



Pipe Ref:	Upstream IL	Downstream IL	Pipe Dia	Distance	Pipe Gradient 1:X	Pipe Gradient %	Pipe Material
1.000	2.639	2.568	150	10,558	148.7	0.67%	Plastic
1.001	2.568	2.431	150	20,572	150.2	0.67%	Plastic
1.002	2.431	2.272	150	23,850	150.0	0.67%	Plastic
1.003	2.272	2.120	150	22,777	149.8	0.67%	Plastic
1.004	2.120	1.940	150	27,047	150.3	0.67%	Plastic
1.005	1.940	1.705	150	35,233	149.9	0.67%	Plastic
1.006	1.705	1.458	150	37,076	150.1	0.67%	Plastic

Plastic pipes to be compliant with specifications in E2.21 of DCG

*All private connection to adoptable sewers are a minimum 100mm diameter and laid soffit to soffit

Surface Water: S104							
MH Ref:	Cover Level	Invert Level	Depth to Soffit	Pipe Dia	MH Type	MH Size	MH Cover
S1	3.350	1.634	1.266	450	Type C	1350	D400
S2	3.397	1.564	1.383	450	Type C	1500	D400
S3	3.675	1.597	1.628	450	Type B	1350	D400
S4	3.582	1.511	1.621	450	Type B	1500	D400
S5	3.377	1.448	1.479	450	Type C	1500	D400
S6	3.475	1.486	1.539	450	Type B	1350	D400
S7	3.523	1.379	1.694	450	Type B	1500	D400
S8	3.367	1.319	1.598	450	Type B	1500	D400
S9	3.377	1.243	1.684	450	Type B	1500	D400
S10	3.350	1.263	1.637	450	Type B	1500	D400
S11	3.412	1.194	1.768	450	Type B	1500	D400
S12	3.320	1.163	1.707	450	Type B	1500	D400
S13	3.100	1.059	1.891	150	Special Control	2100	D400
S14	3.000	1.045	1.805	150	Type B	1200	D400
S15	2.760	0.816	1.794	150	Type B	1800	D400

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*ALL S104 WORKS DESIGNED IN ACCORDANCE WITH THE DESIGN & CONSTRUCTION GUIDANCE (DCG) WHICH IS PART OF THE SEWERAGE SECTOR GUIDANCE (SSG).

P7	FFls and domestic drainage revised	JW	PAE	23/09/25
P6	S15 added to schedule	JW	PAE	09/05/25
P5	Sewer easement block colour sent to back	JW	PAE	09/04/25
P4	Note to private attenuation tank revised.	JW	PAE	19/03/25
P3	Revised to suit comments from IDB - discharge reduced to 2.0l/s	JW	PAE	14/03/25
P2	Revised to suit comments from AW.	JW	PAE	19/02/25
P1	Initial Issue	JW	PAE	04/02/25
Rev	Description	Drn	Vfd	Date

As outlined in section 2.3 of the CITS Industry Guidance to Designers, insignificant risks can usually be ignored, as can risks arising from routine construction activities, unless the design components or significantly alters these risks. In accordance with CDM Regulations 8, 9 and 11, any significant risks relating to the design features shown on this drawing have been identified and are annotated thus: 

☒ No significant risks have been identified.

☐ Significant risks have been identified - refer to notes on drawing for information on residual risks and any control measures to be employed.

Refer to the current Designer's Risk Assessment sheets for further details.

Designer's Signature	JW	Date	02/25
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Drawing Status **REGULATORY APPROVAL**

williamsaunders
architecture: engineering: building consultancy

The Kiln,
Mather Road,
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Nottinghamshire. NG24 1FB.

Also at Leeds and Lincoln.

Project
Residential Development,
Lime Walk,
Long Sutton

Client
Seagate Homes (UK) Ltd.

Title
S104 Layout

Wms Project Ref. 12700	Drawn JW	Date 02/25	Scale 1:500 @ A1
Drawing/Document Reference			
Project	Originator	Zone	Level Type Role Number Status Rev.
12700 - WMS - ZZ - XX - D - C - 39210 - S8 - P7			

1. Drawing to be read in conjunction with all other relevant Engineers and Architects details.
2. All works to be carried out in accordance with the current British Standards, Codes of Practice, Building Regulations and DCG (SSG).
3. All uncovered and shallow pipework to be protected against construction traffic as part of the Contractors temporary works requirements.
4. Pipes of different diameters entering manholes should be installed with soffits of the same level.
5. Pre-formed channels to be used for all manholes.
6. High strength concrete benching to be steel trowelled to a dense smooth face neatly shaped and finished to fit branch connections and laid in accordance with the specification.
7. Pipe bends to be provided in direction of flow.
8. All manholes covers and frames to be heavy duty ductile iron grade D400 double flangeular to BS EN 124 unless noted otherwise.
9. First Reveal jointing to pipe adjacent to a manhole shall be 600mm maximum from inside face of manhole connecting to the next pipe. Rocker pipe length to be 600mm (130 + 300mm) and 1000mm (600mm) deep.
10. All soil spots encountered in the trench formation to be removed and replaced with graded granular material.
11. All buried concrete must cater for Class 2 sulphate conditions in accordance with BRE Guided 363.
12. Pre-cast concrete manhole rings will not be cut under any circumstances. Other options, manhole built up with concrete or block work to the top of the pipe.
13. All landscaping and tree planting existing or proposed to be in accordance to requirements of DCG (SSG).
14. A temporary screen/pile will be fitted over the last new manhole before entering the existing sewer in accordance with DCG (SSG). The screen shall only be removed once the grade condition has been completely examined.
15. Where pipe crossings occur plastic membrane to be used for protection to eliminate any chances of cross contamination.
16. In all pipe covers should not be used, where a cover is located in an area of black paving the frame should be 150mm deep.
17. Cover and frames should be lake marked.
18. Protective concrete cover boxes to be used on pipework in non trafficked areas which doesn't achieve 0.9m cover and 1.2m cover in trafficked areas.
19. The proposed materials for the pipework and manholes are suitable for the existing ground conditions on site.