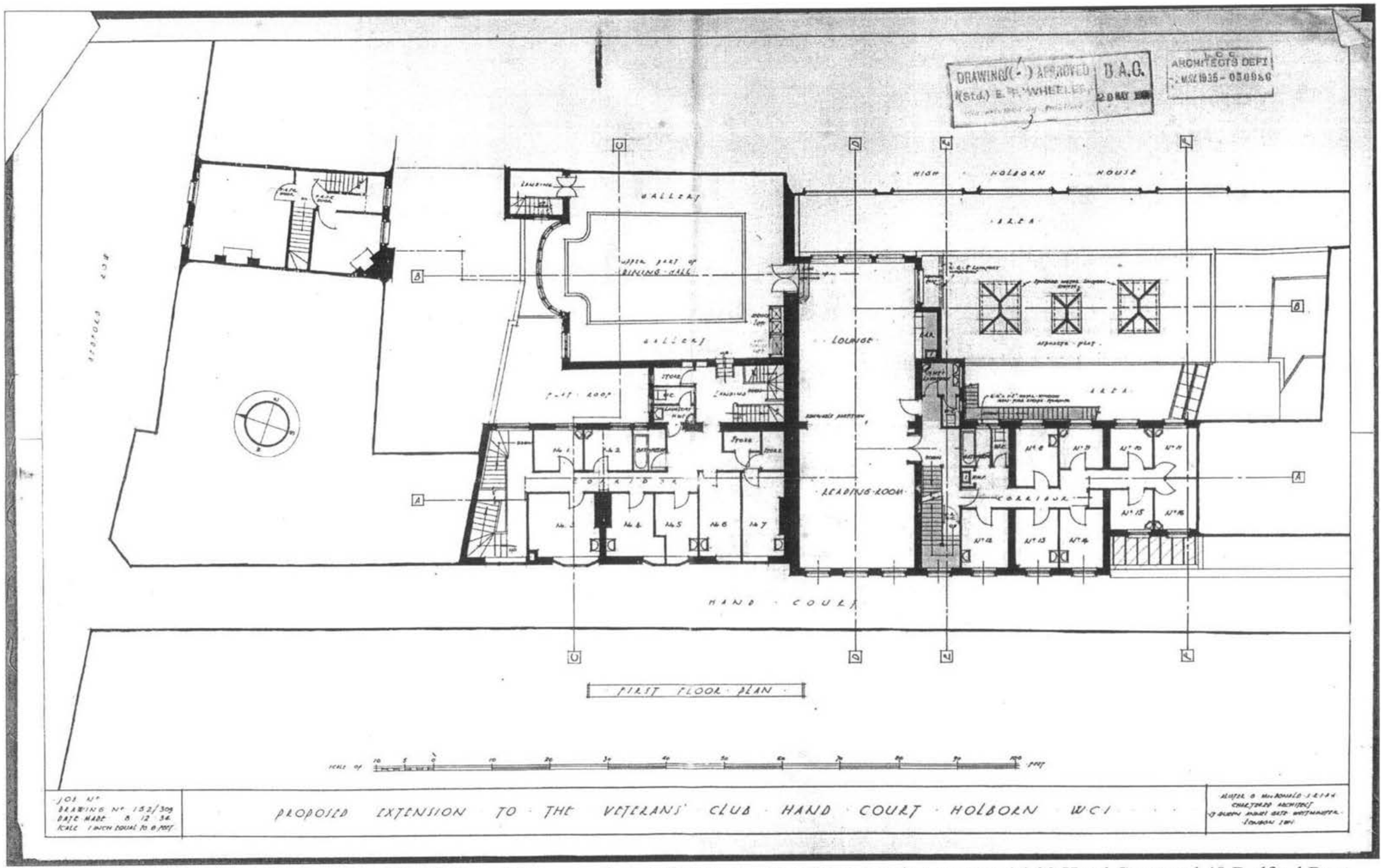


Plate XX Alister G MacDonald drawings of the Veterans Club extensions 1934/1935. These relate to what are now 16-23 Hand Court and 48 Bedford Row.

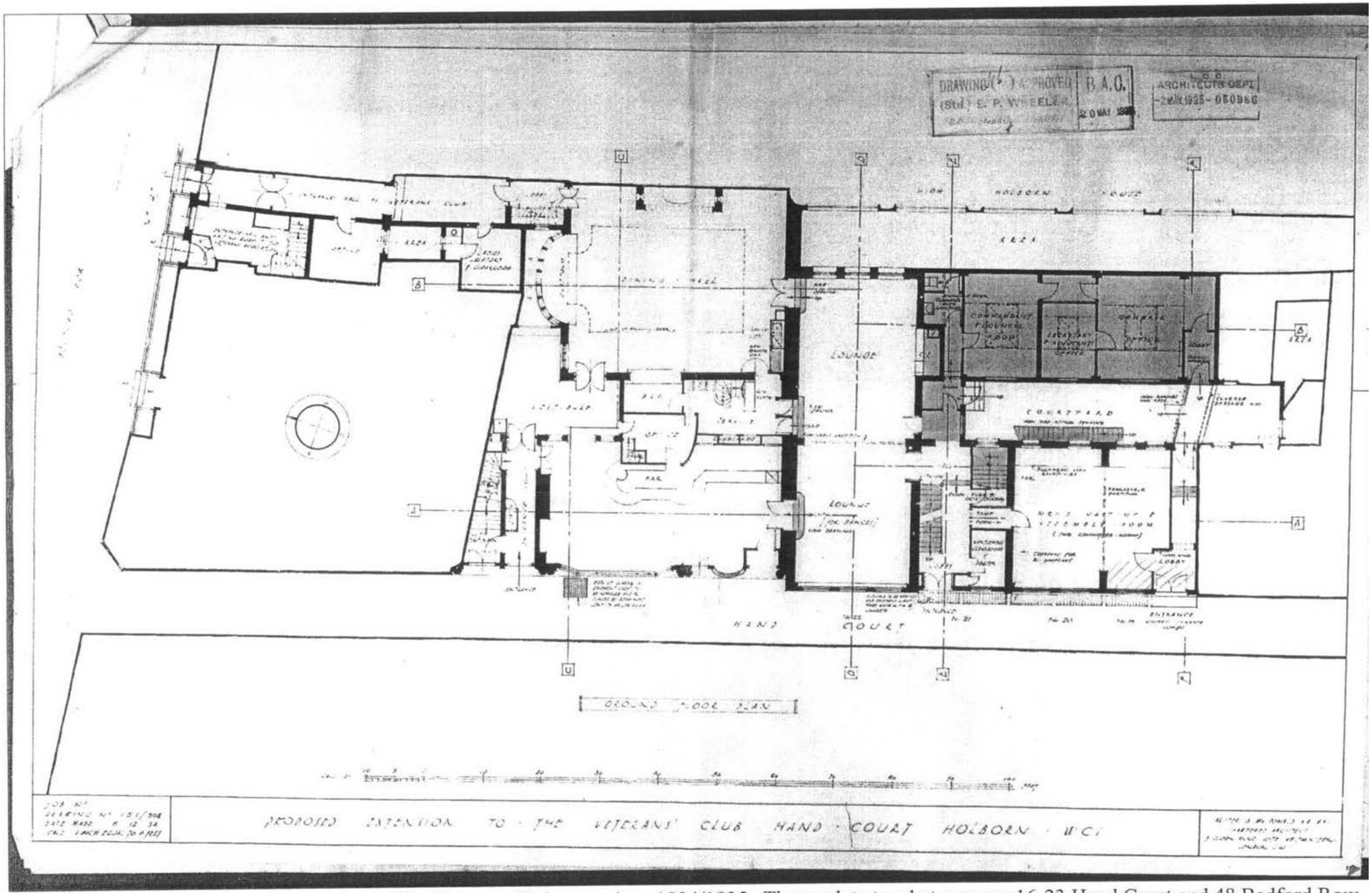
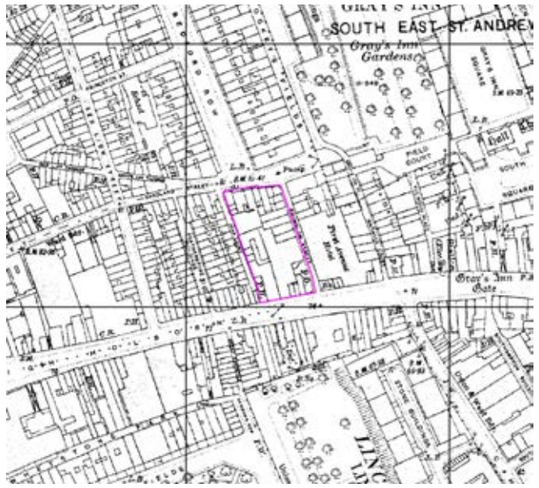


Plate XXI Alister G MacDonald drawings of the Veterans Club extensions 1934/1935. These relate to what are now 16-23 Hand Court and 48 Bedford Row.

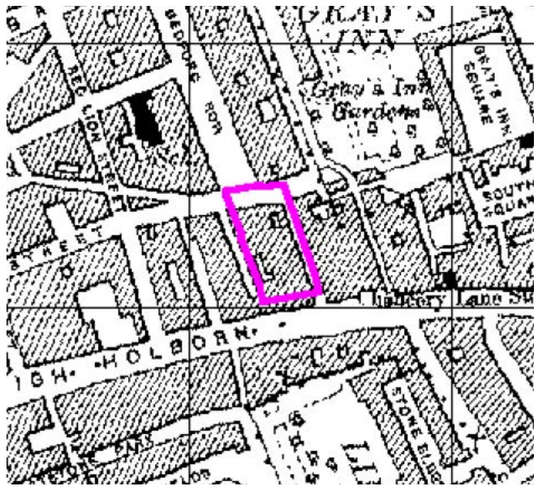
Published 1878

Published 1895-1896

Published 1896



Published 1916

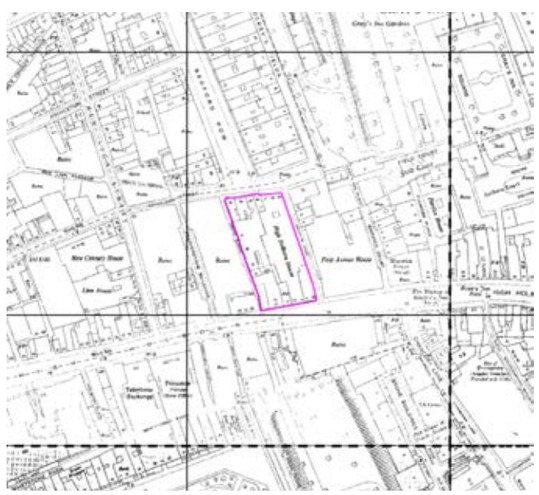


Published 1920

Published 1937

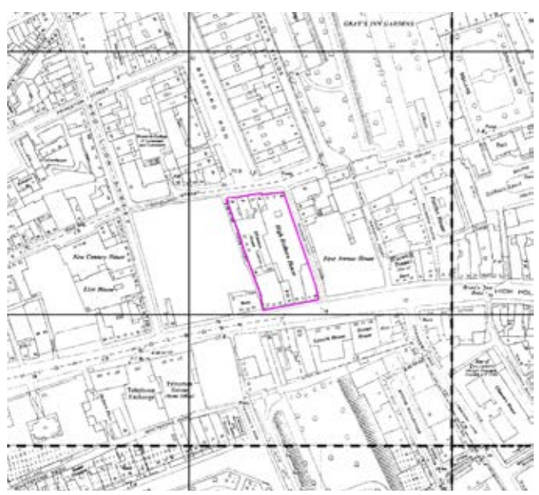
Published 1940-1951

Published 1947-1949

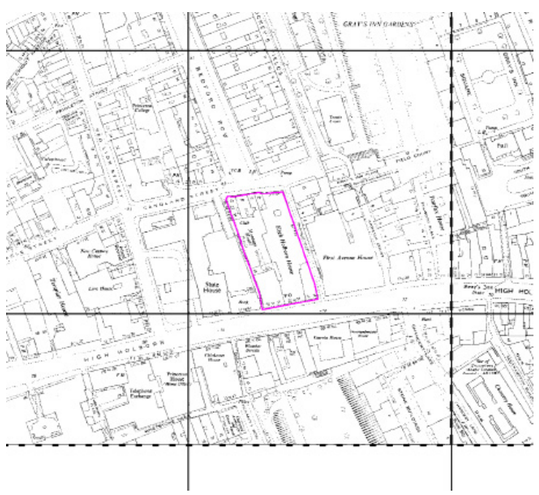


Published 1952-1953

Published 1953



Published 1958-1969



Published 1963-1966

1508 High Holborn Estate, London, WC1V 6RQ - Historical Maps

HEYNE TILLETT STEEL

Appendix F

Below Ground Drainage CCTV Survey - Spaflow

BEDFORD ROW

HAND COURT

BROWNLOW STREET

150 DIA. VC 4.42m TO PUBLIC SEWER IN BEDFORD ROW.

150 DIA. VC 7.77m TO PUBLIC SEWER IN BEDFORD ROW.

150 DIA. VC 8.00m TO PUBLIC SEWER IN BEDFORD ROW.

100 DIA. VC 7.10m TO PUBLIC SEWER IN BEDFORD ROW.

150 DIA. VC 3.83m TO PUBLIC SEWER IN HAND COURT.

100 DIA. C.I. VP TO M/L.

OPEN TOP BACK INLET GULLY.

42 DIA. UPVC WP DISCHARGES AT L/L OVER OTBIG.

100 DIA. C.I. DROPS AND CONNECTS TO OTBIG WITH 35 DIA. UPVC CONNECTION AT L/L.

35 DIA. UPVC WP AT L/L.

100 DIA. VC DRY TRAP IN THIS AREA.

42 DIA. UPVC CONNECTION FROM DISHWASHER.

42 DIA. UPVC WP AT L/L.

100 DIA. C.I. SVP F/A T/B GROUND WITH 42 DIA. UPVC CONNECTION AT L/L.

68 DIA. UPVC RWP F/A T/B GROUND.

42 DIA. UPVC WP AT L/L.

SEALED TOP BACK INLET GULLY.

SEALED TOP BACK INLET GULLY.

100 DIA. C.I. RWP F/A T/B GROUND.

UNABLE TO TRACE DUE TO DEBRIS IN PIPE.

45 BEDFORD ROW

46 BEDFORD ROW

47 BEDFORD ROW

48 BEDFORD ROW

24-25 HAND COURT

22-23 HAND COURT

18-21 HAND COURT

MH1 MH2 MH3 MH4 MH5 MH9 MH10 MH11 MH12 MH13 MH14 MH15 MH16 MH17 MH18 MH19

110 DIA. UPVC SP AT L/L.

110 DIA. UPVC STUB STACK T/B GROUND.

32 DIA. UPVC WP AT L/L.

68 DIA. UPVC RWP F/A T/B GROUND.

100 DIA. LEAD SVP F/A T/B GROUND.

100 DIA. VC T/B GROUND.

OPEN TOP BACK INLET GULLY. (OTBIG1)

35 DIA. UPVC WP AT L/L.

42 DIA. UPVC WP F/A OFFSETS AT L/L.

68 DIA. UPVC RWP F/A T/B GROUND.

100 DIA. C.I. DROPS FROM H/L T/B GROUND.

100 DIA. C.I. FROM MH7 LOCATED AT GROUND LEVEL.

OPEN TOP BACK INLET GULLY. (OTBIG2)

54 DIA. UPVC WP T/B GROUND.

100 DIA. VC. (UNABLE TO TRACE FURTHER DUE TO DEBRIS)

100 DIA. VC. (UNABLE TO TRACE FURTHER DUE TO DEBRIS)

2 No. ASSUMED 100 DIA. VC BRANCHES FROM AN UNTRACED SOURCE.

110 DIA. UPVC SVP F/A T/B GROUND. (AC1)

100 DIA. VC DRY TRAP IN THIS AREA.

100 DIA. VC SEALED DP IN THIS AREA.

110 DIA. UPVC SVP F/A T/B GROUND.

110 DIA. UPVC SEALED WITH CONCRETE.

110 DIA. UPVC DROPS FROM L/L T/B GROUND WITH TOP ACCESS.

110 DIA. UPVC AT L/L. (BOXED IN)

110 DIA. UPVC SVP ASSUMED F/A OFFSETS AT L/L. (BOXED IN)

110 DIA. UPVC T/B GROUND.

110 DIA. UPVC T/B GROUND.

42 DIA. UPVC WP DROPS AND CONNECTS TO 110 DIA. UPVC DP WITH 42 DIA. UPVC BRANCH CONNECTION.

42 DIA. UPVC WP AT L/L.

110 DIA. UPVC SVP F/A OFFSETS AT L/L.

110 DIA. UPVC SVP DROPS FROM L/L T/B GROUND AND RECEIVES 2 No. 42 DIA. UPVC BOSS CONNECTIONS.

110 DIA. UPVC SVP F/A OFFSETS AND RUNS AT L/L BELOW RAISED FLOOR.

MENS

LADIES

100 DIA. C.I. ENTERS THROUGH STRUCTURE AT H/L FROM AN UNTRACED SOURCE.

100 DIA. C.I. AT H/L. (ASSUMED RWP)

100 DIA. C.I. VP TERMINATES AT H/L TO ATMOSPHERE.

OPEN TOP GULLY.

100 DIA. C.I. VP TERMINATES AT H/L TO ATMOSPHERE.

OPEN TOP GULLY.

OPEN TOP GULLY.

100 DIA. C.I. VP TERMINATES AT H/L TO ATMOSPHERE.

UNKNOWN BLIND CONNECTION FROM AN UNTRACED SOURCE.

100 DIA. C.I. SVP F/A T/B GROUND.

68 DIA. UPVC RWP F/A T/B GROUND.

32 DIA. UPVC WP AT L/L.

100 DIA. VC T/B GROUND.

150 DIA. VC ASSUMED TO PICK UP DRAINAGE AT GROUND LEVEL AT REAR OF No. 47A

150 DIA. VC. (UNABLE TO TRACE FURTHER DUE TO DEBRIS)

50 DIA. C.I. RWP F/A T/B GROUND.

OPEN TOP BACK INLET GULLY. (OTBIG3)

54 DIA. UPVC WP T/B GROUND.

100 DIA. C.I. SVP F/A T/B GROUND.

110 DIA. UPVC RWP F/A T/B GROUND.

OPEN TOP BACK INLET GULLY.

100 DIA. VC F/A T/B GROUND.

100 DIA. VC SEALED WITH CONCRETE.

110 DIA. UPVC DROPS FROM L/L T/B GROUND.

110 DIA. UPVC F/A OFFSETS AT L/L.

100 DIA. VC SEALED WITH CONCRETE.

100 DIA. VC DRY TRAP IN THIS AREA.

2.5" DIA. C.I. FROM AN UNTRACED SOURCE.

HIGH HOLBORN HOUSE
(NOT PART OF SURVEY)

FOR CONTINUATION REFER TO DRAWING No. PH02

FOR CONTINUATION REFER TO DRAWING No. PH02

NOTES:

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING No. PH02, PH03 & PH05 AND THE SPAFLOW LTD REPORT DATED MARCH 2017.

LEGEND:

- BELOW GROUND (SURFACE WATER)
- BELOW GROUND (FOUL WATER)
- ABOVE GROUND (SURFACE WATER)
- ABOVE GROUND (FOUL WATER)

FH	FIRE HYDRANT	RWP	WASTE VENT PIPE
IV	ISOLATION VALVE	WVP	RAINWATER PIPE
WMT	WATER METER	SVP	SOIL VENT PIPE
GMT	GAS METER	VP	VENT PIPE
WM	RISING WATER MAIN	G	GULLY
GM	RISING GAS MAIN	RG	ROAD GULLY
GT	GREASE TRAP	OTG	OPEN TOP GULLY
CBP	CABLE PIT	STG	SEALED TOP GULLY
CP	CATCHPIT	BIG.	BACK INLET GULLY
MH	MANHOLE	C.I.	CAST IRON
WHB	WASH HAND BASIN	Cu	COPPER
SK	SINK	V.C.	VITRIFIED CLAY
WC	WATER CLOSET	UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UR	URINAL	PF	PITCH FIBRE
RE	RODDING EYE	F.A.	FROM ABOVE
RED.	REDUNDANT	T.A.	TO ABOVE
H/L	HIGH LEVEL	F.B.	FROM BELOW
M/L	MID LEVEL	T.B.	TO BELOW
L/L	LOW LEVEL		

REV.	DATE	DESCRIPTION	BY	APP.

SPAFLOW

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CLIENT:
HEYNE TILLETT STEEL
4 PEAR TREE COURT
LONDON
EC1R 0DS

PROJECT:
HIGH HOLBORN ESTATE
LONDON

TITLE:
RECORD OF TRACING, MAPPING AND CCTV SURVEY OF DRAINAGE.
BASEMENT LEVEL SHEET 1

PROJECT REF:		REV:
DRAWN: SWW	DATE: FEB 17	SCALES: NTS
CHECKED: DWH	APPROVED: DWH	
CLIENT DRG. No:	CAD Q.A.:	PLOT SIZE:
MICROFILM REF:	SHEET:	DRG. No: PH01

FOR CONTINUATION REFER TO DRAWING No. PH01

FOR CONTINUATION REFER TO DRAWING No. PH01

HAND COURT

BROWNLOW STREET

HIGH HOLBORN

100 DIA. C.I. ASSUMED RWP AT H/L. 54 DIA. UPVC STUB STACK T/B GROUND.

42 DIA. UPVC WP AT L/L.

100 DIA. C.I. ASSUMED RWP F/A OFFSETS AND CONNECTS TO 100 DIA. C.I. AT H/L.

100 DIA. C.I. ASSUMED RWP AT H/L.

42 DIA. UPVC STUB STACK RECEIVES 2 No. 42 DIA. UPVC CONNECTIONS AND DROPS T/B GROUND.

100 DIA. C.I. ASSUMED RWP DROPS FROM H/L T/B GROUND.

ASSUMED COVERED STBG IN THIS AREA.

150 DIA. VC 2.83m TO PUBLIC SEWER IN HAND COURT.

100 DIA. C.I. ASSUMED RWP DROPS FROM H/L T/B GROUND.

ASSUMED COVERED STBG IN THIS AREA.

ASSUMED 100 DIA. C.I. RWP F/A TO H/L IN STRUCTURE.

MH22

MH20

MH21

150 DIA. C.I.

150 DIA. VC

100 DIA. C.I.

SINK

WHB

WC

42 DIA. UPVC WP AT L/L.

100 DIA. C.I. FLOAT AT L/L.

100 DIA. C.I. F/A CONNECTS TO 100 DIA. C.I. FLOAT AT L/L.

100 DIA. C.I. DROPS FROM L/L T/B GROUND.

100 DIA. C.I. FROM MH28 LOCATED AT GROUND LEVEL.

100 DIA. C.I. DROPS FROM L/L T/B GROUND.

18-21 HAND COURT

100 DIA. C.I. FROM SEALED DP's.

HIGH HOLBORN HOUSE (NOT PART OF SURVEY)

50 DIA. C.I. DROPS FROM H/L AND CONNECTS TO 50 DIA. LEAD AND DROPS T/B GROUND.

50 DIA. C.I. F/A OFFSETS AT H/L.

100 DIA. LEAD RWP F/A T/B GROUND.

100 DIA. VC (S)

100 DIA. VC (V)

VAULT

SEALED TOP BACK INLET GULLY. (STBG1)

RODDING ACCESS.

68 DIA. UPVC F/A T/B GROUND.

100 DIA. LEAD F/A T/B GROUND.

100 DIA. VC FROM UNTRACED SOURCE. (POSSIBLE TRAP)

MH26

MH25

ASSUMED SEALED 100 DIA. VC DP's BELOW DEBRIS.

OLD TROUGH/CHANNEL WITH 100 DIA. TRAPPED OUTLET.

BROWNLOW HOUSE

42 DIA. UPVC WP DROPS FROM L/L T/B GROUND.

110 DIA. UPVC STUB STACK T/B GROUND.

54 DIA. Cu IN FLOOR VOID FROM UNTRACED SOURCE.

100 DIA. C.I. DROPS FROM L/L IN FLOOR VOID T/B GROUND.

54 DIA. UPVC ENTERS FLOOR VOID FROM UNTRACED SOURCE.

MH24

100 DIA. C.I. DROPS AND OFFSETS IN FLOOR VOID.

ASSUMED 100 DIA. RWP F/A T/B GROUND.

OPEN TOP BACK INLET GULLY.

SEALED TOP GULLY (TAKES CONDENSE) WITH 100 DIA. OUTLET CONNECTS TO TOP OF DRAIN RUN UNDER.

BOLTED INSPECTION CHAMBER IC1 IN FLOOR VOID.

SEALED TOP BACK INLET GULLY IN FLOOR VOID. 54 DIA. UPVC ENTERS FLOOR VOID FROM UNTRACED SOURCE.

42 DIA. UPVC WP OFFSETS AND ENTERS FLOOR VOID.

BOOKSHOP MESSROOM/ TOILETS

PLANTROOM

ASSUMED RWP IN THIS AREA F/A T/B GROUND. (BOXED IN)

ASSUMED 100 DIA. STACK IN THIS AREA F/A T/B GROUND. (BOXED IN)

ASSUMED COVERED SEALED TOP BACK INLET GULLY IN THIS AREA.

ASSUMED COVERED SEALED TOP BACK INLET GULLY IN THIS AREA.

MH23

150 DIA. VC

150 DIA. C.I.

CAROLINE HOUSE (NOT PART OF SURVEY)

HIGH HOLBORN HOUSE (NOT PART OF SURVEY)

BROWNLOW HOUSE (BOOKSHOP)

ASSUMED 100 DIA. STACK IN THIS AREA F/A T/B GROUND. (BOXED IN)

ASSUMED RWP IN THIS AREA F/A T/B GROUND. (BOXED IN)

ASSUMED COVERED SEALED TOP BACK INLET GULLY IN THIS AREA.

ASSUMED 100 DIA. STACK IN THIS AREA F/A T/B GROUND. (BOXED IN)

ASSUMED RWP IN THIS AREA F/A T/B GROUND. (BOXED IN)

ASSUMED COVERED SEALED TOP BACK INLET GULLY IN THIS AREA.

MH27

150 DIA. VC 3.28m TO PUBLIC SEWER IN HIGH HOLBORN.

NOTES:

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING No. PH01, PH04 & PH05 AND THE SPAFLOW LTD REPORT DATED MARCH 2017.

LEGEND:

- BELOW GROUND (SURFACE WATER)
- BELOW GROUND (FOUL WATER)
- ABOVE GROUND (SURFACE WATER)
- ABOVE GROUND (FOUL WATER)

FH	FIRE HYDRANT	RWP	WASTE VENT PIPE
IV	ISOLATION VALVE	WVP	RAINWATER PIPE
WMT	WATER METER	SVP	SOIL VENT PIPE
GMT	GAS METER	VP	VENT PIPE
WM	RISING WATER MAIN	G	GULLY
GM	RISING GAS MAIN	RG	ROAD GULLY
GT	GREASE TRAP	OTG	OPEN TOP GULLY
CBP	CABLE PIT	STG	SEALED TOP GULLY
CP	CATCHPIT	BIG.	BACK INLET GULLY
MH	MANHOLE	C.I.	CAST IRON
WHB	WASH HAND BASIN	Cu	COPPER
SK	SINK	V.C.	VITRIFIED CLAY
WC	WATER CLOSET	UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UR	URINAL	PF	PITCH FIBRE
RE	RODDING EYE	F.A.	FROM ABOVE
RED.	REDUNDANT	T.A.	TO ABOVE
H/L	HIGH LEVEL	F.B.	FROM BELOW
M/L	MID LEVEL	T.B.	TO BELOW
L/L	LOW LEVEL		

REV.	DATE	DESCRIPTION	BY	APP.

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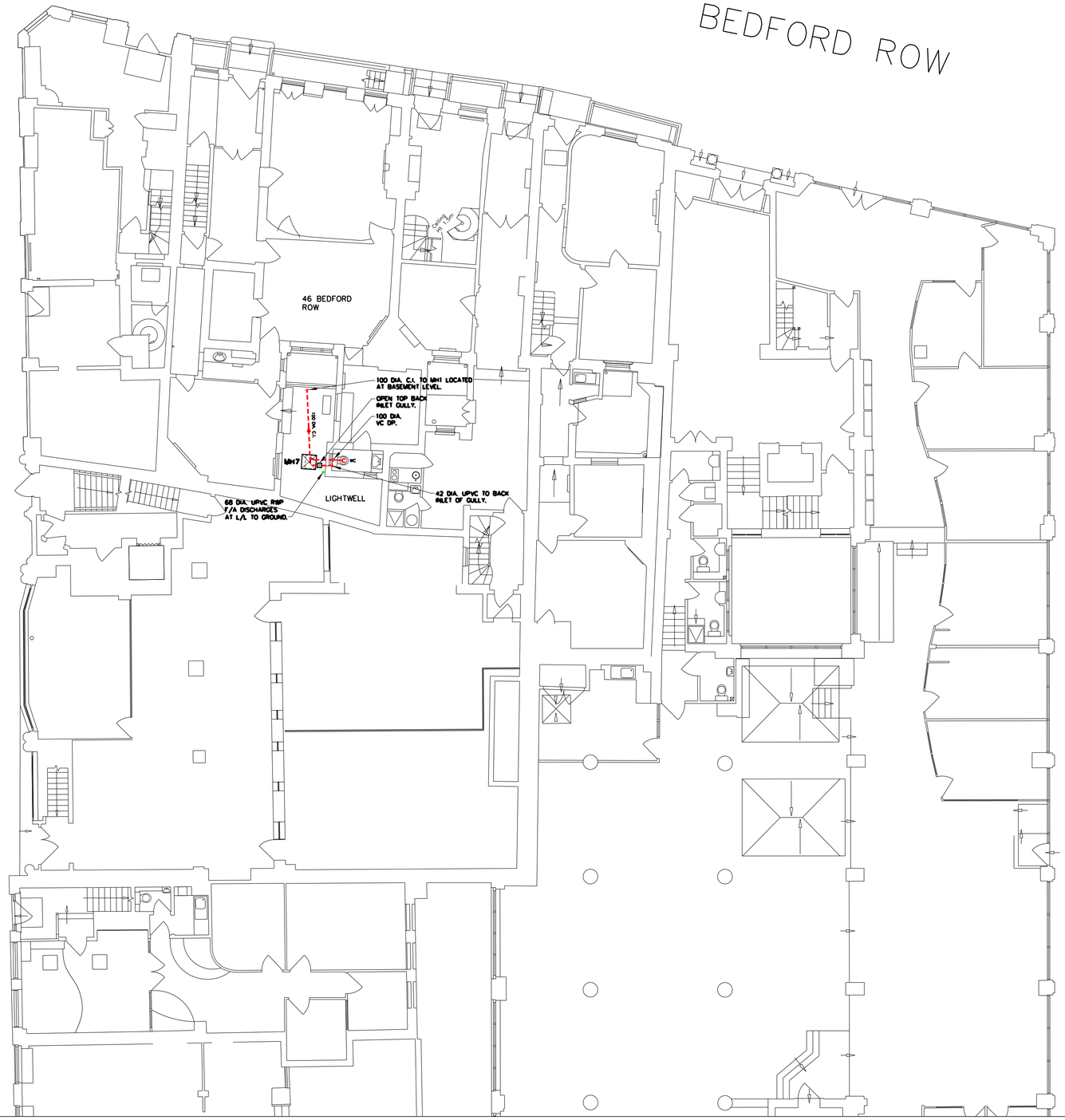
CLIENT:
HEYNE TILLETT STEEL
4 PEAR TREE COURT
LONDON
EC1R 0DS

PROJECT:
HIGH HOLBORN ESTATE
LONDON

TITLE:
RECORD OF TRACING, MAPPING AND CCTV SURVEY OF DRAINAGE. BASEMENT LEVEL SHEET 2

PROJECT REF:		REV:
DRAWN: SWW	DATE: FEB 17	SCALES: NTS
CHECKED: DWH	APPROVED: DWH	
CLIENT DRG. No:	CAD Q.A.:	PLOT SIZE:
MICROFILM REF:	SHEET:	DRG. No: PH02



NOTES:

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LEGEND:

- BELOW GROUND (SURFACE WATER)
- BELOW GROUND (FOUL WATER)
- ABOVE GROUND (SURFACE WATER)
- ABOVE GROUND (FOUL WATER)

FH	FIRE HYDRANT	RWP	WASTE VENT PIPE
IV	ISOLATION VALVE	WVP	RAINWATER PIPE
WMT	WATER METER	SVP	SOIL VENT PIPE
GMT	GAS METER	VP	VENT PIPE
WM	RISING WATER MAIN	G	GULLY
GM	RISING GAS MAIN	RG	ROAD GULLY
GT	GREASE TRAP	OTG	OPEN TOP GULLY
CBP	CABLE PIT	STG	SEALED TOP GULLY
CP	CATCHPIT	BIG.	BACK INLET GULLY
MH	MANHOLE	C.I.	CAST IRON
WHB	WASH HAND BASIN	Cu	COPPER
SK	SINK	V.C.	VITRIFIED CLAY
WC	WATER CLOSET	UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UR	URINAL	PF	PITCH FIBRE
RE	RODDING EYE	F.A.	FROM ABOVE
RED.	REDUNDANT	T.A.	TO ABOVE
H/L	HIGH LEVEL	F.B.	FROM BELOW
M/L	MID LEVEL	T.B.	TO BELOW
L/L	LOW LEVEL		

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CLIENT:
HEYNE TILLETT STEEL
4 PEAR TREE COURT
LONDON
EC1R 0DS

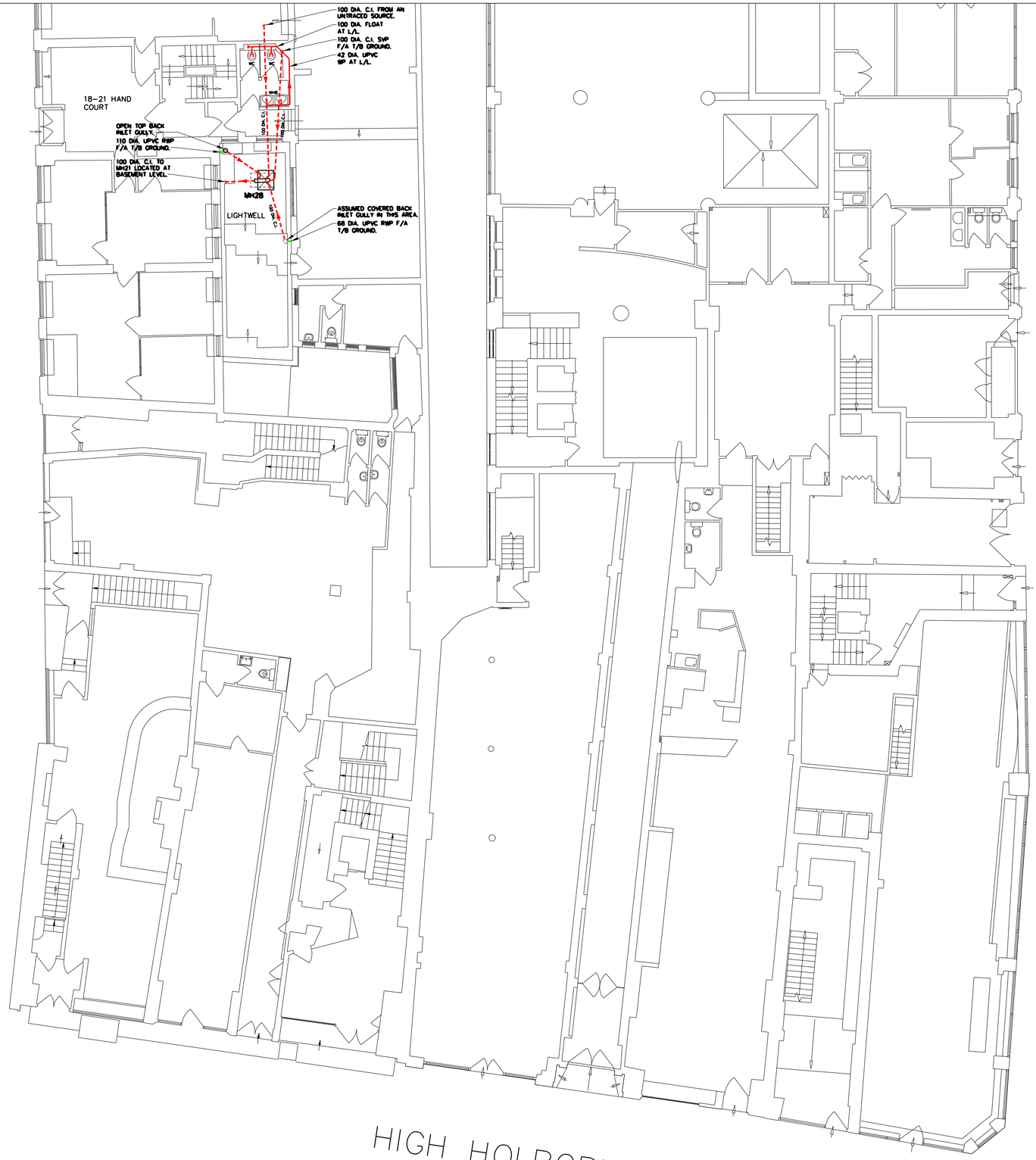
PROJECT:
HIGH HOLBORN ESTATE
LONDON

TITLE:
RECORD OF TRACING, MAPPING AND CCTV SURVEY OF DRAINAGE.
GROUND LEVEL SHEET 1

PROJECT REF:		REV:
DRAWN: SWW	DATE: FEB 11	SCALES: NTS
CHECKED: DWH	APPROVED: DWH	
CLIENT DRG. No:	CAD Q.A.:	PLOT SIZE:
MICROFILM REF:	SHEET:	DRG. No: PH03

FOR CONTINUATION REFER TO DRAWING No. PH03

FOR CONTINUATION REFER TO DRAWING No. PH03



NOTES:

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LEGEND:

- BELOW GROUND (SURFACE WATER)
- BELOW GROUND (FOUL WATER)
- ABOVE GROUND (SURFACE WATER)
- ABOVE GROUND (FOUL WATER)

FH	FIRE HYDRANT	RWP	WASTE VENT PIPE
IV	ISOLATION VALVE	WVP	RAINWATER PIPE
WMT	WATER METER	SVP	SOIL VENT PIPE
GMT	GAS METER	VP	VENT PIPE
WM	RISING WATER MAIN	G	GULLY
GM	RISING GAS MAIN	RG	ROAD GULLY
GT	GREASE TRAP	OTG	OPEN TOP GULLY
CBP	CABLE PIT	STG	SEALED TOP GULLY
CP	CATCHPIT	BIG.	BACK INLET GULLY
MH	MANHOLE	C.I.	CAST IRON
WHB	WASH HAND BASIN	Cu	COPPER
SK	SINK	V.C.	VITRIFIED CLAY
WC	WATER CLOSET	UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UR	URINAL	PF	PITCH FIBRE
RE	RODDING EYE	F.A.	FROM ABOVE
RED.	REDUNDANT	T.A.	TO ABOVE
H/L	HIGH LEVEL	F.B.	FROM BELOW
M/L	MID LEVEL	T.B.	TO BELOW
L/L	LOW LEVEL		

REV.	DATE	DESCRIPTION	BY	APP.

SPAFLOW

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CLIENT:
HEYNE TILLETT STEEL
4 PEAR TREE COURT
LONDON
EC1R 0DS

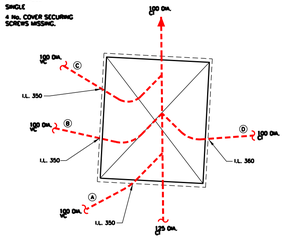
PROJECT:
HIGH HOLBORN ESTATE
LONDON

TITLE:
RECORD OF TRACING, MAPPING AND CCTV SURVEY OF DRAINAGE.
GROUND LEVEL SHEET 2

PROJECT REF:		REV:
DRAWN: SWW	DATE: FEB 11	SCALES: NTS
CHECKED: DWH	APPROVED: DWH	
CLIENT DRG. No:	CAD Q.A.:	PLOT SIZE:
MICROFILM REF:	SHEET:	DRG. No: PH04

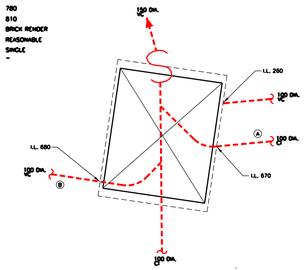
MH1

C/S	660 x 560 C.I.
C/O	600 x 490
CH/S	700 x 590
INLET	460
OUTLET	480
CONST	BRICK RENDER
COND	REASONABLE
SEAL	SINGLE
NOTES	4 No. COVER SECURING SCREWS MISSING.



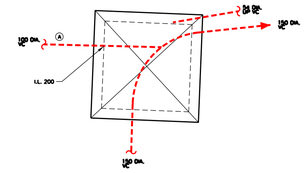
MH2

C/S	670 x 560 C.I.
C/O	610 x 500
CH/S	750 x 600
INLET	780
OUTLET	810
CONST	BRICK RENDER
COND	REASONABLE
SEAL	SINGLE
NOTES	-



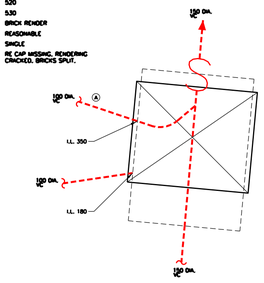
MH3

C/S	585 x 585 C.I.
C/O	460 x 460
CH/S	470 x 470
INLET	280
OUTLET	290
CONST	BRICK RENDER
COND	GOOD
SEAL	DOUBLE
NOTES	-



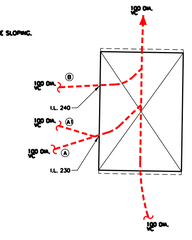
MH4

C/S	660 x 550 C.I.
C/O	620 x 455
CH/S	830 x 810
INLET	530
OUTLET	530
CONST	BRICK RENDER
COND	REASONABLE
SEAL	SINGLE
NOTES	RE CAP MISSING. RENDERING CRACKED. BRICKS SPLIT.



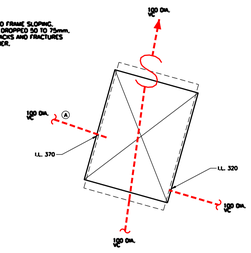
MH5

C/S	645 x 450 C.I.
C/O	600 x 450
CH/S	680 x 450
INLET	320
OUTLET	310
CONST	BRICK RENDER
COND	GOOD
SEAL	SINGLE
NOTES	COVER AND FRAME SLOPING.



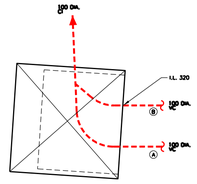
MH6

C/S	620 x 470 GALV MS
C/O	585 x 450
CH/S	710 x 450
INLET	680
OUTLET	630
CONST	BRICK RENDER
COND	POOR
SEAL	SINGLE
NOTES	COVER AND FRAME SLOPING. CHAMBER DROPPED 50 TO 75mm. LARGE CRACKS AND FRACTURES TO CHAMBER.



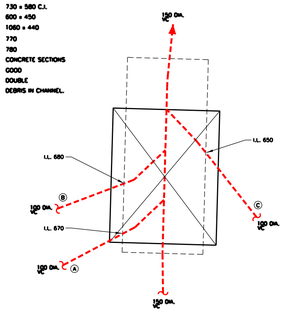
MH7

C/S	590 x 580 C.I.
C/O	460 x 460
CH/S	540 x 440
INLET	260
OUTLET	420
CONST	BRICK RENDER
COND	GOOD
SEAL	DOUBLE
NOTES	-



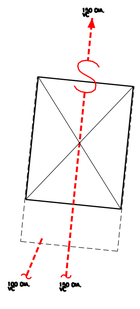
MH8

C/S	730 x 580 C.I.
C/O	600 x 450
CH/S	1060 x 440
INLET	770
OUTLET	780
CONST	CONCRETE SECTIONS
COND	GOOD
SEAL	DOUBLE
NOTES	DEBRIS IN CHANNEL.



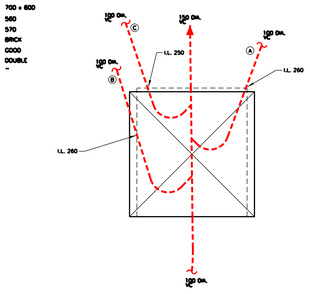
MH9

C/S	670 x 520 C.I.
C/O	610 x 460
CH/S	900 x 530
INLET	710
OUTLET	750
CONST	CONCRETE
COND	GOOD
SEAL	SINGLE
NOTES	NEW COVER AND FRAME REQUIRED.



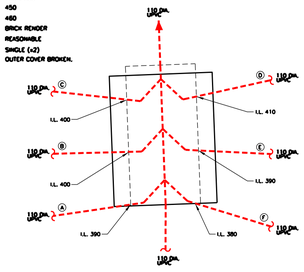
MH10

C/S	680 x 680 GALV MS INFILL
C/O	610 x 600
CH/S	700 x 600
INLET	560
OUTLET	570
CONST	BRICK
COND	GOOD
SEAL	DOUBLE
NOTES	-



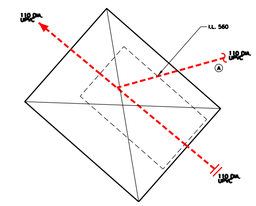
MH11

C/S	710 x 560 GALV MS INFILL (OUTER)
C/O	620 x 470 GALV MS (INNER)
C/O	600 x 450
CH/S	760 x 380
INLET	450
OUTLET	460
CONST	BRICK RENDER
COND	REASONABLE
SEAL	SINGLE (x2)
NOTES	OUTER COVER BROKEN.



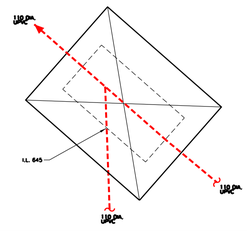
MH12

C/S	825 x 675 GALV MS INFILL
C/O	750 x 600
CH/S	600 x 380
INLET	670
OUTLET	680
CONST	CONCRETE SECTIONS
COND	GOOD
SEAL	SINGLE
NOTES	-



MH13

C/S	825 x 675 GALV MS INFILL
C/O	750 x 600
CH/S	600 x 320
INLET	685
OUTLET	710
CONST	CONCRETE
COND	GOOD
SEAL	SINGLE
NOTES	-

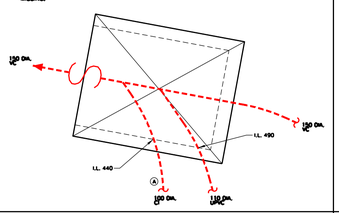


MH14

C/S	-
C/O	-
CH/S	-
INLET	-
OUTLET	-
CONST	-
COND	-
SEAL	-
NOTES	UNABLE TO LIFT COVER WITHOUT DAMAGE.

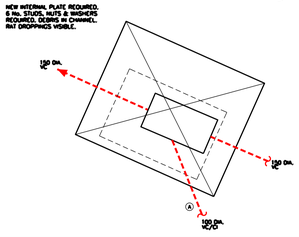
MH15

C/S	825 x 675 GALV MS INFILL
C/O	750 x 600
CH/S	750 x 550
INLET	570
OUTLET	580
CONST	BRICK
COND	REASONABLE
SEAL	SINGLE
NOTES	NEW RE CAP REQUIRED. RATS OBSERVED IN CHAMBER. 4 No. COVER SECURING SCREWS MISSING.



MH16

C/S	825 x 675 GALV MS INFILL
C/O	750 x 600
CH/S	580 x 400
INLET	380 TO DEBRIS
OUTLET	380 TO DEBRIS
CONST	BRICK
COND	REASONABLE
SEAL	SINGLE
NOTES	NEW INTERNAL PLATE REQUIRED. 8 No. STUDS, NUTS & WASHERS REQUIRED. DEBRIS IN CHANNEL. RAT DROPPINGS VISIBLE.

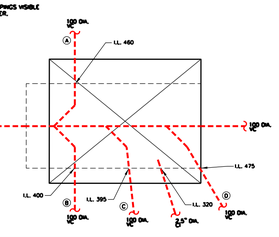


MH17

C/S	-
C/O	-
CH/S	-
INLET	-
OUTLET	-
CONST	-
COND	-
SEAL	-
NOTES	UNABLE TO LIFT COVER WITHOUT DAMAGE.

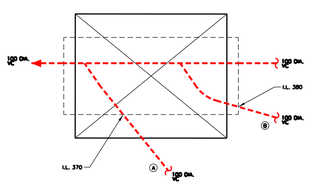
MH18

C/S	825 x 675 GALV MS INFILL
C/O	750 x 600
CH/S	950 x 490
INLET	495
OUTLET	495
CONST	BRICK
COND	REASONABLE
SEAL	SINGLE
NOTES	RAT DROPPINGS VISIBLE IN CHAMBER.



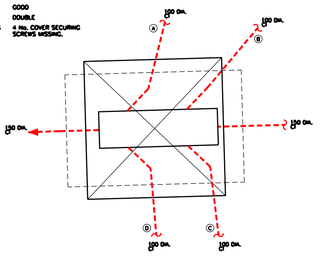
MH19

C/S	825 x 675 GALV MS INFILL
C/O	750 x 600
CH/S	530 x 420
INLET	445
OUTLET	450
CONST	BRICK
COND	REASONABLE
SEAL	SINGLE
NOTES	RAT DROPPINGS VISIBLE IN CHAMBER.



MH20

C/S	750 x 750 C.I. INFILL
C/O	610 x 610
CH/S	980 x 610
INLET	910
OUTLET	950
CONST	BRICK
COND	GOOD
SEAL	DOUBLE
NOTES	4 No. COVER SECURING SCREWS MISSING.

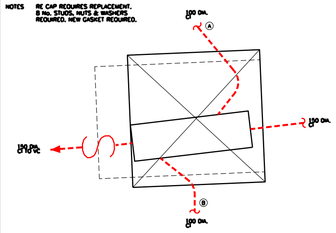


MH21

C/S	-
C/O	-
CH/S	-
INLET	-
OUTLET	-
CONST	-
COND	-
SEAL	-
NOTES	UNABLE TO LIFT COVER, BELOW CARPET.

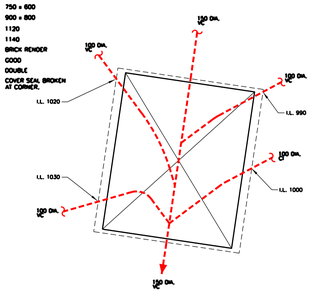
MH22

C/S	720 x 720 C.I.
C/O	610 x 610
CH/S	900 x 610
INLET	1060
OUTLET	1100
CONST	BRICK RENDER
COND	REASONABLE
SEAL	DOUBLE
NOTES	RE CAP REQUIRES REPLACEMENT. 8 No. STUDS, NUTS & WASHERS REQUIRED. NEW GASKET REQUIRED.



MH23

C/S	860 x 710 C.I.
C/O	750 x 600
CH/S	900 x 800
INLET	1120
OUTLET	1140
CONST	BRICK RENDER
COND	GOOD
SEAL	DOUBLE
NOTES	COVER SEAL BROKEN AT CORNER.

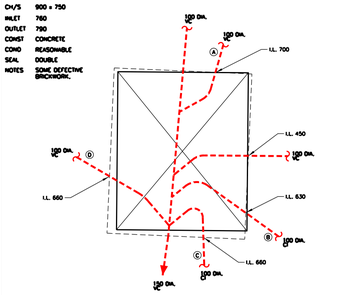


MH24

C/S	-
C/O	-
CH/S	-
INLET	-
OUTLET	-
CONST	-
COND	-
SEAL	-
NOTES	UNABLE TO LIFT COVER, CONFINED SPACE WITH LIMITED HEADROOM.

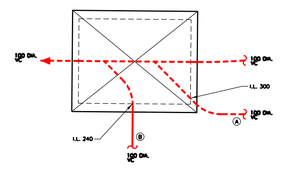
MH25

C/S	860 x 710 C.I.
C/O	750 x 600
CH/S	900 x 750
INLET	760
OUTLET	790
CONST	CONCRETE
COND	REASONABLE
SEAL	DOUBLE
NOTES	SOME DEFECTIVE BRICKWORK.



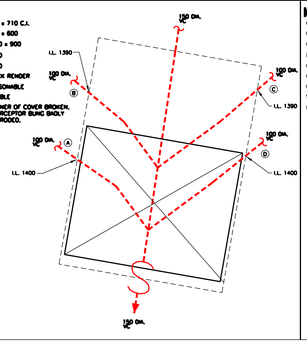
MH26

C/S	680 x 550 C.I.
C/O	610 x 460
CH/S	610 x 460
INLET	280
OUTLET	300
CONST	CONCRETE
COND	REASONABLE
SEAL	DOUBLE
NOTES	DEBRIS IN CHANNEL.



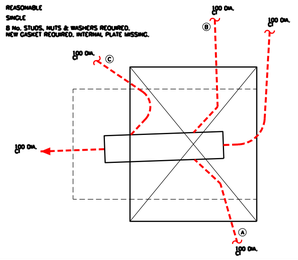
MH27

C/S	860 x 710 C.I.
C/O	750 x 600
CH/S	1250 x 900
INLET	1480
OUTLET	1530
CONST	BRICK RENDER
COND	REASONABLE
SEAL	DOUBLE
NOTES	CORNER OF COVER BROKEN. INTERCEPTOR BUNG BADLY CORRODED.



MH28

C/S	840 x 690 C.I. INFILL
C/O	730 x 610
CH/S	1000 x 600
INLET	1220
OUTLET	1250
CONST	BRICK RENDER
COND	REASONABLE
SEAL	SINGLE
NOTES	8 No. STUDS, NUTS & WASHERS REQUIRED. NEW GASKET REQUIRED. INTERNAL PLATE MISSING.



NOTES:

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING Nos. PH01, PH02, PH03 & PH04 AND THE SPAFLOW LTD REPORT DATED MARCH 2017.

LEGEND:

- BELOW GROUND (SURFACE WATER)
- BELOW GROUND (FOUL WATER)
- ABOVE GROUND (SURFACE WATER)
- ABOVE GROUND (FOUL WATER)

FH	FIRE HYDRANT	RWP	WASTE VENT PIPE
IV	ISOLATION VALVE	WVP	RAINWATER PIPE
WMT	WATER METER	SVP	SOIL VENT PIPE
GMT	GAS METER	VP	VENT PIPE
WM	RISING WATER MAIN	G	GULLY
GM	RISING GAS MAIN	RG	ROAD GULLY
GT	GREASE TRAP	OTG	OPEN TOP GULLY
CBP	CABLE PIT	STG	SEALED TOP GULLY
CP	CATCHPIT	BIG.	BACK INLET GULLY
MH	MANHOLE	C.I.	CAST IRON
WHB	WASH HAND BASIN	Cu	COPPER
SK	SINK	V.C.	VITRIFIED CLAY
WC	WATER CLOSET	UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UR	URINAL	PF	PITCH FIBRE
RE	RODDING EYE	F.A.	FROM ABOVE
RED.	REDUNDANT	T.A.	TO ABOVE
H/L	HIGH LEVEL	F.B.	FROM BELOW
M/L	MID LEVEL	T.B.	TO BELOW
L/L	LOW LEVEL		

REV.	DATE	DESCRIPTION	BY	APP.

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CLIENT:

HEYNE TILLETT STEEL
4 PEAR TREE COURT
LONDON
EC1R 0DS

PROJECT:

HIGH HOLBORN ESTATE
LONDON

TITLE:

RECORD OF TRACING, MAPPING AND CCTV SURVEY OF DRAINAGE.
MANHOLE SCHEDULE

PROJECT REF:		REV:
DRAWN: SWW	DATE: FEB 11	SCALES: NTS
CHECKED: DWH	APPROVED: DWH	
CLIENT DRG. No:	CAD Q.A.:	PLOT SIZE:
MICROFILM REF:	SHEET:	DRG. No: PH05

HIGH HOLBORN ESTATE
LONDON
WC1R 4LR

REPORT ON THE TRACING, MAPPING & CCTV SURVEY OF THE DRAINAGE

BY

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FOR

MS. CARLA BAILEY
SRG HOLBORN LTD
% SANNE
13 CASTLE STREET
ST. HELIER
JERSEY

MARCH 2017

INDEX

1.0 DESCRIPTION OF THE PREMISES

The premises comprise a block of buildings on an 'island site' bounded by High Holborn, Hand Court, Bedford Row & Brownlow Street.

The area of interest for this survey is the drainage below basement floor level.

At the time of survey some of the properties were occupied or partly occupied.

2.0 EXTENT AND METHOD OF THE SURVEY

The extent and method of the survey was as requested by Ms. Siún O'Brien of Heyne Tillett Steel by an email dated 18/04/2016 and as shown in the original Spaflow Limited proposal dated 18/04/2016 and the proposal Rev A dated 23/01/2017.

Confirmation to proceed with the survey was given by email from Ms. Siún O'Brien of Heyne Tillett Steel on 12/01/2017.

The purpose of the survey is to record the installation in its current form, to provide information to the Consulting Engineers, to assist them with their proposals for the redevelopment of the existing property.

The survey comprised the following:-

To locate, trace, map and CCTV survey, the buried drainage below basement slab.

The survey was carried out on the 6th 7th, 9th 14th, 15th and 17th February 2017.

3.0 LIMITATIONS OF THE SURVEY

The scope of the survey was limited to that shown in section 2.0 or otherwise referred to in the text.

No drain cleaning was done, no level checks, flow checks, [apart from route checking tests], leakage tests or other tests were carried out.

Some parts of the system could not be surveyed either due to lack of access or due to debris.

Some drainage runs entered the building of interest from premises beyond the scope of the survey.

As the upper floors were not part of the survey we could not always confirm for certain whether pipes from above received only rainwater or foul drainage, in such cases they were designated as stacks

The work was carried out on days of dry weather.

No responsibility can be accepted for any deficiencies, events or circumstances which may occur and which due to the foregoing circumstances were not identified during the survey.

4.0 HEALTH AND SAFETY

The work was carried out in accordance with the requirements of the Spaflow Method Statement and Health and Safety Procedures Document, and in accordance with the requirements of the client.

No events or incidents occurred during the survey.

No particular findings, which could have an immediate or reasonably foreseeable effect on health and safety were noted.

5.0 INFORMATION UTILISED

The following building survey drawings by Plowman Craven were provided in digital form.

GROUND FLOOR [Sheet 1] DRG. NO. 26776F-02-1 REV B	CAD FILE: 26776F-02B.dwg
GROUND FLOOR [Sheet 2] DRG. NO. 26776F-02-2 REV A	
BASEMENT [Sheet 1] DRG. NO. 26776F-01-1 REV A	CAD FILE: 26776F-01B.dwg
BASEMENT [SHEET 2] DRG. NO. 26776F-01-2 REV B	

6.0 RECORD DRAWINGS PRODUCED

The following survey record drawings were produced on CAD based on the survey drawings referred to above.

DRG NO:	PH01	Record of Tracing, Mapping & CCTV Survey of Drainage - Basement Level – Sheet 1
	PH02	Record of Tracing, Mapping & CCTV Survey of Drainage - Basement Level – Sheet 2
	PH03	Record of Tracing, Mapping & CCTV Survey of Drainage - Ground Level – Sheet 1
	PH04	Record of Tracing, Mapping & CCTV Survey of Drainage - Ground Level – Sheet 2
	PH05	Record of Tracing, Mapping & CCTV Survey of Drainage - Manhole Schedule

7.0 DESCRIPTION OF THE SYSTEM

7.1 General

Because the survey covers several buildings, the system at each building will be described separately.

7.2 Brownlow House

At basement level, the system commences at a manhole, MH26 located in a disused toilet.

MH26 receives, at its head a 100 Ø clay connection from an assumed 100 Ø clay drain point [DP] [below debris].

MH26 receives 2 No. branches, including:-

100 Ø clay [A] from an assumed 100 Ø clay [DP], [below debris].

100 Ø clay [B] from a trapped outlet at an old trough/channel.

The 100 Ø clay outlet from MH26 runs to branch into MH25.

MH25 is located in disused toilets, and receives, at its head a 100 Ø clay connection from a 100 Ø lead stack [assumed soil pipe] [SP] from above.

MH25 also receives 4 No. further branches, including:-

100 Ø clay [A] from a sealed top back inlet gully [STBIG] in a vault.

STBIG1 receives 2 No. branches, including:-

100 Ø clay from a 100 Ø lead RWP from above.

100 Ø clay [B] from a 50 Ø CI rainwater pipe [RWP] from above, which offsets at high level drops to low level, connects to 50 Ø lead and drops to connect to drain. On route to STBIG1, the branch receives a 100 Ø clay blind branch from a 68 Ø UPVC RWP from above, on route there is a rodding access.

The 100 Ø clay outlet from STBIG1 runs to connect as branch [A] at MH25 as previously described.

The next branches to MH25 are:-

100 Ø CI [B] from a 110 Ø UPVC stub stack which receives a connection from a WC, on route the branch receives another 110 Ø UPVC stub stack which also receives a WC.

100 Ø CI [C] from a 42 Ø UPVC WP at low level which receives a waste pipe [WP] from 2 No. wash basins [WBs].

The final branch is 100 Ø CI [D] from an untraced source, possibly from a trap.

The 150 Ø clay outlet from MH25 runs to the head of MH24.

MH24 is located in a stairwell, its cover could not be lifted due to confined space, and receives 1 No. branch, 100Ø clay [assumed] via an external 100 Ø CI branch from a CI, bolted inspection chamber [IC1] in a floor void beneath a toilet.

IC1 receives, at its head a 100 Ø CI connection from a WC, on route to IC1 it receives a 42 Ø UPVC WP from a WB.

IC1 also receives 2 No. branches, including:-

100 Ø CI from a WC.

100 Ø CI from a STBIG in the void. The STBIG receives 2 No. branches, including:-

A 54 Ø UPVC WP from an untraced source, this also receives another 54 Ø UPVC WP from an untraced source and the WP from 2 No. WBs.

The other connection into the STBIG is 54 Ø [cu] from an untraced source.

The 150 Ø clay outlet from MH24 runs to the head of MH23.

MH23 is located in a plant room, and receives 4 No. branches, including:-

100 Ø clay [no number] from an assumed STBIG [boxed in], an assumed RWP from above [boxed in] connects to the assumed STBIG.

100 Ø CI from an assumed [boxed in] 100 Ø stack [SP] from above.

100 Ø clay from an open top gully [OTG] which receives an assumed 100 Ø RWP from above [boxed in], on route the branch receives a 100 Ø outlet from a sealed top gully [STG] which receives condensate waste.

The final branch is 100 Ø clay from an assumed STBIG [covered over].

The 150 Ø clay outlet from MH23 runs to the head of MH27.

MH27 is located in the bookshop.

MH27 receives 4 No. branches, including:-

100 Ø clay [A] from an assumed STBIG [covered over], which receives an assumed [boxed in] RWP from above.

100 Ø clay [B] from an assumed 100 Ø stack [SP] boxed in.

100 Ø clay [C] from an assumed [boxed in] stack [SP] from above.

100 Ø clay [D] from an assumed STBIG [covered over] which receives an assumed [boxed in] RWP from above.

The 150 Ø clay outlet from MH27 is via a clay intercepting trap and 150 Ø clay outfall to the public sewer below High Holborn.

7.3 18-21 Hand Court – Ground Floor Level

The system commences at MH28 located in a light-well. MH28 receives, at its head, a 100 Ø CI connection from a 100 Ø CI soil vent pipe [SVP] from above. This SVP receives a 100 Ø float at low level from 2 No. WCs and a 42 Ø UPVC WP from 2 No. WBs.

MH28 also receives 3 No. branches, including:-

100 Ø CI [A] from an assumed STBIG which receives a 68 Ø UPVC RWP from above.

100 Ø CI [B] from an untraced source, which enters the toilet area through the structure at high level and is assumed to be from a pipe concealed in the structure.

The final branch is 100 Ø [C] CI from an open top gully [OTG] which receives a 110 Ø UPVC RWP from above.

The 100 Ø outlet from MH28 runs to connect to the head of MH21, at basement level.

7.4 18-21 Hand Court – Basement Level

This system commences with the 100 Ø CI outlet connection from MH28 as previously described at ground floor level and which connects to the head of MH21.

MH21 located in an office could not be opened as below carpet. MH21 also receives a branch, 100 Ø CI from a 100 Ø CI SP from above, which receives a 100 Ø CI float at low level from a WC.

The 150 Ø CI outlet from MH21 runs to the head of MH20.

MH20 located in a corridor/doorway receives 4 No. branches including:-

100 Ø CI [A] from a 54 Ø UPVC stub stack which receives a 42 Ø UPVC WP from a sink.

100 Ø CI [B] from a 42 Ø UPVC stub stack which receives a 42 Ø UPVC WP from a shower via a long low level offset and a 42 Ø UPVC WP from 2 No. WBs.

100 Ø CI [C] from a sealed DP upstream of the manhole.

100 Ø CI [D] from a sealed DP upstream of the manhole.

The 150 Ø CI outlet from MH22 runs to the head of MH22.

MH22 located in an old office/storage area receives 2 No. branches, including:-

100 Ø CI [A] from an assumed covered STBIG which receives an assumed 100 Ø CI RWP from an untraced source believed to be within the structure.

This offset enters the basement at high level, receives a 100 Ø CI branch connection from an assumed 100 Ø CI RWP from above, runs at high level and drops from high level to below ground and is assumed to connect to the assumed STBIG.

The other branch to MH22 is 100 Ø CI [B] from an assumed STBIG below the floor finish, which is assumed to receive a connection from an assumed 100 Ø CI RWP from an untraced source in the structure and which offsets at high level and drops to connect to the assumed STBIG.

The 150 Ø CI outlet from MH22 is via a CI intercepting trap which connects to a 150 Ø clay outfall to the public sewer below Hand Court.

7.5 22-23 Hand Court – Basement Level

This system will be described as commencing from MH19.

MH19 is located in a general area and receives, at its head a 100 Ø clay connection which is sealed with concrete upstream of the manhole.

MH19 also receives 2 No. branches, including:-

100 Ø clay [A] which is sealed with concrete upstream of the manhole.

100 Ø clay [B] from a 110 Ø UPVC SP from above, which offsets at low level and connects to drain. The 100 Ø clay outlet from MH19 runs to the head of MH18.

MH18 is located in a general area and receives 5 No. branches, including:-

100 Ø clay [A] from an untraced source [due to debris].

100 Ø clay [B] from a concealed 100 Ø clay trap [dry].

100 Ø clay [C] which is sealed upstream of the manhole.

2½" Ø CI which enter the manhole above the benching from an untraced source.

100 Ø clay [D] from a concealed 100 Ø clay trap [dry]

The 150 Ø clay outlet from MH18 runs to the head of MH17.

MH17 is located in a passage, its cover could not be lifted without damage, and it appears on CCTV to receive 3 No. branches, including:-

A connection from a 54 Ø UPVC sink WP.

2 No. 100 Ø clay branches from untraced sources.

The 150 Ø clay outlet from MH17 runs to the head of MH16.

MH16 is located in a lobby area and receives one branch, 100 Ø clay [A] to 100 Ø CI from an untraced source, [due to debris].

The 150 Ø clay outlet from MH16 runs to the head of MH15.

MH15 is located in a lobby area and receives 2 No. branches, including:-

100 Ø CI [A] from a 110 Ø UPVC SVP, assumed to be from above, which offsets at low level, parallel to the front wall, to drop from low level to below [with an access on top].

The second branch, 110 Ø UPVC [B] is from MH11, MH12 & MH13 via MH14.

MH12 is located in a general area and receives, at its head a 110 Ø UPVC connection, sealed with concrete upstream of the manhole.

MH12 receives one branch, 110 Ø UPVC [A] from a 110 UPVC SVP from above.

The 110 Ø UPVC outlet from MH12 runs to the head of MH13

MH13 is located in a general area receives one branch, 110 Ø UPVC from MH11.

MH11 is located in a ladies toilet and receives, at its head a 110 Ø UPVC connection from a 110 Ø UPVC SVP from above which drops, offsets at low level and receives 2 No. 42 Ø UPVC WPs from WBs.

On route to MH11, this run to the head of the manhole also receives a blind, branch connection from a 110 Ø UPVC SVP from above, which drops, offsets at low level and runs to below a raised floor.

MH11 also receives 6 No. branches, including:-

100 Ø UPVC [A] from a 110 Ø UPVC drain point [DP], at a WC in the male toilets. A 42 Ø UPVC WB from 2 No. WBs also connects to the DP.

110 Ø UPVC [B] from a WC in the male toilets.

110 Ø UPVC [C] from a WC in the male toilets

110 Ø UPVC [D] from a WC in the female toilets.

100 Ø UPVC [E] from a WC in the female toilets.

110 Ø UPVC [F] from a WC in the female toilets.

The 110 Ø UPVC outlet from MH11 runs to branch into MH13 as previously described.

The 110 Ø UPVC outlet from MH13 runs to the head of MH14.

MH14 is located in a general area; its cover could not be lifted without damage. It appears on CCTV to receive one branch from a 110 Ø UPVC SVP from above, an access [ACI] is on the SVP.

The 110 Ø UPVC outlet from MH14 runs to branch into MH15 as previously described.

The 150 Ø clay outlet is via a clay intercepting trap and clay outfall [via an offset] to the public sewer below Hand Court.

7.6 24-25 Hand Court & 45 Bedford Row – Basement Level

This system commences at MH10, located in a stairwell.

MH10 receives, at its head a clay connection from a sealed top back inlet gully [STBIG]. The gully receives 2 No. connections, including from a 100 Ø CI RWP from above and another untraced connection [due to debris].

MH10 also receives 3 No. branches, including:-

100 Ø clay [A] from a 110 Ø UPVC stub stack which receives a WC and a 32 Ø UPVC WP from a WB.

100 Ø clay [B] from a STBIG, which receives a 68 Ø UPVC RWP from above.

100 Ø clay [C] from a 100 Ø CI SVP from above which receives a 42 Ø UPVC WP at low level from a sink.

The 150 Ø clay outlet from MH10 runs to the head of MH8.

MH8 is located in a vaulted area and receives 3 No. branch connections, including:-

100 Ø clay [A] from a buried 100 Ø clay trap [dry].

100 Ø clay [B] from an open top back inlet gully [OTBIG] which receives a 100 Ø CI connection from an assumed RWP which receives a 36 Ø UPVC WP from a cleaners sink at low level.

A 42 Ø UPVC WP from a sink offsets at low level, receives a connection from a dishwasher and discharges over the OTBIG.

The 150 Ø clay outlet from MH8 runs to the head of MH9.

MH9 is located in a vaulted area and receives one branch, a 100 Ø CI connection from a vent pipe [VP].

The 150 Ø clay outlet from MH9 via a clay intercepting trap and outfall to the public sewer below Bedford Row.

7.7 46 Bedford Row – Ground Floor Level

This system commences at ground floor level at MH7.

MH7 is located in a light-well and receives at its head a 100 Ø clay connection [A] from an OTBIG. A 68 Ø UPVC RWP from above discharges to ground close to the OTBIG and a 42 Ø UPVC WP from a WB connects to a back inlet on the OTBIG.

MH7 receives one branch, 100 Ø clay [B] from a DP from a WC.

The 100 Ø CI outlet from MH7 runs to drop to below and connect to the head of MH1 which is located at basement level in a light-well.

7.8 46 Bedford Row – Basement Level

This description continues on from ground floor level – MH1

MH1 also receives 4 No. branches, including:-

100 Ø clay [A] from OTBIG1, OTBIG1 receives a back inlet from a 68 Ø UPVC RWP from above and a back inlet from 42 Ø WP from a WB.

100 Ø clay [B] from a WC.

100 Ø clay [C] from a 100 Ø lead SVP from above.

The final branch is 100 Ø CI from a 110 Ø UPVC stub stack which receives a WC via a 110 Ø UPVC float at low level and a 32 Ø UPVC WP at low level from a WB.

The 100 Ø CI outlet from MH1 runs to the head of MH2.

MH2 is located in a light-well and receives 3 No. branches, including:-

100 Ø CI [A] from an open top gully [OTG].

100 Ø clay [B] from an OTBIG which receives a 110 Ø RWP from above via a back inlet.

100 Ø CI from a 100 Ø CI VP which rises to terminate to atmosphere at high level basement.

The 150 Ø clay outlet from MH2 runs via a clay intercepting trap and 150 Ø clay outfall to the public sewer below Bedford Row.

7.9 48 Bedford Row – Basement Level

This system commences at MH3.

MH3 is located in a light-well and receives at its head a 100 Ø clay connection [A] from a WC.

MH3 also receives a 150 Ø clay branch connection, assumed to be from drainage at ground level from the rear of the adjacent property 47A Bedford Row.

MH3 also receives a 54 Ø UPVC WP connection at high level from a sink.

The 150 Ø clay outlet from MH3 runs to connect via a blind, branch into a 150 Ø clay run from an untraced source [due to debris].

On route to the blind branch, the 150 Ø clay run also receives 2 No. blind, branch connections, including from a 100 Ø CI SVP from above, which receives a 32 Ø UPVC WP from a WB. The next blind branch is also from a 100 Ø CI SVP from above.

Returning to the main 150 Ø clay rain run after it receives the blind, branch connection from MH3 as previously described, this runs to the head of MH4, on route it receives a blind, branch connection from an untraced source.

MH4 is located in a light-well and receives 2 No. branches, including:-

100 Ø clay at high level which is from a 100 Ø CI VP which rises to terminate to atmosphere at high level basement.

100 Ø clay [A] from an OTG.

The 150 Ø clay outlet from MH4 is via a clay intercepting trap and 150 Ø clay outfall to the public sewer below Bedford Row.

7.10 48 Bedford Row – Basement Level

This system commences at MH5 located in a vaulted area.

MH5 receives 2 No. branches, including:-

100 Ø clay [A] from OTBIG3 which receives a back inlet connection from a 50 Ø CI RWP from above. On route to MH5, branch [A] receives a blind, branch connection [A1] from a 100 Ø CI SVP from above.

The final branch is 100 Ø clay [B] from an OTBIG which receives a back inlet connection from a 110 Ø UPVC RWP from above.

The 100 Ø clay outlet from MH5 runs to the head of MH6.

MH6 is located in a light-well and receives 2 No. branch connections, including:-

100 Ø clay [A] from an OTG.

100 Ø clay [B] from a 100 Ø CI VP which rises to terminate to atmosphere at high level basement.

The 100 Ø clay outlet from MH6 is via a clay intercepting trap and 150 Ø clay outfall to the public sewer below Bedford Row.

8.0 FINDINGS OF THE SURVEY

Note: The findings will be described on a building by building basis, as separate sections.

8.1 Brownlow House – Bookshop – Basement Level

The system is 'combined' as it receives connections from foul and surface water drainage.

The layout of the system appears to be reasonably orthodox.

There are a number of blind, branch connections.

There were some untraced connections

There were some sealed pipes.

Some pipe-work is located within an underfloor void.

The drainage pipe-work is generally of clay, with some branches of CI with a clay outfall to the public sewer..

The manholes were constructed as follows:-

MH23 & MH27	Rendered Brickwork
MH25 & MH26	Concrete
MH24	Unconfirmed as unable to open – due to location in a confined space

All manholes had open channels of clay with benchings of concrete.

Manhole covers were as follows:-

MH23, MH24, MH25, MH26 & MH27	CI double seal

The structural condition of the manholes was visually as follows:-

MH23	Good
MH25, MH26 & MH27	Reasonable
MH24	Unconfirmed

There were defects at manholes including the following:-

MH23	Cover corner and seal slightly broken
MH26	Debris in channel
MH27	Corner of cover broken, interceptor cap badly corroded
MH24	Cover could not be lifted due to confined space

The details of concealed STBIGs could not be assessed.

The visible OTG was of clay with a grating of metal.

8.2 18-21 Hand Court – Ground Floor Level

The layout of the system appears to be orthodox and is a 'combined system' as it receives connections from foul and surface water drainage.

The drainage pipe-work is of CI.

The manhole [MH28] was constructed of rendered brickwork and contains a CI bolted access chamber and benchings of concrete.

It does receive a connection from an untraced source, believed to be a rainwater pipe built into the structure.

The manhole cover is of CI, single seal with floor finish infill. The structural condition of the manhole was visually reasonable.

There are defects at the manhole, including:-

6 No. studs, nuts and washers are required for the internal access chamber.

A new cover plate is required for the internal access chamber.

The OTG is of CI with a CI grating.

8.3 18-21 Hand Court – Basement Level

The system is 'combined' as it receives connections from foul and surface water.

The layout of the system appears to be reasonably orthodox.

The system receives 2 No. connections from untraced sources, believed to be from RWPs.

There are sealed pipes

The drainage pipe-work was of CI with a clay outfall to the public sewer.
The manholes were constructed as follows:-

MH20	Brickwork
MH21	Unconfirmed as its could not be opened as it is below a carpet
MH22	Rendered Brickwork

All manholes contained an internal bolted CI access chamber and benchings of concrete

The manhole covers were as follows:-

MH20	CI, double seal, floor finish infill
MH21	Not established
MH22	CI, double seal

The structural condition of the manholes was visually as follows:-

MH20	Good
MH21	Not established
MH22	Reasonable

There were defects at manholes including the following:-

MH20	4 No. securing screws were missing from the manhole cover
MH22	8 No. nuts, studs and washers and a gasket are required for the access chamber The rodding eye cap on the intercepting trap arm requires replacement
MH21	The cover needs to be exposed from beneath the carpet to enable opening and inspection of the manhole.

The details of the assumed STBIGs could not be established as they are concealed below the floor finish.

8.4 22-23 Hand Court – Basement Level

The system appears to be of orthodox format.

The system appears to only receive foul drainage.

There are untraced pipes and some sealed pipes.

There were untraced drain pipes, including some commencing with buried traps

The drainage pipe-work is of clay [original system] and later installed pipe-work of UPVC. The outfall to the sewer was of clay.

The manholes were constructed as follows:-

MH11	Rendered Brickwork
MH12	Pre-cast concrete sections
MH13	Concrete
MH14 & MH17	Unconfirmed as unable to lift cover without damage
MH15, MH16, MH18 & MH19	Brickwork

MH11, MH12, MH13 & MH14 - Contained open channels of UPVC and/ or clay with benchings of concrete.

MH15, MH17, MH18 & MH19 - Contained open channels of clay with benchings of concrete.

MH16 – Contained an internal CI bolted access chamber with benchings of concrete.

Manhole covers were constructed as follows:-

MH11	A double cover, upper cover galvanised mild steel , single seal with floor finish infill Inner cover, galvanised mild steel, single seal
MH12, MH13, MH15, MH16, MH18 & MH19	Galvanised mild steel, single seal, floor finish infill
MH14 & MH17	Not confirmed, unable to lift covers without damage

The structural condition of the manholes was visually as follows:-

MH11, MH15, MH16, MH18 & MH19	Reasonable
MH12 & MH13	Good
MH14 & MH17	Unconfirmed

There were defects at manholes including the following:-

MH11	The upper cover is broken and requires replacing
MH14 & MH17	The covers need to be lifted, may require breaking out
MH15	4 No. cover securing screws are missing and require replacement A new rodding eye cap is required for the interceptor rodding arm
MH16	A new internal cover plate is required for the internal chamber 6 No. nuts, studs, washers and a gasket are required for the internal chamber
MH16, MH18 & MH19	Rat droppings visible on the benching

8.5 24-25 Hand Court & 45 Bedford Row – Basement Level

The system is 'combined' as it receives foul and surface water drainage.

The layout appears to be orthodox although some WPs [assumed to be later installations] connect to RWPs.

There are untraced pipes, [due to debris] and one untraced pipes due to a buried trap.

The pipe-work is of clay, with a clay outfall to the public sewer.

The manholes were as follows:-

MH8	Pre-cast concrete sections
MH9	Concrete
MH10	Brick

All manholes had open channels of clay with benchings of concrete.

Manhole covers were as follows:-

MH8	CI, double seal
MH9	CI, single seal
MH10	CI, double seal with floor finish infill

The structural condition of the manholes was visually as follows:-

MH8, MH9 & MH10	Good

There were defects at manholes including the following:-

MH8	Debris in channel
MH9	A new cover and frame are required

The OTG was of clay with a grating of metal.

The STBIG was of clay with a cover of metal.

8.6 46 Bedford Row – Ground Floor Level

The system is 'combined' as it receives the discharge from foul and surface water.

The layout of the system appears to be orthodox.

The main run pipe-work was of CI, with branches of clay.

MH7 was constructed of rendered brick with channels of clay and benchings of concrete.

The manhole cover was of CI, single seal.

The structural condition of the manhole was visually good.

8.7 46 Bedford Row – Basement Level

The system is 'combined' as it receives foul and surface water drainage.

The layout of the system is orthodox.

The pipe-work was of CI in main runs, with clay branches and a clay outfall to the public sewer.

The manholes were constructed as follows:-

MH11 & MH12 - Rendered brickwork, with channels of clay and benchings of concrete.

The manhole covers to MH1 & MH2 were of CI single seal.

The structural condition of the manholes was visually reasonable.

There was a defect at manhole MH1. 4 No. cover securing screws are missing and require replacement.

The OTBIGs were of clay with gratings of metal.

One gully in the front light-well was blocked and the light-well was flooded. We cleared the gully to enable it to drain. One gully had a solid cover [not a grating] of metal which had a large hole in it.

8.8 47 Bedford Row – Basement Level

The system is 'combined' as it receives connections from foul and surface water drainage.

The layout of the system is reasonably orthodox, although it receives a number of blind branches.

There are untraced connections, due to debris and another [to MH3] which is assumed to receive drainage at ground floor level from No. 47A.

The pipe-work is of clay with a clay outfall to the public sewer.

Note: See photo 79 for an apparently very old and interesting fountain or water feature at ground floor level in 47A Bedford Row.

The construction of the manholes was as follows:-

MH3 & MH9	Rendered brick

MH3 & MH4 - Have open channels of clay with benchings of concrete.

Manhole covers were as follows:-

MH3 & MH4	CI, double seal

The structural condition of the manholes was visually as follows:-

MH3	Good
MH4	Reasonable

There were defects at MH4 including:-

The cap at the rodding eye at the intercepting trap is cracked and requires replacement.

The rendering is cracked and bricks are split and require replacement or repair.

8.9 48 Bedford Row – Basement Level

The system is 'combined' as it receives foul and surface water drainage.

The layout of the system is unorthodox.

The pipe-work is of clay.

MH5 & MH6 – Were constructed of rendered brickwork with open channels of clay and benchings of concrete.

Manhole covers were as follows:-

MH5 – CI, Single seal.

MH6 galvanised mild steel, single seal.

The structural condition of the manholes was visually as follows:-

MH5 - Good

MH6 - Poor

There were defects at MH6 as follows:-

The chamber has 'dropped' approximately 50 to 75mm and there are large cracks and fractures in the chamber.

The OTBIGs were of clay with gratings of metal.

The OTG was of clay with a grating of metal.

In a vaulted area one STBIG has a broken cover.

8.10 The findings of the CCTV Survey

The findings of the CCTV survey are shown in detail for each surveyed pipe run in the CCTV report sheets in Appendix 10.2.

Only general comments or comments on specific defects are repeated in the following text:-

Where pipe runs have several defects of a similar nature in general only the most significant will be repeated here.

Note: The CCTV findings have not been separated on a building by building basis.

There was scale:-

MH1	-	BRANCH D	-	Heavy scale 25% cross sectional area loss from 4 o'clock to 8 o'clock
MH3	-	UNKNOWN DOWNSTREAM	-	Encrustation at joint [2 No.]
MH4	-	SEWER	-	Light scale - Encrustation at joint Light scale visible at belly in pipe
MH4	-	UNKNOWN UPSTREAM	-	Encrustation at joint [3 No.]
MH5	-	UNKNOWN UPSTREAM	-	Medium scale 10% cross sectional area loss from 4 o'clock to 8 o'clock
MH6	-	SEWER	-	Light scale from 5 o'clock to 7 o'clock
MH7	-	BRANCH B	-	Encrustation at joint