"RESIDUAL HAZARD REGISTER (RELATES TO CIVIL/STRUCTURAL MATTERS ONLY)
MUST BE READ IN CONJUNCTION WITH CURTINS RESIDUAL HAZARD REGISTER 080866-CUR-ZZ-XX-HA-X-00001.
HAZARDS THAT SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR HAVE NOT BEEN INDICATED ON THIS DRAWING. SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED, THE CONTRACTOR SHOULD NOTIFY ALL RELEVANT PROJECT TEAM MEMBERS."

## HAZARD REGISTER

| Hazard Ref. | Item (Feature, Element or Activity) | Potential Hazard Identified | Action (Information to Assist Control) |
|---|---|---|---|
| 3.00 Existing Buried & Overhead Services | | | |
| 3.01 | Existing UU Combined public sewers on site. | Damage to pipes during site basement works | CCTV Survey unlikely to accurately position due to depth of sewer (10m) sewer to be investigated prior to piling - during proof dig works to locate |
| 3.02 | Existing Live Services | Existing Live Services - particularly if services are to be retained through development. | Carry out additional surveys and investigations to locate and protect the services in co-ordination with Services Engineer/Statutory Undertakers. |
| 4.00 Demolition of Existing Structures/ Site Clearance | | | |
| 4.01 | Site Clearance | Contaminated Land | Contractor to review specific site investigation report and determine what measures are required for removing spoil from site. |
| 5.00 Excavations and Foundations | | | |
| 5.01 | Deep Excavation for attenuation tank | Excavation collapse/instability | Contractor method statements considering adequate support for excavations. Sequencing of works ot be considered. |
| 5.02 | Groundworks | Ground Gas | Undertake Site investigation to identify potential contamination in the ground. |
| 5.03 | Groundworks | Contamination in Ground | Site Investigation Undertaken and contamination identified. Contractor to review SI information. |
| 6.00 Materials and Processes | | | |
| 6.01 | Construction Loadings | Drainage components designed for permanent use and not taken temporary construction loadings into account. | Inform Contractor. Contractor to provide protection measures as part of Construction Methodology. |

OTHER DISCIPLINE DRAWING REFERENCES

THE DESIGN OF THIS SCHEME HAS BEEN DESIGNED IN ACCORDANCE WITH THE BELOW DRAWINGS AND INFORMATION.

TOPOGRAPHICAL SURVEY REF:
11072_001B / 1 TO 3 REV B. BY N.D. OLIVER, DATED DEC 2022

CCTV SURVEY:
SURVEY BY IWJS DATED JUNE 2023

UNITED UTILITIES RECORDS:
UUPS-GRD-275021, DATED APRIL 2021

STRUCTURAL ENGINEERS DRAWING REF:
1799-F2-DP2-G210-PL-00-3525 REV P04 CAPPING BEAM GA
1799-F2-DP2-G200-PL-B2-2610 REV P01 FOUNDATION GA

ARCHITECTS DRAWING REF:
10334-F2-SHP-G200-PL-GRD-001 GA GROUND FLOOR
10334-F2-SHP-G260-PL-GRD-001 STRUCTURAL LAYOUT GROUND FLOOR

LANDSCAPE ARCHITECTS DRAWING REF:
Z1-TPM-G710-PL-XX-3851 101 REV P3 LANDSCAPE GA DRAFT

M&E ENGINEERS DRAWING REF:
F2-FUT-G580-PL-GRD-001 REV P2 LEVEL 00 ABOVE GROUND DRAINAGE
F2-FUT-G580-PL-B1-001 REV P4 LEVEL B1 ABOVE GROUND DRAINAGE
F2-FUT-G580-PL-B2-001 REV P2 LEVEL B2 ABOVE GROUND DRAINAGE

DESIGN PHILOSOPHY

SURFACE WATER DESIGN
THE DESIGN PROVIDES CAPACITY UP TO THE 100 YEAR + 40% CLIMATE CHANGE EVENT.
SW FLOW RATE: 115L/S (BASED ON 50% REDUCTION OF EXISTING 1-YEAR BROWNFIELD FLOW RATE)

ATTENUATION
APPROXIMATE STORAGE REQUIREMENT:53M³ PROVIDED WITHIN CELLULAR STORAGE.
FURTHER ATTENUATION IS PROVIDED WITHIN PERMEABLE PAVING SUB-BASE & OVERSIZED PIPEWORK.

OUTFALL:
SITE DISCHARGES TO THE EXISTING 300Ø SEWER IN POND STREET.
A S106 AGREEMENT IS REQUIRED WITH UNITED UTILITIES:
PART 1 BY CURTINS
PART 2 BY CONCTRACTOR

LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.

POLLUTION TREATMENT/ SUSTAINABLE DRAINAGE:
A PROPORTION OF THE HARDSTANDING AREA IS SERVED BY PERMEABLE PAVING.
FOR CARRIAGEWAY DRAINAGE, FILTER TRAPS ARE TO BE FITTED TO ALL ROAD GULLIES. (INCLUDING EXISTING RETAINED GULLIES). TO BE SMART GULLY UNITS BY NAYLOR O.S.A
INFILTRATION IS NOT CONSIDERED APPROPRIATE FOR THIS SCHEME.

FOUL WATER DESIGN (PLOT F2 ONLY)

FW PEAK FLOW RATE:29.1L/S (BASED ON 3,380 DISCHARGE UNITS LOADING PROVIDED BY M&E DESIGNER)

OUTFALL:
SITE DISCHARGES TO THE EXISTING 375Ø SEWER IN OWEN STREET.
A S106 AGREEMENT IS REQUIRED WITH UNITED UTILITIES:
PART 1 BY CURTINS
PART 2 BY CONCTRACTOR

LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. TBC FOLLOWING FURTHER DESIGN AND SURVEY WORK.

KEY:

- RED LINE PLANNING BOUNDARY
- SITE OWNERSHIP BOUNDARY (OFFSET INSIDE REDLINE FOR CLARITY)
- PHASE 1 BOUNDARY (OFFSET INSIDE OWNERSHIP FOR CLARITY)
- PHASE 2 BOUNDARY (OFFSET INSIDE OWNERSHIP FOR CLARITY)
- EXISTING PUBLIC COMBINED SEWER (APPROXIMATE LOCATION)
- EXISTING PRIVATE SW SEWER
- EXISTING PRIVATE FW SEWER
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED SURFACE WATER (100Ø PERFORATED PIPE)
- PROPOSED FOUL WATER DRAINAGE
- PERMEABLE PAVING
- PROPOSED ATTENUATION TANK
- G — PROPOSED SURFACE WATER GULLY (FILTER TRAPS REQUIRED TO ALL GULLIES - NAYLOR SMAR!
- EG — EXISTING SURFACE WATER GULLY TO BE RETAINED (Filter Traps required to all Gullies - Naylor Smart Gullies O.S.A) GULLY CONNECTIONS TO BE RETAINED AS MUCH AS POSSII INTO PROPOSED DRAINAGE
- PROPOSED LINEAR DRAINAGE CHANNEL RENAKER TO ADVISE ON PRODUCT TO BE USED.
- EXISTING DRAINAGE TO BE ABANDONED
- PROPOSED FOUNDATION
- PROPOSED BASEMENT CAPPING BEAM

## GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DESIGN BASED ON TOPOGRAPHICAL SURVEY INFORMATION AVAILABLE AT THE TIME OF DESIGN.
3. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
4. ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
5. FOR DRAINAGE NOTES, REFER TO DRAWING Z1-CUR-G580-PI-GRD-92510.
6. FOR MANHOLE SCHEDULE, REFER TO DRAWING Z1-CUR-G580-PL-XX-92520.

EXISTING OUTFALL TO MEDLOCK RIVER

MH S1, 1200 DIA PCC RING CL 32.075 IL29.790

300mm SURFACE WATER SEWER 1:200

EXG MH S2, 1200 DIA PCC RING CL 32.900 TBC IL29.921

EXISTING 300mm SURFACE WATER SEWER 1:200

EXISTING OUTFALL PIPE, EXACT LINE AND DEPTH TBC

ALL MANHOLES AND DRAINAGE IN POND STREET TO BE SURVEYED!

ALL EXISTING CONNECTIONS TO THE EXISTING SEWER IN POND STREET TO BE RECONNECTED TO THE NEW SURFACE WATER SEWER IN POND STREET.

EXISTING CULVERT APPEARS TO SERVE ONLY ROAD GULLIES ALONG POND STREET AND CONNECTS TO FOUL SYSTEM (REF SURVEY Z1-RBL-JC10-PL-XX-002_Ver1). ADDITIONAL SURVEYS REQUIRED TO CONFIRM THIS IS ONLY SERVING POND STREET. POND STREET DRAINAGE WILL BE RECONNECTED TO NEW SURFACE WATER NETWORK TO RIVER OUTFALL. THEREFORE SHOWN AS TO BE REMOVED.

INDICATIVE TREE CORRIDOR - TREE PIT DETAILS TBC BY TPM

(ASSUMED) EXG SWMH1 CL 32.860 IL31.750

450Ø - 300Ø REDUCER PIECE REQUIRED.

S8 - 2100Ø FCC HYDROBRAKE REF: CTL-SHE-0408-1150-2100-1150 FLOW 115 l/s HEAD 1.8m CL 32.900 IL 29.979 (APPROX)

EXISTING PIPE TO BE REMOVED

EXISTING MH TO BE REMOVED

EXG MH S3, 1200 DIA PCC RING CL 33.050 TBC IL30.000

S7 - 1500Ø CL 32.920 IL 31.330

S13 - 1200Ø CATCHPIT CL 32.800 IL 30.590

DRAINAGE TO THIS AREA TBC DEPENDENT ON IMPERMEABLE OR PERMEABLE TARMAC.

DRAINAGE TO RAMP BOTTOM OF RAMP TO BE DESIGNED BY M&E ENGINEER

EXISTING LAYBY OUTSIDE PLANNING BOUNDARY ADDITIONAL DRAINAGE MAY BE REQUIRED IN THIS AREA. REQUIREMENTS TBC

(ASSUMED) EXG MANHOLE 7 CL 32.616 IL28.616 BD 31.360

(ASSUMED) EXG SWMH2 CL 32.580 IL31.370

MINIMUM 350mm STONE LAYER (TYPE 3) BELOW PERMEABLE PAVING BUILD UP

(ASSUMED) EXG SWMH3 CL 32.230 IL31.700

S5B - 450Ø CATCHPIT MH CL 32.490 IL 31.650

EXMH21 CL 32.176 IL21.680

F2 - 1200Ø CL 32.200 IL 31.165 POTENTIALLY ONLINE EXG

S5 - 1500Ø CATCHPIT MH CL 32.360 IL 30.100

PERFORATED PIPES IN SUB-BASE TO BE 100Ø @ 5m CENTRES. MIN GRADIENT TO BE 1:100

MINIMUM 350mm STONE LAYER (TYPE 3) BELOW PERMEABLE PAVING BUILD UP

BUILDING F1 DRAINAGE CURRENTLY NOT TO STAGE 4 LEVEL OF DETAIL.

STUBS FOR BUILDING F1 DRAINAGE. ACCURATE LOCATION & INVERT LEVELS TO BE PROVIDED BY CONTRACTOR

S4 - 1500Ø CATCHPIT MH CL 32.160 IL 30.140

PIPE THROUGH EDGING/UPSTAND

EDGING/ UPSTAND TO SEPARATE PERMEABLE BUILD UP ZONES

PIPE THROUGH UPSTAND

EDGING/UPSTAND REQUIRED TO EDGE OF PERMEABLE ZONE

F1 - 1200Ø CL 32.200 IL 31.200 TO BE CONSTRUCTED IN BUILDING F1 PHASE

S5A - 450Ø CATCHPIT MH CL 32.425 IL 31.730

PERFORATED PIPES IN SUB-BASE TO BE 100Ø @ 5m CENTRES. MIN GRADIENT TO BE 1:100

S3 - 1500Ø CATCHPIT MH CL 32.320 IL 30.480 TO BE CONSTRUCTED IN BUILDING F1 PHASE

PROPOSED LEVELS TBC BY TPM

EDGING/ UPSTAND REQUIRED TO SEPARATE PERMEABLE BUILD UP ZONES

MINIMUM 150mm STONE LAYER (TYPE 3) BELOW PERMEABLE PAVING BUILD UP

CHANNELS TO BE COORDINATED WITH TREE PITS

PROPOSED ATTENUATION TANK SIZED FOR THE 100 YR +40% CC EVENT 10 X 7 x 0.8m DEEP, PROVIDING 54m³ ATTENUATION BASED ON 95% VOID RATIO, BASED ON POLYSTORM PSM1A/ POLYSTORM PSM4 UNITS. BASE LEVEL: 30.50 TOP OF TANK LEVEL: 31.30 MIN GL: 32.48 (1.18m COVER) MAX GL: 32.65 (1.35m COVER) TO BE CONSTRUCTED IN BUILDING F1 PHASE

S2 - 1200Ø CL 32.510 IL 30.570 TO BE CONSTRUCTED IN BUILDING F1 PHASE

APPROXIMATE ROUTE OF EXISTING 375mm PUBLIC SEWER. LOCATION TO BE CONFIRMED BY SURVEY. 6m EASEMENT REQUIRED BY UNITED UTILITIES WITHIN PRIVATE LAND, EASEMENT POSITIONED 3m EITHER SIDE OF CENTRELINE. ALL PROPOSALS WITHIN THE EASEMENT TO BE AGREED WITH UNITED UTILITIES.

S6 - 1500Ø CL 33.330 IL 31.980

| Rev: | Description: | Date: | By: | Chkd: |
|---|---|---|---|---|
| P02 | DRAFT ISSUE FOR COMMENT | 13/09/23 | ATL | CG |
| P01 | ISSUED FOR STAGE 3/PLANNING CONDITIONS | 28/07/23 | KS | CG |

Curtins
Merchant Exchange, 17-19 Whitworth Street West, Manchester, M1 5WG
0161 236 2394
manchester@curtins.com
www.curtins.com
Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
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Status: SUITABLE FOR INFORMATION — S2

Project: PLOT F, GREAT JACKSON STREET

Drg Title: PROPOSED DRAINAGE LAYOUT

| Drawn By | Designed By | Checked By |
|---|---|---|
| KS | KS | CG |

| Project No | Date | Scales @ A0 |
|---|---|---|
| 078524 | 25/07/23 | 1:250 |

Project Code - Originator - Function - Spatial - Form - Discipline - Number: Z1-CUR- G580 - PI - GRD - 92500 — Revision: P02

3.02 4.01 5.02 5.03 6.01 SITE WIDE HAZARDS

1:1 0 10 20 30 40 50 60 70 80 90 100

Date/Time:25 Jul 2023 - 15:50:05 S:\Z1 Great Jackson Street\04 Production\44 Models\Civil 3D\078524 - Plot F Great Jackson Street.dwg