

S104 Surface Water Manhole Schedule

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
			Code	Inverts	Dimensions (mm)		Manhole	Cover	
S1	4.600		1	Lateral	3.335	150	1500	Type C Fig. B15	D400
E. 524553.640	1.115		2	Gully	3.335	150			
N. 326628.948			3	Gully	3.335	150			
			4	Gully	3.335	150			
			0	1.000	3.110	375			
S2	4.450		1	1.000	3.010	375	1500	Type C Fig. B15	D400
E. 524541.856	1.065		2	Lateral	3.085	300			
N. 326598.385			3	Gully	3.235	150			
			4	Lateral	3.160	225			
			0	1.001	3.010	375			
S3	4.185		1	1.001	2.808	375	1350	Type C Fig. B15	D400
E. 524510.103	1.002		2	Lateral	3.033	150			
N. 326540.472			0	1.002	2.808	375			
S4	4.205		1	Gully	2.990	150	1800	Type C Fig. B15	D400
E. 524521.743	1.065		2	Gully	2.990	150			
N. 326528.604			3	Gully	2.990	150			
			4	Gully	2.990	150			
			5	Lateral	2.915	225			
			0	3.000	2.915	225			
S5	4.050		1	3.000	2.827	225	1350	Type C Fig. B15	D400
E. 524507.621	0.998		2		2.902	150			
N. 326524.551			0	3.001	2.827	225			
S6 (FC)	4.205		1	1.004	2.615	450	1800	Flow Control Chamber	D400
E. 524491.742	1.440		0		1.005	2.615			
N. 326518.809			0	1.005	2.615	150			
S7	4.255		1	Gully	3.050	150	1800	C	D400
E. 524481.697	1.055		2	Gully	3.050	150			
N. 326607.366			3	Gully	3.050	150			
			4	Gully	3.050	150			
			5	Lateral	3.050	150			
			0	2.000	2.825	375			
S8	4.120		1	2.000	2.690	375	1350	C	D400
E. 524461.129	1.055		2	Lateral	2.915	150			
N. 326569.526			0	2.001	2.690	375			

S104 Headwall Schedule

Manhole Number	Cover Level	Connections	Pipe			Headwall Details	
Coordinates	Depth To Soffit		Code	Inverts	Dimensions (mm)		
HW1	3.625		1	1.002	2.775	375	Precast Reinforced Concrete Headwall. Athlon AWSFA10X or similar approved. Suitable Codes For Adoption and Anglian Water compliant screen grill to be supplied and fitted to the headwall. To be fitted with guard railing along back and sides of headwall
E. 524501.150	0.475						Contractor to ensure headwall type has been agreed with Anglian Water prior to ordering.
N. 326534.916							
HW2	3.625		1	2.001	2.648	375	Precast Reinforced Concrete Headwall. Athlon AWSFA10X or similar approved. Suitable Codes For Adoption and Anglian Water compliant screen grill to be supplied and fitted to the headwall. To be fitted with guard railing along back and sides of headwall
E. 524462.072	0.602						Contractor to ensure headwall type has been agreed with Anglian Water prior to ordering.
N. 326556.209							
HW3	3.625		1	3.001	2.775	225	Precast Reinforced Concrete Headwall. Athlon AWSFAGY or similar approved. Suitable Codes For Adoption and Anglian Water compliant screen grill to be supplied and fitted to the headwall. To be fitted with guard railing along back and sides of headwall
E. 524500.149	0.625						Contractor to ensure headwall type has been agreed with Anglian Water prior to ordering.
N. 326528.188							
HW4	3.625						Precast Reinforced Concrete Headwall. Athlon AWSFA11X or similar approved. Suitable Codes For Adoption and Anglian Water compliant screen grill to be supplied and fitted to the headwall. To be fitted with guard railing along back and sides of headwall
E. 524491.257	0.775		0	1.004	2.625	450	Contractor to ensure headwall type has been agreed with Anglian Water prior to ordering.
N. 326521.972							
HW5	2.975		1	1.005	2.530	150	Precast Concrete Inlet. Athlon 150mm Swale Inlet or similar approved. Suitable Codes For Adoption and Anglian Water compliant screen grill to be supplied and fitted to the headwall. Contractor to ensure swale inlet type has been agreed with Anglian Water prior to ordering.
E. 524498.142	0.445						
N. 326507.783							

S104 Foul Water Manhole Schedule

Manhole Number		Cover Level	Connections	Pipe			Manhole Size	Types		
Coordinates		Depth To Soffit		Code	Inverts	Diams		Manhole	Cover	
F1		4.311		1	Lateral	2.650	150	1200	Type B Fig. B10	D400
E.	524546.717	1.511								
N.	326591.290			0	1.000	2.650	150			
F2		4.071		1	1.000	2.257	150	1200	Type B Fig. B10	D400
E.	524518.275	1.664		2	Lateral	2.257	150			
N.	326539.586			0	1.001	2.257	150			
F3		3.850		1	1.001	1.919	150	1200	Type B Fig. B10	D400
E.	524471.276	1.781		2	Lateral	1.919	150			
N.	326558.616			0	1.002	1.919	150			
F4		4.021		1	1.002	1.750	150	1200	Type B Fig. B10	D400
E.	524448.626	2.121								
N.	326569.971			0	1.003	1.750	150			
F5		3.936		1	1.003	1.181	150	1200	Type B Fig. B10	D400
E.	524407.411	2.605								
N.	326495.302			0	1.004	1.181	150			
F6		3.830		1	1.004	-0.394	150	1200	Type A Fig. B5	D400
E.	524363.978	4.074								
N.	326426.966			0	1.005	-0.394	150			
F7		3.915		Ex-1	Existing sewer	-1.319 TBC	150	1200	Type A Fig. B5	D400
E.	524360.362	5.084		2	Existing sewer	-1.319 TBC	150			
N.	326418.454			Ex-0	Existing sewer	-1.319 TBC	150			

Section 106
Foul water (domestic effluent only) to outfall into new manhole on line of existing 150Ø Anglian Water sewer subject to S106 Application and approval.

Number of dwellings served: 37

The Contractor is to satisfy themselves of the line, level, type, pipe size and condition of the existing sewer prior to starting Section 104 works in accordance with the information provided. Contractor should notify the Engineer of any deviance from the information at least 4 weeks prior to works commencing on site.

General Notes

- All dimensions are in metres unless otherwise stated.
- All levels are in metres.
- This drawing is to be read in conjunction with all relevant Engineers and Architect's drawings, Specifications, Reports and Engineering Details.
- Do not scale from this drawing.
- This drawing shall not be used for any precast manhole base setting out. Incoming and outgoing pipe angles are shown indicatively only

Health, safety & the environment

In accordance with the Construction (Design and Management) Regulations 2015, the designs and details on this drawing have been the subject of a Designers Risk Assessment, to identify risks in the construction, use, or demolition of the scheme.

It is not considered necessary for Designers to highlight obvious and/or common risks (such as deep excavations, manual handling and working around heavy plant) which Contractors should be familiar with, and be able to control by good management and site practice.

So far as is reasonably practicable, the risks inherent in the design have been eliminated. Where it has been considered that elimination of a risk (or part of a risk) is not reasonably practicable, it has been reduced.

This drawing has been based/developed using the following external drawings					
Type	Company	Drawing date	Drawing title	Date received	Rev
Site Layout	JGA Architects	02.05.2023	23001 1000-P02 GA Site Layout	02.05.2023	P02
Topographical survey	EMP Surveys LTD	July 2022	1021_Pinchbeck Topographical Survey_Final	04.01.2023	P05
Utilities and Drainage survey	Survey Solutions	26.06.2023	48518NGUG-01 & 02	26.06.2023	B

Agreement	Approval Granted
S23 (Land drainage consent)	NOT APPROVED
S104 (Adoption of sewers)	NOT APPROVED
S278 (Works in existing highway)	NOT APPROVED
S106 (Foul connection)	Approved 23.05.2023

WORKS TO BE IN ACCORDANCE WITH
LINCOLNSHIRE COUNTY COUNCIL
SECTION 278 WORKS SPECIFICATION +
CONSTRUCTION - MARCH 2017

ALL ADOPTABLE DRAINAGE WORKS TO
BE IN ACCORDANCE WITH CODES FOR
ADOPTION DESIGN & CONSTRUCTION
GUIDANCE

DRAWINGS HAVE NOT BEEN APPROVED,
UNTIL THE DRAWINGS ARE APPROVED
THE DESIGNS AND DETAILS SHOWN ON
THIS DRAWING ARE SUBJECT TO
CHANGE.

ANY WORKS UNDERTAKEN PRIOR TO
TECHNICAL APPROVAL IS ENTIRELY AT
THE CONTRACTORS' RISK.

Site Wide Build-Up

Levels across the site have been lifted significantly above existing ground levels to allow for the following:

- To allow surface water drainage to drain to the existing ditch at the southern side of the site by gravity.
- To avoid deep foul drainage required to allow the site to drain to the existing AW manhole by gravity (alternative solution is to pump foul fouls via a rising main)
- To limit excavations required for drainage and services in the unstable ground and Made Ground, where high groundwater is present.

A geogrid will be required under all road, footway, parking areas and patios due to low strength soils (CBR values have been shown to range from 5.2% to 0.3%) and deep Made Ground. Geogrid to be designed by a specialist.

Allowance to be made for Geogrid to extend below all manholes and inspection chambers, and also to cover POS and garden areas where there is a risk of future settlement. Fill material specification also to be advised by Geotechnical Engineer to reduce risk of settlement - allowance to be made for removal of Made Ground material.



Deep Made Ground present within area of proposed detention basin and plots 13-22 (exact extents of Made Ground unknown). Constant inflow of groundwater and excavation collapse encountered in this area during ground investigations. There is also the risk of trench instability and high groundwater across the site. Excavations have been limited where possible by raising site levels.

Geogrid required - design to be undertaken by a specialist. Allowance to also be made for removal of Made Ground.

Prior to commencing works the Contractor is to familiarise themselves with the ground conditions detailed within the Elemental GI Ltd Phase II Geo-Environmental Investigation Report (Jan 2022, Ref: E23142/2/1) and the findings of JPP Geotechnical additional ground investigations undertaken in February 2023. The Contractor is to ensure suitable safe working practices are followed in accordance with current best practice. The Contractor is to ensure the excavations are suitably managed with supports or benched to prevent collapse, and de-watering / pump equipment in place where required. Excavations are not to be left open for long periods

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- Infrastructure Design
- Structural Engineering
- Development Planning
- Geotechnical & Environmental
- Surveying
- Professional Advice

Rev E Foul and surface water manhole schedule amended to suit revised drainage.
Rev D Foul water manhole schedule amended to suit revised foul water outfall.
Rev C Code for Adoption figure added
Rev B Updated to suit latest drainage layout
Rev A Flow control manhole S6 cover level amended.

By SH Checked LC 12.09.2023
By SH Checked LC 17.07.2023
By AD Checked LC 19.06.2023
By AD Checked LC 31.05.2023
By SH Checked LC 17.03.2023

Drawn By:	AD	Client	Burmor Construction
Chkd By:	LC	Project	Land East of Surfleet Road Pinchbeck
Scale @ A1:	NTS	Title	Manhole Schedule
Date:	February 2023		
Status:	FOR TECHNICAL APPROVAL		
Project No.:	26043	Drawing No:	102
Rev:	E		

