

CONTENTS

1.0	INTRODUCTION	2
2.0	AMENDED EXTRACT FROM SITE SPECIFIC FLOOD REPORT	3
3.0	FUTURE SCENARIO SITE LEVELS PLANS	4
4.0	PROPOSED DRAINAGE CATCHMENT PLAN	5
5.0	FLOOD MODELLING HYDROLOGY EXTRACT	6
6.0	HYDRAULIC SUMMARY TABLE - IMPERMEABLE AREAS, DISCHARGE RATES AND ATTENUATION VOLUMES	7
7.0	AMENDED FIGURE FOR WETLANDS 1–3.....	9
8.0	FIXED CONTROLLING LIMITS TABLE	10

APPENDICES

APPENDIX 1 – FUTURE SCENARIO SITE LEVELS PLANS

APPENDIX 2 – PROPOSED DRAINAGE CATCHMENT PLAN

APPENDIX 3 – STRATEGIC SUDS HYDRAULIC CALCULATIONS

1.0 INTRODUCTION

- 1.1 This Addendum 1 forms part of the Flood Resilience Scheme submitted for endorsement under Schedule 3 paragraph 57 (“Flood Risk”) of the Town and Country Planning (Entertainment Resort Complex at Kempston Hardwick, Bedford) Special Development (No. 2) Order 2025.
- 1.2 This Addendum should be read together with the Flood Resilience Scheme dated 2 June 2026 and the plans and supporting material submitted with that Scheme.
- 1.3 This Addendum provides the additional figures, plans, extracts, hydraulic tables, calculations, and Fixed Controlling Limits required to explain and clarify the technical basis, controls and supporting information referred to in the Scheme, so that the Scheme and this Addendum can be read together as a clear and self-contained statement of the flood risk approach and Future Scenario.

2.0 AMENDED EXTRACT FROM SITE SPECIFIC FLOOD REPORT

2.1 **Figure 1** below identifies the Core Zone Watercourse, Stewartby Lake and the West Gateway Zone Existing Watercourse referred to in the Flood Resilience Scheme.

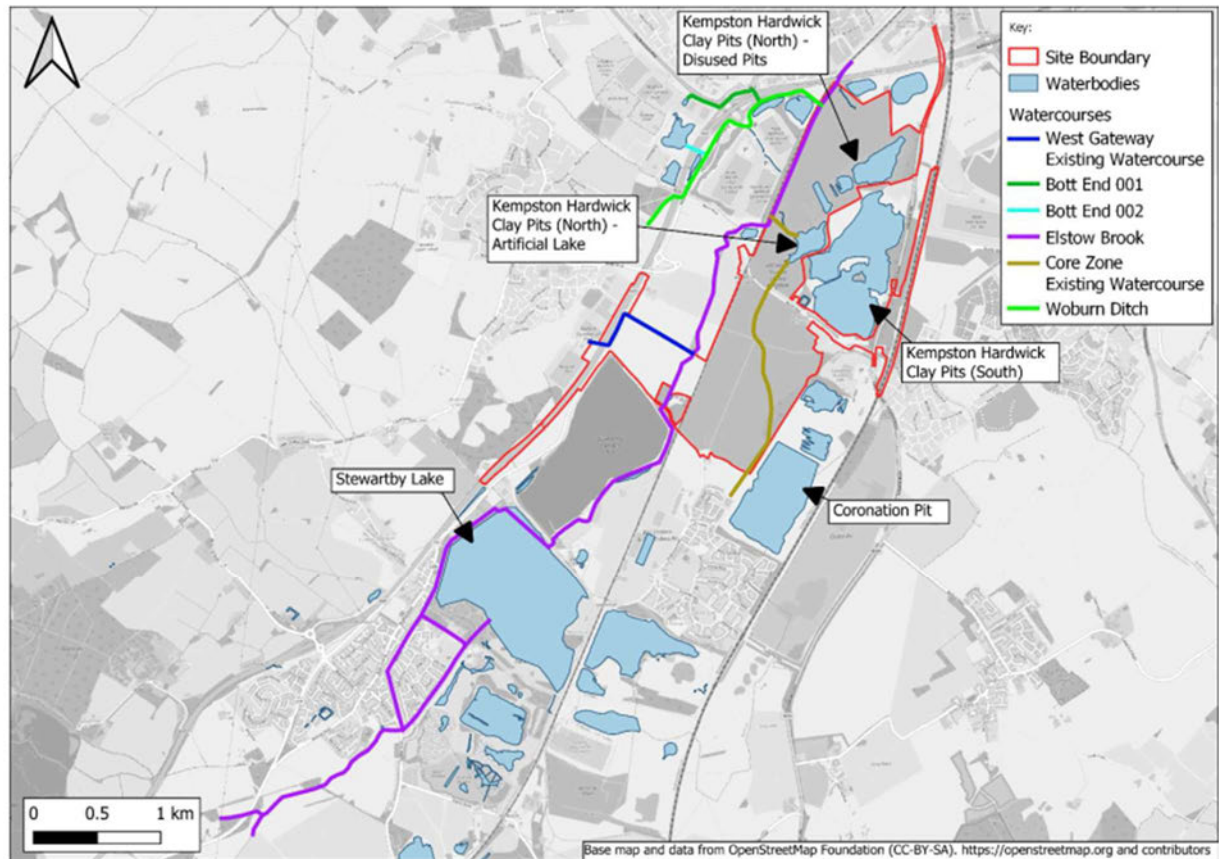


Figure 1 – Order Land Location and Waterbodies

3.0 FUTURE SCENARIO SITE LEVELS PLANS

- 3.1 The Future Scenario Site Levels Plans in **Appendix 1** of this Addendum show the proposed Site Levels used for the Future Scenario flood modelling across the parts of the Order land to which the Scheme applies. These plans should be read together with Section 6 of the Flood Resilience Scheme and Table 6.1, which sets out the corresponding minimum site level requirements derived from the flood modelling.
- 3.2 Where the plans do not show proposed Site Levels, either existing ground levels have been used for modelling purposes or the corresponding minimum site level requirements in Table 6.1 apply.
- 3.3 If the detailed site level configuration differs from the Future Scenario Site Levels Plans, the finished topography must still comply with the fixed controlling requirements of the Scheme and must not increase flood risk within or beyond the Order land.

4.0 PROPOSED DRAINAGE CATCHMENT PLAN

- 4.1 Appendix 2 shows the contributing onsite and offsite catchments relevant to the Proposed Strategic Surface Water Drainage Systems used for Updated Impermeable Areas in Tables 6.2 and 6.3 in Section 6 of the Flood Resilience Scheme.
- 4.2 Table 1 below, developed from Tables 5-6 to 5-8 of Reference Document 16, summarises the catchment area for each zone, the percentage impermeable, and the impermeable area that enters the drainage network for volumetric sizing of the Strategic SuDS.
- 4.3 For the Core Zone, Lake Zone and West Gateway Zone, detailed sub-catchments are based on:
- 100% impermeable for roads and waterbodies;
 - 90% impermeable for future parcels; and
 - 30% impermeable for existing landscaped areas.
- 4.4 Where isolated areas do not enter the drainage network, they have been excluded from the Strategic SuDS sizing and will continue to function under greenfield conditions.
- 4.5 For contributing areas outside the Order land, the catchments remain broadly consistent with Reference Document 16, but with some refinement to the catchment extents, including Manor Road Industrial Site as a cautious worst-case assumption.
- 4.6 The impermeable area values align with the hydraulic calculations in Appendix 3 to this Addendum.

Table 1 - Strategic Drained Areas

Catchment	Catchment Area (Ha)	Percentage Impermeable (%)	Impermeable Area (Ha)
West Gateway Zone	25.62	93	23.78
Core Zone	97.93	91	89.12
Lake Zone	85.56	84	72.50
Stewartby Residential Development	34.48	70	24.14
Coronation Pits	72.86	100	72.86
Coronation Business Park	14.53	90	13.08
Kempston Hardwick Clay Pits South	47.82	100	47.82
Manor Road Industrial Site	6.03	100	6.03
Core Zone Upstream Catchment	6.89	65	4.48

5.0 FLOOD MODELLING HYDROLOGY EXTRACT

5.1 **Figure 3** below shows the hydrology catchment areas and the wider flood modelling basis. Section 4 and Section 6 of the Scheme address different aspects of the Future Scenario: Section 4 sets out the conservative hydrological and flood modelling basis for assessing existing/proposed waterbodies, while Section 6 defines the proposed strategic surface water drainage design and volumetric sizing which is included in Appendix 3 of this Addendum.

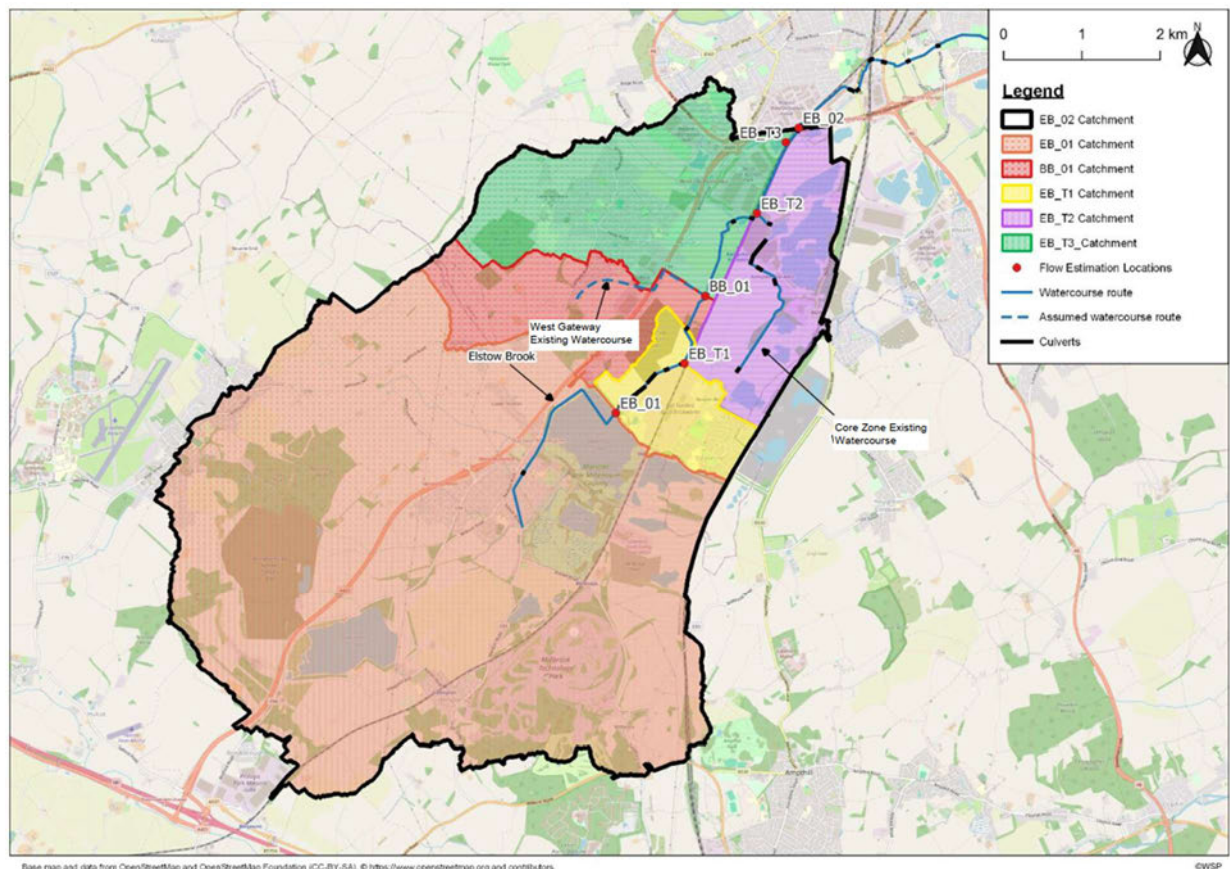


Figure 3 – Flow Estimation Locations and Catchments

Final Catchment Data

Flow Node ID	EB_01	EB_T1	BB_01	EB_T2	EB_T3	EB_02
Catchment X	501050	502250	502100	502850	503300	503400
Catchment Y	242650	244300	244150	245250	246400	246400
Centroid X	498736	502578	500231	503096	501180	499807
Centroid Y	240913	242982	244270	243994	245586	242119
AREA	33.50	2.09	3.35	4.10	6.36	49.41

6.0 HYDRAULIC SUMMARY TABLE - IMPERMEABLE AREAS, DISCHARGE RATES AND ATTENUATION VOLUMES

6.1 Table 2 below summarises the principal impermeable areas, discharge rates and attenuation volumes and cross-refers those values to the supporting hydraulic calculations in Appendix 3 to this Addendum, providing a concise technical reconciliation to Tables 6.2 and 6.3 of the Flood Resilience Scheme.

Table 2 – Hydraulic Summary Table

Catchment Location	Updated Impermeable Area (Ha)	Discharge Rate based on 3.13 l/s/ha (l/s)	Max Attenuation Volume 1 :100 year +40%CC (m ³)	Addendum Appendix Calculation Reference
West Gateway Zone				
Strategic SuDS	17.23	53.93	14,425	Page 5 “Max resident volume”
NH Pond 1	1.20	3.75	1,186	Page 34 QSE “NH 1 Pond”
NH Pond 2	1.63	5.10	1,611	Page 36 QSE “NH 2 Pond”
EWR Parcel	3.38	10.57	3,340	Page 38 QSE “EWR Parcel”
Future Road	0.34	1.06	335	Page 40 QSE “Future Road”
Core and Lake Zone				
Strategic Clay Pits Wetlands Basins Including Artificial Lake	329.95	824.88	267,414	Page 31 “Max resident volume”

6.2 For the purposes of this Addendum, paragraph 6.6.3 of the Flood Resilience Scheme is updated as follows:

As shown in the Strategic SuDS Hydraulic Calculations, the Strategic Clay Pits Wetlands Basins together with Kempston Hardwick Clay Pits (North) – Artificial Lake will provide the principal surface water storage for the Order land, totalling 267,414 m³. Wetland 1 provides a maximum attenuation storage volume of 29,107 m³, Wetlands 2 and 3 provide 208,090 m³, and Kempston Hardwick Clay Pits (North) – Artificial Lake provides a maximum volume of 30,217 m³.

6.3 For the purposes of this Addendum, paragraph 6.3.1 of the Flood Resilience Scheme is updated as follows: The maximum attenuation volume of the basin is 14,425m³.

6.4 For the purposes of this Addendum, Tables 6.2 and 6.3 of the Flood Resilience Scheme are updated as follows:

Table 6.2 – West Gateway Zone Runoff Rates and Volumes

Catchment Location	Reference Doc 16 Drainage Strategy Impermeable Area (Ha)	Updated Impermeable Area (Ha)	Difference (Ha)	Discharge Rate based on 3.13 l/s/ha (l/s)	Max Attenuation Volume 1 :100 year +40%CC (m ³)
West Gateway Zone	27	n/a	n/a		
Strategic SuDS	n/a	17.23		53.93	14,425
NH Pond 1		1.20		3.75	1,186
NH Pond 2		1.63		5.10	1,611
EWR Parcel		3.38		10.57	3,340
Future Road		0.34		1.06	335
TOTAL	27	23.78	-3.22	73.41	20,897

Table 6.3 – Core and Lake Zone Runoff Rates and Volumes

Catchment Location	Reference Doc 16 Drainage Strategy Impermeable Area (Ha)	Updated Impermeable Area (Ha)	Difference (Ha)	Discharge Rate based on 2.5 l/s/ha (l/s)	Max Attenuation Volume 1 :100 year +40%CC (m ³)
Core and Lake Zone	171.2	161.54	-9.64	403.85	172,020
Catchments outside the Order land	138	168.41	+30.41	421.03	95,394
TOTAL	309.2	329.95	+20.74	824.88	267,414

6.5 Appendix 3 to this Addendum contains the hydraulic calculations supporting the key values summarised above. Those calculations demonstrate the basis of the storage volumes and discharge rates used in the Scheme and show that they remain consistent with the Environmental Statement, including by maintaining discharge rates at the equivalent greenfield runoff rate.

7.0 AMENDED FIGURE FOR WETLANDS 1–3

7.1 **Figure 4** below identifies the location of Wetlands 1, 2 and 3 within the Lake Zone Clay Pits Wetland Basins, and clarifies that those wetlands form part of the principal strategic surface water storage referred to in Section 6 of the Scheme.

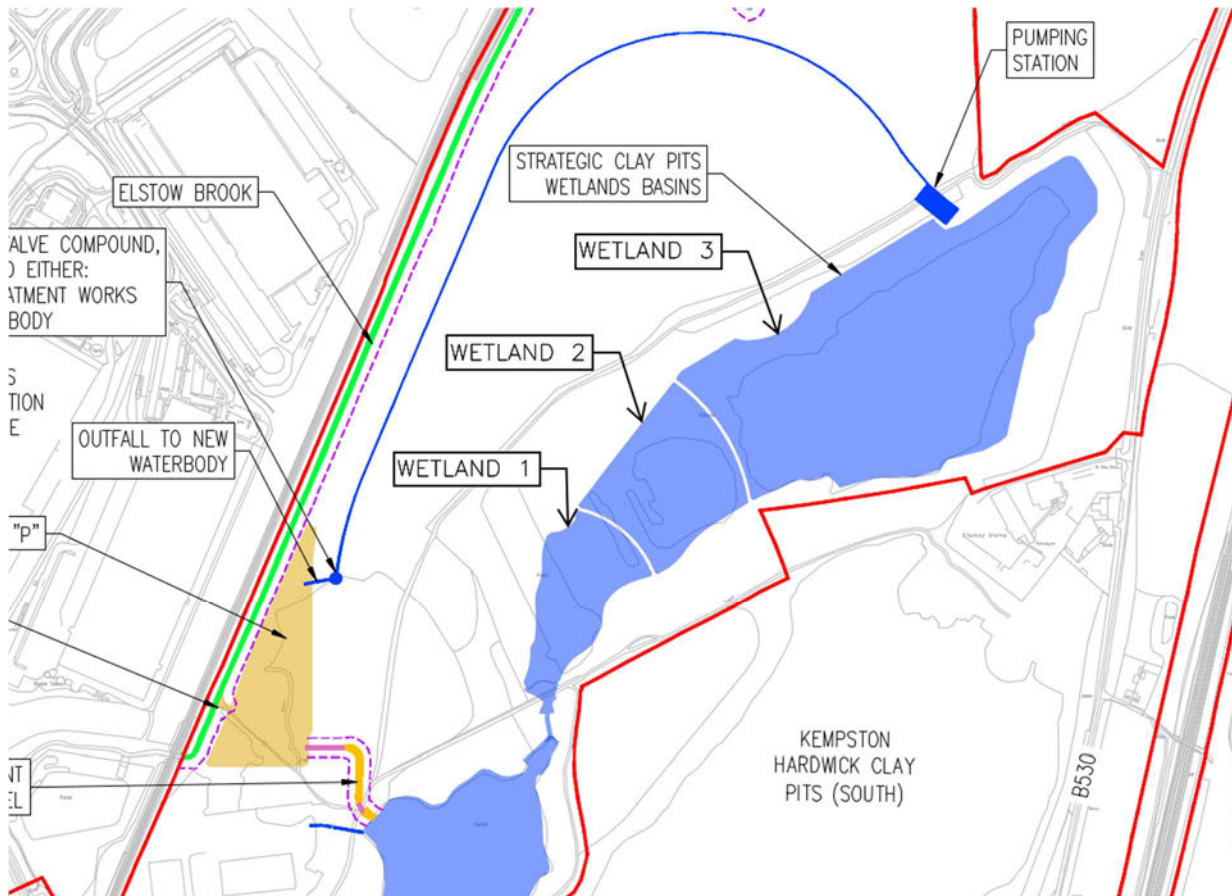


Figure 4 - Proposed Strategic Surface Water Drainage Plan showing Wetlands 1–3.

8.0 FIXED CONTROLLING LIMITS TABLE

- 8.1 Table 3 summarises the fixed controlling requirements of the Scheme, distinguishes them from illustrative or model-only assumptions, and sets out the governance and assurance arrangements by which compliance will be secured. It explains the principal controls governing future design limits, exceedance routing, future mitigation measures and the treatment of residual ponding within the Future Scenario.
- 8.2 This table is the summary of Fixed Controlling Limits for the Future Scenario and should be read in conjunction with Sections 6 and 7 of the Flood Resilience Scheme.
- 8.3 The Future Scenario Site Levels Plans (included in **Appendix 1** of this Addendum), and the minimum site levels set out in Table 6.1 of the Flood Resilience Scheme, are fixed controlling requirements of the Scheme. Future designs and construction shall not provide finished levels below those controlling levels. Where the proposed Future Scenario Site Level Plans show levels above the minimum levels set out in Table 6.1, those higher levels shall govern.

Table 3 – Fixed Controlling Limits

Item	Description	Controlling Limit	Location in Condition 57 Flood Resilience Scheme
1.	Minimum Site Levels	Minimum site levels as defined in 6.8 will be no less than the values in Table 6.1 - Flood Modelling Water Levels, for individual node locations and surrounding areas as identified on Flood Modelling Node Locations Plan. Outcome – to reduce fluvial and pluvial flood risk on the Order land from watercourses and waterbodies.	Table 6.1 - Flood Modelling Water Levels; Appendix A Flood Maps and Plans - Flood Modelling Node Locations Plan
2.	Site Levels	Site Levels shown on the Future Scenario Site Levels Plans, may be refined providing that: - finished levels are not below the applicable controlling levels; - flood exceedance routing is maintained or improved; and - there is no increase in pluvial or fluvial flood risk within or beyond the Order land. Outcome – no increase to fluvial and pluvial flood risk.	Future Scenario Site Levels Plans, Table 6.1, Appendix A Flood Maps and Plans - Exceedance Plan 2, Future Scenario Flood Maps
3.	Proposed Strategic Surface Water Drainage	Where the detailed design of the proposed strategic surface water drainage system differs from the arrangement described in Section 6, it must: restrict discharge rates to the required limits;	Section 6: Proposed Strategic Surface Water Drainage

Item	Description	Controlling Limit	Location in Condition 57 Flood Resilience Scheme
		- provide the required attenuation volumes for the contributing drained area; - maintain the required site levels and exceedance routing; and - maintain water quality in accordance with the Simple Index Approach. Outcome – no increase to fluvial and pluvial flood risk.	Systems, Addendum 1.
4.	Site Allocation	Land uses will be allocated sequentially in accordance with NPPF, prioritising the lowest probability of flood risk, and where applicable based on the land use vulnerability classification, using Condition 57 Future Scenario fluvial and pluvial flood maps. Outcome – protecting property and users from flood risk and future climatic change.	Section 6 Future Scenario Proposals, Appendix A Flood Maps and Plans
5.	Exceedance Routing	Exceedance routing shown on Exceedance Plan 2 may be refined as part of Site Levels, providing that: - Overland surface water flow paths are directed away from people and property. - Flows are managed to safe areas i.e. strategic SuDS, landscaped areas, car parking. - Safe access and egress routes are maintained. - There is no increase to flood risk outside of the Order land. Outcome – protecting property and users from flood risk and future climatic change.	Appendix A Flood Maps and Plans Exceedance Plan 2
6.	Future Surface Water Flood Risk Mitigation	Residual surface water ponding shown on Flood Map 8 (Future Scenario Pluvial Design Flood Event 1% Annual Exceedance Probability + 40%) will be controlled through mitigation measures in Section 6 and 7 of the Scheme as required. The response at each location may include single or multiple measures (changes to site levels, proposed surface water drainage, site allocation) and will make sure that: - There is no increase to fluvial and pluvial flood risk; - Property and users are protected from flood risk and future climatic change; - discharge rates are restricted to the required limits; - attenuation volumes are provided for the contributing drained area; - finished levels are not below the applicable controlling levels;	Section 6 and 7, Appendix A Flood Maps and Plans, Flood Map 8

Item	Description	Controlling Limit	Location in Condition 57 Flood Resilience Scheme
		• flood exceedance routing is maintained or improved; Outcome – to mitigate residual surface water flood risk ponding.	

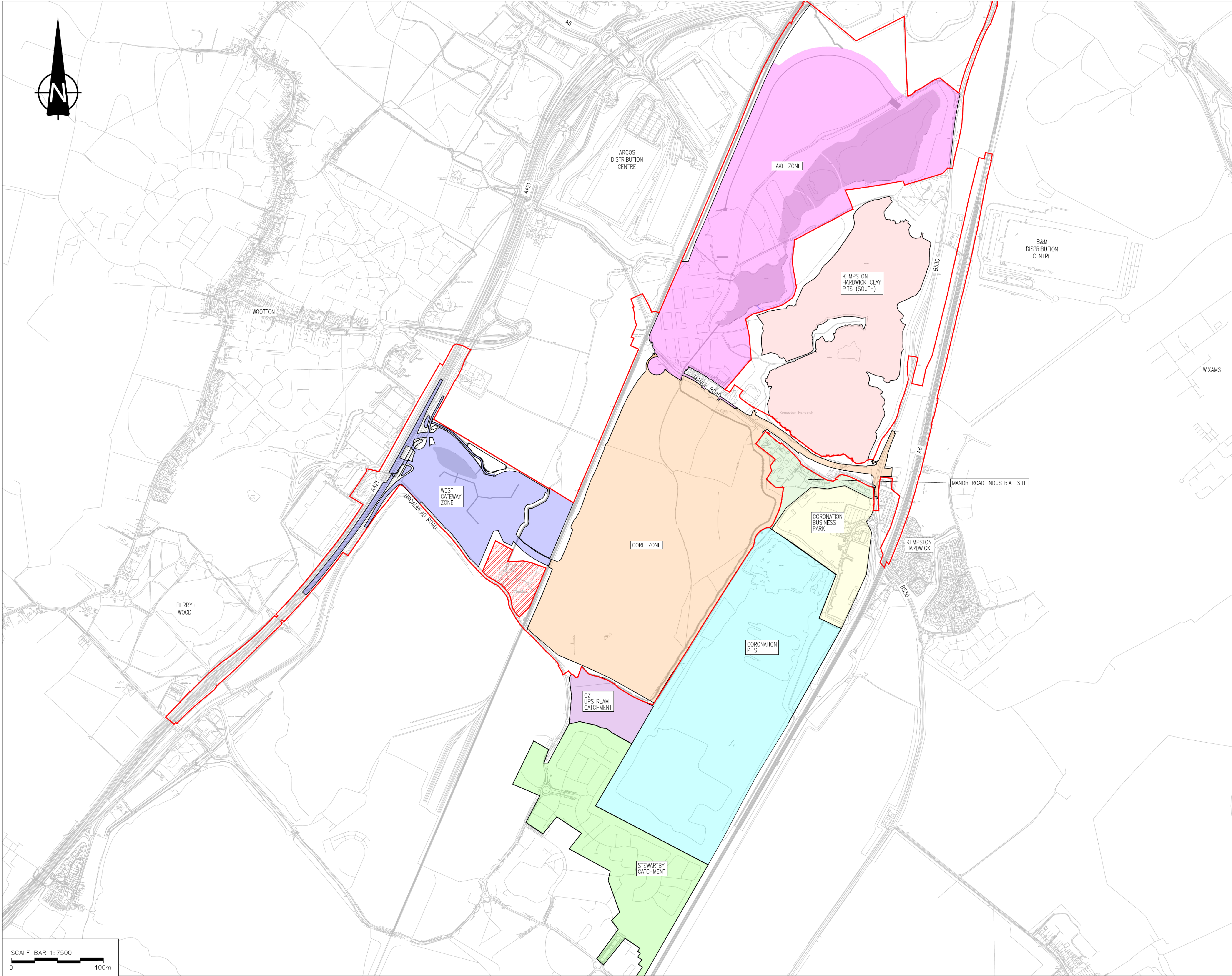
Governance and assurance

- 8.4 Compliance with the fixed controlling limits will be secured through the Promoter's project governance, design assurance, technical review, construction control and verification processes.
- 8.5 During design development and construction, the authorised works will be required to comply with the fixed controlling limits set out in this Addendum, including minimum site levels, strategic drainage performance requirements, exceedance routing principles and the required flood risk outcomes.
- 8.6 Any change to the fixed controlling limits will only be permitted where it can be shown that the required flood risk performance is maintained or improved.

APPENDIX 1 – FUTURE SCENARIO SITE LEVELS PLANS



APPENDIX 2 – PROPOSED DRAINAGE CATCHMENT PLAN



KEY	
	SITE BOUNDARY
	EXCLUDED FROM SITE BOUNDARY

DRAINED AREA SUMMARY		
LOCATION	IMPERMEABLE AREA	LEGEND
WEST GATEWAY ZONE	23.78 HA	
CORE ZONE	89.12 HA	
LAKE ZONE	72.50 HA	
STEWARTBY RESIDENTIAL DEVELOPMENT	24.14 HA	
CORONATION PITS	72.86 HA	
CORONATION BUSINESS PARK	13.08 HA	
KEMPSTON HARDWICK CLAY PITS SOUTH	47.82 HA	
MANOR ROAD INDUSTRIAL SITE	6.03 HA	
CZ UPSTREAM CATCHMENT	4.48 HA	

Reproduced from the Ordnance Survey map with the permission of the Controller of His Majesty's Stationary Office. Licence No. 100031673 Crown copyright reserved.

Drawing Status: For Endorsement	
Scale: 1:7500 © A1	
Sheet Name: DRAINAGE CATCHMENT AREAS TO STRATEGIC SUDS PLAN.	
Sheet No.: SHEET 01 OF 01	Rev #: P01

APPENDIX 3 – STRATEGIC SUDS HYDRAULIC CALCULATIONS

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 West Gateway Zone Strategic SuDS Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: Checked by: Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase (1)	Company Address: WSP UK	



West Gateway Zone Strategic SUDS (UDX)

Type : Pond

Dimensions

Exceedance Level (m)	34.000
Depth (m)	2.000
Base Level (m)	32.000
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.017
Total Volume (m³)	17692.878

Depth (m)	Area (m²)	Volume (m³)
0.000	9195.568	0.000
1.700	11668.610	17692.878
2.000	12129.426	21262.360

Inlets

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment 9 Catchment 8 Catchment 10
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	2.006
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

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

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	West Gateway Zone Strategic SUDS (UDX) (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	1.006
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	232.431
Friction Scheme	Manning's n
n	0.03

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 West Gateway Zone Strategic SuDS Surface Water Drainage Calculations		Date: 16/06/2026			
		Designed by: [REDACTED]	Checked by: [REDACTED]		Approved By: [REDACTED]
Report Details: Type: Outfall Details Storm Phase: Phase (1)		Company Address: WSP UK [REDACTED]			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
MH21	Free Discharge			

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 West Gateway Zone Strategic SuDS Surface Water Drainage Calculations	Date: 16/06/2026			
	Designed by: [Redacted]		Checked by: [Redacted]	Approved By: [Redacted]
Report Title: Rainfall Analysis Criteria	Company Address: WSP UK [Redacted]			

Runoff Type	Dynamic
Output Interval (mins)	1
Time Step	Shortest
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall		
FEH22		Type: FEH
Site Location	GB 503750 246700 TL 03750 46700	
Rainfall Version	2013	
Data Type	Catchment	
Summer	☒	
Winter	☒	

Return Period	
Return Period (years)	Increase Rainfall (%)
100.0	40.000
Storm Durations	

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 West Gateway Zone Strategic SuDS Surface Water Drainage Calculations		Date: 16/06/2026			
		Designed by:	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase (1)		Company Address: WSP UK			



FEH22: 100 years: Increase Rainfall (%): +40: 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. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
West Gateway Zone Strategic SUDS (UDX)	FEH22: 100 years: +40 %: 1440 mins: Summer	33.415	33.415	1.415	1.415	786.2	14424.676	0.000	0.000	52.7	7166.116	2411	18.472

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 West Gateway Zone Strategic SuDS Surface Water Drainage Calculations	Date: 16/06/2026		
	Designed by: [Redacted]	Checked by: [Redacted]	Approved By: [Redacted]
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase (1)		
Company Address: WSP UK [Redacted]			

Status
OK

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations	Date: 15/06/2026 Designed by: [REDACTED] Checked by: [REDACTED] Approved By: [REDACTED]	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK [REDACTED]	



Pit 1

Type : Pond

Dimensions

Exceedance Level (m)	27.000
Depth (m)	2.750
Base Level (m)	24.250
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.324
Total Volume (m³)	25226.175

Depth (m)	Area (m²)	Volume (m³)
0.000	9432.00	0.000
2.250	13091.00	25226.175
2.750	13970.00	31990.235

Inlets

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Artificial Lake to Pits WC
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	(PN1)1.004
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 1 Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

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

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (35)
Bypass Destination	(None)
Capacity Type	No Restriction

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		
Project 320		15/06/2026		
Core and Lake Zone		Designed by:	Checked by:	
Surface Water Drainage Calculations				
Report Details:		Company Address:		
Type: Stormwater Controls		WSP UK		
Storm Phase: Lake Zone Main				

Outlets

Outlet (1)

Outgoing Connection	Pit 1 to 2 Connection
Outlet Type	Free Discharge

Outlet

Outgoing Connection	No Delay
Outlet Type	Weir
Width (m)	130.000
Coefficient of Discharge	0.544
Crest Level (m)	24.250

Advanced

Perimeter	Circular
Length (m)	220.000
Friction Scheme	Manning's n
n	0.03

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:			
Project 320		15/06/2026			
Core and Lake Zone		Designed by:	Checked by:	Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Stormwater Controls		WSP UK			
Storm Phase: Lake Zone Main					



Pond

Type : Pond

Dimensions

Exceedance Level (m)	27.000
Depth (m)	2.750
Base Level (m)	24.250
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.00
Total Volume (m³)	5338.155

Depth (m)	Area (m²)	Volume (m³)
0.000	1815.09	0.000
1.000	2296.44	2051.050
2.750	3274.88	6900.700

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

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

Outlets

Outlet

Outgoing Connection	No Delay (1)
Outlet Type	Weir
Width (m)	0.500
Coefficient of Discharge	0.544
Crest Level (m)	24.750

Advanced

Perimeter	Circular
Length (m)	157.270
Friction Scheme	Manning's n
n	0.03



Artificial Lake

Type : Pond

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations	Date: 15/06/2026 Designed by: Checked by: Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK	

Dimensions

Exceedance Level (m)	30.000
Depth (m)	1.430
Base Level (m)	28.570
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	5.573
Total Volume (m³)	30451.218

Depth (m)	Area (m²)	Volume (m³)
0.000	31095.069	0.000
1.430	36276.688	48123.245

CA-1331-WSPUK-1093-3108-DR-50001-P01:	Date: 15/06/2026		
Project 320	Designed by:	Checked by:	
Core and Lake Zone			
Surface Water Drainage Calculations			
Report Details:	Company Address:		
Type: Stormwater Controls	WSP UK		
Storm Phase: Lake Zone Main			

Inlets

Inlet (1)

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

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	AI Landscape Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Point Inflow
Incoming Item(s)	Culvert CZ-WC10
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (10)

Inlet Type	Point Inflow
Incoming Item(s)	41.008
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	AI Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	LZ Catchment Area 7.0
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	ADDITIONAL SLR CATCHMENT F
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Kempston Hardwick Clay Pits South Overflow to Artificial Lake
Bypass Destination	(None)
Capacity Type	No Restriction

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:			
Project 320		15/06/2026			
Core and Lake Zone		Designed by:	Checked by:		Approved By:
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Stormwater Controls		WSP UK			
Storm Phase: Lake Zone Main					

Outlets

Outlet

Outgoing Connection	Artificial Lake to Pits WC
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	437.991
Friction Scheme	Manning's n
n	0.03



Pit 2 & 3

Type : Pond

Dimensions

Exceedance Level (m)	25.000
Depth (m)	2.550
Base Level (m)	22.450
Freeboard (mm)	810
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	2.419
Total Volume (m³)	208932.525

Depth (m)	Area (m²)	Volume (m³)
0.000	117500.00	0.000
2.550	125116.00	309284.584

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	(PN5)1.005
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	(PN4)1.004
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (7)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 2 Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

CA-1331-WSPUK-1093-3108-DR-50001-P01:	Date:			
Project 320	15/06/2026			
Core and Lake Zone	Designed by:	Checked by:		Approved By:
Surface Water Drainage Calculations				
Report Details:	Company Address:			
Type: Stormwater Controls	WSP UK			
Storm Phase: Lake Zone Main				

Inlet (9)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Landscape Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (10)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 2 Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (11)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (12)

Inlet Type	Point Inflow
Incoming Item(s)	(PN3)1.003
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (13)

Inlet Type	Point Inflow
Incoming Item(s)	(PN2)1.003
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (14)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 1 to 2 Connectiont
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (15)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 2 Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Pump
Invert Level (m)	22.450
Depth (m)	Outflow (L/s)
0.010	824.88
0.200	824.88

CA-1331-WSPUK-1093-3108-DR-50001-P01:

Project 320

Core and Lake Zone

Surface Water Drainage Calculations

Report Details:

Type: Stormwater Controls

Storm Phase: Lake Zone Main

Date:

15/06/2026

Designed by:

Checked by:

Approved By:

Company Address:

WSP UK



0.300	824.88
0.400	824.88
0.500	824.88
0.600	824.88
0.700	824.88
0.800	824.88
0.900	824.88
1.000	824.88
1.100	824.88
1.200	824.88
1.300	824.88
1.400	824.88
1.500	824.88
1.600	824.88
1.700	824.88
1.800	824.88
1.900	824.88
2.000	824.88
2.100	824.88
2.200	824.88
2.300	824.88
2.400	824.88
2.500	824.88
2.600	824.88
2.700	824.88
2.800	824.88
2.900	824.88
3.000	824.88
3.100	824.88
3.200	824.88
3.300	824.88
3.400	824.88
3.500	824.88
3.600	824.88
3.700	824.88
3.800	824.88
3.900	824.88
4.000	824.88
4.100	824.88
4.200	824.88
4.300	824.88
4.400	824.88
4.500	824.88
4.600	824.88
4.700	824.88
4.800	824.88
4.900	824.88
5.000	824.88
5.100	824.88
5.200	824.88
5.300	824.88
5.400	824.88
5.500	824.88
5.600	824.88
5.700	824.88
5.800	824.88
5.900	824.88
6.000	824.88
6.100	824.88
6.200	824.88
6.300	824.88
6.400	824.88
6.500	824.88
6.600	824.88
6.700	824.88
6.800	824.88
6.900	824.88
7.000	824.88
7.100	824.88

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations	Date: 15/06/2026 Designed by: Checked by: Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK	

7.200	824.88
7.300	824.88
7.400	824.88
7.500	824.88
7.600	824.88
7.700	824.88
7.800	824.88
7.900	824.88
8.000	824.88
8.100	824.88
8.200	824.88
8.300	824.88
8.400	824.88
8.500	824.88
8.600	824.88
8.700	824.88
8.800	824.88
8.900	824.88
9.000	824.88
9.100	824.88
9.200	824.88
9.300	824.88
9.400	824.88
9.500	824.88
9.600	824.88
9.700	824.88
9.800	824.88
9.900	824.88
10.000	824.88

Advanced	
Perimeter	Circular
Length (m)	684.526
Friction Scheme	Manning's n
n	0.03

CA-1331-WSPUK-1093-3108-DR-50001-P01:

Project 320

Core and Lake Zone

Surface Water Drainage Calculations

Report Details:

Type: Inflow Summary

Storm Phase: Lake Zone Main

Date:

15/06/2026

Designed by:

Checked by:

Approved By:

Company Address:

WSP UK



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
ADDITIONAL LANDSCAPE	HW-CZ10		Time of Concentration	0.280	30	0	30	0.084
ADDITIONAL SLR CATCHMENT 3	HW-CZ22		Time of Concentration	0.819	100	0	100	0.819
ADDITIONAL SLR CATCHMENT A	CZ-JCT02 (1)		Time of Concentration	0.028	100	0	100	0.028
ADDITIONAL SLR CATCHMENT B	CZ-JCT02 (1)		Time of Concentration	0.310	100	0	100	0.310
ADDITIONAL SLR CATCHMENT D	CZ-AT01		Time of Concentration	1.380	100	0	100	1.380
ADDITIONAL SLR CATCHMENT E	CZ-AT01		Time of Concentration	0.512	100	0	100	0.512
ADDITIONAL SLR CATCHMENT F	Artificial Lake		Time of Concentration	0.711	100	0	100	0.711
AI Landscape Catchment 1	Artificial Lake		Time of Concentration	4.583	30	0	30	1.375
AI Landscape Catchment 2	Artificial Lake		Time of Concentration	0.773	30	0	30	0.232
Artificial Lake Catchment	Artificial Lake		Time of Concentration	3.329	100	0	100	3.329
British car Auctions Catchment 1	Manhole (1)		Time of Concentration	14.537	90	0	90	13.083
Catchment Area (35)	Pit 1		Time of Concentration	0.418	90	0	90	0.376
Catchment Area (88)	MH56		Time of Concentration	0.607	90	0	90	0.546
Catchment Area (89)	MH55		Time of Concentration	0.831	90	0	90	0.748
Catchment Area (130)	MH139		Time of Concentration	0.788	90	0	90	0.710
Catchment Area (131)	MH140		Time of Concentration	0.353	90	0	90	0.318
Catchment Area (132)	MH142		Time of Concentration	0.240	90	0	90	0.216
Catchment Area (133)	MH142		Time of Concentration	0.119	90	0	90	0.107
Catchment Area (136)	MH141		Time of Concentration	1.470	90	0	90	1.323
Catchment Area (138)	MH141		Time of Concentration	0.095	90	0	90	0.085
Catchment Area (168)	MH108		Time of Concentration	0.156	90	0	90	0.141
Coronation Pit Catchment 1	MH151		Time of Concentration	39.035	100	0	100	39.035
Coronation Pit Catchment 2	MH152		Time of Concentration	33.822	100	0	100	33.822
CZ Catchment Area 1.0	MH1		Time of Concentration	0.899	90	0	90	0.809

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:			
Project 320		15/06/2026			
Core and Lake Zone		Designed by: _____ Checked by: _____ Approved By: _____			
Surface Water Drainage Calculations		Company Address:			
Report Details:		WSP UK			
Type: Inflow Summary					
Storm Phase: Lake Zone Main					

CZ Catchment Area 1.1	MH3		Time of Concentration	2.274	90	0	90	2.047
CZ Catchment Area 1.2	MH6		Time of Concentration	3.557	90	0	90	3.201
CZ Catchment Area 2.0	MH9		Time of Concentration	0.200	90	0	90	0.180
CZ Catchment Area 2.1	MH9		Time of Concentration	0.737	90	0	90	0.664
CZ Catchment Area 2.2	MH10		Time of Concentration	1.240	90	0	90	1.116
CZ Catchment Area 2.3	MH11		Time of Concentration	1.380	90	0	90	1.242
CZ Catchment Area 2.4	MH12		Time of Concentration	1.036	90	0	90	0.932
CZ Catchment Area 2.5	MH13		Time of Concentration	1.149	90	0	90	1.034
CZ Catchment Area 2.6	MH14		Time of Concentration	2.683	90	0	90	2.415
CZ Catchment Area 3.0	MH16		Time of Concentration	0.132	90	0	90	0.119
CZ Catchment Area 3.1	MH16		Time of Concentration	0.253	90	0	90	0.228
CZ Catchment Area 3.2	MH17		Time of Concentration	1.116	90	0	90	1.004
CZ Catchment Area 3.3	MH18		Time of Concentration	1.070	90	0	90	0.963
CZ Catchment Area 3.4	MH19		Time of Concentration	0.780	90	0	90	0.702
CZ Catchment Area 3.5	MH20		Time of Concentration	0.713	90	0	90	0.642
CZ Catchment Area 3.6	MH21		Time of Concentration	1.946	90	0	90	1.752
CZ Catchment Area 4.0	MH23		Time of Concentration	0.986	90	0	90	0.887
CZ Catchment Area 4.1	MH24		Time of Concentration	0.585	90	0	90	0.527
CZ Catchment Area 4.2	MH25		Time of Concentration	0.210	90	0	90	0.189
CZ Catchment Area 4.3	MH26		Time of Concentration	0.388	90	0	90	0.349
CZ Catchment Area 4.4	MH27		Time of Concentration	0.507	90	0	90	0.456
CZ Catchment Area 4.5	MH30		Time of Concentration	1.027	90	0	90	0.924
CZ Catchment Area 4.6	Manhole (12)		Time of Concentration	1.135	90	0	90	1.022

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:			
Project 320		15/06/2026			
Core and Lake Zone		Designed by:	Checked by:		
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSPUK			
Storm Phase: Lake Zone Main					

CZ								
Catchment	MH26		Time of	1.452	90	0	90	1.307
Area 4.7			Concentration					
CZ								
Catchment	MH28		Time of	0.761	90	0	90	0.685
Area 4.8			Concentration					
CZ								
Catchment	MH28		Time of	0.313	90	0	90	0.281
Area 4.9			Concentration					
CZ								
Catchment	MH32		Time of	0.518	90	0	90	0.466
Area 5.0			Concentration					
CZ								
Catchment	MH32		Time of	0.220	90	0	90	0.198
Area 5.1			Concentration					
CZ								
Catchment	MH33		Time of	0.502	90	0	90	0.452
Area 5.2			Concentration					
CZ								
Catchment	MH34		Time of	0.278	90	0	90	0.250
Area 5.3			Concentration					
CZ								
Catchment	MH35		Time of	0.494	90	0	90	0.444
Area 5.4			Concentration					
CZ								
Catchment	MH39		Time of	0.656	90	0	90	0.591
Area 5.5			Concentration					
CZ								
Catchment	MH36		Time of	0.167	90	0	90	0.150
Area 5.6			Concentration					
CZ								
Catchment	MH37		Time of	0.068	90	0	90	0.061
Area 5.7			Concentration					
CZ								
Catchment	MH38		Time of	0.073	90	0	90	0.066
Area 5.8			Concentration					
CZ								
Catchment	MH39		Time of	0.135	90	0	90	0.121
Area 5.9			Concentration					
CZ								
Catchment	MH40		Time of	0.198	90	0	90	0.179
Area 5.10			Concentration					
CZ								
Catchment	MH40		Time of	0.365	90	0	90	0.328
Area 5.11			Concentration					
CZ								
Catchment	MH41		Time of	0.477	90	0	90	0.429
Area 5.12			Concentration					
CZ								
Catchment	MH41		Time of	0.089	90	0	90	0.080
Area 5.13			Concentration					
CZ								
Catchment	MH41		Time of	0.800	90	0	90	0.720
Area 5.14			Concentration					
CZ								
Catchment	MH42		Time of	1.257	90	0	90	1.131
Area 5.15			Concentration					
CZ								
Catchment	MH44		Time of	0.338	90	0	90	0.304
Area 6.0			Concentration					
CZ								
Catchment	MH45		Time of	0.538	90	0	90	0.484
Area 6.1			Concentration					
CZ								
Catchment	MH54		Time of	0.196	90	0	90	0.176
Area 6.2			Concentration					
CZ								
Catchment	MH46		Time of	0.404	90	0	90	0.363
Area 6.3			Concentration					

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations		Date: 15/06/2026		
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Designed by:	Checked by:	
		Approved By:		
		Company Address: WSP UK		

CZ Catchment Area 6.4	MH47		Time of Concentration	0.368	90	0	90	0.331
CZ Catchment Area 6.5	MH48		Time of Concentration	0.823	90	0	90	0.740
CZ Catchment Area 6.6	MH50		Time of Concentration	0.459	90	0	90	0.413
CZ Catchment Area 6.7	MH51		Time of Concentration	0.895	90	0	90	0.806
CZ Catchment Area 6.8	MH52		Time of Concentration	0.361	90	0	90	0.325
CZ Catchment Area 6.9	MH53		Time of Concentration	0.235	90	0	90	0.212
CZ Catchment Area 6.10	MH48		Time of Concentration	0.847	90	0	90	0.762
CZ Catchment Area 7.0	MH58		Time of Concentration	0.118	90	0	90	0.106
CZ Catchment Area 7.1	MH59		Time of Concentration	0.118	90	0	90	0.106
CZ Catchment Area 7.2	MH60		Time of Concentration	0.764	90	0	90	0.688
CZ Catchment Area 8.1	MH59		Time of Concentration	0.305	90	0	90	0.275
CZ Catchment Area 8.2	MH59		Time of Concentration	0.973	90	0	90	0.876
CZ Catchment Area 9.0	MH62		Time of Concentration	0.356	90	0	90	0.320
CZ Catchment Area 9.1	CZ-SWMH14		Time of Concentration	0.962	90	0	90	0.866
CZ Catchment Area 10.0	MH65		Time of Concentration	0.599	90	0	90	0.539
CZ Catchment Area 10.1	CZ-SWMH15		Time of Concentration	0.692	90	0	90	0.623
CZ Catchment Area 11.0	MH68		Time of Concentration	0.142	90	0	90	0.128
CZ Catchment Area 11.1	MH69		Time of Concentration	1.242	90	0	90	1.118
CZ Catchment Area 11.2	MH70		Time of Concentration	0.761	90	0	90	0.685
CZ Catchment Area 11.3	MH71		Time of Concentration	0.722	90	0	90	0.650
CZ Catchment Area 11.4	MH74		Time of Concentration	0.358	90	0	90	0.322
CZ Catchment Area 11.5	MH75		Time of Concentration	0.197	90	0	90	0.177
CZ Catchment Area 11.6	MH76		Time of Concentration	0.464	90	0	90	0.417

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date: 15/06/2026		
Project 320		Designed by:	Checked by:	
Core and Lake Zone				
Surface Water Drainage Calculations				
Report Details:		Company Address:		
Type: Inflow Summary		WSPUK		
Storm Phase: Lake Zone Main				

CZ Catchment Area 11.7	MH77		Time of Concentration	0.819	90	0	90	0.737
CZ Catchment Area 11.8	MH77		Time of Concentration	0.548	90	0	90	0.493
CZ Catchment Area 11.9	MH71		Time of Concentration	0.957	90	0	90	0.861
CZ Catchment Area 11.10	CZ-SWMH16		Time of Concentration	0.818	90	0	90	0.737
CZ Catchment Area 12.0	MH78		Time of Concentration	2.380	90	0	90	2.142
CZ Catchment Area 12.1	CZ-SWMH17		Time of Concentration	0.440	90	0	90	0.396
CZ Catchment Area 13.0	MH81		Time of Concentration	0.150	90	0	90	0.135
CZ Catchment Area 13.1	MH82		Time of Concentration	0.232	90	0	90	0.208
CZ Catchment Area 13.1 (1)	MH84		Time of Concentration	0.402	90	0	90	0.362
CZ Catchment Area 13.2	MH101		Time of Concentration	0.926	90	0	90	0.834
CZ Catchment Area 13.3	MH101		Time of Concentration	0.298	90	0	90	0.268
CZ Catchment Area 13.3 (1)	MH105		Time of Concentration	0.282	90	0	90	0.254
CZ Catchment Area 13.4	MH102		Time of Concentration	0.978	90	0	90	0.880
CZ Catchment Area 13.5	MH102		Time of Concentration	0.835	90	0	90	0.752
CZ Catchment Area 13.6	MH103		Time of Concentration	0.943	90	0	90	0.848
CZ Catchment Area 13.7	CZ-SWMH18		Time of Concentration	1.021	90	0	90	0.919
CZ Catchment Area 13.8	MH83		Time of Concentration	0.157	90	0	90	0.141
CZ Catchment Area 13.9	MH83		Time of Concentration	0.366	90	0	90	0.329
CZ Catchment Area 13.10	MH84		Time of Concentration	0.435	90	0	90	0.391
CZ Catchment Area 13.12	MH105		Time of Concentration	0.242	90	0	90	0.217
CZ Catchment Area 13.14	MH105		Time of Concentration	0.317	90	0	90	0.285
CZ Catchment Area 14.0	MH120		Time of Concentration	0.602	90	0	90	0.542
CZ Catchment Area 14.1	MH121		Time of Concentration	0.509	90	0	90	0.458

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



CZ Catchment Area 14.2 (lagoon)	MH107		Time of Concentration	3.473	90	0	90	3.126
CZ Catchment Area 14.3	MH108		Time of Concentration	0.208	90	0	90	0.187
CZ Catchment Area 14.4	MH107		Time of Concentration	0.263	90	0	90	0.237
CZ Catchment Area 14.5	MH109		Time of Concentration	0.182	90	0	90	0.164
CZ Catchment Area 14.6	MH109		Time of Concentration	0.355	90	0	90	0.320
CZ Catchment Area 14.7	MH110		Time of Concentration	0.296	90	0	90	0.266
CZ Catchment Area 14.8	MH110		Time of Concentration	0.781	90	0	90	0.703
CZ Catchment Area 14.9	MH111		Time of Concentration	0.689	90	0	90	0.620
CZ Catchment Area 14.10	MH112		Time of Concentration	0.692	90	0	90	0.623
CZ Catchment Area 14.11	MH113		Time of Concentration	0.161	90	0	90	0.145
CZ Catchment Area 14.12	MH114		Time of Concentration	0.078	90	0	90	0.071
CZ Catchment Area 14.13	MH114		Time of Concentration	0.214	90	0	90	0.193
CZ Catchment Area 14.14	MH115		Time of Concentration	0.337	90	0	90	0.303
CZ Catchment Area 14.15	MH115		Time of Concentration	0.457	90	0	90	0.411
CZ Catchment Area 14.16	MH116		Time of Concentration	0.717	90	0	90	0.645
CZ Catchment Area 14.17	MH116		Time of Concentration	0.491	90	0	90	0.442
CZ Catchment Area 14.18	MH117		Time of Concentration	0.822	90	0	90	0.740
CZ Catchment Area 14.19	CZ-SWMH19		Time of Concentration	1.783	90	0	90	1.605
CZ Catchment Area 15.0	MH130		Time of Concentration	0.228	90	0	90	0.205
CZ Catchment Area 15.1	MH130		Time of Concentration	0.784	90	0	90	0.706
CZ Catchment Area 15.2	MH131		Time of Concentration	1.260	90	0	90	1.134
CZ Catchment Area 15.3	MH137		Time of Concentration	0.217	90	0	90	0.195

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



CZ Catchment Area 15.4	MH138		Time of Concentration	0.688	90	0	90	0.619
CZ Catchment Area 15.5	MH132		Time of Concentration	0.468	90	0	90	0.421
CZ Catchment Area 15.6	MH132		Time of Concentration	0.122	90	0	90	0.109
CZ Catchment Area 15.7	MH133		Time of Concentration	0.340	90	0	90	0.306
CZ Catchment Area 15.8	MH134		Time of Concentration	0.764	90	0	90	0.688
CZ Catchment Area 15.9	CZ-SWMH20		Time of Concentration	0.779	90	0	90	0.701
CZ Catchment Area 8.0	MH58		Time of Concentration	0.165	90	0	90	0.149
CZ Upstream Catchment 1	HW-CZC00A		Time of Concentration	6.888	65	0	65	4.477
EEA Catchment Kempson Hardwick Clay Pits South	Pond		Time of Concentration	0.479	100	0	100	0.479
LZ Catchment Area 1.0	Manhole (1)		Time of Concentration	47.823	100	0	100	47.823
LZ Catchment Area 1.1	MHL16		Time of Concentration	1.061	90	0	90	0.955
LZ Catchment Area 1.2	MHL17		Time of Concentration	0.950	90	0	90	0.855
LZ Catchment Area 2.0	CZ-AT02		Time of Concentration	0.914	90	0	90	0.823
LZ Catchment Area 2.1	MHL4		Time of Concentration	0.195	100	0	100	0.195
LZ Catchment Area 2.2	MHL1		Time of Concentration	0.483	90	0	90	0.434
LZ Catchment Area 2.3	MHL4		Time of Concentration	1.088	90	0	90	0.980
LZ Catchment Area 3.0	MHL7		Time of Concentration	0.698	90	0	90	0.629
LZ Catchment Area 4.0	MHL9		Time of Concentration	2.233	90	0	90	2.010
LZ Catchment Area 4.1	MHL19		Time of Concentration	1.063	90	0	90	0.957
LZ Catchment Area 5.0	MHL21		Time of Concentration	1.108	90	0	90	0.997
LZ Catchment Area 5.1	MHL11		Time of Concentration	1.490	90	0	90	1.341
LZ Catchment Area 7.0	MHL13		Time of Concentration	0.980	90	0	90	0.882
LZ Catchment Area 7.0	Artificial Lake		Time of Concentration	0.943	90	0	90	0.849

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					

LZ								
Catchment	MH 201		Time of	2.829	90	0	90	2.547
Area 8.0			Concentration					
LZ								
Catchment	MH 202		Time of	2.202	90	0	90	1.982
Area 8.1			Concentration					
LZ								
Catchment	MH 203		Time of	1.604	90	0	90	1.444
Area 8.2			Concentration					
LZ								
Catchment	MH 102		Time of	1.782	90	0	90	1.604
Area 9.0			Concentration					
LZ								
Catchment	MH 101		Time of	0.739	90	0	90	0.665
Area 9.1			Concentration					
LZ								
Catchment	MH 102		Time of	0.699	90	0	90	0.629
Area 9.2			Concentration					
LZ								
Catchment	MH 104		Time of	0.868	90	0	90	0.782
Area 9.3			Concentration					
LZ								
Catchment	MH 103		Time of	0.677	90	0	90	0.609
Area 9.4			Concentration					
LZ								
Catchment	MH 105		Time of	0.754	90	0	90	0.679
Area 9.5			Concentration					
LZ								
Catchment	MH 106		Time of	0.616	90	0	90	0.554
Area 9.6			Concentration					
LZ								
Catchment	MH 301		Time of	1.875	90	0	90	1.688
Area 10.0			Concentration					
LZ								
Catchment	MH 304		Time of	1.809	90	0	90	1.628
Area 10.1			Concentration					
LZ								
Catchment	MH 302		Time of	0.344	90	0	90	0.310
Area 10.2			Concentration					
LZ								
Catchment	MH 303		Time of	0.923	90	0	90	0.831
Area 10.3			Concentration					
LZ								
Catchment	MH 305		Time of	0.706	90	0	90	0.635
Area 10.4			Concentration					
LZ								
Catchment	MH 401		Time of	0.791	90	0	90	0.712
Area 11.0			Concentration					
LZ								
Catchment	MH 402		Time of	3.055	90	0	90	2.749
Area 11.1			Concentration					
LZ								
Catchment	MH 402		Time of	0.751	90	0	90	0.676
Area 11.2			Concentration					
LZ								
Catchment	MH 403		Time of	0.741	90	0	90	0.667
Area 11.3			Concentration					
LZ								
Catchment	MH 404		Time of	2.211	90	0	90	1.990
Area 11.4			Concentration					
LZ								
Catchment	MH 405		Time of	2.404	90	0	90	2.164
Area 11.5			Concentration					
LZ								
Catchment	MH 405		Time of	0.978	90	0	90	0.881
Area 11.6			Concentration					
LZ								
Catchment	MH 501		Time of	0.783	90	0	90	0.704
Area 12.0			Concentration					

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



LZ Catchment Area 12.1	MH 502		Time of Concentration	0.896	90	0	90	0.806
LZ Catchment Area 12.2	MH 503		Time of Concentration	0.875	90	0	90	0.788
LZ Catchment Area 12.3	MH 504		Time of Concentration	0.827	90	0	90	0.744
LZ Catchment Area 12.4	MH 505		Time of Concentration	1.774	90	0	90	1.597
LZ Catchment Area 12.5	MH 506		Time of Concentration	2.863	90	0	90	2.577
LZ Catchment Area 12.6	MH 506		Time of Concentration	0.512	100	0	100	0.512
Manor Road Industrial Site Catchment	Industrial Road Industrial Area Inlet		Time of Concentration	6.031	100	0	100	6.031
Pit 1 Catchment Pit 1	Pit 1		Time of Concentration	1.848	100	0	100	1.848
Landscape Catchment 1 Pit 2	Pit 1		Time of Concentration	0.738	30	0	30	0.221
Catchment 1 Pit 2	Pit 2 & 3		Time of Concentration	2.857	100	0	100	2.857
Catchment 2 Pit 2	Pit 2 & 3		Time of Concentration	0.107	90	0	90	0.096
Landscape Catchment 1 Pit 2	Pit 2 & 3		Time of Concentration	1.141	30	0	30	0.342
Catchment 1 Pit 3	Pit 2 & 3		Time of Concentration	10.724	100	0	100	10.724
Catchment 2 Pit 3	Pit 2 & 3		Time of Concentration	0.355	90	0	90	0.320
Landscape Catchment 1 Pit 3	Pit 2 & 3		Time of Concentration	3.516	30	0	30	1.055
Catchment 2 Pit 3	Pit 2 & 3		Time of Concentration	1.322	30	0	30	0.397
Public Rd A-02	MH9		Time of Concentration	0.430	100	0	100	0.430
Public Rd A-02 (1)	MH1		Time of Concentration	0.335	100	0	100	0.335
Public Road B-01	211		Time of Concentration	0.358	100	0	100	0.358
Public Road B-02	217		Time of Concentration	0.185	100	0	100	0.185
SLR - 101	301		Time of Concentration	0.070	100	0	100	0.070
SLR - 102	302		Time of Concentration	0.102	100	0	100	0.102
SLR - 103	303		Time of Concentration	0.103	100	0	100	0.103
SLR - 104	304		Time of Concentration	0.101	100	0	100	0.101
SLR - 105	305		Time of Concentration	0.005	100	0	100	0.005
SLR - 106	306		Time of Concentration	0.002	100	0	100	0.002
SLR - 107	307		Time of Concentration	0.005	100	0	100	0.005
SLR - 110	310		Time of Concentration	0.090	100	0	100	0.090

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					

SLR - 111	311		Time of Concentration	0.049	100	0	100	0.049
SLR - 113	313		Time of Concentration	0.072	100	0	100	0.072
SLR - 114	314		Time of Concentration	0.001	100	0	100	0.001
SLR - 115	315		Time of Concentration	0.058	100	0	100	0.058
SLR - 116	316		Time of Concentration	0.001	100	0	100	0.001
SLR - 117	317		Time of Concentration	0.090	100	0	100	0.090
SLR - 118	318		Time of Concentration	0.107	100	0	100	0.107
SLR - 119	319		Time of Concentration	0.094	100	0	100	0.094
SLR - 121	321		Time of Concentration	0.001	100	0	100	0.001
SLR - 122	322		Time of Concentration	0.001	100	0	100	0.001
SLR - 123	323		Time of Concentration	0.001	100	0	100	0.001
SLR - 124	324		Time of Concentration	0.006	100	0	100	0.006
SLR - 125	325		Time of Concentration	0.003	100	0	100	0.003
SLR - 126	326		Time of Concentration	0.004	100	0	100	0.004
SLR - 127	327		Time of Concentration	0.008	100	0	100	0.008
SLR - 128	328		Time of Concentration	0.003	100	0	100	0.003
SLR - 129	329		Time of Concentration	0.001	100	0	100	0.001
SLR - 130	330		Time of Concentration	0.004	100	0	100	0.004
SLR - 132	332		Time of Concentration	0.096	100	0	100	0.096
SLR - 133	333		Time of Concentration	0.102	100	0	100	0.102
SLR - 134	334		Time of Concentration	0.076	100	0	100	0.076
SLR - 135	335		Time of Concentration	0.021	100	0	100	0.021
SLR - 137	337		Time of Concentration	0.096	100	0	100	0.096
SLR - 138	338		Time of Concentration	0.078	100	0	100	0.078
SLR - 139	339		Time of Concentration	0.112	100	0	100	0.112
SLR - 140	340		Time of Concentration	0.011	100	0	100	0.011
SLR - 141	341		Time of Concentration	0.228	100	0	100	0.228
SLR - 142	342		Time of Concentration	0.070	100	0	100	0.070
SLR - 143	343		Time of Concentration	0.091	100	0	100	0.091
SLR - 144	344		Time of Concentration	0.087	100	0	100	0.087
SLR - 201	201		Time of Concentration	0.065	100	0	100	0.065
SLR - 202	202		Time of Concentration	0.048	100	0	100	0.048
SLR - 203	203		Time of Concentration	0.042	100	0	100	0.042
SLR - 204	204		Time of Concentration	0.042	100	0	100	0.042

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



SLR - 205	205		Time of Concentration	0.042	100	0	100	0.042
SLR - 206	206		Time of Concentration	0.042	100	0	100	0.042
SLR - 207	207		Time of Concentration	0.069	100	0	100	0.069
SLR - 212	212		Time of Concentration	0.138	100	0	100	0.138
SLR - 213	213		Time of Concentration	0.112	100	0	100	0.112
SLR - 214	214		Time of Concentration	0.104	100	0	100	0.104
SLR - 215	215		Time of Concentration	0.137	100	0	100	0.137
SLR - 218	218		Time of Concentration	0.123	100	0	100	0.123
SLR - 219	219		Time of Concentration	0.025	100	0	100	0.025
SLR - 220	220		Time of Concentration	0.056	100	0	100	0.056
SLR - 221	221		Time of Concentration	0.045	100	0	100	0.045
SLR - 222	222		Time of Concentration	0.057	100	0	100	0.057
SLR - 224	224		Time of Concentration	0.139	100	0	100	0.139
SLR - 225	225		Time of Concentration	0.059	100	0	100	0.059
SLR - 226	226		Time of Concentration	0.028	100	0	100	0.028
SLR - 227	227		Time of Concentration	0.046	100	0	100	0.046
SLR - 228	228		Time of Concentration	0.049	100	0	100	0.049
SLR - 229	229		Time of Concentration	0.106	100	0	100	0.106
SLR - 230	230		Time of Concentration	0.040	100	0	100	0.040
SLR - 231	231		Time of Concentration	0.043	100	0	100	0.043
SLR - 233	233		Time of Concentration	0.038	100	0	100	0.038
SLR - 234	234		Time of Concentration	0.050	100	0	100	0.050
SLR - 301	101		Time of Concentration	0.102	100	0	100	0.102
SLR - 302	102		Time of Concentration	0.055	100	0	100	0.055
SLR - 303	103		Time of Concentration	0.037	100	0	100	0.037
SLR - 304	104		Time of Concentration	0.009	100	0	100	0.009
SLR - 305	105		Time of Concentration	0.108	100	0	100	0.108
SLR - 306	106		Time of Concentration	0.032	100	0	100	0.032
SLR - 307	107		Time of Concentration	0.196	100	0	100	0.196
SLR - 308	108		Time of Concentration	0.186	100	0	100	0.186
SLR - 309	109		Time of Concentration	0.121	100	0	100	0.121
SLR - 310	110		Time of Concentration	0.111	100	0	100	0.111
SLR - 311	111		Time of Concentration	0.092	100	0	100	0.092
SLR - 312	112		Time of Concentration	0.125	100	0	100	0.125

CA-1331-WSPUK-1093-3108-DR-50001-P01:		Date:		15/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					

SLR - 313	113		Time of Concentration	0.075	100	0	100	0.075
SLR - 314	114		Time of Concentration	0.084	100	0	100	0.084
SLR - 315	115		Time of Concentration	0.096	100	0	100	0.096
SLR - 316	116		Time of Concentration	0.026	100	0	100	0.026
SLR - 317	117		Time of Concentration	0.006	100	0	100	0.006
SLR - 318	118		Time of Concentration	0.006	100	0	100	0.006
SLR - 319	119		Time of Concentration	0.014	100	0	100	0.014
SLR - 320	120		Time of Concentration	0.021	100	0	100	0.021
SLR - 322	122		Time of Concentration	0.104	100	0	100	0.104
SLR - 323	123		Time of Concentration	0.023	100	0	100	0.023
SLR - 324	124		Time of Concentration	0.197	100	0	100	0.197
SLR - 325	125		Time of Concentration	0.021	100	0	100	0.021
SLR - 326	126		Time of Concentration	0.014	100	0	100	0.014
SLR - 327	127		Time of Concentration	0.029	100	0	100	0.029
SLR - 328	128		Time of Concentration	0.159	100	0	100	0.159
SLR - 329	129		Time of Concentration	0.029	100	0	100	0.029
SLR - 330	130		Time of Concentration	0.001	100	0	100	0.001
SLR - 332	132		Time of Concentration	0.012	100	0	100	0.012
SLR - 334	134		Time of Concentration	0.092	100	0	100	0.092
SLR - 335	135		Time of Concentration	0.034	100	0	100	0.034
SLR - 336	136		Time of Concentration	0.017	100	0	100	0.017
SLR - 337	137		Time of Concentration	0.036	100	0	100	0.036
SLR - 338	138		Time of Concentration	0.128	100	0	100	0.128
SLR - 339	139		Time of Concentration	0.126	100	0	100	0.126
SLR - 340	140		Time of Concentration	0.008	100	0	100	0.008
SLR - 341	141		Time of Concentration	0.010	100	0	100	0.010
SLR - 342	142		Time of Concentration	0.002	100	0	100	0.002
SLR - 343	143		Time of Concentration	0.002	100	0	100	0.002
SLR - 344	144		Time of Concentration	0.002	100	0	100	0.002
SLR - 345	145		Time of Concentration	0.002	100	0	100	0.002
SLR - 346	146		Time of Concentration	0.002	100	0	100	0.002
SLR - 347	147		Time of Concentration	0.003	100	0	100	0.003
SLR - 349	149		Time of Concentration	0.026	100	0	100	0.026
SLR - 350	150		Time of Concentration	0.017	100	0	100	0.017

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations		Date: 15/06/2026			
		Designed by:	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Company Address: WSP UK			

SLR - 351	151		Time of Concentration	0.023	100	0	100	0.023
SLR - 352	152		Time of Concentration	0.017	100	0	100	0.017
SLR - 353	153		Time of Concentration	0.044	100	0	100	0.044
SLR - 354	154		Time of Concentration	0.132	100	0	100	0.132
SLR - 355	155		Time of Concentration	0.132	100	0	100	0.132
SLR - 356	156		Time of Concentration	0.060	100	0	100	0.060
SLR - 357	157		Time of Concentration	0.098	100	0	100	0.098
SLR - 358	158		Time of Concentration	0.097	100	0	100	0.097
SLR - 359	159		Time of Concentration	0.028	100	0	100	0.028
SLR - 360	160		Time of Concentration	0.070	100	0	100	0.070
SLR - 361	161		Time of Concentration	0.047	100	0	100	0.047
SLR - 362	162		Time of Concentration	0.116	100	0	100	0.116
SLR - 364	164		Time of Concentration	0.001	100	0	100	0.001
SLR - 366	166		Time of Concentration	0.001	100	0	100	0.001
SLR - 367	167		Time of Concentration	0.017	100	0	100	0.017
SLR - 368	168		Time of Concentration	0.012	100	0	100	0.012
SLR - 369	169		Time of Concentration	0.002	100	0	100	0.002
SLR - 370	170		Time of Concentration	0.001	100	0	100	0.001
SLR - 371	171		Time of Concentration	0.002	100	0	100	0.002
SLR - 372	172		Time of Concentration	0.003	100	0	100	0.003
SLR - 373	173		Time of Concentration	0.001	100	0	100	0.001
SLR - 374	174		Time of Concentration	0.002	100	0	100	0.002
SLR - 375	175		Time of Concentration	0.004	100	0	100	0.004
SLR - 376	176		Time of Concentration	0.002	100	0	100	0.002
SLR - 377	177		Time of Concentration	0.002	100	0	100	0.002
SLR - 378	178		Time of Concentration	0.001	100	0	100	0.001
SLR - 379	179		Time of Concentration	0.001	100	0	100	0.001
SLR - 380	180		Time of Concentration	0.011	100	0	100	0.011
SLR Manor Rd (Northeast) Catchment	331		Time of Concentration	1.785	100	0	100	1.785
Stewartby Park Catchment 1	MH150		Time of Concentration	34.479	70	0	70	24.136
TOTAL		0.0		366.543				329.942

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations	Date: 15/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Title: Rainfall Analysis Criteria	Company Address: WSP UK _____	

Runoff Type	Dynamic
Output Interval (mins)	1
Time Step	Shortest
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☒
Rainfall Depth (mm)	1.0
Run Time (mins)	1440

Rainfall		
FEH (1)		Type: FEH
Site Location	GB 503750 246700 TL 03750 46700	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations	Date: 15/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Title: Rainfall Analysis Criteria	Company Address: WSP UK _____	

FEH

Type: FEH

Site Location	GB 503750 246700 TL 03750 46700
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations		Date: 15/06/2026 Designed by: _____ Checked by: _____ Approved By: _____		
Report Details: Type: Stormwater Controls Summary Storm Phase: Lake Zone Main		Company Address: WSP UK _____		



FEH (1): 100 years: Increase Rainfall (%): +40: 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. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pit 1	FEH (1): 100 years: +40 %: 180 mins: Summer	26.406	26.406	2.156	2.156	21517.8	24009.563	0.000	0.000	30773.0	134000.797	7	4.823
Pond	FEH (1): 100 years: +40 %: 180 mins: Summer	26.419	26.444	2.169	2.194	19974.3	5097.112	0.000	0.000	656.6	4242.854	132	4.515
Artificial Lake	FEH (1): 100 years: +40 %: 120 mins: Summer	29.513	29.472	0.943	0.902	25667.7	30216.727	0.000	0.000	20876.9	106964.078	19	0.770
Pit 2 & 3	FEH (1): 100 years: +40 %: 1440 mins: Winter	24.183	24.183	1.733	1.733	7207.5	208090.359	0.000	0.000	824.9	128049.180	2106	0.403

CA-1331-WSPUK-1093-3108-DR-50001-P01: Project 320 Core and Lake Zone Surface Water Drainage Calculations	Date: 15/06/2026 Designed by: Checked by: Approved By:	
Report Details: Type: Stormwater Controls Summary Storm Phase: Lake Zone Main	Company Address: WSP UK	

Status
OK
OK
Flood Risk
OK

INTRODUCTION

The following calculations have been obtained using the Quick Storage Estimate (QSE) function in InfoDrainage software Version 2025.5 using FEH 2022 Rainfall Data to determine the volume of attenuation required for each catchment for the 1 in 100 year annual probability event plus a 40% allowance for Climate Change.

NH Pond 1

A. Inputs

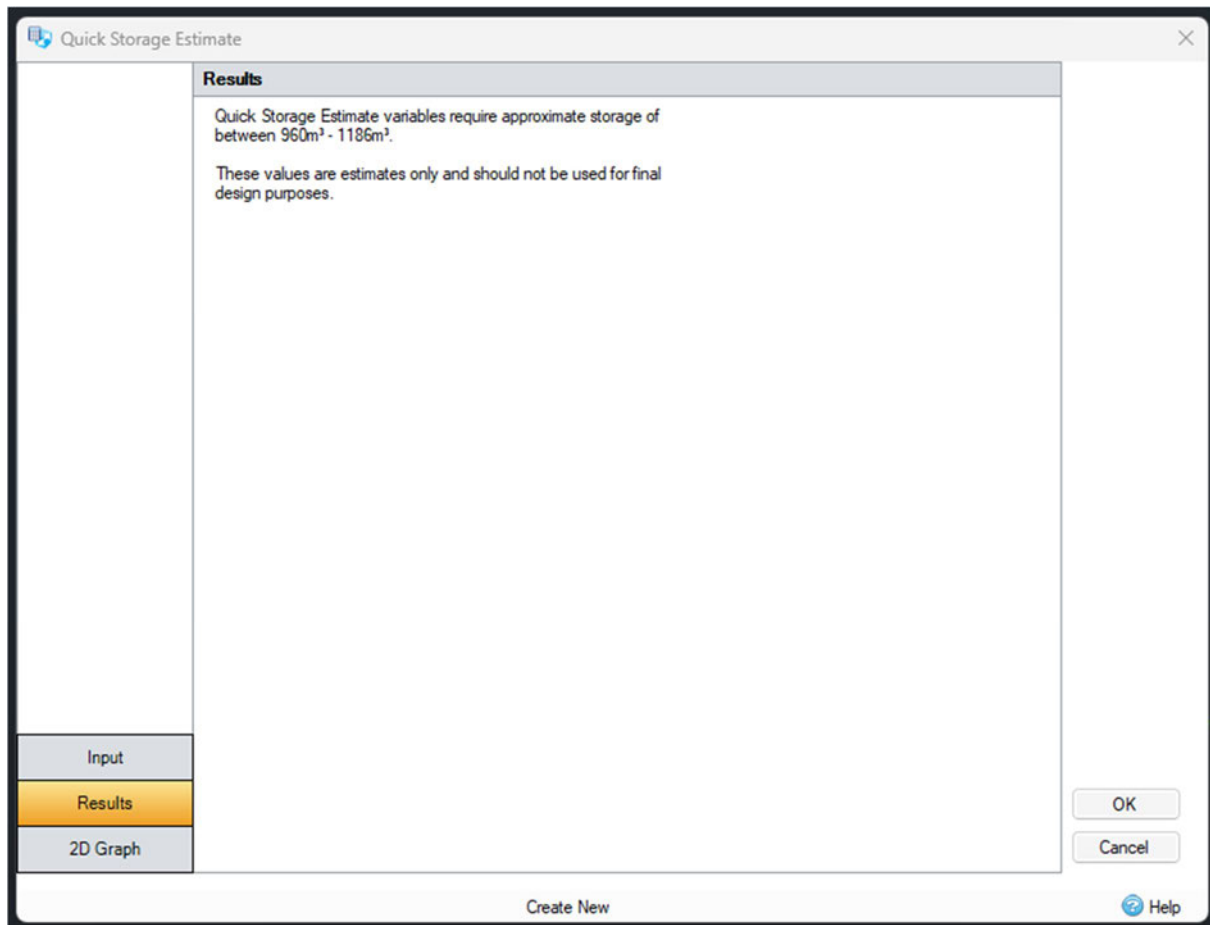
The screenshot displays the 'Quick Storage Estimate' software window. The 'Input' tab is active, showing various parameters for calculation. The 'Input Type' is set to 'User Input'. The 'Area (ha)' is 1.20, 'Volumetric Runoff Coefficient' is 1.000, 'Discharge Rate (L/s)' is 3.75, 'Infiltration Rate (m/hr)' is 0.0, and 'Safety Factor' is 2.0. The 'Full (inc. graphs)' option is selected. The 'Calculate' button is visible. Below these, there are radio buttons for 'Create New' and 'From Library', with 'From Library' selected. A list box shows 'All', 'FEH22' (selected), and 'FEH'. The 'Method' is set to 'FEH', 'Number of Storms' is 38, and 'Max. Run Time (mins)' is 20160. At the bottom, there are buttons for 'Input', 'Results', and '2D Graph', with 'Input' being the active tab. The 'Create New' and 'Help' buttons are also present at the bottom right.

Input	
Input Type	User Input
Area (ha)	1.20
Volumetric Runoff Coefficient	1.000
Discharge Rate (L/s)	3.75
Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
	Full (inc. graphs)
Calculate	
☐ Create New ☒ From Library	
☒ All ☒ FEH22 ☐ FEH	
Method	FEH
Number of Storms	38
Max. Run Time (mins)	20160

Input Results 2D Graph

Create New Help

B. Results



NH Pond 2

A. Inputs

Quick Storage Estimate

Input

Input Type

User Input

Area (ha)

1.63

Volumetric Runoff Coefficient

1.000

Discharge Rate (L/s)

5.1

Infiltration Rate (m/hr)

0.0

Safety Factor

2.0

Full (inc. graphs)

Calculate

Create New

From Library

All

FEH22

FEH

Method

FEH

Number of Storms

38

Max. Run Time (mins)

20160

Input

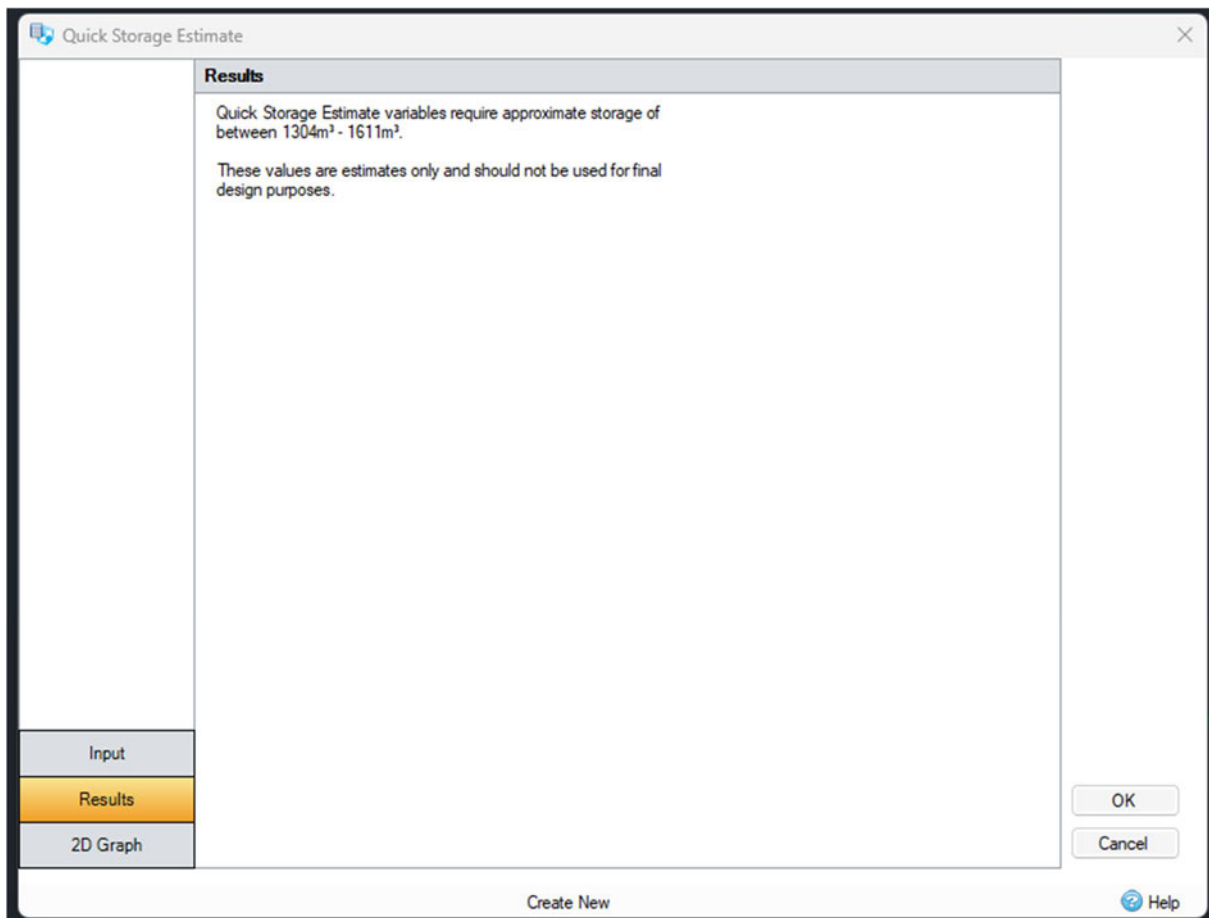
Results

2D Graph

Create New

Help

B. Results



EWR Parcel

A. Inputs

The screenshot shows the 'Quick Storage Estimate' software window. The 'Input' tab is selected in the left sidebar. The main area contains input fields for various parameters, a 'Calculate' button, and a list of methods. The 'FEH22' method is selected in the list, and its details are shown below.

Input	
Input Type	User Input
Area (ha)	3.38
Volumetric Runoff Coefficient	1.000
Discharge Rate (L/s)	10.57
Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
	Full (inc. graphs)
Calculate	
☐ Create New ☒ From Library	
☒ All ☒ FEH22 ☐ FEH	
Method	FEH
Number of Storms	38
Max. Run Time (mins)	20160

Input

Results

2D Graph

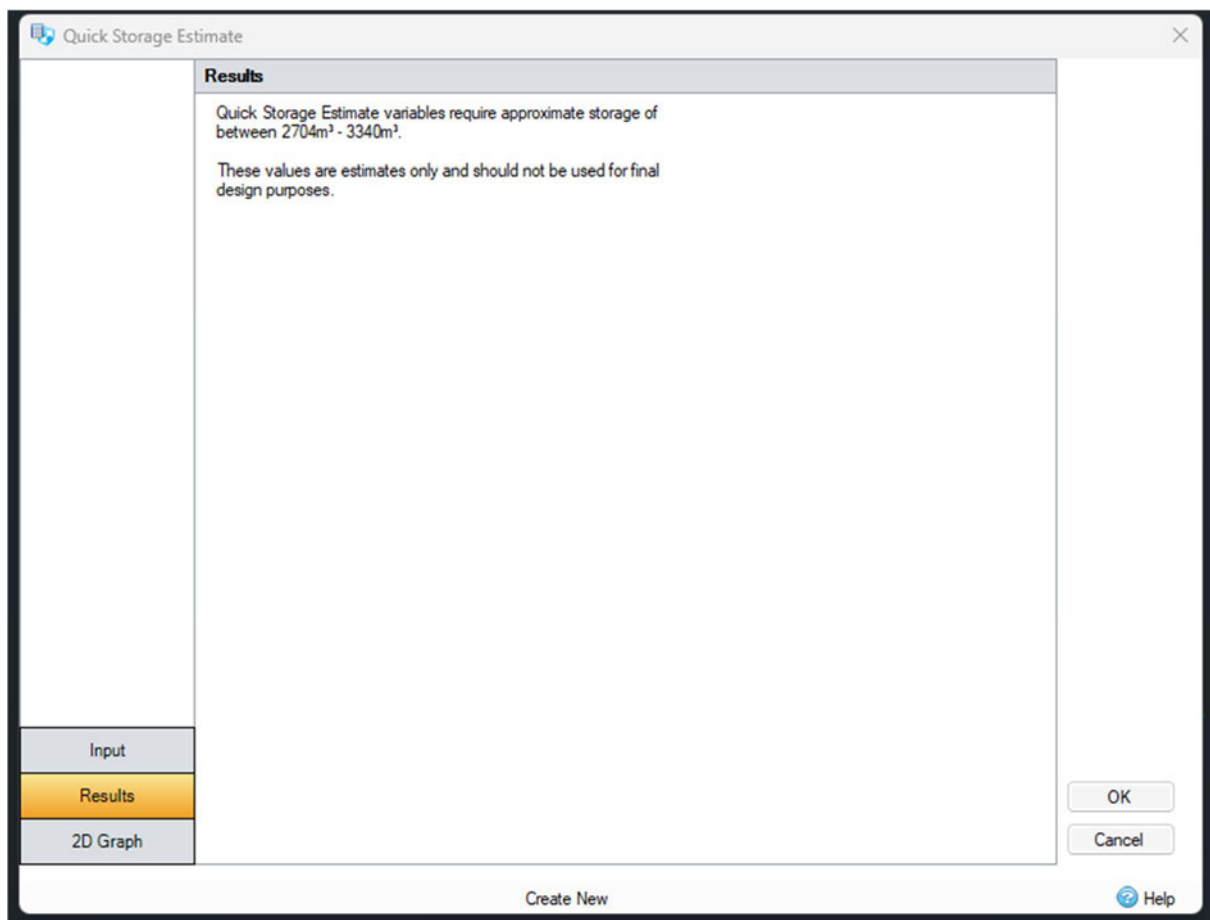
Create New

OK

Cancel

Help

B. Results



Future Road

A. Inputs

The screenshot shows the 'Quick Storage Estimate' application window. The 'Input' tab is selected in the left sidebar. The main area contains several input fields and a 'Calculate' button. Below the input fields are radio buttons for 'Create New' and 'From Library'. A list box shows 'All', 'FEH22' (checked), and 'FEH'. Below this, a table displays the selected method 'FEH' and its parameters: 'Number of Storms' (38) and 'Max. Run Time (mins)' (20160). At the bottom right are 'OK' and 'Cancel' buttons. The bottom status bar includes 'Create New' and a 'Help' icon.

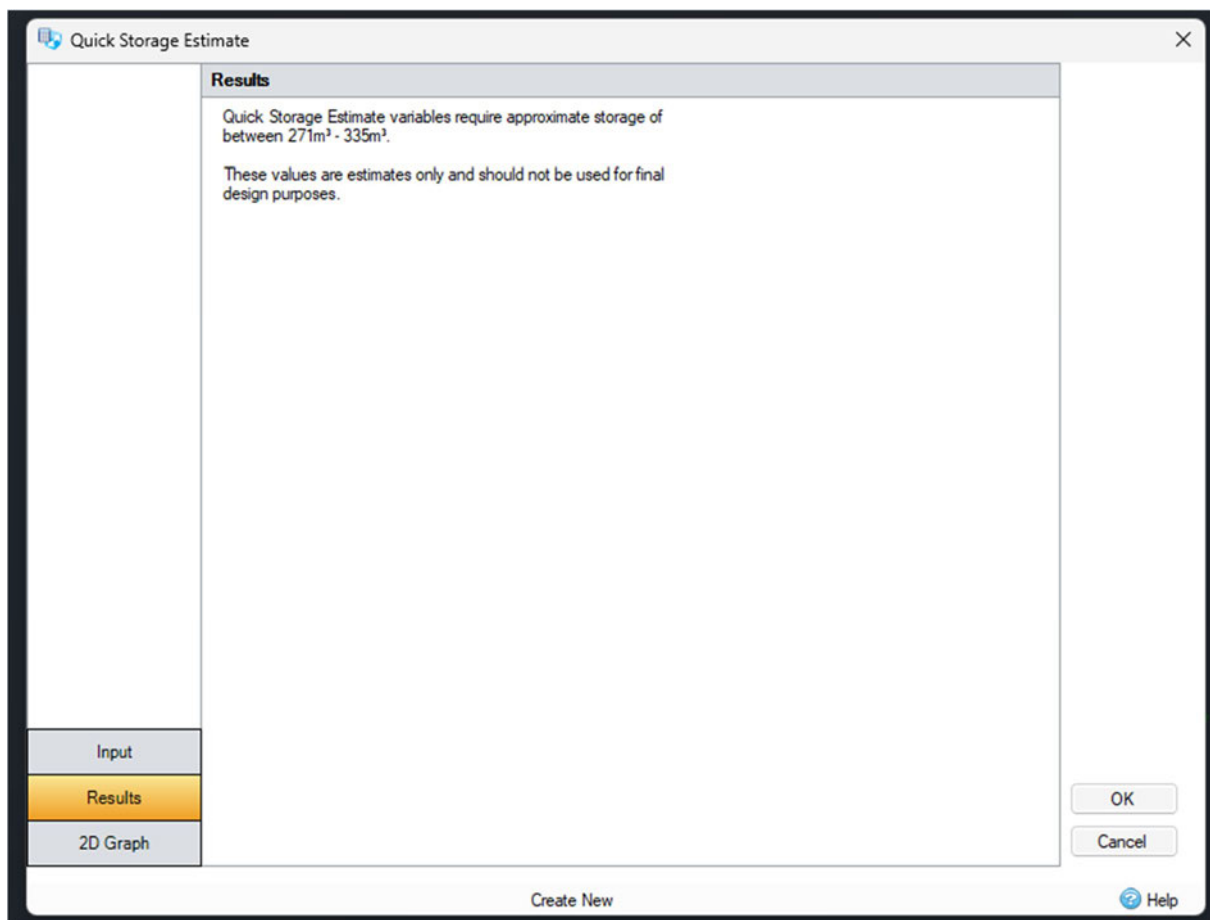
Input	
Input Type	User Input
Area (ha)	0.339
Volumetric Runoff Coefficient	1.000
Discharge Rate (L/s)	1.06
Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
	Full (inc. graphs)
Calculate	
☐ Create New ☒ From Library	
☒ All ☒ FEH22 ☐ FEH	
Method	FEH
Number of Storms	38
Max. Run Time (mins)	20160

Input
Results
2D Graph

OK
Cancel

Create New Help

B. Results



CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK _____	



Pit 1

Type : Pond

Dimensions

Exceedance Level (m)	27.000
Depth (m)	2.750
Base Level (m)	24.250
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.324
Total Volume (m³)	25226.175

Depth (m)	Area (m²)	Volume (m³)
0.000	9432.00	0.000
2.250	13091.00	25226.175
2.750	13970.00	31990.235

Inlets

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Artificial Lake to Pits WC
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	(PN1)1.004
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 1 Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

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

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (35)
Bypass Destination	(None)
Capacity Type	No Restriction

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: Checked by: Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK [Redacted]	

Outlets

Outlet (1)

Outgoing Connection	Pit 1 to 2 Connection
Outlet Type	Free Discharge

Outlet

Outgoing Connection	No Delay
Outlet Type	Weir
Width (m)	130.000
Coefficient of Discharge	0.544
Crest Level (m)	24.250

Advanced

Perimeter	Circular
Length (m)	220.000
Friction Scheme	Manning's n
n	0.03

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: [REDACTED] Checked by: [REDACTED] Approved By: [REDACTED]	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK [REDACTED]	



Pond

Type : Pond

Dimensions

Exceedance Level (m)	27.000
Depth (m)	2.750
Base Level (m)	24.250
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.00
Total Volume (m³)	5338.155

Depth (m)	Area (m²)	Volume (m³)
0.000	1815.09	0.000
1.000	2296.44	2051.050
2.750	3274.88	6900.700

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

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

Outlets

Outlet

Outgoing Connection	No Delay (1)
Outlet Type	Weir
Width (m)	0.500
Coefficient of Discharge	0.544
Crest Level (m)	24.750

Advanced

Perimeter	Circular
Length (m)	157.270
Friction Scheme	Manning's n
n	0.03



Artificial Lake

Type : Pond

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026			
	Designed by:	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main				Company Address: WSP UK

Dimensions

Exceedance Level (m)	30.000
Depth (m)	1.430
Base Level (m)	28.570
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	5.573
Total Volume (m³)	30451.218

Depth (m)	Area (m²)	Volume (m³)
0.000	31095.069	0.000
1.430	36276.688	48123.245

Inlets

Inlet (1)

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

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	AI Landscape Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Point Inflow
Incoming Item(s)	Culvert CZ-WC10
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (10)

Inlet Type	Point Inflow
Incoming Item(s)	41.008
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	AI Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	LZ Catchment Area 7.0
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	ADDITIONAL SLR CATCHMENT F
Bypass Destination	(None)
Capacity Type	No Restriction

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK _____	

Outlets

Outlet

Outgoing Connection	Artificial Lake to Pits WC 1.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	437.991
Friction Scheme	Manning's n
n	0.03



Pit 2 & 3

Type : Pond

Dimensions

Exceedance Level (m)	25.000
Depth (m)	2.550
Base Level (m)	22.450
Freeboard (mm)	860
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	2.419
Total Volume (m³)	202802.734

Depth (m)	Area (m²)	Volume (m³)
0.000	117500.00	0.000
2.550	125116.00	309284.584

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	(PN5)1.005
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	(PN4)1.004
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (7)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (8)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 2 Landscape Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK _____	

Inlet (9)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Landscape Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (10)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 2 Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (11)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 3 Catchment 1
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (12)

Inlet Type	Point Inflow
Incoming Item(s)	(PN3)1.003
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (13)

Inlet Type	Point Inflow
Incoming Item(s)	(PN2)1.003
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (14)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 1 to 2 Connectiont
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (15)

Inlet Type	Point Inflow
Incoming Item(s)	Pit 2 Catchment 2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Pump
Invert Level (m)	22.450
Depth (m)	Outflow (L/s)
0.010	403.85
0.200	403.85

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:
Project 320		16/06/2026
Core and Lake Zone - No Offsite Catchments		Designed by: _____ Checked by: _____ Approved By: _____
Surface Water Drainage Calculations		
Report Details:		
Type: Stormwater Controls		Company Address:
Storm Phase: Lake Zone Main		WSP UK



0.300	403.85
0.400	403.85
0.500	403.85
0.600	403.85
0.700	403.85
0.800	403.85
0.900	403.85
1.000	403.85
1.100	403.85
1.200	403.85
1.300	403.85
1.400	403.85
1.500	403.85
1.600	403.85
1.700	403.85
1.800	403.85
1.900	403.85
2.000	403.85
2.100	403.85
2.200	403.85
2.300	403.85
2.400	403.85
2.500	403.85
2.600	403.85
2.700	403.85
2.800	403.85
2.900	403.85
3.000	403.85
3.100	403.85
3.200	403.85
3.300	403.85
3.400	403.85
3.500	403.85
3.600	403.85
3.700	403.85
3.800	403.85
3.900	403.85
4.000	403.85
4.100	403.85
4.200	403.85
4.300	403.85
4.400	403.85
4.500	403.85
4.600	403.85
4.700	403.85
4.800	403.85
4.900	403.85
5.000	403.85
5.100	403.85
5.200	403.85
5.300	403.85
5.400	403.85
5.500	403.85
5.600	403.85
5.700	403.85
5.800	403.85
5.900	403.85
6.000	403.85
6.100	403.85
6.200	403.85
6.300	403.85
6.400	403.85
6.500	403.85
6.600	403.85
6.700	403.85
6.800	403.85
6.900	403.85
7.000	403.85
7.100	403.85

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: Checked by: Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Lake Zone Main	Company Address: WSP UK	

7.200	403.85
7.300	403.85
7.400	403.85
7.500	403.85
7.600	403.85
7.700	403.85
7.800	403.85
7.900	403.85
8.000	403.85
8.100	403.85
8.200	403.85
8.300	403.85
8.400	403.85
8.500	403.85
8.600	403.85
8.700	403.85
8.800	403.85
8.900	403.85
9.000	403.85
9.100	403.85
9.200	403.85
9.300	403.85
9.400	403.85
9.500	403.85
9.600	403.85
9.700	403.85
9.800	403.85
9.900	403.85
10.000	403.85

Advanced

Perimeter	Circular
Length (m)	684.526
Friction Scheme	Manning's n
n	0.03

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date: 16/06/2026		
Project 320		Designed by: _____		
Core and Lake Zone - No Offsite Catchments		Checked by: _____		
Surface Water Drainage Calculations		Approved By: _____		
Report Details:		WSP UK		
Type: Inflow Summary				
Storm Phase: Lake Zone Main				

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
ADDITIONAL LANDSCAPE	HW-CZ10		Time of Concentration	0.280	30	0	30	0.084
ADDITIONAL SLR CATCHMENT 3	HW-CZ22		Time of Concentration	0.819	100	0	100	0.819
ADDITIONAL SLR CATCHMENT A	CZ-JCT02 (1)		Time of Concentration	0.028	100	0	100	0.028
ADDITIONAL SLR CATCHMENT B	CZ-JCT02 (1)		Time of Concentration	0.310	100	0	100	0.310
ADDITIONAL SLR CATCHMENT D	CZ-AT01		Time of Concentration	1.380	100	0	100	1.380
ADDITIONAL SLR CATCHMENT E	CZ-AT01		Time of Concentration	0.512	100	0	100	0.512
ADDITIONAL SLR CATCHMENT F	Artificial Lake		Time of Concentration	0.711	100	0	100	0.711
AI Landscape Catchment 1	Artificial Lake		Time of Concentration	4.583	30	0	30	1.375
AI Landscape Catchment 2	Artificial Lake		Time of Concentration	0.773	30	0	30	0.232
Artificial Lake Catchment	Artificial Lake		Time of Concentration	3.329	100	0	100	3.329
Catchment Area (35)	Pit 1		Time of Concentration	0.418	90	0	90	0.376
Catchment Area (88)	MH56		Time of Concentration	0.607	90	0	90	0.546
Catchment Area (89)	MH55		Time of Concentration	0.831	90	0	90	0.748
Catchment Area (130)	MH139		Time of Concentration	0.788	90	0	90	0.710
Catchment Area (131)	MH140		Time of Concentration	0.353	90	0	90	0.318
Catchment Area (132)	MH142		Time of Concentration	0.240	90	0	90	0.216
Catchment Area (133)	MH142		Time of Concentration	0.119	90	0	90	0.107
Catchment Area (136)	MH141		Time of Concentration	1.470	90	0	90	1.323
Catchment Area (138)	MH141		Time of Concentration	0.095	90	0	90	0.085
Catchment Area (168)	MH108		Time of Concentration	0.156	90	0	90	0.141
CZ Catchment Area 1.0	MH1		Time of Concentration	0.899	90	0	90	0.809
CZ Catchment Area 1.1	MH3		Time of Concentration	2.274	90	0	90	2.047
CZ Catchment Area 1.2	MH6		Time of Concentration	3.557	90	0	90	3.201
CZ Catchment Area 2.0	MH9		Time of Concentration	0.200	90	0	90	0.180

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations		Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____ Company Address: WSP UK		
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main				

CZ									
Catchment	MH9		Time of	0.737	90	0	90	0.664	
Area 2.1			Concentration						
CZ									
Catchment	MH10		Time of	1.240	90	0	90	1.116	
Area 2.2			Concentration						
CZ									
Catchment	MH11		Time of	1.380	90	0	90	1.242	
Area 2.3			Concentration						
CZ									
Catchment	MH12		Time of	1.036	90	0	90	0.932	
Area 2.4			Concentration						
CZ									
Catchment	MH13		Time of	1.149	90	0	90	1.034	
Area 2.5			Concentration						
CZ									
Catchment	MH14		Time of	2.683	90	0	90	2.415	
Area 2.6			Concentration						
CZ									
Catchment	MH16		Time of	0.132	90	0	90	0.119	
Area 3.0			Concentration						
CZ									
Catchment	MH16		Time of	0.253	90	0	90	0.228	
Area 3.1			Concentration						
CZ									
Catchment	MH17		Time of	1.116	90	0	90	1.004	
Area 3.2			Concentration						
CZ									
Catchment	MH18		Time of	1.070	90	0	90	0.963	
Area 3.3			Concentration						
CZ									
Catchment	MH19		Time of	0.780	90	0	90	0.702	
Area 3.4			Concentration						
CZ									
Catchment	MH20		Time of	0.713	90	0	90	0.642	
Area 3.5			Concentration						
CZ									
Catchment	MH21		Time of	1.946	90	0	90	1.752	
Area 3.6			Concentration						
CZ									
Catchment	MH23		Time of	0.986	90	0	90	0.887	
Area 4.0			Concentration						
CZ									
Catchment	MH24		Time of	0.585	90	0	90	0.527	
Area 4.1			Concentration						
CZ									
Catchment	MH25		Time of	0.210	90	0	90	0.189	
Area 4.2			Concentration						
CZ									
Catchment	MH26		Time of	0.388	90	0	90	0.349	
Area 4.3			Concentration						
CZ									
Catchment	MH27		Time of	0.507	90	0	90	0.456	
Area 4.4			Concentration						
CZ									
Catchment	MH30		Time of	1.027	90	0	90	0.924	
Area 4.5			Concentration						
CZ									
Catchment	Manhole (12)		Time of	1.135	90	0	90	1.022	
Area 4.6			Concentration						
CZ									
Catchment	MH26		Time of	1.452	90	0	90	1.307	
Area 4.7			Concentration						
CZ									
Catchment	MH28		Time of	0.761	90	0	90	0.685	
Area 4.8			Concentration						
CZ									
Catchment	MH28		Time of	0.313	90	0	90	0.281	
Area 4.9			Concentration						

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:		16/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone - No Offsite Catchments		Approved By:			
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



CZ Catchment Area 5.0	MH32		Time of Concentration	0.518	90	0	90	0.466
CZ Catchment Area 5.1	MH32		Time of Concentration	0.220	90	0	90	0.198
CZ Catchment Area 5.2	MH33		Time of Concentration	0.502	90	0	90	0.452
CZ Catchment Area 5.3	MH34		Time of Concentration	0.278	90	0	90	0.250
CZ Catchment Area 5.4	MH35		Time of Concentration	0.494	90	0	90	0.444
CZ Catchment Area 5.5	MH39		Time of Concentration	0.656	90	0	90	0.591
CZ Catchment Area 5.6	MH36		Time of Concentration	0.167	90	0	90	0.150
CZ Catchment Area 5.7	MH37		Time of Concentration	0.068	90	0	90	0.061
CZ Catchment Area 5.8	MH38		Time of Concentration	0.073	90	0	90	0.066
CZ Catchment Area 5.9	MH39		Time of Concentration	0.135	90	0	90	0.121
CZ Catchment Area 5.10	MH40		Time of Concentration	0.198	90	0	90	0.179
CZ Catchment Area 5.11	MH40		Time of Concentration	0.365	90	0	90	0.328
CZ Catchment Area 5.12	MH41		Time of Concentration	0.477	90	0	90	0.429
CZ Catchment Area 5.13	MH41		Time of Concentration	0.089	90	0	90	0.080
CZ Catchment Area 5.14	MH41		Time of Concentration	0.800	90	0	90	0.720
CZ Catchment Area 5.15	MH42		Time of Concentration	1.257	90	0	90	1.131
CZ Catchment Area 6.0	MH44		Time of Concentration	0.338	90	0	90	0.304
CZ Catchment Area 6.1	MH45		Time of Concentration	0.538	90	0	90	0.484
CZ Catchment Area 6.2	MH54		Time of Concentration	0.196	90	0	90	0.176
CZ Catchment Area 6.3	MH46		Time of Concentration	0.404	90	0	90	0.363
CZ Catchment Area 6.4	MH47		Time of Concentration	0.368	90	0	90	0.331
CZ Catchment Area 6.5	MH48		Time of Concentration	0.823	90	0	90	0.740
CZ Catchment Area 6.6	MH50		Time of Concentration	0.459	90	0	90	0.413

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:		16/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone - No Offsite Catchments		Approved By:			
Surface Water Drainage Calculations		Company Address:		WSP UK	
Report Details:		Type: Inflow Summary		Storm Phase: Lake Zone Main	



CZ Catchment Area 6.7	MH51		Time of Concentration	0.895	90	0	90	0.806
CZ Catchment Area 6.8	MH52		Time of Concentration	0.361	90	0	90	0.325
CZ Catchment Area 6.9	MH53		Time of Concentration	0.235	90	0	90	0.212
CZ Catchment Area 6.10	MH48		Time of Concentration	0.847	90	0	90	0.762
CZ Catchment Area 7.0	MH58		Time of Concentration	0.118	90	0	90	0.106
CZ Catchment Area 7.1	MH59		Time of Concentration	0.118	90	0	90	0.106
CZ Catchment Area 7.2	MH60		Time of Concentration	0.764	90	0	90	0.688
CZ Catchment Area 8.1	MH59		Time of Concentration	0.305	90	0	90	0.275
CZ Catchment Area 8.2	MH59		Time of Concentration	0.973	90	0	90	0.876
CZ Catchment Area 9.0	MH62		Time of Concentration	0.356	90	0	90	0.320
CZ Catchment Area 9.1	CZ-SWMH14		Time of Concentration	0.962	90	0	90	0.866
CZ Catchment Area 10.0	MH65		Time of Concentration	0.599	90	0	90	0.539
CZ Catchment Area 10.1	CZ-SWMH15		Time of Concentration	0.692	90	0	90	0.623
CZ Catchment Area 11.0	MH68		Time of Concentration	0.142	90	0	90	0.128
CZ Catchment Area 11.1	MH69		Time of Concentration	1.242	90	0	90	1.118
CZ Catchment Area 11.2	MH70		Time of Concentration	0.761	90	0	90	0.685
CZ Catchment Area 11.3	MH71		Time of Concentration	0.722	90	0	90	0.650
CZ Catchment Area 11.4	MH74		Time of Concentration	0.358	90	0	90	0.322
CZ Catchment Area 11.5	MH75		Time of Concentration	0.197	90	0	90	0.177
CZ Catchment Area 11.6	MH76		Time of Concentration	0.464	90	0	90	0.417
CZ Catchment Area 11.7	MH77		Time of Concentration	0.819	90	0	90	0.737
CZ Catchment Area 11.8	MH77		Time of Concentration	0.548	90	0	90	0.493
CZ Catchment Area 11.9	MH71		Time of Concentration	0.957	90	0	90	0.861

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:		16/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone - No Offsite Catchments		Approved By:			
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



CZ Catchment Area 11.10	CZ-SWMH16		Time of Concentration	0.818	90	0	90	0.737
CZ Catchment Area 12.0	MH78		Time of Concentration	2.380	90	0	90	2.142
CZ Catchment Area 12.1	CZ-SWMH17		Time of Concentration	0.440	90	0	90	0.396
CZ Catchment Area 13.0	MH81		Time of Concentration	0.150	90	0	90	0.135
CZ Catchment Area 13.1	MH82		Time of Concentration	0.232	90	0	90	0.208
CZ Catchment Area 13.1 (1)	MH84		Time of Concentration	0.402	90	0	90	0.362
CZ Catchment Area 13.2	MH101		Time of Concentration	0.926	90	0	90	0.834
CZ Catchment Area 13.3	MH101		Time of Concentration	0.298	90	0	90	0.268
CZ Catchment Area 13.3 (1)	MH105		Time of Concentration	0.282	90	0	90	0.254
CZ Catchment Area 13.4	MH102		Time of Concentration	0.978	90	0	90	0.880
CZ Catchment Area 13.5	MH102		Time of Concentration	0.835	90	0	90	0.752
CZ Catchment Area 13.6	MH103		Time of Concentration	0.943	90	0	90	0.848
CZ Catchment Area 13.7	CZ-SWMH18		Time of Concentration	1.021	90	0	90	0.919
CZ Catchment Area 13.8	MH83		Time of Concentration	0.157	90	0	90	0.141
CZ Catchment Area 13.9	MH83		Time of Concentration	0.366	90	0	90	0.329
CZ Catchment Area 13.10	MH84		Time of Concentration	0.435	90	0	90	0.391
CZ Catchment Area 13.12	MH105		Time of Concentration	0.242	90	0	90	0.217
CZ Catchment Area 13.14	MH105		Time of Concentration	0.317	90	0	90	0.285
CZ Catchment Area 14.0	MH120		Time of Concentration	0.602	90	0	90	0.542
CZ Catchment Area 14.1	MH121		Time of Concentration	0.509	90	0	90	0.458
CZ Catchment Area 14.2 (lagoon)	MH107		Time of Concentration	3.473	90	0	90	3.126
CZ Catchment Area 14.3	MH108		Time of Concentration	0.208	90	0	90	0.187

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations		Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____		
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Company Address: WSP UK _____		

CZ Catchment Area 14.4	MH107		Time of Concentration	0.263	90	0	90	0.237
CZ Catchment Area 14.5	MH109		Time of Concentration	0.182	90	0	90	0.164
CZ Catchment Area 14.6	MH109		Time of Concentration	0.355	90	0	90	0.320
CZ Catchment Area 14.7	MH110		Time of Concentration	0.296	90	0	90	0.266
CZ Catchment Area 14.8	MH110		Time of Concentration	0.781	90	0	90	0.703
CZ Catchment Area 14.9	MH111		Time of Concentration	0.689	90	0	90	0.620
CZ Catchment Area 14.10	MH112		Time of Concentration	0.692	90	0	90	0.623
CZ Catchment Area 14.11	MH113		Time of Concentration	0.161	90	0	90	0.145
CZ Catchment Area 14.12	MH114		Time of Concentration	0.078	90	0	90	0.071
CZ Catchment Area 14.13	MH114		Time of Concentration	0.214	90	0	90	0.193
CZ Catchment Area 14.14	MH115		Time of Concentration	0.337	90	0	90	0.303
CZ Catchment Area 14.15	MH115		Time of Concentration	0.457	90	0	90	0.411
CZ Catchment Area 14.16	MH116		Time of Concentration	0.717	90	0	90	0.645
CZ Catchment Area 14.17	MH116		Time of Concentration	0.491	90	0	90	0.442
CZ Catchment Area 14.18	MH117		Time of Concentration	0.822	90	0	90	0.740
CZ Catchment Area 14.19	CZ-SWMH19		Time of Concentration	1.783	90	0	90	1.605
CZ Catchment Area 15.0	MH130		Time of Concentration	0.228	90	0	90	0.205
CZ Catchment Area 15.1	MH130		Time of Concentration	0.784	90	0	90	0.706
CZ Catchment Area 15.2	MH131		Time of Concentration	1.260	90	0	90	1.134
CZ Catchment Area 15.3	MH137		Time of Concentration	0.217	90	0	90	0.195
CZ Catchment Area 15.4	MH138		Time of Concentration	0.688	90	0	90	0.619
CZ Catchment Area 15.5	MH132		Time of Concentration	0.468	90	0	90	0.421
CZ Catchment Area 15.6	MH132		Time of Concentration	0.122	90	0	90	0.109

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations		Date: 16/06/2026		
		Designed by:	Checked by:	
		Approved By:		
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Company Address: WSP UK		

CZ								
Catchment	MH133		Time of	0.340	90	0	90	0.306
Area 15.7			Concentration					
CZ								
Catchment	MH134		Time of	0.764	90	0	90	0.688
Area 15.8			Concentration					
CZ								
Catchment	CZ-SWMH20		Time of	0.779	90	0	90	0.701
Area 15.9			Concentration					
CZ								
Catchment	MH58		Time of	0.165	90	0	90	0.149
Area 8.0			Concentration					
EEA								
Catchment	Pond		Time of	0.479	100	0	100	0.479
LZ			Concentration					
Catchment	MHL16		Time of	1.061	90	0	90	0.955
Area 1.0			Concentration					
LZ								
Catchment	MHL17		Time of	0.950	90	0	90	0.855
Area 1.1			Concentration					
LZ								
Catchment	CZ-AT02		Time of	0.914	90	0	90	0.823
Area 1.2			Concentration					
LZ								
Catchment	MHL4		Time of	0.195	100	0	100	0.195
Area 2.0			Concentration					
LZ								
Catchment	MHL1		Time of	0.483	90	0	90	0.434
Area 2.1			Concentration					
LZ								
Catchment	MHL4		Time of	1.088	90	0	90	0.980
Area 2.2			Concentration					
LZ								
Catchment	MHL7		Time of	0.698	90	0	90	0.629
Area 2.3			Concentration					
LZ								
Catchment	MHL9		Time of	2.233	90	0	90	2.010
Area 3.0			Concentration					
LZ								
Catchment	MHL19		Time of	1.063	90	0	90	0.957
Area 4.0			Concentration					
LZ								
Catchment	MHL21		Time of	1.108	90	0	90	0.997
Area 4.1			Concentration					
LZ								
Catchment	MHL11		Time of	1.490	90	0	90	1.341
Area 5.0			Concentration					
LZ								
Catchment	MHL13		Time of	0.980	90	0	90	0.882
Area 5.1			Concentration					
LZ								
Catchment	Artificial Lake		Time of	0.943	90	0	90	0.849
Area 7.0			Concentration					
LZ								
Catchment	MH 201		Time of	2.829	90	0	90	2.547
Area 8.0			Concentration					
LZ								
Catchment	MH 202		Time of	2.202	90	0	90	1.982
Area 8.1			Concentration					
LZ								
Catchment	MH 203		Time of	1.604	90	0	90	1.444
Area 8.2			Concentration					
LZ								
Catchment	MH 102		Time of	1.782	90	0	90	1.604
Area 9.0			Concentration					
LZ								
Catchment	MH 101		Time of	0.739	90	0	90	0.665
Area 9.1			Concentration					

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:		16/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone - No Offsite Catchments				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					

LZ								
Catchment	MH 102		Time of	0.699	90	0	90	0.629
Area 9.2			Concentration					
LZ								
Catchment	MH 104		Time of	0.868	90	0	90	0.782
Area 9.3			Concentration					
LZ								
Catchment	MH 103		Time of	0.677	90	0	90	0.609
Area 9.4			Concentration					
LZ								
Catchment	MH 105		Time of	0.754	90	0	90	0.679
Area 9.5			Concentration					
LZ								
Catchment	MH 106		Time of	0.616	90	0	90	0.554
Area 9.6			Concentration					
LZ								
Catchment	MH 301		Time of	1.875	90	0	90	1.688
Area 10.0			Concentration					
LZ								
Catchment	MH 304		Time of	1.809	90	0	90	1.628
Area 10.1			Concentration					
LZ								
Catchment	MH 302		Time of	0.344	90	0	90	0.310
Area 10.2			Concentration					
LZ								
Catchment	MH 303		Time of	0.923	90	0	90	0.831
Area 10.3			Concentration					
LZ								
Catchment	MH 305		Time of	0.706	90	0	90	0.635
Area 10.4			Concentration					
LZ								
Catchment	MH 401		Time of	0.791	90	0	90	0.712
Area 11.0			Concentration					
LZ								
Catchment	MH 402		Time of	3.055	90	0	90	2.749
Area 11.1			Concentration					
LZ								
Catchment	MH 402		Time of	0.751	90	0	90	0.676
Area 11.2			Concentration					
LZ								
Catchment	MH 403		Time of	0.741	90	0	90	0.667
Area 11.3			Concentration					
LZ								
Catchment	MH 404		Time of	2.211	90	0	90	1.990
Area 11.4			Concentration					
LZ								
Catchment	MH 405		Time of	2.404	90	0	90	2.164
Area 11.5			Concentration					
LZ								
Catchment	MH 405		Time of	0.978	90	0	90	0.881
Area 11.6			Concentration					
LZ								
Catchment	MH 501		Time of	0.783	90	0	90	0.704
Area 12.0			Concentration					
LZ								
Catchment	MH 502		Time of	0.896	90	0	90	0.806
Area 12.1			Concentration					
LZ								
Catchment	MH 503		Time of	0.875	90	0	90	0.788
Area 12.2			Concentration					
LZ								
Catchment	MH 504		Time of	0.827	90	0	90	0.744
Area 12.3			Concentration					
LZ								
Catchment	MH 505		Time of	1.774	90	0	90	1.597
Area 12.4			Concentration					
LZ								
Catchment	MH 506		Time of	2.863	90	0	90	2.577
Area 12.5			Concentration					

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations		Date: 16/06/2026			
		Designed by:	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Company Address: WSP UK			

LZ Catchment Area 12.6	MH 506		Time of Concentration	0.512	100	0	100	0.512
Pit 1 Catchment	Pit 1		Time of Concentration	1.848	100	0	100	1.848
Pit 1 Landscape Catchment 1	Pit 1		Time of Concentration	0.738	30	0	30	0.221
Pit 2 Catchment 1	Pit 2 & 3		Time of Concentration	2.857	100	0	100	2.857
Pit 2 Catchment 2	Pit 2 & 3		Time of Concentration	0.107	90	0	90	0.096
Pit 2 Landscape Catchment 1	Pit 2 & 3		Time of Concentration	1.141	30	0	30	0.342
Pit 3 Catchment 1	Pit 2 & 3		Time of Concentration	10.724	100	0	100	10.724
Pit 3 Catchment 2	Pit 2 & 3		Time of Concentration	0.355	90	0	90	0.320
Pit 3 Landscape Catchment 1	Pit 2 & 3		Time of Concentration	3.516	30	0	30	1.055
Pit 3 Landscape Catchment 2	Pit 2 & 3		Time of Concentration	1.322	30	0	30	0.397
Public Rd A-02	MH9		Time of Concentration	0.430	100	0	100	0.430
Public Rd A-02 (1)	MH1		Time of Concentration	0.335	100	0	100	0.335
Public Road B-01	211		Time of Concentration	0.358	100	0	100	0.358
Public Road B-02	217		Time of Concentration	0.185	100	0	100	0.185
SLR - 101	301		Time of Concentration	0.070	100	0	100	0.070
SLR - 102	302		Time of Concentration	0.102	100	0	100	0.102
SLR - 103	303		Time of Concentration	0.103	100	0	100	0.103
SLR - 104	304		Time of Concentration	0.101	100	0	100	0.101
SLR - 105	305		Time of Concentration	0.005	100	0	100	0.005
SLR - 106	306		Time of Concentration	0.002	100	0	100	0.002
SLR - 107	307		Time of Concentration	0.005	100	0	100	0.005
SLR - 110	310		Time of Concentration	0.090	100	0	100	0.090
SLR - 111	311		Time of Concentration	0.049	100	0	100	0.049
SLR - 113	313		Time of Concentration	0.072	100	0	100	0.072
SLR - 114	314		Time of Concentration	0.001	100	0	100	0.001
SLR - 115	315		Time of Concentration	0.058	100	0	100	0.058
SLR - 116	316		Time of Concentration	0.001	100	0	100	0.001
SLR - 117	317		Time of Concentration	0.090	100	0	100	0.090
SLR - 118	318		Time of Concentration	0.107	100	0	100	0.107
SLR - 119	319		Time of Concentration	0.094	100	0	100	0.094
SLR - 121	321		Time of Concentration	0.001	100	0	100	0.001
SLR - 122	322		Time of Concentration	0.001	100	0	100	0.001

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations		Date: 16/06/2026		
		Designed by:	Checked by:	
		Approved By:		
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Company Address: WSP UK 		

SLR - 123	323		Time of Concentration	0.001	100	0	100	0.001
SLR - 124	324		Time of Concentration	0.006	100	0	100	0.006
SLR - 125	325		Time of Concentration	0.003	100	0	100	0.003
SLR - 126	326		Time of Concentration	0.004	100	0	100	0.004
SLR - 127	327		Time of Concentration	0.008	100	0	100	0.008
SLR - 128	328		Time of Concentration	0.003	100	0	100	0.003
SLR - 129	329		Time of Concentration	0.001	100	0	100	0.001
SLR - 130	330		Time of Concentration	0.004	100	0	100	0.004
SLR - 132	332		Time of Concentration	0.096	100	0	100	0.096
SLR - 133	333		Time of Concentration	0.102	100	0	100	0.102
SLR - 134	334		Time of Concentration	0.076	100	0	100	0.076
SLR - 135	335		Time of Concentration	0.021	100	0	100	0.021
SLR - 137	337		Time of Concentration	0.096	100	0	100	0.096
SLR - 138	338		Time of Concentration	0.078	100	0	100	0.078
SLR - 139	339		Time of Concentration	0.112	100	0	100	0.112
SLR - 140	340		Time of Concentration	0.011	100	0	100	0.011
SLR - 141	341		Time of Concentration	0.228	100	0	100	0.228
SLR - 142	342		Time of Concentration	0.070	100	0	100	0.070
SLR - 143	343		Time of Concentration	0.091	100	0	100	0.091
SLR - 144	344		Time of Concentration	0.087	100	0	100	0.087
SLR - 201	201		Time of Concentration	0.065	100	0	100	0.065
SLR - 202	202		Time of Concentration	0.048	100	0	100	0.048
SLR - 203	203		Time of Concentration	0.042	100	0	100	0.042
SLR - 204	204		Time of Concentration	0.042	100	0	100	0.042
SLR - 205	205		Time of Concentration	0.042	100	0	100	0.042
SLR - 206	206		Time of Concentration	0.042	100	0	100	0.042
SLR - 207	207		Time of Concentration	0.069	100	0	100	0.069
SLR - 212	212		Time of Concentration	0.138	100	0	100	0.138
SLR - 213	213		Time of Concentration	0.112	100	0	100	0.112
SLR - 214	214		Time of Concentration	0.104	100	0	100	0.104
SLR - 215	215		Time of Concentration	0.137	100	0	100	0.137
SLR - 218	218		Time of Concentration	0.123	100	0	100	0.123
SLR - 219	219		Time of Concentration	0.025	100	0	100	0.025
SLR - 220	220		Time of Concentration	0.056	100	0	100	0.056

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations		Date: 16/06/2026			
		Designed by:	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Lake Zone Main		Company Address: WSP UK			

SLR - 221	221		Time of Concentration	0.045	100	0	100	0.045
SLR - 222	222		Time of Concentration	0.057	100	0	100	0.057
SLR - 224	224		Time of Concentration	0.139	100	0	100	0.139
SLR - 225	225		Time of Concentration	0.059	100	0	100	0.059
SLR - 226	226		Time of Concentration	0.028	100	0	100	0.028
SLR - 227	227		Time of Concentration	0.046	100	0	100	0.046
SLR - 228	228		Time of Concentration	0.049	100	0	100	0.049
SLR - 229	229		Time of Concentration	0.106	100	0	100	0.106
SLR - 230	230		Time of Concentration	0.040	100	0	100	0.040
SLR - 231	231		Time of Concentration	0.043	100	0	100	0.043
SLR - 233	233		Time of Concentration	0.038	100	0	100	0.038
SLR - 234	234		Time of Concentration	0.050	100	0	100	0.050
SLR - 301	101		Time of Concentration	0.102	100	0	100	0.102
SLR - 302	102		Time of Concentration	0.055	100	0	100	0.055
SLR - 303	103		Time of Concentration	0.037	100	0	100	0.037
SLR - 304	104		Time of Concentration	0.009	100	0	100	0.009
SLR - 305	105		Time of Concentration	0.108	100	0	100	0.108
SLR - 306	106		Time of Concentration	0.032	100	0	100	0.032
SLR - 307	107		Time of Concentration	0.196	100	0	100	0.196
SLR - 308	108		Time of Concentration	0.186	100	0	100	0.186
SLR - 309	109		Time of Concentration	0.121	100	0	100	0.121
SLR - 310	110		Time of Concentration	0.111	100	0	100	0.111
SLR - 311	111		Time of Concentration	0.092	100	0	100	0.092
SLR - 312	112		Time of Concentration	0.125	100	0	100	0.125
SLR - 313	113		Time of Concentration	0.075	100	0	100	0.075
SLR - 314	114		Time of Concentration	0.084	100	0	100	0.084
SLR - 315	115		Time of Concentration	0.096	100	0	100	0.096
SLR - 316	116		Time of Concentration	0.026	100	0	100	0.026
SLR - 317	117		Time of Concentration	0.006	100	0	100	0.006
SLR - 318	118		Time of Concentration	0.006	100	0	100	0.006
SLR - 319	119		Time of Concentration	0.014	100	0	100	0.014
SLR - 320	120		Time of Concentration	0.021	100	0	100	0.021
SLR - 322	122		Time of Concentration	0.104	100	0	100	0.104
SLR - 323	123		Time of Concentration	0.023	100	0	100	0.023

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:		16/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone - No Offsite Catchments				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



SLR - 324	124		Time of Concentration	0.197	100	0	100	0.197
SLR - 325	125		Time of Concentration	0.021	100	0	100	0.021
SLR - 326	126		Time of Concentration	0.014	100	0	100	0.014
SLR - 327	127		Time of Concentration	0.029	100	0	100	0.029
SLR - 328	128		Time of Concentration	0.159	100	0	100	0.159
SLR - 329	129		Time of Concentration	0.029	100	0	100	0.029
SLR - 330	130		Time of Concentration	0.001	100	0	100	0.001
SLR - 332	132		Time of Concentration	0.012	100	0	100	0.012
SLR - 334	134		Time of Concentration	0.092	100	0	100	0.092
SLR - 335	135		Time of Concentration	0.034	100	0	100	0.034
SLR - 336	136		Time of Concentration	0.017	100	0	100	0.017
SLR - 337	137		Time of Concentration	0.036	100	0	100	0.036
SLR - 338	138		Time of Concentration	0.128	100	0	100	0.128
SLR - 339	139		Time of Concentration	0.126	100	0	100	0.126
SLR - 340	140		Time of Concentration	0.008	100	0	100	0.008
SLR - 341	141		Time of Concentration	0.010	100	0	100	0.010
SLR - 342	142		Time of Concentration	0.002	100	0	100	0.002
SLR - 343	143		Time of Concentration	0.002	100	0	100	0.002
SLR - 344	144		Time of Concentration	0.002	100	0	100	0.002
SLR - 345	145		Time of Concentration	0.002	100	0	100	0.002
SLR - 346	146		Time of Concentration	0.002	100	0	100	0.002
SLR - 347	147		Time of Concentration	0.003	100	0	100	0.003
SLR - 349	149		Time of Concentration	0.026	100	0	100	0.026
SLR - 350	150		Time of Concentration	0.017	100	0	100	0.017
SLR - 351	151		Time of Concentration	0.023	100	0	100	0.023
SLR - 352	152		Time of Concentration	0.017	100	0	100	0.017
SLR - 353	153		Time of Concentration	0.044	100	0	100	0.044
SLR - 354	154		Time of Concentration	0.132	100	0	100	0.132
SLR - 355	155		Time of Concentration	0.132	100	0	100	0.132
SLR - 356	156		Time of Concentration	0.060	100	0	100	0.060
SLR - 357	157		Time of Concentration	0.098	100	0	100	0.098
SLR - 358	158		Time of Concentration	0.097	100	0	100	0.097
SLR - 359	159		Time of Concentration	0.028	100	0	100	0.028
SLR - 360	160		Time of Concentration	0.070	100	0	100	0.070

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:		16/06/2026	
Project 320		Designed by:		Checked by:	
Core and Lake Zone - No Offsite Catchments				Approved By:	
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Inflow Summary		WSP UK			
Storm Phase: Lake Zone Main					



SLR - 361	161		Time of Concentration	0.047	100	0	100	0.047
SLR - 362	162		Time of Concentration	0.116	100	0	100	0.116
SLR - 364	164		Time of Concentration	0.001	100	0	100	0.001
SLR - 366	166		Time of Concentration	0.001	100	0	100	0.001
SLR - 367	167		Time of Concentration	0.017	100	0	100	0.017
SLR - 368	168		Time of Concentration	0.012	100	0	100	0.012
SLR - 369	169		Time of Concentration	0.002	100	0	100	0.002
SLR - 370	170		Time of Concentration	0.001	100	0	100	0.001
SLR - 371	171		Time of Concentration	0.002	100	0	100	0.002
SLR - 372	172		Time of Concentration	0.003	100	0	100	0.003
SLR - 373	173		Time of Concentration	0.001	100	0	100	0.001
SLR - 374	174		Time of Concentration	0.002	100	0	100	0.002
SLR - 375	175		Time of Concentration	0.004	100	0	100	0.004
SLR - 376	176		Time of Concentration	0.002	100	0	100	0.002
SLR - 377	177		Time of Concentration	0.002	100	0	100	0.002
SLR - 378	178		Time of Concentration	0.001	100	0	100	0.001
SLR - 379	179		Time of Concentration	0.001	100	0	100	0.001
SLR - 380	180		Time of Concentration	0.011	100	0	100	0.011
SLR Manor Rd (Northeast) Catchment	331		Time of Concentration	1.785	100	0	100	1.785
TOTAL		0.0		183.928				161.536

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Title: Rainfall Analysis Criteria	Company Address: WSP UK _____	

Runoff Type	Dynamic
Output Interval (mins)	1
Time Step	Shortest
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☒
Rainfall Depth (mm)	1.0
Run Time (mins)	1440

Rainfall

FEH (1)		Type: FEH
Site Location	GB 503750 246700 TL 03750 46700	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280

CA-1331-WSPUK-1093-3108-DR-50001-P03: Project 320 Core and Lake Zone - No Offsite Catchments Surface Water Drainage Calculations	Date: 16/06/2026 Designed by: _____ Checked by: _____ Approved By: _____	
Report Title: Rainfall Analysis Criteria	Company Address: WSP UK _____	

FEH

Type: FEH

Site Location	GB 503750 246700 TL 03750 46700
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

CA-1331-WSPUK-1093-3108-DR-50001-P03:		Date:			
Project 320		16/06/2026			
Core and Lake Zone - No Offsite Catchments		Designed by:	Checked by:		Approved By:
Surface Water Drainage Calculations					
Report Details:		Company Address:			
Type: Stormwater Controls Summary		WSP UK			
Storm Phase: Lake Zone Main					



FEH (1): 100 years: Increase Rainfall (%): +40: 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. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pit 1	FEH (1): 100 years: +40 %: 180 mins: Summer	25.639	25.636	1.389	1.386	12552.6	14574.140	0.000	0.000	17120.9	77539.531	8	42.226
Pond	FEH (1): 100 years: +40 %: 180 mins: Summer	25.652	25.653	1.402	1.403	12514.3	2998.813	0.000	0.000	255.5	1930.012	199	43.823
Artificial Lake	FEH (1): 100 years: +40 %: 120 mins: Summer	29.236	29.189	0.666	0.619	16268.9	20737.826	0.000	0.000	12103.7	60574.340	25	31.898
Pit 2 & 3	FEH (1): 100 years: +40 %: 1440 mins: Winter	23.572	23.572	1.122	1.122	4649.3	133709.172	0.000	0.000	403.8	61667.199	2762	34.069

CA-1331-WSPUK-1093-3108-DR-50001-P03:	Date:			
Project 320	16/06/2026			
Core and Lake Zone - No Offsite Catchments	Designed by:	Checked by:	Approved By:	
Surface Water Drainage Calculations				
Report Details:	Company Address:			
Type: Stormwater Controls Summary	WSP UK			
Storm Phase: Lake Zone Main				

Status
OK
OK
OK
OK