DESIGN PHILOSOPHY
SOUTH HEYWOOD SPINE ROAD

CATCHMENT AREA	1.49ha
TOTAL DRAINED AREA	1.49ha
GREENFIELD RUN-OFF ALLOWANCE	Q1 = 7 l/s/Ha Q30 = 13 l/s/Ha Q100 = 16 l/s/Ha
HIGHWAY FLOW ALLOWANCE	Q1 = 10.5 l/s Q30 = 19.4 l/s Q100 = 23.9 l/s Q100+30% CC = 23.9 l/s
M5-60	18.50
RATIO R	0.32

DESIGN PHILOSOPHY

SURFACE WATER DRAINAGE DESIGN IS BASED ON THE PRINCIPLES SET IN THE APPROVED FRA PRODUCED BY CAMPBELL REITH FOR PLANNING APPLICATION 16/01399/HYBR

SURFACE WATER DISCHARGE IS TO THE BRIGHTLEY BROOK TRIUBORY WHICH FLOWS FROM SOUTH TO NORTH TO THE WEST OF PLOT 4. THE DISCHARGES ARE LIMITED TO THE PREDEVELOPMENT GREENFIELD RUN-OFF RATES FOR THE Q1, Q30 AND Q100 STORMS. ATTENUATION IS PROVIDED BY A BASIN LOCATED TO THE WEST OF THE SPINE ROAD ADJACENT TO PLOT 1 AND BU OVERSIZED PIPES TO THE SOUTHERN SECTION OF THE SPINE ROAD. FLOWS ARE CONTROLLED BY A SERIES OF ORIFICES AND A HYDROBRAKE CHAMBER. THE FINAL HYDROBRAKE IS SUPPLEMENTED BY A HIGHER LEVEL ORIFICE WHICH ALLOWS A VARIABLE RATE TO BE ACHIEVED FOR THE DIFFERENT STORM RETURN PERIODS.

N

0 5 10 15 20 25m
SCALE 1:500

ROAD AREA = 1.49Ha
100% IMPERMEABLE = 1.49Ha
DISCHARGE RATES
Q1 = 10.5l/s
Q30 = 19.4l/s
Q100 = 23.9l/s
Q100 + 30% = 23.9l/s

HEADWALL
IL.116.00(300ø)

H1.019 / 300ø / 32m / 1:300

H1-20 (1500ø)
CL.119.30
IL.117.851(300ø)

H1.018 / 300ø / 90m / 1:100

H1-19 (1500ø)
CL.120.100
IL.118.774(300ø)

H1.017 / 300ø / 10m / 1:300

H1.016 / 300ø / 15m / 1:150

H1-18 (1500ø)
CL.120.200
IL.118.776(300ø)

H1.015 / 300ø / 20m / 1:300

H1-17 (1500ø)
CL.121.500
IL.118.828(300ø)

H1.014 / 300ø / 31.8m / 1:300

H1-15 (1500ø)
CL.120.300
IL.118.896(300ø)

H1-14 (1500ø)
CL.121.500
IL.119.00(300ø)

S104 ADOPTABLE
FOUL WATER PUMP STATION
TO UU REQUIREMENTS

FWPS

H1-13 (1500ø)
HYDROBRAKE
SHE-0141-1050-1500-1050 (OSA)
DESIGN HEAD 1.5m
DESIGN FLOW 10.5 l/s
ORIFICE PLATE
DIA 200ø
1.5m ABOVE INVERT
CL.121.288
IL.119.037(300ø)

F-1-7 (1200ø)
CL.122.050
IL.120.35(150ø)

150Ø FW STUB FOR FUTURE DEVELOPMENT IL 120.00

H1.005 / 225ø / 23.4m / 1:150

H1.004 / 150ø / 36m / 1:50

H1.011 / 600ø / 41.8m / 1:124

H1-12 (1500ø)
ORIFICE PLATE (100ø)
CL.122.003
IL.120.230(600ø)
IL.119.074(300ø)

F-1-8 (1200ø)
CL.122.100
IL.120.45(150ø)

150Ø FW STUB FOR FUTURE DEVELOPMENT IL 121.5

H1.010 / 600ø / 68.9m / 1:120

H1-11 (1500ø)
CL.122.752
IL.120.575(600ø)

F-1-6(1200ø)
CL.122.700
IL.121.20(150ø)

150Ø FW STUB FOR FUTURE DEVELOPMENT IL 122.00

F-1-5 (1200ø)
CL.123.890
IL.121.89(150ø)

H1-10 (1500ø)
ORIFICE PLATE (75ø)
CL.124.451
IL.122.640(600ø)
IL.121.150(600ø)

H1.009 / 600ø / 12.5m / 1:300

F-1-4 (1200ø)
CL.124.400
IL.122.700(150ø)

150Ø FW STUB FOR FUTURE DEVELOPMENT IL 122.90

H1-9 (1500ø)
CL.125.267
IL.123.355(600ø)
IL 122.750(600ø)

H1.008 / 600ø / 43.7m / 1:300

F-1-3 (1200ø)
CL.125.25
IL.123.56(150ø)

150Ø FW STUB FOR FUTURE DEVELOPMENT IL 124.7

H1.006 / 600ø / 43.7m / 1:300

F-1-2 (1200ø)
CL.126.20
IL.123.80(150ø)

150Ø FW STUB FOR FUTURE DEVELOPMENT IL 124.00

H1.007 / 600ø / 43.7m / 1:300

H1-8 (1500ø)
ORIFICE PLATE (150ø)
CL.127.820
IL.124.508(600ø)
IL.123.500(600ø)

H1.006 / 225ø / 12.5m / 1:150

H1-7 (1500ø)
CL.127.820
IL.126.020(225ø)
IL.125.000(600ø)

H1-6-HB (1500ø)
HYDROBRAKE
SHE-0100-7000-2800-7000 (OSA)
CL.127.950
IL.126.440(450ø)
IL.126.100(375ø)
IL.126.100(225ø)

H1.005 / 375ø / 73m / 1:80

H2.005 / 450ø / 29.3m / 1:500

H1-5 (1500ø)
CL.128.753
IL.127.015 (375ø)

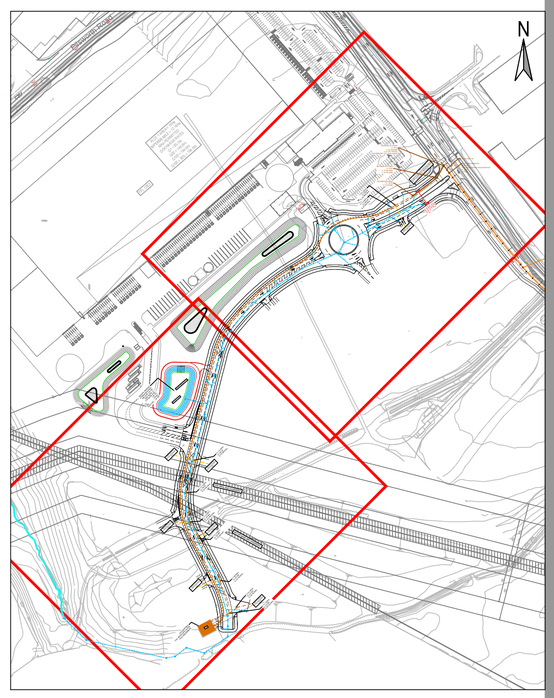
HIGHWAY DRAINAGE ATTENUATION BASIN
BED LEVEL 124.700
SIDE SLOPES 1:3
TOP WATER LEVEL
Q1 - 126.710
Q30 - 126.930
Q100+30% - 127.300

HIGHWAY DRAINAGE BASIN

BED LEVEL 126.5m

GAS MAIN AND EASEMENT

WATER MAIN AND EASEMENT



REFER TO H.S38.05.01

DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

GENERAL NOTES.

a. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT WYG DRAWINGS, SPECIFICATIONS, STANDARD DETAILS AND C.D.M. RISK MANAGEMENT FORMS FOR THE WORKS.
b. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.
c. THE TOPOGRAPHICAL SURVEY IS BASED ON INFORMATION RECEIVED FROM INTELLIGENCE BUILDINGS INFRASTRUCTURE; TITLE - TOPO SURVEY WITH PHASE 1 /2 DEVELEOPMENT RED LINE BOUNDARIES, DRG No 4846_SP(90)104; DATE 17/12/18.
d. THE INFORMATION USED IN PREPARATION OF THIS AND ALL OTHER WYG DESIGNS AND DRAWINGS IS NOT WARRANTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SURVEY INFORMATION PROVIDED AND REPORT ANY ANOMALIES TO WYG.
e. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ASHTON SMITH MASTER PLAN AND DESIGN CODE.
f. DESIGNED IN ACCORDING WITH DESIGN CONSTRUCTION GUIDANCE, SEWERAGE CODES FOR ADOPTION.
g. HIGHWAYS DESIGN TO STORM RETURN PERIODS, Q1, Q30, AND Q100 + 30% CLIMATE CHANGE ALLOWANCE.
h. HIGHWAY TO BE POSITIVELY DRAINED BY TRAPPED ROAD GULLIES AT REGULAR SPACINGS DISCHARGING TO CARRIER DRAIN.
i. DISCHARGE RATES RESTRICTED TO:

Q1	-	10.5 l/s
Q30	-	19.4 l/s
Q100 + 30%	-	23.9 l/s

NOTES

1. SITE PLAN FROM 20019-ASA-VS-ZZ-DR-A-9001 MASTERPLAN, RECEIVED 13 OCT 2020
2. CONDITIONS OF OUTFALL TO BRIGHTLY BROOK TRIBUTORY TO BE AGREED WITH ROCHDALE BOROUGH COUNCIL AS LEAD LOCAL FLOOD AUTHORITY AND / OR THE ENVIRONMENT AGENCY
3. ALL DRAINAGE DESIGN IS IN ACCORDANCE WITH DMRB AND THE SPECIFICATION FOR HIGHWAY WORKS.
4. ALL SUDS DESIGN IS IN ACCORDANCE WITH CIRIA 753 - THE SUDS MANUAL
5. SURFACE WATER CONNECTION TO THE BRIGHTLY BROOK WATERCOURSE SUBJECT TO S23 LAND DRAINAGE CONSENT FROM ROCHDALE METROPOLITAN BOROUGH COUNCIL
6. FOUL WATER IN SOUTH HEYWOOD SPINE ROAD SUBJECT TO S104 APPROVAL UNITED UTILITIES

KEY

- HWD — HIGHWAY WATER DRAIN (S38 ADOPTABLE)
- HW MH — HIGHWAY WATER MANHOLE (S38 ADOPTABLE)
- G — HIGHWAY WATER GULLY (S38 ADOPTABLE)
- FW MH — FOUL WATER SEWER (S104 ADOPTABLE)
- FWD — FOUL WATER MANHOLE (S104 ADOPTABLE)
- FWD — FOUL WATER RISING MAIN (S104 ADOPTABLE)
- FWD — FOUL WATER DRAIN (PRIVATE)

PLANNING ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P3	PLANNING ISSUE	OC	DB	JP	28.10.20
P2	PLANNING ISSUE	OC	CR	JP	23.10.20
P1	ISSUED FOR INFORMATION	OC	JP	JP	22.10.20

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Project:

SOUTH HEYWOOD COMMERCIAL

Drawing Title:

SPINE ROAD
DRAINAGE GENERAL ARRANGEMENT
SHEET 2

Scale @ A1	Drawn	Date	Checked	Date	Approved	Date
1:500	OC	OCT 2020		OCT 2020		OCT 2020

Project No.	Office	Type	Drawing No.	Revision
A104444-8	21	C	H.S38.05.02	P3

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