

Appendix E - InfoDrainage Calculations

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations	Date: 24/01/2023			
Report Details: Type: Inflows Storm Phase: Phase	Designed by: NDD	Checked by:	Approved By:	
Aegaea Ltd:				



Catchment Area (5)

Type : Catchment Area

Area (ha)	0.122
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Catchment Area (1)

Type : Catchment Area

Area (ha)	0.006
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Catchment Area (2)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

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Aegaea Ltd:				



Catchment Area (3)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Catchment Area (4)

Type : Catchment Area

Area (ha)	0.059
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Catchment Area (6)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.840
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations		Date: 24/01/2023			
		Designed by: NDD	Checked by:		Approved By:
Report Details: Type: Junctions Storm Phase: Phase		Aegaea Ltd:			

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)
Manhole	Manhole	228.557	108.125	149.200	1.400

Name	Invert Level (m)	Chamber Shape	Diameter (m)	Manhole Locked
Manhole	147.800	Circular	1.200	☐

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Manhole	Inlet	Catchment Area (6)	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
	Inlet (2)	Catchment Area (3)	(None)	No Restriction
		Catchment Area (1)		
	Inlet (3)	Catchment Area (5)	(None)	No Restriction
		Catchment Area (2)	(None)	No Restriction

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations	Date: 24/01/2023			
Report Title: Rainfall Analysis Criteria	Designed by: NDD	Checked by:	Approved By:	
Aegaea Ltd:				

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall	
FSR	Type: FSR

Region	England and Wales
M5-60 (mm)	18.2
Ratio R	0.355
Summer	☒
Winter	☒

Return Period	
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Return Period (years)	Increase Rainfall (%)
1.0	0
30.0	0
30.0	40
100.0	0
100.0	40

Storm Durations	
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Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations	Date: 24/01/2023			
Report Title: UK and Ireland Rural Runoff Calculator	Designed by: NDD		Checked by:	Approved By:
Aegaea Ltd:				

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.334
SAAR (mm)	847.0
Soil	0.47
Region	Region 4
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 4	2.0	2.0	1.7	3.9	5.2

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations		Date: 24/01/2023			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area (5)	FSR: 1 years: +0 %: 15 mins: Summer	0.12	16.5	7.419
Catchment Area (1)	FSR: 1 years: +0 %: 15 mins: Summer	0.01	0.8	0.348
Catchment Area (2)	FSR: 1 years: +0 %: 15 mins: Summer	0.01	1.2	0.552
Catchment Area (3)	FSR: 1 years: +0 %: 15 mins: Summer	0.01	1.1	0.495
Catchment Area (4)	FSR: 1 years: +0 %: 15 mins: Summer	0.06	8.0	3.594
Catchment Area (6)	FSR: 1 years: +0 %: 15 mins: Winter	0.01	0.9	0.447

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations		Date: 24/01/2023			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area (5)	FSR: 30 years: +0 %: 15 mins: Summer	0.12	40.3	18.156
Catchment Area (1)	FSR: 30 years: +0 %: 15 mins: Summer	0.01	1.9	0.843
Catchment Area (2)	FSR: 30 years: +0 %: 15 mins: Summer	0.01	3.0	1.353
Catchment Area (3)	FSR: 30 years: +0 %: 15 mins: Summer	0.01	2.7	1.215
Catchment Area (4)	FSR: 30 years: +0 %: 15 mins: Summer	0.06	19.5	8.802
Catchment Area (6)	FSR: 30 years: +0 %: 15 mins: Winter	0.01	2.3	1.095

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Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area (5)	FSR: 30 years: +40 %: 15 mins: Summer	0.12	56.4	25.416
Catchment Area (1)	FSR: 30 years: +40 %: 15 mins: Summer	0.01	2.6	1.188
Catchment Area (2)	FSR: 30 years: +40 %: 15 mins: Summer	0.01	4.2	1.896
Catchment Area (3)	FSR: 30 years: +40 %: 15 mins: Summer	0.01	3.8	1.701
Catchment Area (4)	FSR: 30 years: +40 %: 15 mins: Summer	0.06	27.3	12.318
Catchment Area (6)	FSR: 30 years: +40 %: 15 mins: Winter	0.01	3.2	1.536

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	Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area (5)	FSR: 100 years: +0 %: 15 mins: Summer	0.12	52.0	23.445
Catchment Area (1)	FSR: 100 years: +0 %: 15 mins: Summer	0.01	2.4	1.092
Catchment Area (2)	FSR: 100 years: +0 %: 15 mins: Summer	0.01	3.9	1.752
Catchment Area (3)	FSR: 100 years: +0 %: 15 mins: Summer	0.01	3.5	1.575
Catchment Area (4)	FSR: 100 years: +0 %: 15 mins: Summer	0.06	25.2	11.364
Catchment Area (6)	FSR: 100 years: +0 %: 15 mins: Winter	0.01	3.0	1.419

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		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area (5)	FSR: 100 years: +40 %: 15 mins: Summer	0.12	72.8	32.826
Catchment Area (1)	FSR: 100 years: +40 %: 15 mins: Summer	0.01	3.4	1.527
Catchment Area (2)	FSR: 100 years: +40 %: 15 mins: Summer	0.01	5.4	2.454
Catchment Area (3)	FSR: 100 years: +40 %: 15 mins: Summer	0.01	4.9	2.202
Catchment Area (4)	FSR: 100 years: +40 %: 15 mins: Summer	0.06	35.3	15.909
Catchment Area (6)	FSR: 100 years: +40 %: 15 mins: Winter	0.01	4.1	1.983

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Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FSR: 1 years: +0 %: 15 mins: Summer	149.200	147.800	147.800	0.000	28.4	0.000	0.000	28.4	12.804	OK

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FSR: 30 years: +0 %: 15 mins: Summer	149.200	147.800	147.800	0.000	69.6	0.000	0.000	69.6	31.347	OK

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations		Date: 24/01/2023			
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		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FSR: 30 years: +40 %: 15 mins: Summer	149.200	147.800	147.800	0.000	97.4	0.000	0.000	97.4	43.887	OK

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Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FSR: 100 years: +0 %: 15 mins: Summer	149.200	147.800	147.800	0.000	89.8	0.000	0.000	89.9	40.494	OK

Project 682: Vulcan Refractories ST10 1PN Brownfield Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FSR: 100 years: +40 %: 15 mins: Summer	149.200	147.800	147.800	0.000	125.8	0.000	0.000	125.8	56.688	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
Report Details: Type: Inflows Storm Phase: Phase	Designed by: NDD	Checked by:	Approved By:	
Aegaea Ltd:				



Western Catchment Area

Type : Catchment Area

Area (ha)	0.006
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Northern Catchment Area

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Ramp Catchment Area

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
Report Details: Type: Inflows Storm Phase: Phase	Designed by: NDD	Checked by:	Approved By:	
Aegaea Ltd:				



Yard Catchment Area

Type : Catchment Area

Area (ha)	0.059
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Roof Catchment Area

Type : Catchment Area

Area (ha)	0.122
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100



Eastern Catchment Area

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	0.900
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
	Designed by:	Checked by:	Approved By:	
	NDD			
Report Details: Type: Junctions Storm Phase: Phase		Aegaea Ltd:		

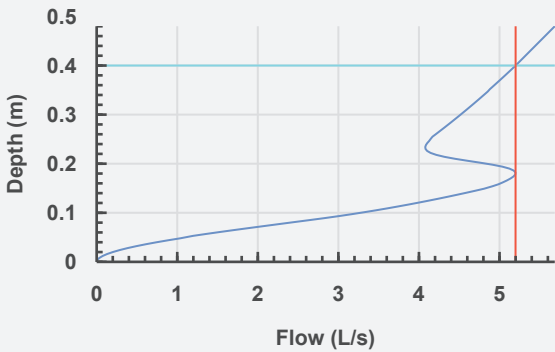
Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)
MH3	Manhole	226.111	113.561	149.200	1.300
MH1	Manhole	218.905	139.873	149.400	0.600
MH2	Manhole	225.864	118.105	149.200	1.200
MH4	Manhole	227.669	110.506	149.200	1.400

Name	Invert Level (m)	Chamber Shape	Diameter (m)	Manhole Locked
MH3	147.900	Circular	1.200	☐
MH1	148.800	Circular	1.200	☐
MH2	148.000	Circular	1.200	☐
MH4	147.800	Circular	1.200	☐

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
MH3	Inlet	2.000	(None)	No Restriction
	Inlet (1)	1.001	(None)	No Restriction
MH1	Inlet	Ramp Catchment Area Northern Catchment Area	(None)	No Restriction
MH2	Inlet	Eastern Catchment Area 1.000	(None)	No Restriction
MH4	Inlet (2)	1.002	(None)	No Restriction

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
MH3	Outlet	1.002	Hydro-Brake®
	Invert Level (m)	147.900	
	Design Depth (m)	0.400	
	Design Flow (L/s)	5.2	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0114-5200-0400-5200	
			
MH1	Outlet	1.000	Free Discharge
MH2	Outlet	1.001	Free Discharge

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed by: NDD	Checked by:	Approved By:	
Aegaea Ltd:				



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedence Level (m)	149.220
Depth (m)	0.420
Base Level (m)	147.920
Number of Crates Long	12
Number of Crates Wide	48
Number of Crates High	2
Porosity (%)	94
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.21
Total Volume (m³)	114.582

Inlets

Inlet (3)

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

Outlets

Outlet

Outgoing Connection	2.000
Outlet Type	Free Discharge

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Connections Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
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Name	Length (m)	Connection Type	Slope (1:x)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
1.000	22.853	Pipe	28.566		0.6	225	149.400	148.800
1.001	4.550	Pipe	45.503		0.6	225	149.200	148.000
1.002	3.430	Pipe	34.296		0.6	225	149.200	147.900
2.000	3.180	Pipe	158.982		0.6	225	149.220	147.920

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Flow Restriction (L/s)
1.000	149.200	148.000	
1.001	149.200	147.900	
1.002	149.200	147.800	5.7
2.000	149.200	147.900	

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023					
Report Title: Rainfall Analysis Criteria	Designed by: NDD <table border="1" style="display: inline-table; vertical-align: top;"> <tr> <td>Checked by:</td> <td>Approved By:</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		Checked by:	Approved By:		
Checked by:	Approved By:					
Aegaea Ltd:						

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

Rainfall	
FSR	Type: FSR

Region	England and Wales
M5-60 (mm)	18.2
Ratio R	0.355
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
1.0	0
30.0	0
30.0	40
100.0	0
100.0	40
1000.0	0

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
Report Title: UK and Ireland Rural Runoff Calculator	Designed by: NDD		Checked by:	Approved By:
Aegaea Ltd:				

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.334
SAAR (mm)	847.0
Soil	0.47
Region	Region 4
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 4	2.0	2.0	1.7	3.9	5.2

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Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Western Catchment Area	FSR: 1 years: +0 %: 15 mins: Summer	0.01	0.9	0.377
Northern Catchment Area	FSR: 1 years: +0 %: 15 mins: Summer	0.01	1.4	0.608
Ramp Catchment Area	FSR: 1 years: +0 %: 15 mins: Summer	0.01	1.3	0.545
Yard Catchment Area	FSR: 1 years: +0 %: 15 mins: Summer	0.06	9.1	3.951
Roof Catchment Area	FSR: 1 years: +0 %: 15 mins: Summer	0.12	18.7	8.148
Eastern Catchment Area	FSR: 1 years: +0 %: 15 mins: Summer	0.01	1.2	0.527

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		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Western Catchment Area	FSR: 30 years: +0 %: 15 mins: Summer	0.01	2.1	0.932
Northern Catchment Area	FSR: 30 years: +0 %: 15 mins: Summer	0.01	3.4	1.486
Ramp Catchment Area	FSR: 30 years: +0 %: 15 mins: Summer	0.01	3.1	1.339
Yard Catchment Area	FSR: 30 years: +0 %: 15 mins: Summer	0.06	22.2	9.670
Roof Catchment Area	FSR: 30 years: +0 %: 15 mins: Summer	0.12	45.9	19.942
Eastern Catchment Area	FSR: 30 years: +0 %: 15 mins: Summer	0.01	3.0	1.289

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Western Catchment Area	FSR: 30 years: +40 %: 15 mins: Summer	0.01	3.0	1.304
Northern Catchment Area	FSR: 30 years: +40 %: 15 mins: Summer	0.01	4.8	2.086
Ramp Catchment Area	FSR: 30 years: +40 %: 15 mins: Summer	0.01	4.3	1.873
Yard Catchment Area	FSR: 30 years: +40 %: 15 mins: Summer	0.06	31.1	13.537
Roof Catchment Area	FSR: 30 years: +40 %: 15 mins: Summer	0.12	64.2	27.918
Eastern Catchment Area	FSR: 30 years: +40 %: 15 mins: Summer	0.01	4.2	1.810

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Western Catchment Area	FSR: 100 years: +0 %: 15 mins: Summer	0.01	2.8	1.205
Northern Catchment Area	FSR: 100 years: +0 %: 15 mins: Summer	0.01	4.4	1.927
Ramp Catchment Area	FSR: 100 years: +0 %: 15 mins: Summer	0.01	4.0	1.729
Yard Catchment Area	FSR: 100 years: +0 %: 15 mins: Summer	0.06	28.7	12.484
Roof Catchment Area	FSR: 100 years: +0 %: 15 mins: Summer	0.12	59.2	25.751
Eastern Catchment Area	FSR: 100 years: +0 %: 15 mins: Summer	0.01	3.8	1.663

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Western Catchment Area	FSR: 100 years: +40 %: 15 mins: Summer	0.01	3.9	1.681
Northern Catchment Area	FSR: 100 years: +40 %: 15 mins: Summer	0.01	6.2	2.691
Ramp Catchment Area	FSR: 100 years: +40 %: 15 mins: Summer	0.01	5.6	2.418
Yard Catchment Area	FSR: 100 years: +40 %: 15 mins: Summer	0.06	40.2	17.481
Roof Catchment Area	FSR: 100 years: +40 %: 15 mins: Summer	0.12	83.0	36.046
Eastern Catchment Area	FSR: 100 years: +40 %: 15 mins: Summer	0.01	5.4	2.334

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023		
	Designed by: NDD	Checked by:	Approved By:
Report Details: Type: Inflows Summary Storm Phase: Phase	Aegaea Ltd:		





FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Western Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	4.5	1.957
Northern Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	7.2	3.138
Ramp Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	6.5	2.814
Yard Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.06	46.9	20.361
Roof Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.12	96.7	41.995
Eastern Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	6.3	2.715

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH3	FSR: 1 years: +0 %: 360 mins: Summer	149.2 00	147.9 00	148.01 1	0.111	2.5	0.125	0.000	2.5	40.313	OK
MH1	FSR: 1 years: +0 %: 15 mins: Summer	149.4 00	148.8 00	148.82 5	0.025	2.7	0.028	0.000	2.6	1.153	OK
MH2	FSR: 1 years: +0 %: 15 mins: Summer	149.2 00	148.0 00	148.03 3	0.033	3.8	0.037	0.000	3.6	1.678	OK
MH4	FSR: 1 years: +0 %: 360 mins: Summer	149.2 00	147.8 00	147.82 6	0.026	2.5	0.000	0.000	2.5	40.303	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH3	FSR: 30 years: +0 %: 240 mins: Summer	149.200	147.900	148.122	0.222	5.2	0.251	0.000	5.2	76.478	OK
MH1	FSR: 30 years: +0 %: 15 mins: Summer	149.400	148.800	148.839	0.039	6.5	0.044	0.000	6.3	2.829	OK
MH2	FSR: 30 years: +0 %: 240 mins: Summer	149.200	148.000	148.122	0.122	2.7	0.138	0.000	2.5	10.476	OK
MH4	FSR: 30 years: +0 %: 240 mins: Summer	149.200	147.800	147.837	0.037	5.2	0.000	0.000	5.2	76.388	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH3	FSR: 30 years: +40 %: 240 mins: Summer	149.200	147.900	148.229	0.329	5.3	0.372	0.000	5.2	99.938	Surcharged
MH1	FSR: 30 years: +40 %: 15 mins: Summer	149.400	148.800	148.846	0.046	9.1	0.052	0.000	8.9	3.969	OK
MH2	FSR: 30 years: +40 %: 240 mins: Summer	149.200	148.000	148.229	0.229	3.8	0.259	0.000	3.4	14.623	Surcharged
MH4	FSR: 30 years: +40 %: 480 mins: Summer	149.200	147.800	147.837	0.037	5.2	0.000	0.000	5.2	141.405	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH3	FSR: 100 years: +0 %: 240 mins: Summer	149.200	147.900	148.206	0.306	5.3	0.346	0.000	5.2	95.098	Surcharged
MH1	FSR: 100 years: +0 %: 15 mins: Summer	149.400	148.800	148.844	0.044	8.4	0.050	0.000	8.2	3.665	OK
MH2	FSR: 100 years: +0 %: 240 mins: Summer	149.200	148.000	148.206	0.206	3.5	0.233	0.000	3.2	13.685	OK
MH4	FSR: 100 years: +0 %: 120 mins: Winter	149.200	147.800	147.837	0.037	5.2	0.000	0.000	5.2	52.660	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH3	FSR: 100 years: +40 %: 240 mins: Summer	149.200	147.900	148.338	0.438	5.3	0.495	0.000	5.2	115.072	Surcharged
MH1	FSR: 100 years: +40 %: 15 mins: Summer	149.400	148.800	148.852	0.052	11.8	0.059	0.000	11.5	5.125	OK
MH2	FSR: 100 years: +40 %: 240 mins: Summer	149.200	148.000	148.338	0.338	5.0	0.382	0.000	4.5	18.892	Surcharged
MH4	FSR: 100 years: +40 %: 480 mins: Summer	149.200	147.800	147.837	0.037	5.2	0.000	0.000	5.2	181.272	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH3	FSR: 1000 years: +0 %: 240 mins: Summer	149.200	147.900	149.210	1.310	20.3	11.897	10.427	5.7	132.502	Flood
MH1	FSR: 1000 years: +0 %: 120 mins: Winter	149.400	148.800	149.213	0.413	4.5	0.468	0.000	4.5	13.768	Flood Risk
MH2	FSR: 1000 years: +0 %: 240 mins: Summer	149.200	148.000	149.210	1.210	9.4	11.803	10.445	5.5	30.206	Flood
MH4	FSR: 1000 years: +0 %: 120 mins: Winter	149.200	147.800	147.838	0.038	5.7	0.000	0.000	5.7	64.290	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item

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 (%)	Status
Cellular Storage	FSR: 1 years: +0 %: 360 mins: Summer	148.012	148.012	0.092	0.092	6.9	24.802	0.000	0.000	2.3	35.110	162	78	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: NDD	Checked by:	Approved By:	
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item

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. Residual 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 (%)	Status
Cellular Storage	FSR: 30 years: +0 %: 240 mins: Summer	148.122	148.122	0.202	0.202	20.1	54.808	0.000	0.000	4.8	66.103	183	52	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item

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. Residual 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 (%)	Status
Cellular Storage	FSR: 30 years: +40 %: 240 mins: Summer	148.229	148.229	0.309	0.309	28.1	83.707	0.000	0.000	5.1	85.499	220	27	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: NDD	Checked by:	Approved By:	
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item

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. Residual 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 (%)	Status
Cellular Storage	FSR: 100 years: +0 %: 240 mins: Summer	148.206	148.206	0.286	0.286	26.3	77.432	0.000	0.000	5.1	81.575	203	32	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed by: NDD	Checked by:	Approved By:
Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item

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 (%)	Status
Cellular Storage	FSR: 100 years: +40 %: 240 mins: Summer	148.339	148.339	0.419	0.419	37.0	113.330	0.000	0.000	5.1	96.527	305	1	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: NDD	Checked by:	Approved By:	
		Aegaea Ltd:			



FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item

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. Residual 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 (%)	Status
Cellular Storage	FSR: 1000 years: +0 %: 240 mins: Summer	149.214	149.214	1.294	1.294	44.9	114.619	0.000	0.000	20.3	103.296	95	0	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 1 years: Increase Rainfall (%): +0: Critical Storm Per Item

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FSR: 1 years: +0 %: 15 mins: Summer	Pipe	MH1	MH2	149.4	148.82 ₅	0.029	1.153	0.9	0.03	2.6	OK
1.001	FSR: 1 years: +0 %: 15 mins: Summer	Pipe	MH2	MH3	149.2	148.03 ₃	0.053	1.678	0.5	0.05	3.6	OK
1.002	FSR: 1 years: +0 %: 360 mins: Summer	Pipe	MH3	MH4	149.2	148.01 ₁	0.027	40.303	0.9	0.03	2.5	OK
2.000	FSR: 1 years: +0 %: 360 mins: Summer	Pipe	Cellular Storage	MH3	149.2	148.01 ₂	0.101	35.110	0.1	0.06	2.3	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
	Designed by:	Checked by:	Approved By:	
	NDD			
Report Details:	Aegaea Ltd:			
Type: Connections Summary				
Storm Phase: Phase				



FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FSR: 30 years: +0 %: 15 mins: Summer	Pipe	MH1	MH2	149.4	148.83 ₉	0.048	2.829	1.0	0.06	6.3	OK
1.001	FSR: 30 years: +0 %: 15 mins: Summer	Pipe	MH2	MH3	149.2	148.05 ₇	0.087	4.042	0.7	0.12	8.9	OK
1.002	FSR: 30 years: +0 %: 240 mins: Summer	Pipe	MH3	MH4	149.2	148.12 ₂	0.038	76.388	1.2	0.06	5.2	OK
2.000	FSR: 30 years: +0 %: 120 mins: Winter	Pipe	Cellular Storage	MH3	149.2	148.11 ₄	0.204	39.699	0.1	0.12	4.9	OK

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
	Designed by:	Checked by:	Approved By:	
	NDD			
Report Details: Type: Connections Summary Storm Phase: Phase		Aegaea Ltd:		



FSR: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FSR: 30 years: +40 %: 15 mins: Summer	Pipe	MH1	MH2	149.4	148.846	0.058	3.969	1.1	0.09	8.9	OK
1.001	FSR: 30 years: +40 %: 15 mins: Summer	Pipe	MH2	MH3	149.2	148.084	0.134	5.543	0.7	0.16	12.6	OK
1.002	FSR: 30 years: +40 %: 480 mins: Summer	Pipe	MH3	MH4	149.2	148.221	0.038	141.405	1.2	0.06	5.2	Surcharged
2.000	FSR: 30 years: +40 %: 480 mins: Summer	Pipe	Cellular Storage	MH3	149.2	148.221	0.225	124.000	0.1	0.12	5.1	Surcharged

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations		Date: 24/01/2023			
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: NDD	Checked by:		Approved By:
		Aegaea Ltd:			



FSR: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FSR: 100 years: +0 %: 15 mins: Summer	Pipe	MH1	MH2	149.4	148.84 ₄	0.056	3.665	1.1	0.08	8.2	OK
1.001	FSR: 100 years: +0 %: 15 mins: Summer	Pipe	MH2	MH3	149.2	148.07 ₁	0.121	5.139	0.7	0.15	11.6	OK
1.002	FSR: 100 years: +0 %: 120 mins: Winter	Pipe	MH3	MH4	149.2	148.19 ₅	0.038	52.660	1.2	0.06	5.2	Surcharged
2.000	FSR: 100 years: +0 %: 120 mins: Summer	Pipe	Cellular Storage	MH3	149.2	148.19 ₆	0.225	41.214	0.1	0.12	5.1	Surcharged

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Connections Summary Storm Phase: Phase	NDD			
Aegaea Ltd:				



FSR: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FSR: 100 years: +40 %: 15 mins: Summer	Pipe	MH1	MH2	149.4	148.85 ₂	0.074	5.125	1.1	0.12	11.5	OK
1.001	FSR: 100 years: +40 %: 15 mins: Summer	Pipe	MH2	MH3	149.2	148.13 ₃	0.183	7.026	0.8	0.21	16.3	OK
1.002	FSR: 100 years: +40 %: 480 mins: Summer	Pipe	MH3	MH4	149.2	148.32 ₇	0.038	181.272	1.2	0.06	5.2	Surcharged
2.000	FSR: 100 years: +40 %: 240 mins: Summer	Pipe	Cellular Storage	MH3	149.2	148.33 ₉	0.225	96.270	0.1	0.12	5.1	Surcharged

Project 682: Vulcan Refractories ST10 1PN Proposed Calculations	Date: 24/01/2023			
	Designed by:	Checked by:	Approved By:	
	NDD			
Report Details: Type: Connections Summary Storm Phase: Phase		Aegaea Ltd:		

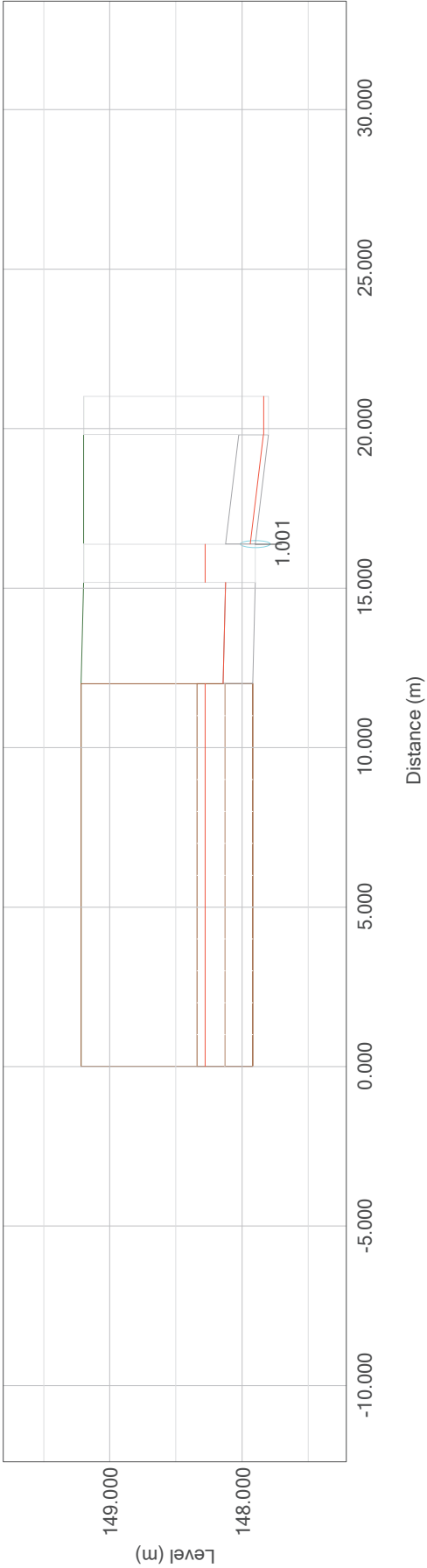


FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	MH1	MH2	149.4	148.856	0.091	5.971	1.2	0.14	13.5	OK
1.001	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	MH2	MH3	149.2	148.171	0.221	8.086	0.8	0.25	19.0	OK
1.002	FSR: 1000 years: +0 %: 120 mins: Winter	Pipe	MH3	MH4	149.2	149.208	0.040	64.290	1.2	0.06	5.7	Flood
2.000	FSR: 1000 years: +0 %: 240 mins: Summer	Pipe	Cellular Storage	MH3	149.2	149.214	0.225	102.517	0.5	0.49	20.3	Surcharged

		Page 1
Project 682: Vulcan Refractories ST10 1PN	Aegaea Ltd:	
Proposed Calculations		
Modified date 24/01/2023	Designed by NDD	
File 682_v1-no pump.iddx	Checked by	
InfoDrainage 2023.0		
Profile - Flow Path		
		Horizontal Scale 1:200, Vertical Scale 1:50

1/1



Junction		MH3		MH4	
Type		Manhole		Manhole	
CL (m)		149.200		149.200	
IL (m)		147.900		147.800	
Connection		2.000		1.002	
Type		Pipe		Pipe	
Length (m)		3.180		3.430	
Diam (mm)		225		225	
Height (mm)					
U/S IL (m)		147.920		147.900	
D/S IL (m)		147.900		147.800	
C. Splay (mm)					
SWC		Cellular Storage			
Type		Cellular Storage			
EL (m)		149.220			
BL (m)		147.920			

