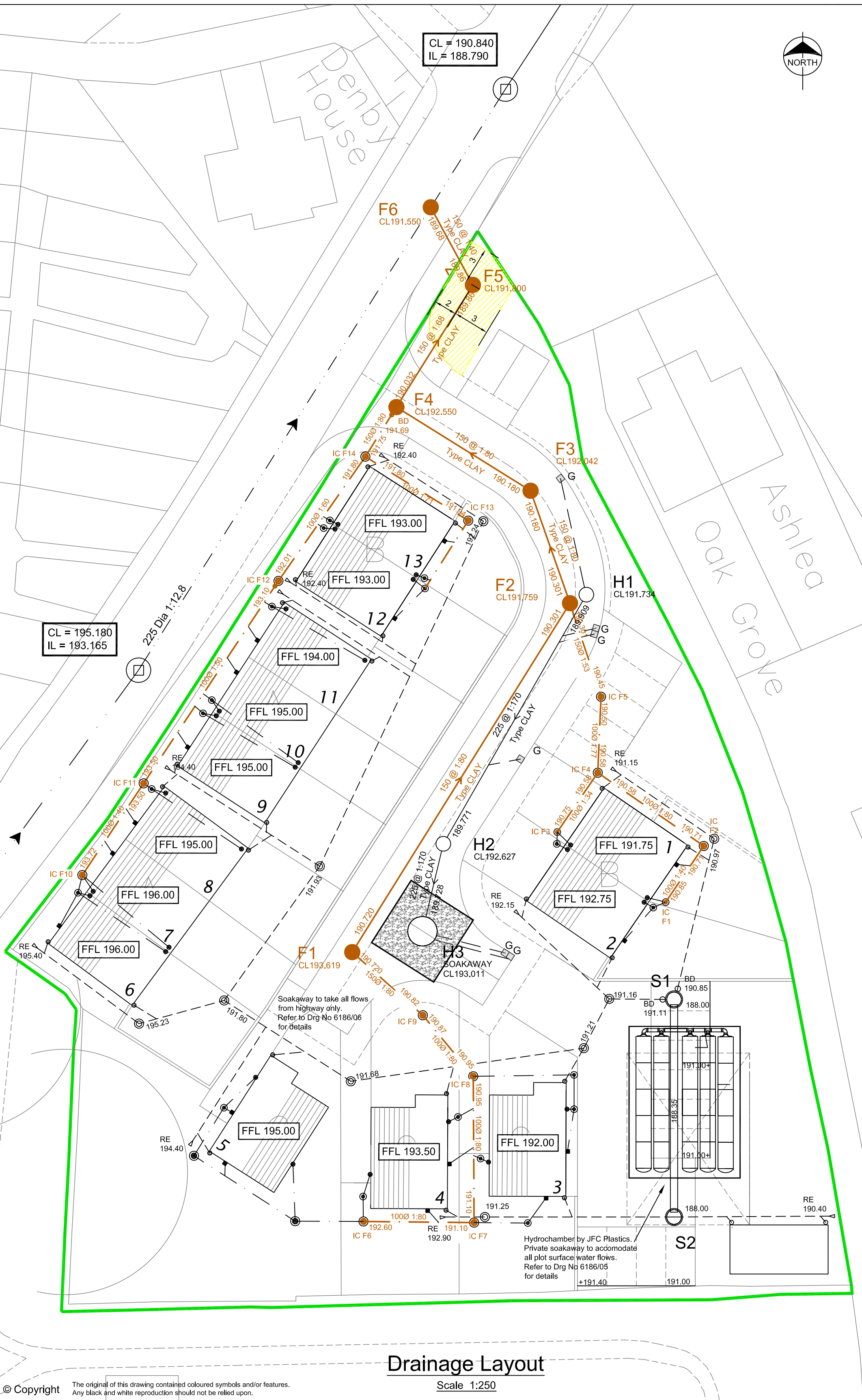


DO NOT SCALE

Legend

	Site Boundary		SVP
	Existing Combined Sewer		RWP
	Proposed Adoptable Foul Sewer		Rodding Eye
	Proposed Highway Surface Water Sewer (to be adopted under Section 38)		Highway Gully
	Proposed Private Surface Water Drain		Plot Slab Level
	Proposed Private Foul Drain		Sewer Easement



Drainage Layout

Scale 1:250

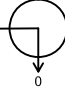
CL-01

EXISTING GROUND LEVEL	193.681	193.989	192.754	191.733	191.250	191.255	191.574	192.651	192.088
STORMWATER COVER LEVEL		193.011	192.227	191.734					
STORMWATER INVERT		188.728	Pipe 1.001 Dia 225 Circular CLAY 1 in 170 7.327	188.771	Pipe 1.000 Dia 225 Circular CLAY 1 in 170 23.409				
FOULWATER COVER LEVEL	193.619		191.734		192.042	192.250	191.800	191.550	189.680
FOULWATER INVERT	192.720		Pipe 1.000 Dia 150 Circular CLAY 1 in 80 33.517	192.301	Pipe 1.001 Dia 150 Circular CLAY 1 in 80 9.713	Pipe 1.002 Dia 150 Circular CLAY 1 in 80 12.883	Pipe 1.003 Dia 150 Circular CLAY 1 in 68 11.741	Pipe 1.004 Dia 150 Circular CLAY 1 in 40 7.200	

Longsection

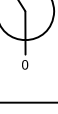
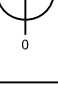
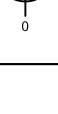
Scale: 1:100 Vertical 1:500 Horizontal

MANHOLE SCHEDULE

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
Coordinates	Depth To Sofit		Code	Inverts	Alarm Invert	Manhole	Cover		
F1	193.619		1	1.000	190.720	150	1200	Type 2	D400 675 x 675
E.	329503.698	2.749	0	1.000	190.720	150			
N.	354617.348								
F2	191.759		1	1.001	190.301	150	1200	Type 2	D400 675 x 675
E.	329550.442	1.308	0	1.001	190.301	150			
N.	354645.783								
F3	192.042		1	1.001	190.180	150	1200	Type 2	D400 675 x 675
E.	329547.229	1.712	0	1.002	190.180	150			
N.	354654.850								
F4	192.550		1	1.002	190.032	150	1200	Type 2	D400 675 x 675
E.	329536.300	2.368	0	1.003	190.032	150			
N.	354601.767								
F5	191.800		1	1.003	189.800	150	1200	Type 2	D400 675 x 675
E.	329543.239	1.790	0	1.004	189.800	150			
N.	354671.720								
F6	191.550		1	1.004	189.580	150	1500	Type 2	D400 675 x 675
E.	329530.095	1.720							
N.	354678.049								

H1	191.734	1.600	0	1.000	189.909	1200	Type 2	D400 675 x 675
H2	192.527	2.631	0	1.001	189.771	1200	Type 2	D400 675 x 675
H3	193.011	3.058	0	1.001	189.728	2400	Type 1	D400 675 x 675

Manhole Schedule

Manhole Number		Cover Level	Pipe		Manhole Size	Types	
Coordinates	Connections	Depth To Sole	Inverts	Elms		Manhole	Cover
IC F1		191.600 0.650	1 190.950	100	225	Type 4	A15
E.. 329508.239			0 190.950	100			
N. 354032.405							
IC F2		191.600 0.790	1 190.710	100	450	Type 4	A15
E.. 329561.340							
N. 354025.998			0 190.710	100			
IC F3		191.840 0.890	1 190.750	100	225	Type 4	A15
E.. 329549.405							
N. 354027.133			0 190.750	100			
IC F4		191.820 1.140	1 190.580 2 190.580	100 100	450	Type 4	B125
E.. 329552.703							
N. 354031.969			0 190.580	100			
IC F5		191.850 1.200	1 190.500	100	450	Type 4	B125
E.. 329552.872							
N. 354038.160			0 190.450	150			

IC F6	193.350	0.650	1	192.600	100	450	Type 4	A15
IC F7	191.850	0.650	1	191.100	100	450	Type 4	A15
IC F8	192.550	1.130	0	190.950	100	450	Type 4	B125
IC F9	193.290	2.320	1	190.870	100	450	Type 3	A15

Foul Inspection Chamber Schedule

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:
a) The trench is within 1m of the foundation, the trench is filled with concrete up to the lowest level of the foundation, or
b) 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 trench, less 150mm.
- Soakaways to be constructed a minimum of 5.0m from any proposed buildings or existing structures.
- 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:
100 laid at 1:100 with the exception of the first connection which shall be minimum 1:80
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 S 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.

Coopers Drawing List:

- | | |
|---------|------------------------------------|
| 6186/01 | Proposed Drainage Layout |
| 6186/02 | Proposed Highway Layout and Levels |
| 6186/03 | Drainage Construction Details |
| 6186/04 | Highway Construction Details |
| 6186/05 | Hydrochamber Soakaway Details |
| 6186/06 | Highway Soakaway Details |
| 6186/07 | Section 38 Agreement Plan |

APPROVAL

C	30.11.15	Revised as per Welsh Water comments MH F6 revised, and MHs F7 & F8 removed	PJN	AJ
B	20.11.15	Amendments: MHs F4, F5, F6, F7, F8	PH	AJ
A	11.11.15	Revised to suit new planning layout	PJN	AJ
Rev.	Date	Revision	By	Appd.



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Client

Project
High Street
Brymbo, Wrexham

Title
Section 104 Drainage Layout

DRAWING NUMBER	SCALE at A1	1:250
6186/01	DATE	JULY 2015
	DRAWN	PH
	CHECKED	AJ
	REVISION	C