



REVISION C02
ALL COVER LEVELS AMENDED IN LINE LINE
WITH REVISED MASTERPLAN LEVELS.
OTHER CHANGES CLOUDED

MANHOLES IN THIS AREA
TO BE CO-ORDINATED
WITH TEMPORARY RAMP
CONSTRUCTION

HYDROBRAKE MH
MH SA11 15000
CL: 33.158
IL: 30.860
DESIGN FLOW: 18l/s
DESIGN HEAD 2.0m
PRODUCT REF:
MD-SHE-0175-1800-2000-1800
SUMP DEPTH: 500mm
1000 Ø FLOW PIPE
IL: 31.800

SADDLE
CONNECTION
TO EXISTING
SW CULVERT
IL: 28.330 TBC

PPIC F13
6000
CL: 33.170
IL: 32.344

HATCHED AREA (PALE BLUE) DENOTES FLOOD
COMPENSATION ZONE, WITH OVERFLOW PIPE TO THE
RIVER MEDLOCK. NON-RETURN VALVE IN CHAMBER
PRIOR TO OUTLET.

PUBLIC SEWER NOTED ON PUBLIC
SEWER RECORDS. DRAINAGE SURVEYS
HAVE CONFIRMED THIS DOES NOT EXIST.

FOR DETAILS OF SUSPENDED
DRAINAGE WITHIN UNDERCROFT
AREA REFER TO M&E DRAWINGS.

PROPOSED FILTER
DRAIN IN
PERMEABLE
PAVING SUB-BASE

PPIC SB5 6000
CL: 33.470
IL: 32.170
CATCHPIT
FILTER DRAIN OUTLET
LOWERED LOCALLY TO
1300mm DEEP

MHSB7 12000
CL: 33.142
IL: 31.128
NEW MH ON
EXISTING DRAIN.

MH SB9 12000
CL: 33.300
IL: 31.186, 31.330
MANHOLE TO BE BUILT ON
EXISTING 2250 SW DRAIN.
TO BE CONSTRUCTED TO
ALLOW CONNECTION OF
PHASE 1B

HYDROBRAKE MH
MHSB6 15000
CL: 33.189
IL: 31.550
DESIGN FLOW: 22l/s
DESIGN HEAD: 1.015m
PRODUCT REF:
MD-SHE-0207-2200-1015-2200
SUMP DEPTH 420mm
1500 Ø FLOW PIPE
IL: 32.250

ATTENUATION STORAGE
PLUVIAL CUBE BY Y-ESS OSA
8 x 3.5 x 1.075m (30.1m³)
IL: 31.700

STUB CONNECTION
FROM SB8 TO
WORKS BOUNDARY.
IL: 31.750

HOARDING LINE
NOTE: ALL DRAINAGE CONNECTIONS FOR RAIN
GARDENS & PERMEABLE PAVING TO BE INSTALLED,
READY FOR CONNECTION UPON INSTALLATION OF
WORKS WITHIN FUTURE PHASES

MINIMUM COVER OVER ATTENUATION
TANK IN TEMPORARY CASE TO BE 600mm

ATTENUATION STORAGE
PLUVIAL CUBE BY Y-ESS OSA
18.5m x 4.5m x 1.075m (89.5m³)
IL: 31.300

MH F20 1500/12000
CL: 31.460
IL: 25.760 TBC
BACKDROP CONNECTION
IL: 27.260
NEW MH ON EXISTING
COMBINED SEWER.
EXISTING IL TBC

1500 FW STUB
CONNECTION
IL: 30.22

MH F18
12000
CL: 33.400
IL: 28.452

MH SA15 (P1B)
12000
CL: 33.400
IL: 31.436
To be installed to
facilitate Building
9 drainage

MH F17
12000
CL: 33.455
IL: 28.780

1500 SW STUB
CONNECTION
IL: 31.334

IC SA5
6000
CL: 33.680
IL: 32.730
CATCHPIT

MHSA7
12000
CL: 33.650
IL: 31.594

PPIC SA6
6000
CL: 33.640
IL: 33.690
CATCHPIT

PPIC F7
6000
CL: 33.725
IL: 32.368

PPIC F6
6000
CL: 33.780
IL: 32.513

PPIC F4
6000
CL: 34.310
IL: TBC

PPIC F3
6000
CL: 34.345
IL: 32.560

MHSA1
12000
CL: 34.370
IL: TBC

PPIC SB1 6000
CL: 35.380
IL: 34.080

PPIC F1
6000
CL: 34.510
IL: 32.536

MHSA2
12000
CL: 35.315
IL: 33.980

MH SB8
12000
CL: 34.951
IL: 31.695
TO BE
CONSTRUCTED TO
ALLOW CONNECTION
OF PHASE 1B

MH SB4
12000
CL: 34.495
IL: 32.995

PPIC SB3
6000
CL: 34.510
IL: 32.536
CATCHPIT

MH SB8A
12000
CL: 33.810
IL: 31.543

MH SB8
12000
CL: 34.951
IL: 31.695
TO BE
CONSTRUCTED TO
ALLOW CONNECTION
OF PHASE 1B

MH SB8
12000
CL: 34.951
IL: 31.695
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TO BE
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ALLOW CONNECTION
OF PHASE 1B

- KEY**
- EXISTING SURFACE WATER DRAIN
 - EXISTING COMBINED WATER DRAIN
 - PIPE WORK TO BE ABANDONED
 - PROPOSED SURFACE WATER DRAIN
 - PROPOSED FOUL WATER DRAIN
 - ATTENUATION TANK
PLUVIAL CUBE BY Y-ESS OSA
(REFER TO MANUFACTURER'S DETAILS)
 - ATTENUATION TANK ACCESS BOX
(REFER TO MANUFACTURER'S DETAILS)
 - ATTENUATION TANK VENT/ VENT BOX
(REFER TO MANUFACTURER'S DETAILS)
 - LINEAR DRAINAGE CHANNEL
 - FILTER DRAIN 450mm WIDE 600mm
DEEP WITH PERFORATED 1000 PIPE
 - CONNECTION FROM DRAINAGE
CHANNEL TO FILTER DRAIN
 - OFFLINE POLYPROPYLENE INSPECTION
CHAMBER.
REFER TO BUILDING 10 & 11 DRAWINGS
 - SOIL VENT PIPE/ FLOOR GULLY
 - RAIN WATER PIPE
 - RODDING EYE
 - GULLY
 - PROPOSED FILTER DRAIN UNDER
PERMEABLE PAVING AREAS
 - INSPECTION PIPE FROM FILTER
DRAIN/ TREE PIT/ RAIN GARDEN
 - PROPOSED TREE PLANTING AREA
INCLUDING IRRIGATION SYSTEM
 - PROPOSED PERMEABLE PAVING
 - PROPOSED TREE PIT FILL AREA
 - FLOOD COMPENSATION AREA
 - EXTENT OF WORKS INCLUDED IN
PHASE 1A WHICH IS FOR
TEMPORARY ACCESS. FUTURE
BUILDING NOT PART OF THIS PHASE.
 - EXTENT OF WORKS INCLUDED IN
PHASE 1A WHICH IS FOR STOPPING
UP. FUTURE BUILDING NOT PART OF
THIS PHASE.
 - EXTENT OF WORKS IS NOT INCLUDED
IN PHASE 1A WORKS BUT HAS
GENERALLY BEEN TAKEN INTO
CONSIDERATION
 - PROPOSED PAVEMENT LAYING COURSE
DRAINAGE REFER TO DETAIL

FOR BUILDING DRAINAGE REFER TO
DRAWINGS:
MA1347-70-00-04 BUILDING 10
MA1347-70-00-05 BUILDING 11

FOR FLOOD COMPENSATION ZONE &
UNDERCROFT DRAINAGE REFER TO
DRAWING MA1347-70-00-06

FOR DRAINAGE DETAILS REFER AND
SECTIONS REFER TO MA1347-70-10-
SERIES OF DRAWINGS

FOR DRAINAGE DETAILS REFER AND
SECTIONS REFER TO MA1347-70-10-
SERIES OF DRAWINGS

SUSPENDED DRAINAGE IN
UNDERCROFT AREA TO BE DESIGNED
BY OTHERS.

- NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
 - DO NOT SCALE THIS DRAWING. ALL DETAILS AND DIMENSIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
 - ALL DIMENSIONS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR MAY WISH TO SURVEY ALL EXISTING DRAINAGE PRIOR TO COMMENCEMENT TO CONFIRM LOCATION AND CONDITION OF EXISTING DRAINAGE. POTENTIAL PRE-CLEANING TO BE UNDERTAKEN IN ORDER TO FACILITATE SURVEY IF REQUIRED.
 - ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
 - ALL EXISTING SERVICES TO BE ABANDONED SHALL BE EITHER GRUBBED OR GROUTED UP. GROUTING TO BE PERFORMED BY CAPPING ALL ENDS / CONNECTIONS AND FILLING THE RETAINING VOID WITH GROUT, IN ACCORDANCE WITH CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION (CESWI) 7TH EDITION.
 - ALL SOFT SPOTS TO BE REMOVED FROM BOTTOM OF EXCAVATIONS AND TO BE REFILLED TO FORMATION LEVEL WITH THE SAME MATERIAL AS PERMANENT WORKS WHICH REST IN IT.
 - ALL ADAPTABLE DRAINAGE WORKS INCLUDING WORKS TO EXISTING PUBLIC SEWERS TO BE UNDERTAKEN IN ACCORDANCE WITH "SEWERS FOR ADOPTION 7th EDITION" AND "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION" AND CONSTRUCTED TO THE RELEVANT STATUTORY UNDERTAKERS DETAILS.
 - ALL ADAPTABLE DRAINAGE PIPES WILL REQUIRE A MINIMUM OF 1200mm COVER, IN ACCORDANCE WITH SEWERAGE UNDERTAKERS REQUIREMENTS.
 - ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION", BS EN 752 2008 DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS AND THE BUILDING REGULATIONS APPROVED DOCUMENT H.
 - ALL PRIVATE DRAINAGE PIPES WITH A COVER OF LESS THAN 600mm IN NON-TRAFFICKED AREAS AND LESS THAN 900mm IN TRAFFICKED AREAS TO BE BEDDED AND SURROUNDED IN CONCRETE. COMPRESSIBLE MATERIAL SHALL BE PROVIDED AT EVERY PIPE JOINT. WHERE COVER EXCEEDS THIS, PIPES ARE TYPICALLY BEDDED AND SURROUNDED IN CLASS S. REFER TO PIPE EMBEDMENT DETAIL DRAWING FOR SPECIFIC TYPES.
 - COVER LEVELS, GULLY POSITIONS, AND BUILDING LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/LANDSCAPE ARCHITECT. CONTRACTOR TO ALLOW FOR ADJUSTMENT TO SUIT AGREED POSITIONS AND FINISHED LEVELS, AND CONFIRM ALL COVER LEVELS ON SITE.
 - ALL NEW CONNECTIONS INTO EXISTING MANHOLES (OR INTO EXISTING SEWERS) TO BE "SOFFITS LEVEL" UNLESS OTHERWISE NOTED.
 - FOR GRAVITY SEWERS, ALL DRAINAGE AND FITTINGS TO BE FLEXIBLY JOINTED UPVC TO BS EN 1401-1 CLAYWARE TO BS EN 295 CONCRETE TO BS EN 11-100.
 - A FLEXIBLE JOINT SHALL BE PROVIDED AS CLOSE AS FEASIBLE TO THE OUTSIDE FACT OF ANY STRUCTURE INTO WHICH A PIPE IS BUILT, COMPATIBLE WITH THE SATISFACTORY COMPLETION AND SUBSEQUENT MOVEMENT OF THE JOINT.
 - ALL SURFACE WATER DRAINS TO BE 150mm Ø & LAID AT 1:100 GRADIENT UNLESS NOTED OTHERWISE & NOT LESS THAN 1:150 IN ANY CASE.
 - ALL FOUL DRAINAGE TO BE 100mm DIAMETER UNLESS NOTED OTHERWISE ON THIS DRAWING OR MANHOLE SCHEDULE.
 - ALL PPICs TO BE APPROX. 1m DEEP UNLESS NOTED OTHERWISE.
 - BACKFILL TO DRAINAGE TRENCHES UNDER HARDSTANDING AREAS TO BE TYPE 1 SUB BASE MATERIAL. ELSEWHERE BACKFILL TO BE FREE DRAINING READILY COMPATIBLE MATERIAL FREE FROM RUBBISH AND ORGANIC MATTER, FROZEN SOIL, CLAY LUMPS AND LARGE STONES. TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT PIPES ARE ADEQUATELY PROTECTED FROM CONCENTRATED LOADING BY CONSTRUCTION TRAFFIC DURING THE CONSTRUCTION PERIOD.
 - ALL DRAINS TO BE CCTV SURVEYED ON COMPLETION OF THE WORKS.
 - DRAINAGE SUBJECT TO APPROVAL FROM UNITED UTILITIES AND MANCHESTER COUNCIL.

C10	Updated with partial Final Construction information for building handover	04.09.17	TMc	CG
C09	MHSB8 and MHSB9 amended MHSB8A added to accommodate constructed pipe run	26.07.17	HS	HS
C08	PROPOSED PAVEMNT ADDED	11.05.17	AMG	HS
C07	Tree Pit drainage added	12.04.17	TG	HS
C06	Amended in line with Utility Co-ordination Site Amendments added	15.11.16	ATL	CG
C05	Off-site S106 Connections Amended	14.09.16	ATL	CG
Rev:	Description:	Date:	By:	Chkd:

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Status: CONSTRUCTION

Project: THE FORMER BBC SITE
OXFORD ROAD, MANCHESTER

Drg Title: PHASE 1A DRAINAGE LAYOUT

Scale:	Size:	First Issue:	Drawn:	Checked:
1:500	A1	20.10.15	ATL	CG

Drg No:	Rev:
MA1347-70-00-01	C10

FINAL CONSTRUCTION- BUILDINGS ONLY
THE INFORMATION IS BASED ON CONFIRMATION
FROM THE CONTRACTOR OF THE INSTALLED
DRAINAGE. THERE MAY BE VARIATIONS ON SITE
WHICH ARE NOT REFLECTED ON THIS DRAWING
AND HAS NOT BEEN VERIFIED.