

Project Name:	2 Hilliards Road, Cowley
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Document Name:	Technical Note
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Checked By:	Samuel Flesher (May, 2026)
Approved By:	Jon Soar (May 2026)

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1. INTRODUCTION

- 1.1 This Technical Note has been prepared by Paul Basham Associates on behalf of Mr Patrick Maughan to support Discharge of Condition 7 to Hillingdon Council in relation to the creation of a new single storey dwelling at 2 Hilliards Road, Cowley. Condition 7 states - *"Prior to the commencement of any construction above ground level, a scheme for the provision of sustainable water management shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall clearly demonstrate that sustainable drainage systems (SuDS) have been incorporated into the design of the development. The development shall be completed in accordance with the approved details"*.

- 1.2 The site assessed within this Technical Note is approximately 0.3ha in size and is currently used as the rear garden to 2 Hilliards Road, Cowley. The nearest post code to the site is UB8 3TA and the proposed boundary is indicated by the red line boundary demonstrated within **Figure 1**.

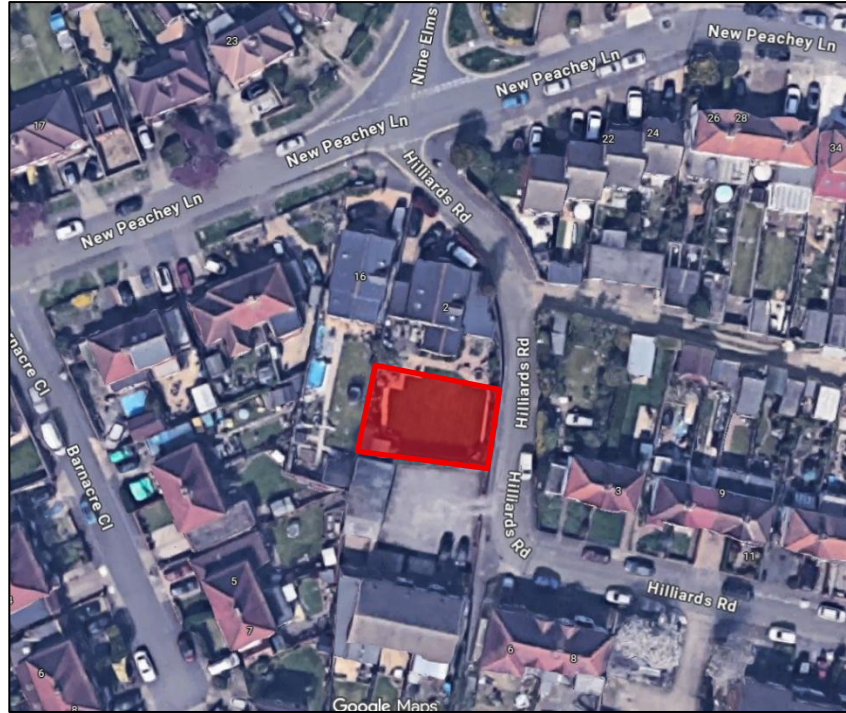


Figure 1: Site Location

- 1.3 Development proposals are for a 2-bed bungalow with associated parking and landscaping.

2. SITE GROUND CONDITIONS

- 2.1 The nearest significant watercourse is the River Pinn which is approximately 440m to the south-east of the proposed development site, with the Grand Union Canal approximately 340m to the west with Coley Lake and the River Colne 460m and 815m to the west respectively.
- 2.2 A topographical survey received from Cadmap (dated October 2021 Reference: CM/21496/T) shows a general fall from north to south with levels ranging from 31.29mAOD at the entrance to the existing residential dwelling to 30.82mAOD at the rear boundary giving a gradient of 1:78 across the site.
- 2.3 A review of the British Geological Survey (BGS) mapping shows that the proposed development is underlain by bedrock London Clay Formation – Clay, silt and sand shown in **Figure 2** below.

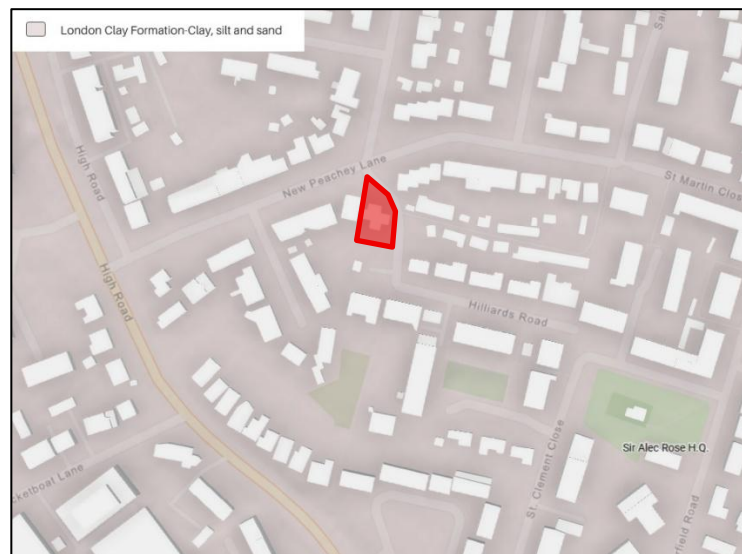


Figure 2: BGS Mapping Extract - Bedrock Geology

- 2.4 A review of the British Geological Survey (BGS) mapping shows that the proposed development is underlain by superficial deposits Langley Silt Member – Clay and silt shown in **Figure 3** below.

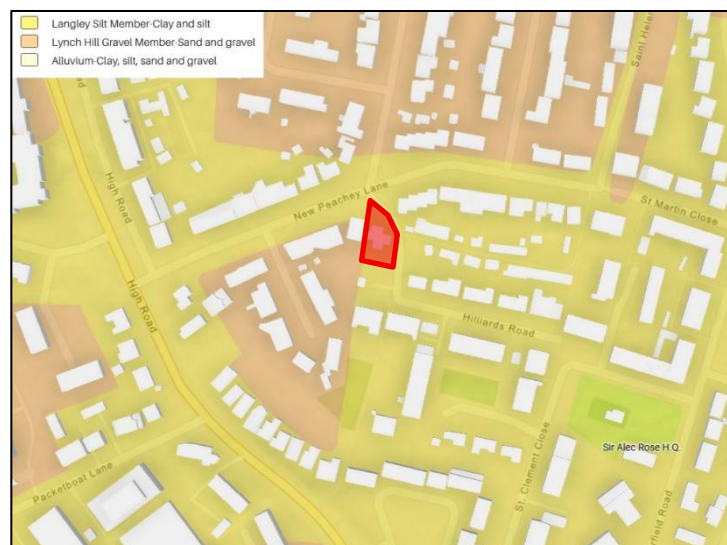


Figure 3: BGS Mapping Extract – Superficial Deposits

3. FLOOD RISK

Fluvial Flooding

- 3.1 Flood mapping (**Figure 4**) obtained from the government's 'flood map for planning' website has identified that the site falls within Flood Zone 1.

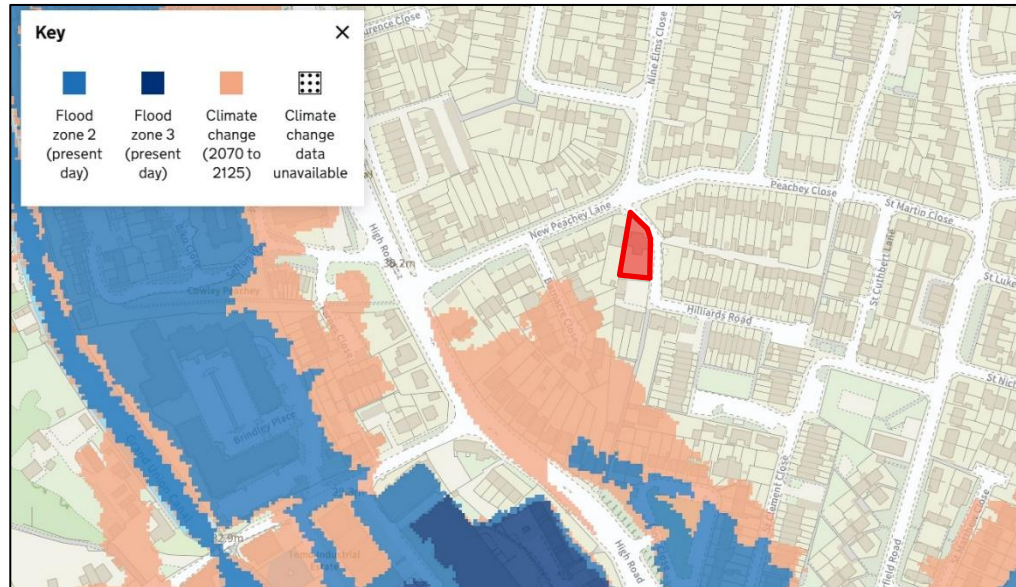


Figure 4: Flood Map for Rivers and Seas Map

- 3.2 The long term flood risk from rivers and seas mapping (**Figure 5**) shows the site is not considered to be at risk of flooding from rivers and seas.

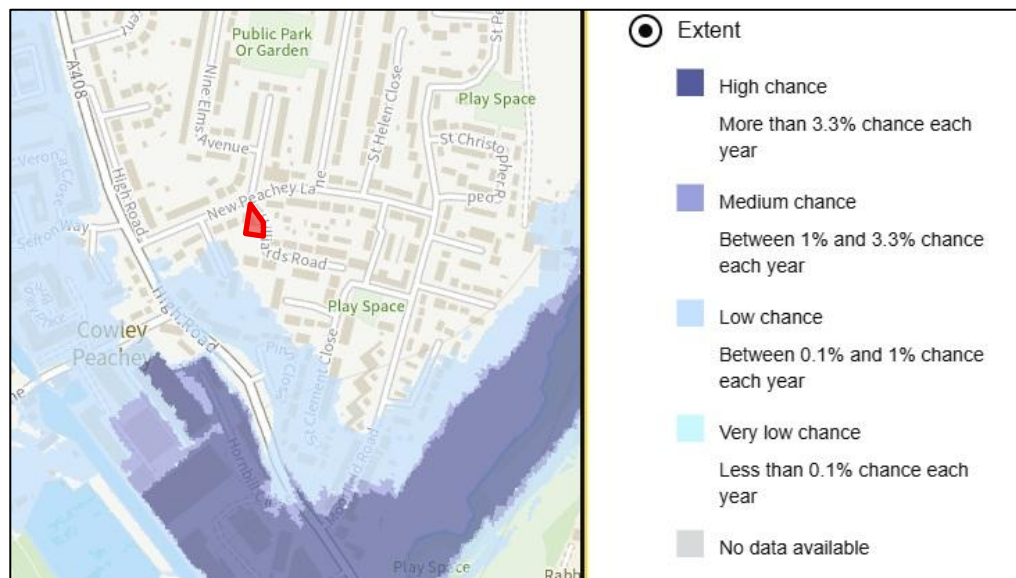


Figure 5: Long-term flood risk from rivers and seas map

Reservoir Flooding

- 3.3 The EA's long-term flood risk reservoirs shows that the site is considered to be at very low risk of flooding from reservoirs (**Figure 6**).

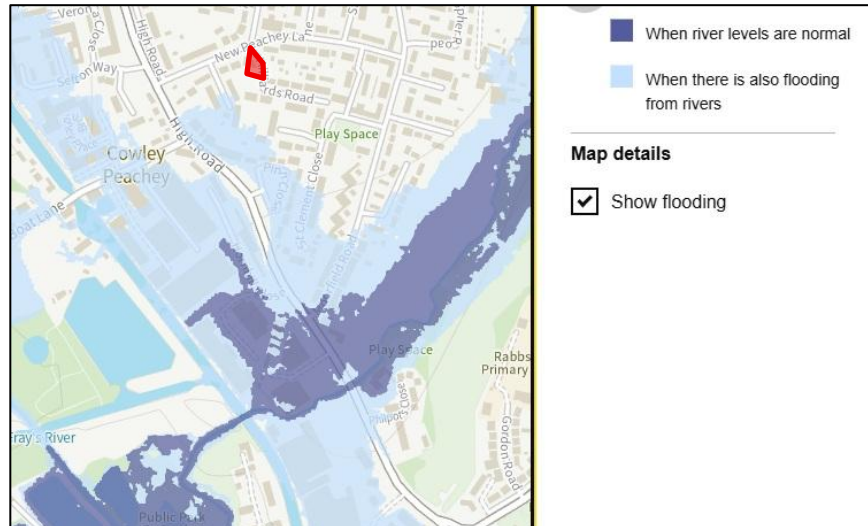


Figure 6: Long term flood risk from reservoirs

Surface Water Flooding

- 3.4 Surface water or 'pluvial' flooding results from rainfall running over ground before eventually entering a watercourse or sewer. It is usually associated with high intensity rainfall events but can also occur with lower intensity rainfall or melting snow where the ground is already saturated, frozen, developed (for example in an urban setting), or otherwise has low permeability.
- 3.5 The surface water flood risk map is shown in **Figure 7** below indicates that the site is considered to be at very low risk of flooding from surface water.

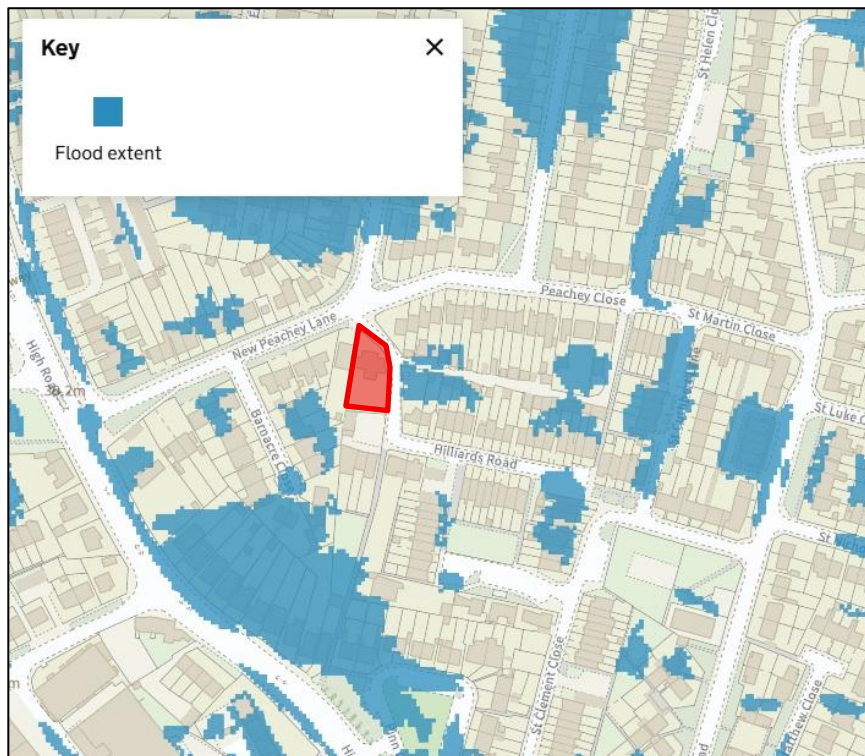


Figure 7: Long term flood risk from surface water

Groundwater Flooding

- 3.6 Groundwater flooding occurs when groundwater levels increase sufficiently for the water table to intersect the ground surface. Groundwater flooding can occur in a variety of geological settings including valleys and in areas underlain by chalk, and in river valleys with thick deposits of alluvium and river gravels.
- 3.7 The EA's flood risk indicates that flooding from groundwater is unlikely for the site, see **Figure 8**.

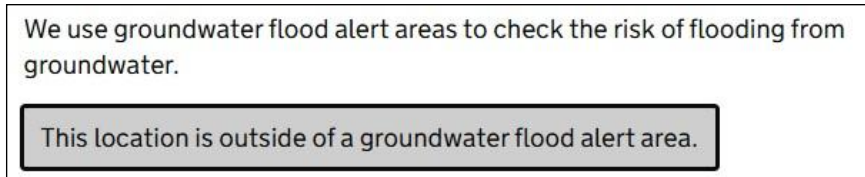


Figure 8: Long term flood risk from groundwater

4. DRAINAGE STRATEGY

Surface Water Drainage Strategy

- 4.1 In line with Standard 1 of the National Standards for Sustainable Drainage Systems (NSSuDS), surface water shall discharge to one of the following, listed in order of priority:
- Collected for non-potable use,
 - Infiltrated to ground,
 - Discharged to an above ground surface water body,
 - Discharged to a surface water sewer, or another piped surface water drainage system,
 - Discharged to a combined sewer.
- 4.2 As per our previous report that was issued with the planning application and granted planning at appeal on 22nd November 2024 (REF: APP/R5510/W/24/3348490) and reviewing the BGS Geology Mapping, infiltration is not achievable here for this development.
- 4.3 It is proposed to utilise an attenuation tank located within the parking area of the proposed bungalow and discharging to an existing sewer to the north of this site in New Peachey Lane via a package pump chamber and rising main. A pump rate of 1.5l/s has been used as suggested by All Pump Solutions with a 63mm DIA OD SDR11 rising main. For pump chamber details refer to **Appendix A**. The connection to the existing sewer will be subject to a Section 106 Agreement with Thames Water.
- 4.4 Additional emergency storage has been provided within the tank in the event of a blockage or a power cut resulting in the pump not working. Using the standard Thames Water – compliant approach $\text{Emergency Storage (m}^3\text{)} = Q30\text{yr} \times 1800 \text{ seconds (30 minutes)}$ we have calculated we require an additional 1.62m³ of storage. After the 0.1% AEP plus climate change event there is 2.92m³ available storage in the tank.
- 4.5 Permeable block paving is proposed for the parking areas and footpaths of this development to capture the surface water runoff. The runoff will filter through into the sub-base before entering the attenuation tank. See **Appendix B** for a copy of the proposed drainage strategy.
- 4.6 Hydraulic modelling calculations have been undertaken within Causeway Flow software for the sizing of the attenuation tank. Refer to **Appendix C** for the results.
- 4.7 The below **Table 1** contains the parameters used in the supporting network modelling.

Parameter	Input	Guidance/notes
Rainfall Data	FEH22	Hillingdon Borough Council Surface Water Planning Guidance
Outfall surcharge depth	N/A	Not discharging to a watercourse
Urban Creep	10%	Refer to policy
CV (Summer and Winter)	1.0	Hillingdon Borough Council Surface Water Planning Guidance
Climate Change 3.3% AEP 1% AEP	35% 40%	EA Climate change allowances for peak rainfall in England https://environment.data.gov.uk/hydrology/climate-change-allowances/rainfall

Table 1: Hydraulic Modelling Parameters

Foul Water Drainage Strategy

- 4.8 It is proposed that the foul wastewater from the development will connect to the existing Thames Water sewer located within Hilliards Road via the construction of a new direct connection manhole on the existing sewer.
- 4.9 The connection to the existing sewer will be subject to a Section 106 Agreement with Thames Water.

5. WATER QUALITY

5.1 *Figure 9 to Figure 10* are extracted from the SuDS Manual and demonstrate the pollution risks associated with various discharge situations.

TABLE 26.2 Pollution hazard indices for different land use classifications				
Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydrocarbons
Residential roofs	Very low	0.2	0.2	0.05
Other roofs (typically commercial/ industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Individual property driveways, residential car parks, low traffic roads (eg cul de sacs, homezones and general access roads) and non-residential car parking with infrequent change (eg schools, offices) ie < 300 traffic movements/day	Low	0.5	0.4	0.4
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways ¹	Medium	0.7	0.6	0.7
Sites with heavy pollution (eg haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured; industrial sites; trunk roads and motorways ¹	High	0.8 ²	0.8 ²	0.9 ²

Figure 9: Table 26.2 of the SuDS Manual

TABLE 26.3 Indicative SuDS mitigation indices for discharges to surface waters			
Type of SuDS component	Mitigation indices ¹		
	TSS	Metals	Hydrocarbons
Filter strip	0.4	0.4	0.5
Filter drain	0.4 ²	0.4	0.4
Swale	0.5	0.6	0.6
Bioretention system	0.8	0.8	0.8
Permeable pavement	0.7	0.6	0.7
Detention basin	0.5	0.5	0.6
Pond ⁴	0.7 ³	0.7	0.5
Wetland	0.8 ³	0.8	0.8
Proprietary treatment systems ^{5,6}	These must demonstrate that they can address each of the contaminant types to acceptable levels for frequent events up to approximately the 1 in 1 year return period event, for inflow concentrations relevant to the contributing drainage area.		

Figure 10: Table 26.3 of the SuDS Manual

- 5.2 The UKSuDS Water Quality toolkits (based on the Simple Index Assessment method) have been used to assess water quality improvement for the site. **Table 2** below summarises the results of the toolkit.

Land Use			SuDS Component			Water Treatment
Low Traffic Roads			Permeable Paving			Sufficient
Pollution Indices			Mitigation Indices			
TSS	Metals	Hydrocarbons	TSS	Metals	Hydrocarbons	
0.5	0.4	0.4	0.7	0.6	0.7	

Table 2: Water Quality Summary

Appendix A



all pump solutions

FLUID EXPERTISE



Private Packaged Pumping Station

2 Hilliards Road, Cowley

Presented to

David Pearson

Paul Basham Associates Ltd

Technical Specification Number

00155274 ()

Project Number

00006689

All Pump Solutions | Dale House, Ennerdale Road, Shrewsbury, SY1 3LD | 01743 465463





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E: sales@allpumpsolutions.com
www.allpumpsolutions.com

David Pearson
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The Bothy
Cams Hall Estate
Fareham
PO16 8UT

18 May 2026

Technical Specification Number : 00155274 (0) - 2 Hilliards Road, Cowley

Dear David,

Many thanks for giving us the opportunity to provide a proposal for the pumping system at 2 Hilliards Road, Cowley. We have based this on the information provided to date.

The following pages provide specification of the pumping station(s) required as well as pricing for the commissioning and additional items not included in the price below.

Please note, our offer is to be read in conjunction with our 'terms and conditions of sale', and 'schedule of caveats and exclusions'.

Should you require any further information, amendments, revisions or clarification on our proposal please get in touch. APS offer a very wide range of chamber sizes, dimensions, volumes, pump selection to suit any requirement.

We would love to work alongside you to deliver this scheme and I look forward to speaking soon.

Yours sincerely

Roger Pocock

Roger Pocock

Roger.pocock@allpumpsolutions.com
01743 452051
07848 451631





all pump solutions

FLUID EXPERTISE

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E: sales@allpumpsolutions.com
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Pumping Station Specification

Site Data

Cover Level (m)	30.810	Liquid Handled	Surface
Inlet Level (m)	29.280	Storage Required (ltrs)	TBC
Outfall Inlet Level (m)	30.300	Rising Main Length (m)	45 TBC
Static Head (m)	1.340	Rising Main Type	63mm OD SDR11
Total Head (m)	4.612	Flow Rate (l/s)	1.5 approx.
Pump Operation	Duty/Standby	Water Table (m)	TBC

Design Summary

Design and costings of the Surface Water Pumping Station have been based on the supplied drawing and information through email. As there is currently limited detail, we have assumed that the emergency storage volume has been calculated by others and an adequate provision has been made within the drainage network. The water table level is able to be up to 29.460 mAOD but upon confirmation that the water table level is higher than this then we can revise our proposal to suit. Based on the drawing and scale given, we have approximated a rising main length of 45 meters.

We have selected a non-ATEX rated pump. The developer may be required to complete a DSEAR assessment on the site to confirm the ATEX requirements.

We have allowed for the lowest flowrate that will still achieve cleansing velocity in the rising main.

Surface Water Pump Station

Chamber

- 1 No. APS GRP+ V-12-2000-Standard-GP Vertical Package Pumping Station. 1200mm overall diameter x 2000mm overall depth. 600 x 800mm rectangular manway opening.
- 1 No. DN110 Inlet
- 2 No. DN50 Discharge Connection
- 3 No. DN50 Non return Valve
- 1 No. DN50 Discharge Pipework.
- 2 No. DN50 Gate Valve
- 1 No. Connector to Suit 63mm OD Rising Main
- 1 No. Angle Guide Rail System
- 1 No. Upper Guide Rail Bracket Angle Iron in Stainless Steel
- 1 No. Float Switch Bracket in Stainless Steel

Pumps

- 2 No. Javelin Submersible Pumps, 0.37kW, 240 volt, 1 phase, 10 metres cable per pump.
- 2 No. 3m Long, 300Kg WLL Certified Galvanised Lifting Chain.





Controls

- 1 No. Dual pump control panel, features include:
Approx Panel size: 310mm (H) x 210mm (W) x 175mm (D)
Hand/Off auto control switch.
Pump running facia indicator lamps.
Pump tripped facia indicator lamps.
High level facia indicator lamp.
Alarm cancel button.
Audible alarm.
High level alarm output.
*Control Panel not compatible with BMS , telemetry or repeater panels. If required, upgraded control panels are available.
- 3 No. Float Switch Level Control c/w 10m cable per float

Total Cost

All costs are excluding VAT.

£6,382.36

Availability:

5 - 6 weeks from receipt of approved drawings and agreed order, as at time of quote. Please speak with Sales for current lead times.

Production begins on drawing approval of APS working drawings. For Adoptable Pump Stations you will also require sign off as part of the S104 from the Water Authority

Other specifications are available; please speak to our team for more details.

Commissioning

- | | | | | |
|---|-----|---|----------------|----------------|
| 1 | No. | Single Pump Station Commissioning (1 day) | £960.00 | £960.00 |
|---|-----|---|----------------|----------------|





Additional Items

1	No.	Single Door Roadside Steel Kiosk to house the control panel (will fit standard panel only) - Approx. Kiosk size: 1250mm (H) x 750mm (W) x 400mm (D) - (Supply Only). (Price per kiosk, if required please specify total quantity)	£755.00	£755.00
1	No.	Double Door Roadside Steel Kiosk to house the control panel (will fit panel and meter) - Approx. Kiosk size: 1250mm (H) x 1250mm (W) x 400mm (D) - (Supply Only). (Price per kiosk, if required please specify total quantity)	£1,475.00	£1,475.00
1	No.	Amber Flashing Beacon (Price per Pump Station)	£78.00	£78.00
1	No.	O & M Manual (per Pump Station)	£95.00	£95.00
1	No.	Upgrade Control Panel to Electromechanical specification for compatibility with a Telemetry Unit or BMS connectivity. (Dual Pump System)	£620.00	£620.00



Notes

Commissioning

Standard commissioning works include the following:

- Installation of the pump/s
- Installation of pump/s power cabling from chamber to the control panel*
- Installation of control systems to control panel*
- GSM installation if purchased through APS (Price can be found in Service Enhancement)
- Full operation check and test of system
- Operational handover to client after completion on day of commissioning
- Earthing of guide rail/s
- Commissioning certificates

*NOTE – cables assumed to be no longer than 10m from the bottom of the chamber to the control panel, unless specified upon pricing.

Should our engineers need to provide any services outside of this scope of works, then we will be happy to provide a quotation upon request.

Discharge Consent

APS require that you ensure the correct sewer connection application has been raised with your local waste authority, prior to ordering. This enables confirmation of a sufficient flow rate, proposed in the design. The necessary consent should be in place before installation. If this is not the case when you install the pumping station, APS cannot accept or compensate any costs.

Septicity

Our design has allowed for a minimum risk of septicity occurring; calculations are based upon information provided at enquiry stage.





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FLUID EXPERTISE



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Exclusions

- All civil works associated with the construction of the wet well, valve chamber including cover slabs and remaining compound requirements
- Provision and installation of lifting equipment if applicable, and load testing of davit socket
- All cable ducts and draw ropes
- Connection from the valve chamber outlet to the rising main.
- Water supply to allow APS to commission the system live
- Incoming power supply cable to be wired into the control panel
- Excavation/Backfilling
- Any additional on-site testing aside from the APS commissioning/testing
- APS have not carried out site surveys such as: hydraulic analysis, surge tests, geotechnics survey or DSEAR assessment. It is the responsibility of the contractor to inform APS of subsequent special requirements.
- Off-loading of materials is by others





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FLUID EXPERTISE



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2. Builders Profile, Constructionline Gold and CHAS approved company.
3. Guaranteed Price Match on genuine like-for-like products.
4. Full technical and commercial support direct with manufacturer's warranties.
5. A dedicated project manager as a single point of contact for the entire project including a direct email address and phone contact number.
6. Full risk assessments, method statements and project documentation as appropriate.
7. On-going service & maintenance support.
8. Built to BS EN 13121-3/ BS EN 976 with a 25 year warranty and a life expectancy in excess of 50 years
9. Commitment to delivering excellent service on time and on budget.

We offer a complete range of pumping station equipment and ancillaries, should a specific item be required, please contact our sales team.

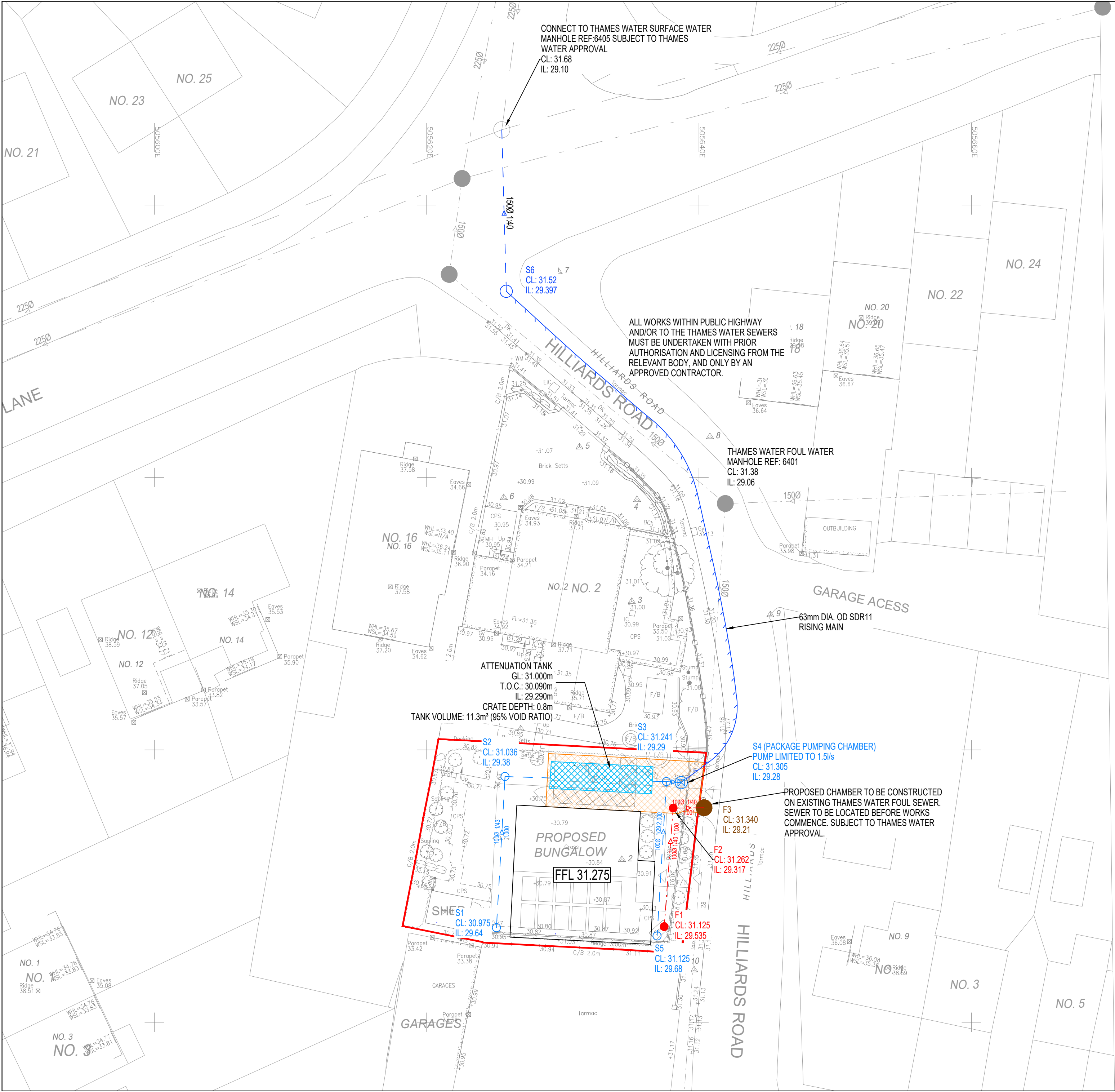
For further details visit our website - www.allpumpsolutions.com

See some of our valued clients here and some recent projects here.

End of Proposal

This quotation is subject to our standard terms and conditions of sale and excludes VAT. The payment programme is outlined in our terms. The price offered is for a materials order, retention has not been included; the only site element is the commissioning. If Drawing Approval is more than 14 days the quotation may be subject to price increases due to rising costs of raw materials





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 - Site Layout: 101031-HRB-1000-ZZ-L01-GA-A0825 (DATED 16.05.2022)
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DRAINAGE LEGEND

- SITE BOUNDARY
- PROPOSED ADOPTABLE FOUL WATER
- EXISTING FOUL WATER
- PROPOSED PRIVATE FOUL WATER
- PROPOSED ADOPTABLE SURFACE WATER
- PROPOSED PRIVATE SURFACE WATER
- PROPOSED SW RISING MAIN
- EXISTING SURFACE WATER
- ATTENUATION STORAGE CRATES (SIZE AS NOTED)
- PROPOSED PERMEABLE PAVING
- FFL 42.275
- FINISHED FLOOR LEVEL

PRELIMINARY

DRAWING/DESIGN IS STILL 'IN DEVELOPMENT'
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

1:200 0m 10m

P01	FIRST ISSUE	20.05.2026	DP	JS
Rev	Description	Date	By	App'd



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Client

PRIVATE CLIENT

Project Name

2 HILLIARDS ROAD,
COWLEY

Title

DRAINAGE STRATEGY

Project Phase			
PRELIMINARY			
Date Created	Drawn By	Approved By	Suitability Code
18.05.2026	DP	JS	S4
PBA Project Number		Scale	
502.5287		1:200	(AT A2)
PBA Drawing No:			Revision
502.5287.0501			P01

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	1.000
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	0.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.003	5.00	30.784	600	505625.127	181406.941	1.144
S2			30.693	600	505625.758	181418.038	1.313
S5	0.004	5.00	30.909	600	505636.920	181406.333	1.229
S3	0.011	5.00	31.241	600	505637.607	181417.664	1.951
S4			31.305	900	505638.700	181417.593	2.025

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)
1.000	S1	S2	11.115	0.600	29.640	29.380	0.260	42.8	150	0.00
1.001	S2	S3	11.855	0.600	29.380	29.290	0.090	131.7	150	0.00
2.000	S5	S3	11.351	0.600	29.680	29.290	0.390	29.1	150	0.00
1.002	S3	S4	5.000	0.600	29.290	29.280	0.010	500.0	150	0.00

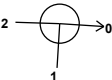
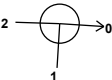
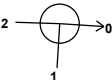
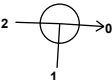
Name	Vel (m/s)	Cap (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.543	27.3	0.994	1.163	0.003	0.0	0	0.000
1.001	0.874	15.4	1.163	1.801	0.003	0.0	0	0.000
2.000	1.873	33.1	1.079	1.801	0.004	0.0	0	0.000
1.002	0.443	7.8	1.801	1.875	0.018	0.0	0	0.000

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	11.115	42.8	150	Circular	30.784	29.640	0.994	30.693	29.380	1.163
1.001	11.855	131.7	150	Circular	30.693	29.380	1.163	31.241	29.290	1.801
2.000	11.351	29.1	150	Circular	30.909	29.680	1.079	31.241	29.290	1.801
1.002	5.000	500.0	150	Circular	31.241	29.290	1.801	31.305	29.280	1.875

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	600	Manhole	Adoptable	S2	600	Manhole	Adoptable
1.001	S2	600	Manhole	Adoptable	S3	600	Manhole	Adoptable
2.000	S5	600	Manhole	Adoptable	S3	600	Manhole	Adoptable
1.002	S3	600	Manhole	Adoptable	S4	900	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S1	505625.127	181406.941	30.784	1.144	600		0	1.000	29.640	150
S2	505625.758	181418.038	30.693	1.313	600		1	1.000	29.380	150
S5	505636.920	181406.333	30.909	1.229	600		0	1.001	29.380	150
S3	505637.607	181417.664	31.241	1.951	600		1	2.000	29.680	150
							2	2.000	29.290	150
							2	1.001	29.290	150
							0	1.002	29.290	150
S4	505638.700	181417.593	31.305	2.025	900		1	1.002	29.280	150

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	60	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	35	0	0
100	40	0	0

Node S4 Online Pump Control

Flap Valve	x	Design Depth (m)	0.800	Switch off depth (m)	0.000
Replaces Downstream Link	✓	Design Flow (l/s)	1.5		
Invert Level (m)	29.280	Switch on depth (m)	0.100		

Depth (m)	Flow (l/s)
0.800	1.500

Node S3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	29.290
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	100

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	14.9	14.9	0.800	14.9	25.8	0.801	0.0	25.8

Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 95.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S1	128	29.738	0.098	0.7	0.0278	0.0000	OK
180 minute summer	S2	128	29.738	0.358	0.7	0.1014	0.0000	SURCHARGED
180 minute summer	S5	128	29.738	0.058	0.9	0.0165	0.0000	OK
180 minute summer	S3	128	29.739	0.448	3.8	6.4754	0.0000	SURCHARGED
180 minute summer	S4	128	29.738	0.458	0.9	0.2915	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S1	1.000	S2	0.7	0.448	0.026	0.1658	
180 minute summer	S2	1.001	S3	0.4	0.249	0.026	0.2087	
180 minute summer	S5	2.000	S3	0.9	0.520	0.027	0.1358	
180 minute summer	S3	1.002	S4	0.9	0.195	0.113	0.0880	
180 minute summer	S4	Pump		0.9				7.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 95.45%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S1	128	29.871	0.231	0.9	0.0652	0.0000	SURCHARGED
180 minute summer	S2	128	29.871	0.491	0.9	0.1388	0.0000	SURCHARGED
180 minute summer	S5	128	29.870	0.190	1.2	0.0539	0.0000	SURCHARGED
180 minute summer	S3	128	29.870	0.580	5.0	8.3810	0.0000	SURCHARGED
180 minute summer	S4	128	29.870	0.590	1.1	0.3754	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S1	1.000	S2	0.9	0.450	0.033	0.1957	
180 minute summer	S2	1.001	S3	0.5	0.197	0.034	0.2087	
180 minute summer	S5	2.000	S3	1.2	0.522	0.036	0.1998	
180 minute summer	S3	1.002	S4	1.1	0.155	0.145	0.0880	
180 minute summer	S4	Pump		1.1				9.3