

APPENDIX C

INFILTRATION TESTING



Test 1

Date: 17/18-07-25

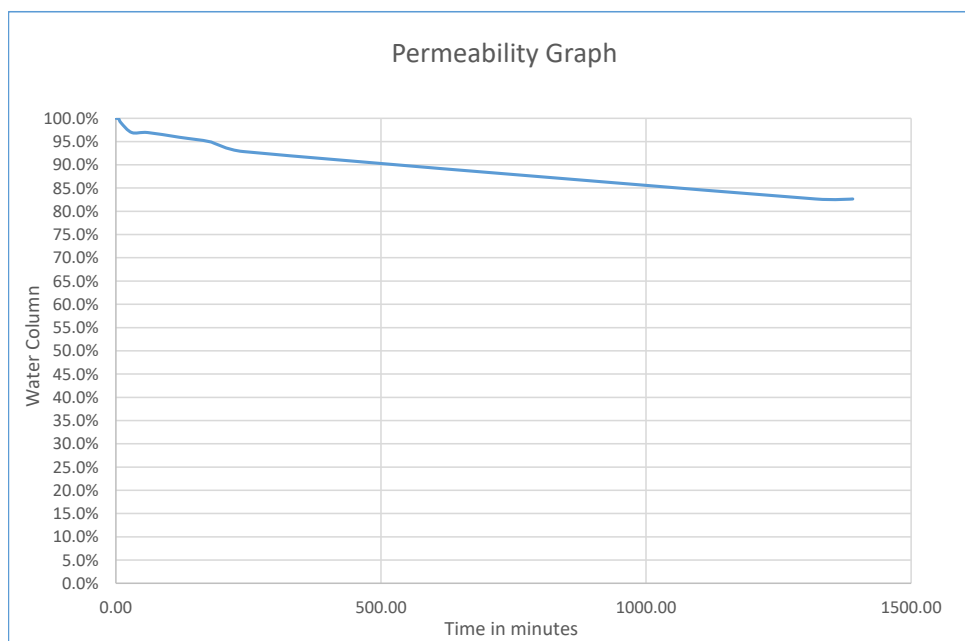
[illegible]

Pit Size		Time in mins	
Length	2.00		75%
Width	0.70		25%
Depth	1.90		

Unable to achieve 75% or 25% effective depth

Infiltration Rate from 75%-25%

not valid m/s





Test 1

Date: 17/18-07-25

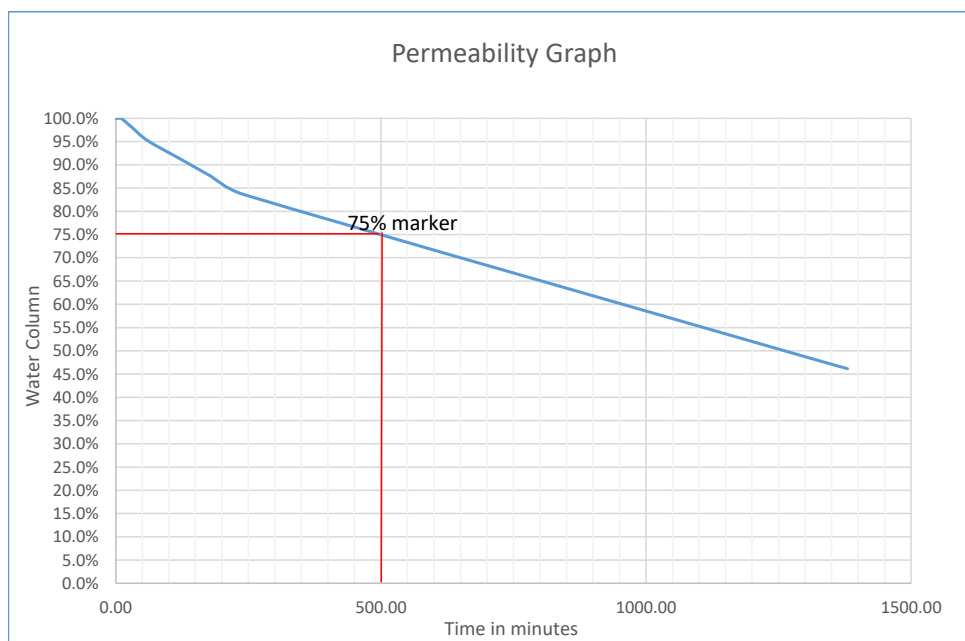
[illegible]

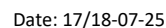
Pit Size		Time in mins	
Length	2.10	500	75%
Width	0.70		25%
Depth	2.00		

Unable to achieve 25% effective depth

Infiltration Rate from 75%-25%

not valid m/s





APPENDIX D

INFO-DRAINAGE CALCULATIONS

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Ridge and Partners LLP:

Checked by:

Approved By:

Report Details:
Type: Stormwater Controls
Storm Phase: Phase

RIDGE



Pond

Type : Pond

Dimensions

Exceedance Level (m)	49.254
Depth (m)	1.650
Base Level (m)	47.604
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	2.935
Total Volume (m³)	868.967

Depth (m)	Area (m²)	Volume (m³)
0.000	474.31	0.000
1.650	921.81	1131.541

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (6)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	SW_1.017
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

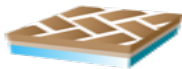
Outlet (1)

Outgoing Connection	SW_1.018
Outlet Type	Free Discharge

Advanced

Base Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Perimeter	Circular
Length (m)	43.614
Friction Scheme	Manning's n
n	0.25

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving

Type : Porous Paving

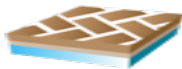
Dimensions		
Exceedance Level (m)		59.250
Depth (m)		0.660
Base Level (m)		58.590
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		12.457
Long. Slope (1:X)		200.00
Width (m)		13.879
Total Volume (m³)		20.746

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (99)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_3.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		59.015

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (1)

Type : Porous Paving

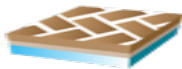
Dimensions		
Exceedance Level (m)		59.774
Depth (m)		0.660
Base Level (m)		59.114
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.244
Long. Slope (1:X)		250.00
Width (m)		6.299
Total Volume (m³)		8.498

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (100)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_2.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		59.114

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (2)

Type : Porous Paving

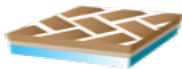
Dimensions		
Exceedance Level (m)		56.845
Depth (m)		0.660
Base Level (m)		56.185
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		14.058
Long. Slope (1:X)		150.00
Width (m)		3.292
Total Volume (m³)		5.554

Inlets		
Inlet		
Inlet Type	Point Inflow	
Incoming Item(s)	Catchment Area (126)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_7.000	
Outlet Type	Orifice	
Diameter (m)		0.017
Coefficient of Discharge		0.600
Invert Level (m)		56.185

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (3)

Type : Porous Paving

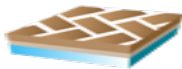
Dimensions		
Exceedance Level (m)		56.049
Depth (m)		0.660
Base Level (m)		55.389
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		13.732
Long. Slope (1:X)		100.00
Width (m)		5.575
Total Volume (m³)		9.187

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (124)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_12.000	
Outlet Type	Orifice	
Diameter (m)		0.017
Coefficient of Discharge		0.600
Invert Level (m)		56.000

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (4)

Type : Porous Paving

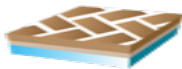
Dimensions		
Exceedance Level (m)		57.501
Depth (m)		0.660
Base Level (m)		56.841
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		5.871
Long. Slope (1:X)		100.00
Width (m)		6.262
Total Volume (m³)		4.412

Inlets		
Inlet (1)		
Inlet Type	Point Inflow	
Incoming Item(s)	Catchment Area (18)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_11.000	
Outlet Type	Orifice	
Diameter (m)		0.017
Coefficient of Discharge		0.600
Invert Level (m)		56.841

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (5)

Type : Porous Paving

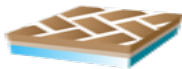
Dimensions		
Exceedance Level (m)		56.670
Depth (m)		0.860
Base Level (m)		55.810
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		9.055
Long. Slope (1:X)		100.00
Width (m)		6.371
Total Volume (m³)		10.384

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (107)	
Bypass Destination	(None)	
Capacity Type	No Restriction	
Inlet (2)		
Inlet Type	Point Inflow	
Incoming Item(s)	SW_10.000	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_10.001	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		55.810

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (6)

Type : Porous Paving

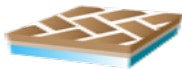
Dimensions		
Exceedance Level (m)		57.088
Depth (m)		0.660
Base Level (m)		56.428
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.181
Long. Slope (1:X)		70.00
Width (m)		3.304
Total Volume (m³)		4.434

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (106)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_10.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (7)

Type : Porous Paving

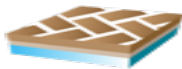
Dimensions		
Exceedance Level (m)		56.048
Depth (m)		0.660
Base Level (m)		55.388
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		10.467
Long. Slope (1:X)		100.00
Width (m)		3.299
Total Volume (m³)		4.144

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (79)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_9.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (8)

Type : Porous Paving

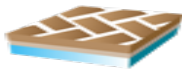
Dimensions		
Exceedance Level (m)		54.635
Depth (m)		0.660
Base Level (m)		53.975
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		13.431
Long. Slope (1:X)		200.00
Width (m)		3.166
Total Volume (m³)		5.102

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (125)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_15.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		54.000

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (9)

Type : Porous Paving

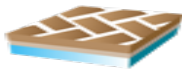
Dimensions		
Exceedance Level (m)		59.161
Depth (m)		0.660
Base Level (m)		58.501
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		7.060
Long. Slope (1:X)		80.00
Width (m)		6.309
Total Volume (m³)		5.345

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (101)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_4.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		58.501

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (10)

Type : Porous Paving

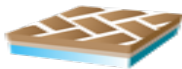
Dimensions		
Exceedance Level (m)		58.950
Depth (m)		0.660
Base Level (m)		58.290
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.180
Long. Slope (1:X)		100.00
Width (m)		6.248
Total Volume (m³)		8.383

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (102)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_5.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		58.290

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (11)

Type : Porous Paving

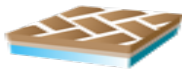
Dimensions		
Exceedance Level (m)		58.694
Depth (m)		0.660
Base Level (m)		58.034
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		12.404
Long. Slope (1:X)		250.00
Width (m)		3.255
Total Volume (m³)		4.845

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (103)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_6.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		58.040

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (12)

Type : Porous Paving

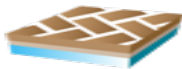
Dimensions		
Exceedance Level (m)		56.454
Depth (m)		0.660
Base Level (m)		55.794
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		13.364
Long. Slope (1:X)		100.00
Width (m)		6.095
Total Volume (m³)		9.775

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (86)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_8.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		56.240

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (14)

Type : Porous Paving

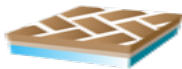
Dimensions		
Exceedance Level (m)		55.690
Depth (m)		0.660
Base Level (m)		55.030
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		5.909
Long. Slope (1:X)		200.00
Width (m)		6.268
Total Volume (m³)		4.445

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (105)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_13.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		55.030

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (15)

Type : Porous Paving

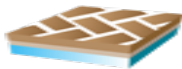
Dimensions		
Exceedance Level (m)		54.082
Depth (m)		0.660
Base Level (m)		53.422
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		13.495
Long. Slope (1:X)		200.00
Width (m)		3.573
Total Volume (m³)		5.787

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (2)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_16.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		53.478

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (16)

Type : Porous Paving

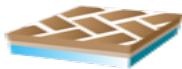
Dimensions		
Exceedance Level (m)		53.725
Depth (m)		0.660
Base Level (m)		53.065
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		12.819
Long. Slope (1:X)		200.00
Width (m)		3.384
Total Volume (m³)		5.205

Inlets		
Inlet (1)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (82)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_17.000	
Outlet Type	Orifice	
Diameter (m)		0.012
Coefficient of Discharge		0.600
Invert Level (m)		53.108

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (17)

Type : Porous Paving

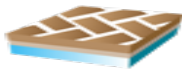
Dimensions		
Exceedance Level (m)		52.912
Depth (m)		0.660
Base Level (m)		52.252
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.738
Long. Slope (1:X)		200.00
Width (m)		10.995
Total Volume (m³)		15.488

Inlets		
Inlet (2)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (12)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_22.000	
Outlet Type	Orifice	
Diameter (m)		0.012
Coefficient of Discharge		0.600
Invert Level (m)		52.252

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (18)

Type : Porous Paving

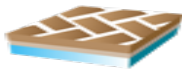
Dimensions		
Exceedance Level (m)		53.812
Depth (m)		0.660
Base Level (m)		53.152
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		5.014
Long. Slope (1:X)		200.00
Width (m)		9.793
Total Volume (m³)		5.892

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (19)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_19.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		53.189

Advanced		
Conductivity (m/hr)		5.0

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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (19)

Type : Porous Paving

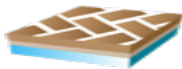
Dimensions		
Exceedance Level (m)		53.777
Depth (m)		0.660
Base Level (m)		53.117
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		18.226
Long. Slope (1:X)		200.00
Width (m)		5.522
Total Volume (m³)		12.077

Inlets		
Inlet		
Inlet Type	Point Inflow	
Incoming Item(s)	Catchment Area (8)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_20.000	
Outlet Type	Orifice	
Diameter (m)		0.017
Coefficient of Discharge		0.600
Invert Level (m)		53.161

Advanced		
Conductivity (m/hr)		5.0

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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (21)

Type : Porous Paving

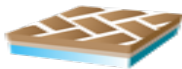
Dimensions		
Exceedance Level (m)		51.942
Depth (m)		0.660
Base Level (m)		51.282
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		14.132
Long. Slope (1:X)		200.00
Width (m)		5.526
Total Volume (m³)		9.371

Inlets		
Inlet (3)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (84)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_23.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (22)

Type : Porous Paving

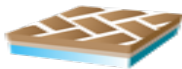
Dimensions		
Exceedance Level (m)		52.365
Depth (m)		0.660
Base Level (m)		51.705
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.215
Long. Slope (1:X)		200.00
Width (m)		3.311
Total Volume (m³)		4.456

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (60)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_21.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		51.749

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (23)

Type : Porous Paving

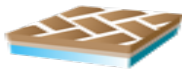
Dimensions		
Exceedance Level (m)		51.648
Depth (m)		0.760
Base Level (m)		50.888
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.806
Long. Slope (1:X)		60.00
Width (m)		3.390
Total Volume (m³)		6.003

Inlets		
Inlet (1)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (85)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_26.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (24)

Type : Porous Paving

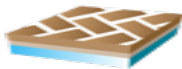
Dimensions		
Exceedance Level (m)		52.637
Depth (m)		0.660
Base Level (m)		51.977
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		19.361
Long. Slope (1:X)		200.00
Width (m)		8.069
Total Volume (m³)		18.748

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (72)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_31.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (25)

Type : Porous Paving

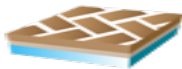
Dimensions		
Exceedance Level (m)		50.747
Depth (m)		0.660
Base Level (m)		50.087
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		14.769
Long. Slope (1:X)		200.00
Width (m)		5.844
Total Volume (m³)		10.358

Inlets		
Inlet (1)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (121)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_28.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		50.087

Advanced		
Conductivity (m/hr)		5.0

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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (26)

Type : Porous Paving

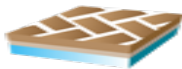
Dimensions		
Exceedance Level (m)		50.552
Depth (m)		0.660
Base Level (m)		49.892
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		6.048
Long. Slope (1:X)		200.00
Width (m)		6.299
Total Volume (m³)		4.572

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (122)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_27.000	
Outlet Type	Orifice	
Diameter (m)		0.012
Coefficient of Discharge		0.600
Invert Level (m)		49.892

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (28)

Type : Porous Paving

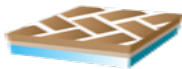
Dimensions		
Exceedance Level (m)		52.700
Depth (m)		0.660
Base Level (m)		52.040
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.984
Long. Slope (1:X)		60.00
Width (m)		6.364
Total Volume (m³)		9.151

Inlets		
Inlet (1)		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (73)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_35.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (29)

Type : Porous Paving

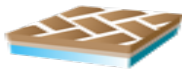
Dimensions		
Exceedance Level (m)		52.757
Depth (m)		0.660
Base Level (m)		52.097
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		17.092
Long. Slope (1:X)		80.00
Width (m)		3.216
Total Volume (m³)		6.597

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (74)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_34.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (30)

Type : Porous Paving

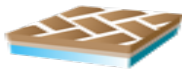
Dimensions		
Exceedance Level (m)		52.000
Depth (m)		0.660
Base Level (m)		51.340
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		11.383
Long. Slope (1:X)		200.00
Width (m)		3.185
Total Volume (m³)		4.351

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (115)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_33.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

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	Ridge and Partners LLP:			
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Porous Paving (31)

Type : Porous Paving

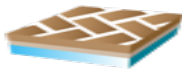
Dimensions		
Exceedance Level (m)		52.356
Depth (m)		0.660
Base Level (m)		51.696
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		9.851
Long. Slope (1:X)		200.00
Width (m)		4.976
Total Volume (m³)		5.882

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (116)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_29.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (32)

Type : Porous Paving

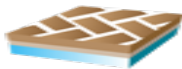
Dimensions		
Exceedance Level (m)		52.271
Depth (m)		0.660
Base Level (m)		51.611
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		4.959
Long. Slope (1:X)		200.00
Width (m)		5.229
Total Volume (m³)		3.112

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (4)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_32.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving (33)

Type : Porous Paving

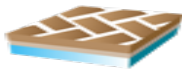
Dimensions		
Exceedance Level (m)		50.112
Depth (m)		0.660
Base Level (m)		49.452
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		12.863
Long. Slope (1:X)		200.00
Width (m)		5.490
Total Volume (m³)		8.474

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (120)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_37.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving 34

Type : Porous Paving

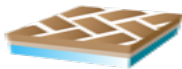
Dimensions		
Exceedance Level (m)		50.411
Depth (m)		0.660
Base Level (m)		49.751
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		10.612
Long. Slope (1:X)		200.00
Width (m)		3.184
Total Volume (m³)		4.055

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (118)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_36.000	
Outlet Type	Free Discharge	

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	Ridge and Partners LLP:			



Porous Paving 35

Type : Porous Paving

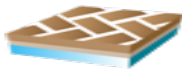
Dimensions		
Exceedance Level (m)		53.861
Depth (m)		0.660
Base Level (m)		53.201
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		13.423
Long. Slope (1:X)		200.00
Width (m)		3.545
Total Volume (m³)		5.711

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (5)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_24.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		53.490

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Porous Paving 36

Type : Porous Paving

Dimensions		
Exceedance Level (m)		53.815
Depth (m)		0.660
Base Level (m)		53.155
Paving Layer Depth (mm)		260
Membrane Percolation (m/hr)		360.0
Porosity (%)		30
Length (m)		12.645
Long. Slope (1:X)		200.00
Width (m)		3.880
Total Volume (m³)		5.887

Inlets		
Inlet		
Inlet Type	Lateral Inflow	
Incoming Item(s)	Catchment Area (104)	
Bypass Destination	(None)	
Capacity Type	No Restriction	

Outlets		
Outlet		
Outgoing Connection	SW_25.000	
Outlet Type	Orifice	
Diameter (m)		0.010
Coefficient of Discharge		0.600
Invert Level (m)		53.340

Advanced		
Conductivity (m/hr)		5.0

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Storm Phase: Phase				



Swale 2

Type : Swale

Swale		
Exceedance Level (m)		52.086
Depth (m)		0.700
Base Level (m)		51.386
Top Width (m)		4.766
Side Slope (1:X)		3.00
Base Width (m)		0.566
Freeboard (mm)		150
Length (m)		27.870
Long. Slope (1:X)		200.00
Filtration Rate (m/hr)		0.0
Friction Scheme		Manning's n
n		0.035
Total Volume (m³)		33.963

Inlets	
Inlet	
Inlet Type	Point Inflow
Incoming Item(s)	SW_18.002
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction
Inlet (1)	
Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (87)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction
Inlet (2)	
Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (81)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets	
Outlet	
Outgoing Connection	SW_18.003
Outlet Type	Free Discharge

Advanced	
Swale	
Porosity (%)	100

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Stormwater Controls
Storm Phase: Phase

RIDGE



Swale 1

Type : Swale

Swale

Exceedance Level (m)	55.267
Depth (m)	0.550
Base Level (m)	54.717
Top Width (m)	2.924
Side Slope (1:X)	2.00
Base Width (m)	0.724
Freeboard (mm)	100
Length (m)	20.140
Long. Slope (1:X)	30.00
Filtration Rate (m/hr)	0.0
Friction Scheme	Manning's n
n	0.035
Total Volume (m³)	14.719

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (89)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (69)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	SW_14.000
Outlet Type	Free Discharge

Advanced

Swale

Porosity (%)	100
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Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Report Details: Type: Inflow Summary Storm Phase: Phase			
Ridge and Partners LLP:				

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SWMH_38		Time of Concentration	0.016	100	10	110	0.018
Catchment Area (1)	SWMH_41		Time of Concentration	0.012	100	10	110	0.013
Catchment Area (2)	Porous Paving (15)		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (3)	SWMH_42		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (4)	Porous Paving (32)		Time of Concentration	0.002	100	10	110	0.003
Catchment Area (5)	Porous Paving 35		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (6)	Pond		Time of Concentration	0.092	100	10	110	0.101
Catchment Area (7)	SWMH_37		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (8)	Porous Paving (19)		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (9)	SWMH_44		Time of Concentration	0.006	100	10	110	0.006
Catchment Area (10)	SWMH_44		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (11)	SWMH_24		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (12)	Porous Paving (17)		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (13)	SWMH_33		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (14)	SWMH_24		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (15)	SWMH_32		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (16)	SWMH_32		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (17)	SWMH_24		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (18)	Porous Paving (4)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (19)	Porous Paving (18)		Time of Concentration	0.005	100	10	110	0.006
Catchment Area (20)	SWMH_27		Time of Concentration	0.012	100	10	110	0.013
Catchment Area (21)	SWMH_17		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (22)	SWMH_17		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (23)	SWMH_8		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (24)	SWMH_18		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (25)	SWMH_19		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (26)	SWMH_8		Time of Concentration	0.012	100	10	110	0.013
Catchment Area (27)	SWMH_5		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (28)	SWMH_5		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (29)	SWMH_5		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (30)	SWMH_6		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (31)	SWMH_6		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (32)	SWMH_6		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (33)	SWMH_9		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (34)	SWMH_8		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (35)	SWMH_8		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (36)	SWMH_3		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (37)	SWMH_4		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (38)	SWMH_3		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (39)	SWMH_3		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (40)	SWMH_2		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (41)	SWMH_1		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (42)	SWMH_14		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (43)	SWMH_13		Time of Concentration	0.013	100	10	110	0.014
Catchment Area (44)	SWMH_13		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (45)	SWMH_12		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (46)	SWMH_20		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (47)	SWMH_20		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (48)	SWMH_21		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (49)	SWMH_21		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (50)	SWMH_22		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (51)	SWMH_22		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (52)	SWMH_28		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (53)	SWMH_28		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (54)	SWMH_28		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (55)	SWMH_23		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (56)	SWMH_28		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (57)	SWMH_28		Time of Concentration	0.002	100	10	110	0.002

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Report Details: Type: Inflow Summary Storm Phase: Phase			
Ridge and Partners LLP:				

Catchment Area (58)	SWMH_29		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (59)	SWMH_29		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (60)	Porous Paving (22)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (61)	SWMH_30		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (62)	SWMH_35		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (63)	SWMH_34		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (64)	SWMH_35		Time of Concentration	0.015	100	10	110	0.017
Catchment Area (65)	SWMH_4		Time of Concentration	0.015	100	10	110	0.017
Catchment Area (66)	SWMH_4		Time of Concentration	0.021	100	10	110	0.023
Catchment Area (67)	SWMH_18		Time of Concentration	0.006	100	10	110	0.006
Catchment Area (68)	SWMH_8		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (69)	Swale 1		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (70)	SWMH_31		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (71)	SWMH_15		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (72)	Porous Paving (24)		Time of Concentration	0.016	100	10	110	0.017
Catchment Area (73)	Porous Paving (28)		Time of Concentration	0.008	100	10	110	0.008
Catchment Area (74)	Porous Paving (29)		Time of Concentration	0.005	100	10	110	0.006
Catchment Area (75)	SWMH_41		Time of Concentration	0.010	100	10	110	0.011
Catchment Area (76)	SWMH_34		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (77)	SWMH_12		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (78)	SWMH_16		Time of Concentration	0.050	100	10	110	0.055
Catchment Area (79)	Porous Paving (7)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (80)	SWMH_13		Time of Concentration	0.012	100	10	110	0.013
Catchment Area (81)	Swale 2		Time of Concentration	0.049	100	10	110	0.054
Catchment Area (82)	Porous Paving (16)		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (83)	SWMH_23		Time of Concentration	0.017	100	10	110	0.018
Catchment Area (84)	Porous Paving (21)		Time of Concentration	0.008	100	10	110	0.009
Catchment Area (85)	Porous Paving (23)		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (86)	Porous Paving (12)		Time of Concentration	0.009	100	10	110	0.009
Catchment Area (87)	Swale 2		Time of Concentration	0.014	100	10	110	0.015
Catchment Area (88)	SWMH_7		Time of Concentration	0.059	100	10	110	0.064
Catchment Area (89)	Swale 1		Time of Concentration	0.029	100	10	110	0.032
Catchment Area (90)	SWMH_20		Time of Concentration	0.017	100	10	110	0.019
Catchment Area (91)	SWMH_21		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (92)	SWMH_23		Time of Concentration	0.019	100	10	110	0.021
Catchment Area (93)	SWMH_23		Time of Concentration	0.021	100	10	110	0.023
Catchment Area (94)	SWMH_30		Time of Concentration	0.030	100	10	110	0.033
Catchment Area (95)	SWMH_34		Time of Concentration	0.023	100	10	110	0.025
Catchment Area (96)	SWMH_37		Time of Concentration	0.020	100	10	110	0.022
Catchment Area (97)	SWMH_44		Time of Concentration	0.017	100	10	110	0.019
Catchment Area (98)	SWMH_45		Time of Concentration	0.120	100	10	110	0.132
Catchment Area (99)	Porous Paving		Time of Concentration	0.017	100	10	110	0.019
Catchment Area (100)	Porous Paving (1)		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (101)	Porous Paving (9)		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (102)	Porous Paving (10)		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (103)	Porous Paving (11)		Time of Concentration	0.004	100	10	110	0.005
Catchment Area (104)	Porous Paving 36		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (105)	Porous Paving (14)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (106)	Porous Paving (6)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (107)	Porous Paving (5)		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (108)	SWMH_42		Time of Concentration	0.019	100	10	110	0.021
Catchment Area (109)	SWMH_38		Time of Concentration	0.016	100	10	110	0.018
Catchment Area (110)	SWMH_38		Time of Concentration	0.021	100	10	110	0.023
Catchment Area (111)	SWMH_41		Time of Concentration	0.002	100	10	110	0.002
Catchment Area (112)	SWMH_41		Time of Concentration	0.016	100	10	110	0.017
Catchment Area (113)	SWMH_42		Time of Concentration	0.011	100	10	110	0.012
Catchment Area (114)	SWMH_43		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (115)	Porous Paving (30)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (116)	Porous Paving (31)		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (117)	SWMH_43		Time of Concentration	0.016	100	10	110	0.018

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Inflow Summary Storm Phase: Phase				

Catchment Area (118)	Porous Paving 34		Time of Concentration	0.003	100	10	110	0.004
Catchment Area (119)	SWMH_44		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (120)	Porous Paving (33)		Time of Concentration	0.007	100	10	110	0.008
Catchment Area (121)	Porous Paving (25)		Time of Concentration	0.009	100	10	110	0.010
Catchment Area (122)	Porous Paving (26)		Time of Concentration	0.004	100	10	110	0.004
Catchment Area (123)	SWMH_14		Time of Concentration	0.005	100	10	110	0.006
Catchment Area (124)	Porous Paving (3)		Time of Concentration	0.008	100	10	110	0.008
Catchment Area (125)	Porous Paving (8)		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (126)	Porous Paving (2)		Time of Concentration	0.005	100	10	110	0.005
Catchment Area (127)	SWMH_11		Time of Concentration	0.004	100	10	110	0.004
TOTAL		0.0		1.486				1.635

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Title: Rainfall Analysis Criteria				

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	10
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Junctions Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH_5	FSR: 1 years: +0 %: 15 mins: Summer	59.117	57.517	57.552	0.034	2.6	0.010	0.000	2.5	1.176	OK
SWMH_4	FSR: 1 years: +0 %: 15 mins: Summer	59.038	56.975	57.052	0.077	16.3	0.087	0.000	15.6	7.527	OK
SWMH_7	FSR: 1 years: +0 %: 15 mins: Summer	57.807	55.605	55.700	0.095	23.6	0.108	0.000	23.1	11.020	OK
SWMH_9	FSR: 1 years: +0 %: 15 mins: Summer	56.020	53.820	53.926	0.106	27.9	0.120	0.000	27.3	13.618	OK
SWMH_10	FSR: 1 years: +0 %: 15 mins: Summer	55.356	53.574	53.705	0.130	43.4	0.230	0.000	41.5	22.287	OK
SWMH_20	FSR: 1 years: +0 %: 15 mins: Summer	54.660	52.160	52.282	0.122	45.6	0.138	0.000	45.0	24.056	OK
SWMH_22	FSR: 1 years: +0 %: 15 mins: Summer	53.544	51.732	51.825	0.093	48.2	0.105	0.000	46.8	25.833	OK
SWMH_23	FSR: 1 years: +0 %: 15 mins: Summer	52.379	51.088	51.203	0.115	59.6	0.203	0.000	57.3	31.554	OK
SWMH_29	FSR: 1 years: +0 %: 15 mins: Summer	51.924	50.724	50.839	0.116	58.8	0.191	0.000	56.3	32.167	OK
SWMH_30	FSR: 1 years: +0 %: 15 mins: Summer	51.682	49.682	49.818	0.136	65.0	0.240	0.000	63.1	36.165	OK
SWMH_34	FSR: 1 years: +0 %: 15 mins: Summer	50.988	49.367	49.516	0.149	71.7	0.262	0.000	68.1	39.926	OK
SWMH_36	FSR: 1 years: +0 %: 15 mins: Summer	50.665	49.237	49.361	0.123	68.1	0.140	0.000	66.5	39.888	OK
SWMH_37	FSR: 1 years: +0 %: 15 mins: Summer	50.759	48.952	49.099	0.147	90.3	0.259	0.000	85.9	51.040	OK
SWMH_44	FSR: 1 years: +0 %: 15 mins: Summer	50.319	48.625	48.789	0.164	92.0	0.290	0.000	87.7	53.636	OK
SWMH_13	FSR: 1 years: +0 %: 15 mins: Summer	58.021	55.706	55.757	0.051	5.5	0.058	0.000	5.2	2.640	OK
SWMH_11	FSR: 1 years: +0 %: 30 mins: Summer	57.185	55.585	55.626	0.041	6.8	0.046	0.000	6.9	5.482	OK
SWMH_16	FSR: 1 years: +0 %: 30 mins: Summer	55.879	54.730	54.794	0.064	11.5	0.091	0.000	11.5	8.713	OK
SWMH_1	FSR: 1 years: +0 %: 15 mins: Summer	59.990	58.990	59.022	0.032	1.8	0.009	0.000	1.7	0.774	OK
SWMH_3	FSR: 1 years: +0 %: 15 mins: Summer	59.691	58.291	58.334	0.044	4.8	0.012	0.000	4.4	2.161	OK
SWMH_17	FSR: 1 years: +0 %: 15 mins: Summer	55.496	55.113	55.143	0.030	2.0	0.019	0.000	1.8	0.879	OK
SWMH_18	FSR: 1 years: +0 %: 15 mins: Summer	55.257	54.973	55.018	0.045	4.4	0.029	0.000	4.2	1.815	Flood Risk
SWMH_19	FSR: 1 years: +0 %: 15 mins: Summer	55.163	54.824	54.877	0.052	5.9	0.033	0.000	5.5	2.558	Flood Risk
SWMH_31	FSR: 1 years: +0 %: 15 mins: Summer	53.931	52.131	52.142	0.011	0.3	0.012	0.000	0.3	0.134	OK
SWMH_33	FSR: 1 years: +0 %: 15 mins: Summer	53.684	51.684	51.719	0.036	3.6	0.040	0.000	3.2	1.627	OK
SWMH_38	FSR: 1 years: +0 %: 15 mins: Summer	52.919	51.524	51.574	0.050	7.3	0.056	0.000	7.1	3.172	OK
SWMH_42	FSR: 1 years: +0 %: 15 mins: Summer	52.553	51.011	51.083	0.072	18.2	0.082	0.000	17.7	8.259	OK
SWMH_43	FSR: 1 years: +0 %: 15 mins: Summer	52.047	50.047	50.102	0.055	21.1	0.062	0.000	20.7	9.728	OK
SWMH_28	FSR: 1 years: +0 %: 15 mins: Summer	52.710	51.582	51.624	0.041	4.0	0.047	0.000	3.6	1.769	OK
SWMH_24	FSR: 1 years: +0 %: 15 mins: Summer	54.242	52.942	52.983	0.041	4.2	0.047	0.000	4.1	1.824	OK
SWMH_25	FSR: 1 years: +0 %: 15 mins: Summer	53.866	52.745	52.789	0.044	4.1	0.050	0.000	3.9	1.821	OK
SWMH_26	FSR: 1 years: +0 %: 15 mins: Summer	53.644	52.539	52.576	0.037	5.5	0.042	0.000	5.2	2.517	OK
SWMH_45	FSR: 1 years: +0 %: 1440 mins: Summer	49.397	47.715	47.972	0.257	8.4	0.290	0.000	8.4	331.144	OK
SWMH_46	FSR: 1 years: +0 %: 1440 mins: Summer	49.096	47.570	47.634	0.064	8.4	0.072	0.000	8.4	324.220	OK
SWMH_47	FSR: 1 years: +0 %: 15 mins: Summer		47.453	47.480	0.027	1.5			1.5	0.821	OK
SWMH_12	FSR: 1 years: +0 %: 30 mins: Summer	56.839	56.012	56.038	0.026	1.4	0.016	0.000	1.3	1.199	OK
SWMH_41	FSR: 1 years: +0 %: 15 mins: Summer	52.702	51.225	51.293	0.068	12.6	0.077	0.000	12.1	5.570	OK
SWMH_35	FSR: 1 years: +0 %: 15 mins: Summer	50.730	49.630	49.657	0.026	2.7	0.030	0.000	2.6	1.221	OK
SWMH_21	FSR: 1 years: +0 %: 15 mins: Summer	54.120	52.056	52.154	0.097	47.6	0.110	0.000	46.6	25.169	OK
SWMH_14	FSR: 1 years: +0 %: 15 mins: Summer	57.796	55.493	55.684	0.191	7.9	0.216	0.000	7.4	3.578	Surcharged
SWMH_6	FSR: 1 years: +0 %: 15 mins: Summer	58.868	57.293	57.348	0.055	5.8	0.016	0.000	5.4	2.583	OK
SWMH_2	FSR: 1 years: +0 %: 15 mins: Summer	59.921	58.915	58.941	0.027	2.3	0.008	0.000	2.2	1.046	OK
SWMH_8	FSR: 1 years: +0 %: 15 mins: Summer	56.728	55.272	55.379	0.107	27.8	0.121	0.000	26.5	13.046	OK
SWMH_32	FSR: 1 years: +0 %: 15 mins: Summer	53.840	51.952	51.981	0.029	2.3	0.033	0.000	2.2	1.025	OK
SWMH_27	FSR: 1 years: +0 %: 15 mins: Summer	53.779	53.076	53.098	0.021	1.6	0.024	0.000	1.5	0.701	OK
SWMH_15	FSR: 1 years: +0 %: 15 mins: Summer	57.753	56.427	56.443	0.016	0.6	0.018	0.000	0.5	0.247	OK
SWMH_40	FSR: 1 years: +0 %: 1440 mins: Winter	52.968	51.590	51.592	0.003	0.0	0.003	0.000	0.0	0.431	OK
SWMH_39	FSR: 1 years: +0 %: 15 mins: Summer	52.280	51.931	51.931	0.000	0.0	0.000	0.000	0.0	0.000	OK

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Junctions Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH_5	FSR: 30 years: +0 %: 15 mins: Summer	59.117	57.517	57.572	0.055	6.4	0.015	0.000	6.3	2.859	OK
SWMH_4	FSR: 30 years: +0 %: 15 mins: Summer	59.038	56.975	57.108	0.133	40.3	0.151	0.000	38.8	18.391	OK
SWMH_7	FSR: 30 years: +0 %: 15 mins: Summer	57.807	55.605	55.789	0.184	58.6	0.209	0.000	57.2	26.947	OK
SWMH_9	FSR: 30 years: +0 %: 15 mins: Summer	56.020	53.820	54.404	0.584	67.7	0.661	0.000	61.2	33.360	Surcharged
SWMH_10	FSR: 30 years: +0 %: 15 mins: Summer	55.356	53.574	54.162	0.588	108.4	1.039	0.000	100.1	57.968	Surcharged
SWMH_20	FSR: 30 years: +0 %: 15 mins: Summer	54.660	52.160	52.361	0.201	110.2	0.227	0.000	108.9	62.350	OK
SWMH_22	FSR: 30 years: +0 %: 15 mins: Summer	53.544	51.732	51.885	0.153	117.4	0.173	0.000	114.7	66.745	OK
SWMH_23	FSR: 30 years: +0 %: 15 mins: Summer	52.379	51.088	51.282	0.194	146.3	0.343	0.000	141.3	80.779	OK
SWMH_29	FSR: 30 years: +0 %: 15 mins: Summer	51.924	50.724	50.918	0.194	145.0	0.321	0.000	138.7	82.329	OK
SWMH_30	FSR: 30 years: +0 %: 15 mins: Summer	51.682	49.682	49.918	0.237	160.5	0.418	0.000	155.0	92.196	OK
SWMH_34	FSR: 30 years: +0 %: 15 mins: Summer	50.988	49.367	49.626	0.259	176.2	0.457	0.000	168.7	101.471	OK
SWMH_36	FSR: 30 years: +0 %: 15 mins: Summer	50.665	49.237	49.459	0.222	168.7	0.251	0.000	165.5	101.422	OK
SWMH_37	FSR: 30 years: +0 %: 15 mins: Summer	50.759	48.952	49.219	0.267	224.3	0.471	0.000	216.9	128.646	OK
SWMH_44	FSR: 30 years: +0 %: 15 mins: Summer	50.319	48.625	48.919	0.294	231.9	0.520	0.000	225.9	135.092	OK
SWMH_13	FSR: 30 years: +0 %: 15 mins: Summer	58.021	55.706	55.958	0.252	16.3	0.285	0.000	12.5	6.960	Surcharged
SWMH_11	FSR: 30 years: +0 %: 15 mins: Summer	57.185	55.585	55.651	0.067	18.9	0.075	0.000	18.0	10.556	OK
SWMH_16	FSR: 30 years: +0 %: 15 mins: Summer	55.879	54.730	54.848	0.118	34.8	0.169	0.000	33.0	17.011	OK
SWMH_1	FSR: 30 years: +0 %: 15 mins: Summer	59.990	58.990	59.041	0.051	4.4	0.014	0.000	4.3	1.893	OK
SWMH_3	FSR: 30 years: +0 %: 15 mins: Summer	59.691	58.291	58.363	0.073	11.8	0.021	0.000	11.1	5.262	OK
SWMH_17	FSR: 30 years: +0 %: 15 mins: Summer	55.496	55.113	55.161	0.048	4.9	0.031	0.000	4.7	2.169	OK
SWMH_18	FSR: 30 years: +0 %: 15 mins: Summer	55.257	54.973	55.051	0.078	10.9	0.050	0.000	10.6	4.686	Flood Risk
SWMH_19	FSR: 30 years: +0 %: 15 mins: Summer	55.163	54.824	54.916	0.092	14.8	0.058	0.000	14.2	6.521	Flood Risk
SWMH_31	FSR: 30 years: +0 %: 15 mins: Summer	53.931	52.131	52.148	0.017	0.8	0.019	0.000	0.7	0.328	OK
SWMH_33	FSR: 30 years: +0 %: 15 mins: Summer	53.684	51.684	51.742	0.058	9.0	0.066	0.000	8.3	4.010	OK
SWMH_38	FSR: 30 years: +0 %: 15 mins: Summer	52.919	51.524	51.605	0.080	17.9	0.091	0.000	17.1	7.798	OK
SWMH_42	FSR: 30 years: +0 %: 15 mins: Summer	52.553	51.011	51.135	0.124	44.5	0.140	0.000	43.4	20.243	OK
SWMH_43	FSR: 30 years: +0 %: 15 mins: Summer	52.047	50.047	50.132	0.085	52.0	0.096	0.000	51.2	23.910	OK
SWMH_28	FSR: 30 years: +0 %: 15 mins: Summer	52.710	51.582	51.649	0.066	9.9	0.075	0.000	9.2	4.323	OK
SWMH_24	FSR: 30 years: +0 %: 15 mins: Summer	54.242	52.942	53.011	0.069	10.3	0.078	0.000	10.1	4.467	OK
SWMH_25	FSR: 30 years: +0 %: 15 mins: Summer	53.866	52.745	52.818	0.073	10.1	0.083	0.000	9.7	4.463	OK
SWMH_26	FSR: 30 years: +0 %: 15 mins: Summer	53.644	52.539	52.601	0.062	13.6	0.070	0.000	13.1	6.187	OK
SWMH_45	FSR: 30 years: +0 %: 960 mins: Summer	49.397	47.715	48.413	0.698	10.2	0.790	0.000	10.1	629.596	Surcharged
SWMH_46	FSR: 30 years: +0 %: 1440 mins: Summer	49.096	47.570	47.640	0.070	10.1	0.079	0.000	10.1	732.837	OK
SWMH_47	FSR: 30 years: +0 %: 15 mins: Summer		47.453	47.508	0.055	6.6			6.6	7.401	OK
SWMH_12	FSR: 30 years: +0 %: 15 mins: Summer	56.839	56.012	56.061	0.049	5.0	0.031	0.000	4.6	2.183	OK
SWMH_41	FSR: 30 years: +0 %: 15 mins: Summer	52.702	51.225	51.340	0.115	30.6	0.130	0.000	29.4	13.639	OK
SWMH_35	FSR: 30 years: +0 %: 15 mins: Summer	50.730	49.630	49.671	0.041	6.6	0.046	0.000	6.4	2.958	OK
SWMH_21	FSR: 30 years: +0 %: 15 mins: Summer	54.120	52.056	52.218	0.161	115.3	0.182	0.000	113.5	65.086	OK
SWMH_14	FSR: 30 years: +0 %: 15 mins: Summer	57.796	55.493	55.854	0.362	19.3	0.409	0.000	17.4	9.655	Surcharged
SWMH_6	FSR: 30 years: +0 %: 15 mins: Summer	58.868	57.293	57.389	0.096	14.2	0.027	0.000	13.4	6.308	OK
SWMH_2	FSR: 30 years: +0 %: 15 mins: Summer	59.921	58.915	58.957	0.042	5.7	0.012	0.000	5.5	2.542	OK
SWMH_8	FSR: 30 years: +0 %: 15 mins: Summer	56.728	55.272	55.488	0.216	68.7	0.244	0.000	64.4	31.971	OK
SWMH_32	FSR: 30 years: +0 %: 15 mins: Summer	53.840	51.952	51.999	0.047	5.8	0.053	0.000	5.6	2.515	OK
SWMH_27	FSR: 30 years: +0 %: 15 mins: Summer	53.779	53.076	53.109	0.033	4.0	0.037	0.000	3.8	1.732	OK
SWMH_15	FSR: 30 years: +0 %: 15 mins: Summer	57.753	56.427	56.452	0.025	1.4	0.028	0.000	1.3	0.601	OK
SWMH_40	FSR: 30 years: +0 %: 15 mins: Summer	52.968	51.590	51.603	0.014	0.3	0.016	0.000	0.0	0.029	OK
SWMH_39	FSR: 30 years: +0 %: 15 mins: Summer	52.280	51.931	51.931	0.000	0.0	0.000	0.000	0.0	0.000	OK

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Junctions Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH_5	FSR: 100 years: +0 %: 15 mins: Summer	59.117	57.517	57.580	0.063	8.3	0.018	0.000	8.2	3.691	OK
SWMH_4	FSR: 100 years: +0 %: 15 mins: Summer	59.038	56.975	57.136	0.161	52.2	0.182	0.000	50.3	23.812	OK
SWMH_7	FSR: 100 years: +0 %: 15 mins: Summer	57.807	55.605	56.132	0.527	75.9	0.596	0.000	69.7	34.895	Surcharged
SWMH_9	FSR: 100 years: +0 %: 15 mins: Summer	56.020	53.820	54.873	1.054	85.1	1.192	0.000	75.4	43.208	Surcharged
SWMH_10	FSR: 100 years: +0 %: 15 mins: Summer	55.356	53.574	54.524	0.949	137.4	1.678	0.000	126.0	76.618	Surcharged
SWMH_20	FSR: 100 years: +0 %: 15 mins: Summer	54.660	52.160	52.392	0.232	139.0	0.262	0.000	137.5	82.297	OK
SWMH_22	FSR: 100 years: +0 %: 15 mins: Summer	53.544	51.732	51.908	0.176	148.5	0.199	0.000	145.0	88.035	OK
SWMH_23	FSR: 100 years: +0 %: 15 mins: Summer	52.379	51.088	51.314	0.227	186.0	0.401	0.000	180.6	106.299	OK
SWMH_29	FSR: 100 years: +0 %: 15 mins: Summer	51.924	50.724	50.951	0.227	185.4	0.376	0.000	180.0	108.309	OK
SWMH_30	FSR: 100 years: +0 %: 15 mins: Summer	51.682	49.682	49.969	0.287	208.4	0.507	0.000	203.6	121.105	OK
SWMH_34	FSR: 100 years: +0 %: 15 mins: Summer	50.988	49.367	49.682	0.315	228.9	0.556	0.000	221.5	133.122	OK
SWMH_36	FSR: 100 years: +0 %: 15 mins: Summer	50.665	49.237	49.511	0.274	221.5	0.310	0.000	217.3	133.066	OK
SWMH_37	FSR: 100 years: +0 %: 15 mins: Summer	50.759	48.952	49.281	0.328	293.6	0.580	0.000	280.2	168.331	OK
SWMH_44	FSR: 100 years: +0 %: 15 mins: Summer	50.319	48.625	48.979	0.355	299.6	0.627	0.000	288.8	176.687	OK
SWMH_13	FSR: 100 years: +0 %: 15 mins: Summer	58.021	55.706	56.117	0.411	16.0	0.465	0.000	14.6	9.106	Surcharged
SWMH_11	FSR: 100 years: +0 %: 15 mins: Summer	57.185	55.585	55.662	0.077	24.1	0.087	0.000	23.6	13.819	OK
SWMH_16	FSR: 100 years: +0 %: 15 mins: Summer	55.879	54.730	54.872	0.142	45.4	0.204	0.000	43.6	22.388	OK
SWMH_1	FSR: 100 years: +0 %: 15 mins: Summer	59.990	58.990	59.049	0.059	5.7	0.017	0.000	5.6	2.457	OK
SWMH_3	FSR: 100 years: +0 %: 15 mins: Summer	59.691	58.291	58.376	0.085	15.3	0.024	0.000	14.5	6.810	OK
SWMH_17	FSR: 100 years: +0 %: 15 mins: Summer	55.496	55.113	55.168	0.055	6.4	0.035	0.000	6.1	2.818	OK
SWMH_18	FSR: 100 years: +0 %: 15 mins: Summer	55.257	54.973	55.067	0.094	14.2	0.060	0.000	13.8	6.118	Flood Risk
SWMH_19	FSR: 100 years: +0 %: 15 mins: Summer	55.163	54.824	54.936	0.111	19.2	0.071	0.000	18.4	8.435	Flood Risk
SWMH_31	FSR: 100 years: +0 %: 15 mins: Summer	53.931	52.131	52.150	0.019	1.0	0.022	0.000	0.9	0.427	OK
SWMH_33	FSR: 100 years: +0 %: 15 mins: Summer	53.684	51.684	51.752	0.068	11.7	0.077	0.000	10.8	5.203	OK
SWMH_38	FSR: 100 years: +0 %: 15 mins: Summer	52.919	51.524	51.619	0.094	23.2	0.107	0.000	22.2	10.128	OK
SWMH_42	FSR: 100 years: +0 %: 15 mins: Summer	52.553	51.011	51.159	0.148	57.7	0.167	0.000	56.3	26.235	OK
SWMH_43	FSR: 100 years: +0 %: 15 mins: Summer	52.047	50.047	50.143	0.096	67.3	0.109	0.000	66.6	30.986	OK
SWMH_28	FSR: 100 years: +0 %: 15 mins: Summer	52.710	51.582	51.659	0.076	12.8	0.086	0.000	12.0	5.615	OK
SWMH_24	FSR: 100 years: +0 %: 15 mins: Summer	54.242	52.942	53.023	0.082	13.3	0.092	0.000	13.0	5.783	OK
SWMH_25	FSR: 100 years: +0 %: 15 mins: Summer	53.866	52.745	52.830	0.086	13.0	0.097	0.000	12.6	5.779	OK
SWMH_26	FSR: 100 years: +0 %: 15 mins: Summer	53.644	52.539	52.611	0.072	17.6	0.082	0.000	17.0	8.020	OK
SWMH_45	FSR: 100 years: +0 %: 960 mins: Summer	49.397	47.715	48.620	0.905	10.2	1.023	0.000	10.1	766.818	Surcharged
SWMH_46	FSR: 100 years: +0 %: 360 mins: Summer	49.096	47.570	47.640	0.070	10.1	0.079	0.000	10.1	283.740	OK
SWMH_47	FSR: 100 years: +0 %: 15 mins: Summer		47.453	47.517	0.064	9.2			9.2	10.533	OK
SWMH_12	FSR: 100 years: +0 %: 15 mins: Summer	56.839	56.012	56.119	0.107	6.5	0.068	0.000	2.1	3.004	OK
SWMH_41	FSR: 100 years: +0 %: 15 mins: Summer	52.702	51.225	51.363	0.138	39.7	0.156	0.000	38.1	17.667	OK
SWMH_35	FSR: 100 years: +0 %: 15 mins: Summer	50.730	49.630	49.683	0.052	8.5	0.059	0.000	6.1	3.817	OK
SWMH_21	FSR: 100 years: +0 %: 15 mins: Summer	54.120	52.056	52.242	0.186	145.7	0.210	0.000	143.5	85.862	OK
SWMH_14	FSR: 100 years: +0 %: 15 mins: Summer	57.796	55.493	55.989	0.497	23.4	0.562	0.000	22.3	12.688	Surcharged
SWMH_6	FSR: 100 years: +0 %: 15 mins: Summer	58.868	57.293	57.411	0.118	18.4	0.033	0.000	17.3	8.163	OK
SWMH_2	FSR: 100 years: +0 %: 15 mins: Summer	59.921	58.915	58.963	0.048	7.4	0.014	0.000	7.2	3.294	OK
SWMH_8	FSR: 100 years: +0 %: 15 mins: Summer	56.728	55.272	55.696	0.424	84.6	0.480	0.000	80.8	41.396	Surcharged
SWMH_32	FSR: 100 years: +0 %: 15 mins: Summer	53.840	51.952	52.006	0.054	7.5	0.062	0.000	7.3	3.265	OK
SWMH_27	FSR: 100 years: +0 %: 15 mins: Summer	53.779	53.076	53.114	0.038	5.1	0.043	0.000	5.0	2.251	OK
SWMH_15	FSR: 100 years: +0 %: 15 mins: Summer	57.753	56.427	56.455	0.028	1.8	0.032	0.000	1.7	0.778	OK
SWMH_40	FSR: 100 years: +0 %: 15 mins: Summer	52.968	51.590	51.618	0.028	0.4	0.032	0.000	0.0	0.062	OK
SWMH_39	FSR: 100 years: +0 %: 15 mins: Summer	52.280	51.931	51.931	0.000	0.0	0.000	0.000	0.0	0.000	OK

Land West off Gatesmead Avenue :

Date:
10/04/2026

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SS

Checked by:

Approved By:

Report Details:
Type: Junctions Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH_5	FSR: 100 years: +45 %: 15 mins: Summer	59.117	57.517	57.616	0.099	12.1	0.028	0.000	9.4	5.341	OK
SWMH_4	FSR: 100 years: +45 %: 15 mins: Summer	59.038	56.975	57.278	0.303	72.0	0.343	0.000	63.5	34.357	Surcharged
SWMH_7	FSR: 100 years: +45 %: 15 mins: Summer	57.807	55.605	56.932	1.327	100.6	1.501	0.000	91.4	50.528	Surcharged
SWMH_9	FSR: 100 years: +45 %: 30 mins: Summer	56.020	53.820	55.663	1.843	96.3	2.085	0.000	96.0	85.498	Surcharged
SWMH_10	FSR: 100 years: +45 %: 30 mins: Summer	55.356	53.574	55.152	1.577	164.4	2.787	0.000	164.2	156.671	Flood Risk
SWMH_20	FSR: 100 years: +45 %: 15 mins: Summer	54.660	52.160	52.430	0.270	176.6	0.305	0.000	175.2	121.571	OK
SWMH_22	FSR: 100 years: +45 %: 15 mins: Summer	53.544	51.732	51.939	0.208	192.6	0.235	0.000	189.5	129.966	OK
SWMH_23	FSR: 100 years: +45 %: 15 mins: Summer	52.379	51.088	51.366	0.279	249.0	0.492	0.000	245.0	163.611	OK
SWMH_29	FSR: 100 years: +45 %: 15 mins: Summer	51.924	50.724	51.004	0.280	252.0	0.462	0.000	248.1	166.485	OK
SWMH_30	FSR: 100 years: +45 %: 30 mins: Summer	51.682	49.682	50.064	0.382	274.7	0.675	0.000	268.7	263.668	OK
SWMH_34	FSR: 100 years: +45 %: 30 mins: Summer	50.988	49.367	49.871	0.504	293.5	0.890	0.000	288.3	287.608	Surcharged
SWMH_36	FSR: 100 years: +45 %: 30 mins: Summer	50.665	49.237	49.708	0.471	288.3	0.532	0.000	286.7	287.561	Surcharged
SWMH_37	FSR: 100 years: +45 %: 30 mins: Summer	50.759	48.952	49.534	0.582	367.0	1.029	0.000	361.2	357.652	Surcharged
SWMH_44	FSR: 100 years: +45 %: 30 mins: Summer	50.319	48.625	49.211	0.587	380.5	1.037	0.000	379.4	374.225	Surcharged
SWMH_13	FSR: 100 years: +45 %: 15 mins: Summer	58.021	55.706	56.404	0.698	23.1	0.790	0.000	19.0	13.353	Surcharged
SWMH_11	FSR: 100 years: +45 %: 15 mins: Summer	57.185	55.585	55.674	0.089	31.8	0.100	0.000	31.4	20.226	OK
SWMH_16	FSR: 100 years: +45 %: 30 mins: Summer	55.879	54.730	55.289	0.560	52.0	0.801	0.000	51.7	45.375	Surcharged
SWMH_1	FSR: 100 years: +45 %: 15 mins: Summer	59.990	58.990	59.063	0.072	8.2	0.021	0.000	8.1	3.563	OK
SWMH_3	FSR: 100 years: +45 %: 15 mins: Summer	59.691	58.291	58.402	0.112	22.3	0.032	0.000	20.9	9.870	OK
SWMH_17	FSR: 100 years: +45 %: 30 mins: Summer	55.496	55.113	55.249	0.136	6.3	0.087	0.000	6.2	5.706	Flood Risk
SWMH_18	FSR: 100 years: +45 %: 30 mins: Summer	55.257	54.973	55.235	0.262	14.1	0.167	0.000	14.1	12.265	Flood Risk
SWMH_19	FSR: 100 years: +45 %: 15 mins: Summer	55.163	54.824	55.168	0.344	20.3	5.703	5.488	15.9	13.347	Flood
SWMH_31	FSR: 100 years: +45 %: 15 mins: Summer	53.931	52.131	52.154	0.023	1.4	0.026	0.000	1.4	0.622	OK
SWMH_33	FSR: 100 years: +45 %: 15 mins: Summer	53.684	51.684	51.769	0.086	17.0	0.097	0.000	15.8	7.535	OK
SWMH_38	FSR: 100 years: +45 %: 15 mins: Summer	52.919	51.524	51.644	0.120	33.6	0.135	0.000	32.6	14.724	OK
SWMH_42	FSR: 100 years: +45 %: 15 mins: Summer	52.553	51.011	51.215	0.204	83.4	0.231	0.000	80.2	38.047	OK
SWMH_43	FSR: 100 years: +45 %: 15 mins: Summer	52.047	50.047	50.159	0.112	96.2	0.127	0.000	95.3	44.932	OK
SWMH_28	FSR: 100 years: +45 %: 15 mins: Summer	52.710	51.582	51.676	0.094	18.5	0.106	0.000	17.4	8.135	OK
SWMH_24	FSR: 100 years: +45 %: 15 mins: Summer	54.242	52.942	53.049	0.107	19.3	0.121	0.000	18.9	8.385	OK
SWMH_25	FSR: 100 years: +45 %: 15 mins: Summer	53.866	52.745	52.856	0.112	18.9	0.126	0.000	18.3	8.381	OK
SWMH_26	FSR: 100 years: +45 %: 15 mins: Summer	53.644	52.539	52.631	0.092	25.5	0.104	0.000	24.7	11.636	OK
SWMH_45	FSR: 100 years: +45 %: 960 mins: Winter	49.397	47.715	49.032	1.317	10.8	1.489	0.000	10.8	936.871	Surcharged
SWMH_46	FSR: 100 years: +45 %: 960 mins: Winter	49.096	47.570	47.642	0.072	10.8	0.082	0.000	10.8	928.832	OK
SWMH_47	FSR: 100 years: +45 %: 15 mins: Summer		47.453	47.520	0.067	10.0			10.0	9.877	OK
SWMH_12	FSR: 100 years: +45 %: 30 mins: Summer	56.839	56.012	56.417	0.405	6.4	0.258	0.000	5.3	5.982	Surcharged
SWMH_41	FSR: 100 years: +45 %: 15 mins: Summer	52.702	51.225	51.415	0.190	58.0	0.215	0.000	55.0	25.621	OK
SWMH_35	FSR: 100 years: +45 %: 30 mins: Summer	50.730	49.630	49.872	0.242	8.5	0.274	0.000	5.9	7.693	OK
SWMH_21	FSR: 100 years: +45 %: 15 mins: Summer	54.120	52.056	52.275	0.218	187.2	0.247	0.000	185.2	126.769	OK
SWMH_14	FSR: 100 years: +45 %: 15 mins: Summer	57.796	55.493	56.193	0.700	31.8	0.791	0.000	29.0	18.650	Surcharged
SWMH_6	FSR: 100 years: +45 %: 15 mins: Summer	58.868	57.293	57.582	0.289	24.3	0.082	0.000	21.4	11.832	Surcharged
SWMH_2	FSR: 100 years: +45 %: 15 mins: Summer	59.921	58.915	58.974	0.059	10.7	0.017	0.000	10.5	4.764	OK
SWMH_8	FSR: 100 years: +45 %: 15 mins: Summer	56.728	55.272	56.255	0.983	113.1	1.112	0.000	100.8	60.550	Surcharged
SWMH_32	FSR: 100 years: +45 %: 15 mins: Summer	53.840	51.952	52.020	0.068	10.8	0.077	0.000	10.6	4.728	OK
SWMH_27	FSR: 100 years: +45 %: 15 mins: Summer	53.779	53.076	53.122	0.046	7.4	0.052	0.000	7.2	3.266	OK
SWMH_15	FSR: 100 years: +45 %: 15 mins: Summer	57.753	56.427	56.461	0.034	2.6	0.039	0.000	2.5	1.125	OK
SWMH_40	FSR: 100 years: +45 %: 15 mins: Summer	52.968	51.590	51.644	0.054	0.4	0.061	0.000	0.1	0.128	OK
SWMH_39	FSR: 100 years: +45 %: 15 mins: Summer	52.280	51.931	51.931	0.000	0.0	0.000	0.000	0.0	0.000	OK

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Junctions Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH_5	FSR: 30 years: +35 %: 15 mins: Summer	59.117	57.517	57.582	0.064	8.7	0.018	0.000	8.6	3.856	OK
SWMH_4	FSR: 30 years: +35 %: 15 mins: Summer	59.038	56.975	57.141	0.166	54.4	0.188	0.000	52.4	24.838	OK
SWMH_7	FSR: 30 years: +35 %: 15 mins: Summer	57.807	55.605	56.207	0.602	79.1	0.681	0.000	72.6	36.402	Surcharged
SWMH_9	FSR: 30 years: +35 %: 15 mins: Summer	56.020	53.820	54.978	1.159	89.0	1.310	0.000	78.6	45.062	Surcharged
SWMH_10	FSR: 30 years: +35 %: 15 mins: Summer	55.356	53.574	54.602	1.028	143.1	1.816	0.000	131.1	80.118	Surcharged
SWMH_20	FSR: 30 years: +35 %: 15 mins: Summer	54.660	52.160	52.398	0.237	144.6	0.269	0.000	143.1	86.045	OK
SWMH_22	FSR: 30 years: +35 %: 15 mins: Summer	53.544	51.732	51.912	0.181	154.6	0.204	0.000	151.0	92.040	OK
SWMH_23	FSR: 30 years: +35 %: 15 mins: Summer	52.379	51.088	51.321	0.233	193.8	0.412	0.000	187.8	111.418	OK
SWMH_29	FSR: 30 years: +35 %: 15 mins: Summer	51.924	50.724	50.957	0.233	192.9	0.385	0.000	186.9	113.508	OK
SWMH_30	FSR: 30 years: +35 %: 15 mins: Summer	51.682	49.682	49.977	0.295	216.5	0.521	0.000	211.6	126.844	OK
SWMH_34	FSR: 30 years: +35 %: 15 mins: Summer	50.988	49.367	49.691	0.324	237.1	0.572	0.000	229.2	139.362	OK
SWMH_36	FSR: 30 years: +35 %: 15 mins: Summer	50.665	49.237	49.520	0.282	229.2	0.319	0.000	224.9	139.301	OK
SWMH_37	FSR: 30 years: +35 %: 15 mins: Summer	50.759	48.952	49.292	0.340	304.5	0.601	0.000	291.5	176.072	OK
SWMH_44	FSR: 30 years: +35 %: 15 mins: Summer	50.319	48.625	48.992	0.367	311.8	0.649	0.000	301.2	184.784	OK
SWMH_13	FSR: 30 years: +35 %: 15 mins: Summer	58.021	55.706	56.135	0.430	16.9	0.486	0.000	14.8	9.499	Surcharged
SWMH_11	FSR: 30 years: +35 %: 15 mins: Summer	57.185	55.585	55.663	0.078	24.7	0.088	0.000	24.3	14.415	OK
SWMH_16	FSR: 30 years: +35 %: 15 mins: Summer	55.879	54.730	54.876	0.146	47.0	0.209	0.000	45.3	23.388	OK
SWMH_1	FSR: 30 years: +35 %: 15 mins: Summer	59.990	58.990	59.050	0.060	5.9	0.017	0.000	5.8	2.559	OK
SWMH_3	FSR: 30 years: +35 %: 15 mins: Summer	59.691	58.291	58.378	0.088	16.0	0.025	0.000	15.1	7.099	OK
SWMH_17	FSR: 30 years: +35 %: 15 mins: Summer	55.496	55.113	55.169	0.057	6.7	0.036	0.000	6.4	2.941	OK
SWMH_18	FSR: 30 years: +35 %: 15 mins: Summer	55.257	54.973	55.070	0.098	14.8	0.062	0.000	14.4	6.389	Flood Risk
SWMH_19	FSR: 30 years: +35 %: 15 mins: Summer	55.163	54.824	54.940	0.115	20.1	0.073	0.000	19.2	8.795	Flood Risk
SWMH_31	FSR: 30 years: +35 %: 15 mins: Summer	53.931	52.131	52.151	0.020	1.0	0.022	0.000	1.0	0.445	OK
SWMH_33	FSR: 30 years: +35 %: 15 mins: Summer	53.684	51.684	51.753	0.070	12.2	0.079	0.000	11.3	5.422	OK
SWMH_38	FSR: 30 years: +35 %: 15 mins: Summer	52.919	51.524	51.621	0.097	24.1	0.109	0.000	23.1	10.563	OK
SWMH_42	FSR: 30 years: +35 %: 15 mins: Summer	52.553	51.011	51.164	0.153	60.1	0.173	0.000	58.7	27.355	OK
SWMH_43	FSR: 30 years: +35 %: 15 mins: Summer	52.047	50.047	50.144	0.098	70.2	0.111	0.000	69.4	32.317	OK
SWMH_28	FSR: 30 years: +35 %: 15 mins: Summer	52.710	51.582	51.660	0.078	13.3	0.088	0.000	12.5	5.859	OK
SWMH_24	FSR: 30 years: +35 %: 15 mins: Summer	54.242	52.942	53.026	0.084	13.9	0.095	0.000	13.6	6.029	OK
SWMH_25	FSR: 30 years: +35 %: 15 mins: Summer	53.866	52.745	52.833	0.088	13.6	0.100	0.000	13.2	6.026	OK
SWMH_26	FSR: 30 years: +35 %: 15 mins: Summer	53.644	52.539	52.613	0.074	18.4	0.084	0.000	17.8	8.364	OK
SWMH_45	FSR: 30 years: +35 %: 960 mins: Summer	49.397	47.715	48.683	0.968	10.1	1.094	0.000	10.1	786.631	Surcharged
SWMH_46	FSR: 30 years: +35 %: 30 mins: Winter	49.096	47.570	47.640	0.070	10.1	0.079	0.000	10.1	18.318	OK
SWMH_47	FSR: 30 years: +35 %: 15 mins: Summer		47.453	47.519	0.066	9.6			9.6	11.054	OK
SWMH_12	FSR: 30 years: +35 %: 15 mins: Summer	56.839	56.012	56.145	0.133	6.8	0.084	0.000	2.5	3.161	OK
SWMH_41	FSR: 30 years: +35 %: 15 mins: Summer	52.702	51.225	51.367	0.142	41.3	0.161	0.000	39.7	18.421	OK
SWMH_35	FSR: 30 years: +35 %: 15 mins: Summer	50.730	49.630	49.693	0.063	8.9	0.071	0.000	5.6	3.974	OK
SWMH_21	FSR: 30 years: +35 %: 15 mins: Summer	54.120	52.056	52.247	0.191	151.7	0.216	0.000	149.3	89.767	OK
SWMH_14	FSR: 30 years: +35 %: 15 mins: Summer	57.796	55.493	56.002	0.509	23.9	0.576	0.000	22.8	13.240	Surcharged
SWMH_6	FSR: 30 years: +35 %: 15 mins: Summer	58.868	57.293	57.415	0.122	19.2	0.035	0.000	18.0	8.516	OK
SWMH_2	FSR: 30 years: +35 %: 15 mins: Summer	59.921	58.915	58.964	0.049	7.7	0.014	0.000	7.5	3.430	OK
SWMH_8	FSR: 30 years: +35 %: 15 mins: Summer	56.728	55.272	55.739	0.466	88.2	0.528	0.000	84.5	43.174	Surcharged
SWMH_32	FSR: 30 years: +35 %: 15 mins: Summer	53.840	51.952	52.008	0.056	7.8	0.063	0.000	7.6	3.403	OK
SWMH_27	FSR: 30 years: +35 %: 15 mins: Summer	53.779	53.076	53.115	0.038	5.3	0.044	0.000	5.2	2.349	OK
SWMH_15	FSR: 30 years: +35 %: 15 mins: Summer	57.753	56.427	56.456	0.029	1.9	0.033	0.000	1.8	0.814	OK
SWMH_40	FSR: 30 years: +35 %: 15 mins: Summer	52.968	51.590	51.620	0.030	0.4	0.034	0.000	0.0	0.068	OK
SWMH_39	FSR: 30 years: +35 %: 15 mins: Summer	52.280	51.931	51.931	0.000	0.0	0.000	0.000	0.0	0.000	OK

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Stormwater Controls Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Velocity (m/s)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)
Pond	FSR: 1 years: +0 %: 1440 mins: Summer	47.973	47.973	0.368	0.368	15.2	190.480	0.000	0.000		7.8	293.464	
Porous Paving	FSR: 1 years: +0 %: 1440 mins: Winter	58.751	58.712	0.099	0.122	0.2	5.483	0.000	0.000		0.0	0.000	
Porous Paving (1)	FSR: 1 years: +0 %: 1440 mins: Winter	59.256	59.129	0.097	0.015	0.1	1.404	0.000	0.000		0.0	1.011	
Porous Paving (2)	FSR: 1 years: +0 %: 1440 mins: Summer	56.553	56.187	0.274	0.002	0.1	1.621	0.000	0.000		0.0	0.164	
Porous Paving (3)	FSR: 1 years: +0 %: 1440 mins: Summer	55.618	55.525	0.092	0.136	0.1	2.394	0.000	0.000		0.0	0.000	
Porous Paving (4)	FSR: 1 years: +0 %: 1440 mins: Winter	57.064	56.846	0.164	0.005	0.0	0.932	0.000	0.000		0.0	0.729	
Porous Paving (5)	FSR: 1 years: +0 %: 1440 mins: Winter	56.072	56.027	0.172	0.217	0.1	3.280	0.000	0.000		0.0	0.754	
Porous Paving (6)	FSR: 1 years: +0 %: 1440 mins: Winter	56.679	56.430	0.092	0.002	0.0	0.737	0.000	0.000		0.0	0.679	
Porous Paving (7)	FSR: 1 years: +0 %: 1440 mins: Summer	55.616	55.602	0.123	0.214	0.1	1.707	0.000	0.000		0.0	0.399	
Porous Paving (8)	FSR: 1 years: +0 %: 1440 mins: Summer	54.161	54.014	0.120	0.039	0.1	1.147	0.000	0.000		0.0	0.634	
Porous Paving (9)	FSR: 1 years: +0 %: 1440 mins: Summer	58.681	58.520	0.093	0.019	0.1	0.665	0.000	0.000		0.0	1.092	
Porous Paving (10)	FSR: 1 years: +0 %: 1440 mins: Winter	58.491	58.305	0.090	0.015	0.1	1.352	0.000	0.000		0.0	1.109	
Porous Paving (11)	FSR: 1 years: +0 %: 1440 mins: Summer	58.195	58.052	0.112	0.018	0.1	0.938	0.000	0.000		0.0	0.625	
Porous Paving (12)	FSR: 1 years: +0 %: 1440 mins: Summer	56.023	55.935	0.095	0.141	0.1	2.640	0.000	0.000		0.0	0.000	
Porous Paving (14)	FSR: 1 years: +0 %: 1440 mins: Winter	55.163	55.127	0.104	0.097	0.0	1.067	0.000	0.000		0.0	0.630	
Porous Paving (15)	FSR: 1 years: +0 %: 1440 mins: Summer	53.596	53.488	0.107	0.067	0.1	1.337	0.000	0.000		0.0	0.445	
Porous Paving (16)	FSR: 1 years: +0 %: 1440 mins: Summer	53.238	53.119	0.109	0.054	0.1	1.160	0.000	0.000		0.0	0.500	
Porous Paving (17)	FSR: 1 years: +0 %: 1440 mins: Summer	52.410	52.278	0.099	0.026	0.2	2.655	0.000	0.000		0.0	1.904	
Porous Paving (18)	FSR: 1 years: +0 %: 1440 mins: Summer	53.273	53.210	0.096	0.058	0.1	1.060	0.000	0.000		0.0	1.021	
Porous Paving (19)	FSR: 1 years: +0 %: 1440 mins: Winter	53.483	53.129	0.275	0.011	0.1	3.180	0.000	0.000		0.0	0.000	
Porous Paving (21)	FSR: 1 years: +0 %: 1440 mins: Summer	51.450	51.401	0.097	0.119	0.1	2.418	0.000	0.000		0.0	0.000	
Porous Paving (22)	FSR: 1 years: +0 %: 1440 mins: Winter	51.865	51.757	0.105	0.052	0.0	0.963	0.000	0.000		0.0	0.421	
Porous Paving (23)	FSR: 1 years: +0 %: 1440 mins: Summer	51.178	51.026	0.094	0.138	0.1	1.385	0.000	0.000		0.0	0.201	
Porous Paving (24)	FSR: 1 years: +0 %: 1440 mins: Winter	52.176	52.074	0.102	0.097	0.1	4.779	0.000	0.000		0.0	0.432	
Porous Paving (25)	FSR: 1 years: +0 %: 1440 mins: Winter	50.258	50.105	0.097	0.018	0.1	1.741	0.000	0.000		0.0	1.132	
Porous Paving (26)	FSR: 1 years: +0 %: 1440 mins: Winter	50.016	49.902	0.094	0.010	0.0	0.569	0.000	0.000		0.0	0.868	
Porous Paving (28)	FSR: 1 years: +0 %: 1440 mins: Winter	52.323	52.042	0.083	0.002	0.1	1.419	0.000	0.000		0.0	1.320	
Porous Paving (29)	FSR: 1 years: +0 %: 1440 mins: Summer	52.405	52.194	0.095	0.097	0.1	1.638	0.000	0.000		0.0	0.292	
Porous Paving (30)	FSR: 1 years: +0 %: 1440 mins: Winter	51.501	51.468	0.104	0.128	0.0	1.206	0.000	0.000		0.0	0.000	
Porous Paving (31)	FSR: 1 years: +0 %: 1440 mins: Summer	51.851	51.821	0.105	0.125	0.1	1.638	0.000	0.000		0.0	0.000	
Porous Paving (32)	FSR: 1 years: +0 %: 960 mins: Winter	51.728	51.718	0.092	0.107	0.0	0.756	0.000	0.000		0.0	0.000	

Land West off Gatesmead Avenue :	Date: 10/04/2026		RIDGE	
	Designed by: SS	Checked by:		Approved By:
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			Ridge and Partners LLP:

Percentage Available (%)	Status
78.080	OK
73.569	OK
83.475	OK
70.805	OK
73.944	OK
78.885	OK
68.413	OK
83.377	OK
58.806	OK
77.528	OK
87.551	OK
83.878	OK
80.641	OK
72.995	OK
75.993	OK
76.893	OK
77.710	OK
82.854	OK
82.008	OK
73.672	OK
74.200	OK
78.391	OK
76.925	OK
74.511	OK
83.188	OK
87.545	OK
84.493	OK
75.175	OK
72.284	OK
72.159	OK
75.712	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

Porous Paving (33)	FSR: 1 years: +0 %: 1440 mins: Winter	49.614	49.573	0.097	0.120	0.1	2.196	0.000	0.000		0.0	0.000	
Swale 2	FSR: 1 years: +0 %: 1440 mins: Summer	51.868	51.868	0.343	0.482	1.5	20.914	0.000	0.000	0.0	1.0	14.507	
Porous Paving 34	FSR: 1 years: +0 %: 1440 mins: Winter	49.911	49.883	0.107	0.132	0.0	1.158	0.000	0.000		0.0	0.000	
Porous Paving 35	FSR: 1 years: +0 %: 1440 mins: Summer	53.376	53.332	0.108	0.131	0.1	1.632	0.000	0.000		0.0	0.000	
Porous Paving 36	FSR: 1 years: +0 %: 1440 mins: Summer	53.324	53.285	0.106	0.130	0.1	1.662	0.000	0.000		0.0	0.000	
Swale 1	FSR: 1 years: +0 %: 360 mins: Summer	55.391	55.117	0.003	0.400	1.2	4.055	0.000	0.000	0.1	0.8	2.966	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

74.087	OK
38.422	OK
71.442	OK
71.427	OK
71.772	OK
72.451	OK

Land West off Gatesmead Avenue :

Date:
10/04/2026

Designed by:
SS

Checked by:

Approved By:

Report Details:
Type: Stormwater Controls Summary
Storm Phase: Phase

Ridge and Partners LLP:

RIDGE



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Velocity (m/s)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)
Pond	FSR: 30 years: +0 %: 960 mins: Summer	48.414	48.414	0.810	0.810	44.4	463.074	0.000	0.000		10.1	562.650	235
Porous Paving	FSR: 30 years: +0 %: 1440 mins: Winter	58.849	58.823	0.197	0.233	0.3	10.835	0.000	0.000		0.0	0.000	
Porous Paving (1)	FSR: 30 years: +0 %: 1440 mins: Summer	59.352	59.164	0.193	0.050	0.2	2.700	0.000	0.000		0.0	2.341	
Porous Paving (2)	FSR: 30 years: +0 %: 1440 mins: Winter	56.942	56.190	0.663	0.005	0.1	2.952	0.044	0.000		0.0	0.743	415
Porous Paving (3)	FSR: 30 years: +0 %: 1440 mins: Summer	55.711	55.644	0.185	0.256	0.2	4.764	0.000	0.000		0.0	0.000	
Porous Paving (4)	FSR: 30 years: +0 %: 1440 mins: Summer	57.183	56.851	0.283	0.009	0.1	1.614	0.000	0.000		0.0	1.607	
Porous Paving (5)	FSR: 30 years: +0 %: 1440 mins: Summer	56.213	56.077	0.313	0.267	0.2	4.698	0.000	0.000		0.0	2.838	
Porous Paving (6)	FSR: 30 years: +0 %: 1440 mins: Summer	56.754	56.431	0.166	0.003	0.1	1.280	0.000	0.000		0.0	1.367	
Porous Paving (7)	FSR: 30 years: +0 %: 1440 mins: Winter	55.706	55.604	0.213	0.216	0.1	2.255	0.000	0.000		0.0	1.136	675
Porous Paving (8)	FSR: 30 years: +0 %: 1440 mins: Winter	54.269	54.024	0.227	0.049	0.1	2.021	0.000	0.000		0.0	1.481	
Porous Paving (9)	FSR: 30 years: +0 %: 960 mins: Summer	58.745	58.557	0.157	0.057	0.2	1.310	0.000	0.000		0.0	1.748	
Porous Paving (10)	FSR: 30 years: +0 %: 1440 mins: Summer	58.583	58.341	0.182	0.051	0.2	2.641	0.000	0.000		0.0	2.541	
Porous Paving (11)	FSR: 30 years: +0 %: 1440 mins: Summer	58.281	58.069	0.197	0.035	0.1	1.589	0.000	0.000		0.0	1.275	
Porous Paving (12)	FSR: 30 years: +0 %: 1440 mins: Winter	56.123	56.062	0.195	0.268	0.2	5.328	0.000	0.000		0.0	0.000	
Porous Paving (14)	FSR: 30 years: +0 %: 960 mins: Summer	55.223	55.166	0.164	0.137	0.1	1.548	0.000	0.000		0.0	1.231	
Porous Paving (15)	FSR: 30 years: +0 %: 1440 mins: Winter	53.692	53.501	0.203	0.079	0.1	2.227	0.000	0.000		0.0	1.265	
Porous Paving (16)	FSR: 30 years: +0 %: 1440 mins: Winter	53.322	53.122	0.193	0.058	0.1	1.851	0.000	0.000		0.0	1.166	
Porous Paving (17)	FSR: 30 years: +0 %: 1440 mins: Winter	52.501	52.303	0.190	0.050	0.2	5.017	0.000	0.000		0.1	4.150	
Porous Paving (18)	FSR: 30 years: +0 %: 960 mins: Summer	53.344	53.254	0.166	0.102	0.2	1.896	0.000	0.000		0.1	1.936	
Porous Paving (19)	FSR: 30 years: +0 %: 1440 mins: Summer	53.872	53.166	0.664	0.049	0.3	6.156	0.126	0.000		0.0	0.303	1050
Porous Paving (21)	FSR: 30 years: +0 %: 1440 mins: Winter	51.549	51.443	0.196	0.161	0.1	4.343	0.000	0.000		0.0	0.852	
Porous Paving (22)	FSR: 30 years: +0 %: 1440 mins: Summer	51.953	51.775	0.192	0.071	0.1	1.572	0.000	0.000		0.0	1.086	
Porous Paving (23)	FSR: 30 years: +0 %: 1440 mins: Summer	51.253	51.028	0.168	0.140	0.1	1.984	0.000	0.000		0.0	0.935	
Porous Paving (24)	FSR: 30 years: +0 %: 1440 mins: Summer	52.274	52.080	0.201	0.103	0.4	7.805	0.000	0.000		0.1	2.686	
Porous Paving (25)	FSR: 30 years: +0 %: 1440 mins: Winter	50.357	50.133	0.196	0.046	0.2	3.436	0.000	0.000		0.0	2.543	
Porous Paving (26)	FSR: 30 years: +0 %: 1440 mins: Summer	50.082	49.920	0.160	0.028	0.1	0.971	0.000	0.000		0.0	1.766	
Porous Paving (28)	FSR: 30 years: +0 %: 1440 mins: Winter	52.407	52.044	0.168	0.004	0.1	2.710	0.000	0.000		0.1	2.857	
Porous Paving (29)	FSR: 30 years: +0 %: 1440 mins: Winter	52.495	52.196	0.184	0.099	0.1	2.629	0.000	0.000		0.0	1.162	
Porous Paving (30)	FSR: 30 years: +0 %: 1440 mins: Summer	51.584	51.562	0.187	0.222	0.1	2.166	0.000	0.000		0.0	0.000	
Porous Paving (31)	FSR: 30 years: +0 %: 1440 mins: Winter	51.949	51.929	0.204	0.233	0.1	3.138	0.000	0.000		0.0	0.000	
Porous Paving (32)	FSR: 30 years: +0 %: 1440 mins: Summer	51.836	51.834	0.201	0.223	0.1	1.644	0.000	0.000		0.0	0.000	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

Percentage Available (%)	Status
46.710	OK
47.771	OK
68.230	OK
46.852	Flood
48.144	OK
63.423	OK
54.760	OK
71.124	OK
45.568	OK
60.398	OK
75.488	OK
68.498	OK
67.210	OK
45.495	OK
65.171	OK
61.521	OK
64.432	OK
67.608	OK
67.822	OK
49.029	Flood
53.652	OK
64.713	OK
66.943	OK
58.370	OK
66.829	OK
78.769	OK
70.382	OK
60.144	OK
50.218	OK
46.658	OK
47.176	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026										RIDGE		
	Designed by: SS					Checked by:			Approved By:				
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase												
Ridge and Partners LLP:													

Porous Paving (33)	FSR: 30 years: +0 %: 1440 mins: Summer	49.715	49.687	0.198	0.234	0.2	4.446	0.000	0.000		0.0	0.000	
Swale 2	FSR: 30 years: +0 %: 240 mins: Summer	51.899	51.899	0.374	0.513	10.5	23.605	0.000	0.000	0.1	7.1	21.604	
Porous Paving 34	FSR: 30 years: +0 %: 1440 mins: Summer	50.000	49.983	0.196	0.232	0.1	2.124	0.000	0.000		0.0	0.000	
Porous Paving 35	FSR: 30 years: +0 %: 1440 mins: Winter	53.473	53.442	0.205	0.241	0.1	3.090	0.000	0.000		0.0	0.000	
Porous Paving 36	FSR: 30 years: +0 %: 1440 mins: Winter	53.420	53.348	0.201	0.192	0.1	2.949	0.000	0.000		0.0	0.391	20
Swale 1	FSR: 30 years: +0 %: 60 mins: Summer	55.398	55.145	0.010	0.428	6.8	4.668	0.000	0.000	0.2	5.7	4.801	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

47.533	OK
30.499	OK
47.616	OK
45.895	OK
49.900	OK
68.286	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
Ridge and Partners LLP:				



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Velocity (m/s)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)
Pond	FSR: 100 years: +0 %: 960 mins: Summer	48.621	48.621	1.016	1.016	56.5	608.449	0.000	0.000		10.1	682.310	545
Porous Paving	FSR: 100 years: +0 %: 1440 mins: Winter	58.898	58.876	0.246	0.286	0.4	13.475	0.000	0.000		0.0	0.000	
Porous Paving (1)	FSR: 100 years: +0 %: 1440 mins: Winter	59.398	59.169	0.239	0.054	0.2	3.359	0.000	0.000		0.0	3.053	
Porous Paving (2)	FSR: 100 years: +0 %: 1440 mins: Winter	56.943	56.192	0.664	0.007	0.1	3.461	0.061	0.000		0.0	1.205	1100
Porous Paving (3)	FSR: 100 years: +0 %: 1440 mins: Summer	55.759	55.702	0.233	0.313	0.3	5.970	0.000	0.000		0.0	0.000	
Porous Paving (4)	FSR: 100 years: +0 %: 1440 mins: Summer	57.245	56.853	0.345	0.012	0.1	1.968	0.000	0.000		0.0	2.120	
Porous Paving (5)	FSR: 100 years: +0 %: 1440 mins: Summer	56.278	56.107	0.377	0.297	0.3	5.547	0.000	0.000		0.1	3.973	550
Porous Paving (6)	FSR: 100 years: +0 %: 1440 mins: Summer	56.798	56.431	0.210	0.003	0.1	1.587	0.000	0.000		0.0	1.776	
Porous Paving (7)	FSR: 100 years: +0 %: 1440 mins: Winter	55.766	55.606	0.273	0.218	0.2	2.637	0.000	0.000		0.0	1.697	
Porous Paving (8)	FSR: 100 years: +0 %: 1440 mins: Winter	54.317	54.034	0.275	0.059	0.1	2.406	0.000	0.000		0.0	1.909	
Porous Paving (9)	FSR: 100 years: +0 %: 480 mins: Summer	58.769	58.595	0.181	0.095	0.4	1.716	0.000	0.000		0.1	1.638	
Porous Paving (10)	FSR: 100 years: +0 %: 1440 mins: Winter	58.627	58.347	0.225	0.057	0.2	3.301	0.000	0.000		0.0	3.275	
Porous Paving (11)	FSR: 100 years: +0 %: 1440 mins: Winter	58.334	58.067	0.250	0.033	0.1	1.997	0.000	0.000		0.0	1.718	
Porous Paving (12)	FSR: 100 years: +0 %: 1440 mins: Summer	56.172	56.121	0.244	0.327	0.3	6.654	0.000	0.000		0.0	0.000	
Porous Paving (14)	FSR: 100 years: +0 %: 960 mins: Summer	55.264	55.185	0.205	0.155	0.2	1.881	0.000	0.000		0.1	1.718	
Porous Paving (15)	FSR: 100 years: +0 %: 1440 mins: Summer	53.737	53.524	0.247	0.102	0.2	2.637	0.000	0.000		0.0	1.705	
Porous Paving (16)	FSR: 100 years: +0 %: 1440 mins: Winter	53.378	53.127	0.249	0.063	0.1	2.312	0.000	0.000		0.0	1.672	
Porous Paving (17)	FSR: 100 years: +0 %: 1440 mins: Summer	52.547	52.336	0.236	0.084	0.5	6.416	0.000	0.000		0.1	5.478	
Porous Paving (18)	FSR: 100 years: +0 %: 960 mins: Summer	53.380	53.279	0.203	0.127	0.3	2.357	0.000	0.000		0.1	2.550	
Porous Paving (19)	FSR: 100 years: +0 %: 1440 mins: Winter	53.873	53.169	0.665	0.051	0.2	7.752	0.165	0.000		0.0	1.077	
Porous Paving (21)	FSR: 100 years: +0 %: 1440 mins: Winter	51.597	51.445	0.244	0.163	0.2	5.040	0.000	0.000		0.1	1.570	905
Porous Paving (22)	FSR: 100 years: +0 %: 1440 mins: Winter	52.005	51.773	0.244	0.069	0.1	1.940	0.000	0.000		0.0	1.522	
Porous Paving (23)	FSR: 100 years: +0 %: 1440 mins: Winter	51.304	51.028	0.219	0.140	0.1	2.378	0.000	0.000		0.0	1.446	
Porous Paving (24)	FSR: 100 years: +0 %: 1440 mins: Winter	52.324	52.079	0.251	0.102	0.4	9.314	0.000	0.000		0.1	3.927	
Porous Paving (25)	FSR: 100 years: +0 %: 1440 mins: Summer	50.406	50.165	0.245	0.078	0.3	4.304	0.000	0.000		0.1	3.342	
Porous Paving (26)	FSR: 100 years: +0 %: 360 mins: Summer	50.093	49.966	0.171	0.074	0.4	1.263	0.000	0.000		0.1	1.221	
Porous Paving (28)	FSR: 100 years: +0 %: 1440 mins: Winter	52.452	52.044	0.212	0.004	0.2	3.366	0.000	0.000		0.1	3.726	
Porous Paving (29)	FSR: 100 years: +0 %: 1440 mins: Summer	52.538	52.197	0.227	0.100	0.2	3.098	0.000	0.000		0.1	1.630	
Porous Paving (30)	FSR: 100 years: +0 %: 1440 mins: Winter	51.628	51.610	0.232	0.270	0.1	2.670	0.000	0.000		0.0	0.000	
Porous Paving (31)	FSR: 100 years: +0 %: 1440 mins: Winter	51.995	51.978	0.250	0.282	0.1	3.840	0.000	0.000		0.0	0.000	
Porous Paving (32)	FSR: 100 years: +0 %: 1440 mins: Summer	51.877	51.876	0.242	0.265	0.1	1.968	0.000	0.000		0.0	0.000	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			

Percentage Available (%)	Status
29.980	OK
35.046	OK
60.470	OK
37.673	Flood
35.016	OK
55.389	OK
46.583	OK
64.198	OK
36.357	OK
52.852	OK
67.897	OK
60.629	OK
58.774	OK
31.929	OK
57.677	OK
54.438	OK
55.581	OK
58.570	OK
59.997	OK
35.816	Flood
46.218	OK
56.463	OK
60.382	OK
50.321	OK
58.447	OK
72.373	OK
63.223	OK
53.046	OK
38.634	OK
34.724	OK
36.766	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026										RIDGE	
	Designed by: SS					Checked by:			Approved By:			
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase											
Ridge and Partners LLP:												

Porous Paving (33)	FSR: 100 years: +0 %: 1440 mins: Winter	49.764	49.740	0.247	0.288	0.2	5.532	0.000	0.000		0.0	0.000	
Swale 2	FSR: 100 years: +0 %: 120 mins: Summer	51.921	51.921	0.396	0.535	20.8	25.620	0.000	0.000	0.1	14.0	24.416	
Porous Paving 34	FSR: 100 years: +0 %: 1440 mins: Summer	50.045	50.031	0.241	0.280	0.1	2.598	0.000	0.000		0.0	0.000	
Porous Paving 35	FSR: 100 years: +0 %: 1440 mins: Winter	53.520	53.491	0.252	0.290	0.1	3.792	0.000	0.000		0.0	0.013	
Porous Paving 36	FSR: 100 years: +0 %: 1440 mins: Summer	53.465	53.355	0.246	0.200	0.2	3.363	0.000	0.000		0.0	0.845	
Swale 1	FSR: 100 years: +0 %: 60 mins: Summer	55.400	55.157	0.012	0.441	9.0	4.941	0.000	0.000	0.2	8.8	7.498	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
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	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

34.717	OK
24.566	OK
35.926	OK
33.603	OK
42.869	OK
66.429	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
Ridge and Partners LLP:				



FSR: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Velocity (m/s)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)
Pond	FSR: 100 years: +45 %: 960 mins: Winter	49.033	49.033	1.429	1.429	53.5	935.023	0.000	0.000		10.7	814.773	1005
Porous Paving	FSR: 100 years: +45 %: 1440 mins: Winter	59.011	59.253	0.359	0.663	0.6	19.559	0.160	0.000		0.0	0.000	
Porous Paving (1)	FSR: 100 years: +45 %: 1440 mins: Summer	59.492	59.230	0.333	0.115	0.4	4.968	0.000	0.000		0.1	4.766	690
Porous Paving (2)	FSR: 100 years: +45 %: 1440 mins: Summer	56.946	56.222	0.667	0.037	0.3	3.966	0.115	0.000		0.1	2.724	1895
Porous Paving (3)	FSR: 100 years: +45 %: 1440 mins: Summer	55.868	56.068	0.342	0.679	0.4	8.658	0.490	0.000		0.0	0.000	
Porous Paving (4)	FSR: 100 years: +45 %: 960 mins: Summer	57.563	56.881	0.663	0.040	0.3	2.463	0.051	0.000		0.1	2.710	270
Porous Paving (5)	FSR: 100 years: +45 %: 1440 mins: Summer	56.430	56.183	0.530	0.373	0.4	7.588	0.000	0.000		0.1	6.831	1495
Porous Paving (6)	FSR: 100 years: +45 %: 1440 mins: Winter	56.890	56.432	0.302	0.004	0.1	2.220	0.000	0.000		0.0	2.751	235
Porous Paving (7)	FSR: 100 years: +45 %: 1440 mins: Winter	55.862	55.611	0.369	0.222	0.2	3.239	0.000	0.000		0.1	2.734	
Porous Paving (8)	FSR: 100 years: +45 %: 1440 mins: Winter	54.433	54.064	0.392	0.089	0.2	3.351	0.000	0.000		0.1	3.067	1320
Porous Paving (9)	FSR: 100 years: +45 %: 480 mins: Summer	58.847	58.649	0.258	0.149	0.5	2.587	0.000	0.000		0.1	2.468	
Porous Paving (10)	FSR: 100 years: +45 %: 1440 mins: Summer	58.717	58.410	0.316	0.120	0.4	4.909	0.000	0.000		0.1	5.032	615
Porous Paving (11)	FSR: 100 years: +45 %: 1440 mins: Winter	58.432	58.091	0.348	0.057	0.1	2.731	0.000	0.000		0.0	2.660	510
Porous Paving (12)	FSR: 100 years: +45 %: 1440 mins: Summer	56.285	56.485	0.358	0.691	0.4	9.642	0.828	0.000		0.0	0.000	
Porous Paving (14)	FSR: 100 years: +45 %: 960 mins: Summer	55.339	55.229	0.280	0.199	0.3	2.558	0.000	0.000		0.1	2.667	305
Porous Paving (15)	FSR: 100 years: +45 %: 1440 mins: Winter	53.842	53.538	0.352	0.116	0.2	3.607	0.000	0.000		0.0	2.815	1205
Porous Paving (16)	FSR: 100 years: +45 %: 1440 mins: Winter	53.480	53.141	0.351	0.077	0.1	3.136	0.000	0.000		0.1	2.708	900
Porous Paving (17)	FSR: 100 years: +45 %: 1440 mins: Summer	52.646	52.392	0.335	0.140	0.7	9.545	0.000	0.000		0.1	8.585	805
Porous Paving (18)	FSR: 100 years: +45 %: 960 mins: Summer	53.466	53.342	0.289	0.190	0.4	3.472	0.000	0.000		0.1	4.086	325
Porous Paving (19)	FSR: 100 years: +45 %: 1440 mins: Winter	53.875	53.208	0.667	0.091	0.3	9.147	0.272	0.000		0.1	4.151	
Porous Paving (21)	FSR: 100 years: +45 %: 1440 mins: Winter	51.703	51.447	0.350	0.164	0.3	6.564	0.000	0.000		0.1	3.345	
Porous Paving (22)	FSR: 100 years: +45 %: 1440 mins: Summer	52.100	51.812	0.339	0.108	0.2	2.587	0.000	0.000		0.1	2.470	560
Porous Paving (23)	FSR: 100 years: +45 %: 1440 mins: Winter	51.390	51.029	0.305	0.141	0.1	3.033	0.000	0.000		0.1	2.437	250
Porous Paving (24)	FSR: 100 years: +45 %: 1440 mins: Winter	52.437	52.080	0.363	0.104	0.5	12.664	0.000	0.000		0.2	6.978	
Porous Paving (25)	FSR: 100 years: +45 %: 1440 mins: Winter	50.510	50.200	0.349	0.113	0.3	6.370	0.000	0.000		0.1	5.168	1040
Porous Paving (26)	FSR: 100 years: +45 %: 360 mins: Summer	50.166	50.009	0.244	0.117	0.5	1.907	0.000	0.000		0.1	1.856	
Porous Paving (28)	FSR: 100 years: +45 %: 1440 mins: Winter	52.543	52.045	0.304	0.005	0.3	4.685	0.000	0.000		0.1	5.677	255
Porous Paving (29)	FSR: 100 years: +45 %: 1440 mins: Winter	52.637	52.197	0.327	0.100	0.2	4.146	0.000	0.000		0.1	2.739	
Porous Paving (30)	FSR: 100 years: +45 %: 1440 mins: Summer	51.751	51.739	0.354	0.399	0.2	4.050	0.000	0.000		0.0	0.000	
Porous Paving (31)	FSR: 100 years: +45 %: 1440 mins: Winter	52.108	52.096	0.362	0.400	0.2	5.544	0.000	0.000		0.0	0.000	
Porous Paving (32)	FSR: 100 years: +45 %: 1440 mins: Summer	51.980	51.979	0.345	0.368	0.1	2.772	0.000	0.000		0.0	0.000	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			

Percentage Available (%)	Status
-7.602	Flood Risk
5.720	Flood
41.544	OK
28.584	Flood
5.756	Flood
44.179	Flood
26.927	OK
49.929	OK
21.835	OK
34.323	OK
51.604	OK
41.443	OK
43.629	OK
1.362	Flood
42.452	OK
37.666	OK
39.756	OK
38.372	OK
41.082	OK
24.261	Flood
29.953	OK
41.949	OK
49.479	OK
32.452	OK
38.502	OK
58.286	OK
48.806	OK
37.147	OK
6.915	OK
5.757	OK
10.931	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026										RIDGE		
	Designed by: SS					Checked by:			Approved By:				
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase												
Ridge and Partners LLP:													

Porous Paving (33)	FSR: 100 years: +45 %: 1440 mins: Winter	49.875	50.115	0.358	0.663	0.2	7.968	0.064	0.000		0.0	0.000	
Swale 2	FSR: 100 years: +45 %: 60 mins: Summer	51.954	51.953	0.428	0.567	40.7	28.778	0.000	0.000	0.1	26.8	31.076	
Porous Paving 34	FSR: 100 years: +45 %: 1440 mins: Summer	50.166	50.415	0.362	0.664	0.2	3.864	0.045	0.000		0.0	0.000	
Porous Paving 35	FSR: 100 years: +45 %: 1440 mins: Winter	53.631	53.509	0.363	0.308	0.2	4.877	0.000	0.000		0.0	1.094	
Porous Paving 36	FSR: 100 years: +45 %: 1440 mins: Winter	53.570	53.383	0.352	0.228	0.2	4.343	0.000	0.000		0.0	2.009	
Swale 1	FSR: 100 years: +45 %: 15 mins: Summer	55.407	55.183	0.019	0.466	21.3	5.491	0.000	0.000	0.3	15.9	5.432	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			

Report Details:
Type: Stormwater Controls Summary
Storm Phase: Phase

5.968	Flood
15.266	Flood Risk
4.701	Flood
14.594	OK
26.220	OK
62.696	Flood Risk

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
Ridge and Partners LLP:				



FSR: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Velocity (m/s)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)
Pond	FSR: 30 years: +35 %: 960 mins: Summer	48.684	48.684	1.079	1.079	60.3	655.339	0.000	0.000		10.1	696.589	630
Porous Paving	FSR: 30 years: +35 %: 1440 mins: Winter	58.917	58.897	0.265	0.307	0.4	14.519	0.000	0.000		0.0	0.000	
Porous Paving (1)	FSR: 30 years: +35 %: 1440 mins: Summer	59.413	59.190	0.254	0.076	0.3	3.638	0.000	0.000		0.1	3.333	
Porous Paving (2)	FSR: 30 years: +35 %: 1440 mins: Summer	56.944	56.193	0.666	0.008	0.2	3.654	0.085	0.000		0.0	1.450	1235
Porous Paving (3)	FSR: 30 years: +35 %: 1440 mins: Summer	55.778	55.724	0.252	0.335	0.3	6.438	0.000	0.000		0.0	0.000	
Porous Paving (4)	FSR: 30 years: +35 %: 1440 mins: Summer	57.268	56.854	0.368	0.013	0.1	2.099	0.000	0.000		0.0	2.325	
Porous Paving (5)	FSR: 30 years: +35 %: 1440 mins: Winter	56.312	56.107	0.412	0.297	0.2	5.891	0.000	0.000		0.1	4.504	695
Porous Paving (6)	FSR: 30 years: +35 %: 1440 mins: Winter	56.821	56.431	0.233	0.003	0.1	1.748	0.000	0.000		0.0	1.996	
Porous Paving (7)	FSR: 30 years: +35 %: 1440 mins: Winter	55.783	55.607	0.290	0.219	0.2	2.738	0.000	0.000		0.0	1.863	
Porous Paving (8)	FSR: 30 years: +35 %: 1440 mins: Summer	54.339	54.054	0.298	0.080	0.2	2.581	0.000	0.000		0.0	2.131	45
Porous Paving (9)	FSR: 30 years: +35 %: 960 mins: Summer	58.792	58.586	0.204	0.085	0.2	1.823	0.000	0.000		0.1	2.416	
Porous Paving (10)	FSR: 30 years: +35 %: 1440 mins: Summer	58.640	58.368	0.238	0.078	0.3	3.562	0.000	0.000		0.1	3.536	
Porous Paving (11)	FSR: 30 years: +35 %: 1440 mins: Winter	58.351	58.071	0.268	0.037	0.1	2.130	0.000	0.000		0.0	1.880	
Porous Paving (12)	FSR: 30 years: +35 %: 1440 mins: Winter	56.193	56.145	0.265	0.350	0.2	7.194	0.000	0.000		0.0	0.000	
Porous Paving (14)	FSR: 30 years: +35 %: 960 mins: Summer	55.274	55.191	0.215	0.161	0.2	1.973	0.000	0.000		0.1	1.853	
Porous Paving (15)	FSR: 30 years: +35 %: 1440 mins: Summer	53.756	53.529	0.267	0.108	0.2	2.813	0.000	0.000		0.0	1.904	
Porous Paving (16)	FSR: 30 years: +35 %: 1440 mins: Winter	53.394	53.129	0.265	0.065	0.1	2.445	0.000	0.000		0.0	1.828	
Porous Paving (17)	FSR: 30 years: +35 %: 1440 mins: Summer	52.565	52.345	0.254	0.092	0.5	6.936	0.000	0.000		0.1	5.991	
Porous Paving (18)	FSR: 30 years: +35 %: 960 mins: Summer	53.395	53.288	0.218	0.136	0.3	2.543	0.000	0.000		0.1	2.817	
Porous Paving (19)	FSR: 30 years: +35 %: 1440 mins: Summer	53.875	53.170	0.667	0.053	0.4	8.287	0.224	0.000		0.0	1.404	
Porous Paving (21)	FSR: 30 years: +35 %: 1440 mins: Summer	51.616	51.446	0.263	0.164	0.3	5.316	0.000	0.000		0.1	1.891	
Porous Paving (22)	FSR: 30 years: +35 %: 1440 mins: Winter	52.024	51.776	0.263	0.072	0.1	2.072	0.000	0.000		0.0	1.692	
Porous Paving (23)	FSR: 30 years: +35 %: 1440 mins: Winter	51.320	51.028	0.236	0.140	0.1	2.504	0.000	0.000		0.0	1.633	
Porous Paving (24)	FSR: 30 years: +35 %: 1440 mins: Winter	52.345	52.079	0.271	0.102	0.4	9.929	0.000	0.000		0.1	4.459	740
Porous Paving (25)	FSR: 30 years: +35 %: 1440 mins: Winter	50.423	50.159	0.262	0.072	0.2	4.638	0.000	0.000		0.1	3.618	
Porous Paving (26)	FSR: 30 years: +35 %: 960 mins: Summer	50.123	49.946	0.201	0.054	0.2	1.338	0.000	0.000		0.1	2.078	
Porous Paving (28)	FSR: 30 years: +35 %: 1440 mins: Winter	52.466	52.044	0.227	0.004	0.2	3.579	0.000	0.000		0.1	4.031	
Porous Paving (29)	FSR: 30 years: +35 %: 1440 mins: Summer	52.554	52.197	0.244	0.101	0.2	3.275	0.000	0.000		0.1	1.813	
Porous Paving (30)	FSR: 30 years: +35 %: 1440 mins: Winter	51.658	51.641	0.261	0.301	0.1	3.000	0.000	0.000		0.0	0.000	
Porous Paving (31)	FSR: 30 years: +35 %: 1440 mins: Summer	52.016	52.000	0.270	0.304	0.2	4.158	0.000	0.000		0.0	0.000	
Porous Paving (32)	FSR: 30 years: +35 %: 1440 mins: Summer	51.895	51.893	0.259	0.283	0.1	2.106	0.000	0.000		0.0	0.000	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

Percentage Available (%)	Status
24.584	OK
30.014	OK
57.197	OK
34.206	Flood
29.921	OK
52.416	OK
43.269	OK
60.567	OK
33.932	OK
49.415	OK
65.890	OK
57.504	OK
56.045	OK
26.406	OK
55.602	OK
51.382	OK
53.034	OK
55.214	OK
56.840	OK
31.379	Flood
43.269	OK
53.502	OK
58.280	OK
47.038	OK
55.219	OK
70.743	OK
60.892	OK
50.354	OK
31.049	OK
29.318	OK
32.331	OK

Land West off Gatesmead Avenue :	Date: 10/04/2026										RIDGE
	Designed by: SS					Checked by:			Approved By:		
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase										
Ridge and Partners LLP:											

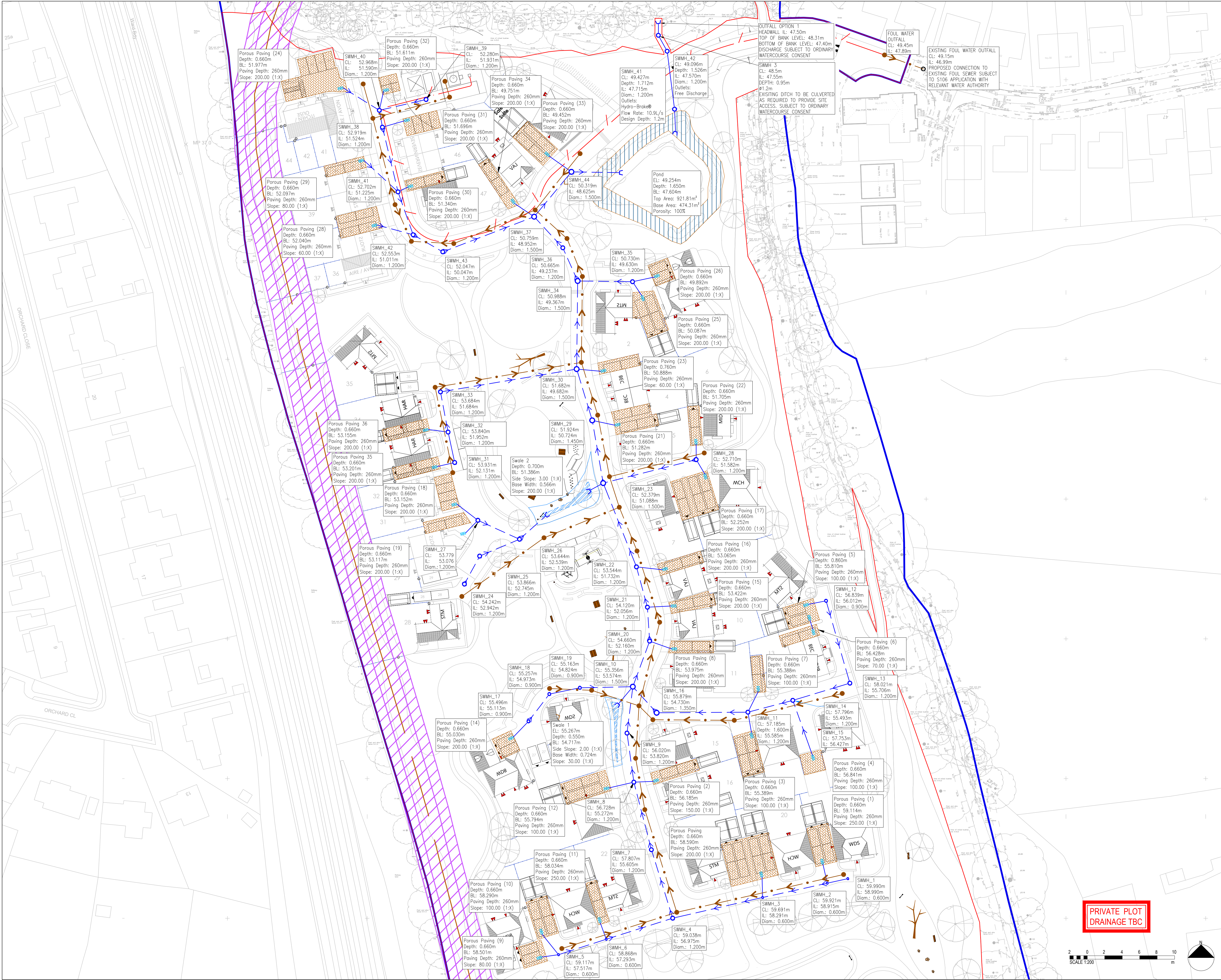
Porous Paving (33)	FSR: 30 years: +35 %: 1440 mins: Summer	49.781	49.759	0.265	0.307	0.3	5.922	0.000	0.000		0.0	0.000	
Swale 2	FSR: 30 years: +35 %: 120 mins: Summer	51.923	51.923	0.398	0.537	21.4	25.852	0.000	0.000	0.1	14.8	25.628	
Porous Paving 34	FSR: 30 years: +35 %: 1440 mins: Summer	50.065	50.052	0.261	0.302	0.1	2.808	0.000	0.000		0.0	0.000	
Porous Paving 35	FSR: 30 years: +35 %: 1440 mins: Summer	53.542	53.497	0.274	0.296	0.2	4.083	0.000	0.000		0.0	0.200	
Porous Paving 36	FSR: 30 years: +35 %: 1440 mins: Summer	53.484	53.360	0.266	0.205	0.2	3.544	0.000	0.000		0.0	1.051	
Swale 1	FSR: 30 years: +35 %: 30 mins: Summer	55.401	55.158	0.013	0.442	10.3	4.973	0.000	0.000	0.2	9.1	5.169	

Land West off Gatesmead Avenue :	Date: 10/04/2026			RIDGE
	Designed by: SS	Checked by:	Approved By:	
	Ridge and Partners LLP:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				

30.114	OK
23.882	OK
30.746	OK
28.499	OK
39.792	OK
66.213	OK

APPENDIX E

DRAINAGE STRATEGY LAYOUT



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EXTERNAL REFERENCES:
THIS INFORMATION & RIDGE & PARTNERS LLP CIVIL 3D & ASSOCIATED 3D OUTPUTS ARE BASED UPON THE FOLLOWING INFORMATION FROM THE DESIGN TEAM

LANDSCAPE REFERENCE:
• PAD DESIGN DRG No. 25714/33101 (DATED MARCH 2026)

SURVEY REFERENCE:
• HOOK SURVEYS LTD. DWG No. 525/1048001 - 06 (DATED JULY 2025)
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THIS INFORMATION IS CURRENT PRIOR TO CONSTRUCTION

LEGEND

	SITE BOUNDARY
	PROPOSED PRIVATE FOUL DRAIN
	PROPOSED PRIVATE S.W. DRAIN
	PROPOSED FOUL RISING MAIN
	EXISTING MANHOLE / GULLY
	PROPOSED 1200mm MANHOLE
	PROPOSED MANHOLE WITH BACKDROP
	PROPOSED PERMEABLE PAVING
	PROPOSED HEADWALL
	PROPOSED DIFFUSER UNIT

P03	RED LINE BOUNDARY UPDATED	14.05.2026	SS	TC
P02	UPDATED TO LATEST ARCHITECTURAL PLAN	29.04.2026	SS	TC
P01	INITIAL ISSUE	10.04.2026	PJ	TC
REV	DESCRIPTION	DATE	BY	CHKD
ORIGINATOR: www.ridge.co.uk				



PROJECT NUMBER: 5029426
CLIENT: CREST NICHOLSON

IN ASSOCIATION WITH:

PROJECT: LAND WEST OF GATESMEAD

TITLE: DRAINAGE LAYOUT PLAN

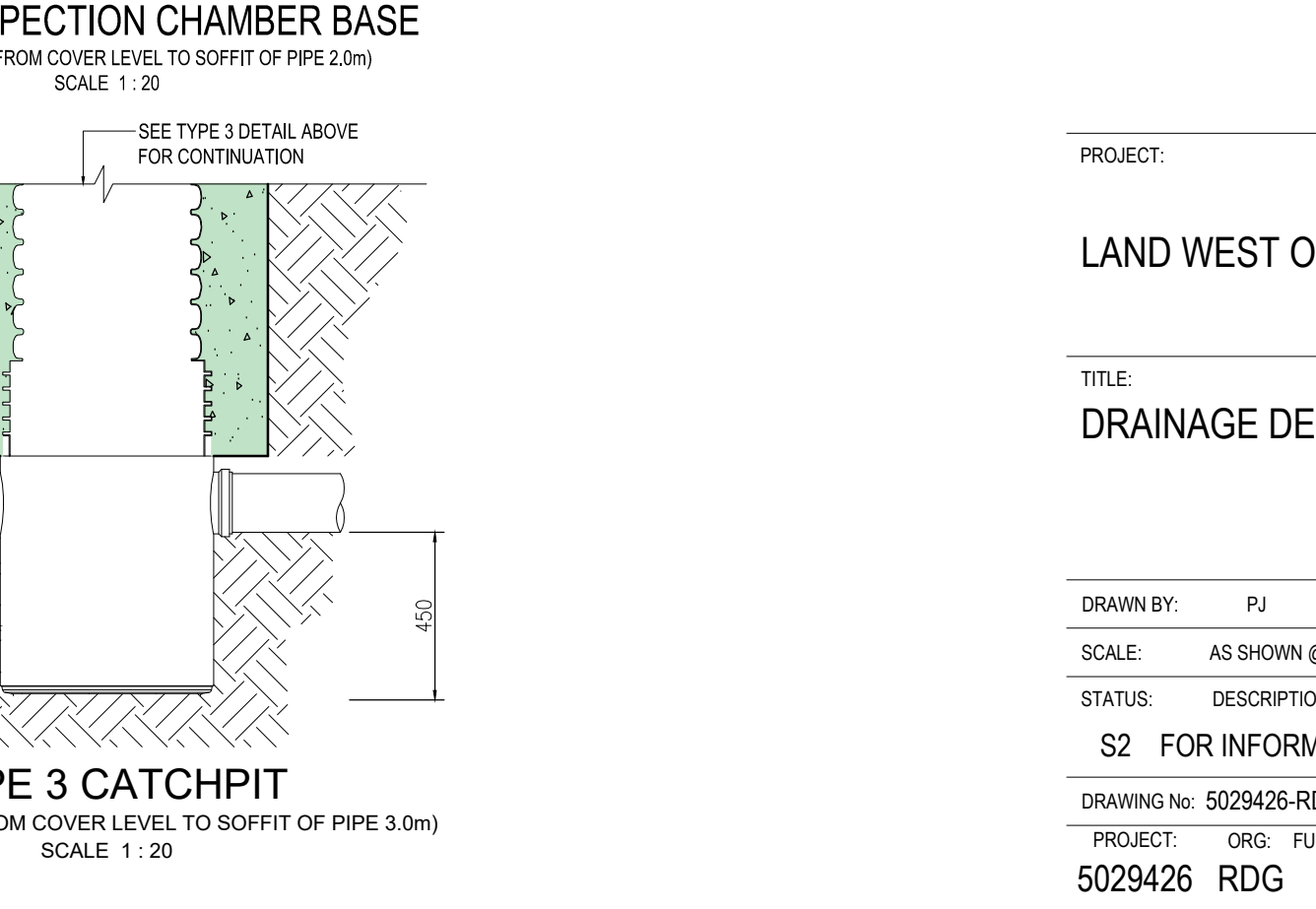
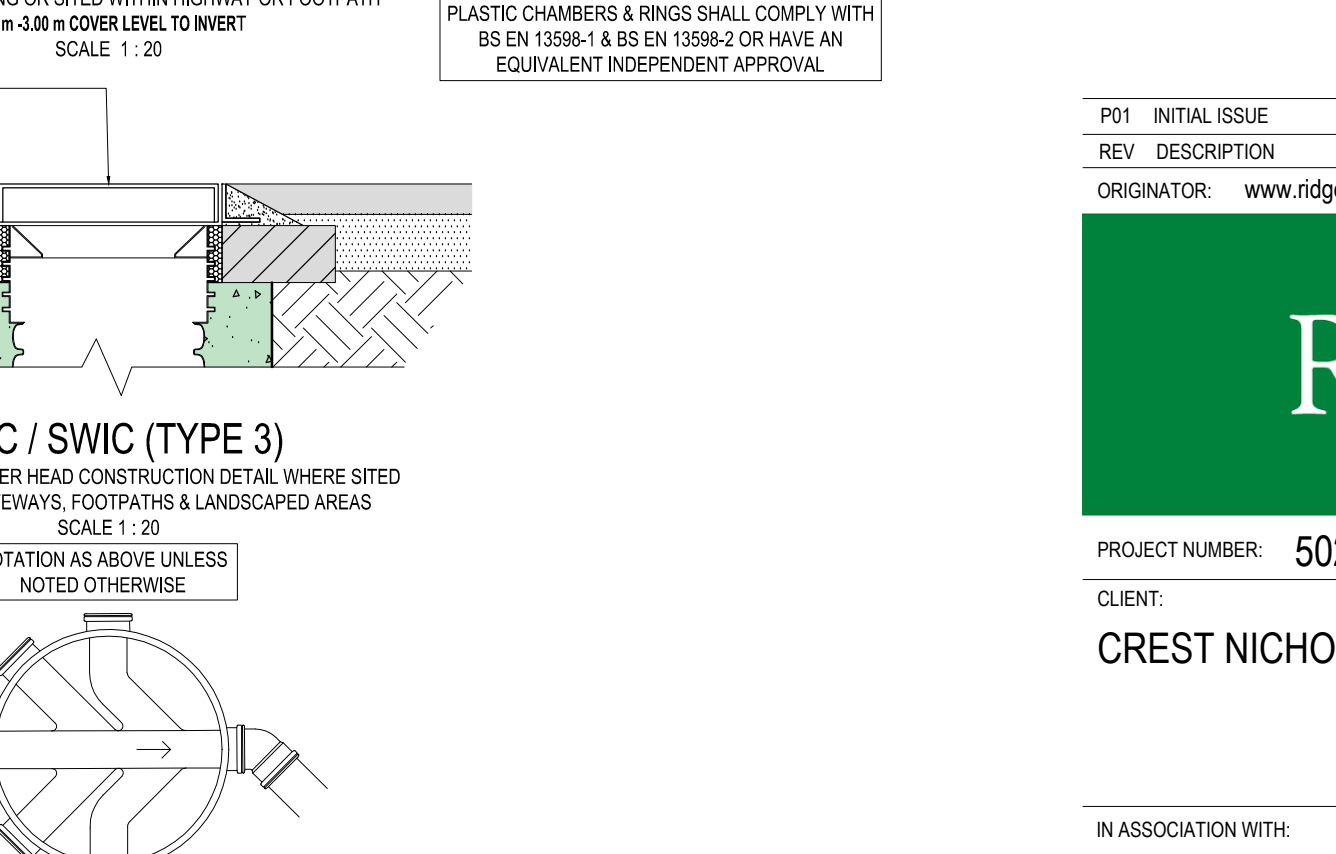
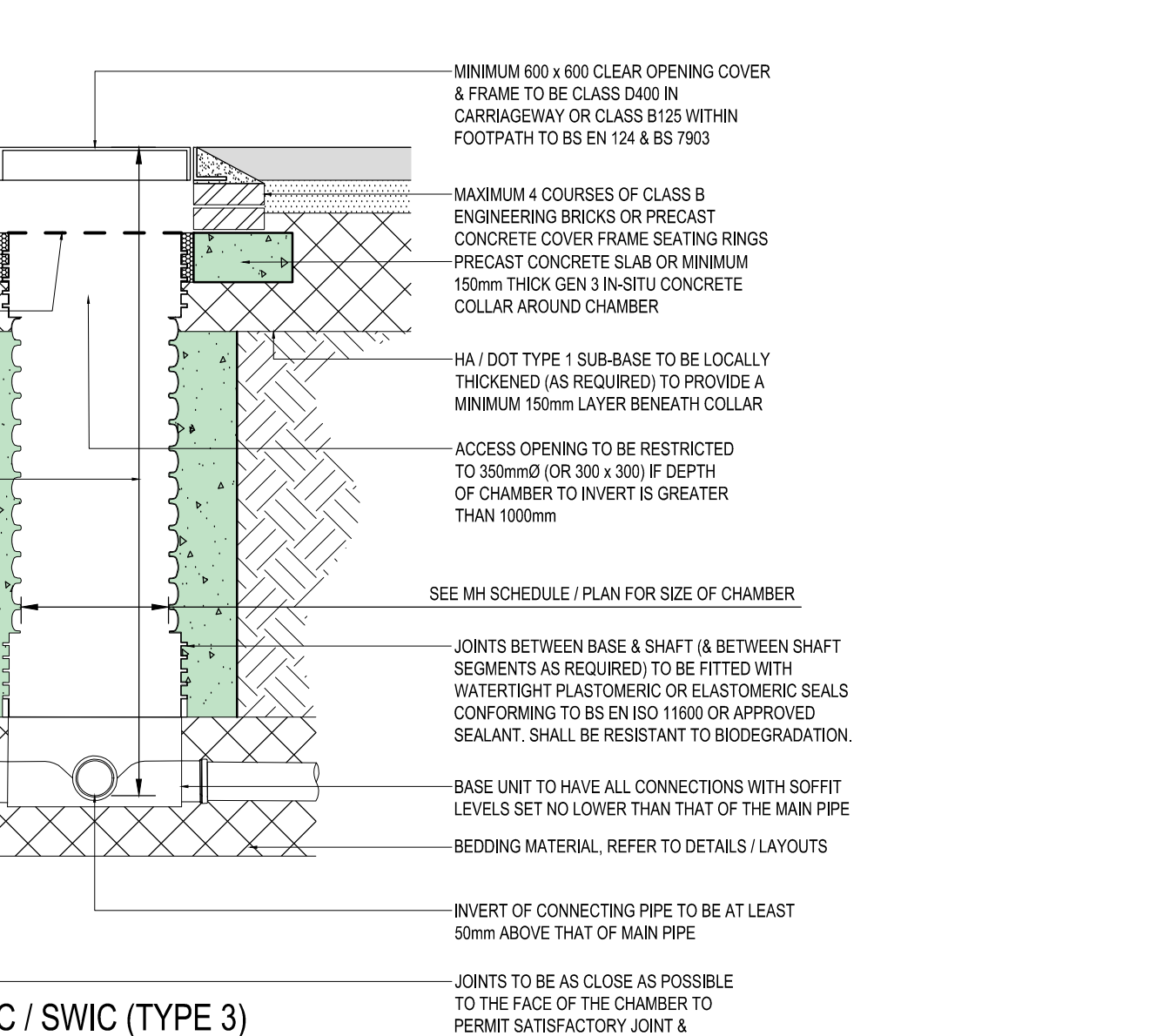
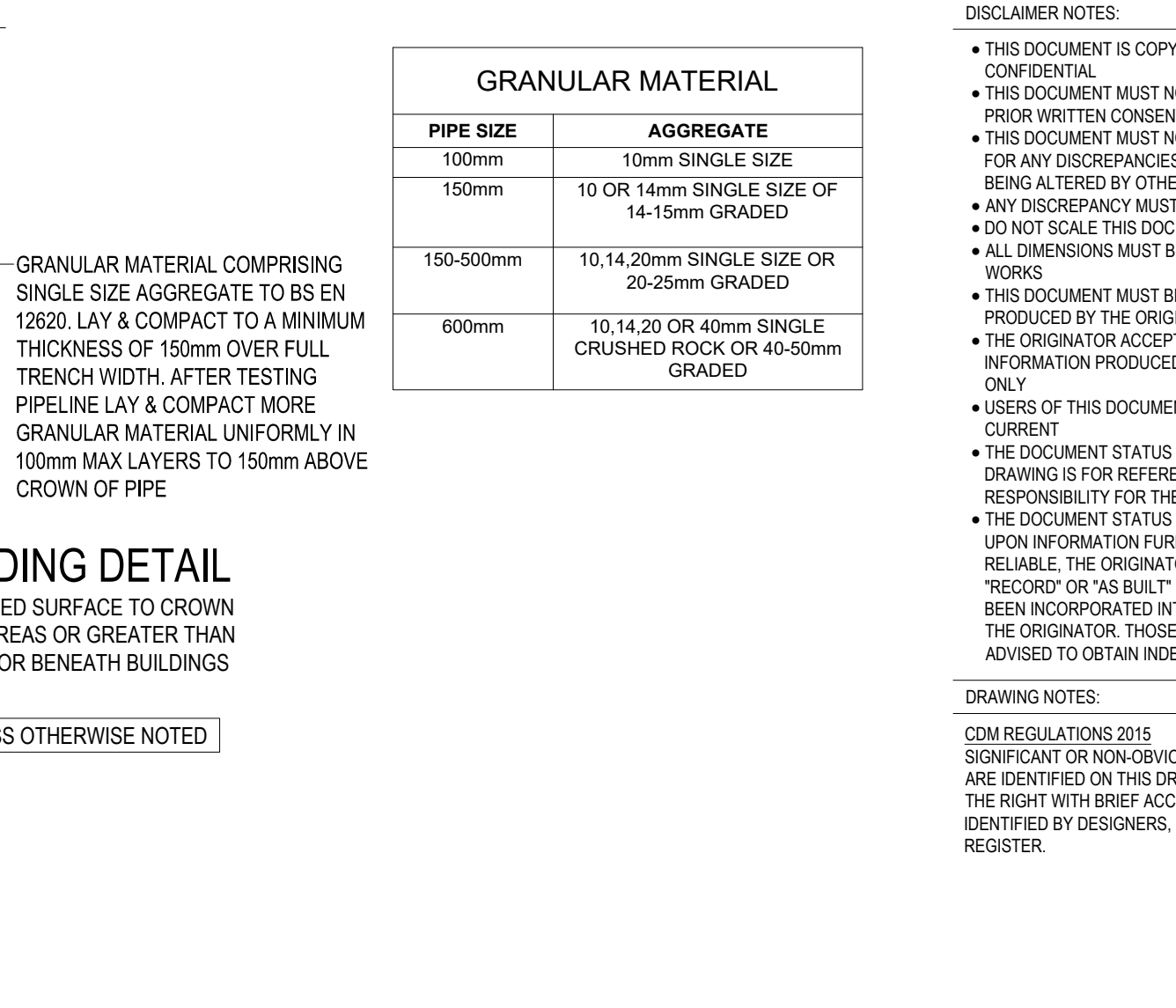
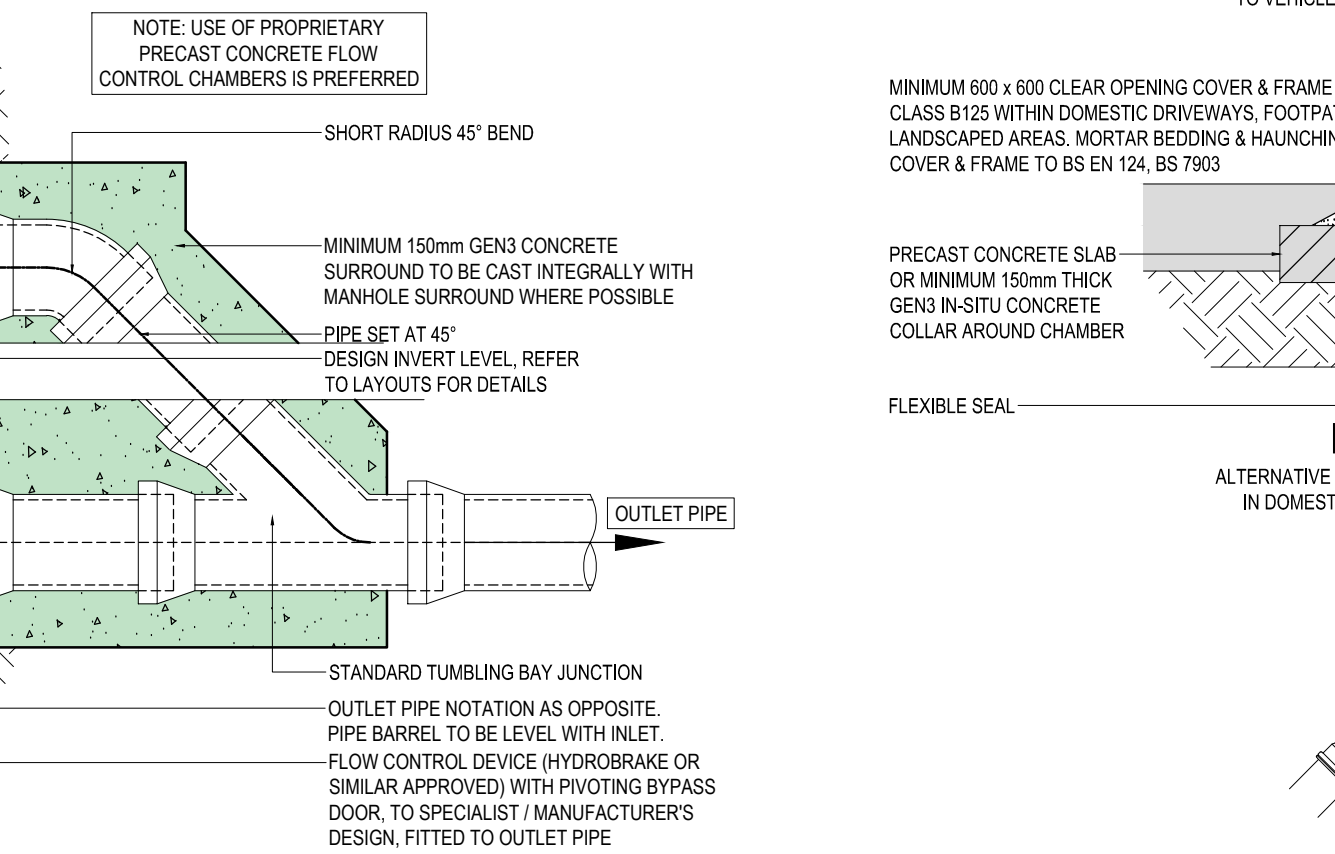
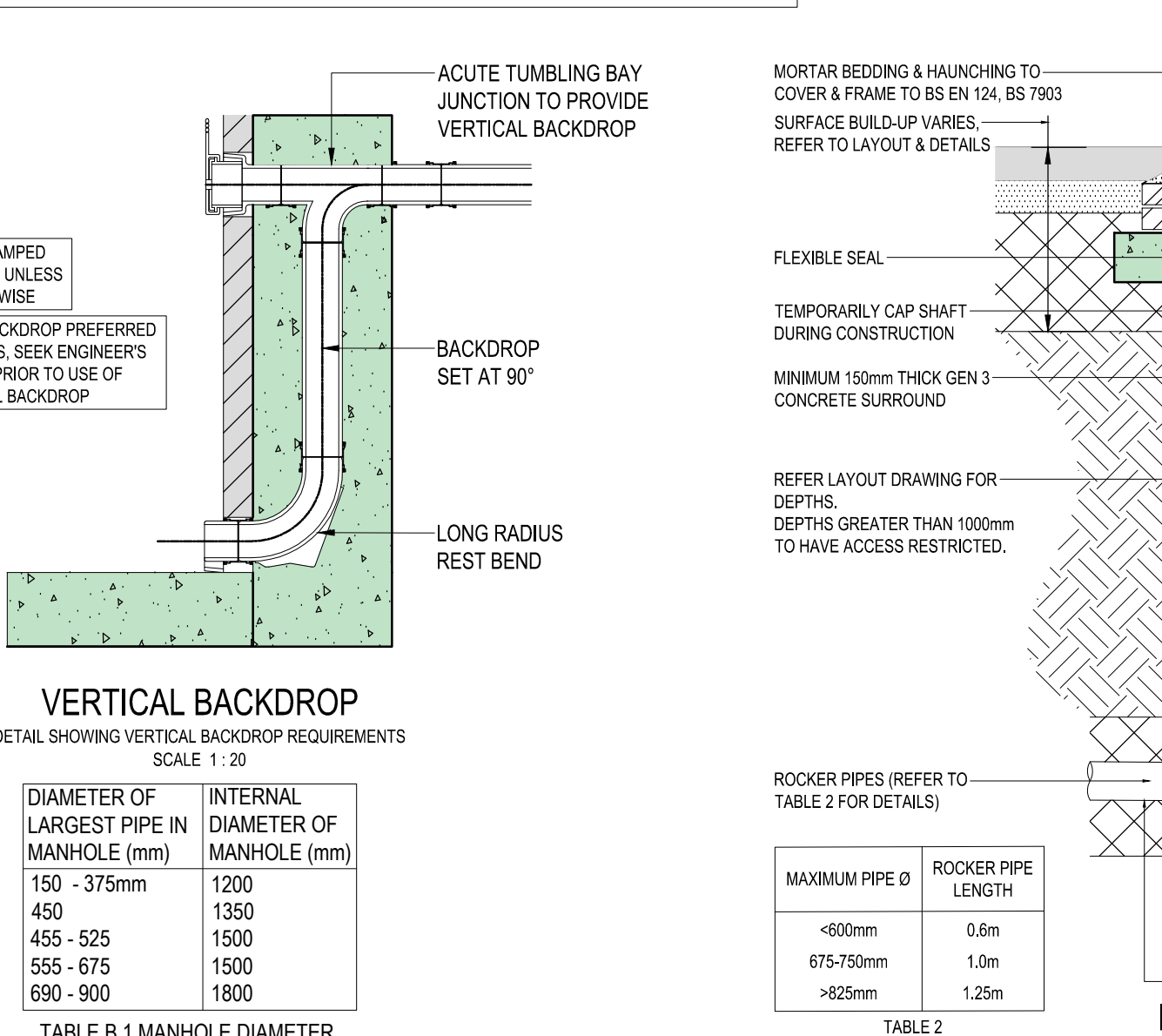
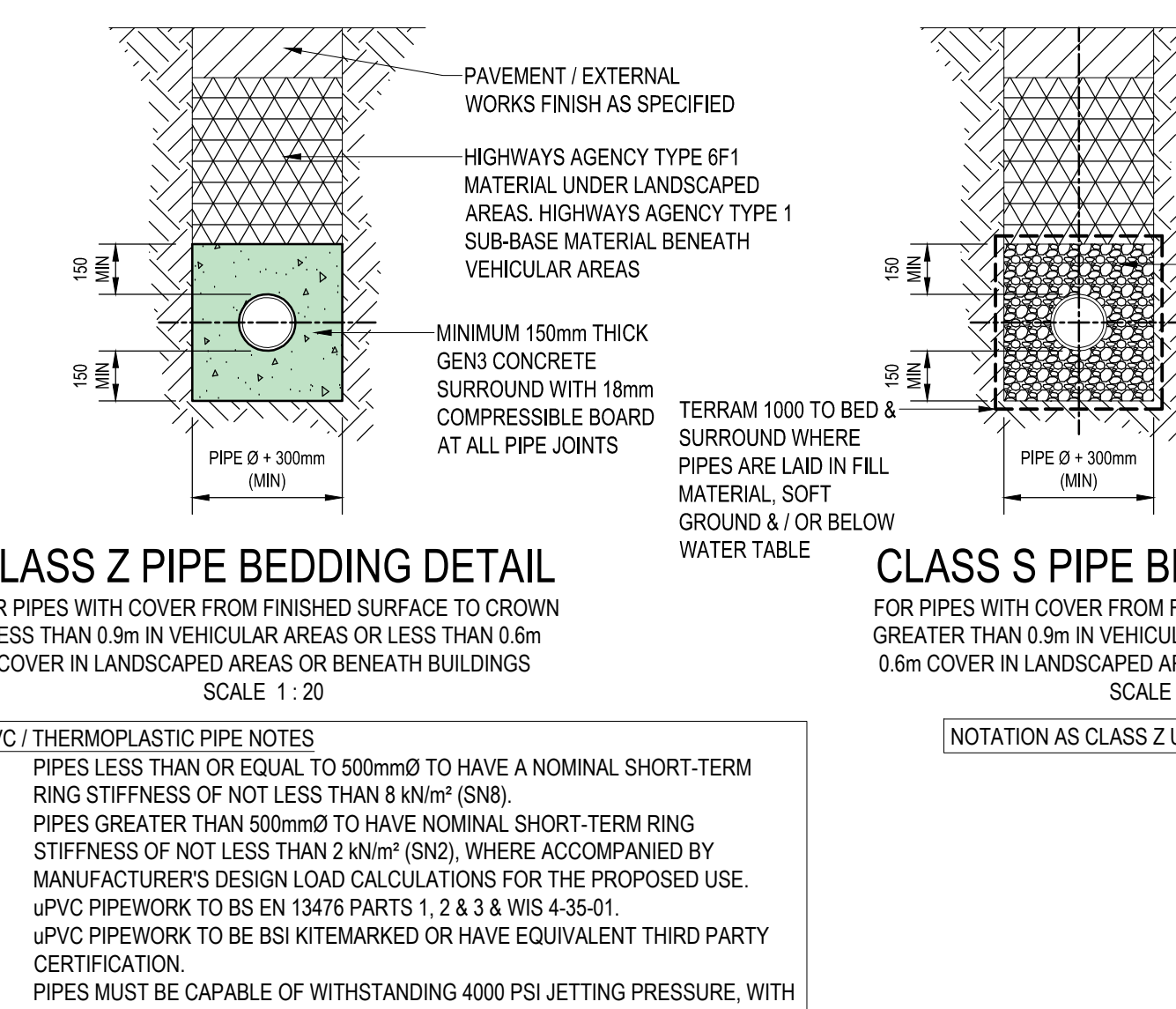
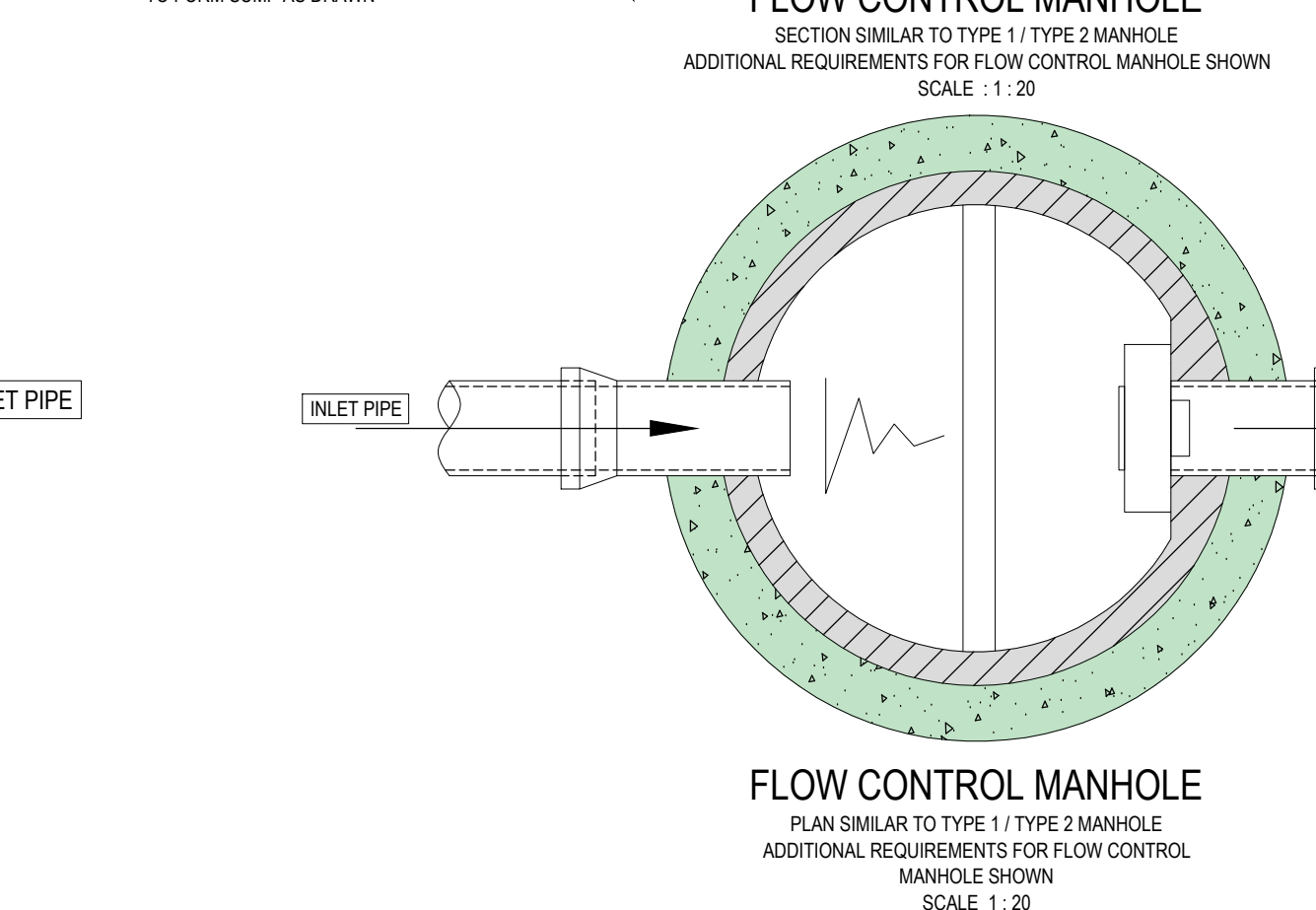
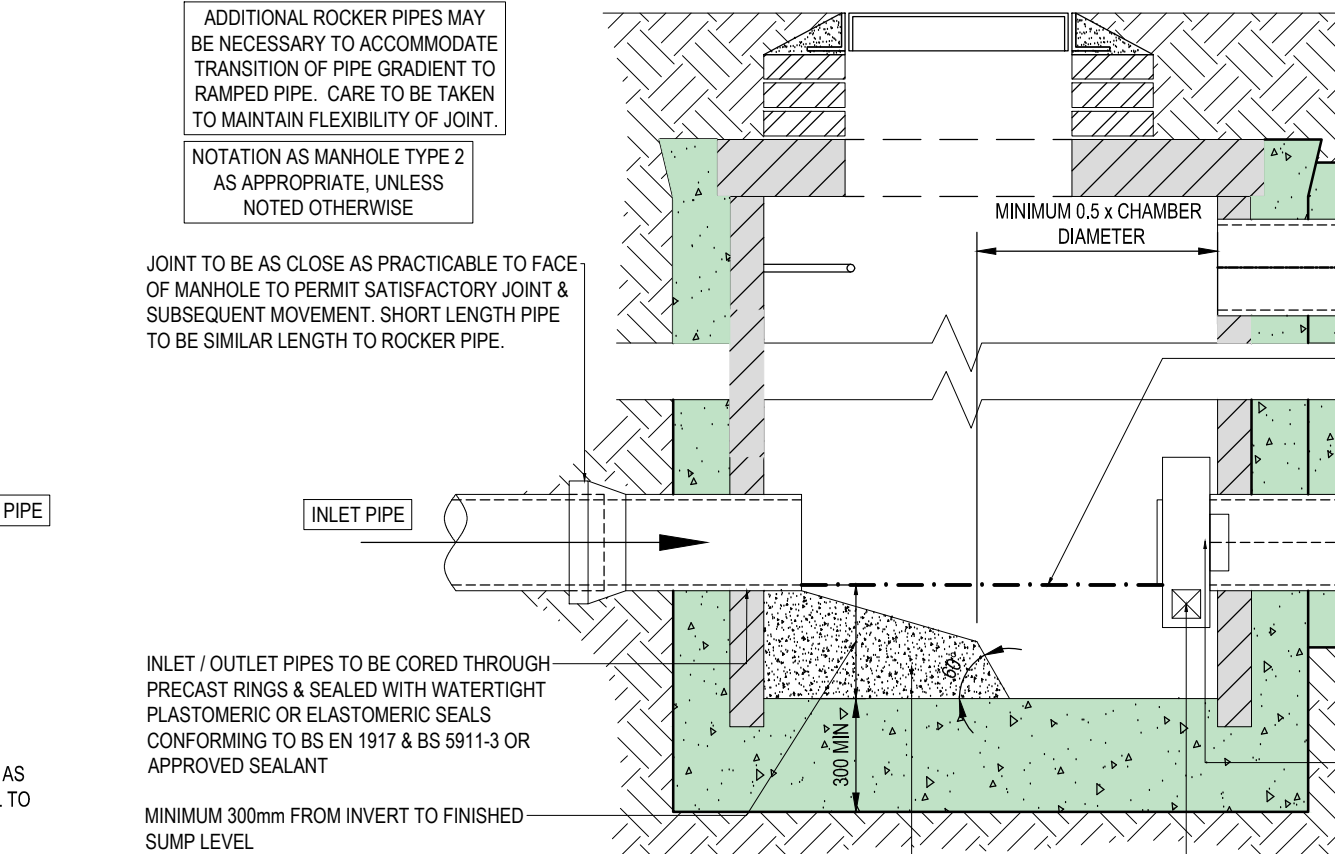
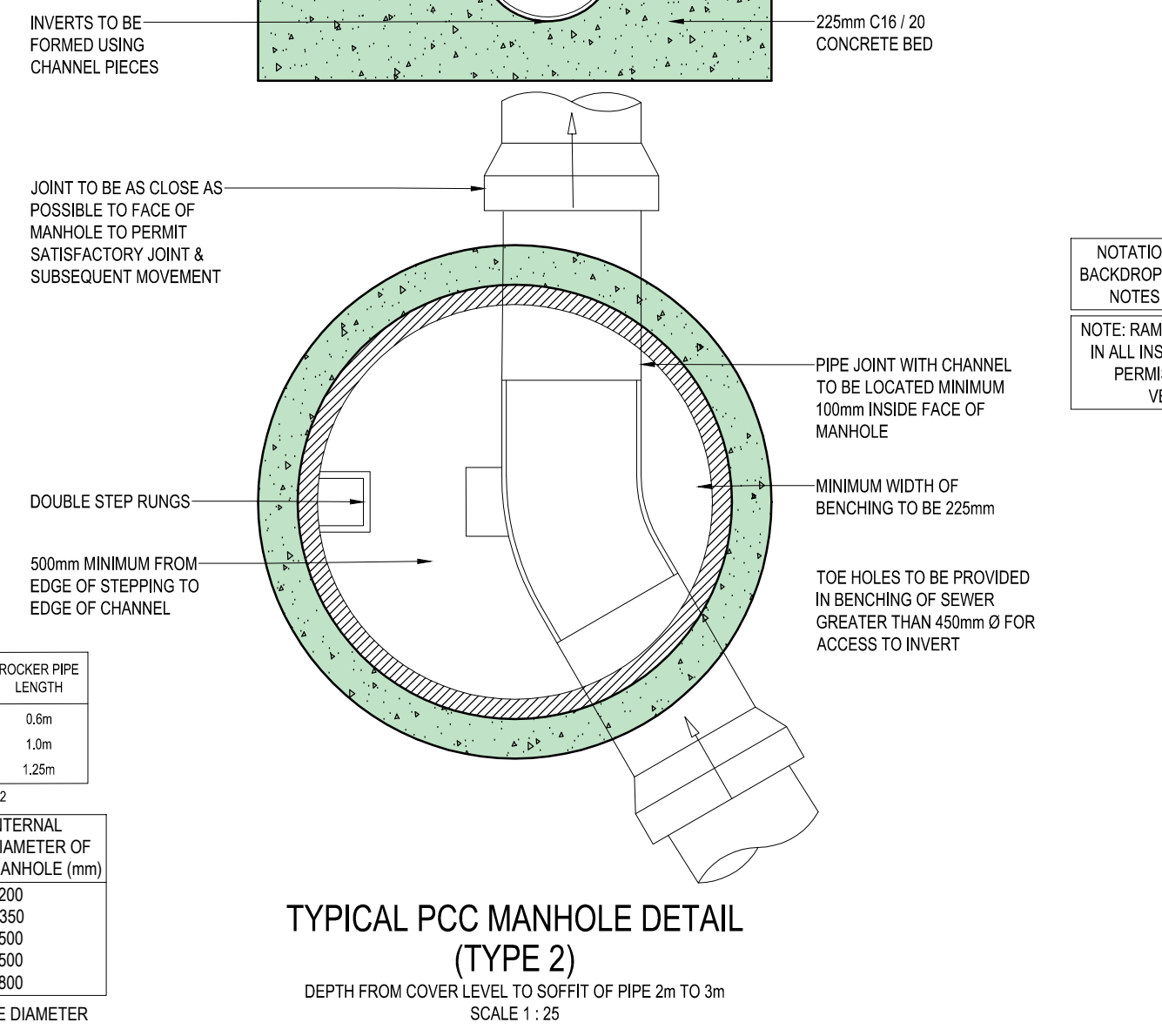
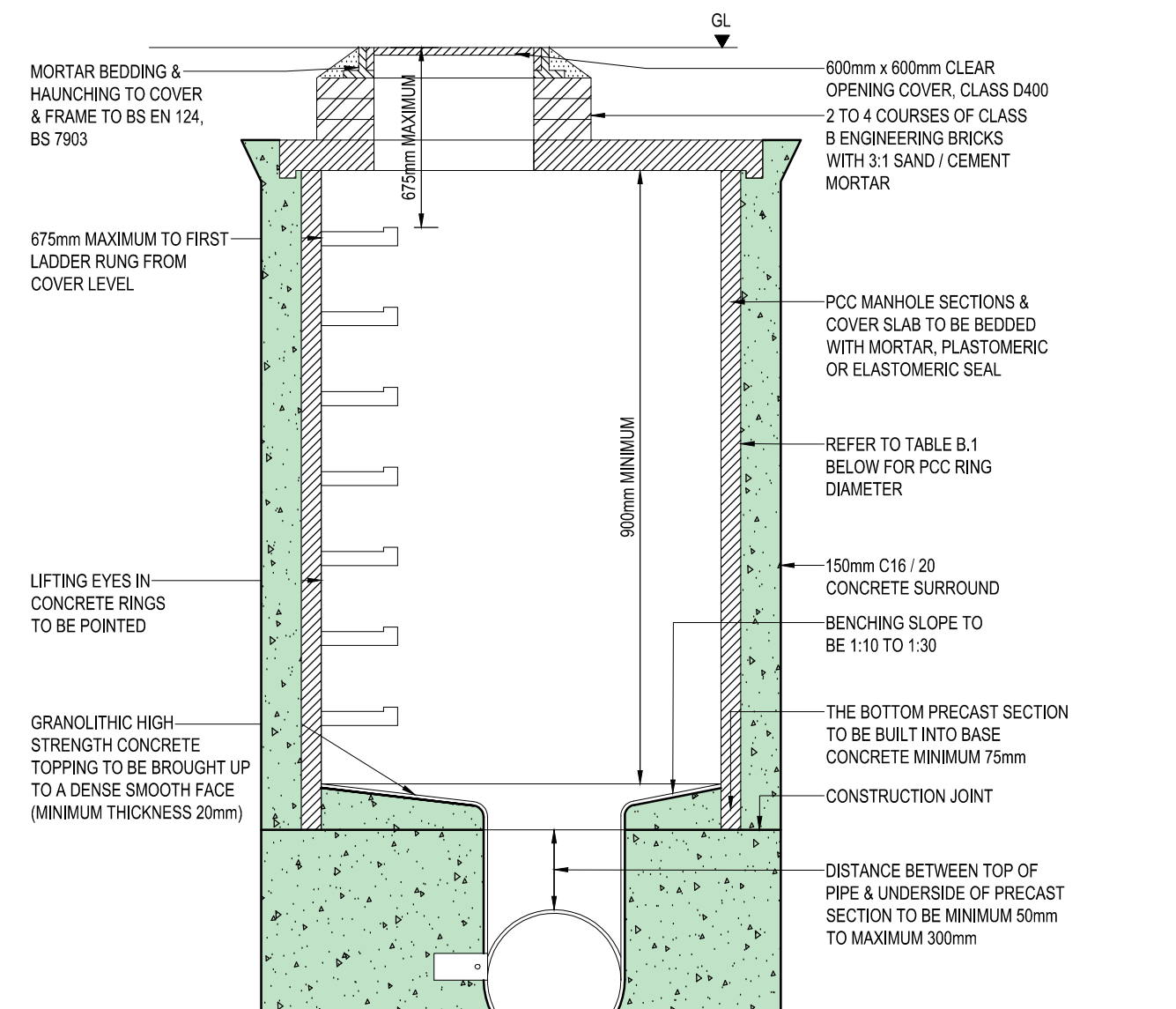
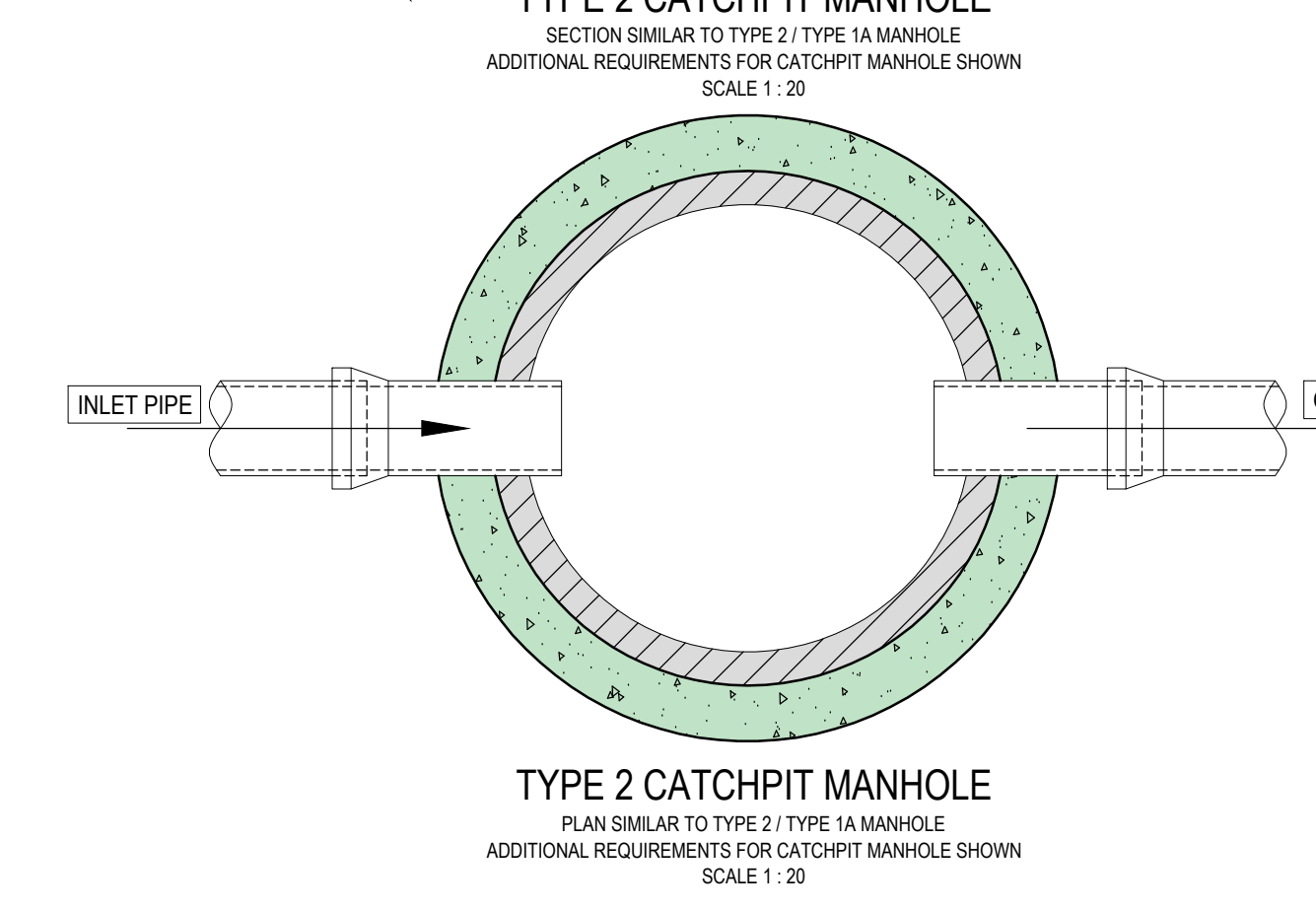
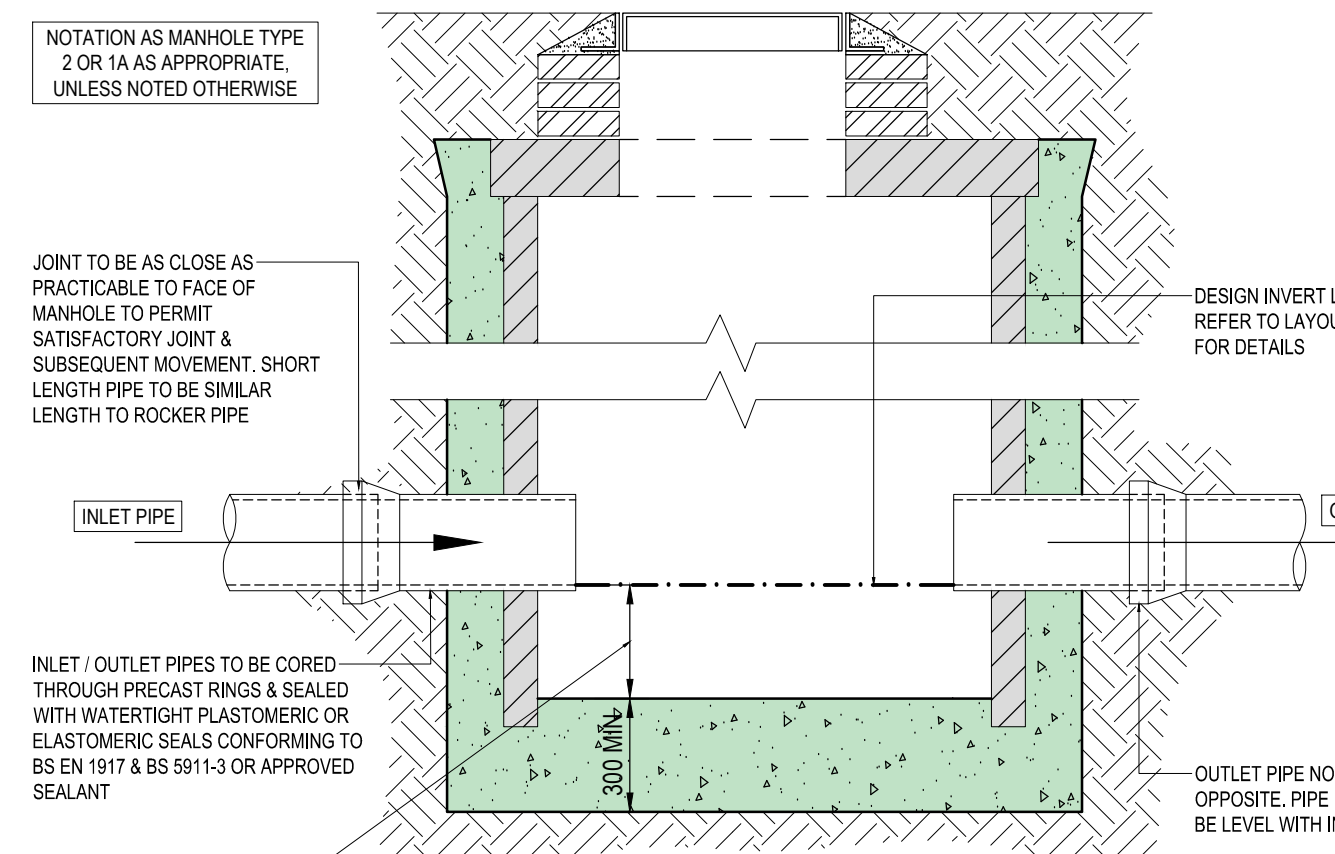
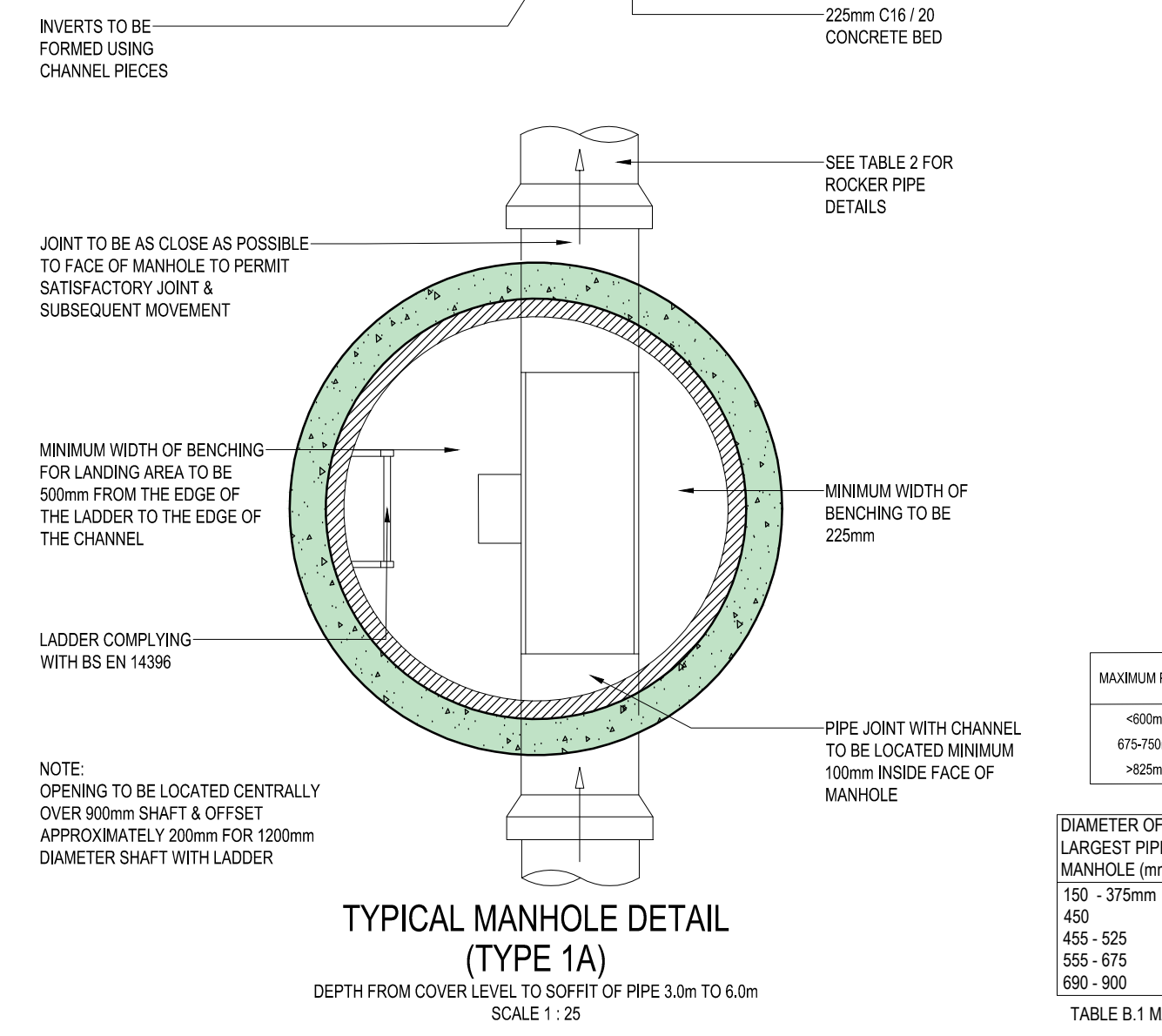
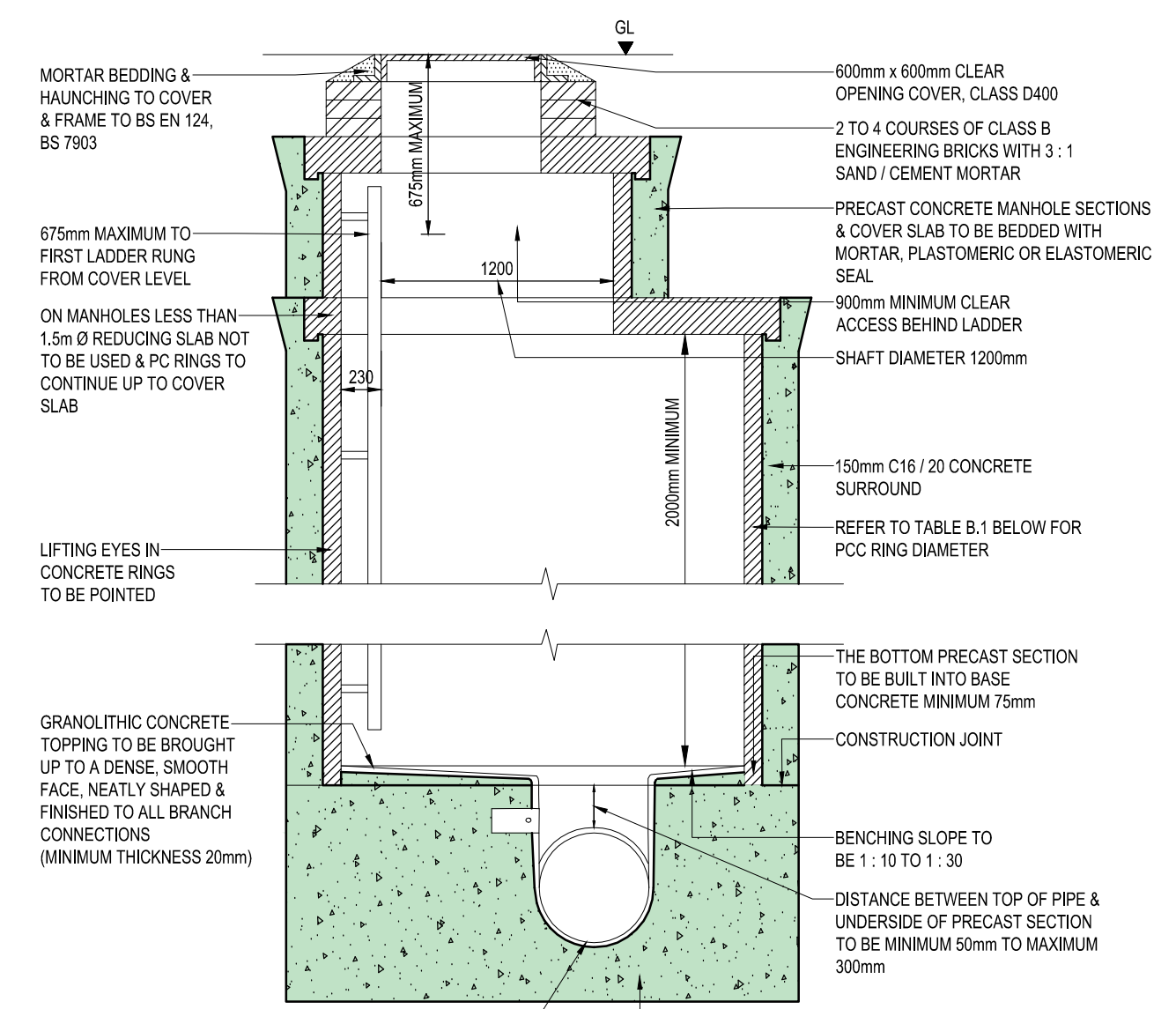
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SCALE: 1:200 @ A1 DATE: 22/01/2026

STATUS: DESCRIPTION: S2 FOR INFORMATION

DRAWING No: 5029426-RDG-XX-XX-D-C-110500

PROJECT: ORG: FUNCTION: SPATIAL: FORM: DISCIPLINE: NUMBER: REV: 5029426 RDG XX D C 110500 P03



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P01_INITIAL ISSUE	10/04/2026	PJ	TC
REV_DESCRIPTION	DATE	BY	CHKD
ORIGINATOR:	www.ridge.co.uk		



PROJECT NUMBER: 5029426

CLIENT: CREST NICHOLSON

IN ASSOCIATION WITH:

PROJECT:

LAND WEST OF GATESMEAD

TITLE: DRAINAGE DETAILS

DRAWN BY: PJ CHECKED BY: APPROVED BY:

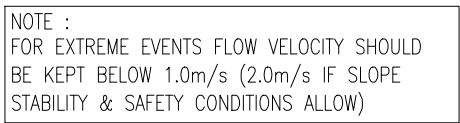
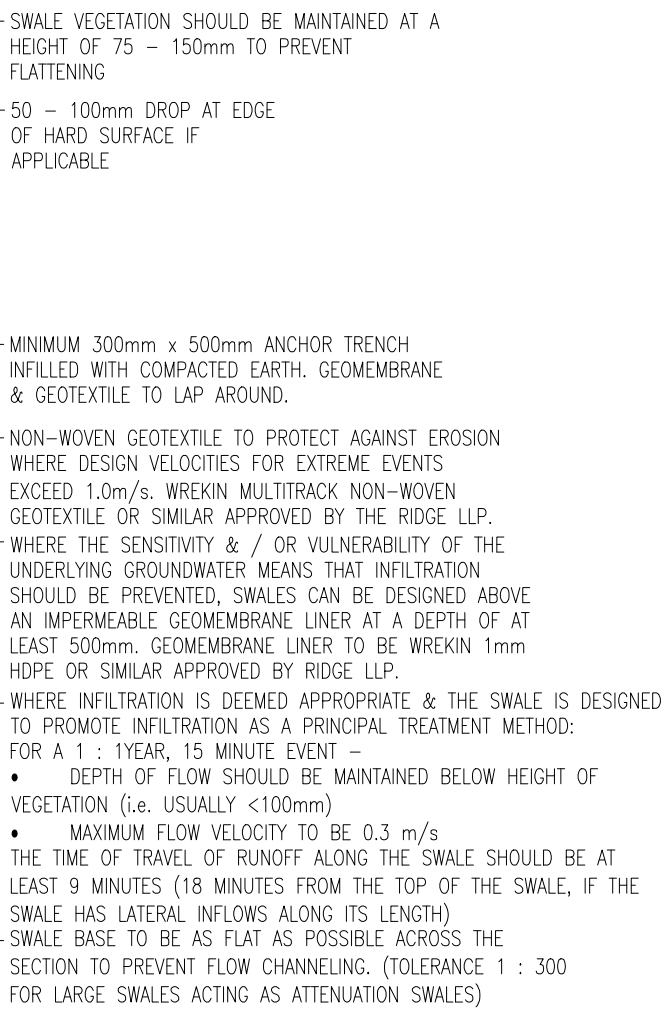
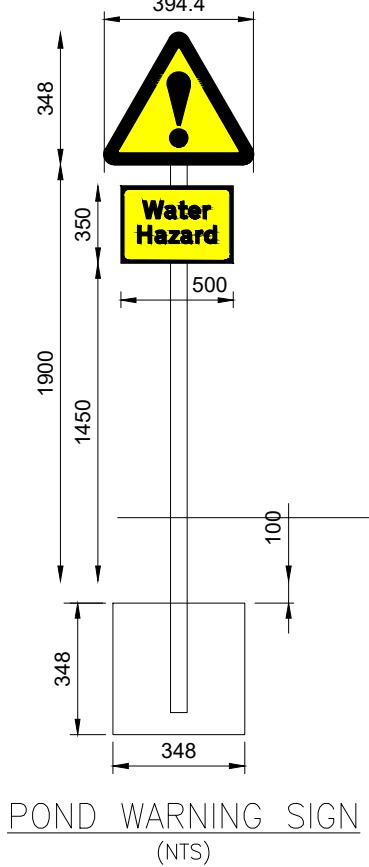
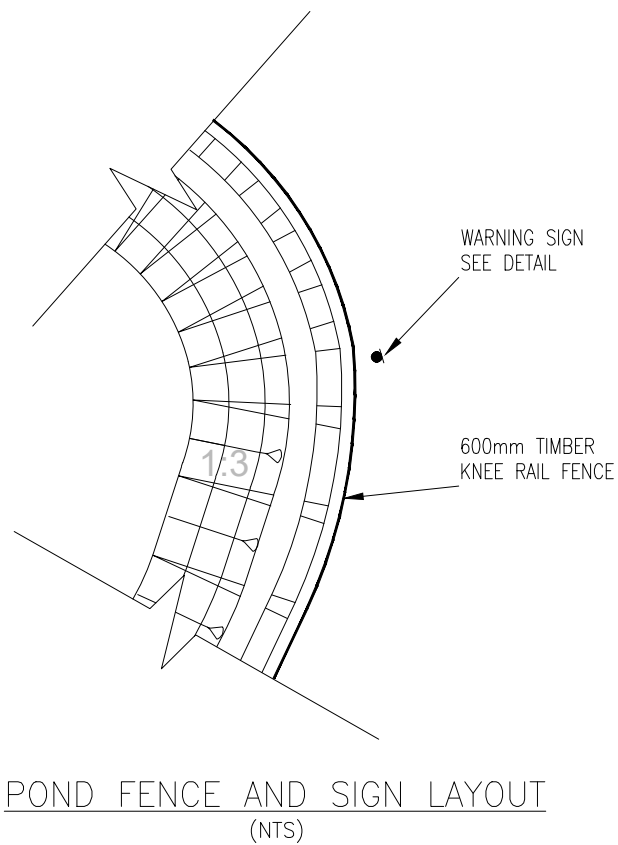
SCALE: AS SHOWN @ A1 DATE: 10/04/2026

STATUS: DESCRIPTION:

S2 FOR INFORMATION

DRAWING No: 5029426-RDG-XX-XX-D-C-110510

PROJECT: 5029426 RDG XX XX D C 110510 P01



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