

1. DRAINAGE DESIGN AND CONSTRUCTION IS IN ACCORDANCE WITH SPECIFICATIONS FOR ADAPTION 7TH EDITION, WELSH MINISTERS STANDARDS AND THE REQUIREMENTS OF THE STATUTORY UNDERTAKER.
2. ALL ADAPTABLE MATERIALS AND WORKMANSHIP TO CONFORM TO PART 6 OF SEWERS FOR ADAPTION 7TH EDITION.
3. ALL SVP, RWP AND BIG CONNECTIONS ARE INDICATIVE AND MUST BE CONFIRMED BY ARCHITECT DRAWING 7TH EDITION.
4. PIPE GRADIENTS: SOU OF BUILDING TO CONNECTS MANHOLE 1 TO 8 AND 10 TO 11 IN ACCORDANCE WITH PART 1 OF THE 2002 BUILDING REGULATIONS, TABLE 6. ALL INVERTS TO SVP WITHIN 3 STOREY BUILDINGS MUST BE 750mm IN ACCORDANCE WITH BUILDING REGULATIONS.
5. TOLERANCES IN PIPE LAYING TO BE IN ACCORDANCE WITH SEWERS FOR ADAPTION 7TH EDITION CLAUSE 4.5.9
6. FOR PIPES 150-450mm DIA, ALL ROCKER PIPES TO BE IN ACCORDANCE WITH "SEWERS FOR ADAPTION" 7th EDITION.
7. ENGINEERING BRICKS SHALL NOT CONTAIN FROGS OR HOLES.
8. BRICKWORK TO MANHOLES TO BE ENGLISH BOND.
9. WHERE PIPES SURROUNDED IN CONCRETE, FLEXIBILITY TO BE MAINTAINED AT PIPE JOINTS BY THE USE OF SUITABLE COMPRESSIBLE MATERIAL SUCH "FLEXCELL" OR "FIBREBOARD".
10. ALL MANHOLE COVERS AND FRAMES MUST COMPLY WITH BS EN124 CONCRETE SLABS TO BE 400mm DIA0 AND BE 150mm DEEP MANHOLE COVERS IN CAR PARKING AREAS AND DRIVES TO BE GRADE B125. WHILST LANDSCAPED AREAS MAY BE GRADE A15. ALL INVERTS TO BE IN ACCORDANCE WITH PART 1 OF BUILDING REGULATIONS 2002, TABLES 11 & 12.
11. PIPEWORK MATERIALS AS SPECIFIED WITH SEWERS FOR ADAPTION 7th.
 - 10a. CLAY PIPES SEE E2 18 SPA 7th.
 - 10b. PLASTIC PIPES SEE E2 21 SPA 7th.
 - 10c. CONCRETE PIPES SEE E2 16 SPA 7th.
12. GRANULITHIC BENCHING TO MANHOLES TO BE 40mm THICKNESS MINIMUM.
13. PRECAST CONCRETE CHAMBER RINGS TO BE REINFORCED.
14. THE SLOPE OF BENCHING IN ALL CASES SHOULD BE 1 IN 30.
15. MANHOLES SHALL NOT INCORPORATE DOUBLE SQUARE OR DOUBLE OBLIQUE CHANNEL JUNCTIONS IN THEIR INVERTS.
16. ALL INCOMING PIPES SHALL BE SURROUNDED WITH 150mm OF CONCRETE TO THE FACE OF THE COLLAR OF THE FIRST FLEXIBLE JOINT AND THE OUTGOING PIPE SHALL ALSO BE SURROUNDED TO WITHIN 50mm OF THE FIRST FLEXIBLE JOINT AND A COMPRESSIBLE FILLER USED AS A FORMER BETWEEN THE CONCRETE SURROUND AND DOWNSTREAM PIPE COLLAR.

17. ALL UNDERGROUND SERVICES TO BE CONFIRMED BY CONTRACTOR PRIOR TO COMMENCEMENT ON SITE. ANY DISCREPANCIES TO BE REPORTED TO ENGINEER.
18. THE MINIMUM DEPTH OF COVER TO THE CROWN OF GRAVITY PIPE WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
 - a) DOMESTIC GARDENS AND DRIVEWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS, 0.35m;
 - b) DOMESTIC DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT REDUCED TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.9m;
 - c) DOMESTIC DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITH HEIGHT REDUCED TO PREVENT ENTRY BY VEHICLES WITH A GROSS ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.9m;
 - d) RURAL LANEWAYS AND PUBLIC OPEN SPACE, 0.9m;
 - e) OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 1.2m.
19. ROAD GULLIES TO BE TRAPPED FOR CONNECTION TO PROPOSED COMBINED SEWER.
20. NO DEEP OR WIDE ROUTED TREES TO BE PLANTED WITHIN CLOSE PROXIMITY OF THE PROPOSED AND EXISTING PUBLIC SEWER SYSTEM.

The developer must self-vet and certify that the design criteria, material standards and workmanship specifications for the proposed adoptable sewers are in accordance with those set out in "Sewers for Adoption" 7th Edition (SFA 7th), The Welsh Ministers Standards and the requirement of DCWW as the Statutory Sewerage Undertaker.

The Landscaping arrangements & Drainage design conforms to the requirements setout in B3.1.13 of SFA 7th.

Subject to a Section 104 Adoption Agreement being complete, a Section 106 application to connect must be made to DCWW the developer shall give 21 days' notice prior to connection. The works may only be undertaken by an SSIP Health & Safety approved contractor.

8. BRICKWORK TO MANHOLES TO BE ENGLISH BOND.
9. ALL PIPES SURROUNDED IN CONCRETE, FLEXIBILITY TO BE MAINTAINED AT THE JOINTS BY THE USE OF SUITABLE COMPRESSIBLE MATERIAL (i.e. "FLEXCELL" OR "FIBREBOARD").
10. ALL MANHOLE COVERS AND FRAMES MUST COMPLY WITH BS EN 242 COVERS IN ROADS TO BE GRADE D400 AND BE 150mm DEEP. MANHOLE COVERS IN CAR PARKING AREAS AND DRIVES TO BE GRADE D150. WHERE LANDSCAPING MAY BE REQUIRED A15. ALL TO BE SIZED IN ACCORDANCE WITH PART H OF BUILDING REGULATIONS 2002, TABLES 11 & 12.
11. PIPEWORK MATERIALS AS SPECIFIED WITHIN SEWERS FOR ADOPTION.
 - 10a. CLAY PIPES SEE E2 18 SFA 75th.
 - 10b. PLASTIC PIPES SEE E2 21 SFA 75th.
 - 10c. CONCRETE PIPES SEE E2 16 SFA 75th.
12. GRANULITIC BENCHING TO MANHOLES TO BE 40mm THICKNESS MINIMUM.
13. PRECAST CONCRETE CHAMBER RINGS TO BE REINFORCED.
14. THE SLOPE OF BENCHING IN ALL CASES SHOULD BE 1 IN 30.
15. MANHOLES SHALL NOT INCORPORATE DOUBLE SQUARE OR DOUBLE OBlique CHANNEL JUNCTIONS IN THEIR INVERTS.
16. ALL INCOMING PIPES SHALL BE SURROUNDED WITH 150mm OF CONCRETE TO THE FACE OF THE COLLAR OF THE FIRST FLEXIBLE JOINT AND THE OUTGOING PIPE SHALL ALSO BE SURROUNDED TO WITHIN 50mm OF THE FIRST FLEXIBLE JOINT AND A COMPRESSIBLE MATERIAL FILL FORMING BETWEEN THE CONCRETE SURROUND AND DOWNSTREAM PIPE COLLAR.

- | LEGEND | |
|---|--|
|  | SURFACE WATER SEWER (PRIVATE) |
|  | SURFACE WATER CONNECTION TO SUDS (PRIVATE) |
|  | SURFACE WATER DRAIN (PRIVATE) |
|  | PERFORATED UNDER DRAIN (PRIVATE) |
|  | SURFACE WATER MANHOLE (PRIVATE) |
|  | SURFACE WATER SILT TRAP CHAMBER (PRIVATE) |
|  | TYPE 4 SURFACE WATER INSPECTION CHAMBERS NOT GREATER THAN 1 PROPERTY (PRIVATE) |
|  | SURFACE WATER RODDING EYE (PRIVATE) |
|  | RAIN WATER PIPE (RWP) CONNECTION (PRIVATE) |
|  | YARD GULLY (PRIVATE) |
|  | PERMEABLE ROAD CONSTRUCTION (PRIVATE) |
|  | IMPERMEABLE/STANDARD ROAD CONSTRUCTION (DCWM SERVICE CORRIDORS) |

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- FOUL WATER SEWER (ADOPTABLE)
- FOUL WATER RISING MAIN (ADOPTABLE)
- FOUL WATER LATERAL DRAIN (ADOPTABLE)
- FOUL WATER DRAIN (PRIVATE)
- FOUL WATER MANHOLE (ADOPTABLE)
- TYPE 3 FOUL WATER INSPECTION CHAMBER (ADOPTABLE)
- TYPE 4 FOUL WATER INSPECTION CHAMBERS - NOT GREATER THAN 3 PROPERTIES (ADOPTABLE)
- TYPE 4 FOUL WATER INSPECTION CHAMBERS - NOT GREATER THAN 1 PROPERTY (PRIVATE)
- SOIL VENT PIPE (SVP) / DIRECT DRAIN CONNECTION (PRIVATE)
- BACK INLET GULLY (BIG) (PRIVATE)
- PROPOSED DRAINAGE EASEMENT (PRIVATE)
- THIRD PARTY LAND

- [illegible]

DCWW service corridors
(standard road construction -
Impermeable)

Turning Head to be Impermeable
(standard road construction)

— Sheared Drive/Access to be Impermeable
(*standard road construction*)

DCWW service corridors
(standard road construction -
Impermeable)

Sheared Drive/Access
Impermeable
(standard road construction)

Turning Head to be Impermeable
(standard road construction)

non-degradable
marker tape to
be used with the
rising main.

Sheared Drive/Access to be
Impermeable
(standard road construction)

DCWW service corridors
(standard road construction -
Impermeable)

Turning Head to be Impermeable
(standard road construction)

Sheared Drive/Access to be
Impermeable
(standard road construction)

DCWW service corridors
(standard road construction -
Impermeable)

Scale: 1:250

H	02.09.22	GPR colours amended at rising main termination point	GW
G	26.08.22	Rising Main easement draw order	CP
F	11.08.22	Rising Main Route amended	CP
E	12.07.22	Updated following DCWW comments	CP
D	10.03.22	Updated following review (F1.16-F1.32)	CP
C	09.02.22	Drawing reviewed following S104 Comments	CP
B	22.11.21	Foul Water drainage amended	NR
A	26.07.21	Preliminary issue for Section 104 submission	CP

Revision history

Drawing originator:







Client _____

ot 66

Castle
Green

Green

Project title: **Demystify Demand**

Rossell Rodd,
Rossell

 RUSSELL

Drawing file: Draw and Section 104 Assignment

Proposed Section 104 Agreement
Drainage Layout

Drainage Layout
Northern Land Parcel

1:250 for the original size of A0

Drawn by: CP | Checked by: RA | Passed by: RA | Date: July 2021

Drawing status: **For Information**

Job No: _____ Drawing No: _____ Revision: _____

CAS02	Project	Orig.	Volume	Level	Type	Discip.	Number	
		BET				C	301	H

Do not scale this drawing

Chester 01244 288178 | Alfrincham 0161 613531