

Davina Bowley

From: Amanda Scholes on behalf of Planning.Responses
Sent: 16 November 2020 20:10
To: Planning Scanning
Subject: FW: Wicks Farm Conditions 4, 5 & 8 -- F/30/18/PL
Attachments: Drainage Maintenance Schedule.pdf; 70_A_Sections.pdf; 21_F_Drainage and Levels - 1 of 6.pdf; 22_F_Drainage and Levels - 2 of 6.pdf; 24_F_Drainage and Levels - 4 of 6.pdf; 51_B_Construction Details.pdf; 51_C_Construction Details.pdf; 22_G_Drainage and Levels - 2 of 6.pdf

Amanda Scholes | Receptionist, Department, [Arun District Council](#) | Location: Ground Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

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Save the environment - think before you print.

From: Anita Gardner <Anita.Gardner@arun.gov.uk>
Sent: 16 November 2020 14:54
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Subject: FW: Wicks Farm Conditions 4, 5 & 8 -- F/30/18/PL

Please add to application F/24/20/DOC

Anita Gardner
Principal Planning Officer,
Directorate of Place

T: 01903 737529
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Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF
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From: John Hall <[REDACTED]>
Sent: 16 November 2020 14:24
To: Anita Gardner <Anita.Gardner@arun.gov.uk>; Paul Cann <Paul.Cann@arun.gov.uk>
Cc: David Moore <[REDACTED]>
Subject: Wicks Farm Conditions 4, 5 & 8 -- F/30/18/PL

Hello Anita & Paul,

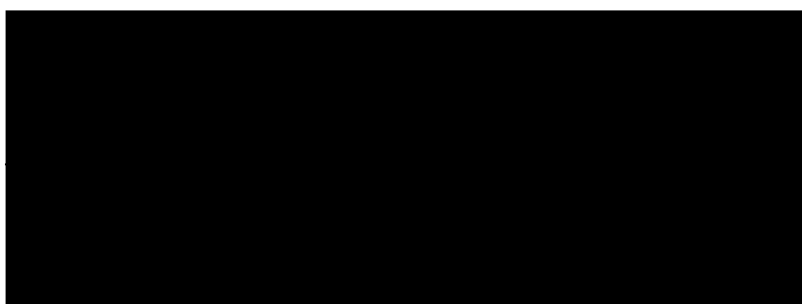
Please see the extracted plans attached from the original reports to show separately those listed in the Land Drainage Consent forms for Wicks Farm.

A copy of the Drainage Maintenance Schedule is also attached.

Hopefully you will agree that this clears DoC 4,5 & 8.

Many thanks, John.

John Hall MBA MCIHort
John Hall Consulting Ltd.
113 Limmer Lane
Felpham
West Sussex
PO22 7LR



Drainage Maintenance Schedule



The Civil Engineering Practice
11 Tungsten Building
George Street
Fishersgate
Sussex
BN41 1RA

Project	Wicks Farm, Ford
Project Number	23314

By Steve Burgess
Date 24 September 2020

1 General

- 1.1 A copy of the Jackson Purdue Lever SuDS Operation and Maintenance Statement is attached at the rear of this documents. Where discrepancies are present between the Jackson Purdue Lever SuDS Operation and Maintenance Statement and this document this document will take precedent.
- 1.2 Any reference to designs or drawings within either document must be made to the current set of drawings.

2 System Summary

2.1 Catchment 1

- 2.1.1 Surface water runoff from the hardstanding areas to the south of the glasshouses drains via ACO channels into the conveyance swale located along the southern edge of the adjacent access road and then discharges to the pond located at the south western corner of the site.
- 2.1.2 Surface water runoff from the gravel car park to the south of the glasshouses drains via a fin drain the conveyance swale located along the southern edge of the adjacent access road and then discharges to the pond located at the south western corner of the site.
- 2.1.3 Surface water runoff from the southern site access road falls into the adjacent conveyance swale located along the southern edge of the access road and then discharges to the pond located at the south western corner of the site.
- 2.1.4 Surface water from the pond at the south western corner of the site discharges at a restricted rate via a Hydrobrake flow control device into an existing ditch along the western boundary of the site.
- 2.1.5 The existing ditch along the western boundary of the site channels surface water flows to the north and finally discharges into the watercourse on the northern side of the adjacent railway line.

2.2 Catchment 2

- 2.2.1 Surface water runoff from the glasshouses drains from the roofs via a siphonic rainwater pipe system.
- 2.2.2 Surface water runoff from the glasshouses is then discharged into the large lined reservoir at the north eastern corner of the site.
- 2.2.3 The reservoir has been designed to retain a level of water for operational use within the development. Any additional volume of surface water runoff then discharges though a high level restricted overflow via a Hydrobrake flow control device into an existing ditch along the northern boundary of the site.



- 2.2.4 The existing ditch along the northern boundary of the site channels surface water flows to the west and finally discharges into the watercourse on the northern side of the adjacent railway line.

3 Schedule of Maintenance

- 3.1 Once appointed the Contractor will prepare a site specific method statement for the control of silt and other pollutants during construction. CIRIA Report C532, Control of water pollution from construction sites, provides further guidance on this.
- 3.2 The Contractor will maintain the proposed drainage system during construction and until the handing over of the site.
- 3.3 Upon completion, responsibility for regular and corrective maintenance of all elements of the drainage system will be passed on to a Site Operator and managed by them.
- 3.4 An initial pre-handover inspection of the scheme will be undertaken to ensure that it has been constructed as designed.
- 3.5 Provisions will be made to replace any infrastructure that has reached the end of its serviceable design life and will be replaced on a like for like basis as far as reasonably practicable.
- 3.6 The following maintenance schedules detail the typical tasks to be undertaken at different intervals and is based on the maintenance requirements outline in Chapter 32 of CIRIA document C753 'The SuDS Manual'.

Maintenance Schedule	Required Action	Frequency
Regular / Occasional Maintenance	Inspections and reporting on the whole drainage system	2 monthly or after significant storm events*
	Litter and debris removal – trash screen, catch pits, Hydrobrake control device, swales, permitter ditches, pond and reservoir	Monthly or as required
	Grass Cutting – swales, pond and reservoir	Monthly or as required
	Weed and invasive plant control – swales, pond and reservoir	As required
	Shrub Control – swales, pond, permitter ditches and reservoir	As required
	Aquatic and shoreline vegetation management	As required
	Surface and foul water pipework, channel drains, headwalls and fin drains – jetting / rodding	Every 2 years or as required
	Remove sediment and debris from silt trap chambers, channel drains and inlet chambers	6 monthly
	Remove sediment and debris from swales, pond and permitter ditches and reservoir	Once a year
	Inspection of foul pumping station	Once a year

* During the first year of operation inspections will usually be carried out monthly and/or after significant storm events to ensure that the system is functioning as designed and that no damage is apparent.

Maintenance Schedule	Required Action	Frequency
Corrective Maintenance	Remove debris and/or blockages from the drainage systems including, trash screen, silt traps, channel drains, fin drains, Hydrobrake control device	As required
	Repairs to access chambers, pipework, silt traps, manhole covers, fin drains, channel drains, headwalls, trash screens and grilles	As required
	Inspect inlet, outlet from downpipe and gullies for blockages, standing water and clear	As required
	Service and/or repair foul pumping station apparatus	As required/ when alarm indicates
	Replace Hydrobrake control device	As required/every 25 years
	Replace foul pumping station	As required/every 10 years

Indicative Schedule of Maintenance for the Proposed Drainage System

3.7 A copy of the Hydrobrake specifications are attached at the rear of this document.

4 Financing

4.1 The regular and corrective maintenance of all elements of the drainage system will be managed and funded through by the Site Operator-

Inspection / Action Required	Gullies, Channels , Fin Drains and Gutters	Catchpits / Inspection Chambers	Surface and Foul Water Pipework	Headwalls and Trash Screen	Pond / Swales / Reservoir	Hydrobrake Control Device	Foul Pumping Station
After leaf fall in Autumn	✓	✓					
Monthly	✓				✓		
2 Monthly	✓	✓	✓	✓	✓	✓	✓
6 Months	✓	✓		✓			
1 Year					✓		✓
2 Years			✓				
10 Years							✓
25 Years						✓	
When alarm indicates							✓

Drainage System Maintenance Summary



SuDS Operation and Maintenance Statement

Drainage Design
Wicks Farm, Arundel
JDI01679-1HI





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Appendices

A	Proposed Drainage Layout
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1.0 Terms of Reference

1.1 Report Details

Jackson Purdue Lever has been appointed by Envireau to prepare a SuDS Operation and Maintenance Statement. No liability is accepted to any third party for all or part of this report in connection with this or any other development.

This document has been produced, the contents of which are based on current best practice guidance, to demonstrate the effectiveness and longevity of the SuDS features designed within the drainage strategy.

The surface water network has been designed to accommodate the 1 in 100 year storm rainfall event plus an allowance of 40% for climate change. As the flows are generally being attenuated on site, and within SuDS features, there will be a period of time after storm events where the network is still partially or fully surcharged and is discharging runoff. Should any surcharging still be present 48 hours after the end of the storm, appropriate action should be taken as noted within the following sections.

This document is intended to give an overview of the operation and maintenance for the range of SuDS features included within the drainage strategy and in relation to typical/standard details only. Where proprietary products are specified the manufacturer's recommendations should be followed in the first instance, unless specifically noted otherwise due to project constraints.

The recommended operation and maintenance intervals are indicative only and should initially be undertaken on a more frequent basis to ensure that there are no unforeseen issues with the construction and early operation. The frequency can then be adjusted to suit the Client's wider site maintenance programme.

1.2 Report History

Status - Revision	Author	Approved	Issued Date	Purpose
A1-C01	MPW	TSL	27/03/2020	Issued for Planning
A1-C02	MPW	TSL	24/06/2020	Updated following comments received from LLFA.



2.0 Pipes and Manholes

2.1 Location and Description

The proposed pipes and manholes are shown on the drainage layout drawing included within Appendix A.

The pipes and manholes have been designed in accordance with CIRIA C753 and all current British Standards. Where specified, proprietary products are to be installed and maintained in accordance with the manufacturer's recommendations.

2.2 Operation

The pipes are intended to be surface water conveyance features. These features are intended to be dry except during rainfall events and have been designed to be self-cleansing as a result of the gradients proposed.

Access for maintenance has been provided through inspection chambers, manholes and rodding eyes.

2.3 Inspection and Maintenance Regime

Regular inspection and maintenance are an important factor for the effective operation of these features and to identify areas which may have been obstructed/clogged and are not operating correctly.

A recommended schedule of maintenance activities is included in the table below:

Maintenance Schedule	Required Action	Typical Frequency
Occasional Maintenance	Remove or control tree roots where they are encroaching pipe runs, using recommended methods (e.g. NJUG, 2018 or BS 3998:2010)	As required
Remedial Actions	Clear pipework of blockages	As required
Monitoring	Initial inspection should be provided using a post-construction CCTV survey	Once (post-construction)
	Inspect for evidence of poor operation	Monthly (during the first year), then annually



3.0 Channel Drains

3.1 Location and Description

The proposed channel drains are shown on the drainage layout drawing included within Appendix A.

The channel drains have been designed in accordance with CIRIA C753 and all current British Standards. Where specified, proprietary products are to be installed and maintained in accordance with the manufacturer's recommendations.

3.2 Operation

The channel drains are intended to be surface water collection and conveyance features. These features are intended to be dry except during rainfall events.

The surface water should enter the drainage channel from runoff from adjacent impermeable surfaces and typically consist of a channel with a removable grate.

Access for maintenance has been provided through access chambers, rodding points and the removable cover grates.

3.3 Inspection and Maintenance Regime

Regular inspection and maintenance are an important factor for the effective operation of these features and to identify areas which may have been obstructed/clogged and are not operating correctly.

A recommended schedule of maintenance activities is included in the table below:

Maintenance Schedule	Required Action	Typical Frequency
Routine Maintenance	Remove litter and debris and inspect for sediment accumulation	Six monthly
Remedial Actions	Clear pipework of blockages	As required
Monitoring	Inspect for evidence of poor operation	Monthly (during the first year), then annually
	Inspect sediment accumulation rates and establish appropriate removal frequencies	Monthly (during the first year), then annually



4.0 Flow Control Chambers/Devices

4.1 Location and Description

The proposed flow control chambers/devices are shown on the drainage layout drawing included within Appendix A.

The flow control chambers/devices have been designed in accordance with CIRIA C753 and all current British Standards. Where specified, proprietary products are to be installed and maintained in accordance with the manufacturer's recommendations.

4.2 Operation

The flow control chamber/device is intended to restrict the discharge rate of surface water leaving the site to a designed rate utilising devices such as an orifice plate, vortex separator or mechanical float control.

Access for maintenance has been provided through the chamber itself.

4.3 Inspection and Maintenance Regime

Regular inspection and maintenance are an important factor for the effective operation of these features and to identify areas which may have been obstructed/clogged and are not operating correctly.

A recommended schedule of maintenance activities is included in the table below:

Maintenance Schedule	Required Action	Typical Frequency
Routine Maintenance	Remove litter and debris and inspect for sediment accumulation	Annually
Regular Maintenance	Check any penstocks and other mechanical devices	Annually
Remedial Actions	Clear pipework of blockages, utilise penstock to clear chamber if required	As required
Monitoring	Initial inspection should be provided using a post-construction CCTV survey	Once (post-construction)
	Inspect for evidence of poor operation	Monthly (during the first year), then annually



5.0 Swales

5.1 Location and Description

The proposed swales are shown on the drainage layout drawing included within Appendix A.

The swales have been designed in accordance with CIRIA C753 and all current British Standards. Where specified, proprietary products are to be installed and maintained in accordance with the manufacturer's recommendations.

5.2 Operation

The swales are intended to be surface water conveyance, water quality improvement and attenuation storage features. These features are intended to be dry except during rainfall events.

Specific access for maintenance has not been provided as the swales are open features that can be accessed from the surrounding area.

5.3 Inspection and Maintenance Regime

Regular inspection and maintenance are an important factor for the effective operation of swales.

A recommended schedule of maintenance activities is included in the table below:

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Remove litter and debris	Monthly, or as required
	Cut grass -- to retain grass height within specified design range	Monthly (during growing season), or as required.
	Manage other vegetation and remove nuisance plants	Monthly at start, then as required
	Inspect inlets, outlets and overflows for blockages and clear if required	Monthly
	Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponding for > 48 hours	Monthly, or as required
	Inspect vegetation coverage	Monthly for six months, quarterly for two years, then six monthly
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies	Six monthly
Occasional Maintenance	Re-seed areas of poor vegetation growth, alter plant types to better suit conditions if required	As required, or if bare soil is exposed over 10% or more of the swale treatment area
Remedial Actions	Repair erosion or other damage by re-turfing or re-seeding	As required



	Re-level uneven surfaces and reinstate design levels	As required
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface	As required
	Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip	As required
	Remove and dispose of oils or petrol residues using safe standard practices	As required



6.0 Ponds and Wetlands

6.1 Location and Description

The proposed ponds and wetlands are shown on the drainage layout drawing included within Appendix A.

The ponds and wetlands have been designed in accordance with CIRIA C753 and all current British Standards. Where specified, proprietary products are to be installed and maintained in accordance with the manufacturer's recommendations.

6.2 Operation

The ponds and wetlands are intended to be surface water conveyance, water quality improvement and attenuation storage features. These features are intended to be wet.

Specific access for maintenance has not been provided as the ponds and wetlands are open features that can be accessed from the surrounding area.

6.3 Inspection and Maintenance Regime

Regular inspection and maintenance are an important factor for the effective operation of ponds and wetlands.

A recommended schedule of maintenance activities is included in the table below:

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Remove litter and debris	Monthly, or as required
	Cut the grass – public areas	Monthly (during growing season)
	Cut the meadow grass	Six monthly (spring, before nesting season and autumn)
	Inspect marginal and bankside vegetation and remove nuisance plants (for first three years)	Monthly (at start), then as required
	Inspect inlets, outlets, banksides, structures, pipework, etc. for evidence of blockage and/or physical damage	Monthly
	Inspect water body for signs of poor water quality	Monthly (May-October)
	Inspect silt accumulation rates in any forebay and in main body of the pond and establish appropriate removal frequencies; undertake contamination testing once some build-up has occurred, to inform management and disposal options	Six monthly



	Check any mechanical devices, e.g. penstocks	Six monthly
	Hand cut submerged and emergent aquatic plants (at minimum of 0.1m above pond base; include maximum 25% of pond surface)	Annually
	Remove 25% of bank vegetation from water's edge to a minimum of 1.0m above water level	Annually
	Tidy all dead growth (scrub clearance) before start of growing season (Note: tree maintenance is usually part of overall landscape management contract)	Annually
	Remove sediment from any forebay	Every 1-5 years, or as required
	Remove sediment and planting from one quadrant of the main body of ponds without sediment forebays	Every five years, or as required
Occasional Maintenance	Remove sediment from the main body of big ponds when pool volume is reduced by 20%	With effective pre-treatment, this will only be required rarely, e.g. every 25-50 years
Remedial Actions	Repair erosion or other damage	As required
	Replant, where necessary	As required
	Aerate pond when signs of eutrophication are detected	As required
	Realign riprap or repair other damage	As required
	Repair/rehabilitate inlets, outlets and overflows	As required

Technical Specification

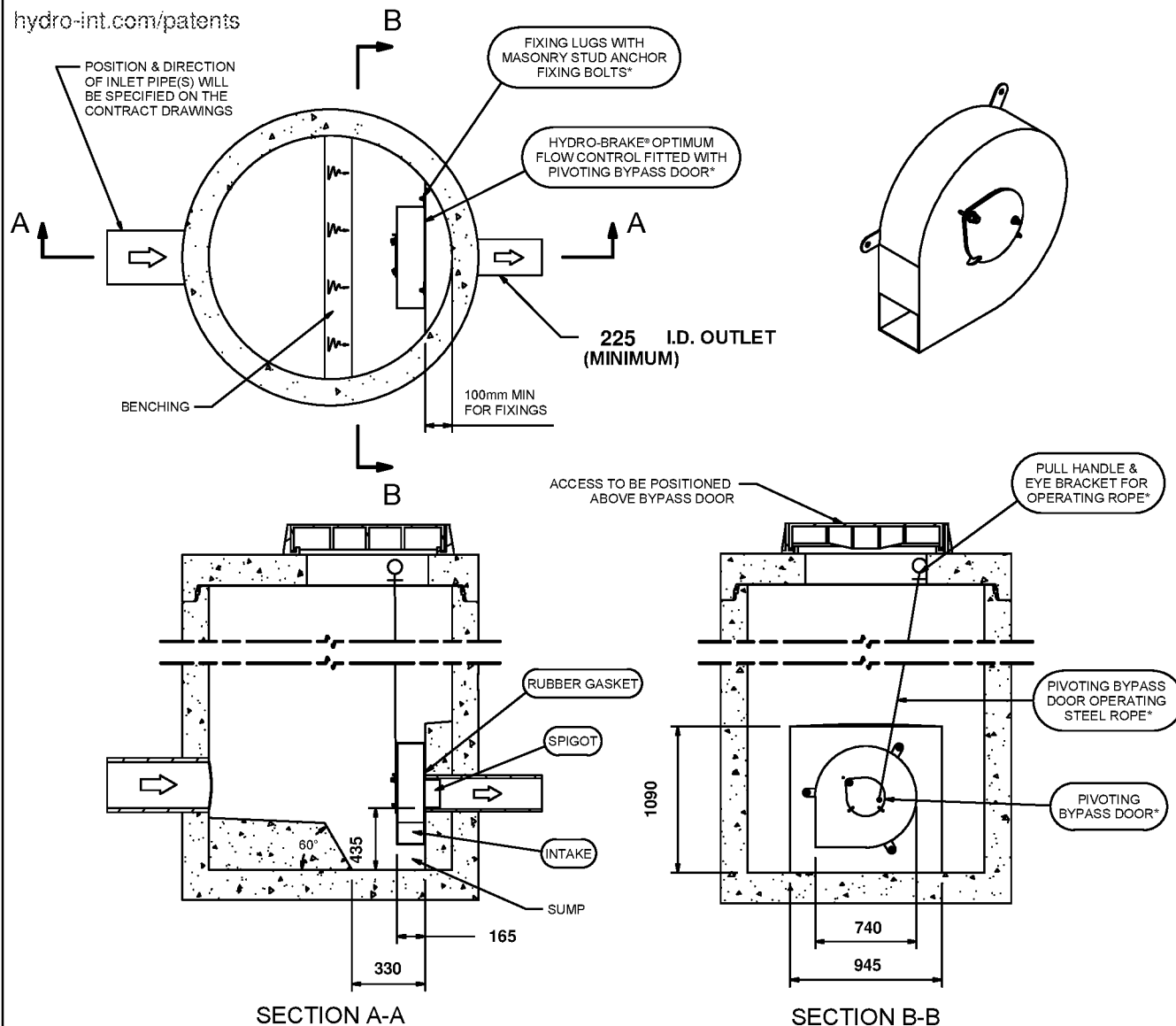
Control Point	Head (m)	Flow (l/s)
Primary Design	1.470	13.000
Flush-Flo™	0.435	12.998
Kick-Flo®	0.936	10.504
Mean Flow		11.296

Hydro-Brake® Optimum Flow Control including:

- 3 mm grade 304L stainless steel
- Integral stainless steel pivoting by-pass door allowing clear line of sight through to outlet, c/w stainless steel operating rope
- Beed blasted finish to maximise corrosion resistance
- Stainless steel fixings
- Rubber gasket to seal outlet



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IMPORTANT: LIMIT OF HYDRO INTERNATIONAL SUPPLY
 THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
 FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
 ALL CIVIL AND INSTALLATION WORK BY OTHERS
 * WHERE SUPPLIED
 HYDRO-BRAKE® FLOW CONTROL & HYDRO-BRAKE® OPTIMUM FLOW CONTROL ARE REGISTERED TRADEMARKS FOR FLOW
 CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE



The head/flow characteristics of this SHE-0157-1300-1470-1300 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.
The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

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DATE 8/21/2020 8:24 AM

SITE 23314 Wicks Farm

DESIGNER Paul Reynolds

REF SW-06

SHE-0157-1300-1470-1300

Hydro-Brake® Optimum

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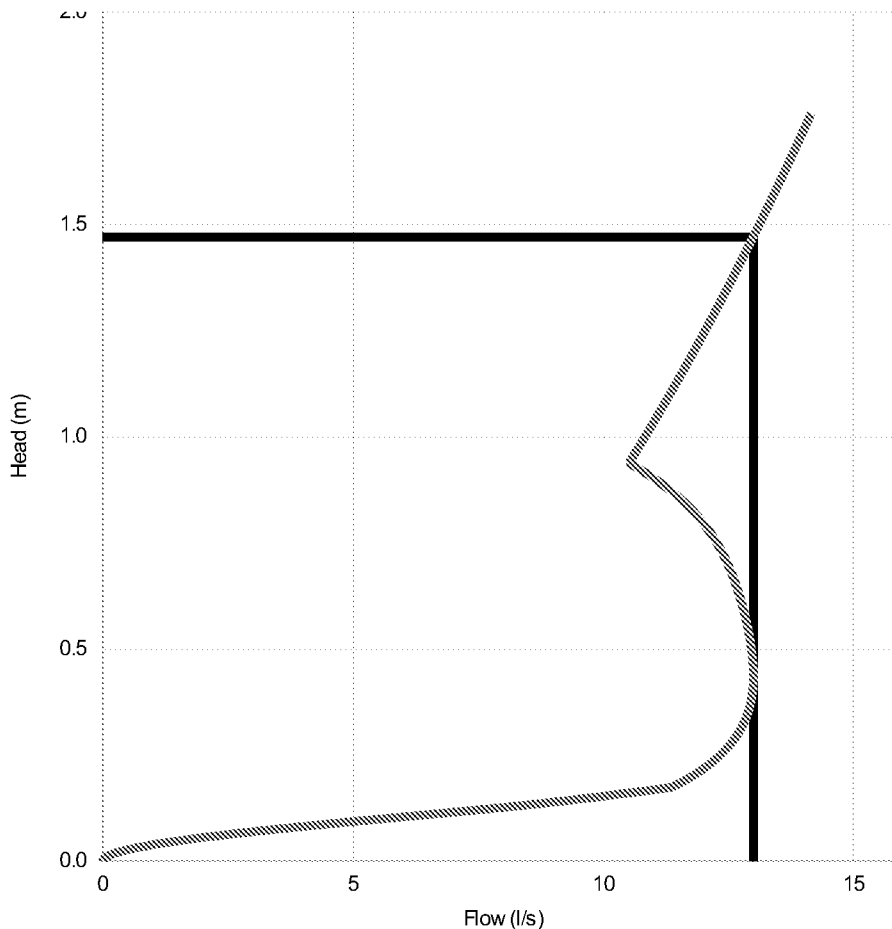
paul@civil.co.uk

Technical Specification

Control Point	Head (m)	Flow (l/s)
Primary Design	1.470	13.000
Flush-Flo	0.435	12.998
Kick-Flo®	0.936	10.504
Mean Flow		11.296



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Head (m)	Flow (l/s)
0.000	0.000
0.051	1.698
0.101	5.765
0.152	9.957
0.203	11.813
0.253	12.368
0.304	12.711
0.355	12.903
0.406	12.986
0.456	12.993
0.507	12.949
0.558	12.869
0.608	12.760
0.659	12.622
0.710	12.445
0.760	12.209
0.811	11.890
0.862	11.454
0.912	10.866
0.963	10.644
1.014	10.904
1.064	11.157
1.115	11.404
1.166	11.645
1.217	11.881
1.267	12.112
1.318	12.338
1.369	12.560
1.419	12.778
1.470	12.991

DESIGN ADVICE



The head/flow characteristics of this SHE-0157-1300-1470-1300 Hydro-Brake Optimum® Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.

The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

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DATE	21/08/2020 08:24
Site	23314 Wicks Farm
DESIGNER	Paul Reynolds
Ref	SW-06

SHE-0157-1300-1470-1300
Hydro-Brake Optimum®

Technical Specification

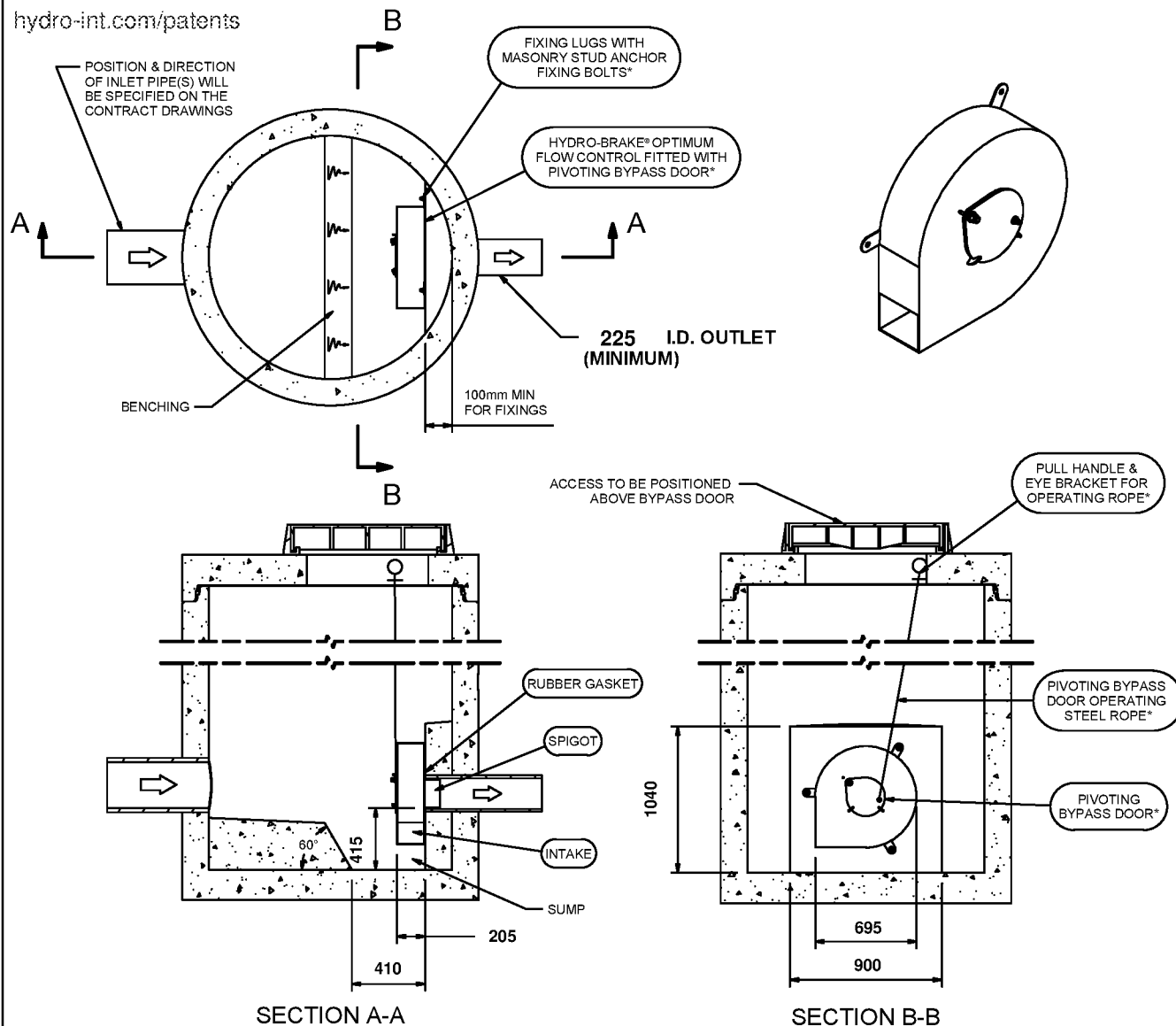
Control Point	Head (m)	Flow (l/s)
Primary Design	1.000	20.000
Flush-Flo™	0.340	19.998
Kick-Flo®	0.721	17.120
Mean Flow		16.823

Hydro-Brake® Optimum Flow Control including:

- 3 mm grade 304L stainless steel
- Integral stainless steel pivoting by-pass door allowing clear line of sight through to outlet, c/w stainless steel operating rope
- Beed blasted finish to maximise corrosion resistance
- Stainless steel fixings
- Rubber gasket to seal outlet



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IMPORTANT: ○ LIMIT OF HYDRO INTERNATIONAL SUPPLY
 THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
 FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
 ALL CIVIL AND INSTALLATION WORK BY OTHERS
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 HYDRO-BRAKE® FLOW CONTROL & HYDRO-BRAKE® OPTIMUM FLOW CONTROL ARE REGISTERED TRADEMARKS FOR FLOW
 CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

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DESIGN ADVICE



The head/flow characteristics of this SHE-0199-2000-1000-2000 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.
The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

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DATE 8/17/2020 2:17 PM

SITE 23314 Wicks Farm

DESIGNER Paul Reynolds

REF SW-07

SHE-0199-2000-1000-2000

Hydro-Brake® Optimum

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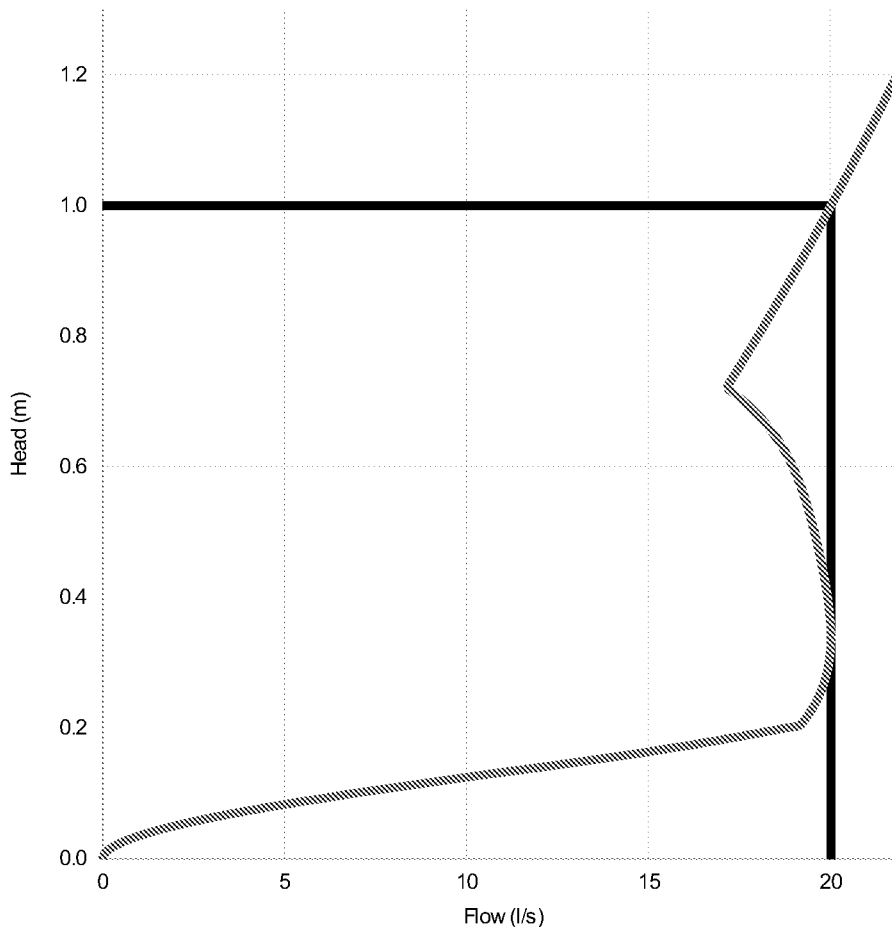
paul@civil.co.uk

Technical Specification

Control Point	Head (m)	Flow (l/s)
Primary Design	1.000	20.000
Flush-Flo	0.340	19.998
Kick-Flo®	0.721	17.120
Mean Flow		16.823



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Head (m)	Flow (l/s)
0.000	0.000
0.034	0.939
0.069	3.511
0.103	7.275
0.138	11.663
0.172	15.908
0.207	19.189
0.241	19.599
0.276	19.846
0.310	19.969
0.345	19.997
0.379	19.958
0.414	19.873
0.448	19.758
0.483	19.622
0.517	19.468
0.552	19.288
0.586	19.064
0.621	18.770
0.655	18.369
0.690	17.819
0.724	17.161
0.759	17.538
0.793	17.911
0.828	18.277
0.862	18.634
0.897	18.984
0.931	19.328
0.966	19.664
1.000	19.995

DESIGN ADVICE



The head/flow characteristics of this SHE-0199-2000-1000-2000 Hydro-Brake Optimum® Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.

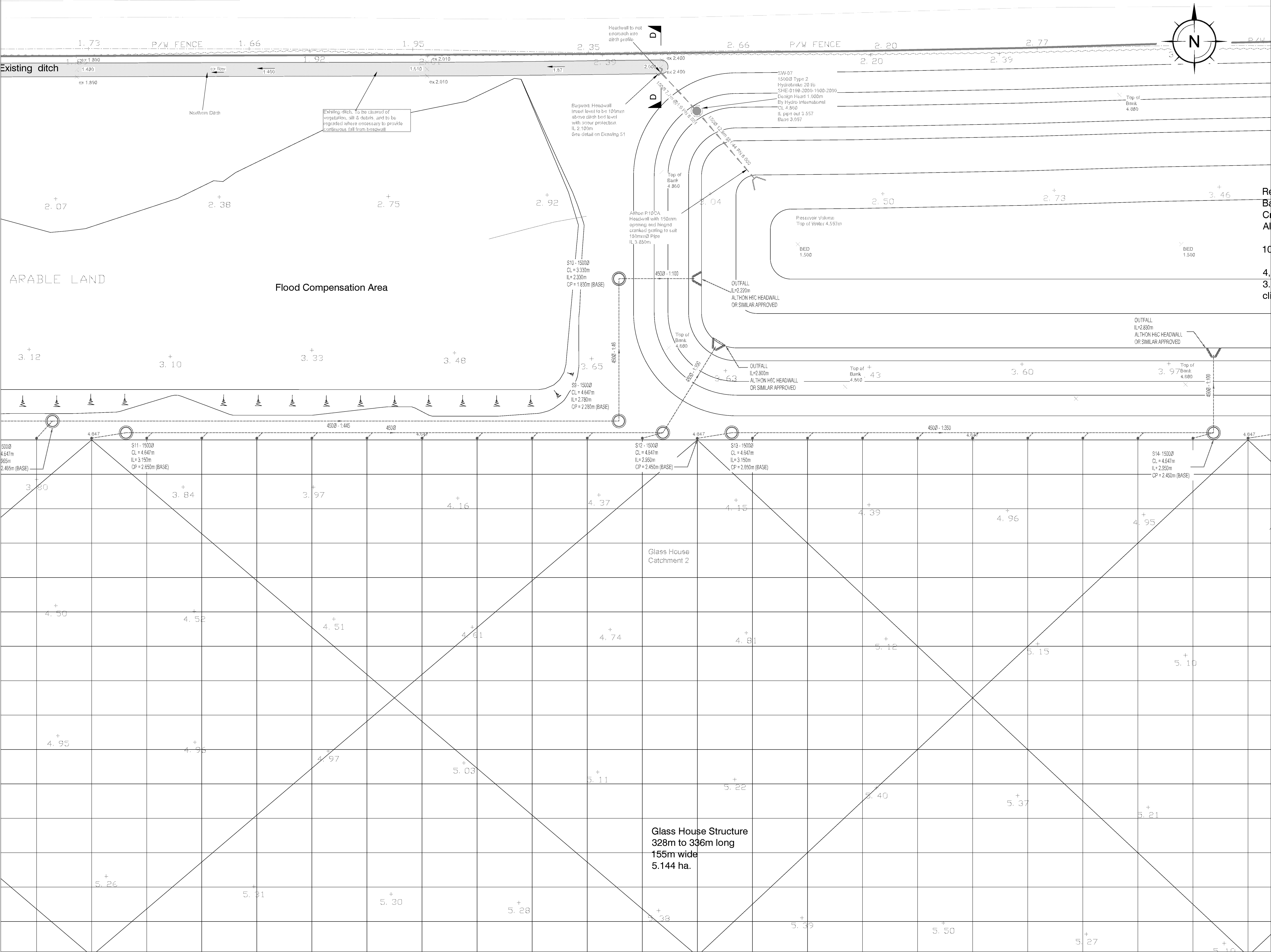
The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

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International

DATE	17/08/2020 14:17
Site	23314 Wicks Farm
DESIGNER	Paul Reynolds
Ref	SW-07

SHE-0199-2000-1000-2000
Hydro-Brake Optimum®

Existing Railway Line

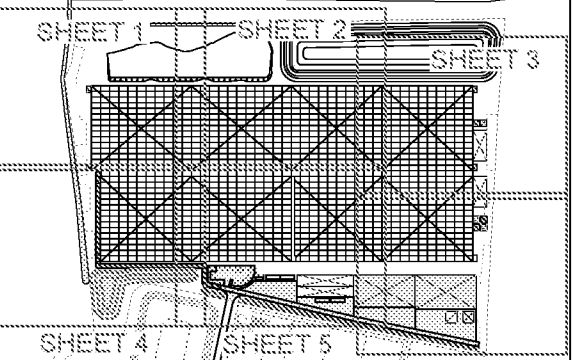


GENERAL NOTES:

1. All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
2. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
3. The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.
4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the Consultant and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.

DRAINAGE NOTES:

1. All adoptable pipes, bends and junctions shall be verified clay to BS EN 295-1, with flexible joints and kitemark certified.
2. All Adoptable sewers shall be in strict accordance with the 7th edition of Sewers For Adoption. Unless otherwise stated adoptable sewers shall be 150mm diameter and shall be laid in a class S bedding. Where the depth to soffit is less than 1.2m under a public highway or 0.9m elsewhere the pipe shall be laid with a class Z bedding.
3. All private building drainage shall be constructed in strict accordance with BS EN 752:2008. Unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of 1 in 40 for foul drains and 1 in 80 for surface water drains. All building drains shall be laid in class B bedding unless otherwise specified.
4. Where a pipe is within 1m of a foundation the trench shall be filled with class GEN 3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN 3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN 3 concrete.
5. Where pipes, external to the structures, have a depth to soffit from ground level of less than 450mm they shall have a class GEN 3 concrete encasement (150mm thick). In all other cases the pipes shall be bedded and surrounded with 100mm thick granular material.
6. In any circumstances where pipes are bedded and surrounded in concrete flexible joints should be provided. Compressible boards (fibreglass or polystyrene) shall be provided at a maximum of 6m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 18mm for pipes up to 450mm nominal diameter and 36mm for pipes over 450mm nominal diameter.
7. All syps shall have rodding access plates fitted at their bases (ground floor level).
8. Where existing pipes are to be abandoned they shall be dug out together with any abandoned manholes.
9. Any discrepancy between the drawing and site should be reported immediately to the Engineer.
10. All manhole and chamber sizes are given as a minimum to meet the 7th edition of Sewers For Adoption.
11. All pipes to connect soffit to soffit.



SHEET PLAN

LEVELS KEY

- 5.31+ Existing Topographical Survey Level
- 6x4.884 Existing Tie into Level
- 4.884 Proposed Spot Level
- 1:11 Proposed Gradient
- Proposed Contours
- 50mm intervals on site
- 250mm intervals on pond

DRAINAGE KEY

- Private Storm Drainage**
 - Type 2 Precast Concrete Manhole Type
 - CP Catchpit Manholes
 - Aco Channels
 - Fin Drain
 - French Drain
 - Surface Water Drainage by Jackson Purdus Lever - See Drawings 001879-DR-D-4001 to 4004
- Private Foul Drainage**
 - Type 2 Precast Concrete Manhole Type
 - Type 3 Inspection Chambers
 - Rising Main
 - Root Protection Area

F:	24.09.20	PR:	Manhole Type and Diameters added to plan.	SB
			Jackson Purdus Lever Drainage added.	
E:	21.08.20	PR:	Levels and Drainage updated.	SB
D:	25.08.20	PR:	Flood compensation area and reservoir revised.	SB
C:	12.06.20	PR:	Existing Ditches added. Reservoir outlet drainage amended.	SB
B:	18.03.20	PR:	Swale on western boundary revised. Reservoir and compensation areas revised as per Geodine Drawings	SB
A:	03.03.20	PR:	Minor Amendments.	SB
REV	DATE	INT	DESCRIPTION	CHK

Asado Status

PRELIMINARY

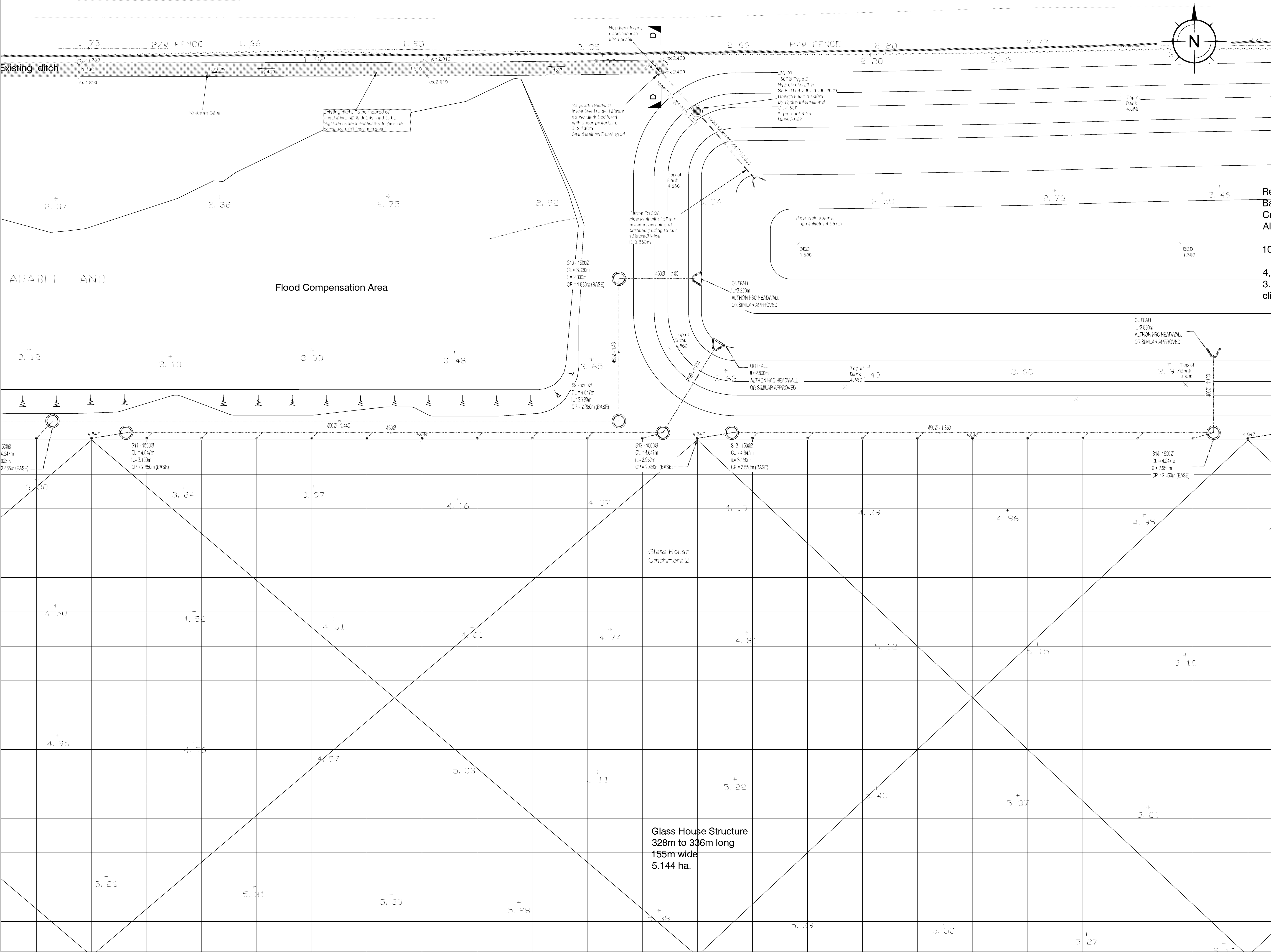
The Civil Engineering Practice
11 Tungsten Building
George Street
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BN41 1RA
01273 424424
info@cepr.co.uk
www.cepr.co.uk

CLIENT
DPS Limited
PROJECT
Wicks Farm
Ford
TITLE
Proposed Levels and Drainage
Sheet 2 of 6

DRAWN PR	DATE Feb 2020	PROJECT NO. 23314
DESIGNED SB	CHECKED	REV 22 F
SCALE 1:250 @ A1		

Glass House Structure
328m to 336m long
155m wide
5.144 ha.

Existing Railway Line



GENERAL NOTES:

- All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
- This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
- The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.
- Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the Consultant and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.

DRAINAGE NOTES:

- All adoptable pipes, bends and junctions shall be verified clay to BS EN 295-1, with flexible joints and kitemark certified.
- All adoptable sewers shall be in strict accordance with the 7th edition of Sewers For Adoption. Unless otherwise stated adoptable sewers shall be 150mm diameter and shall be laid in a class S bedding. Where the depth to soffit is less than 1.2m under a public highway or 0.9m elsewhere the pipe shall be laid with a class Z bedding.
- All private building drainage shall be constructed in strict accordance with BS EN 752:2008. Unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of 1 in 40 for foul drains and 1 in 80 for surface water drains. All building drains shall be laid in class B bedding unless otherwise specified.
- Where a pipe is within 1m of a foundation the trench shall be filled with class GEN 3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN 3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN 3 concrete.
- Where pipes, external to the structures, have a depth to soffit from ground level of less than 450mm they shall have a class GEN 3 concrete encasement (150mm thick). In all other cases the pipes shall be bedded and surrounded with 100mm thick granular material.
- In any circumstances where pipes are bedded and surrounded in concrete flexible joints should be provided. Compressible boards (fibreglass or polystyrene) shall be provided at a maximum of 6m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 18mm for pipes up to 450mm nominal diameter and 36mm for pipes over 450mm nominal diameter.
- All sumps shall have rodding access plates fitted at their bases (ground floor level).
- Where existing pipes are to be abandoned they shall be dug out together with any abandoned manholes.
- Any discrepancy between the drawing and site should be reported immediately to the Engineer.
- All manhole and chamber sizes are given as a minimum to meet the 7th edition of Sewers For Adoption.
- All pipes to connect soffit to soffit.

SHEET PLAN

LEVELS KEY

- 5.31 ± Existing Topographical Survey Level
- 6x4.884 ± Existing Tie into Level
- 4.884 ± Proposed Spot Level
- 1:11 Proposed Gradient
- 5.000 Proposed Contours
- 50mm intervals on site
- 250mm intervals on pond

DRAINAGE KEY

Private Storm Drainage

- Type 2 Precast Concrete Manhole Type
- CP Catchpit Manholes
- Aco Channels
- Fin Drain
- French Drain
- Surface Water Drainage by Jackson
- Purdue Lever - See Drawings 001879-DR-D-4001 to 4004

Private Foul Drainage

- Type 2 Precast Concrete Manhole Type
- Type 3 Inspection Chambers
- Rising Main
- Root Protection Area

REVISIONS

NO.	DATE	BY	DESCRIPTION	CHKD
F	24.09.20	PR	Manhole Type and Diameters added to plan. Jackson Further Level Drainage added.	SB
E	21.08.20	PR	Levels and Drainage updated.	SB
D	25.08.20	PR	Fixed compensation area and reservoir revised.	SB
C	12.06.20	PR	Existing Ditches added. Reservoir outlet drainage amended.	SB
B	18.03.20	PR	Swale on western boundary revised. Reservoir and compensation areas revised as per Geodine Drawings.	SB
A	03.03.20	PR	Minor Amendments.	SB

ASAP Status

PRELIMINARY

CLIENT
DPS Limited

PROJECT
Wicks Farm Ford

WEEK
Proposed Levels and Drainage Sheet 2 of 6

DRAWN
PR

DATE
Feb 2020

PROJECT NO.
23314

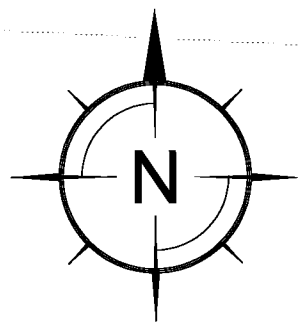
THROWER
SB

CHECKED
SB

SCALE
1:250 @ A1

REV
22

REV
F



Existing ditch to be cleared of vegetation, silt & debris, and to be regraded where necessary to provide continuous fall from headwall

Western Ditch

Top section of existing ditch to be deepened to allow gravity connection from new Pond

Bagwork Headwall with slope protection IL 3.720m
See detail on Drawing 51

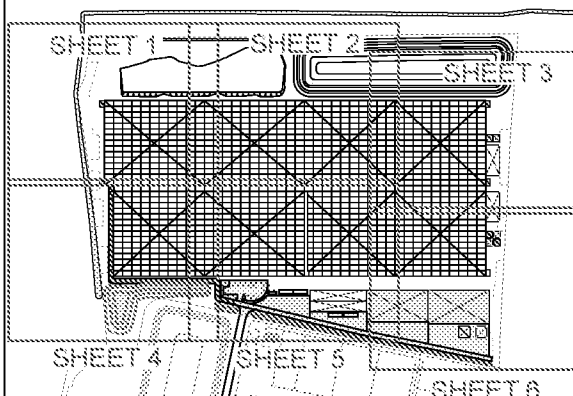
SWH-06
15000 Type 2
Hydrobrake 15 IL
SHE-0157-1300-1470-1300
Design Head 1.470m
By Hydro International
CL 6.390
IL 3.780
Bases 3.245

Albion P10CA
Headwall with 450mm opening and hinged cranked gratings IL 3.680m

Albion R20B
Headwall with two 600mm openings and hinged cranked gratings IL 4.140m

Pond Storage Volume 010m³
Bed @ 3.800 - 4.100m
Top of Water 5.250m

- GENERAL NOTES:**
- All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
 - This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
 - The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.
 - Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the Consultant and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.
- DRAINAGE NOTES:**
- All adoptable pipes, bends and junctions shall be verified clay to BS EN 295-1, with flexible joints and kitemark certified.
 - All Adoptable sewers shall be in strict accordance with the 7th edition of Sewers For Adoption. Unless otherwise stated adoptable sewers shall be 150mm diameter and shall be laid in a class S bedding. Where the depth to soffit is less than 1.2m under a public highway or 0.9m elsewhere the pipe shall be laid with a class Z bedding.
 - All private building drainage shall be constructed in strict accordance with BS EN 752:2008. Unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of 1 in 40 for foul drains and 1 in 80 for surface water drains. All building drains shall be laid in class B bedding unless otherwise specified.
 - Where a pipe is within 1m of a foundation the trench shall be filled with class GEN 3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN 3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN 3 concrete.
 - Where pipes, external to the structures, have a depth to soffit from ground level of less than 450mm they shall have a class GEN 3 concrete encasement (150mm thick). In all other cases the pipes shall be bedded and surrounded with 100mm thick granular material.
 - In any circumstances where pipes are bedded and surrounded in concrete flexible joints should be provided. Compressible boards (fibreglass or polystyrene) shall be provided at a maximum of 6m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 18mm for pipes up to 450mm nominal diameter and 36mm for pipes over 450mm nominal diameter.
 - All syps shall have rodding access plates fitted at their bases (ground floor level).
 - Where existing pipes are to be abandoned they shall be dug out together with any abandoned manholes.
 - Any discrepancy between the drawing and site should be reported immediately to the Engineer.
 - All manhole and chamber sizes are given as a minimum to meet the 7th edition of Sewers For Adoption
 - All pipes to connect soffit to soffit.



SHEET PLAN

LEVELS KEY	
5.31+	Existing Topographical Survey Level
ex 4.864 ✓	Existing Tie into Level
4.634 /	Proposed Spot Level
1:11	Proposed Gradient
6.000	Proposed Contours 50mm intervals on site 250mm intervals on pond
DRAINAGE KEY	
Private Storm Drainage	
	Type 2 Precast Concrete Manhole Type
	Catchpit Manholes
	Aco Channels
	Fin Drain
	French Drain
	Surface Water Drainage by Jackson
	Purdue Level - See Drawings
	001679-DR-D-4001 to 4004
Private Foul Drainage	
	Type 2 Precast Concrete Manhole Type
	Type 3 Inspection Chambers
	Rising Main
	Root Protection Area

F:	24.09.20	PR	Manhole Type and Diameters added to plan.	SB
E:	21.08.20	PR	Levels and Drainage updated.	SB
D:	25.06.20	PR	Pipe sizes and headwalls revised	SB
C:	12.06.20	PR	Existing Ditch shown and connection from Pond added	SB
B:	03.03.20	PR	Rising main route revised and details off final connection added.	SB
A:	03.03.20	PR	Minor Amendments	SB
REV	DATE	INT	DESCRIPTION	CW

PRELIMINARY

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CLIENT		DPS Limited	
PROJECT		Wicks Farm Ford	
TITLE		Proposed Levels and Drainage Sheet 4 of 6	
DRAWN	PR	DATE	Feb 2020
THROUGHT	SB	CHECKED	
SCALE	1:250 @ A1	PROJECT NO.	23314
		REV	24 F

600 mm x 600 mm clear opening cover complying with BS EN 124 and BS 7903 See Clause E2.32

Mortar bedding and haunching to cover and frame to Clause E6.7

Minimum 2 courses of Class B engineering bricks or precast concrete cover frame seating 675 mm maximum to first step rung from cover level

Lifting eyes in concrete rings to be pointed

In-situ concrete to be GEN3 (designed to BRE Special Design Concrete in Aggressive Ground)

High-strength concrete topping to be brought up to a dense, smooth face, neatly shaped and finished to all branch connections (minimum thickness 20 mm)

Construction joint

Self-cleaning tee holes to be provided where channel exceeds 600 mm wide

Inverts to be formed using channel pipes

Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

Pipe joint with channel to be located minimum 100 mm inside face of manhole

Double step rungs in accordance with BS EN 13101 See Clause E2.35 for double step details

1200 mm or 1500 mm for manholes containing hydrobrakes

150 mm concrete surround

Chamber height (not less than 900 mm)

Benching slope to be 1:10 to 1:30

The bottom precast manhole ring to be built into base concrete minimum 75 mm

Distance between top of pipe and underside of precast section to be minimum 50 mm to maximum 300 mm

225 mm to underside of channel

See Figure B.14 and Clause E6.6.2 for rocker pipe details

Minimum width of benching to be 225 mm

500 mm minimum from edge of stringing

Technical drawing of a manhole construction, showing various components and dimensions. The drawing is a cross-section of a vertical manhole structure.

Top Section:

- Manhole cover to suit BS EN 124 loading
- Minimum 300 mm x 300 mm clear opening
- Surface course
- Binder course
- Base course

Inner Chamber:

- 1-4 precast concrete cover frame seating rings with 350 mm diameter or 300 mm x 300 mm opening or class B engineering bricks
- Temporarily cap manhole shaft during construction
- DOT Type 1 sub base (thickness varies)

Outer Structure:

- Cover slab with access opening restricted to 350 mm diameter or 300 mm x 300 mm if depth of chamber to invert is > 1 m
- Precast concrete sections to be jointed with elastomeric or plastomeric seals
- Minimum internal dimensions: 450 mm diameter or 450 mm x 450 mm
- DOT Type 1 sub base (thickness varies) or concrete surround

Base and Connections:

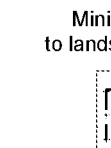
- Pipes built into chamber wall or joint formed with watertight seals
- Granular bedding material
- Base unit to have all connections with soffit levels set no lower than that of the main pipe
- Joint to be as close as possible to face of chamber to permit satisfactory joint and subsequent movement
- See Figure B.14 and Clause E6.2 for rooker pipe details
- Invert of connecting pipe at least 50 mm above that of the main pipe

Bottom Section:

- 100 mm precast base or 150 mm in-situ formed

Ground Level

Minimum 200mm topsoil to landscape architects details



450mm x 600mm deep French Drain with 150mm perforated pipe laid level 10 - 63mm size stone surround

High standard of workmanship
not to be used unless accurate
trimming by shovel is possible

accurate hand trimming is not possible
is an alternative to class D

Technical drawing of a stepped shaft. The shaft has a total length of $x + 600$ mm (maximum) and $x + 300$ mm (minimum). The diameter of the shaft is $x + 150$ mm. The shaft is divided into two sections: a larger section on the left and a smaller section on the right. The smaller section has a diameter of $x + 150$ mm. The larger section has a diameter of $x + 150$ mm. The shaft is shown in cross-section with hatching.



Detail for vee transition

PIPE BEDDING DETAILS (NON ADOPTABLE DRAINS) (Not To Scale)

The diagram illustrates a cross-section of a reservoir. Key features include:

- Top of Bank:** Elevation 4.880 on both the left and right sides.
- Maintained Reservoir:** Water Level 3.850.
- 1:100yr storm + Climate change:** Water Level 4.557.
- 1.2.5 bank:** Slope ratio indicated on both sides.
- See Headwall Detail:** Points to the overflow structure.
- Top of Bank:** Elevation 4.880 (repeated on the right).
- 150mmØ Overflow Pipe:** Two pipes shown, one on each side of the headwall.
- To existing ditch:** Direction of flow for the overflow.
- Reservoir Bed:** Elevation 1.500.
- 0.75mm thick butyl rubber reservoir liner on 30mm sand bed:** Liner specification.
- Formation to be compacted and:** Note on the left side of the reservoir.
- Reservoir liner to be stepped at top of bank and backfilled with large stones and 200mm topsoil to entire perimeter of pond:** Note on the left side of the reservoir.
- SW-07 Hydrobrake 20 V/s:** Specification for the overflow structure.
- CL 4.800:** Centerline elevation of the overflow structure.
- IL pipe out 3.557:** Inlet level of the overflow structure.
- Base 3.057:** Base elevation of the overflow structure.

Min 1500 or Pipe Ø + 1200mm

800 Max Centres

Nominal 125mm x 500mm

Outlet pipe
See GA for diameter

Staked with hooks
12mm reinforcing bar

See GA for height

and depth of swale
of discharge above
be dependant upon
location. See GA

Steel Spikes to hook
over top of bagwork

1:2 Bank

Outlet pipe
See GA for
diameter

Pipe cut to
profile of ditch

100mm

Backfill behind bagwork to be placed
and tamped as work proceeds

50-100mm thick PCC
paving slab laid on
class 1 mortar bed

Paving slabs to extend
750mm either side of
centre of outlet pipe to
prevent scouring

Unsuitable material in foundation
to be excavated and backfilled
with ST4 concrete

200

150

HEADWALL SECTION

Section or Canvas shall be
provide a wall thickness of 500mm
work shall be to Clause 519 and
drilled with 25mm slump ST4
diately prior to placing with the

100mm Dia. pipe

800 Max Centres

Staked with hooked 12mm reinforcing bar

Nominal 125mm x 500mm

1:2

50-100mm thick PCC paving slab laid on 50mm class 1 mortar bed

Outlet pipe. See GA for diameter

Technical drawing illustrating the construction of a trench for a 150mm diameter pipe, showing the installation of a bagwork trench box and backfill.

The drawing shows a cross-section of the trench. The pipe is labeled "Outlet pipe See GA for diameter". The trench box is labeled "Bagwork to extend 1.5m from outlet". The backfill material is labeled "Backfill behind bagwork to be placed and tamped as work proceeds". The trench is labeled "1:2 Bank". The pipe is labeled "Pipe cut to profile of ditch". The trench is labeled "100mm". The trench is labeled "Steel Spikes to hook over top of bagwork". The trench is labeled "Unsuitable material in foundation to be excavated and backfilled with ST4 concrete". The trench is labeled "Level and depth of swale and depth of discharge above will be dependant upon location. See GA".

[illegible]

LEGEND:

	Selected fill: free from stones larger than 40mm, lumps of clay over 100mm, timber frozen material and vegetable matter
	Granular material: should conform to BS 882:1983 table 4 or BS8301:1985 Appendix D. Compaction fraction > 0.3 for class N > 0.2 for class F and B.
	Selected fill or granular fill free from stones larger than 40mm

'x' - Denotes external pipe diameter.

GENERAL NOTES:

1. All dimensions to be checked on site. All details and dimensions relating to Sub-Contractors work must be checked and agreed between the Sub-Contractor or supplier and the general Contractor.
2. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
3. The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.
4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the main Contractor and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.

DRAINAGE NOTES:

1. All adoptable pipes, bends and junctions shall be verified dry at and in accordance with the current version of BS EN 295-1, with flexible joints and kilnmark certified.
2. All Adoptable sewers shall be in a strict accordance with the 7th edition of Sewers for Adoption. Unless otherwise stated adoptable sewers shall be 150mm diameter and shall be laid in a class B bedding. Where the depth to soffit is less than 1.2m under a public highway or 0.9m elsewhere the pipe shall be laid with a class B bedding.
3. All private building drainage shall be constructed in strict accordance with the current version of BS EN 752 2017. Unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of 1 in 40 for foul drains and 1 in 80 for surface water drains. All building drains shall be laid in class B bedding unless otherwise specified.
4. Where a pipe is within 1m of a foundation the trench shall be filled with class GEN 3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN 3 concrete to a level below the lowest level for the foundation up to the bedding. Bedding shall be provided at a maximum of 80mm centres (conceding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 15mm for pipes up to 450mm nominal diameter and 38mm for pipes of 450mm nominal diameter.
5. All sumps shall have rodding access plates fitted at their bases (ground floor level).
6. Where existing pipes are to be abandoned they shall be dug out together with any abandoned manholes.
7. Any discrepancy between the drawing and site should be reported immediately to the Engineer.
8. All manhole and chamber sizes are given as a minimum to meet the 7th edition of Sewers For Adoption

B | 24.09.20 | PR | Reservoir Section top of bank level & IL updated. | SB
aco surround confirmed as 150mm. Outfall IL updated. Scour protection
extent added. Reservoir Section updated.

A | 12.06.20 | PR | Catchpit and french drain detail added. Reservoir | SB
Section added.

REV	DATE	INT	DESCRIPTION	CHK
-----	------	-----	-------------	-----

Issue Status PRELIMINARY

c
e
p

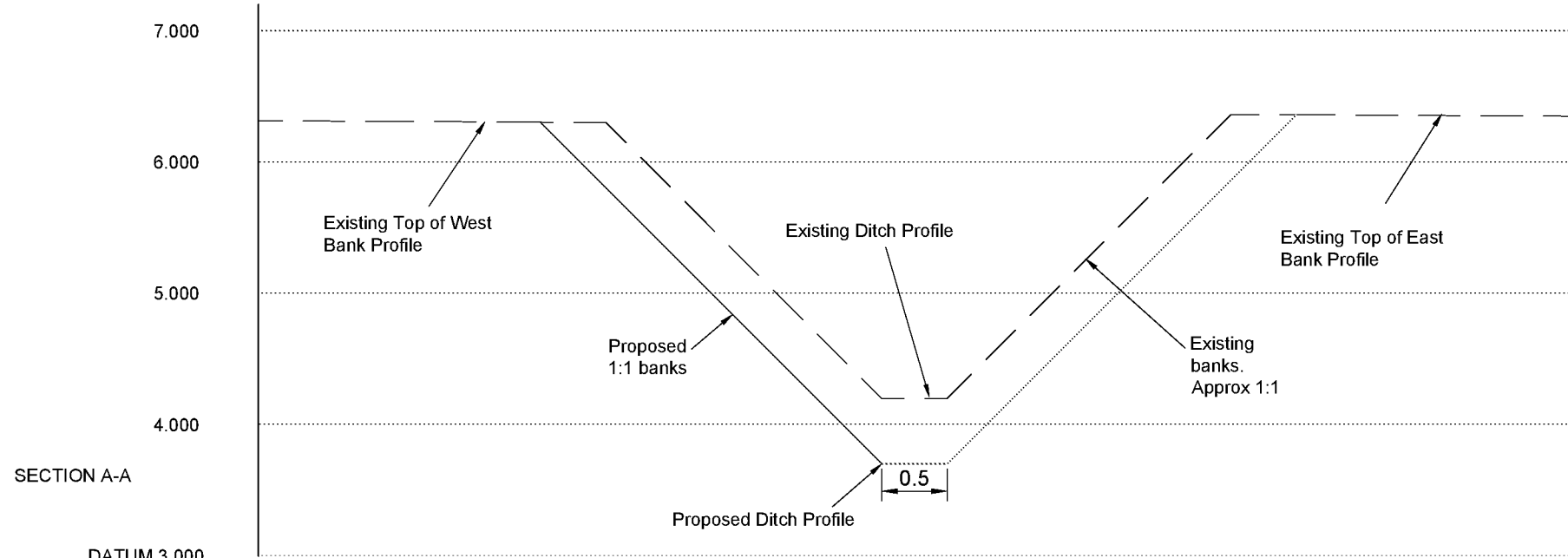
The Civil Engineering Practice
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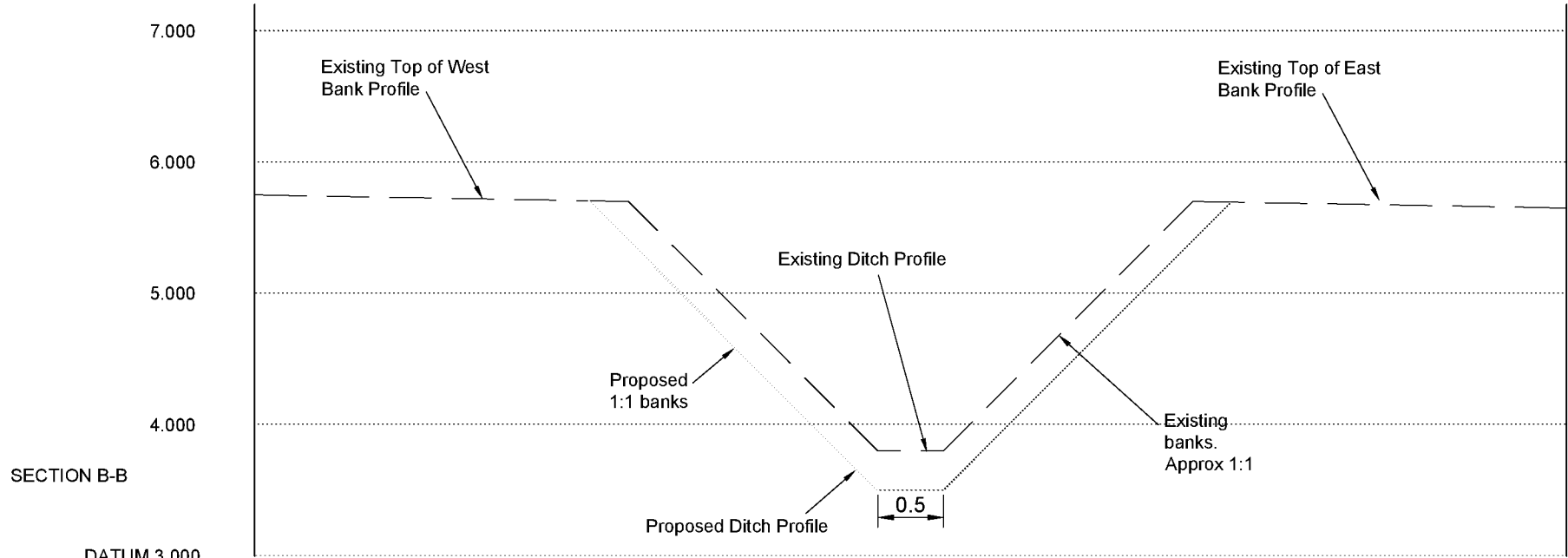
CURRENT	DPS Limited
PROJECT	Wicks Farm Polytunnel Ford

Construction Details
Sheet 1 of 2

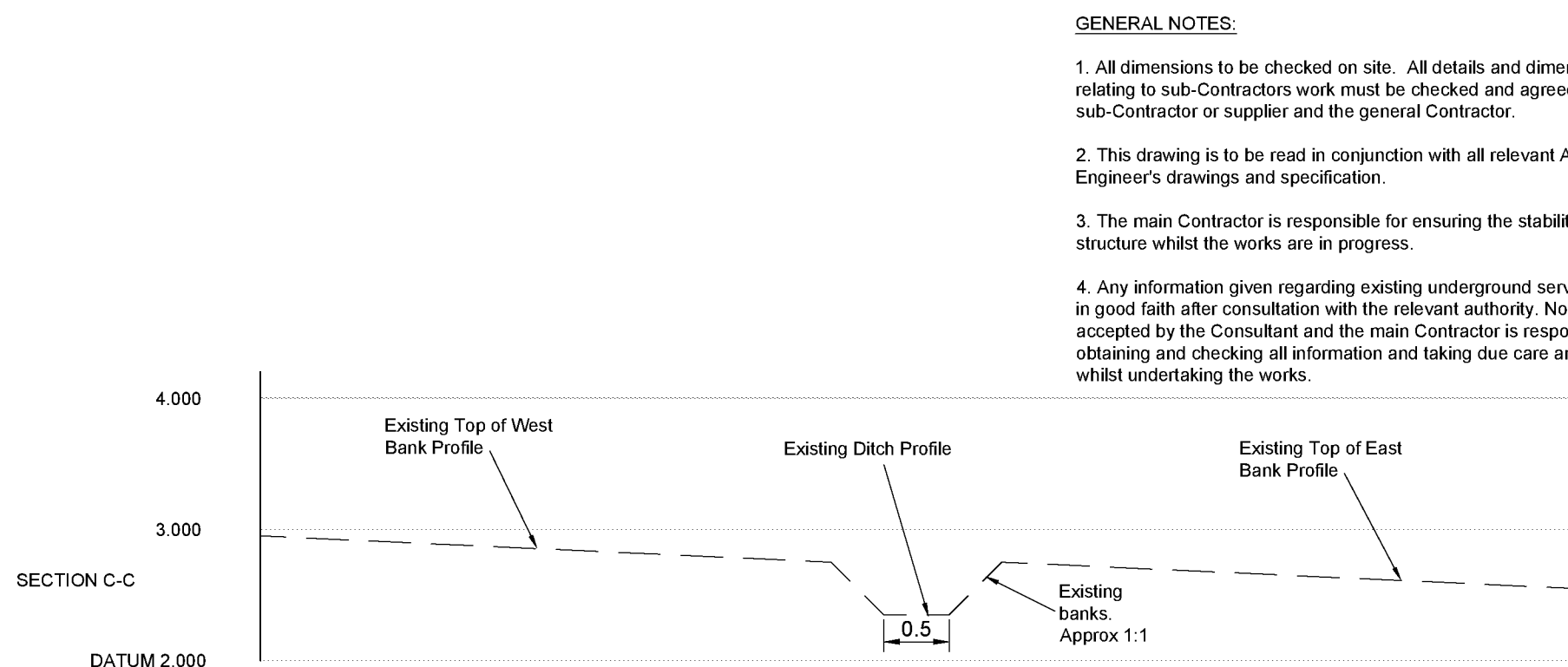
DRAWN P Reynolds		DATE Mar 2020		PROJECT NO. 23314	
ENGINEER S Burgess		CHECKED SB		DRG. No. 51 REV. B	
SCALE As shown @ A1					



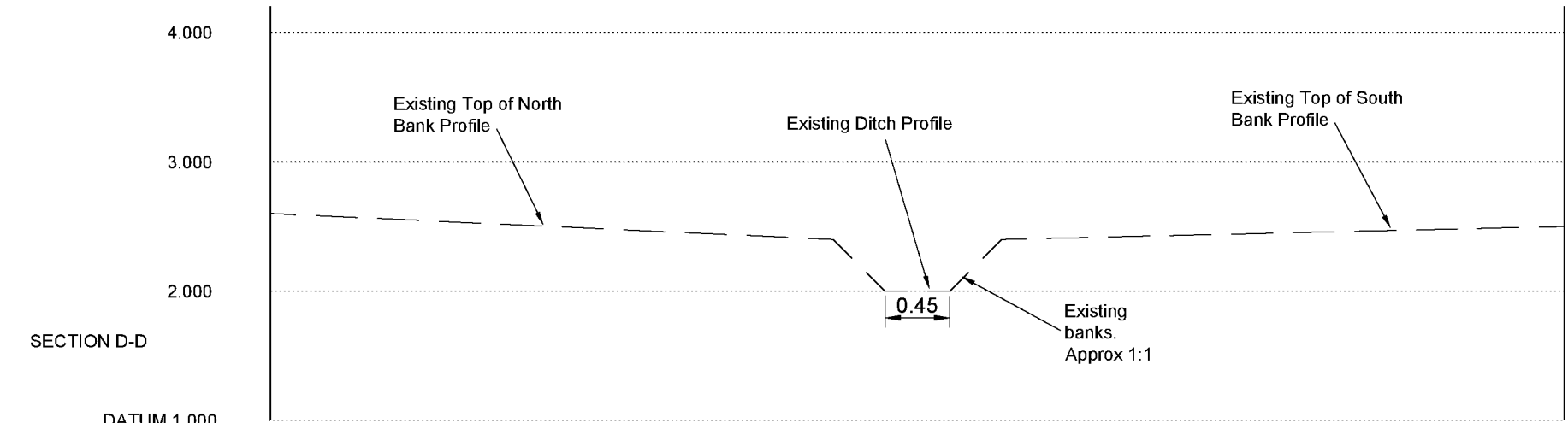
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EXISTING LEVEL	6.315	6.310	6.305	6.300	4.950	4.200	4.950	5.950	6.362	6.355	6.350
PROPOSED LEVEL			6.304	5.450	4.450	3.700	4.450	5.450	6.360		6.350



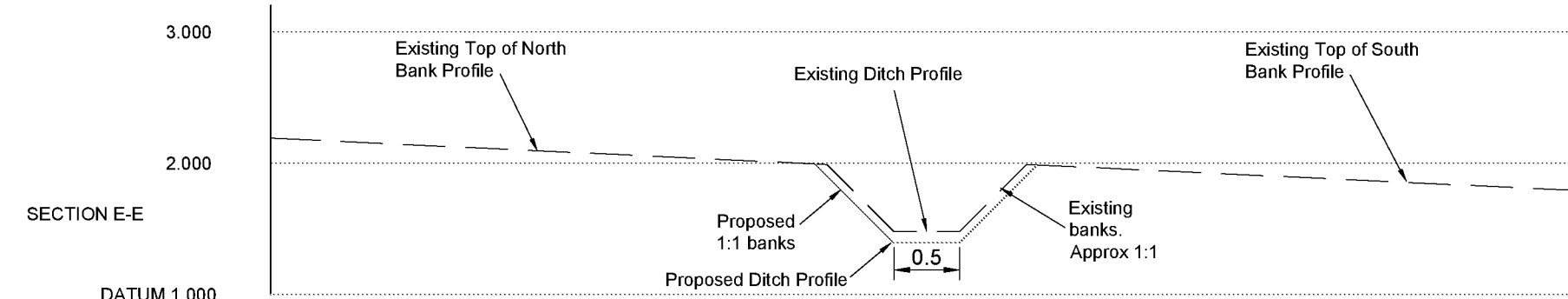
CHAINAGE	0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000
EXISTING LEVEL	5.750	5.733	5.715	5.700	4.550	3.800	4.550	5.550	5.700	5.668	5.650
PROPOSED LEVEL			5.705		4.250	3.500	4.250		5.095		



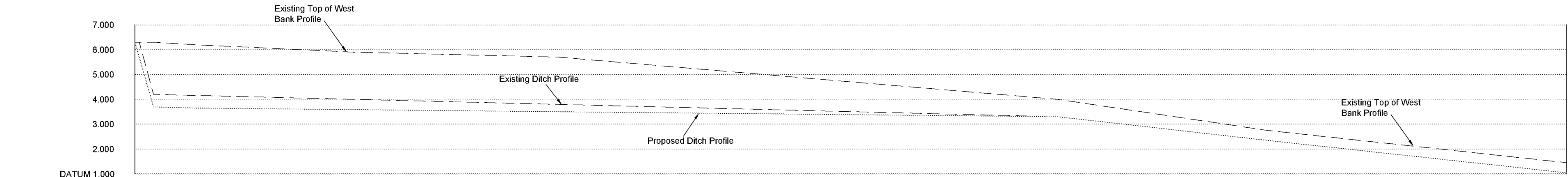
CHAINAGE	0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000
EXISTING LEVEL	2.950	2.904	2.858	2.812	2.776	2.750	2.740	2.688	2.642	2.596	2.550



CHAINAGE	0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000
EXISTING LEVEL	2.600	2.554	2.508	2.462	2.416	2.400	2.408	2.431	2.454	2.477	2.500

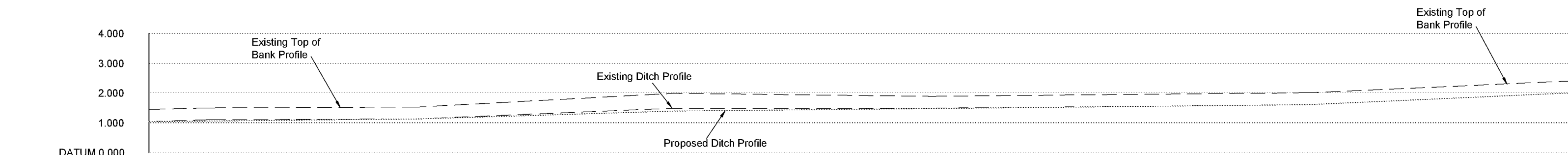


CHAINAGE	0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000
EXISTING LEVEL	2.190	2.143	2.096	2.049	2.001	1.990	1.980	1.979	1.932	1.884	1.837
PROPOSED LEVEL					1.995	1.935	1.986				1.790



CHAINAGE	0.000		9.419	10.000		20.000		30.000	35.345	40.000		50.000		60.000		68.260	70.000		80.000		90.000		100.000		108.503	110.000	120.000		130.000		140.000	148.793	150.000	160.000		170.000		180.000	182.575	190.000		200.000		210.000		220.000		230.000
EXISTING LEVEL	4.200		4.160						4.000							3.800										3.550						3.300							2.350						1.040			
EXISTING TOP OF BANK LEVEL WEST SIDE	6.300		6.200						5.900							5.700										4.850						4.000							2.750						1.450			
PROPOSED LEVEL	3.700	1:400				1:400			3.595			1:400				3.500					1:400					3.400	1:400				3.300			1:35			2.350			1:37			1.040					

LONG SECTION - WESTERN DITCH
(Horizontal Scale 1:500 / Vertical Scale 1:125)



CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000
EXISTING LEVEL	1.040	1.060			1.130			1.490								1.610			2.000	
EXISTING TOP OF BANK LEVEL WEST SIDE	1.450	1.500			1.530			1.990								2.010			2.400	2.400
PROPOSED LEVEL	1.040	1.060	1:400	1:400	1.130	1:130	1.395	1.400	1.480	1:87									2.000	

LONG SECTION - NORTHERN DITCH
(Horizontal Scale 1:500 / Vertical Scale 1:125)

- GENERAL NOTES:
1. All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
 2. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
 3. The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.
 4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the Consultant and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.

A | 24.09.20 | PR | Ditch widths and bank gradients added. | SB

Issue Status PRELIMINARY

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CLIENT: DPS Limited

PROJECT: Wicks Farm
Polytunnel
Ford

TITLE: Sections

DRAWN: P Reynolds DATE: Aug 2020 PROJECT NO: 23314

ENGINEER: S Burgess CHECKED: SB

SCALE: As shown @ A1

70 A