

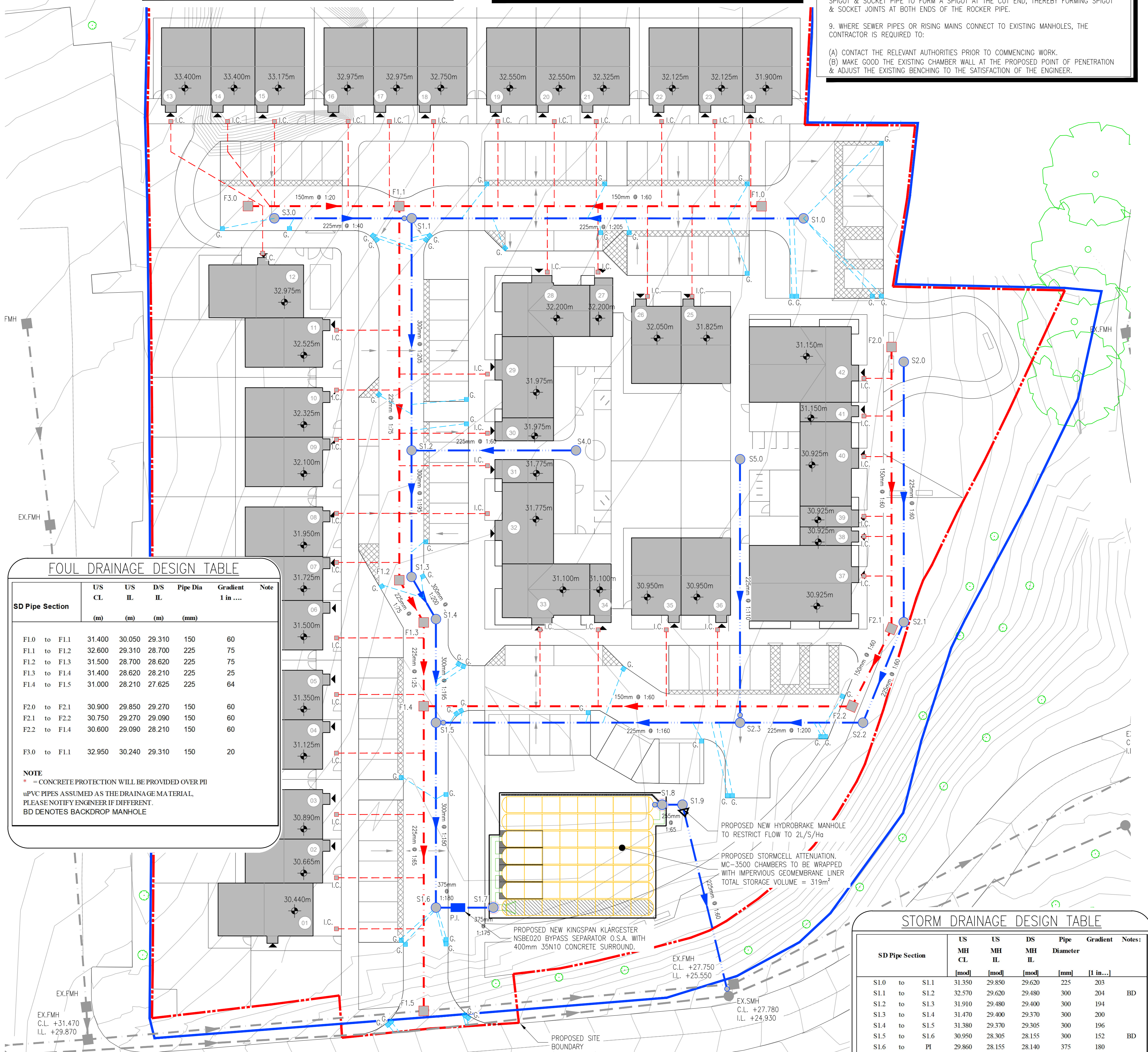
TESTING OF SEWERS:

1. FOUL & SURFACE WATER SEWERS TO BE TESTED EITHER BY WATER OR AIR TEST. IF THE AIR TEST IS CARRIED OUT & THE RESULTS SHOW A FAILURE THEN A WATER TEST SHALL BE SUBSEQUENTLY CARRIED OUT TO DETERMINE ACCEPTANCE OR REJECTION.
2. WATER TESTS CARRIED OUT SHALL BE TESTED IN UNDER A HEAD OF WATER IN ACCORDANCE WITH BS 8301 1995, & CARRIED OUT FOR A MINIMUM OF 30 MINUTES.
3. THE CONTRACTOR IS TO ENGAGE AN ENGINEER WITH PROFESSIONAL INDEMNITY INSURANCE TO SUPERVISE ALL AIR/WATER TESTS ON MAINS BEFORE BACKFILLING.
4. ON COMPLETION OF ALL SEWERS DRAINS & GULLIES, ALL SEWERS SHALL BE FLUSHED OUT & LEFT FREE FROM DEFECT & OBSTRUCTION & SUBSEQUENTLY A CCTV SURVEY SHALL BE CARRIED OUT BY AN INDEPENDENT CONTRACTOR OF THE AS BUILT DRAINAGE. THE CCTV SURVEY SHALL INCLUDE A REPORT & DVD & SHALL BE SUBMITTED TO THE ENGINEER & ARCHITECT PRIOR TO PRACTICAL COMPLETION.
5. ON COMPLETION OF ALL SEWERS, DRAINS & GULLIES AN AS-BUILT SURVEY MUST BE SUBMITTED INCLUDING LOCATION OF MANHOLES RELATIVE TO THE BUILDING OUTLINE, COVER, INVERT LEVELS & PIPE DIAMETERS TO THE ENGINEER & ARCHITECT FOR THEIR REVIEW PRIOR TO PRACTICAL COMPLETION.

10. WHERE SEWER PIPES, RISING MAINS OR ROAD GULLY DRAINS CROSS EXISTING ROADS, THE CONTRACTOR IS REQUIRED TO:
 - (A) CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
 - (B) MAKE GOOD THE EXISTING ROAD TO ITS ORIGINAL SPECIFICATION AS APPROVED BY THE ENGINEER.
11. MINIMUM FALLS INDICATED ON DRAINAGE PIPES, LEVELS TO BE REVISED IF MANHOLE LOCATIONS ARE MODIFIED BY CONTRACTOR.
12. CONCRETE PROTECTION TO BE PROVIDED AROUND ALL PIPES UNO.
13. ALL BRANCH & PERIMETER DRAINAGE ARE TO BE DETAILED BY ARCHITECT.
14. PROPRIETARY ACCESS JUNCTIONS TO BE USED TO DEPTHS OF 600mm OR LESS.
15. 450x450mm INSPECTION CHAMBERS TO BE USED AT DEPTHS OF 600-1000mm.
16. MANHOLES TO DETAILS TO BE USED AT DEPTHS OVER 1000mm.
17. ROAD GULLIES TO BE PROVIDED SO THAT MAX AREA CONTRIBUTING TO A SINGLE GULLY IS 180m².
18. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH 'RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS', DEPARTMENT OF THE ENVIRONMENT.
19. ALL STORM MANHOLE BASES TO BE PRECAST CONCRETE PRE-BENCHED OFF SITE.

GENERAL DRAINAGE NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
2. ALL LEVELS ARE IN METRES ABOVE DATUM UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR MUST CONTACT THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK, & SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.
4. ALL PIPE DIAMETERS ARE NORMAL.
5. ALL BEDDING TO SEWERS IS CLASS 'B' UNLESS OTHERWISE NOTED.
6. ALL MANHOLES CAN BE EITHER PRECAST CONCRETE RING MANHOLES OR BLOCKWORK UNLESS OTHERWISE STATED.
7. 600mm MAX. LENGTH ROCKER PIPES ARE TO BE PROVIDED ON SEWER WHERE:
 - (A) A PIPE ENTERS A MANHOLE OR PUMPING STATION.
 - (B) A PIPE LEAVES A MANHOLE.
 - (C) A PIPE ENTERS CONCRETE ENCASUREMENT.
 - (D) A PIPE LEAVES CONCRETE ENCASUREMENT.
 - (E) ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER.
8. ALL SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING & TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
9. WHERE SEWER PIPES OR RISING MAINS CONNECT TO EXISTING MANHOLES, THE CONTRACTOR IS REQUIRED TO:
 - (A) CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
 - (B) MAKE GOOD THE EXISTING CHAMBER WALL AT THE PROPOSED POINT OF PENETRATION & ADJUST THE EXISTING BENCHING TO THE SATISFACTION OF THE ENGINEER.



FOUL DRAINAGE DESIGN TABLE

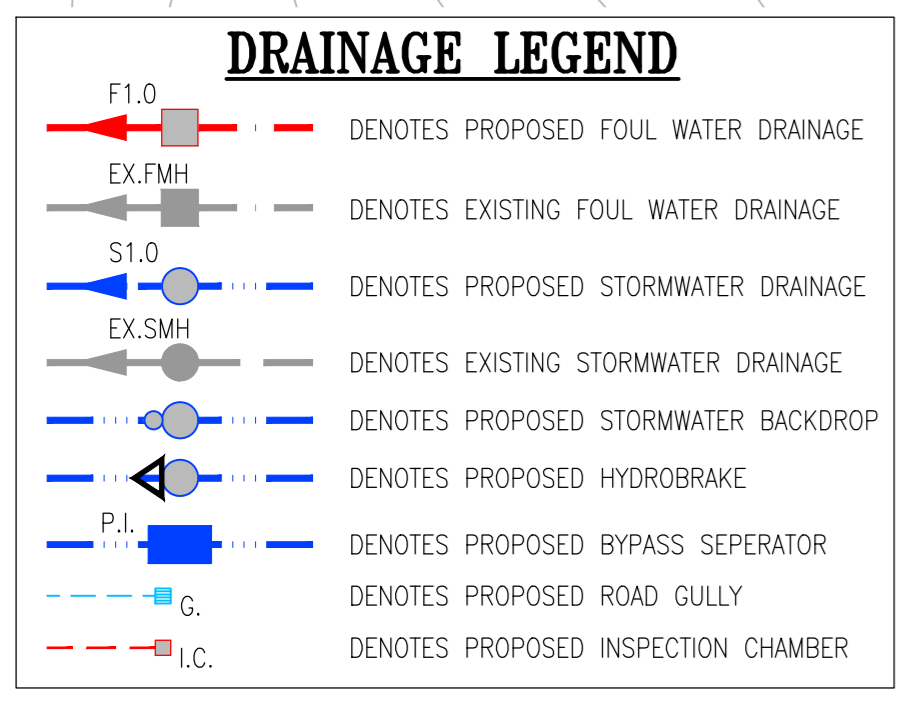
SD Pipe Section	US CL (m)	US IL (m)	D/S IL (m)	Pipe Dia (mm)	Gradient 1 in ...	Note
F1.0 to F1.1	31.400	30.050	29.310	150	60	
F1.1 to F1.2	32.600	29.310	28.700	225	75	
F1.2 to F1.3	31.500	28.700	28.620	225	75	
F1.3 to F1.4	31.400	28.620	28.210	225	25	
F1.4 to F1.5	31.000	28.210	27.625	225	64	
F2.0 to F2.1	30.900	29.850	29.270	150	60	
F2.1 to F2.2	30.750	29.270	29.090	150	60	
F2.2 to F1.4	30.600	29.090	28.210	150	60	
F3.0 to F1.1	32.950	30.240	29.310	150	20	

NOTE
 * = CONCRETE PROTECTION WILL BE PROVIDED OVER PIPES
 *PVC PIPES ASSUMED AS THE DRAINAGE MATERIAL, PLEASE NOTIFY ENGINEER IF DIFFERENT.
 BD DENOTES BACKDROP MANHOLE

STORM DRAINAGE DESIGN TABLE

SD Pipe Section	US MH CL [mod]	US MH IL [mod]	D/S MH IL [mod]	Pipe Diameter [mm]	Gradient [1 in...]	Notes
S1.0 to S1.1	31.350	29.850	29.620	225	203	
S1.1 to S1.2	32.570	29.620	29.480	300	204	BD
S1.2 to S1.3	31.910	29.480	29.400	300	194	
S1.3 to S1.4	31.470	29.400	29.370	300	200	
S1.4 to S1.5	31.380	29.370	29.305	300	196	
S1.5 to S1.6	30.950	28.305	28.155	300	152	BD
S1.6 to P.I.	29.860	28.155	28.140	375	180	
P.I. to S1.7	29.860	28.040	28.015	375	174	
S1.7 to S1.8	30.000	28.015	27.915	375	200	Sump
S1.8 to S1.9	29.750	27.915	27.875	225	63	Sump/BD
S1.9 to EXT.	30.500	27.060	26.655	225	60	
S2.0 to S2.1	30.885	29.760	29.230	225	60	
S2.1 to S2.2	30.660	29.230	29.010	225	61	
S2.2 to S2.3	30.450	29.010	28.935	225	201	
S2.3 to S1.5	30.540	28.935	28.700	225	159	BD
S3.0 to S1.1	32.960	31.535	31.115	225	40	
S4.0 to S1.2	31.760	29.815	29.480	225	60	
S5.0 to S2.3	30.600	29.625	29.325	225	108	

NOTES:
 *PVC PIPES ASSUMED AS THE DRAINAGE MATERIAL, PLEASE NOTIFY ENGINEER IF DIFFERENT
 * = CONCRETE PROTECTION WILL BE PROVIDED OVER PIPES
 BD = DENOTES BACKDROP MANHOLE
 Sump = DENOTES 0.5m DEEP SUMP BELOW PIPE INVERT



PROPOSED DRAINAGE LAYOUT
 SCALE 1:250 @ A1 / 1:500 @ A3

PRELIMINARY

PROPOSED DRAINAGE LAYOUT

Date: 09.05.23 Scale: A1 @ 1:250 / A3 @ 1:500

Drawn By: G.GOODSON Checked By: T.DELANEY Approved By: N.PATTERSON

Client: **KILKENNY COUNTY COUNCIL**

Job Description: **HOUSING DEVELOPMENT THOMASTOWN, CO.KILKENNY**

Project No: 22KK022 Drawing Ref: C-015 Rev: P1

Hayes Higgins Partnership

Gas House Lane, Kilkenny.

Gas House Lane, Kilkenny (056) 7764710 (056) 7723233 info@hayeshiggins.com

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICE ENGINEERS DRAWINGS & SPECIFICATIONS.
2. ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
4. DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.

QUALITY ISO 9001:2000 NSAI Certified

ENGINEERS IRELAND

cpd ACCREDITED COMPANY

HAYES HIGGINS PARTNERSHIP

Issue register

Rev.	Date	Description	Drawn	Checked	Approved
01	31.05.23	PRELIMINARY ISSUE	GG	TD	NP