAC
TRAP
TRAP
100ø FA
100ø FA
75ø FA & TRAP
100ø @ ML
WP FA
WP FA
WP FA
100ø
100ø TRAP
100ø FA
75ø FA
75ø FA & TRAP
HIGH LEVEL CAST IRON BACK INLET GULLY
150ø @ ML
100ø @ ML
100ø FA
BAC
150ø
100ø @ ML
100ø FA
PUMP CHAMBER 2 (PC2) 520x610x390DP
100ø BELOW GROUND DRAIN – UTS
HIGH LEVEL BACK INLET GULLY & TRAP
225ø
PUMP RISING MAIN
BAC 1
100ø @ ML
100ø @ ML
225ø CI SEWER OUTFALL
100ø @ ML
OPEN END
100ø FA
100ø FA & TRAP
100ø @ ML

TOTTENHAM STREET

LOWER BASEMENT SEWER OUTFALL DETAIL



REV.No	DATE	REVISION

jpd technical services
PUBLIC HEALTH ENGINEERS SURVEY:DESIGN:CONTRACT
14 Fairdene Road
Coulsdon, Surrey CR5 1RA
TEL: 01737 555054 WWW.JPDTECH.CO.UK

CLIENT: HEYNE TILLETT STEEL

PROJECT: ARTHUR STANLEY HOUSE
TOTTENHAM STREET
LONDON W1T

TITLE: LOWER BASEMENT FLOOR PLAN
EXISTING DRAINAGE LAYOUT

DRAWN: SDS
CHECKED: JPD
SCALE: 1:50 @ A1 DO NOT SCALE
DATE: DEC 2015
DRAWING No: 4389/1

Appendix L

LUL Asset plan

HEYNE TILLETT STEEL

Transport for London
London Underground

London Underground
Infrastructure Protection

3rd Floor
Albany House
55 Broadway
London SW1H 0BD

www.tfl.gov.uk/tube

Your ref: 0431
Our ref: 20403-SI-1-301115

Jessie Faulkner
Heyne Tillett Steel
JFaulkner@hts.uk.com

30 November 2015

Dear Jessie,

Arthur Stanley House 40 Tottenham Street W1T 4RN

Thank you for your communication of 25th November 2015.

I can confirm that London Underground has no assets within 50 metres of your site as shown on the plan you provided.

If I can be of further assistance, please contact me.

Yours sincerely

Shahina Inayathusein
Information Manager
Email: locationenquiries@tube.tfl.gov.uk
Direct line: 020 7918 0016

Appendix M

Archaeology

HEYNE TILLETT STEEL

Historic England

Mr Andrew Middlebrook
Heyne Tillett Steel
4 Pear Tree Court
London
EC1R 0DS

Your Ref:

Our Ref: CLO23604

Contact: Sandy Kidd
Direct Dial: 0207 973 3215
Email: sandy.kidd@HistoricEngland.org.uk

12 June 2017

Dear Mr Middlebrook

TOWN & COUNTRY PLANNING ACT 1990 (AS AMENDED)
NATIONAL PLANNING POLICY FRAMEWORK 2012

40-50 Tottenham Street, W1T 4RN

Redevelopment of Arthur Stanley House

Recommend No Archaeological Requirement

Thank you for your consultation dated 05 June 2017.

The Greater London Archaeological Advisory Service (GLAAS) provides archaeological advice to boroughs in accordance with the National Planning Policy Framework and GLAAS Charter.

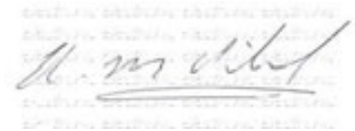
Having considered the proposals with reference to information held in the Greater London Historic Environment Record and/or made available in connection with this application, I conclude that the proposal is unlikely to have a significant effect on heritage assets of archaeological interest.

The proposed development site does not lie within an Archaeological Priority Area because according to historic maps the area was not built upon until the late 18th century. The construction of existing basements will have either massively truncated or entirely removed remains of the 18th/19th century buildings, and anything earlier that might have been present.

No further assessment or conditions are therefore necessary.

Please note that this response relates solely to archaeological considerations. If necessary my Historic Buildings and Areas colleagues should be consulted separately regarding statutory matters.

Yours sincerely



Sandy Kidd

Archaeology Advisor

Greater London Archaeological Advisory Service
Planning Group: London

1 WATERHOUSE SQUARE, 138 – 142 HOLBORN, LONDON, EC1N 2ST
Telephone 020 7973 3000 Facsimile 020 7973 3001
www.historicengland.org.uk
Please note that Historic ENgland operates an access to information policy.
Correspondence or information which you send us may therefore become publicly available

Appendix N

Openreach assets

HEYNE TILLETT STEEL

Legend

CAUTION AREA

BT.CAUTION_AREA

EQUIPMENT

TABCD FIBRE, TCODE

COPPER, CABINET

476R COPPER, DP

DUCT

A/C AERIAL

TUNNEL

DUCT

PROPOSED

A/C AERIAL

DUCT

STRUCTURE

YCODE

CABINET SHELL

× SPLIT COUPLING

O POLE

Ⓚ KIOSKS

MANHOLE

JOINTBOX

/ CHANGE OF STATE

DUCT TEE

PROPOSED

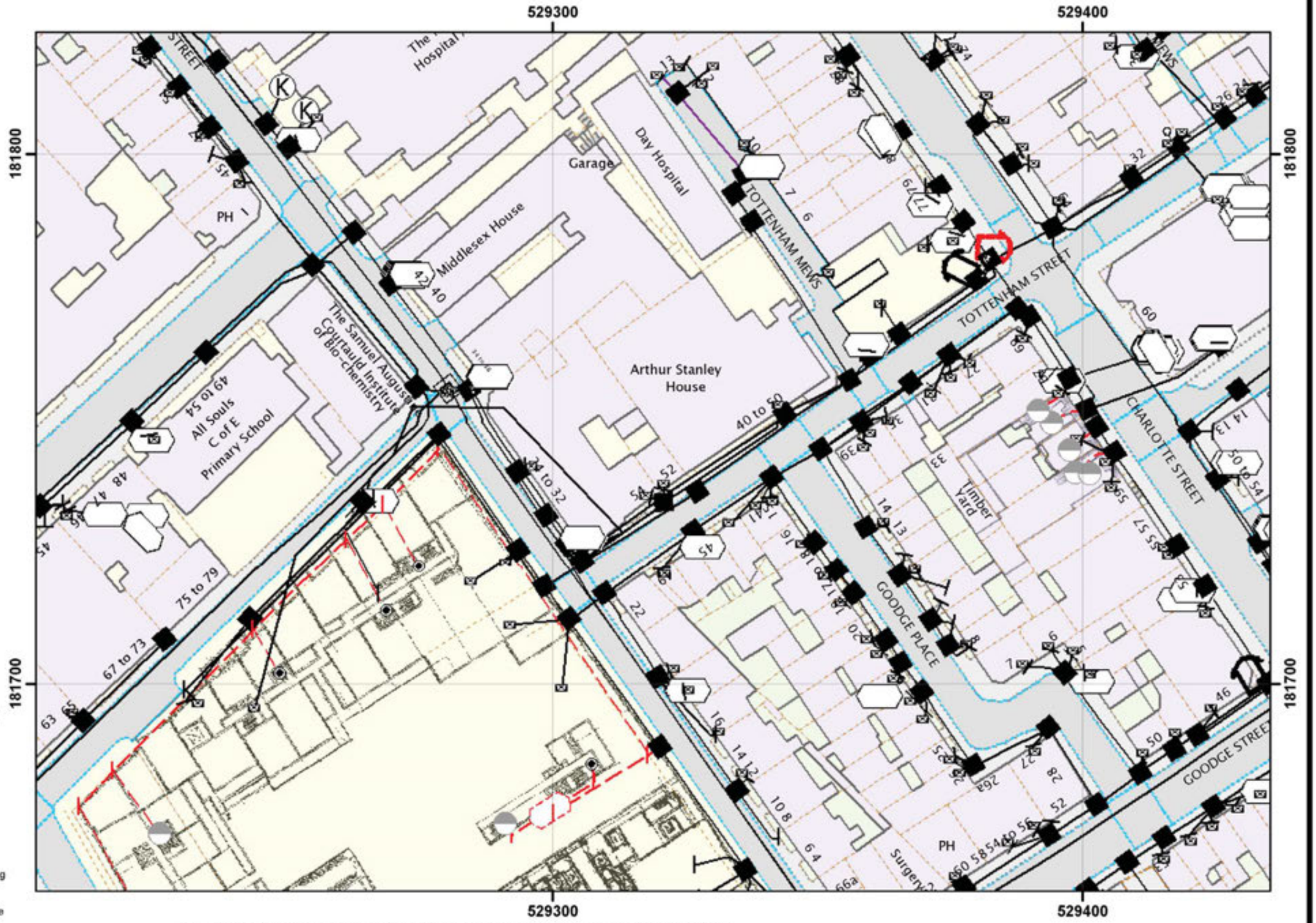
MANHOLE

JOINTBOX

DUCT TEE

Other proposed plant is shown using dashed lines.

BT symbols not listed above may be disregarded.



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Information regarding the location of BT apparatus is given for your assistance and is intend for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus, which may exist at various depths and may deviate from the marked route.

Existing BT plant may not be recorded.
Information valid at time of preparation.

CLICK BEFORE YOU DIG
FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE
email chyd@openreach.co.uk
ADVANCE NOTICE REQUIRED
(Office hours Monday–Friday 08:00 to 17:00)

PLANT INFORMATION REPLY

C04815 chg 16 DLT 0430 sh1 31_05_17

Arthur Stanley House, W1T 4RN

openreach
a BT Group business

4 Pear Tree Court, London EC1R 0DS +44 (0) 20 7870 8050