

General Notes

1.

All dimensions are in metres unless otherwise stated.
2.

All levels are in metres.
3.

This drawing is to be read in conjunction with all relevant Engineers and Architect's drawings, Specifications, Reports and Engineering Details.
4.

Do not scale from this drawing.

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	04.05.2022	20050 0102-P06 Proposed Site Layout-Model Space	04.01.2023	P06
Topographical survey	EMP Surveys LTD	July 2022	1021_Pinchbeck Topographical Survey_Final	04.01.2023	P05

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)	NOT APPROVED

ALL WORKS WITHIN THE ADOPTABLE PUBLIC HIGHWAY SHALL CONFORM TO THE CURRENT "LINCOLNSHIRE DEVELOPMENT ROADS & SUSTAINABLE DRAINAGE DESIGN GUIDE" AND "DEVELOPMENT ROAD AND SUSTAINABLE DRAINAGE SPECIFICATION AND CONSTRUCTION" PUBLICATIONS IN FORCE IN THE COUNTY AT THE TIME OF CONSTRUCTION.

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 foul 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: E21142/2/1) 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.

By SH

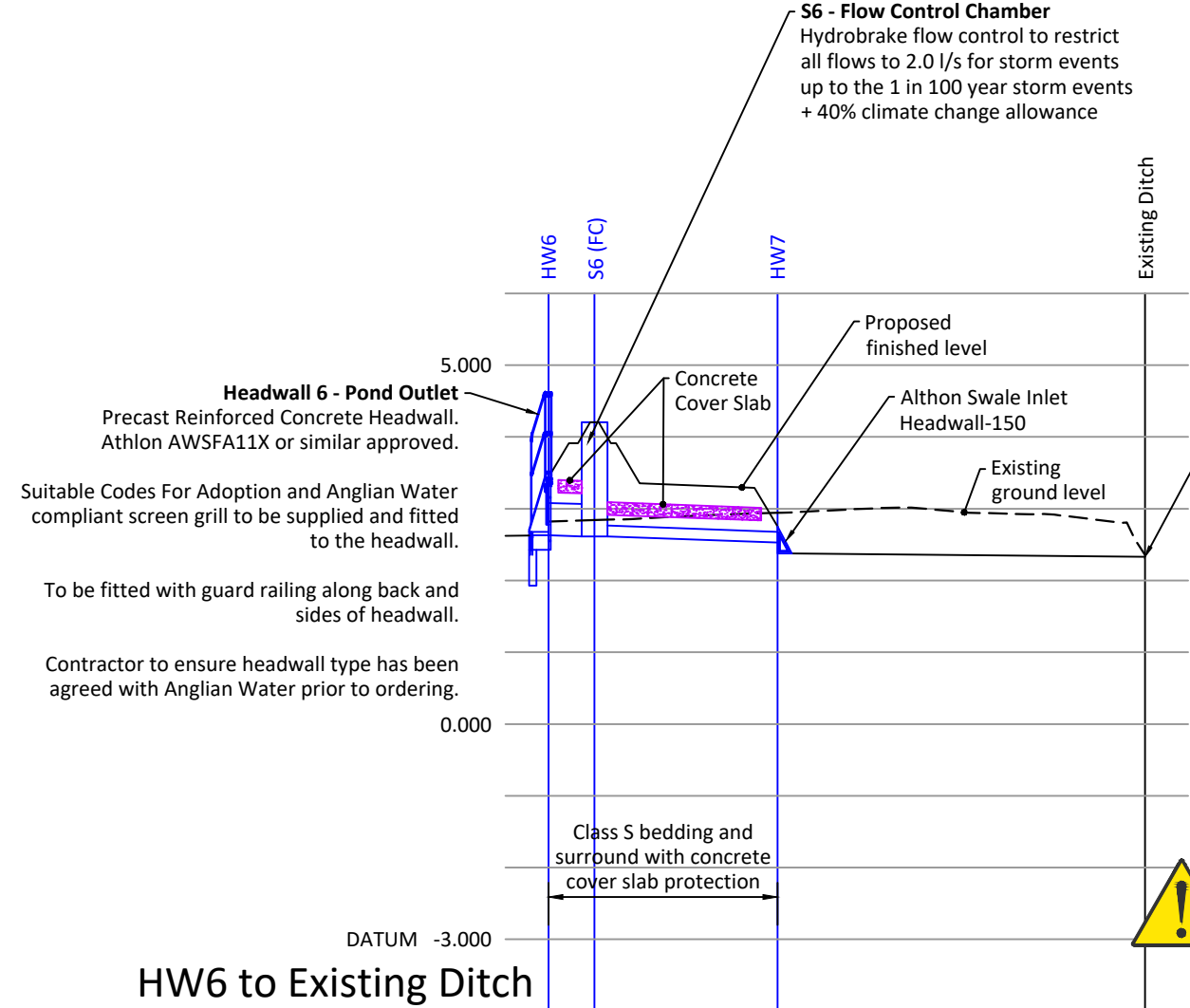
Checked LC

13.04.2023

By SH

Checked LC

17.03.2023



Section 23
New swale to outfall to existing ditch. Existing banks to be re-graded to suit new swale connection.
IL: 2.330
OS Grid reference of connection point
E: 524519.456
N: 326493.780

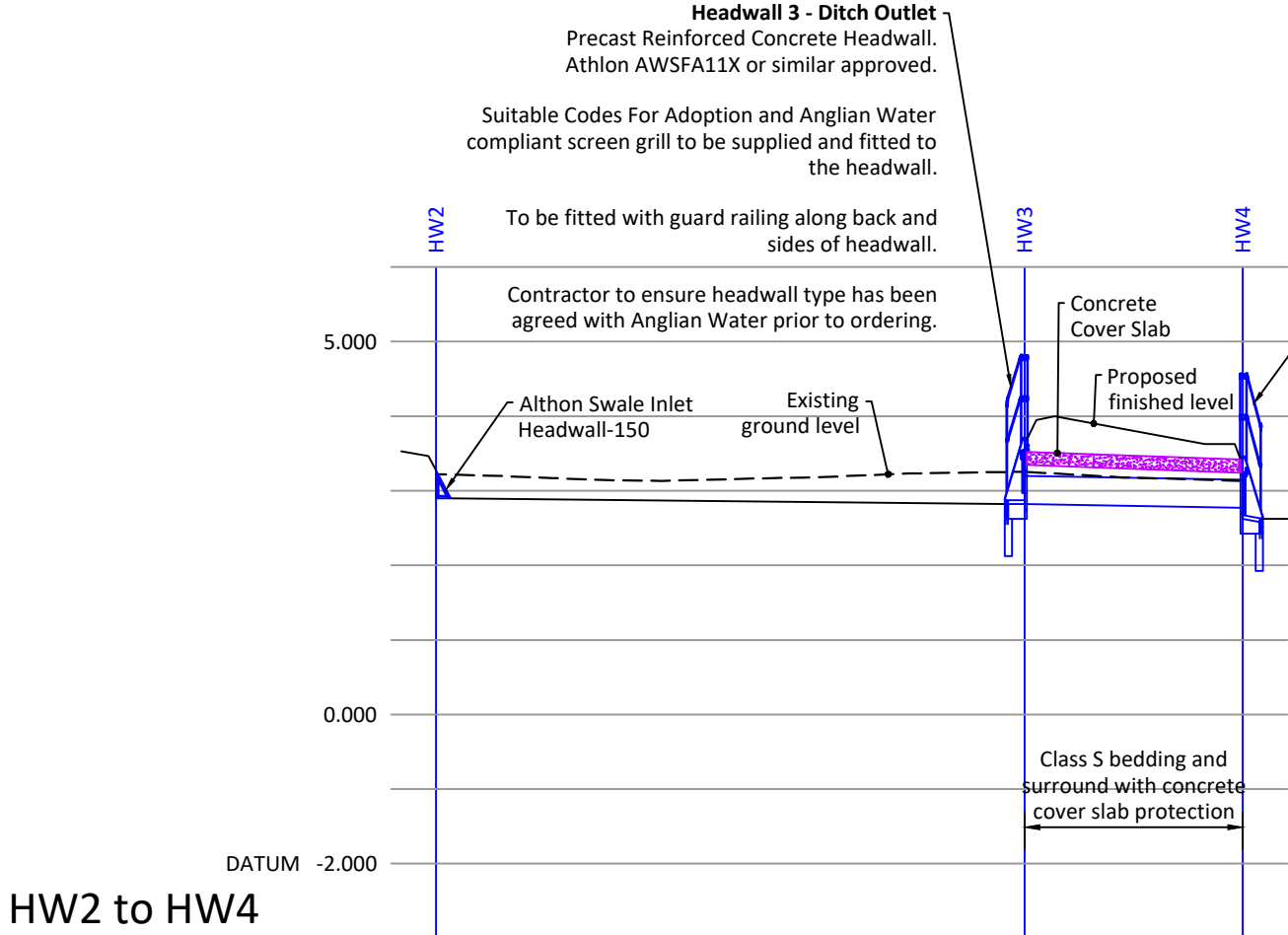
Screen/grill to be located in last manhole to prevent any debris/rubble from entering the existing watercourse during construction.

The Contractor is to satisfy themselves of the line, level, type, and condition of the existing ditch to starting any drainage 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.

Works required in the vicinity of an existing watercourse to form swale outfall. Water levels unknown. Contractor to ensure suitable method statement is in place prior to commencing works, including temporary silt barriers to prevent debris from entering the watercourse.

HW6 to Existing Ditch

EXISTING GROUND LEVEL	2.821	2.898	2.980	2.941	2.806
STORMWATER COVER LEVEL	3.625	4.205	2.975		2.840
STORMWATER INVERT	2.625	2.615	2.530		2.329
STORMWATER DETAILS	Pipe 1.004 Dia 450 Circular CONC 1 in 240	Pipe 1.005 Dia 150 Circular CLAY 1 in 150		Pipe 1.006 Swale 1:3 1 in 500	
STORMWATER LENGTHS	3.200	12.748		25.624	



HW2 to HW4

EXISTING GROUND LEVEL	3.221	3.153	3.157	3.218	3.248	3.158
STORMWATER COVER LEVEL	3.625				3.725	3.725
STORMWATER INVERT	2.900				2.821	2.811
STORMWATER DETAILS		Pipe 2.000 Swale 1:2 1 in 500			Pipe 2.001 Dia 375 Circular CONC 1 in 318	
STORMWATER LENGTHS		39.480			14.625	



Works required in highway to form site access and construct new foul sewer in area where existing services are present, including water main, HV electric cables and gas mains. Contractor to ensure all existing services in the vicinity of the works are accurately located prior to works commencing. Contractor also to ensure all required licenses for works within the existing highway are obtained from Lincolnshire Country Council Highways, and all required, fencing, barriers and signage are in place.



Deep excavation required within existing road for new foul gravity sewer. Ground conditions unknown - possibility for trench instability and groundwater ingress. It is advised additional trial holes are undertaken along the route of the new sewer prior to works commencing to determine ground conditions. The Contractor is to ensure the excavations are suitably managed with supports or benched to prevent collapse. Excavations are not to be left open for long periods or during wet weather conditions. An alternative solution to allow for shallower drainage is to pump flows from development to existing manhole via a rising main.



Works to live foul water sewer to form new connection to existing sewer. Contractor to ensure suitable method statement is in place, including any temporary support measures, and consider undertaking at off-peak times when flows within the existing sewer are low.

Section 106
Foul water (domestic effluent only) to outfall into new manhole on line of existing 2250 Anglian Water sewer subject to S106 Application and approval.

CL: 3.760
Invert levels interpolated between existing manhole 3401 and 3403 as follows:
IL: -1.285 (2250mm)
BDIL: -0.285 (1500mm)

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.

F2 to F7

EXISTING GROUND LEVEL	2.863	2.870	2.879	2.864	2.893	2.991	3.157	3.885	3.969	3.972	3.971	3.963	3.952	3.955	3.966	3.964	3.942	3.943	3.948	3.925	3.895	3.885	3.865	3.851	3.842	
FOULWATER COVER LEVEL	4.071	3.850																			3.940	3.940	3.830	3.760		
FOULWATER INVERT	2.257	1.919																			1.775	1.206	1.206	0.701	0.701	-0.285
FOULWATER DETAILS	Pipe 1.001 Dia 150 Circular CLAY 1 in 150					Pipe 1.002 Dia 150 Circular CLAY 1 in 150					Pipe 1.003 Dia 150 Circular CLAY 1 in 150					Pipe 1.004 Dia 150 Circular CLAY 1 in 150					Pipe 1.005 Dia 150 Circular CLAY 1 in 14					
FOULWATER LENGTHS	50.705					21.563					85.289					75.701					13.389					

Rev B

Flow Control Manhole note amended.

Rev A

Flow Control Manhole Chamber S6 cover level amended.

Drawn By:	AD
Chkd By:	LC
Scale @ A1:	NTS
Date:	February 2023
Status:	FOR TECHNICAL APPROVAL
Project No.:	26043

Client	Burmor Construction
Project	Land East of Surfleet Road Pinchbeck
Title	Longitudinal Sections (Sheet 3)
Drawing No:	101 (3)

Rev: B



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