

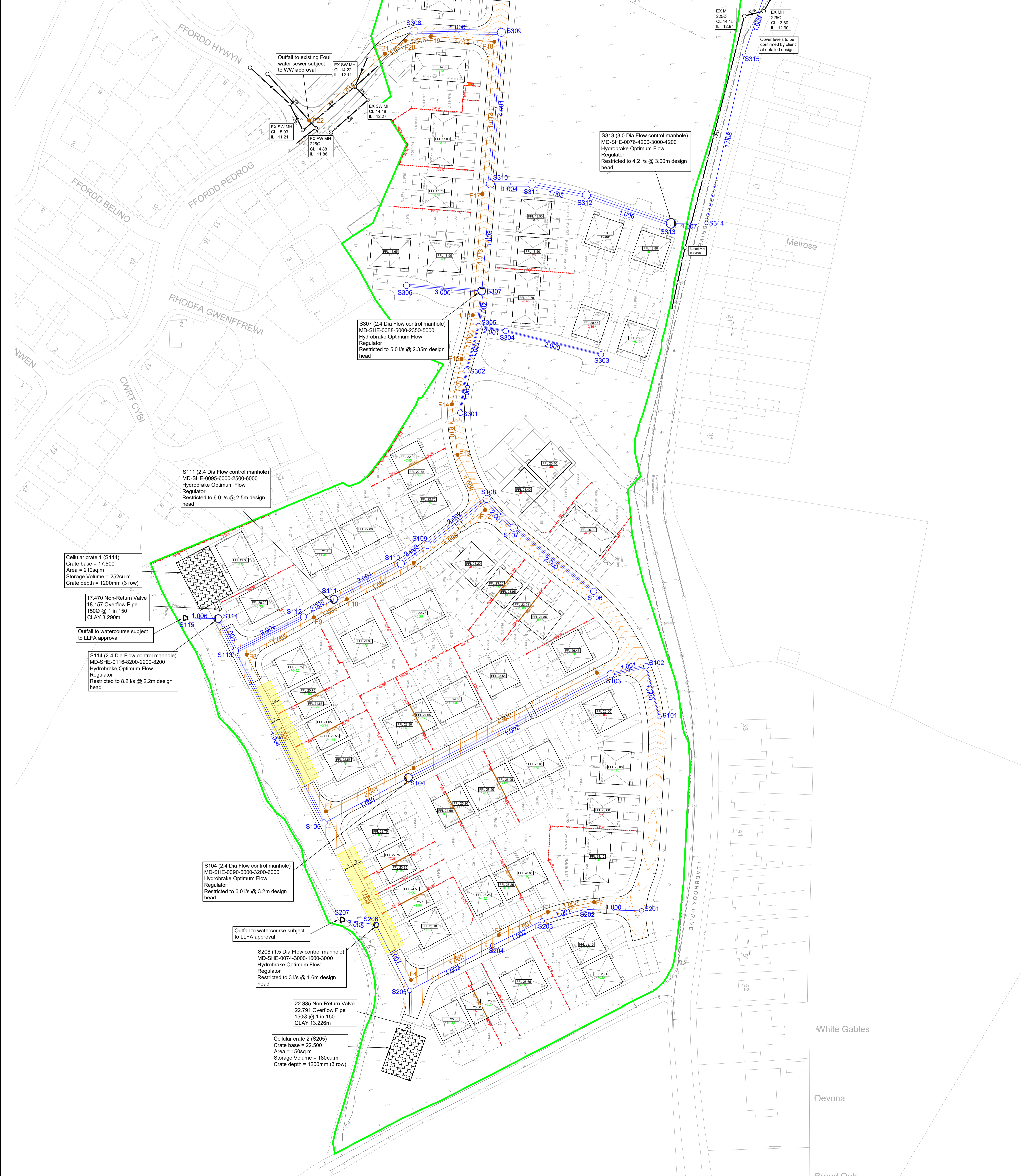
DO NOT SCALE

STORM Network 1											
Pipe Code	Diameter (mm)	Gradient (1%)	Pipe Type	Pipe Length	Number	Upstream Manhole Invert	Cover	Number	Downstream Manhole Invert	Cover	
1.000	450	30	Circular	11,139	S101	23.78	27.58	S102	22.90	26.73	
1.001	900	398	Circular	11,937	S102	22.45	26.73	S103	22.42	26.39	
1.002	1500	401	Circular	74,656	S103	20.02	26.39	S104	19.94	25.44	
1.003	300	240	Circular	21,653	S104	19.84	23.44	S105	19.71	21.88	
1.004	1200	400	Circular	63,544	S105	17.66	21.88	S113	17.50	19.73	
1.005	1200	393	Circular	11,804	S113	17.50	19.73	S114	17.47	19.68	
1.006	225	170	Circular	12,884	S114	17.47	19.65	S115	17.40	19.65	
2.000	900	61	Circular	33,538	S106	19.85	25.25	S107	19.30	23.57	
2.001	1000	450	Circular	10,014	S107	19.70	23.57	S108	18.86	22.81	
2.002	1500	397	Circular	24,621	S108	18.66	22.91	S109	18.60	22.54	
2.003	1500	397	Circular	10,706	S109	18.60	22.54	S110	18.57	22.20	
2.004	1500	396	Circular	24,968	S110	18.57	22.20	S111	18.51	21.29	
2.005	300	240	Circular	11,498	S111	18.51	21.20	S112	18.46	20.74	
2.006	1200	398	Circular	25,054	S112	17.56	20.74	S113	17.50	19.73	

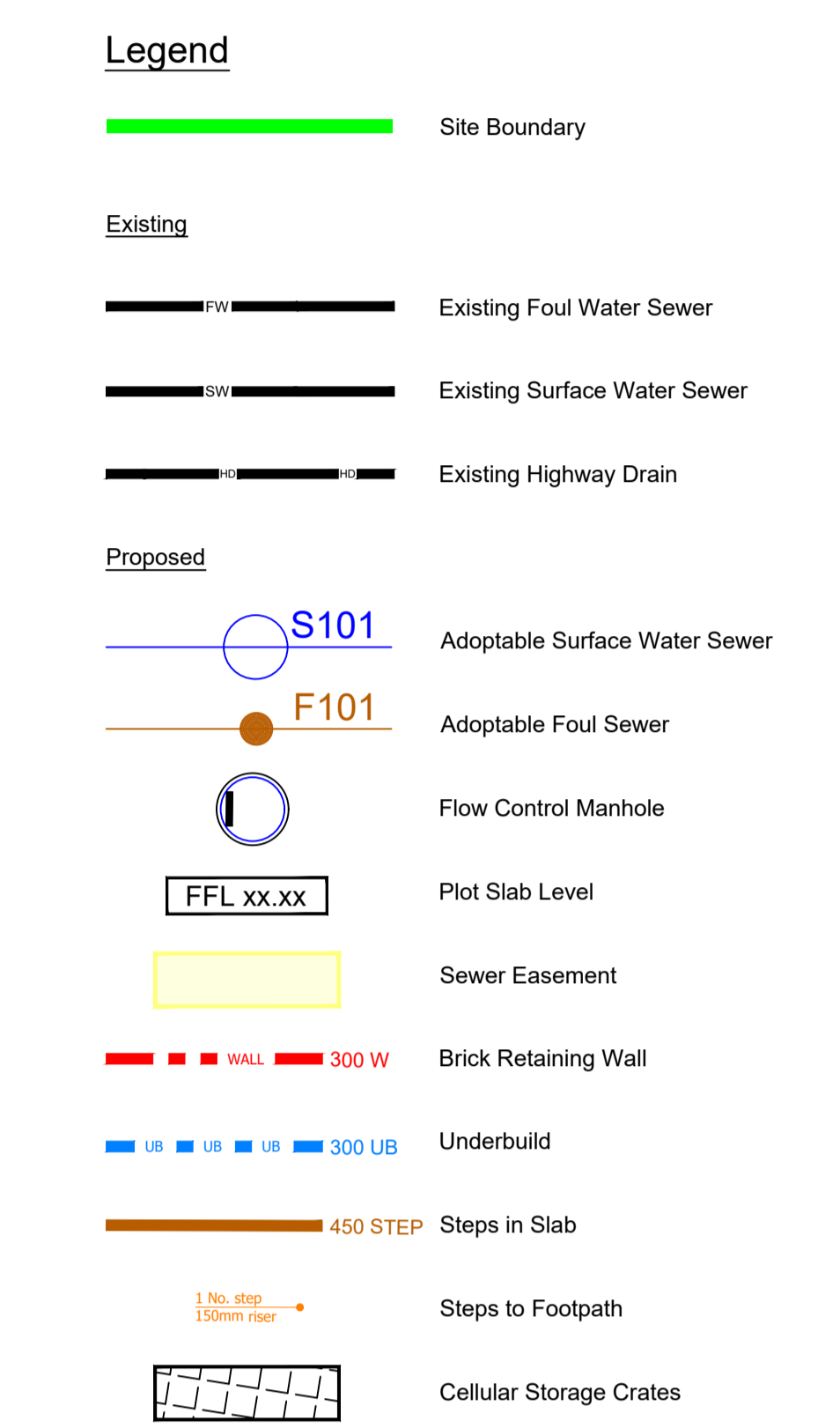
FOUL Network 1											
Pipe Code	Diameter (mm)	Gradient (1%)	Pipe Type	Pipe Length	Number	Upstream Manhole Invert	Cover	Number	Downstream Manhole Invert	Cover	
1.000	150	20	Circular	15,528	F1	26.52	27.86	F2	25.75	27.10	
1.001	150	20	Circular	17,823	F2	25.75	27.10	F3	24.87	26.22	
1.002	150	20	Circular	32,380	F3	24.81	26.22	F4	23.24	24.59	
1.003	150	23	Circular	61,984	F4	23.24	24.59	F7	20.56	21.91	
1.004	150	29	Circular	57,772	F7	20.56	21.91	F8	18.55	19.90	
1.005	150	135	Circular	20,296	F8	18.55	19.90	F9	18.37	20.50	
1.006	150	135	Circular	12,327	F9	18.37	20.50	F10	18.28	21.40	
1.007	150	135	Circular	25,025	F10	18.28	21.40	F11	18.09	22.38	
1.008	150	135	Circular	29,190	F11	18.09	22.38	F12	17.88	23.03	
1.009	150	135	Circular	20,317	F12	17.88	23.03	F13	17.73	23.84	
1.010	150	135	Circular	16,631	F13	17.73	23.84	F14	17.60	24.22	
1.011	150	135	Circular	15,263	F14	17.60	24.22	F15	17.49	20.48	
1.012	150	135	Circular	14,822	F15	17.49	20.48	F16	17.38	19.73	
1.013	150	40	Circular	30,935	F16	17.38	19.73	F17	16.38	17.72	
1.014	150	20	Circular	50,178	F17	16.38	17.72	F18	13.87	15.22	
1.015	150	13	Circular	20,961	F18	13.87	15.22	F19	12.32	14.17	
1.016	150	64	Circular	4,464	F19	12.32	14.17	F20	12.18	13.93	
1.017	150	92	Circular	7,940	F20	12.18	13.93	F21	12.10	13.52	
1.018	150	135	Circular	33,174	F21	12.10	13.52	F22	12.02	14.88	
2.000	150	25	Circular	67,875	F5	24.92	26.27	F6	22.18	23.53	
2.001	150	20	Circular	32,124	F6	22.18	23.53	F7	20.56	21.91	

STORM Network 2											
Pipe Code	Diameter (mm)	Gradient (1%)	Pipe Type	Pipe Length	Number	Upstream Manhole Invert	Cover	Number	Downstream Manhole Invert	Cover	
1.000	300	68	Circular	16,580	S201	26.20	28.50	S202	25.53	27.76	
1.001	300	77	Circular	14,481	S202	24.73	27.76	S203	24.54	27.02	
1.002	300	50	Circular	16,219	S203	23.34	27.02	S204	22.97	26.10	
1.003	300	53	Circular	39,972	S204	22.97	26.10	S205	22.38	24.57	
1.004	300	41	Circular	24,222	S205	22.38	24.57	S206	21.80	23.52	
1.005	225	10	Circular	12,829	S206	21.80	23.52	S207	20.50	21.25	

STORM Network 4											
Pipe Code	Diameter (mm)	Gradient (1%)	Pipe Type	Pipe Length	Number	Upstream Manhole Invert	Cover	Number	Downstream Manhole Invert	Cover	
1.000	600	400	Circular	14,112	S301	16.38	21.36	S302	16.34	20.64	
1.001	600	450	Circular	15,097	S302	16.34	20.64	S305	16.31	19.89	
1.002	750	400	Circular	11,615	S305	16.16	19.89	S307	16.13	19.33	
1.003	225	19	Circular	35,323	S307	15.98	19.33	S310	14.13	17.55	
1.004	1500	450	Circular	13,316	S310	14.13	17.55	S311	11.09	18.26	
1.005	1500	400	Circular	18,201	S311	11.09	18.20	S312	11.05	18.35	
1.006	1500	400	Circular	29,862	S312	11.05	18.35	S313	10.97	18.56	
1.007	225	169	Circular	11,010	S313	10.97	18.50	S314	10.91	17.75	
1.008	225	170	Circular	56,704	S314	10.91	17.75	S315	10.57	15.00	
1.009	225	170	Circular	22,457	S315	10.57	15.00	S316	10.44	13.75	
1.010	225	169	Circular	30,518	S316	10.44	13.75	S317	10.35	13.00	
1.011	225	169	Circular	7,061	S317	10.35	13.00	S318	10.32	12.80	
2.000	600	450	Circular	32,212	S303	16.41	21.10	S304	16.33	19.70	
2.001	600	400	Circular	9,072	S304	16.33	19.70	S305	16.31	19.89	
3.000	800	400	Circular	24,801	S306	16.04	18.60	S307	15.99	19.53	
4.000	1500	400	Circular	28,638	S308	11.32	14.02	S309	11.25	16.64	
4.001	1500	400	Circular	49,891	S309	11.25	15.05	S310	11.13	17.35	



- Notes**
- Setting out shall be undertaken using only the information given. Distances should not be scaled from this drawing.
 - All adoptable drainage shall be constructed in accordance with "Sewers for Adoption" 7th Edition, Welsh Ministers Standards and Welsh Water Details and Guidelines.
 - The minimum gravity pipe diameter under adoptable highways shall be 150mm.
 - 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 rates shall include for hand dig around services where necessary. The Contractor shall adhere to the CDM Regulations at all times.
 - All materials to bear the relevant B.S. Kitemark and comply fully with the specifications. All concrete & concrete products must be Sulphate resistant cement to withstand Class 3 condition (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur).
 - 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 the Network Operator as applicable.
 - Where structured wall UPVC pipes (or similar approved) are used in adoptable drainage they shall be handled and laid in accordance with the manufacturers instructions and will be subject to post installation deformation testing prior to adoption. A Class 5 Bed and Surround must be used for structured wall pipes.
 - Trench backfills 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.
 - Slab levels shall not be varied without reference to the Engineer for guidance.
 - Pipes have not been designed to accommodate adequate traffic loading. The contractor is responsible for providing adequate protection to the pipes during construction.
 - 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. 1m² fill-type covers should not be used. Where a cover is located in an area of block paving, the bottom of the frame should be 150mm deep.



STRATEGY

A	31.10.23	Surface Water drainage design updated	PW	AJ
Rev.	Date	Revision	By	Appd.

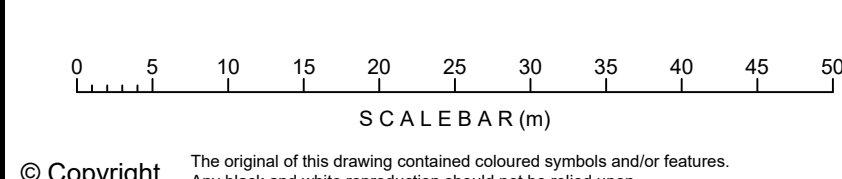
cooperters
 chartered consulting engineers

Client: **Castle Green**

Project: **QUARRY FARM, OAKENHOLT, FLINT.**

Title: **Drainage Strategy**

DRAWING NUMBER	SCALE at A0	DATE	REVISION
8211 / SK01	1:500	20.09.23	
CHECKED	PW	AJ	A



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