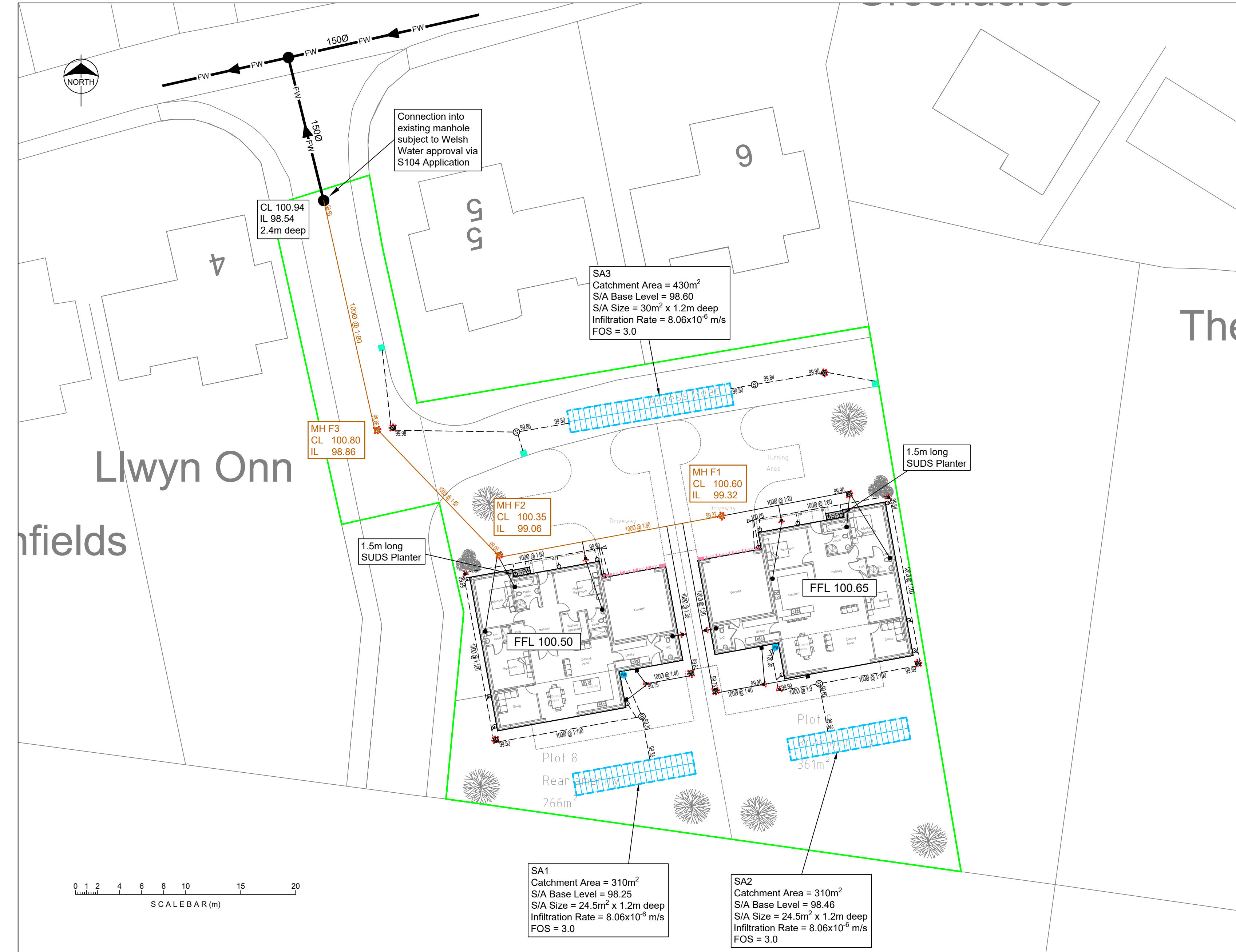
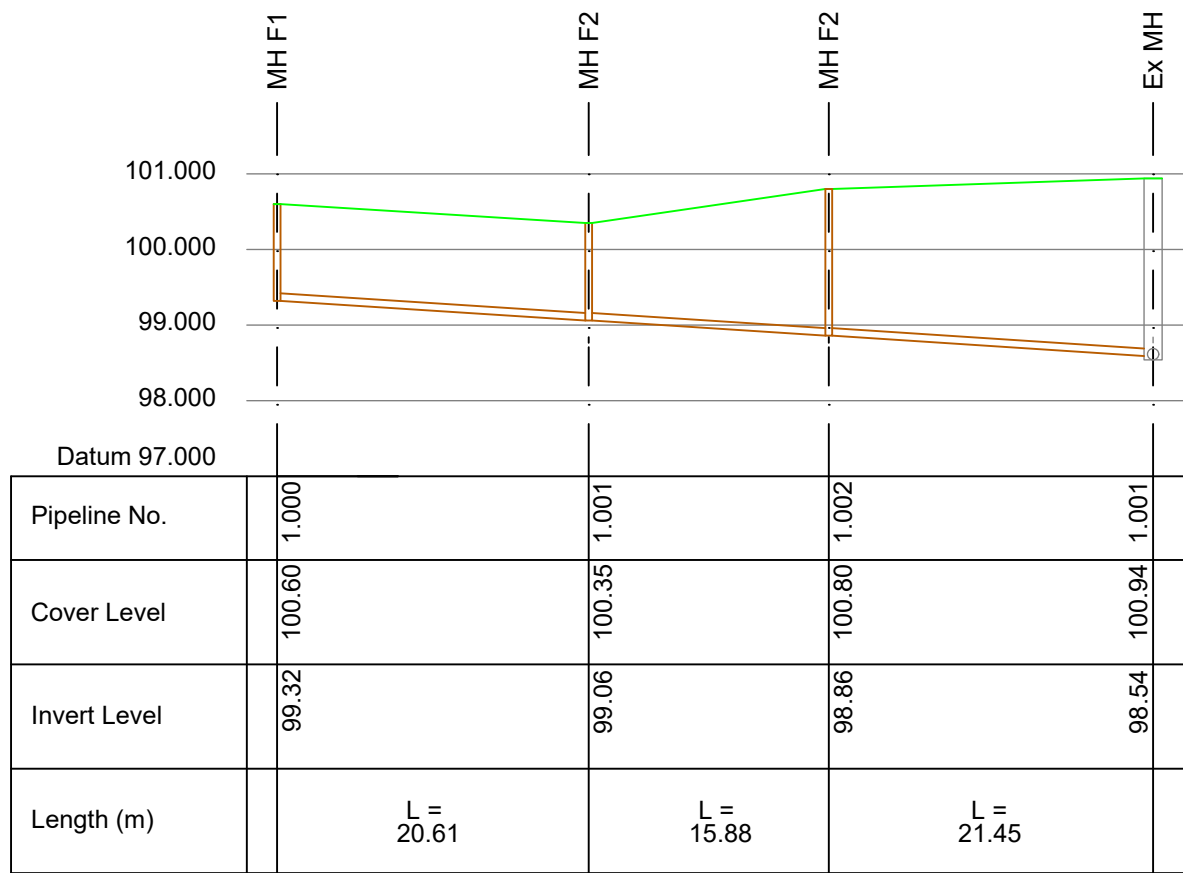


DO NOT SCALE



Drainage Layout
1:250



Adoptable Drainage Longsections
Scale: 1:500 H 1:100 V

The minimum depth of cover to the crown of gravity pipes with should be as follows:

- Domestic gardens and pathways without any possibility of vehicular access, 0.35m;
- Domestic driveways, parking areas and yards with height restrictions to prevent entry by vehicles with a gross vehicle weight in excess of 7.5 tonnes, 0.5m;
- Domestic driveways, parking areas and narrow streets without footways (e.g., mews developments) with limited access for vehicles with gross vehicle weight in excess of 7.5 tonnes, 0.9m;
- Agricultural land and public open space, 0.9m;
- Other highways and parking areas with unrestricted access to vehicles with a gross vehicle weight in excess of 7.5 tonnes, 1.2m

Pipe Materials Table

Pipe Materials Table	Pipe Materials Table
100	UPVC
150	UPVC

Bedding and Surround Table

Depth to Soffit	Bedding and Surround Type
>1.2m	Class S
<1.2m	Class Z

Note:
Adoptable materials / workmanship to conform to Part E of "Sewers for Adoption" 7th Edition.

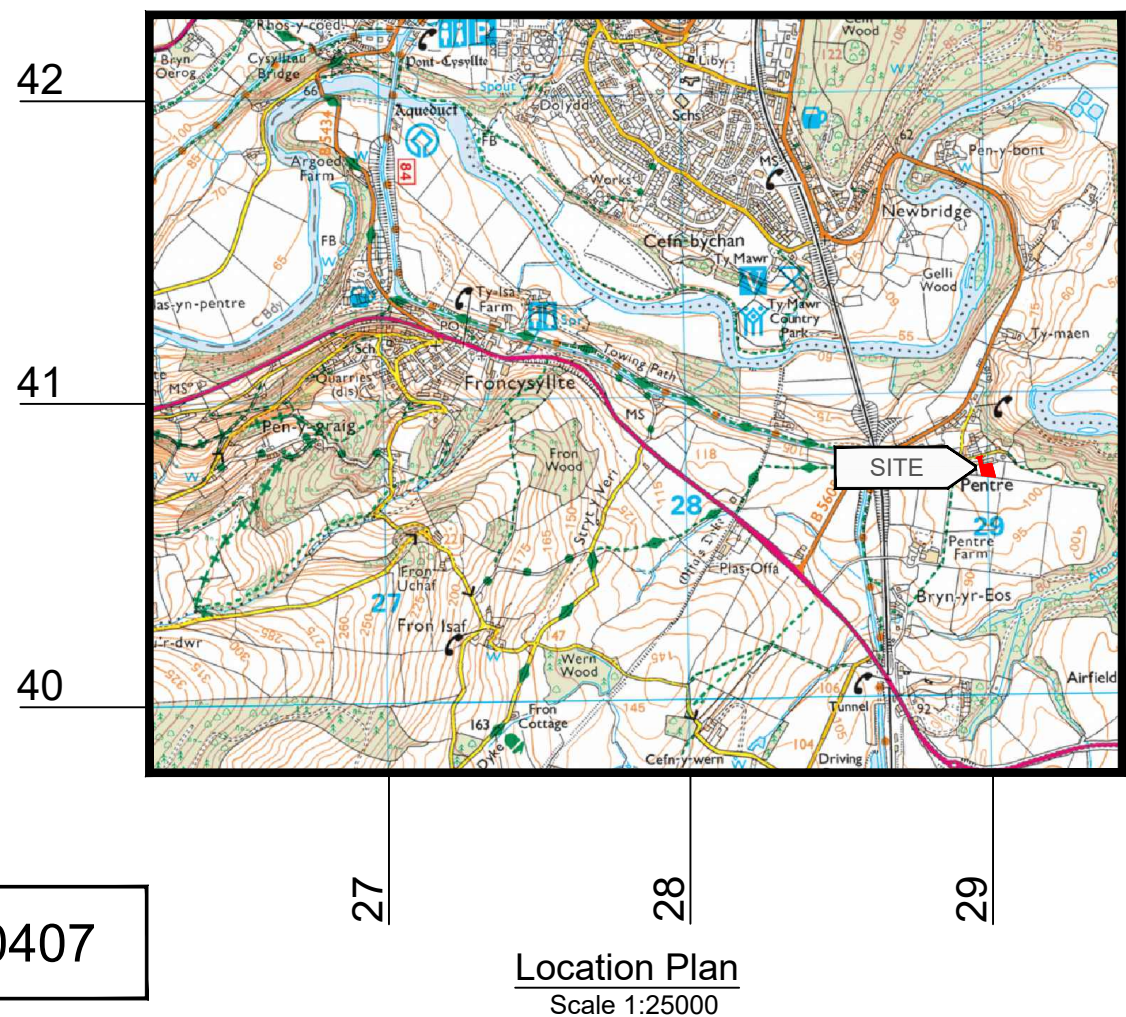
Contractor may elect to use thermoplastics pipes. These shall comply with the relevant provisions of BS EN 1401-1, BS EN 1852 and BS EN 12666-1 and should be Welsh Water approved products

MANHOLE SCHEDULE

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams Inv-soff		Manhole	Cover
F1	100.60		0	1.000	99.32	100	Type 3	D400 450 X 450
E. 329016.804	1.180							
N. 340748.243								
F2	100.35		1	1.001	99.06	100	Type 3	B125 450 X 450
E. 328996.594	1.190							
N. 340744.724								
F3	100.80		1	1.002	98.86	100	Type 3	D400 450 X 450
E. 328985.544	1.840							
N. 340756.091								
EX MH	100.94		1	1.002	98.54	150	Type 3	D400 600 X 600
E. 328980.704	2.250							
N. 340776.945								

Legend

- Site Boundary
- Existing Foul Water Drain
- Proposed Private Surface Water
- Private Foul Drain
- Adoptable Foul Sewer (Welsh Water)
- Silt Trap / Catchpit
- SVP
- BIG
- RWP
- RE
- Slab Level
- Soakaway
- Private Road Gully
- ACO Drain
- SUDS Planter



Notes

- All dimensions are in millimetres unless otherwise shown.
- All adoptable drainage shall be constructed in accordance with 'Sewers for Adoption' 7th Edition, Welsh Ministers Standards and Welsh Water Details and Guidelines.
- All private drainage works are to comply fully with Part H of the Building Regulations.
- All existing invert levels to be checked by the contractor at the start of works and any other discrepancies notified to the Engineer prior to commencing works. All levels are based on topographical survey information provided by others.
- It is the responsibility of the Contractor to verify all information given with regards to existing services and drainage connections etc. prior to commencing the works.
- The Contractor shall adhere to the CDM Regulations at all times.
- Only trained personnel shall be permitted to enter confined spaces.
- All materials to bear the relevant B.S. Kitemark and comply fully with the Sewers for Adoption 7th Specification. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur to withstand a class 3 condition).
- All opening notices etc. as required under Highways Acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Welsh Water as applicable.
- Trench backfill in highways to within 1m of highway shall, as directed by the Highway Authority be a suitable granular material all in accordance with Sewers for Adoption.
- Cover loadings shall be as detailed on the Manhole Schedule.
- Drain trenches should not be excavated lower than the foundations of any building nearby unless either:
 - The trench is within 1m of the foundation, the trench is filled with concrete up to the lowest level of the foundation, or
 - Where the trench is further than 1m from the building, the trench is filled with concrete to a level below the lowest level for the building equal to the distance from the build, less 150mm.
- All SVP and RWP connections are indicative and shall be confirmed by the client.
- Pipe gradients out of the building to connecting manhole to be laid at 1:40 in accordance with Building Regulations, Part H, Table 6.
- Where pipe sizes are not indicated :
1000 to be used for foul
1000 to be used for surface water unless stated otherwise.
- Minimum surface water gradients shall be:
1000 laid at 1:100 with the exception of the first connection which shall be minimum 1:60
1500 laid at 1:150
- Minimum 1000 foul drainage gradient to be 1:80 with the exception of the first connection which shall be minimum 1:40.
- Manhole covers to be marked FWS or SW as appropriate.
- All manhole covers and frames shall comply with BS EN124. All adoptable manholes and chambers shall comply with Sewers for Adoption 7th Edition. Covers in roads to be grade D400 and be 150mm deep. Manhole covers in car parking areas and drives to be grade B125 and covers in landscaping areas to be grade A15. All to be sized in accordance with Building Regulations Part H, Tables 11 & 12.
- Precast concrete rings to be reinforced.
- Backdrops in private manholes / inspection chambers to be internal
- Private drains laid under adopted / private roads to be Class S granular bed and surround with a minimum of 1.2m cover, where this cannot be achieved a Class Z concrete bed and surround shall be provided.
- Private drains located under landscape areas or driveways / car parking bays to be Class B granular bed and surround with a minimum 0.6m cover, where this cannot be achieved a Class Z concrete bed and surround shall be provided.
- Pipes have not been designed to accommodate construction traffic loading. The contractor is responsible for providing adequate protection to the pipes during construction.
- Slab levels shall not be varied without reference to the Engineer for guidance.
- 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.
- Subject to a Section 104 Adoption Agreement being complete, a Section 106 application to connect must be made to DCWW the developer shall be given 21 days notice prior to connection. The works may only be undertaken by an SSIP Health & Safety approved contractor.

APPROVAL

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Client

GARY JONES

Project

LAND AT REAR OF NO. 5 & 6,
PENTRE, WREXHAM.

Title

S104 Drainage Layout

DRAWING NUMBER

8290 / 01

SCALE at A1 1:250

DATE	02.11.23	REVISION
DRAWN	PW	-
CHECKED	AJ	-