

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024	
Report Details: Type: Junctions Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB
		Approved By: CG	
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY	



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Sump Depth (m)	Chamber Shape
IC02	Manhole	388636.751	400120.061	87.074	1.300	85.774	0.000	Circular
MH01C	Manhole	388645.441	400120.002	86.978	2.093	84.885	0.000	Circular
IC04	Manhole	388638.404	400135.404	86.907	1.260	85.647	0.000	Circular
IC01B	Manhole	388657.730	400121.214	86.840	1.135	85.705	0.000	Circular
MH01D	Manhole	388645.612	400135.962	86.836	2.154	84.682	0.000	Circular
IC03C	Manhole	388656.809	400136.694	86.760	1.668	85.092	0.000	Circular
IC01A	Manhole	388672.506	400122.801	86.708	0.779	85.929	0.000	Circular
MH01E	Manhole	388643.484	400138.541	86.707	2.036	84.671	0.000	Circular
IC10	Manhole	388635.201	400153.286	86.619	0.529	86.090	0.000	Circular
JCN1	Manhole	388660.990	400138.976	86.516	1.428	85.088	0.000	Circular
IC13A	Manhole	388631.735	400166.547	86.507	0.707	85.800	0.000	Circular
IC03B	Manhole	388674.062	400137.227	86.503	1.163	85.340	0.000	Circular
MH01F	Manhole	388643.217	400153.277	86.482	1.860	84.622	0.000	Circular
IC01	Manhole	388686.018	400124.217	86.462	0.397	86.065	0.000	Circular
IC13B	Manhole	388640.632	400166.700	86.437	0.787	85.650	0.000	Circular
RG04	Manhole	388635.703	400144.063	86.405	0.705	85.700	0.000	Circular
IC03A	Manhole	388685.531	400137.327	86.381	0.931	85.450	0.000	Circular
MH05	Manhole	388676.967	400139.275	86.308	0.918	85.390	0.000	Circular
MH09	Manhole	388659.003	400153.109	86.293	1.618	84.675	0.000	Circular
MH01G	Manhole	388643.102	400164.918	86.259	1.676	84.583	0.000	Circular
RG03	Manhole	388667.548	400145.080	86.172	0.772	85.400	0.000	Circular
MH11	Manhole	388651.994	400166.533	86.133	1.506	84.628	0.000	Circular
MH09A	Manhole	388674.186	400153.213	86.122	1.371	84.751	0.000	Circular
MH09B	Manhole	388682.891	400153.242	86.093	1.148	84.945	0.000	Circular
RG02	Manhole	388686.666	400145.283	86.076	0.576	85.500	0.000	Circular
MH12 (HB)	Manhole	388643.146	400168.071	86.053	1.670	84.383	0.200	Circular
RG01	Manhole	388688.256	400145.446	86.052	0.552	85.500	0.000	Circular
RG05	Manhole	388649.374	400167.153	85.986	0.686	85.300	0.000	Circular
MH13 (DC1)	Manhole	388627.164	400168.014	85.945	1.544	84.401	0.000	Circular
Ex. MH1	Manhole	388623.197	400175.296	85.873	1.555	84.318	0.000	Circular

Name	Diameter (m)	Part Family	Lock
IC02	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
MH01C	1.200	Cylindrical Junction Structure NF SI	None
IC04	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
IC01B	0.600	Cylindrical Junction Structure NF SI	None
MH01D	1.500	Cylindrical Junction Structure NF SI	None
IC03C	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
IC01A	0.600	Cylindrical Junction Structure NF SI	None
MH01E	1.500	Cylindrical Junction Structure NF SI	None
IC10	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024	
		Designed by: KGB	Checked by: KGB
		Approved By: CG	
Report Details: Type: Junctions Storm Phase: Proposed SW		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY	



JCN1	0.300	Road gulley 150mm trapped outlet	None
IC13A	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
IC03B	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
MH01F	1.500	Cylindrical Junction Structure NF SI	None
IC01	0.600	Cylindrical Junction Structure NF SI	None
IC13B	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
RG04	0.450	Road gulley 150mm trapped outlet	None
IC03A	0.600	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
MH05	1.200	Cylindrical Junction Structure NF SI	None
MH09	1.200	Cylindrical Junction Structure NF SI	None
MH01G	1.500	Cylindrical Junction Structure NF SI	None
RG03	0.450	Road gulley 150mm trapped outlet	None
MH11	1.200	Cylindrical Junction Structure NF SI	None
MH09A	1.200	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
MH09B	1.200	SFA7 - Type3 - Circ Rigid (Light Loads) (B.19)	None
RG02	0.450	Road gulley 150mm trapped outlet	None
MH12 (HB)	1.200	Cylindrical Junction Structure NF SI	None
RG01	0.450	Road gulley 150mm trapped outlet	None
RG05	0.450	Road gulley 150mm trapped outlet	None
MH13 (DC1)	1.200	Cylindrical Junction Structure NF SI	None

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
		Designed by: KGB	Checked by: KGB		Approved By: CG
Report Details: Type: Junctions Storm Phase: Proposed SW		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Ex. MH1	1.200	Cylindrical Junction Structure NF SI	None
---------	-------	---	------

Inlets	
--------	--

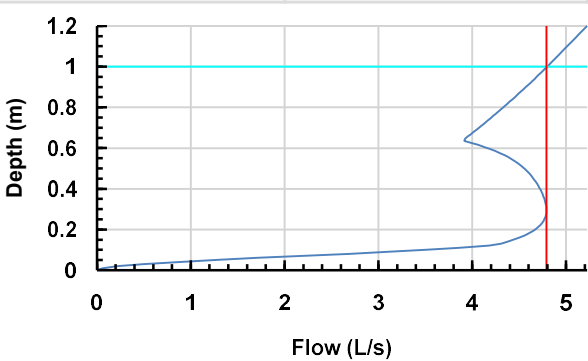
Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change	Date: 16/08/2024		
	Designed by: KGB	Checked by: KGB	Approved By: CG
Report Details: Type: Junctions Storm Phase: Proposed SW	Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY		



Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
IC02	Inlet	Catchment Area IC02	(None)	No Restriction
MH01C	Inlet	1.002	(None)	No Restriction
	Inlet (1)	2.000	(None)	No Restriction
IC04	Inlet	Catchment Area IC04	(None)	No Restriction
	Inlet (1)	D1 Outfall	(None)	No Restriction
IC01B	Inlet	1.001	(None)	No Restriction
	Inlet (1)	Catchment Area IC01B	(None)	No Restriction
MH01D	Inlet	1.003 E1 Outfall	(None)	No Restriction
	Inlet (1)	3.002	(None)	No Restriction
	Inlet (3)	4.000	(None)	No Restriction
IC03C	Inlet	Catchment Area IC03C	(None)	No Restriction
	Inlet (1)	3.001	(None)	No Restriction
	Inlet (2)	F1 Outfall E2 Outfall	(None)	No Restriction
IC01A	Inlet	1.000	(None)	No Restriction
	Inlet (1)	Catchment Area IC01A	(None)	No Restriction
MH01E	Inlet	1.004	(None)	No Restriction
	Inlet (1)	8.000 D2 Outfall	(None)	No Restriction
	Inlet (2)	5.002	(None)	No Restriction
IC10	Inlet	Catchment Area IC10	(None)	No Restriction
	Inlet (1)	A2 Outfall	(None)	No Restriction
JCN1	Inlet	5.001	(None)	No Restriction
	Inlet (1)	7.000	(None)	No Restriction
IC13A	Inlet	A1 Outfall	(None)	No Restriction
	Inlet (1)	Catchment Area IC13A	(None)	No Restriction
IC03B	Inlet	Catchment Area IC03B	(None)	No Restriction
	Inlet (1)	3.000 G1 Outfall F2 Outfall	(None)	No Restriction
MH01F	Inlet	1.005	(None)	No Restriction
	Inlet (1)	9.002	(None)	No Restriction
	Inlet (2)	10.000	(None)	No Restriction
IC01	Inlet	Catchment Area IC01	(None)	No Restriction
IC13B	Inlet	13.000	(None)	No Restriction
RG04	Inlet	Catchment Area RG04	(None)	No Restriction
IC03A	Inlet	G2 Outfall Catchment Area IC03A	(None)	No Restriction
MH05	Inlet	5.000	(None)	No Restriction
	Inlet (1)	6.000	(None)	No Restriction
MH09	Inlet	9.001 B1 Outfall B2 Outfall	(None)	No Restriction
MH01G	Inlet (2)	Catchment Area MH09	(None)	No Restriction
	Inlet	1.006	(None)	No Restriction
	Inlet (1)	13.001	(None)	No Restriction
RG03	Inlet (2)	11.002	(None)	No Restriction
	Inlet	Catchment Area RG03	(None)	No Restriction
MH11	Inlet (1)	12.000	(None)	No Restriction
	Inlet (2)	Cell Stor B Outfall	(None)	No Restriction
MH09A	Inlet	C1 Outfall	(None)	No Restriction
	Inlet (1)	9.000	(None)	No Restriction
MH09B	Inlet	Catchment Area IC09A	(None)	No Restriction
	Inlet (1)	C2 Outfall	(None)	No Restriction
RG02	Inlet	Catchment Area RG2	(None)	No Restriction
MH12 (HB)	Inlet	1.007	(None)	No Restriction
RG01	Inlet	Catchment Area RG01	(None)	No Restriction
RG05	Inlet	Catchment Area RG05	(None)	No Restriction
MH13 (DC1)	Inlet	1.008	(None)	No Restriction
Ex. MH1	Inlet	1.009	(None)	No Restriction

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Junctions Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
IC02	Outlet	2.000	Free Discharge
MH01C	Outlet	1.003	Free Discharge
IC04	Outlet	4.000	Free Discharge
IC01B	Outlet	1.002	Free Discharge
MH01D	Outlet	1.004	Free Discharge
IC03C	Outlet	3.002	Free Discharge
IC01A	Outlet	1.001	Free Discharge
MH01E	Outlet	1.005	Free Discharge
IC10	Outlet	10.000	Free Discharge
JCN1	Outlet	5.002	Free Discharge
IC13A	Outlet	13.000	Free Discharge
IC03B	Outlet	3.001	Free Discharge
MH01F	Outlet	1.006	Free Discharge
IC01	Outlet	1.000	Free Discharge
IC13B	Outlet	13.001	Free Discharge
RG04	Outlet	8.000	Free Discharge
IC03A	Outlet	3.000	Free Discharge
MH05	Outlet	5.001	Free Discharge
MH09	Outlet	9.002	Free Discharge
MH01G	Outlet	1.007	Free Discharge
RG03	Outlet	7.000	Free Discharge
MH11	Outlet	11.002	Free Discharge
MH09A	Outlet	9.001	Free Discharge
MH09B	Outlet	9.000	Free Discharge
RG02	Outlet	6.000	Free Discharge
MH12 (HB)	Outlet	1.008	Hydro-Brake®
	Invert Level (m)		84.583
	Design Depth (m)		1.000
	Design Flow (L/s)		4.8
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference		SHE-0103-4800-1000-4800
			
	RG01	Outlet	5.000
RG05	Outlet	12.000	Free Discharge
MH13 (DC1)	Outlet	1.009	Free Discharge

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving C2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.100
Depth (m)	0.300
Base Level (m)	85.800
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.1
Porosity (%)	30
Length (m)	5.987
Long. Slope (1:X)	500.00
Width (m)	5.988
Total Volume (m³)	2.225

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-C2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	C2 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving C1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.079
Depth (m)	0.300
Base Level (m)	85.779
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	5.961
Long. Slope (1:X)	500.00
Width (m)	5.972
Total Volume (m³)	2.210

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-C1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	C1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving B2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.138
Depth (m)	0.300
Base Level (m)	85.838
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	5.992
Long. Slope (1:X)	500.00
Width (m)	5.997
Total Volume (m³)	2.230

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-B2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	B2 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving B1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.218
Depth (m)	0.300
Base Level (m)	85.918
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	5.757
Long. Slope (1:X)	500.00
Width (m)	5.998
Total Volume (m³)	2.143

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-B1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	B1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving A2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.446
Depth (m)	0.300
Base Level (m)	86.146
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	5.984
Long. Slope (1:X)	500.00
Width (m)	3.067
Total Volume (m³)	1.175

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-A2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	A2 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving A1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.538
Depth (m)	0.300
Base Level (m)	86.238
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	6.000
Long. Slope (1:X)	500.00
Width (m)	2.998
Total Volume (m³)	1.154

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-A1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	A1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving D1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.900
Depth (m)	0.300
Base Level (m)	86.600
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	7.272
Long. Slope (1:X)	500.00
Width (m)	2.990
Total Volume (m³)	1.395

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-D1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	D1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving D2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.776
Depth (m)	0.300
Base Level (m)	86.476
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	5.977
Long. Slope (1:X)	500.00
Width (m)	3.018
Total Volume (m³)	1.156

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-D2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	D2 Outfall
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving E1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.735
Depth (m)	0.300
Base Level (m)	86.435
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	3.194
Long. Slope (1:X)	500.00
Width (m)	6.769
Total Volume (m³)	1.337

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-E1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	E1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving E2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.603
Depth (m)	0.300
Base Level (m)	86.303
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	6.770
Long. Slope (1:X)	500.00
Width (m)	3.178
Total Volume (m³)	1.375

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-E2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	E2 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving F1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.526
Depth (m)	0.300
Base Level (m)	86.226
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	6.517
Long. Slope (1:X)	500.00
Width (m)	3.278
Total Volume (m³)	1.362

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-F1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	F1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving G1

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.388
Depth (m)	0.300
Base Level (m)	86.088
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	6.483
Long. Slope (1:X)	500.00
Width (m)	2.564
Total Volume (m³)	1.077

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-G1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	G1 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving G2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.326
Depth (m)	0.300
Base Level (m)	86.026
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	3.211
Long. Slope (1:X)	500.00
Width (m)	6.217
Total Volume (m³)	1.238

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-G2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	G2 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Porous Paving F2

Type : Porous Paving

Dimensions

Exceedance Level (m)	86.440
Depth (m)	0.300
Base Level (m)	86.140
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	0.01
Porosity (%)	30
Length (m)	6.121
Long. Slope (1:X)	500.00
Width (m)	3.480
Total Volume (m³)	1.354

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area PP-F2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	F2 Outfall
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	0.1
---------------------	-----

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Cellular Storage Block B

Type : Cellular Storage

Dimensions

Exceedance Level (m)	85.703
Depth (m)	0.420
Base Level (m)	84.628
Number of Crates Long	28
Number of Crates Wide	4
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1.2
Crate Width (m)	0.6
Crate Height (m)	0.42
Total Volume (m³)	32.830

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area IC11A
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area IC11B
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Cell Stor B Outfall
Outlet Type	Free Discharge

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
		Designed by: KGB	Checked by: KGB		Approved By: CG
Report Details: Type: Connections Storm Phase: Proposed SW		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	From	To	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	No. of Barrels
1.000	IC01	IC01A	13.586	Pipe	99.896		0.6	1
1.001	IC01A	IC01B	14.861	Pipe	99.738		0.6	1
1.002	IC01B	MH01C	12.348	Pipe	21.217		0.6	1
1.003	MH01C	MH01D	15.961	Pipe	300.000		0.6	1
1.004	MH01D	MH01E	3.343	Pipe	300.000		0.6	1
1.005	MH01E	MH01F	14.738	Pipe	300.000		0.6	1
1.006	MH01F	MH01G	11.641	Pipe	300.000		0.6	1
1.008	MH12 (HB)	MH13 (DC1)	15.982	Pipe	87.900		0.6	1
1.009	MH13 (DC1)	Ex. MH1	8.292	Pipe	100.000		0.6	1
2.000	IC02	MH01C	8.690	Pipe	16.511		0.6	1
3.000	IC03A	IC03B	11.469	Pipe	104.267		0.6	1
3.001	IC03B	IC03C	17.261	Pipe	99.775		0.6	1
3.002	IC03C	MH01D	11.221	Pipe	149.620		0.6	1
9.000	MH09B	MH09A	8.705	Pipe	200.000		0.6	1
9.002	MH09	MH01F	15.787	Pipe	300.000		0.6	1
10.000	IC10	MH01F	8.016	Pipe	7.202		0.6	1
13.000	IC13A	IC13B	8.898	Pipe	59.322		0.6	1
1.007	MH01G	MH12 (HB)	3.153	Pipe	200.000		0.6	1
13.001	IC13B	MH01G	3.045	Pipe	3.687		0.6	1
11.002	MH11	MH01G	9.038	Pipe	200.610		0.6	1
9.001	MH09A	MH09	15.184	Pipe	200.000		0.6	1
4.000	IC04	MH01D	7.229	Pipe	13.026		0.6	1
8.000	RG04	MH01E	9.541	Pipe	13.159		0.6	1
5.000	RG01	MH05	12.866	Pipe	116.963		0.6	1
5.001	MH05	JCN1	15.980	Pipe	105.129		0.6	1
5.002	JCN1	MH01E	17.511	Pipe	150.000		0.6	1
7.000	RG03	JCN1	8.959	Pipe	39.818		0.6	1
6.000	RG02	MH05	11.409	Pipe	103.722		0.6	1
12.000	RG05	MH11	2.692	Pipe	5.158		0.6	1
A1 Outfall	Porous Paving A1	IC13A	2.906	Pipe	6.639		0.6	1
B1 Outfall	Porous Paving B1	MH09	2.030	Pipe	3.158		0.6	1
A2 Outfall	Porous Paving A2	IC10	4.747	Pipe	100.000		0.6	1
B2 Outfall	Porous Paving B2	MH09	3.036	Pipe	5.394		0.6	1
C1 Outfall	Porous Paving C1	MH09A	2.006	Pipe	6.103		0.6	1
C2 Outfall	Porous Paving C2	MH09B	1.873	Pipe	7.490		0.6	1
G2 Outfall	Porous Paving G2	IC03A	1.115	Pipe	2.118		0.6	1
G1 Outfall	Porous Paving G1	IC03B	2.970	Pipe	3.401		0.6	1
F1 Outfall	Porous Paving F1	IC03C	3.260	Pipe	3.232		0.6	1
E2 Outfall	Porous Paving E2	IC03C	2.168	Pipe	1.996		0.6	1
D1 Outfall	Porous Paving D1	IC04	4.740	Pipe	4.974		0.6	1
Cell Stor B Outfall	Cellular Storage Block B	MH11	1.995	Pipe	0.000		0.6	1
D2 Outfall	Porous Paving D2	MH01E	1.660	Pipe	0.920		0.6	1
E1 Outfall	Porous Paving E1	MH01D	2.263	Pipe	1.291		0.6	1
F2 Outfall	Porous Paving F2	IC03B	2.301	Pipe	2.875		0.6	1

Name	Diameter / Base Width (mm)	Height (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock
1.000	150		86.462	86.065	86.708	85.929	Generic Pipe SI	All

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change	Date: 16/08/2024		
	Designed by: KGB	Checked by: KGB	Approved By: CG
Report Details: Type: Connections Storm Phase: Proposed SW	Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY		



1.001	150	86.708	85.929	86.840	85.780	Generic Pipe SI	All
1.002	225	86.840	85.705	86.978	85.123	Generic Pipe SI	All
1.003	450	86.978	84.885	86.836	84.832	Generic Pipe SI	All
1.004	600	86.836	84.682	86.707	84.671	Generic Pipe SI	All
1.005	600	86.707	84.671	86.482	84.622	Generic Pipe SI	All
1.006	600	86.482	84.622	86.259	84.583	Generic Pipe SI	All
1.008	225	86.053	84.583	85.945	84.401	Generic Pipe SI	All
1.009	150	85.945	84.401	85.873	84.318	Generic Pipe SI	All
2.000	100	87.074	85.774	86.978	85.248	Generic Pipe SI	All
3.000	150	86.381	85.450	86.503	85.340	Generic Pipe SI	All
3.001	150	86.503	85.340	86.760	85.167	Generic Pipe SI	All
3.002	225	86.760	85.092	86.836	85.017	Generic Pipe SI	All
9.000	300	86.093	84.945	86.122	84.901	Generic Pipe SI	All
9.002	450	86.293	84.675	86.482	84.622	Generic Pipe SI	All
10.000	150	86.619	86.090	86.482	84.977	Generic Pipe SI	All
13.000	150	86.507	85.800	86.437	85.650	Generic Pipe SI	All
1.007	300	86.259	84.599	86.053	84.583	Generic Pipe SI	All
13.001	150	86.437	85.650	86.259	84.824	Generic Pipe SI	All
11.002	300	86.133	84.628	86.259	84.583	Generic Pipe SI	All
9.001	450	86.122	84.751	86.293	84.675	Generic Pipe SI	All
4.000	150	86.907	85.647	86.836	85.092	Generic Pipe SI	All
8.000	150	86.405	85.700	86.707	84.975	Generic Pipe SI	All
5.000	150	86.052	85.500	86.308	85.390	Generic Pipe SI	All
5.001	150	86.308	85.390	86.516	85.238	Generic Pipe SI	All
5.002	300	86.516	85.088	86.707	84.971	Generic Pipe SI	All
7.000	150	86.172	85.400	86.516	85.175	Generic Pipe SI	All
6.000	100	86.076	85.500	86.308	85.390	Generic Pipe SI	All
12.000	100	85.986	85.300	86.133	84.778	Generic Pipe SI	All
A1 Outfall	100	86.550	86.238	86.507	85.800	Generic Pipe SI	All
B1 Outfall	100	86.276	85.918	86.293	85.275	Generic Pipe SI	All
A2 Outfall	100	86.487	86.187	86.619	86.140	Generic Pipe SI	All
B2 Outfall	100	86.243	85.838	86.293	85.275	Generic Pipe SI	All
C1 Outfall	100	86.112	85.779	86.122	85.450	Generic Pipe SI	All
C2 Outfall	100	86.085	85.800	86.093	85.550	Generic Pipe SI	All
G2 Outfall	100	86.291	86.026	86.381	85.500	Generic Pipe SI	All
G1 Outfall	100	86.495	86.213	86.503	85.340	Generic Pipe SI	All
F1 Outfall	100	86.586	86.226	86.760	85.217	Generic Pipe SI	All

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change	Date: 16/08/2024				
	Designed by:	Checked by:	Approved By:		
	KGB	KGB	CG		
Report Details: Type: Connections Storm Phase: Proposed SW	Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY				

E2 Outfall	100		86.720	86.303	86.760	85.217	Generic Pipe SI	All
D1 Outfall	100		86.915	86.600	86.907	85.647	Generic Pipe SI	All
Cell Stor B Outfall	225		86.129	84.628	86.133	84.628	Generic Pipe SI	All
D2 Outfall	100		86.794	86.476	86.707	84.671	Generic Pipe SI	All
E1 Outfall	100		86.833	86.435	86.836	84.682	Generic Pipe SI	All
F2 Outfall	100		86.522	86.140	86.503	85.340	Generic Pipe SI	All

Name	Flow Restriction (L/s)
1.000	
1.001	
1.002	
1.003	
1.004	
1.005	
1.006	
1.008	5.2
1.009	
2.000	
3.000	
3.001	
3.002	
9.000	
9.002	
10.000	
13.000	
1.007	
13.001	
11.002	
9.001	
4.000	
8.000	
5.000	
5.001	
5.002	
7.000	
6.000	
12.000	
A1 Outfall	0.0
B1 Outfall	0.0
A2 Outfall	0.0
B2 Outfall	0.0
C1 Outfall	0.0
C2 Outfall	0.0
G2 Outfall	0.0
G1 Outfall	0.0
F1 Outfall	0.0
E2 Outfall	0.0
D1 Outfall	0.0
Cell Stor B Outfall	
D2 Outfall	
E1 Outfall	0.0
F2 Outfall	0.0

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
IC02	87.074 85.774	Diameter / Length: 0.600					Manhole
E:388636.751 N:400120.061	1.300						
			{a} 2.000	Pipe	85.774	Diam/Width:100	Not Applicable
MH01C	86.978 84.885	Diameter / Length: 1.200	{1} 1.002	Pipe	85.123	Diam/Width:225 Diam/Width:100	Manhole
E:388645.441 N:400120.002	2.093		{2} 2.000	Pipe	85.248		
			{a} 1.003	Pipe	84.885	Diam/Width:450	Not Applicable
IC04	86.907 85.647	Diameter / Length: 0.600	{1} D1 Outfall	Pipe	85.647	Diam/Width:100	Manhole
E:388638.404 N:400135.404	1.260						
			{a} 4.000	Pipe	85.647	Diam/Width:150	Not Applicable
IC01B	86.840 85.705	Diameter / Length: 0.600	{1} 1.001	Pipe	85.780	Diam/Width:150	Manhole
E:388657.730 N:400121.214	1.135						
			{a} 1.002	Pipe	85.705	Diam/Width:225	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
MH01D	86.836 84.682	Diameter / Length: 1.500	{1} 1.003	Pipe	84.832	Diam/Width:450	Manhole
E:388645.612	2.154		{2} E1 Outfall	Pipe	84.682	Diam/Width:100	
N:400135.962			{3} 3.002	Pipe		Diam/Width:225	
			{4} 4.000	Pipe	85.017	Diam/Width:150	
					85.092		
			{a} 1.004	Pipe	84.682	Diam/Width:600	Not Applicable
IC03C	86.760 85.092	Diameter / Length: 0.600	{1} 3.001	Pipe	85.167	Diam/Width:150	Manhole
E:388656.809	1.668		{2} F1 Outfall	Pipe	85.217	Diam/Width:100	
N:400136.694			{3} E2 Outfall	Pipe		Diam/Width:100	
					85.217		
			{a} 3.002	Pipe	85.092	Diam/Width:225	Not Applicable
IC01A	86.708 85.929	Diameter / Length: 0.600	{1} 1.000	Pipe	85.929	Diam/Width:150	Manhole
E:388672.506	0.779						
N:400122.801							
			{a} 1.001	Pipe	85.929	Diam/Width:150	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
MH01E	86.707 84.671	Diameter / Length: 1.500	{1} 1.004	Pipe	84.671	Diam/Width:600	Manhole
E:388643.484	2.036		{2} 8.000	Pipe	84.975	Diam/Width:150	
N:400138.541			{3} D2 Outfall	Pipe		Diam/Width:100	
			{4} 5.002	Pipe		84.671	
					84.971		
		{a} 1.005	Pipe	84.671	Diam/Width:600	Not Applicable	
IC10	86.619 86.090	Diameter / Length: 0.600	{1} A2 Outfall	Pipe	86.140	Diam/Width:100	Manhole
E:388635.201	0.529						
N:400153.286			{a} 10.000	Pipe	86.090	Diam/Width:150	Not Applicable
JCN1	86.516 85.088	Diameter / Length: 0.300	{1} 5.001	Pipe	85.238	Diam/Width:150	Manhole
E:388660.990	1.428		{2} 7.000	Pipe	85.175	Diam/Width:150	
N:400138.976			{a} 5.002	Pipe		85.088	Diam/Width:300
IC13A	86.507 85.800	Diameter / Length: 0.600	{1} A1 Outfall	Pipe	85.800	Diam/Width:100	Manhole
E:388631.735	0.707						
N:400166.547			{a} 13.000	Pipe	85.800	Diam/Width:150	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
IC03B	86.503 85.340	Diameter / Length: 0.600	{1} 3.000	Pipe	85.340	Diam/Width:150	Manhole
E:388674.062	1.163		{2} G1 Outfall	Pipe	85.340	Diam/Width:100	
N:400137.227			{3} F2 Outfall	Pipe	85.340	Diam/Width:100	
			{a} 3.001	Pipe	85.340	Diam/Width:150	Not Applicable
MH01F	86.482 84.622	Diameter / Length: 1.500	{1} 1.005	Pipe	84.622	Diam/Width:600	Manhole
E:388643.217	1.860		{2} 9.002	Pipe	84.622	Diam/Width:450	
N:400153.277			{3} 10.000	Pipe	84.977	Diam/Width:150	
			{a} 1.006	Pipe	84.622	Diam/Width:600	Not Applicable
IC01	86.462 86.065	Diameter / Length: 0.600					Manhole
E:388686.018	0.397						
N:400124.217			{a} 1.000	Pipe	86.065	Diam/Width:150	Not Applicable
IC13B	86.437 85.650	Diameter / Length: 0.600	{1} 13.000	Pipe	85.650	Diam/Width:150	Manhole
E:388640.632	0.787						
N:400166.700			{a} 13.001	Pipe	85.650	Diam/Width:150	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
RG04	86.405 85.700	Diameter / Length: 0.450					Manhole
E:388635.703 N:400144.063	0.705						
			{a} 8.000	Pipe	85.700	Diam/Width:150	Not Applicable
IC03A	86.381 85.450	Diameter / Length: 0.600	{1} G2 Outfall	Pipe	85.500	Diam/Width:100	Manhole
E:388685.531 N:400137.327	0.931						
			{a} 3.000	Pipe	85.450	Diam/Width:150	Not Applicable
MH05	86.308 85.390	Diameter / Length: 1.200	{1} 5.000	Pipe	85.390	Diam/Width:150 Diam/Width:100	Manhole
E:388676.967 N:400139.275	0.918		{2} 6.000	Pipe	85.390		
			{a} 5.001	Pipe	85.390	Diam/Width:150	Not Applicable
MH09	86.293 84.675	Diameter / Length: 1.200	{1} 9.001	Pipe	84.675	Diam/Width:450 Diam/Width:100 Diam/Width:100	Manhole
E:388659.003 N:400153.109	1.618		{2} B1 Outfall	Pipe	85.275		
			{3} B2 Outfall	Pipe	85.275		
			{a} 9.002	Pipe	84.675	Diam/Width:450	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
MH01G	86.259 84.583	Diameter / Length: 1.500	{1} 1.006	Pipe	84.583	Diam/Width:600	Manhole
E:388643.102	1.676		{2} 13.001	Pipe	84.824	Diam/Width:150	
N:400164.918			{3} 11.002	Pipe	84.583	Diam/Width:300	
			{a} 1.007	Pipe	84.599	Diam/Width:300	Not Applicable
RG03	86.172 85.400	Diameter / Length: 0.450					Manhole
E:388667.548	0.772						
N:400145.080			{a} 7.000	Pipe	85.400	Diam/Width:150	Not Applicable
MH11	86.133 84.628	Diameter / Length: 1.200	{1} 12.000	Pipe	84.778	Diam/Width:100	Manhole
E:388651.994	1.506		{2} Cell Stor B Outfall	Pipe	84.628	Diam/Width:225	
N:400166.533			{a} 11.002	Pipe	84.628	Diam/Width:300	Not Applicable
MH09A	86.122 84.751	Diameter / Length: 1.200	{1} C1 Outfall	Pipe	85.450	Diam/Width:100	Manhole
E:388674.186	1.371		{2} 9.000	Pipe	84.901	Diam/Width:300	
N:400153.213			{a} 9.001	Pipe	84.751	Diam/Width:450	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
MH09B	86.093 84.945	Diameter / Length: 1.200	{1} C2 Outfall	Pipe	85.550	Diam/Width:100	Manhole
E:388682.891 N:400153.242	1.148						
			{a} 9.000	Pipe	84.945	Diam/Width:300	Not Applicable
RG02	86.076 85.500	Diameter / Length: 0.450					Manhole
E:388686.666 N:400145.283	0.576						
			{a} 6.000	Pipe	85.500	Diam/Width:100	Not Applicable
MH12 (HB)	86.053 84.383	Diameter / Length: 1.200	{1} 1.007	Pipe	84.583	Diam/Width:300	Manhole
E:388643.146 N:400168.071	1.670						
			{a} 1.008	Pipe	84.583	Diam/Width:225	Not Applicable
RG01	86.052 85.500	Diameter / Length: 0.450					Manhole
E:388688.256 N:400145.446	0.552						
			{a} 5.000	Pipe	85.500	Diam/Width:150	Not Applicable
RG05	85.986 85.300	Diameter / Length: 0.450					Manhole
E:388649.374 N:400167.153	0.686						
			{a} 12.000	Pipe	85.300	Diam/Width:100	Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Manhole Schedule Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
MH13 (DC1)	85.945 84.401	Diameter / Length: 1.200	{1} 1.008	Pipe	84.401	Diam/Width:225	Manhole
E:388627.164 N:400168.014	1.544						
			{a} 1.009	Pipe	84.401	Diam/Width:150	Not Applicable
Ex. MH1	85.873 84.318	Diameter / Length: 1.200	{1} 1.009	Pipe	84.318	Diam/Width:150	Manhole
E:388623.197 N:400175.296	1.555						
							Not Applicable

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Inflow Summary Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (m²)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (m²)
Catchment Area IC01	IC01		Time of Concentration	42.999	100	0	100	42.999
Catchment Area IC01A	IC01A		Time of Concentration	40.760	100	0	100	40.760
Catchment Area IC01B	IC01B		Time of Concentration	39.139	100	0	100	39.139
Catchment Area IC02	IC02		Time of Concentration	42.985	100	0	100	42.985
Catchment Area IC03A	IC03A		Time of Concentration	37.668	100	0	100	37.668
Catchment Area IC03B	IC03B		Time of Concentration	38.462	100	0	100	38.462
Catchment Area IC03C	IC03C		Time of Concentration	40.615	100	0	100	40.615
Catchment Area IC04	IC04		Time of Concentration	36.730	100	0	100	36.730
Catchment Area IC09A	MH09B		Time of Concentration	91.424	100	0	100	91.424
Catchment Area IC10	IC10		Time of Concentration	41.428	100	0	100	41.428
Catchment Area IC11A	Cellular Storage Block B		Time of Concentration	68.236	100	0	100	68.236
Catchment Area IC11B	Cellular Storage Block B		Time of Concentration	76.981	100	0	100	76.981
Catchment Area IC13A	IC13A		Time of Concentration	36.355	100	0	100	36.355
Catchment Area MH09	MH09		Time of Concentration	80.198	100	0	100	80.198
Catchment Area PP-A1	Porous Paving A1		Time of Concentration	46.439	100	0	100	46.439
Catchment Area PP-A2	Porous Paving A2		Time of Concentration	31.331	100	0	100	31.331
Catchment Area PP-B1	Porous Paving B1		Time of Concentration	47.526	100	0	100	47.526
Catchment Area PP-B2	Porous Paving B2		Time of Concentration	50.567	100	0	100	50.567
Catchment Area PP-C1	Porous Paving C1		Time of Concentration	49.962	100	0	100	49.962
Catchment Area PP-C2	Porous Paving C2		Time of Concentration	50.100	100	0	100	50.100
Catchment Area PP-D1	Porous Paving D1		Time of Concentration	21.734	100	0	100	21.734
Catchment Area PP-D2	Porous Paving D2		Time of Concentration	18.048	100	0	100	18.048
Catchment Area PP-E1	Porous Paving E1		Time of Concentration	21.114	100	0	100	21.114
Catchment Area PP-E2	Porous Paving E2		Time of Concentration	21.436	100	0	100	21.436
Catchment Area PP-F1	Porous Paving F1		Time of Concentration	21.443	100	0	100	21.443
Catchment Area PP-F2	Porous Paving F2		Time of Concentration	22.175	100	0	100	22.175
Catchment Area PP-G1	Porous Paving G1		Time of Concentration	16.541	100	0	100	16.541
Catchment Area PP-G2	Porous Paving G2		Time of Concentration	19.216	100	0	100	19.216
Catchment Area RG01	RG01		Time of Concentration	113.506	100	0	100	113.506
Catchment Area RG2	RG02		Time of Concentration	78.487	100	0	100	78.487
Catchment Area RG03	RG03		Time of Concentration	151.306	100	0	100	151.306
Catchment Area RG04	RG04		Time of Concentration	170.940	100	0	100	170.940
Catchment Area RG05	RG05		Time of Concentration	166.946	100	0	100	166.946
TOTAL		0.0		1832.794				1832.794

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
		Designed by: KGB	Checked by: KGB		Approved By: CG
Report Details: Type: Network Design Criteria Storm Phase: Proposed SW		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (hrs)	0.083
Max. Travel Time (hrs)	0.50

FSR

Type: FSR

Return Period (years)	1.0
Region	England And Wales
M5-60 (mm)	18.0
Ratio R	0.357

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
		Designed by: KGB	Checked by: KGB		Approved By: CG
Report Details: Type: Outfall Details Storm Phase: Proposed SW		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			

Outfalls

Outfall	Outfall Type	Fixed Surcharged Level (m)	Level Curve
Ex. MH1	Free Discharge		

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024	
Report Details: Type: Inflows Summary Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley, L33 7UY	



Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (m²)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Catchment Area IC01	FSR: 100 years: +45 %: 0.25 hrs: Winter	43.00	2.4	1.108
Catchment Area PP-G2	FSR: 100 years: +45 %: 0.25 hrs: Winter	19.22	1.1	0.495
Catchment Area IC03A	FSR: 100 years: +45 %: 0.25 hrs: Winter	37.67	2.1	0.969
Catchment Area PP-G1	FSR: 100 years: +45 %: 0.25 hrs: Winter	16.54	0.9	0.426
Catchment Area IC03B	FSR: 100 years: +45 %: 0.25 hrs: Winter	38.46	2.1	0.988
Catchment Area IC01A	FSR: 100 years: +45 %: 0.25 hrs: Winter	40.76	2.3	1.049
Catchment Area IC03C	FSR: 100 years: +45 %: 0.25 hrs: Winter	40.61	2.3	1.045
Catchment Area IC01B	FSR: 100 years: +45 %: 0.25 hrs: Winter	39.14	2.2	1.005
Catchment Area IC02	FSR: 100 years: +45 %: 0.25 hrs: Winter	42.98	2.4	1.106
Catchment Area IC04	FSR: 100 years: +45 %: 0.25 hrs: Winter	36.73	2.0	0.946
Catchment Area RG04	FSR: 100 years: +45 %: 0.25 hrs: Winter	170.94	9.5	4.396
Catchment Area RG03	FSR: 100 years: +45 %: 0.25 hrs: Winter	151.31	8.4	3.891
Catchment Area RG01	FSR: 100 years: +45 %: 0.25 hrs: Winter	113.51	6.3	2.918
Catchment Area RG05	FSR: 100 years: +45 %: 0.25 hrs: Winter	166.95	9.3	4.292
Catchment Area IC09A	FSR: 100 years: +45 %: 0.25 hrs: Winter	91.42	5.1	2.351
Catchment Area IC11A	FSR: 100 years: +45 %: 0.25 hrs: Winter	68.24	3.8	1.754
Catchment Area IC11B	FSR: 100 years: +45 %: 0.25 hrs: Winter	76.98	4.3	1.981
Catchment Area MH09	FSR: 100 years: +45 %: 0.25 hrs: Winter	80.20	4.5	2.063
Catchment Area IC10	FSR: 100 years: +45 %: 0.25 hrs: Winter	41.43	2.3	1.065
Catchment Area IC13A	FSR: 100 years: +45 %: 0.25 hrs: Winter	36.36	2.0	0.935
Catchment Area PP-F2	FSR: 100 years: +45 %: 0.25 hrs: Winter	22.18	1.2	0.571

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024	
		Designed by: KGB	Checked by: KGB
		Approved By: CG	
Report Details: Type: Inflows Summary Storm Phase: Proposed SW		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY	



Catchment Area PP-F1	FSR: 100 years: +45 %: 0.25 hrs: Winter	21.44	1.2	0.551
Catchment Area PP-E2	FSR: 100 years: +45 %: 0.25 hrs: Winter	21.44	1.2	0.550
Catchment Area PP-E1	FSR: 100 years: +45 %: 0.25 hrs: Winter	21.11	1.2	0.543
Catchment Area PP-D2	FSR: 100 years: +45 %: 0.25 hrs: Winter	18.05	1.0	0.466
Catchment Area PP-D1	FSR: 100 years: +45 %: 0.25 hrs: Winter	21.73	1.2	0.558
Catchment Area PP-C2	FSR: 100 years: +45 %: 0.25 hrs: Winter	50.10	2.8	1.288
Catchment Area PP-C1	FSR: 100 years: +45 %: 0.25 hrs: Winter	49.96	2.8	1.284
Catchment Area PP-B2	FSR: 100 years: +45 %: 0.25 hrs: Winter	50.57	2.8	1.300
Catchment Area PP-B1	FSR: 100 years: +45 %: 0.25 hrs: Winter	47.53	2.6	1.222
Catchment Area PP-A2	FSR: 100 years: +45 %: 0.25 hrs: Winter	31.33	1.7	0.804
Catchment Area PP-A1	FSR: 100 years: +45 %: 0.25 hrs: Winter	46.44	2.6	1.194
Catchment Area RG2	FSR: 100 years: +45 %: 0.25 hrs: Winter	78.49	4.4	2.018

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024		
Report Details: Type: Junctions Summary Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB	
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY		



Critical Storm Per Item: Rank By: Max. Depth

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
IC02	FSR: 100 years: +45 %: 0.25 hrs: Winter	87.074	85.774	85.802	0.028	2.4	0.008	0.000	2.4	1.105	OK
MH01C	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.978	84.885	85.706	0.821	7.8	0.929	0.000	3.1	9.282	Surcharged
IC04	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.907	85.647	85.706	0.059	1.1	0.017	0.000	1.1	3.194	OK
IC01B	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.840	85.705	85.743	0.038	6.7	0.011	0.000	6.7	3.157	OK
MH01D	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.836	84.682	85.706	1.024	8.7	1.810	0.000	7.0	28.172	Surcharged
IC03C	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.760	85.092	85.706	0.614	3.8	0.174	0.000	3.8	15.278	Surcharged
IC01A	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.708	85.929	85.983	0.054	4.6	0.015	0.000	4.5	2.153	OK
MH01E	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.707	84.671	85.706	1.035	16.8	1.829	0.000	15.1	54.802	Surcharged
IC10	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.619	86.090	86.113	0.023	3.1	0.006	0.000	3.1	1.589	OK
JCN1	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.516	85.088	85.706	0.618	6.6	0.044	0.000	6.6	18.917	Surcharged
IC13A	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.507	85.800	85.849	0.049	4.3	0.014	0.000	4.3	2.091	OK
IC03B	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.503	85.340	85.707	0.367	2.2	0.104	0.000	2.2	10.760	Surcharged
MH01F	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.482	84.622	85.706	1.084	20.2	1.916	0.000	17.2	71.084	Surcharged
IC01	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.462	86.065	86.102	0.037	2.4	0.011	0.000	2.4	1.107	OK
IC13B	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.437	85.650	85.706	0.056	1.6	0.016	0.000	1.6	4.536	OK
RG04	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.405	85.700	85.747	0.047	9.5	0.007	0.000	9.5	4.395	OK
IC03A	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.381	85.450	85.707	0.257	1.1	0.073	0.000	1.1	3.147	Surcharged
MH05	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.308	85.390	85.707	0.317	3.7	0.358	0.000	3.7	10.594	Surcharged
MH09	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.293	84.675	85.706	1.031	7.6	1.166	0.000	4.0	17.234	Surcharged
MH01G	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.259	84.583	85.706	1.123	18.7	1.985	0.000	5.2	81.561	Surcharged
RG03	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.172	85.400	85.706	0.306	2.9	0.049	0.000	2.9	8.300	Surcharged
MH11	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.133	84.628	85.706	1.078	15.5	1.220	0.000	5.6	35.894	Surcharged
MH09A	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.122	84.751	85.706	0.955	4.6	1.080	0.000	2.9	9.753	Surcharged
MH09B	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.093	84.945	85.706	0.761	5.2	0.861	0.000	2.7	7.719	Surcharged
RG02	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.076	85.500	85.707	0.207	1.5	0.033	0.000	1.5	4.308	Surcharged
MH12 (HB)	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.053	84.383	85.706	1.323	5.2	1.496	0.000	5.0	58.513	Surcharged
RG01	FSR: 100 years: +45 %: 2.00 hrs: Winter	86.052	85.500	85.707	0.207	2.2	0.033	0.000	2.2	6.222	Surcharged
RG05	FSR: 100 years: +45 %: 2.00 hrs: Winter	85.986	85.300	85.706	0.406	3.2	0.065	0.000	3.2	9.161	Flood Risk
MH13 (DC1)	FSR: 100 years: +45 %: 2.00 hrs: Winter	85.945	84.401	84.458	0.057	5.0	0.065	0.000	5.0	58.307	OK
Ex. MH1	FSR: 100 years: +45 %: 2.00 hrs: Winter	85.873	84.318	84.372	0.054	5.0	0.000	0.000	5.0	58.307	OK

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024			
Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB		Approved By: CG
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY			



Critical Storm Per Item: Rank By: Max. Avg. Depth

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)	Percentage Available (%)	Status
Porous Paving C2	FSR: 100 years: +45 %: 0.25 hrs: Winter	85.874	85.850	0.062	0.050	2.8	0.600	0.000	0.000	2.2	1.192	73.054	OK
Porous Paving C1	FSR: 100 years: +45 %: 0.25 hrs: Winter	85.852	85.829	0.061	0.050	2.8	0.593	0.000	0.000	2.2	1.190	73.182	OK
Porous Paving B2	FSR: 100 years: +45 %: 0.25 hrs: Winter	85.912	85.888	0.062	0.050	2.8	0.601	0.000	0.000	2.2	1.205	73.071	OK
Porous Paving B1	FSR: 100 years: +45 %: 0.25 hrs: Winter	85.989	85.965	0.060	0.047	2.6	0.556	0.000	0.000	2.1	1.133	74.052	OK
Porous Paving A2	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.224	86.221	0.066	0.075	1.7	0.387	0.000	0.000	1.2	0.592	67.049	OK
Porous Paving A1	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.313	86.291	0.064	0.053	2.6	0.315	0.000	0.000	2.4	1.165	72.711	OK
Porous Paving D1	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.658	86.630	0.043	0.030	1.2	0.238	0.000	0.000	1.0	0.520	82.940	OK
Porous Paving D2	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.524	86.484	0.036	0.008	1.0	0.119	0.000	0.000	1.0	0.441	89.695	OK
Porous Paving E1	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.479	86.464	0.038	0.028	1.2	0.213	0.000	0.000	1.0	0.510	84.047	OK
Porous Paving E2	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.359	86.333	0.043	0.029	1.2	0.230	0.000	0.000	1.0	0.513	83.271	OK
Porous Paving F1	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.281	86.255	0.043	0.030	1.2	0.230	0.000	0.000	1.0	0.513	83.117	OK
Porous Paving G1	FSR: 100 years: +45 %: 24.00 hrs: Summer	86.222	86.222	0.121	0.134	0.7	0.634	0.000	0.000	1.3	92.814	41.188	OK
Porous Paving G2	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.069	86.054	0.037	0.028	1.1	0.191	0.000	0.000	0.9	0.465	84.541	OK
Porous Paving F2	FSR: 100 years: +45 %: 0.25 hrs: Winter	86.195	86.171	0.043	0.030	1.2	0.231	0.000	0.000	1.0	0.535	82.962	OK
Cellular Storage Block B	FSR: 100 years: +45 %: 2.00 hrs: Winter	85.706	85.706	1.078	1.078	17.9	33.033	0.207	0.000	3.6	5.683	-0.617	Flood

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change		Date: 16/08/2024		
Report Details: Type: Connections Summary Storm Phase: Proposed SW		Designed by: KGB	Checked by: KGB	
		Company Address: KGB Infrastructure North Mersey Business Centre Knowsley, L33 7UY		



Critical Storm Per Item: Rank By: Max. Flow

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: +45 %: 0.25 hrs: Winter	Pipe	IC01	IC01A	86.462	86.102	0.045	1.107	0.5	0.13	2.4	OK
1.001	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC01A	IC01B	86.708	85.983	0.053	2.153	0.8	0.26	4.5	OK
1.002	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC01B	MH01C	86.840	85.743	0.037	3.157	1.5	0.06	6.7	OK
1.003	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	MH01C	MH01D	86.978	84.973	0.114	3.926	0.6	0.05	9.0	OK
1.004	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	MH01D	MH01E	86.836	84.973	0.296	9.973	0.3	0.05	19.4	OK
1.005	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	MH01E	MH01F	86.707	84.973	0.326	21.875	0.6	0.12	45.6	OK
1.006	FSR: 100 years: +45 %: 0.25 hrs: Summer	Pipe	MH01F	MH01G	86.482	84.945	0.340	23.718	0.4	0.14	55.1	OK
1.008	FSR: 100 years: +45 %: 2.00 hrs: Winter	Pipe	MH12 (HB)	MH13 (DC1)	86.053	85.706	0.051	58.458	0.7	0.09	5.0	Surcharged
1.009	FSR: 100 years: +45 %: 2.00 hrs: Winter	Pipe	MH13 (DC1)	Ex. MH1	85.945	84.458	0.056	58.307	0.8	0.28	5.0	OK
2.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC02	MH01C	87.074	85.802	0.027	1.105	1.4	0.16	2.4	OK
3.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC03A	IC03B	86.381	85.491	0.051	1.427	0.5	0.16	2.8	OK
3.001	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC03B	IC03C	86.503	85.401	0.060	2.937	0.9	0.32	5.7	OK
3.002	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC03C	MH01D	86.760	85.169	0.075	4.989	0.8	0.23	9.6	OK
9.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	MH09B	MH09A	86.093	85.007	0.061	3.475	0.7	0.08	6.6	OK
9.002	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	MH09	MH01F	86.293	84.973	0.324	6.275	0.2	0.09	16.4	OK
10.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC10	MH01F	86.619	86.113	0.022	1.589	1.9	0.05	3.1	OK
13.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC13A	IC13B	86.507	85.849	0.035	2.091	1.4	0.19	4.3	OK
1.007	FSR: 100 years: +45 %: 1.00 hrs: Winter	Pipe	MH01G	MH12 (HB)	86.259	85.449	0.300	28.696	0.5	0.09	7.2	Surcharged
13.001	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC13B	MH01G	86.437	85.672	0.078	2.088	2.4	0.05	4.3	OK
11.002	FSR: 100 years: +45 %: 2.00 hrs: Summer	Pipe	MH11	MH01G	86.133	85.388	0.300	0.120	0.3	0.13	10.5	Surcharged
9.001	FSR: 100 years: +45 %: 0.25 hrs: Summer	Pipe	MH09A	MH09	86.122	84.952	0.237	3.543	0.3	0.03	7.3	OK

Project: Proposed Residential Development Terence Street, Manchester 1 in 100 yr Storm Event plus 45% climate change				Date: 16/08/2024									
				Designed by: KGB		Checked by: KGB						Approved By: CG	
Report Details: Type: Connections Summary Storm Phase: Proposed SW				Company Address: KGB Infrastructure North Mersey Business Centre Knowsley. L33 7UY									

4.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	IC04	MH01D	86.907	85.672	0.025	1.458	1.5	0.06	2.8	OK
8.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	RG04	MH01E	86.405	85.747	0.046	4.395	2.1	0.19	9.5	OK
5.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	RG01	MH05	86.052	85.567	0.077	2.916	0.7	0.38	6.3	OK
5.001	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	MH05	JCN1	86.308	85.478	0.086	4.923	1.0	0.6	10.4	OK
5.002	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	JCN1	MH01E	86.516	85.185	0.094	8.809	1.0	0.21	18.6	OK
7.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	RG03	JCN1	86.172	85.460	0.058	3.890	1.3	0.3	8.4	OK
6.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	RG02	MH05	86.076	85.565	0.076	2.016	0.7	0.73	4.3	OK
12.000	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	RG05	MH11	85.986	85.343	0.100	4.291	2.7	0.34	9.3	OK
A1 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving A1	IC13A	86.550	86.296	0.035	1.162	1.0	0.1	2.4	OK
B1 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving B1	MH09	86.276	85.972	0.017	1.129	2.3	0.06	2.1	OK
A2 Outfall	FSR: 100 years: +45 %: 0.50 hrs: Summer	Pipe	Porous Paving A2	IC10	86.487	86.217	0.032	0.736	0.6	0.21	1.2	OK
B2 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving B2	MH09	86.243	85.894	0.020	1.200	2.0	0.08	2.2	OK
C1 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving C1	MH09A	86.112	85.834	0.021	1.184	1.8	0.09	2.2	OK
C2 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving C2	MH09B	86.085	85.856	0.022	1.186	1.7	0.1	2.2	OK
G2 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving G2	IC03A	86.291	86.058	0.010	0.463	2.1	0.02	0.9	OK
G1 Outfall	FSR: 100 years: +45 %: 2.00 hrs: Winter	Pipe	Porous Paving G1	IC03B	86.495	86.215	0.100	4.341	0.9	0.02	0.5	OK
F1 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving F1	IC03C	86.586	86.261	0.012	0.510	1.9	0.03	1.0	OK
E2 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving E2	IC03C	86.720	86.339	0.011	0.510	2.3	0.02	1.0	OK
D1 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving D1	IC04	86.915	86.636	0.019	0.517	1.1	0.04	1.0	OK
Cell Stor B Outfall	FSR: 100 years: +45 %: 2.00 hrs: Summer	Pipe	Cellular Storage Block B	MH11	86.129	85.389	0.225	0.000	0.2	0.25	7.5	Surchar ged
D2 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving D2	MH01E	86.794	86.498	0.100	0.441	0.1	0.02	1.0	OK
E1 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving E1	MH01D	86.833	86.468	0.100	0.507	0.1	0.02	1.0	OK
F2 Outfall	FSR: 100 years: +45 %: 0.25 hrs: Winter	Pipe	Porous Paving F2	IC03B	86.522	86.176	0.036	0.533	0.5	0.03	1.0	OK