

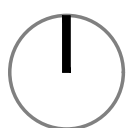
Appendix A

Site Location Plan

General Notes

- This document is to be used for the stated purpose only and should not be used for any other.
- Dimensions are as indicated, unless stated otherwise.
- It is the responsibility of the user to ensure the document is the correct size & scale.
- All relevant drawings and specifications should be read in conjunction with this document.
- Scaling of this document is not recommended.

North

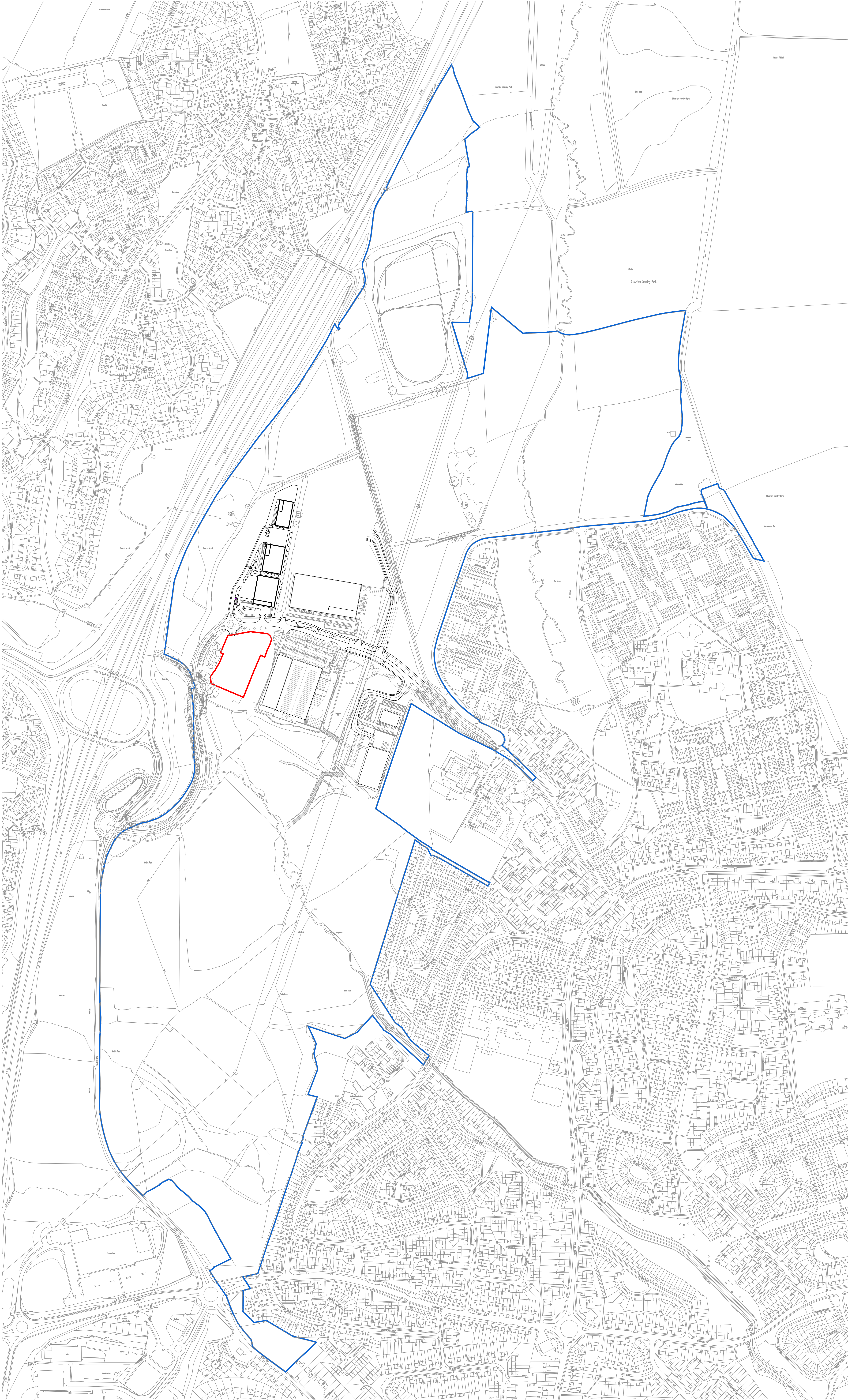


Document Scale(s)



Key

Ownership Boundary	291.25 ac	117.86 ha
Plot 6 Area	2.37 ac	0.96 ha



Project Name

**Plot 1, Dunsbury Park, Havant,
Portsmouth**

Portsmouth City Council

Project Address

Civic Offices,
Guildhall Square,
Portsmouth,
PO1 2AL

RIBA Workstage

2 - Concept Design

Status

S3 - Review & Comment

Drawn

KS

Checked

DS

10.10.2025

Created

AO

Size

UMC Project Reference

25266

Scale

1:2500

LOD

1

LOI

1

Document Title

Plot 1, Site Location Plan

Document Reference

DP - UMC - 0100 - SI - DR - A - 0501

Revision Note

Initial Issue

Issue Date

13.10.2025

Package

PLANNING

Current Revision

P1.0

Appendix B

Proposed Site Layout

General Notes

- This document is to be used for the stated purpose only and should not be used for any other.
- Dimensions are all in millimetres, unless stated otherwise.
- It is the recipient's responsibility to print this document to the correct size & scale.
- All relevant drawings and specifications should be read in conjunction with this document.
- Scaling is for planning purposes.

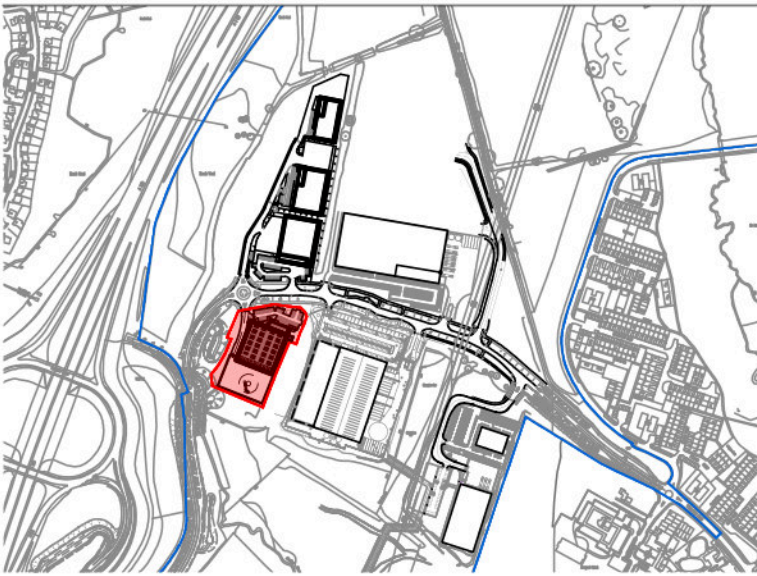
North



Document Scale(s)



Key Plan



Project Name

Plot 1, Dunsbury Park, Portsmouth

Employer	Project Address		
Portsmouth City Council	Dunsbury Park, Havant, Portsmouth		
RIBA Workstage	Suitability		
2 - Concept Design	S3 - Review & Comment		
Drawn	Checked	Created	Size
KS	DS	29.09.2025	A1
UMC Project Reference		Scale	LOD LOI
25266		As Indicated	1 1

Document Title

Site Layout Plan

Document Reference

DP - UMC - 0100 - SI - DR - A - 0601

Revision Note

Issue Date Status Current Revision

12.12.2025 PLANNING

P2.1

Key			
—	Ownership Boundary	291.25 ac	117.86 ha
—	Plot 1 Area	2.37 ac	0.96 ha

Schedule of Accommodation Unit 100

Warehouse	29,000 m ²	2,694 m ²
2-Storey Office	6,000 m ²	557 m ²
Total	35,000 m²	3,251 m²

Level Access Doors	4
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Parking	
---------	--

Standard Car Parking Spaces	36
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Accessible Spaces Included In Total	2
-------------------------------------	---

EVC Spaces Included In Total	4
------------------------------	---

Total Parking Provision	40
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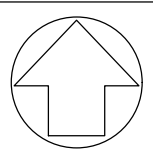
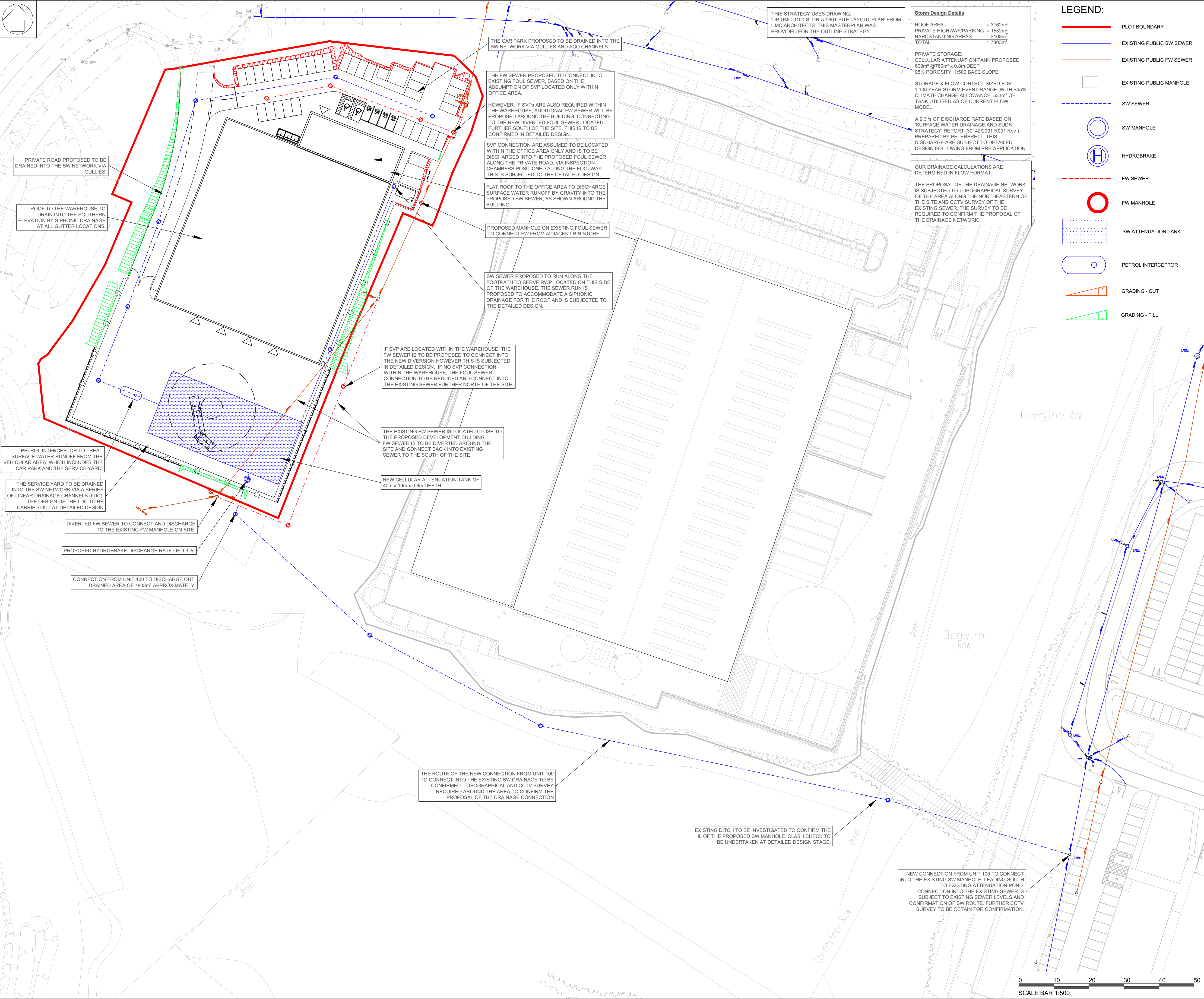
Cycle Spaces	10
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Clear Internal Height	12.5 m
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Site Plan_SCALE 1:500

Appendix C

Drainage Strategy Layout and Calculations



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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF
WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

- HIGH RETAINING WALL AROUND THE SITE.
UTILITIES SURVEY AND TOPOGRAPHICAL SURVEY IS ONLY CARRIED OUT
WITHIN PLOT 1. POSSIBILITIES THAT THERE ARE UNKNOWN SERVICES ALONG
THE SEWER CONNECTION IN NORTHEASTERN OF THE SITE.

MAINTENANCE

- EXISTING AND PROPOSED PONDS WILL REQUIRE MAINTENANCE AGREEMENTS OR ADOPTION TO SUPPORT THE DEVELOPMENT.

DEMOLITION

- UTILITIES SURVEY AND TOPOGRAPHICAL SURVEY IS ONLY CARRIED OUT WITHIN PLOT 1. POSSIBILITIES THAT THERE ARE UNKNOWN SERVICES ALONG THE SEWER CONNECTION IN NORTHEASTERN OF THE SITE.

ALL WORKS TO BE CARRIED OUT BY A COMPETENT CONTRACTOR,
WORKING (WHERE APPROPRIATE) TO AN APPROVED METHOD STATEMENT

GENERAL NOTES:

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- ALL UNITS IN MILLIMETERS U.N.O. ON THE DRAWING.
- DO NOT SCALE OFF THE DRAWING.
- THE WORKS DESCRIBED AND SPECIFIED ON THIS DRAWING AND ASSOCIATED DRGS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ALL CURRENT HEALTH AND SAFETY LEGISLATION AND THE PROJECT HEALTH & SAFETY PLAN.
- PREPARED BY THE PLANNING SUPERVISOR FOR THE PROJECT.
- WHERE NOTES AND INFORMATION ON THIS DRG DIFFER FROM THE SPECIFICATION, CLARIFICATION SHOULD BE SOUGHT FROM THE ENGINEER.
- ALL PIPES, MANHOLES, GULLIES, ACCESS FITTINGS ETC. ARE TO BE MATERIALS COMPLYING WITH THE BUILDING REGULATIONS. WHERE DRAINAGE IS TO BE ADOPTED, THESE SHALL ALSO COMPLY WITH SEWERAGE SECTOR GUIDANCE APPENDIX C.
- PIPE BEDDING TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. TAKING ACCOUNT OF THE DEPTH AND LOADINGS IN RELATION TO THE PIPE STRENGTH AND MODIFIED IF NECESSARY. WHERE BELOW GROUND WATER LEVEL IS ABOVE THE PIPE THE MAIN CONTRACTOR IS TO ISSUE BEDDING PROPOSALS TO THE ENGINEER FOR CONSIDERATION.
- PIPES ENTERING AND EXITING MANHOLES ARE TO HAVE LEVEL SOFFITS U.N.O.
- DETAILS OF EXISTING SEWERS SHALL BE CONFIRMED BY THE CONTRACTOR ON SITE PRIOR TO THE COMMENCEMENT OF WORKS. THE CONTRACTOR SHOULD CHECK THE LEVELS OF ALL NEW OUTFALLS IN RELATION TO EXISTING SEWERS PRIOR TO CONSTRUCTION OF ANY DRAINAGE TO ENSURE THE PROPOSED DESIGN MAY BE ACHIEVED. ANY DISCREPANCIES TO REPORTED TO THE ENGINEER.
3. BEFORE EXCAVATION COMMENCES, THE CONTRACTOR SHALL ASCERTAIN THE DEPTHS, SIZES AND LOCATIONS OF ALL SERVICES TO BE CROSSED. ANY CONFLICT IN LEVELS BETWEEN NEW AND EXISTING SEWERS TO BE NOTIFIED TO THE ENGINEER.
1. REFER TO ARCHITECTS DRAWINGS FOR POSITIONS OF SOIL VENT PIPES, STUB STACKS, RAINWATER PIPES AND INTERNAL GULLIES.
2. ALL ROOF GULLY CONNECTIONS TO BE Ø150, LAID NO FLATTER THAN 1:80 U.N.O.
1. ALL ROAD DRAINAGE CONNECTIONS TO BE Ø100, LAID NO FLATTER THAN 1:40 U.N.O.
3. ADOPTABLE DRAINAGE:
- 13.1. NO WORKS ARE TO BE UNDERTAKEN TO THE PUBLIC SEWER UNTIL THE APPROPRIATE S106 CONNECTION APPLICATIONS HAVE BEEN MADE AND ISSUED BY THE STATUTORY AUTHORITY FOR THE WORKS.
- 13.2. ADOPTED DRAINAGE PIPEWORK TO BE HEPWORTH SUPERSLEEVE VITRIFIED CLAY DRAINAGE SYSTEM TO BS EN 295 OR SIMILAR. ALL JOINTS TO BE FLEXIBLE. PIPES TO BE LAID IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
14. PRIVATE DRAINAGE PIPEWORK TO BE EITHER HEPWORTH SUPERSLEEVE VITRIFIED CLAY DRAINAGE SYSTEM TO BS EN 295 (OR SIMILAR) OR HEPWORTH UPVC DRAINAGE SYSTEM TO BS EN 1401 (OR SIMILAR). ALL JOINTS TO BE FLEXIBLE. PIPES TO BE LAID IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. UPVC PIPES TO BE LAID IN SHORT LENGTH MAXIMUM 3.0 m DUE TO HEAVY POTENTIAL.
15. ALL EXISTING DRAINAGE INFRASTRUCTURE TO BE MAINTAINED AS PART OF THE WORKS IS INDICATED ON THIS DRAWING. ALL EXISTING DRAINAGE INFRASTRUCTURE TO BE MADE REDUNDANT TO BE CONFIRMED AS SUCH PRIOR TO COMMENCING THE WORKS. REFER TO THE SITE CLEARANCE DRAWING FOR DETAILS OF DRAINAGE INFRASTRUCTURE TO BE TAKE UP AND REMOVED TO TIP OFF SITE.
3. ALL FLOWS FROM EXISTING BUILDINGS SHALL BE MAINTAINED DURING CONSTRUCTION U.N.O ON THE DRAWING.
7. EXTERNAL CHANNEL DRAINS TO BE TRAPPED AND RODDABLE WITH LEAF/GRIT BASKET.

P3	Site Boundary added	ET	07/01/2026	GS
P2	Updated to new Architect Layout	ET	22/12/2025	RGM
P1	Preliminary Issue	AS	11/11/2025	GS
Rev	Description	By	Date	Chkd

PEREGA

Quarry Court, Lime Quarry Mews, Guildford, GU1 2RD 01483 565 886

Client _____

PORTSMOUTH CITY COUNCIL

Project

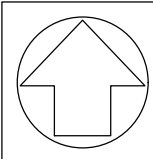
DUNSBURY PARK, PORTSMOUTH

HAVANT, PORTSMOUTH

Title

PLOT 100

Peregrine Project No.			Checked	Passed	Size	Scale
W24084			GS		A1	1:500
Project Code	Originator	Zone	Level	Type	Role	Drawing No.
W24084	PER	10	XX	DR	C	02001
Suitability Code			Status			Revision
S2			PRELIMINARY			P3



THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR THE SW MANHOLE.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR THE SW MANHOLE.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR THE SW MANHOLE.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR THE SW MANHOLE.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR SW DRAINAGE IN THIS AREA.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR THE SW MANHOLE.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC FOR THE SW MANHOLE.

THE EXCEEDANCE FLOOD ROUTE SHOWN IF STORM EVENT EXCEEDS 1:100 +45% CC.

THE EXCEEDANCE FLOOD ROUTE NOT SHOWN IN NORTHEASTERN AS IT IS SUBJECTED TO TOPOGRAPHICAL SURVEY OF THE AREA.

THIS STRATEGY USES DRAWING: 'DP-UMC-0100-SI-DR-A-0601-SITE LAYOUT PLAN' FROM UMC ARCHITECTS. THIS MASTERPLAN WAS PROVIDED FOR THE OUTLINE STRATEGY.

LEGEND:

- PLOT BOUNDARY
- EXISTING PUBLIC SW SEWER
- EXISTING PUBLIC FW SEWER
- EXISTING PUBLIC MANHOLE
- SW SEWER
- SW MANHOLE
- HYDROBRAKE
- FW SEWER
- FW MANHOLE
- SW ATTENUATION TANK
- PETROL INTERCEPTOR
- FLOOD EXCEEDANCE ARROW

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- MAINTENANCE**
- EXISTING AND PROPOSED PONDS WILL REQUIRE MAINTENANCE AGREEMENTS OR ADOPTION TO SUPPORT THE DEVELOPMENT.

- DEMOLITION**
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- REFER TO ARCHITECTS DRAWINGS FOR POSITIONS OF SOIL VENT PIPES, STUB STACKS, RAINWATER PIPES AND INTERNAL GULLIES.
- ALL ROAD GULLY CONNECTIONS TO BE Ø150, LAID NO FLATTER THAN 1.80 U.N.O. ALL ROOF DRAINAGE CONNECTIONS TO BE Ø100, LAID NO FLATTER THAN 1.40 U.N.O.
- ADOPTABLE DRAINAGE:
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- PRIVATE DRAINAGE PIPEWORK TO BE EITHER HEPWORTH SUPERSLEEVE VITRIFIED CLAY DRAINAGE SYSTEM TO BS EN 295 (OR SIMILAR) OR HEPWORTH UPVC DRAINAGE SYSTEM TO BS EN 1401 (OR SIMILAR). ALL JOINTS TO BE FLEXIBLE, PIPES TO BE LAID IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. UPVC PIPES TO BE LAID IN SHORT LENGTH MAXIMUM 3.0 m DUE TO HEAVE POTENTIAL.
- ONLY EXISTING DRAINAGE INFRASTRUCTURE TO BE MAINTAINED AS PART OF THE WORKS IS INDICATED ON THIS DRAWING. ALL EXISTING DRAINAGE INFRASTRUCTURE TO BE MADE REDUNDANT TO BE CONFIRMED AS SUCH PRIOR TO COMMENCING THE WORKS. REFER TO THE SITE CLEARANCE DRAWING FOR DETAILS OF DRAINAGE INFRASTRUCTURE TO BE TAKE UP AND REMOVED TO TIP OFF SITE.
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- EXTERNAL CHANNEL DRAINS TO BE TRAPPED AND RODDABLE WITH LEAF/GRIT BASKET.

P3	UPDATE SITE BOUNDARY	GS	10/03/2026	ACN
P2	Updated to new Architect Layout	ET	22/12/2025	RGM
P1	Preliminary Issue	AS	11/11/2025	GS
Rev	Description	By	Date	Chkd

PEREGA

Quarry Court, Lime Quarry Mews, Guildford, GU1 2RD 01483 565 886

Client

PORTSMOUTH CITY COUNCIL

Project
DUNSBURY PARK, PORTSMOUTH HAVANT, PORTSMOUTH

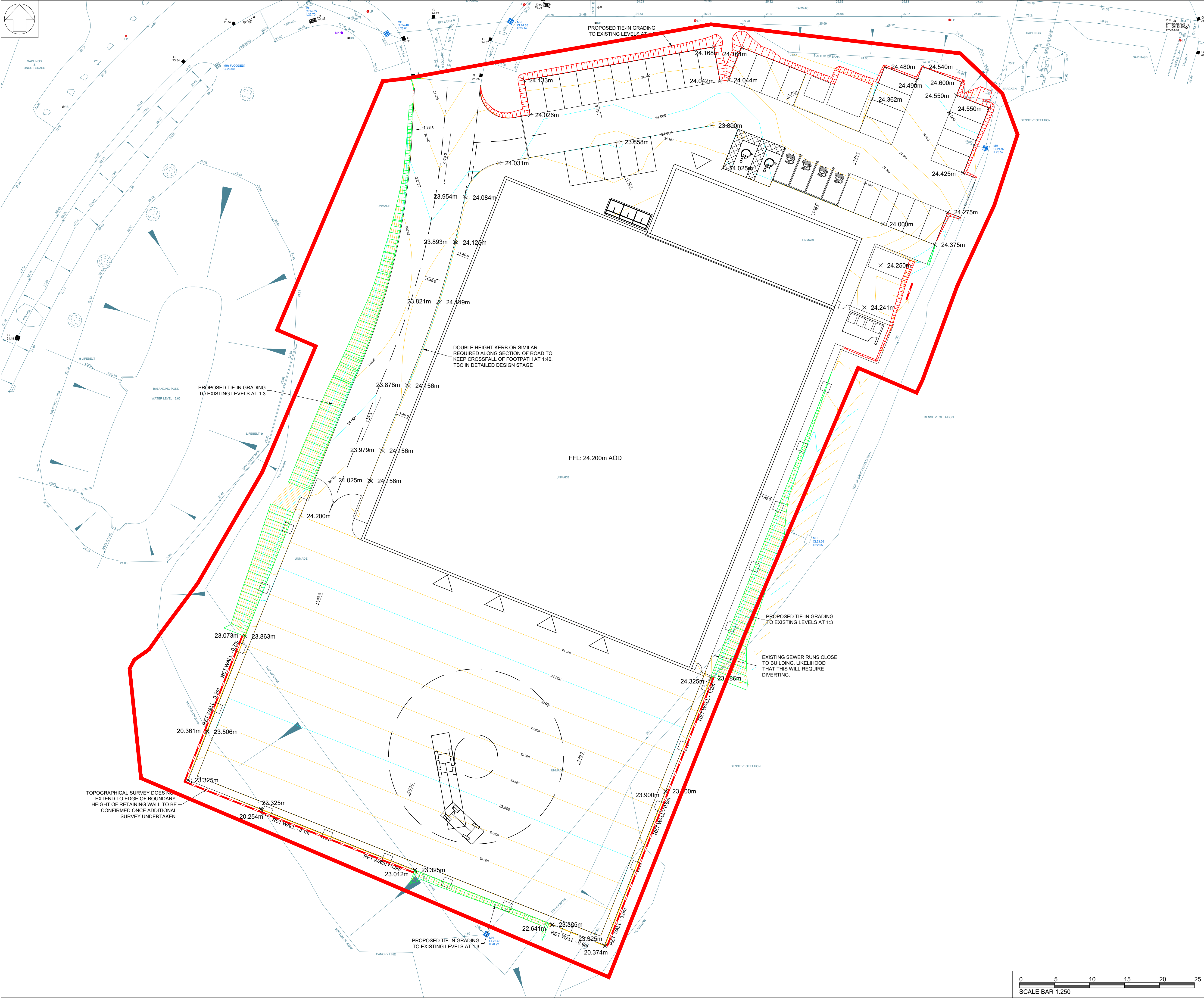
Title
PLOT 100 FLOOD EXCEEDANCE PLAN

Perega Project No.			Checked	Passed	Size	Scale
W24084			GS		A1	1:500
Project Code	Originator	Zone	Level	Type	Role	Drawing No.
W24084	PER	10	XX	DR	C	02002
Suitability Code			Status			Revision
S2			INFORMATION			P3



EXISTING DITCH TO BE INVESTIGATED TO CONFIRM THE IL OF THE PROPOSED SW MANHOLE. CLASH CHECK TO BE UNDERTAKEN AT DETAILED DESIGN STAGE.

NEW CONNECTION FROM UNIT 100 TO CONNECT INTO THE EXISTING SW MANHOLE, LEADING SOUTH TO EXISTING ATTENUATION POND. CONNECTION INTO THE EXISTING SEWER IS SUBJECT TO EXISTING SEWER LEVELS AND CONFIRMATION OF SW ROUTE. FURTHER CCTV SURVEY TO BE OBTAIN FOR CONFIRMATION.



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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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CONSTRUCTION

1. NOT REVIEWED AT THIS STAGE

MAINTENANCE

1. NOT REVIEWED AT THIS STAGE

DEMOLITION

1. NOT REVIEWED AT THIS STAGE

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5. WHERE NOTES AND INFORMATION ON THIS DRG DIFFER FROM THE SPECIFICATION, CLARIFICATION SHOULD BE SOUGHT FROM THE ENGINEER.

LEGEND

PLOT BOUNDARY

PROPOSED MAJOR CONTOUR - 0.5m INTERVAL

PROPOSED MINOR CONTOUR - 0.1m INTERVAL

RETAINING WALL

GRADINGS - CUT

GRADINGS - FILL

P3	SITE BOUNDARY ADDED	ET	07/01/2026	GS
P2	UPDATED TO NEW ARCHITECT LAYOUT	ET	22/12/2025	RGM
P1	ISSUED FOR INFORMATION	ACN	20/10/2025	GS
Rev	Description	By	Date	Chkd

Quarry Court, Lime Quarry Mews, Guildford, GU1 2RD 01483 565 886

Client

PORTSMOUTH CITY COUNCIL

Project

DUNSBUURY PARK

HAVANT, PORTSMOUTH

Title

PLOT 100

PROPOSED LEVELS

Perega Project No.	Checked	Passed	Size	Scale		
W24084	GS	-	A1	1:250		
Project Code	Originator	Zone	Level	Type	Role	Drawing No.
W24084	PER	10	XX	DR	C	02401
Suitability Code	Status	Revision				
S2	INFORMATION	P3				

SCALE BAR 1:250

Design Settings

Rainfall Methodology	FEH-22	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	1.200
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0	Include Intermediate Ground	✓
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	x
CV	1.000	Connection Type	Level Soffits		
Time of Entry (mins)	5.00	Minimum Backdrop Height (m)	0.200		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
01		5.00	24.269	1200	469869.193	109111.322	1.549
02	0.098	5.00	23.988	1200	469841.575	109122.462	1.444
03	0.034	5.00	24.145	1350	469801.587	109115.737	1.840
04	0.014	5.00	23.957	1350	469791.030	109081.176	1.839
05	0.369	5.00	24.082	1350	469782.217	109056.971	2.028
06	0.250	5.00	23.515	1350	469773.859	109035.884	1.650
07	0.016	5.00	24.173	1200	469858.153	109091.210	1.350
08			24.169	1200	469839.923	109044.736	1.841
09 Tank			23.297		469816.856	109009.480	1.687
10 HydroBrake			23.250	1500	469816.282	109007.650	1.650
11			22.180	1350	469812.884	108997.732	1.575

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)	Rain (mm/hr)
1.000	01	02	29.780	0.600	22.720	22.544	0.176	169.2	225	5.50	50.0
1.001	02	03	40.550	0.600	22.544	22.305	0.239	169.7	375	5.98	50.0
1.002	03	04	36.137	0.600	22.305	22.193	0.112	322.7	375	6.58	50.0
1.003	04	05	25.759	0.600	22.118	22.054	0.064	402.5	450	7.01	50.0
1.004	05	06	22.683	0.600	22.054	21.865	0.189	120.0	450	7.21	50.0
1.005	06	09 Tank	50.457	0.600	21.865	21.610	0.255	197.9	450	7.80	50.0
2.000	07	08	49.922	0.600	22.823	22.328	0.495	100.9	150	5.83	50.0
2.001	08	09 Tank	42.132	0.600	22.328	21.910	0.418	100.8	150	6.53	50.0
1.006	09 Tank	10 HydroBrake	1.918	0.600	21.610	21.600	0.010	191.8	450	7.82	50.0
1.007	10 HydroBrake	11	10.484	0.600	21.600	20.605	0.995	10.5	375	7.85	50.0

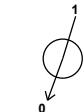
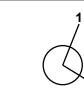
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.002	39.8	0.0	1.324	1.219	0.000	0.0	0	0.000
1.001	1.388	153.3	17.7	1.069	1.465	0.098	0.0	85	0.935
1.002	1.003	110.8	23.7	1.465	1.389	0.131	0.0	118	0.804
1.003	1.007	160.1	26.3	1.389	1.578	0.145	0.0	123	0.750
1.004	1.854	294.9	93.0	1.578	1.200	0.515	0.0	173	1.649
1.005	1.441	229.2	138.2	1.200	1.237	0.765	0.0	253	1.506
2.000	1.000	17.7	2.9	1.200	1.691	0.016	0.0	41	0.736
2.001	1.001	17.7	2.9	1.691	1.237	0.016	0.0	41	0.737
1.006	1.464	232.9	141.0	1.237	1.200	0.780	0.0	253	1.530
1.007	5.608	619.4	141.0	1.275	1.200	0.780	0.0	121	4.581

Pipeline Schedule

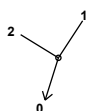
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	29.780	169.2	225	Circular	24.269	22.720	1.324	23.988	22.544	1.219
1.001	40.550	169.7	375	Circular	23.988	22.544	1.069	24.145	22.305	1.465
1.002	36.137	322.7	375	Circular	24.145	22.305	1.465	23.957	22.193	1.389
1.003	25.759	402.5	450	Circular	23.957	22.118	1.389	24.082	22.054	1.578
1.004	22.683	120.0	450	Circular	24.082	22.054	1.578	23.515	21.865	1.200
1.005	50.457	197.9	450	Circular	23.515	21.865	1.200	23.297	21.610	1.237
2.000	49.922	100.9	150	Circular	24.173	22.823	1.200	24.169	22.328	1.691
2.001	42.132	100.8	150	Circular	24.169	22.328	1.691	23.297	21.910	1.237
1.006	1.918	191.8	450	Circular	23.297	21.610	1.237	23.250	21.600	1.200
1.007	10.484	10.5	375	Circular	23.250	21.600	1.275	22.180	20.605	1.200

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	01	1200	Manhole	Adoptable	02	1200	Manhole	Adoptable
1.001	02	1200	Manhole	Adoptable	03	1350	Manhole	Adoptable
1.002	03	1350	Manhole	Adoptable	04	1350	Manhole	Adoptable
1.003	04	1350	Manhole	Adoptable	05	1350	Manhole	Adoptable
1.004	05	1350	Manhole	Adoptable	06	1350	Manhole	Adoptable
1.005	06	1350	Manhole	Adoptable	09 Tank		Junction	
2.000	07	1200	Manhole	Adoptable	08	1200	Manhole	Adoptable
2.001	08	1200	Manhole	Adoptable	09 Tank		Junction	
1.006	09 Tank		Junction		10 HydroBrake	1500	Manhole	Adoptable
1.007	10 HydroBrake	1500	Manhole	Adoptable	11	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
01	469869.193	109111.322	24.269	1.549	1200		0	1.000	22.720	225
02	469841.575	109122.462	23.988	1.444	1200		1	1.000	22.544	225
03	469801.587	109115.737	24.145	1.840	1350		0	1.001	22.544	375
04	469791.030	109081.176	23.957	1.839	1350		1	1.001	22.305	375
05	469782.217	109056.971	24.082	2.028	1350		0	1.002	22.305	375
06	469773.859	109035.884	23.515	1.650	1350		1	1.002	22.193	375
07	469782.217	109056.971	24.082	2.028	1350		0	1.003	22.118	450
08	469773.859	109035.884	23.515	1.650	1350		1	1.003	22.054	450
09	469765.497	109014.799	23.282	1.450	1350		0	1.004	22.054	450
10	469757.135	108993.714	23.049	1.250	1350		1	1.004	21.865	450
11	469748.773	108972.629	22.816	1.050	1350		0	1.005	21.865	450
12	469740.411	108951.544	22.583	0.850	1200		0	2.000	22.823	150
13	469732.049	108930.459	22.350	0.650	1200		1	2.000	22.328	150
14	469723.687	108909.374	22.117	0.450	1200		0	2.001	22.328	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
09 Tank	469816.856	109009.480	23.297	1.687			1	2.001	21.910	150
							2	1.005	21.610	450
							0	1.006	21.610	450
10 HydroBrake	469816.282	109007.650	23.250	1.650	1500		1	1.006	21.600	450
							0	1.007	21.600	375
11	469812.884	108997.732	22.180	1.575	1350		1	1.007	20.605	375

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Additional Storage (m³/ha)	20.0	Check Discharge Volume	x
Rainfall Events	Singular	Skip Steady State	x	Starting Level (m)			
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Rate(s)	x		

Storm Durations

30	60	120	240	360	480	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	40	0	0	100	45	0	0

Node 10 HydroBrake Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	21.600	Product Number	CTL-SHE-0144-9300-0805-9300
Design Depth (m)	0.805	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	9.3	Min Node Diameter (mm)	1200

Node 09 Tank Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	21.610
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	760.0	0.0	0.400	760.0	0.0	0.800	760.0	0.0	0.801	0.0	0.0

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.12%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	01	19	23.060	0.340	17.4	0.3848	0.0000	SURCHARGED
30 minute summer	02	19	23.142	0.598	56.6	1.4854	0.0000	SURCHARGED
30 minute summer	03	19	23.076	0.771	75.1	1.3856	0.0000	SURCHARGED
30 minute summer	04	19	23.013	0.895	96.4	1.4201	0.0000	SURCHARGED
30 minute summer	05	19	22.963	0.909	262.2	4.6103	0.0000	SURCHARGED
30 minute summer	06	19	22.747	0.882	386.4	3.9342	0.0000	SURCHARGED
30 minute summer	07	18	22.902	0.079	9.2	0.1072	0.0000	OK
30 minute summer	08	19	22.404	0.076	9.2	0.0859	0.0000	OK
360 minute summer	09 Tank	360	22.166	0.556	97.3	401.4951	0.0000	SURCHARGED
360 minute summer	10 HydroBrake	360	22.166	0.566	9.5	1.0002	0.0000	SURCHARGED
30 minute summer	11	1	20.605	0.000	9.3	0.0000	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)
30 minute summer	01	1.000	02	-17.4	-0.592	-0.436	1.1844	
30 minute summer	02	1.001	03	60.2	0.963	0.393	4.4725	
30 minute summer	03	1.002	04	93.2	0.937	0.842	3.9858	
30 minute summer	04	1.003	05	115.9	0.797	0.723	4.0813	
30 minute summer	05	1.004	06	254.7	1.607	0.863	3.5940	
30 minute summer	06	1.005	09 Tank	380.5	3.038	1.660	6.5862	
30 minute summer	07	2.000	08	9.2	1.032	0.523	0.4515	
30 minute summer	08	2.001	09 Tank	8.9	1.005	0.505	0.3744	
360 minute summer	09 Tank	1.006	10 HydroBrake	9.5	0.215	0.041	0.3039	
360 minute summer	10 HydroBrake	Hydro-Brake®	11	9.3				255.1

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.12%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	01	19	23.987	1.267	38.9	1.4330	0.0000	FLOOD RISK
30 minute summer	02	19	23.960	1.416	76.5	3.5164	0.0000	FLOOD RISK
30 minute summer	03	19	23.909	1.604	89.0	2.8805	0.0000	FLOOD RISK
30 minute summer	04	19	23.820	1.702	105.3	2.6992	0.0000	FLOOD RISK
30 minute summer	05	19	23.792	1.738	362.3	8.8153	0.0000	FLOOD RISK
30 minute summer	06	19	23.421	1.556	519.3	6.9377	0.0000	FLOOD RISK
30 minute summer	07	18	22.916	0.093	12.0	0.1269	0.0000	OK
30 minute summer	08	19	22.418	0.090	12.0	0.1015	0.0000	OK
360 minute summer	09 Tank	360	22.347	0.737	124.1	532.2429	0.0000	SURCHARGED
360 minute summer	10 HydroBrake	360	22.347	0.747	9.5	1.3202	0.0000	SURCHARGED
30 minute summer	11	1	20.605	0.000	9.3	0.0000	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)
30 minute summer	01	1.000	02	-38.9	-0.978	-0.976	1.1844	
30 minute summer	02	1.001	03	69.8	0.970	0.455	4.4725	
30 minute summer	03	1.002	04	102.1	0.965	0.921	3.9858	
30 minute summer	04	1.003	05	114.9	0.790	0.718	4.0813	
30 minute summer	05	1.004	06	340.3	2.148	1.154	3.5940	
30 minute summer	06	1.005	09 Tank	505.8	3.627	2.207	7.7786	
30 minute summer	07	2.000	08	12.0	1.094	0.681	0.5558	
30 minute summer	08	2.001	09 Tank	11.7	1.070	0.661	0.4601	
360 minute summer	09 Tank	1.006	10 HydroBrake	9.5	0.214	0.041	0.3039	
360 minute summer	10 HydroBrake	Hydro-Brake®	11	9.3				265.0