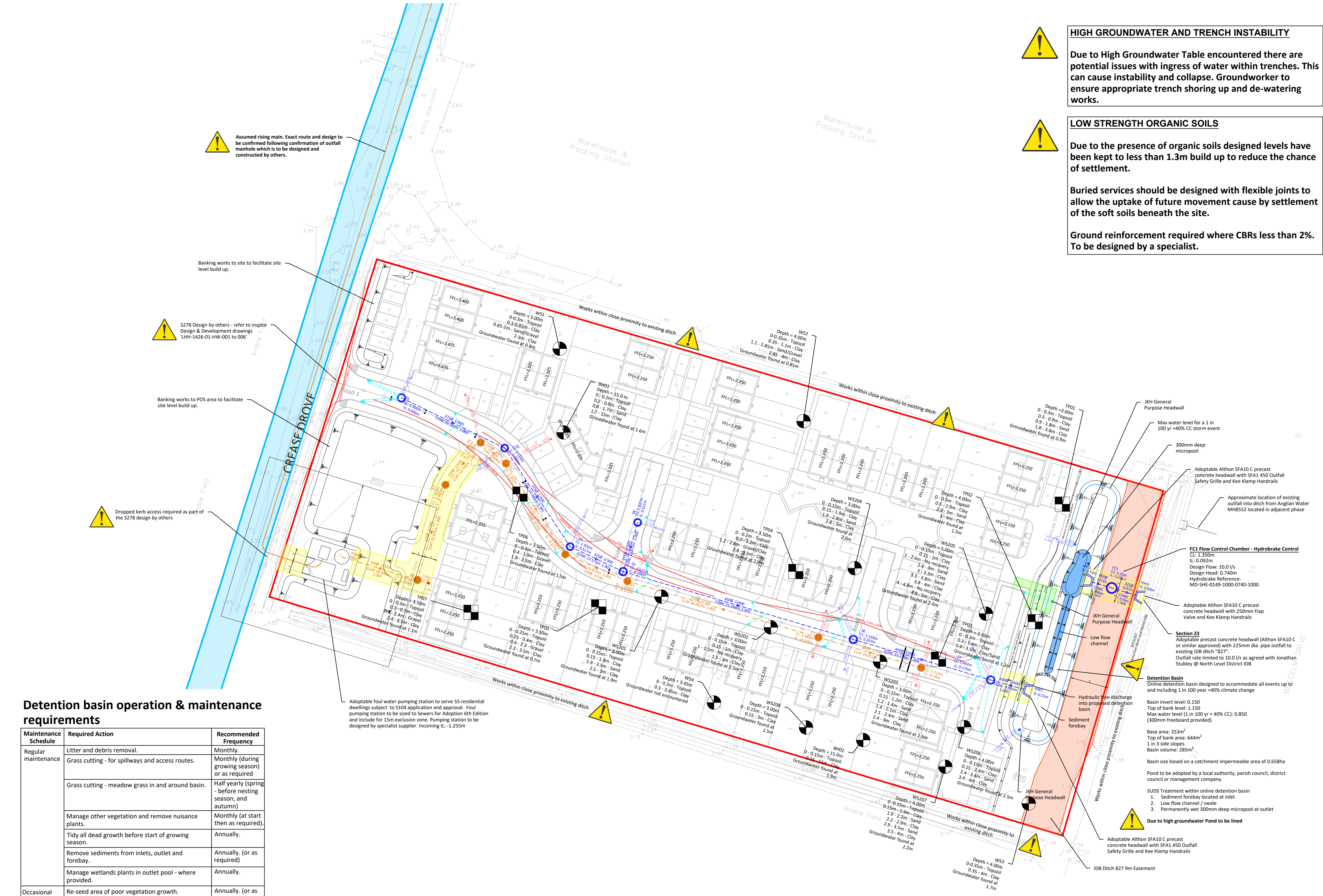




HIGH GROUNDWATER AND TRENCH INSTABILITY

Due to High Groundwater Table encountered there are potential issues with ingress of water within trenches. This can cause instability and collapse. Groundworker to ensure appropriate trench shoring up and de-watering works.

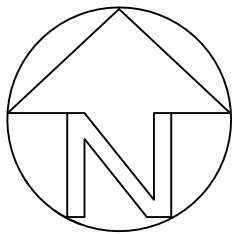


LOW STRENGTH ORGANIC SOILS

Due to the presence of organic soils designed levels have been kept to less than 1.3m build up to reduce the chance of settlement.

Buried services should be designed with flexible joints to allow the uptake of future movement cause by settlement of the soft soils beneath the site.

Ground reinforcement required where CBRs less than 2%. To be designed by a specialist.



General Notes

1. All dimensions are in metres unless otherwise stated.
2. All levels are in metres and are in relation to Ordnance Datum
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.

Engineering Layout

Drawing key

- Site boundary (Taken from latest site layout referenced below)
- Highway boundary (Taken from Highways drawing: Crease Drive, liability for maintenance)
- Adoptable Section 104 foul water sewer with pipe diameter, gradient and manhole
- Adoptable Section 104 surface water sewer with pipe diameter, gradient and manhole
- Adoptable Section 38 trapped road gully and 1500 connection
- Private surface water lateral with pipe diameter, gradient and manhole reference
- Private foul water lateral with pipe diameter, gradient and manhole reference
- Finished Floor Level
- Existing ground level
- Existing contour
- Tactile paving at uncontrolled crossing point
- Section 104 Sewer Easement
- Section 38 Gully Easement
- North Level District IDB 9m Easement
- Window Sample Location - (Taken from JPP Site Investigation Report Revision 01:August 2019)
- Trial Pit Location - (Taken from JPP Site Investigation Report Revision 01:August 2019)
- Borehole Location - (Taken from JPP Site Investigation Report Revision 01:August 2019)

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.

Significant unusual residual risks are identified on the drawing by use of a Yellow Caution Marker, beside the measures which have been adopted to eliminate and/or reduce them.

Refer to JPP Drawing No. 100 for Health & Safety Risks

This drawing has been based/developed using the following external drawings					
Type	Company	Drawing date	Drawing title	Date received	Rev
Topographical Survey	TCS Topo & Volumetric Surveys	Jul 2015	Topographical Survey July 2015	09.04.19	-
Site Layout	RGF	March 2020	100-220 Crease Drive Overlay - Model Extract 2020-03-02	03.02.20	-

JPP CONSULTING TO BE INFORMED IMMEDIATELY IF THESE DRAWINGS ARE NO LONGER CURRENT

Agreement	Approval Date
Section 278 (Works within the Existing Highway)	N/A
Section 38 (Highways adoption agreement)	Not Approved
Section 104 (Sewer adoption agreement)	Not Approved
Section 106 (Permission to discharge to public sewer)	Not Approved
Section 23 (Permission to discharge into watercourse)	Not Approved

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 CONTRACTOR'S RISK

ALL ADAPTABLE HIGHWAY WORKS TO BE IN ACCORDANCE WITH LINCOLNSHIRE COUNTY COUNCIL DEVELOPMENT ROAD AND SUSTAINABLE DRAINAGE SPECIFICATION AND CONSTRUCTION

ALL ADAPTABLE DRAINAGE WORKS TO BE IN ACCORDANCE WITH SEWERS FOR ADOPTION 6TH EDITION.

Detention basin operation & maintenance requirements

Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Litter and debris removal.	Monthly.
	Grass cutting - for spillways and access routes.	Monthly (during growing season) or as required
	Grass cutting - meadow grass in and around basin.	Half yearly (spring - before nesting season, and autumn)
	Manage other vegetation and remove nuisance plants.	Monthly (at start then as required).
	Tidy all dead growth before start of growing season.	Annually.
Occasional maintenance	Remove sediments from inlets, outlet and forebay.	Annually. (or as required)
	Manage wetlands plants in outlet pool - where provided.	Annually.
	Re-seed area of poor vegetation growth.	Annually. (or as required)
Remedial actions	Prune and trim trees and remove cuttings.	2 years, (or as required)
	Remove sediments from forebay, when 50% full and from micropools if volume is reduced by >25%	3-10 years, (or as required)
	Repair of erosion or other damage by re-seeding or re-turfing.	As required.
Monitoring	Realignment of rip-rap.	As required.
	Repair/rehabilitation of inlets, outlets and overflows	As required.
	Re-level uneven surfaces and reinstate design levels	As required.
	Inspect inlets, outlets and overflows for blockages, and clear if required.	Monthly/after large storms.
	Inspect banksides, structures and pipework, etc for evidence of physical damage.	Monthly/after large storms.
Monitoring	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Half yearly
	Check penstocks and other mechanical devices.	Half yearly

Operation and maintenance requirements for pipes, gullies and manholes

Maintenance schedule	Required action	Recommended frequency
Regular maintenance	Inspect and identify areas that are not operating correctly. If required, take remedial action	Monthly for first 3 months and then six monthly
	Debris removal from catchment surface (where may cause risk to performance)	Monthly
Monitoring	Remove sediment from pre-treatment structure (e.g. gullies)	Annually or as required
	Cleaning/jetting of annually, or as required, pipes and manholes	As required

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

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Rev A Added a note regarding dropped kerbs for pump station access.

Drawn By:	IH
Chkd By:	ML
Scale @ A1:	1:500
Date:	March 2020
Status:	FOR TECHNICAL APPROVAL
Project No.:	11557H

Client L&H Homes

Project Housing Development
Crease Drive
Crowland
Engineering Layout

Title

Drawing No: 100

By IH Checked ML 26.03.2020

Rev: A

