



Surface Water Flow Rates

Site Area = 3.13ha

Existing Greenfield Run-off Rates
(Based on soil type 4 - Clay)

QBar = 15.76 l/s
1yr = 13.87 l/s
30yr = 15.76 l/s
100yr = 34.35 l/s

Proposed Run-off Rates

QBar = 15.76 l/s
1yr = 15.76 l/s
30yr = 15.76 l/s
100yr = 15.76 l/s

Impermeable area = 1.517 ha = 10% Urban Creep
= 1.668 ha

Estimated 100yr storage @ 30%CC required = 860m³
(based on no infiltration)

**REDROW HOMES
RESIDENTIAL
SITE
(HARDWICK DRIVE)**

STORM Network 1

Pipe Code	Diameter (mm)	Gradient (1:)	Pipe Type	Pipe Length	Upstream Manhole		Downstream Manhole		
					Number	Invert	Number	Invert	
1.000	225	23	CLAY	31.810	S1	90.90	S2	89.13	90.65
1.001	225	16	CLAY	20.025	S2	89.13	S4	87.82	89.86
1.002	375	170	CONC	16.957	S4	87.87	S5	89.98	90.19
1.003	375	229	CONC	20.022	S5	87.87	S6	87.46	90.51
1.004	375	229	CONC	10.993	S6	87.46	S7	87.42	89.43
1.005	375	296	CONC	9.473	S7	87.42	S8	87.38	90.14
1.006	375	301	CONC	22.984	S8	87.38	S9	90.14	89.24
1.007	375	118	CONC	35.983	S9	87.31	S10	87.01	89.68
1.008	375	34	CONC	27.610	S10	87.01	S11	86.19	88.84
1.009	450	43	CONC	12.175	S11	86.11	S12	85.83	88.51
1.010	450	400	CONC	9.593	S12	85.83	S13	85.81	88.06
1.011	525	52	CONC	23.264	S13	85.73	S14	85.29	86.94
1.012	525	156	CONC	19.616	S14	85.29	S17	85.16	88.87
1.013	525	399	CONC	63.103	S17	85.16	S18	85.00	86.89
1.014	600	401	CONC	40.870	S18	84.93	S19	84.82	86.66
1.015	600	404	CONC	10.995	S19	84.82	S20	84.79	86.46
1.016	600	399	CONC	47.451	S20	84.82	S21	84.50	86.60
1.017	600	398	CONC	8.717	S21	84.50	S22	84.47	86.46
1.018	225	170	CLAY	9.031	S22	84.47	S23	84.42	85.50
2.000	300	340	CLAY	16.270	S23	87.82	S24	87.75	89.98
3.000	225	171	CLAY	20.802	S15	86.83	S16	87.47	87.15
3.001	300	163	CLAY	40.346	S16	86.64	S17	85.39	86.87

FOUL Network 1

Pipe Code	Diameter (mm)	Gradient (1:)	Pipe Type	Pipe Length	Upstream Manhole		Downstream Manhole		
					Number	Invert	Number	Invert	
1.000	150	23	CLAY	30.993	F1	90.06	F2	88.70	90.48
1.001	150	47	CLAY	18.031	F2	88.70	F3	88.30	89.93
1.002	150	150	CLAY	24.848	F3	88.30	F4	88.14	90.24
1.003	150	150	CLAY	20.107	F4	88.14	F5	88.00	90.50
1.004	150	150	CLAY	8.572	F5	88.00	F6	87.95	90.48
1.005	150	151	CLAY	6.300	F6	87.95	F7	87.89	90.22
1.006	150	150	CLAY	29.452	F7	87.89	F8	87.70	89.95
1.007	150	150	CLAY	44.590	F8	87.70	F9	87.40	88.75
1.008	150	150	CLAY	11.910	F9	87.40	F10	87.28	88.71
1.009	150	16	CLAY	9.213	F10	87.28	F11	86.72	88.37
1.010	150	18	CLAY	7.247	F11	86.72	F12	86.33	87.98
1.011	150	16	CLAY	23.745	F12	86.33	F13	85.85	86.95
1.012	150	94	CLAY	18.527	F13	84.85	F16	84.65	86.84
1.013	150	150	CLAY	62.512	F16	84.65	F17	84.24	86.92
1.014	150	150	CLAY	20.029	F17	84.24	F18	84.08	85.49
1.015	150	150	CLAY	4.599	F18	84.08	F19	84.03	85.48
1.016	150	150	CLAY	3.163	F19	84.03	F20	84.01	85.48
2.000	150	63	CLAY	15.765	F14	85.16	F15	84.91	87.18
2.001	150	150	CLAY	38.063	F15	84.91	F16	84.65	86.84

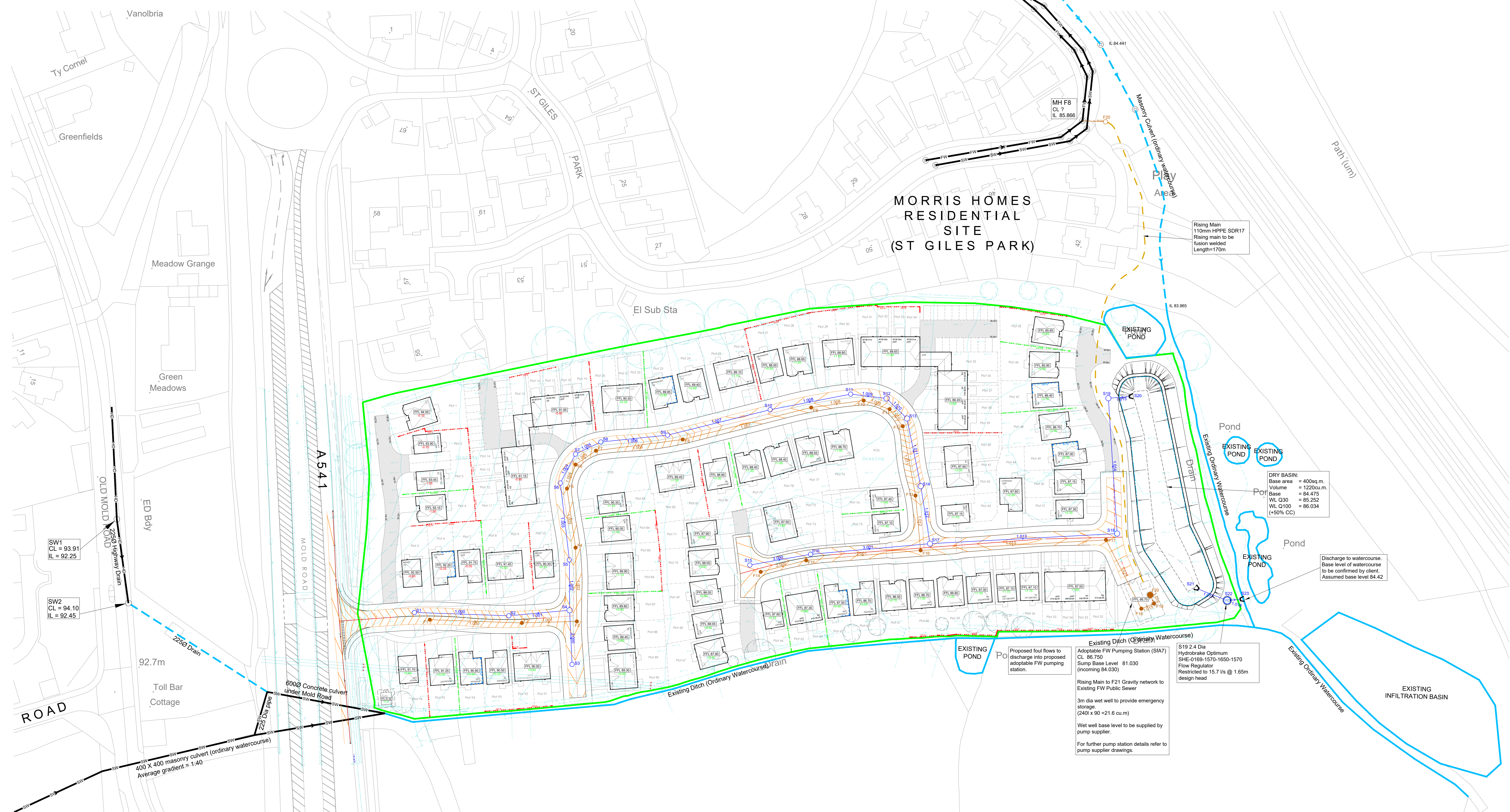
Note

- This is a preliminary design demonstrating a drainage solution is achievable to discharge flows from the proposed development.
- The specification in all respects shall be in accordance with the current Wrexham CBC Specification and Construction publication in force in the county at the time of construction.

Legend

- Site Boundary
- Existing Highway Sewer
- Existing Foul Sewer
- Existing Surface Water Sewer
- Ordinary Watercourse
- Culvert
- Adoptable Surface Water Sewer
- Adoptable Foul Sewer
- Slab Level
- Wall
- Underbuild
- Flag On Edge
- Rising Man
- Depth of fill (Existing to Proposed)

Note: Retention of 300mm and above has been shown for strategy stage. Small retaining features and underbuild of up to 200mm will also be required at other locations and will be shown at detailed design stage.



STRATEGY

Rev.	Date	Revision	By	Appd.
D	18.11.22	Updated to suit revised layout	PW	AJ
C	07.09.22	Updated to suit revised layout	AJ	AJ
B	04.05.22	Updated to suit revised layout	PW	AJ
A	05.04.22	Dry Basin moved to suit client comment	PW	AJ

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Project: **MOLD ROAD, GWERSYLLT, WREXHAM.**

Title: **Drainage Strategy**

DRAWING NUMBER	SCALE at A0	DATE	REVISION
7956 / SK01	1:500	25.03.22	D
		DRAWN	PW
		CHECKED	AJ