

DO NOT SCALE

S104 DRAINAGE LEGEND

- 150mm 1/100
- Foul water sewer to be adopted under S104 agreement
- Foul water manhole Type C to be adopted under S104 agreement
- Foul water inspection chamber Type D to be adopted under S104 agreement
- 150mm 1/100
- Surface water sewer to be adopted under S104 agreement
- Surface water catchpit manhole Type B to be adopted under S104 agreement
- Surface water manhole Type C to be adopted under S104 agreement
- Surface water inspection chamber Type D to be adopted under S104 agreement

PRIVATE LEGEND

- 150mm 1/100
- Private foul water drain
- Private FW Inspection Chamber min. 300mm dia. to max depth 1200mm to BS EN 13598-1 or BS EN 13598-2
- Private FW shallow access chamber with 100mm dia. pipe outfall to max. depth of 600mm to BS EN 13598-1
- Internal gully to Architects specification
- Foul water backdrop connection
- Private surface water drain
- Private surface water manhole
- Private surface water catchpit manhole
- Surface water flow control manhole
- Surface Water Silt Trap
- Private SW Inspection Chamber min. 300mm dia. to max depth 1200mm to BS EN 13598-1 or BS EN 13598-2
- Private SW shallow access chamber with 100mm dia. pipe outfall to max. depth of 600mm to BS EN 13598-1
- Surface water rodding eye
- Perforated collector pipe
- Permovoid diffuser unit
- Polypipe rainwater back inlet gully
- Trapped road gully
- Marshalls mini beany drainage kerb with side outlet outfall and silt box
- Channel drain and trapped outfall unit
- Denotes extent of permeable block paved car park.
- Extent of culverted watercourse as determined by Laser Survey (Encompass Surveys June 2023)
- Proposed finished floor level
- Proposed step in FFL
- Proposed level
- Existing level
- Proposed gradient - shown as flat if less than 1 in 100
- Proposed permeable sub base formation level
- Proposed bank and gradient
- Denotes extent of additional Exposed Brickwork below standard, with max. additional height as indicated.
- Denotes extent of Gravel Board on fence line with max. level difference of 0.3m
- Denotes extent of retaining wall with max. retaining height shown.
- Denotes extent of Raised Damp Proof Course, with max. height as indicated. To be in accordance with Bellway Standard Detail A/SD/S10/B/12 Detail B
- Denotes extent of Tanking with max. height indicated. To be in accordance with Bellway Standard Detail A/SD/S10/B/22 rev D
- Proposed contours at 20mm increments
- Proposed contours at 100mm increments
- Site Boundary
- Proposed private street lighting column. Refer to drawing WLC907-PRV-1300-001 R1 (WLC, October 2023)
- Proposed timber bollard

ENGINEERING NOTES

- This drawing to be read in conjunction with all relevant Architects, Engineers and Subcontractors drawings and details.
- This drawing is based on topographical survey and utility mapping survey by Warner Surveys. Drawing Nos. RT/222/0002/P/0001 & RT/222/0002/P/0002 Dated 02/03/2022 and laser survey by Encompass Surveys: Drawing No. ENG/070723-2679-1 Dated June 2023
- All levels relate to levels given on survey drawing.
- Refer to Architects drawings for details of all paving types & patterns, soft landscaping, fences, gates & bollards.
- For lighting, service supplies & ducting requirements, refer to M&E drawings.
- All works to be carried out in accordance with Sewers for Adoption 7th Edition, BS EN 752 'Drain and sewer systems outside buildings' and the current edition of The Building Regulations 'Approved document H'.
- New drainage connections are to be made with appropriate lengths of rocker pipes & couplings.
- All manhole chamber covers to be installed parallel to final kerbs, edgings, paving joints or building lines as appropriate.
- This drawing details all below ground drainage up to finished floor level. For details of drainage above finished floor level, refer to Architects drawings.
- All stock connections under buildings to be minimum 100mm diameter solid PVC-U to BS EN 1401-1/BS4660 & laid at a minimum gradient of 1 in 40 unless otherwise noted. If the stock is greater than 100mm then the diameter of the connection is to be increased to match it
- All RWP connections to be minimum 100mm diameter solid PVC-U to BS EN 1401-1/BS4660 & laid at a minimum gradient of 1 in 80 unless otherwise noted. If the RWP is greater than 100mm then the diameter of the connection is to be increased to match it.
- All private foul water pipework up to 150mm in diameter to be PVC-U to BS EN 1401-1/BS4660.
- All private surface water pipework up to 150mm in diameter to be solid PVC-U to BS EN 1401-1/BS4660. All private surface water pipework 225mm and above to be structured wall plastic sewer pipe complying with clause 518 of the specification for highway works.
- Plastic chambers shall comply with BS EN 1917 and BS 5911-3.
- All adaptable foul water and surface water pipework up to 225mm in diameter to be Kitemark certified Vitrified Clay (VC) with flexible spigot and socket joints and shall comply with the requirements of BS EN 295. All adaptable foul water and surface water pipework 300mm and above to be concrete sewer pipe with flexible spigot and socket joints and shall comply with the requirements of BS EN 1916 and BS 5911: Part 1.
- On completion of development all drainage shall be jet cleaned and CCTV surveyed.
- Redundant drainage & services marked to be removed are to be dug out with chambers demolished & void filled with Type 1 material to clause 803 & 806.
- All road gully connections to be minimum 150mm diameter solid PVC-U pipework to BS EN 1401-1/BS4660 and laid at a minimum gradient of 1 in 150.
- All existing services shown are based on topographical survey by Warner Surveys. Location of all services in close proximity to works should be confirmed by means of trial pits under supervision of statutory undertaker & in accordance with HSE document 'Avoiding Danger from Underground Services'

C4	GRAVEL BOARDS REMOVED FROM SOUTH AND WEST BOUNDARIES FOLLOWING SITE INSPECTION. FOUL WATER OUTFALL UPDATED FOLLOWING SITE REPORT OF OBSTRUCTIONS.	MW	06.03.25
C3	SITE PLAN UPDATED OUTSIDE BLOCK C. MANHOLE COVER LEVELS UPDATED AROUND SECTION 38 AREA.	GH	06.12.24
C2	BLOCK C SIP LOCATIONS UPDATED. PATH TO REAR OF EXISTING PROPERTIES IN ABSENCE. FOUL WATER OUTFALL UPDATED AND UPSTREAM NETWORK UPDATED TO SUIT.	GH	12.08.24
C1	ISSUED FOR CONSTRUCTION.	GL	19.01.24
MK	REVISION	BY	DATE

DRAWING STATUS

FINAL

CLIENT



DRAWING TITLE

ENGINEERING LAYOUT

PROJECT

Project Number P22-1222

CARTERS, READING



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Drawn GH Chkd A/R Scales 1:200 @ A1 Date APRIL 2023

Purpose of Issue

FOR CONSTRUCTION

Drawing Number P22-1222-100 Revision C4

ALIGNMENT AND INTERNAL EXTENT OF CULVERTED WATERCOURSE AS RECORDED DURING LASER SURVEY BY ENCOMPASS SURVEYS (JUNE 2022). EXTERNAL WALL DIMENSIONS UNKNOWN. HEAD OF BARREL VAULTED CEILING RECORDED DURING LASER SURVEY. CEILING LEVELS BEYOND SITE BOUNDARY RESTRICTED BY RANGE OF LASER LEVEL EQUIPMENT FROM ENTRY MANHOLE ALONG CAVERSHAM ROAD.

CONTRACTOR SHALL ENSURE NO PLANT OR MATERIALS ARE STORED WITHIN 3m OF EXISTING CULVERT. CONTRACTOR SHALL SEEK ADVICE FROM STRUCTURAL ENGINEER FOR ALL EXCAVATION WORKS IN CLOSE PROXIMITY TO THE CULVERT.

ALIGNMENT AND INTERNAL EXTENT OF CULVERTED WATERCOURSE AS RECORDED DURING LASER SURVEY BY ENCOMPASS SURVEYS (JUNE 2022). EXTERNAL WALL DIMENSIONS UNKNOWN. INVERT LEVEL OF CULVERT ASSUMED TO BE 1.6m BELOW RECORDED CEILING VAULT LEVELS.

FLOW CONTROL CHAMBER
HYDRO-BRAKE CHAMBER WITH INTERNAL WEIR WALL TO BE FITTED WITH A COMPLEX FLOW CONTROL SYSTEM MOUNTED ON THE INTERNAL WEIR WALL TO THE FOLLOWING SPECIFICATION:
HYDRO-BRAKE
RST = MD-SHE-124-7100-1000-7100
INVERT LEVEL = 36.47m AOD
DESIGN HEAD = 1.0m
ORIFICE DIAMETER = 124mm
DESIGN FLOW = 7.1/s
(UP TO 30YR+35SDCC EVENT)
ORIFICE
INVERT LEVEL = 37.48m AOD
ORIFICE DIAMETER = 150mm
DESIGN FLOW = 23.2/s
(UP TO 100YR+40SDCC EVENT)
RST
TOP LEVEL = 37.79m AOD

EXISTING SURFACE WATER DRAINAGE SHOWN AS SHOWN ON LAND REGISTRY PLAN DATED 02.05.1973. ROUTE IS INDICATIVE. DRAINAGE NOT IDENTIFIED DURING TOPOGRAPHICAL SURVEY. ALIGNMENT, DEPTH AND CONDITION OF EXISTING DRAINAGE TO BE CONFIRMED BY CCTV SURVEY PRIOR TO INSTALLING ANY FOUNDATIONS.