



Winners Chapel, Blackley

Drainage Statement – Response to United Utilities Planning Enquiries

24360-ROS-ZZ-XX-RE-C-00150



Winners Chapel, Blackley

DRAINAGE STATEMENT – Response to United Utilities Planning Enquiries



REPORT ISSUE TABLE

Purpose of Issue	Status	Revision	Date	Prepared By	Checked By
FIRST ISSUE	S2	P01	03.04.25	JT	JC



This drainage statement has been prepared by Roscoe in response to comment made by United Utilities on the initial planning drainage submission for Winners Chapel, document reference – DC-25-35.

'Following our review of the submitted drainage documents; Flood Risk Assessment, prepared by Roscoe, Ref: 24360-ROS-00-00-RE-D-09001, Dated October 2024, the plans are not acceptable to United Utilities. This is because we have not seen robust evidence that the drainage hierarchy has been thoroughly investigated and an existing drainage survey plan has not been provided to understand the betterment rate. Should planning permission be granted we request the following condition is attached to any subsequent Decision Notice:

CONDITION:

Prior to the commencement of development, details of a sustainable surface water drainage scheme and a foul water drainage scheme shall be submitted to and approved in writing by the Local Planning Authority. The drainage schemes must include:

- (i) An investigation of the hierarchy of drainage options in the National Planning Practice Guidance (or any subsequent amendment thereof). This investigation shall include evidence of an assessment of ground conditions and the potential for infiltration of surface water in accordance with BRE365; Manchester City Council Your ref 141622/FO/2024 By email Our ref DC/25/35 Date 17-FEB-25*
- (ii) A restricted rate of discharge of surface water agreed with the local planning authority (if it is agreed that infiltration is discounted by the investigations). In the event of surface water discharging to the public combined sewer, the rate of discharge shall be restricted to 7 l/s;*
- (iii) Levels of the proposed drainage systems including proposed ground and finished floor levels in AOD;*
- (iv) Incorporate mitigation measures to manage the risk of sewer surcharge where applicable;*
- and*
- (v) Foul and surface water shall drain on separate systems.*

The approved schemes shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage.

Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.

Reason: To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution.'



The two elements highlighted by United Utilities in the objection are the following.

- ‘We have not seen robust evidence that the drainage hierarchy has been thoroughly investigated’
- ‘An existing survey plan has not been provided to understand the betterment rate’

This response by Roscoe should be read in conjunction with the following documents.

- Appendix 1: Roscoe Drainage Layout ‘24360-ROS-00-00-DR-C-09000’
- Appendix 2: Roscoe Drainage Manhole Schedule ‘24360-ROS-00-XX-DR-C-09100’
- Appendix 3: G.P Drain Surveys document ‘Drawings - Winners Chapel Blackley Manchester - October 2024’
- Appendix 4: G.P Drain Surveys document ‘sur3264’
- Appendix 5: Existing network InfoDrainage calculations – 100yr storm event
- Appendix 6: Existing network InfoDrainage calculations – 2yr storm event

‘We have not seen robust evidence that the drainage hierarchy has been thoroughly investigated.’

Roscoe Flood Risk Assessment and Drainage Strategy outlines the proposed designs approach to following the drainage hierarchy, as per the following.

1. Into the ground (infiltration)
2. To a surface water body
3. To a surface water sewer, highway drain, or other drainage system
4. To a combined sewer

Site investigation is yet to be carried out to determine if infiltration is a viable option on the site, but existing public records for the surrounding area, nearest being along the M60, indicated significant clay deposits with sporadic sand layers. Based on the current assumption that the site existing ground is likely to contain a majority clay, infiltration is not anticipated to be suitable. As such, Roscoe have discounted this when following the drainage hierarchy. Roscoe agrees with the proposed UU condition that this will need to be investigated further, with BRE365 soakaway testing advised before infiltration can be completed discounted.

The next preferred option according to the drainage hierarchy is to connect surface water to a surface water body. The River Irwell is the closest major surface water body but at approximately 4000m away, it would not be suitable. A smaller brook is located to the North of the site, Boardman Brook, but as the closest point on the brook is in excess of 500m away, through the M60, it is not deemed viable. As such, Roscoe have discounted this when following the drainage hierarchy.

Following the drainage hierarchy, Roscoe next reviewed the option to connect to a separate publicly owned surface water sewer. No separate surface water systems were identified in the local area as per information taken from United Utilities sewer mapping. With the existing site being served by a private combined sewer, which ultimately discharged to the East of the site to a publicly owned combined sewer. As such, Roscoe have discounted this when following the drainage hierarchy.

Ultimately, Roscoe have had to, following the existing sites principle, proposed connection for the surface water to the local publicly owned combined sewer.



I trust the above provides context for Roscoe's approach in ensuring that the drainage hierarchy is followed. Roscoe will review if infiltration is possible following receipt of site investigation works.

'An existing survey plan has not been provided to understand the betterment rate.'

Based on topographical data and information from personal site investigation, it was anticipated that the existing site drained both surface and foul water into a combined network, which ultimately flowed down Chain Rd and into a publicly owned combined network. This was adopted as the understanding of the existing network at the time of the proposed drainage design.

Since the planning drainage design, a CCTV survey has been carried out by 'G.P Drain Survey', with both report and plan layout included in Appendix 3 and 4.

The CCTV Survey corroborates the initial Roscoe understanding of the existing network, with the existing building utilising an existing combined private network, which drained hardstanding positively and ultimately discharged offsite to a publicly owned United Utilities combined sewer. With the ultimate connection proven to exit the site to the South – East, instead of just to the South as initially anticipated by Roscoe.

On the back of this, Roscoe have carried out infodrainage calculations on the existing network, see Appendix 5 and 6.

This has been modelled for 2yr and 100yr storm events, to understand what range of flow rates previously exited the site as a result of the hardstanding within our development.

The 2yr storm event calculation provided a final flow rate of 58.3l/s, with the 100yr storm event calculation providing a flow rate of 101.9l/s.

Proposed Roscoe design is to flow control to a total discharge from the development site at 44l/s. This is for all storm events up to and including a 100yr + 45% climate change allowance event.

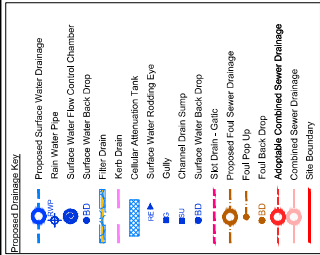
This would offer a betterment of 25% on the existing 2yr storm, and a 57% betterment on the existing 100yr storm event.

This will exceed the minimum requirement of 50% betterment on the existing like-for-like storm event.

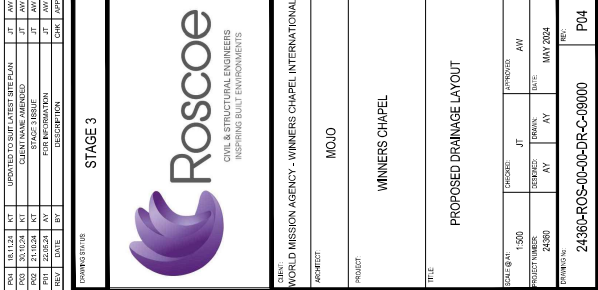
To ensure this restricted surface water flow is maintained, it is proposed to use two attenuation tanks and associated vortex flow control devices. One serving the new building, wider development and larger car park, the other serving the Southern minor car park.



APPENDIX 1: Roscoe Drainage Layout ‘24360-ROS-00-00-DR-C-09000’

[illegible]

- | | |
|--------|---|
| NOTES: | <ol style="list-style-type: none"> 1. Locations of SVA and RWFS to be confirmed with Architect/ME consultant. Drains to be subject to change following confirmation. 2. All drains to be covered, approval from public sewer required. Unlited access removal required as part of the first point of discharge into the public sewer system. 3. SW Discharge rate agreed to be agreed with council through planning and with United Utilities. 4. Any cover levels shown are indicative and based upon the following topographical survey. Cover level to suit landscaping strategy. 5. All drainage is to remain private and designed following Building Regulations Part 1 guidance. 6. Drains with channels to be Guller Paviblock or similar approved. 7. Drains with less than 0.6m cover to have concrete surround. This will be confirmed following land drainage architect external level and site visit confirmation. 8. Drains not to be gullies to be gullies out or removed. 9. All internal floor levels to be fixed with non return valves. 10. All external floor levels to be fixed with non return valves. 11. Position of drainage to be designed in depths 150mm. May affect level or position of drainage. 12. PDD covers opening to be specified to 350mm or larger. |
|--------|---|





APPENDIX 2: Roscoe Drainage Manhole Schedule '24360-ROS-00-XX-DR-C-09100'

DO NOT SCALE

1. On site, this drawing, All dimensions must be checked/ verified.
2. This drawing is to be read in conjunction with all relevant architect, engineer and specialist drawings and specifications.
3. All dimensions in millimetres unless noted otherwise, All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. This drawing is to be read in conjunction with the best drainage layout drawing.
6. Unless noted otherwise, all clauses relate to Sewer Sector Guidelines Notes of Building Regulations Part H.
7. To be read in conjunction with Reseal drawing
"24360-A105-01-0049-C-00007".

Manhole Name	Existing	Northing	Cover Level (mm)	Min Depth (mm)	Manhole Dom. Lvl (mm)	Pipe Out Dia (mm)	Pipe In Dia (mm)	Pipes in Invert Level (mm)	Pipes in Backslop (mm)	Manhole / Structure Type	Opening Size	COMMENTS / NOTES
SWMH01	385545.270	404445.980	104.500	1.260	1050	105.300	104.933	150	-	Type 2	600 x 600	
SWMH02	385549.854	404582.433	106.700	1.900	1050	104.933	104.933	150	104.933	Type 2	600 x 600	
SWMH03	385559.854	404692.433	106.700	2.250	1050	104.931	104.931	150	104.931	Type 2	600 x 600	
SWMH04	385603.657	404674.569	106.600	2.500	1050	104.931	104.931	150	104.931	Type 2	600 x 600	
SWMH05	385635.745	404674.642	106.600	2.250	1050	104.903	104.903	150	104.903	Type 2	600 x 600	
SWMH06	385637.776	404644.449	105.700	1.066	1050	104.934	104.934	150	-	Type 2	600 x 600	
SWMH07	385713.883	404688.933	105.000	0.779	1050	105.271	105.271	150	105.271	Type 2	600 x 600	
SWMH08	385684.400	404685.996	105.000	1.350	1050	104.500	104.500	150	104.500	Type 2	600 x 600	
SWMH09	385741.901	404677.433	105.000	1.426	1050	103.574	103.574	150	103.574	Type 2	600 x 600	
SWMH10	385736.138	404604.400	104.800	1.999	1050	102.841	102.841	150	102.841	Type 2	600 x 600	
SWMH11	385736.138	404604.400	104.800	1.999	1050	102.841	102.841	150	102.841	Type 2	600 x 600	
SWMH12	385709.919	404533.109	97.800	2.700	1050	97.175	97.175	225	97.175	Type 2	600 x 600	
FC01	385704.761	404586.225	103.500	1.745	TBC	101.755	101.755	150	101.755	Type 2	600 x 600	to restrict flow to 38.6 l/s at design head of 1.327m.
FC02	385700.637	404537.361	97.700	2.357	TBC	97.343	97.343	150	98.860	Type 2	600 x 600	to restrict flow to 54 l/s at design head of 1.327m.
BP01	385734.642	404599.213	104.750	-	TBC	-	-	150	102.793	-	-	Bypass Separator providing 4,000m ³ storage area.

Wardrobe Name	Easting	Northing	Cover Level (mm)	Min Depth (mm)	Monobloc Dim. LxW (mm)	Pipe Out / In Level (mm)	Pipe Out / In Level (mm)	Pipes in Invert Level (mm)	Pipes in Downer Level (mm)	Pipes in Backstop (mm)	Monobloc / Structure Type	Opening Size	COMMENTS / NOTES
FWMH01	355577.03	404435.03	105.100	1,200	600	104.300	150	-	-	-	PPC	600 x 600	
FWMH02	355603.81	404532.19	105.100	1,063	600	104.037	150	104.037	150	-	PPC	600 x 600	
FWMH03	355619.63	404300.34	105.100	1,229	1030	103.871	150	103.871	150	-	Type 2	600 x 600	
FWMH04	355638.88	404285.19	105.100	1,273	1030	103.871	150	103.871	150	-	Type 2	600 x 600	
FWMH05	355658.99	404263.59	105.100	1,273	1030	103.727	150	103.727	150	-	Type 2	600 x 600	
FWMH06	355611.601	404463.881	105.100	1,274	600	104.626	150	104.626	150	-	PPC	600 x 600	
FWMH07	355625.93	355625.93	105.900	1,381	1050	104.519	150	104.519	150	-	PPC	600 x 600	
CBMH07	355697.028	404582.097	102.950	4,007	1200	98.943	225	98.943	225	101.670	Type 1	600 x 600	

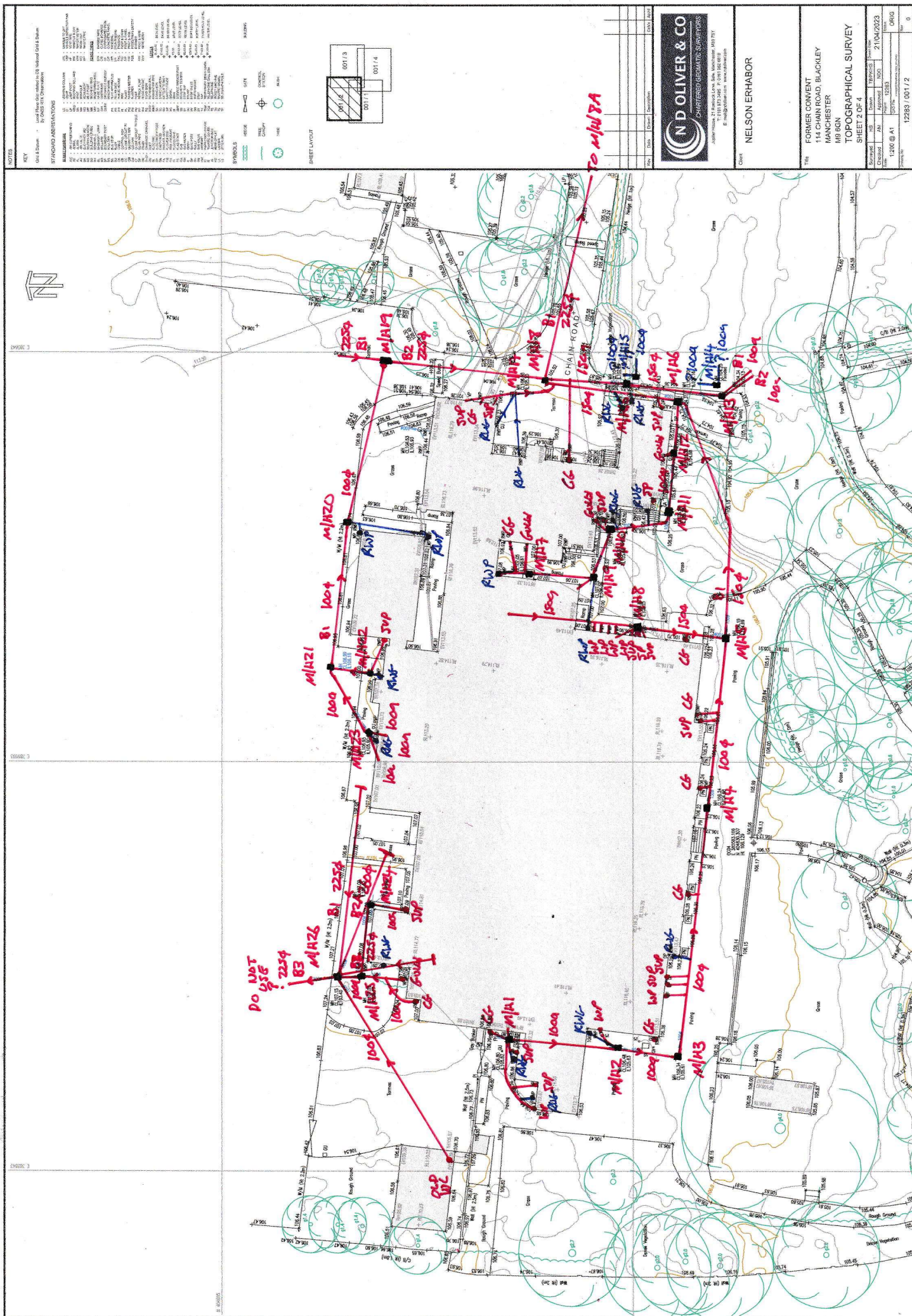
PO2	30.10.24	KT	CLIENT NAME AMENDED	JT	AW
P01	21.10.24	KT	STAGE 3 ISSUE	JT	AW
REV	DATE	BY	DESCRIPTION	CHK	APP



CAMEL WORLD MISSION AGENCY - WINNERS CHAPEL INTERNATIONAL ADDRESS ADDRESS	MOJO WINNERS CHAPEL PROJECT	TITLE MANHOLE SCHEDULE	<table><tr><th>DATE @ 4H</th><th>CHARGE</th><th>CHARGE</th><th>CHARGE</th><th>CHARGE</th></tr><tr><td>N.T.S</td><td>JT</td><td>AV</td><td>KT</td><td>AW</td></tr><tr><td>PROJECT</td><td>SERVICES</td><td>AV</td><td>KT</td><td>AW</td></tr><tr><td>2400</td><td>2400</td><td>2400</td><td>2400</td><td>2400</td></tr></table>	DATE @ 4H	CHARGE	CHARGE	CHARGE	CHARGE	N.T.S	JT	AV	KT	AW	PROJECT	SERVICES	AV	KT	AW	2400	2400	2400	2400	2400	DATE OCTOBER 2024 P02
DATE @ 4H	CHARGE	CHARGE	CHARGE	CHARGE																				
N.T.S	JT	AV	KT	AW																				
PROJECT	SERVICES	AV	KT	AW																				
2400	2400	2400	2400	2400																				

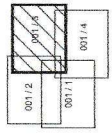


APPENDIX 3: G.P Drain Surveys document 'Drawings - Winners Chapel Blackley Manchester - October 2024'



NOTES

- KEY
- ON A Scale: 1 inch = 100 feet
- STANDARD ABBREVIATIONS
- 1. ROAD
 - 2. RAILROAD
 - 3. CANAL
 - 4. DRAINAGE
 - 5. FENCE
 - 6. POWER LINE
 - 7. TELEPHONE LINE
 - 8. TELEGRAPH LINE
 - 9. WATER
 - 10. SWAMP
 - 11. SAND
 - 12. GRAVEL
 - 13. CLAY
 - 14. ROCK
 - 15. ICE
 - 16. SNOW
 - 17. FOG
 - 18. HAZE
 - 19. MIST
 - 20. CLOUD
 - 21. RAIN
 - 22. SNOW
 - 23. FOG
 - 24. HAZE
 - 25. MIST
 - 26. CLOUD
 - 27. RAIN
 - 28. SNOW
 - 29. FOG
 - 30. HAZE
 - 31. MIST
 - 32. CLOUD
 - 33. RAIN
 - 34. SNOW
 - 35. FOG
 - 36. HAZE
 - 37. MIST
 - 38. CLOUD
 - 39. RAIN
 - 40. SNOW
 - 41. FOG
 - 42. HAZE
 - 43. MIST
 - 44. CLOUD
 - 45. RAIN
 - 46. SNOW
 - 47. FOG
 - 48. HAZE
 - 49. MIST
 - 50. CLOUD
 - 51. RAIN
 - 52. SNOW
 - 53. FOG
 - 54. HAZE
 - 55. MIST
 - 56. CLOUD
 - 57. RAIN
 - 58. SNOW
 - 59. FOG
 - 60. HAZE
 - 61. MIST
 - 62. CLOUD
 - 63. RAIN
 - 64. SNOW
 - 65. FOG
 - 66. HAZE
 - 67. MIST
 - 68. CLOUD
 - 69. RAIN
 - 70. SNOW
 - 71. FOG
 - 72. HAZE
 - 73. MIST
 - 74. CLOUD
 - 75. RAIN
 - 76. SNOW
 - 77. FOG
 - 78. HAZE
 - 79. MIST
 - 80. CLOUD
 - 81. RAIN
 - 82. SNOW
 - 83. FOG
 - 84. HAZE
 - 85. MIST
 - 86. CLOUD
 - 87. RAIN
 - 88. SNOW
 - 89. FOG
 - 90. HAZE
 - 91. MIST
 - 92. CLOUD
 - 93. RAIN
 - 94. SNOW
 - 95. FOG
 - 96. HAZE
 - 97. MIST
 - 98. CLOUD
 - 99. RAIN
 - 100. SNOW
- SYMBOLS
- HEIGHT
- DEPTH
- TEMPERATURE
- WIND
- MOON
- SHEET LAYOUT





Address or Site Reference
CHAIN ROAD PRESBYTERY 112
CHAIN ROAD,
MANCHESTER,
M9 6GN

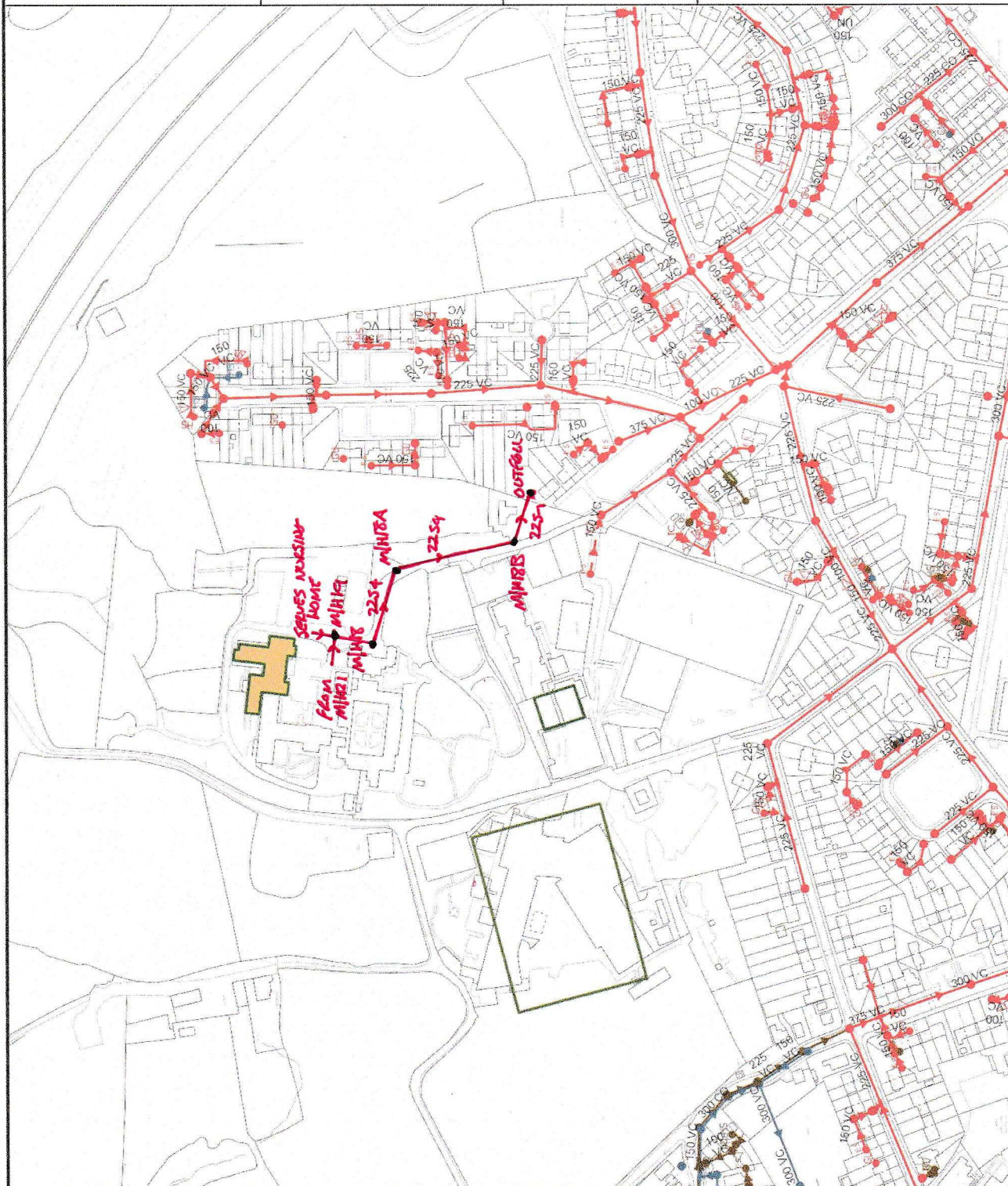
Scale: 1:2500

Date: 12/03/2024

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

Crown copyright and database rights 2023
Ordnance Survey 100022432. Unauthorised
reproduction will infringe these copyrights.





APPENDIX 4: G.P Drain Surveys document 'sur3264'

G.P. DRAIN SURVEYS

CLEANING, JETTING, RE-LINING, REPAIRS & SURVEYS

REGISTERED OFFICE:
THORNY CROFT
56 B SCATCHERD LANE
MORLEY
LEEDS
LS27 OJJ

TEL\FAX: 0113 2533154
MOBILE: 07973 834690

Our Ref : GMP/lhg/3264

Your Ref : Aaron Wall

4th October 2024

Roscoe
Quayside House
Furnival Road
Sheffield
S4 7YA

For the attention of : Aaron Wall

C.C.T.V. DRAINAGE SURVEY.

Site at Winners Chapel Chain Road Blackley Manchester M9 6GN.

Manhole	Invert	Pipe Size	Material	Service	Chamber size
1	980mm	4"	Clay	Combined	960mm x 720mm
2	470mm to debris/rubble		Clay	Combined	450mm x 600mm
3	730mm	4"	Clay	Combined	900mm x 980mm
4	1380mm	4"	Clay	Combined	700mm x 950mm
5	1500mm	6"	Clay	Combined	700mm x 930mm
6	530mm	6"	Clay	Combined	600mm x 600mm
7	440mm	4"	Clay	Combined	600mm x 700mm
8	1610mm	4" & 6"	Clay	Combined	700mm x 950mm
9	730mm	4"	Clay	Combined	650mm x 650mm
10	700mm	4"	Clay	Combined	500mm x 750mm
11	670mm	4"	Clay	Combined	600mm x 600mm
12	660mm	4"	Clay	Combined	450mm x 600mm
13	1230mm	4" & 6"	Clay	Combined	700mm x 1150mm
14 – Land Drain?	870mm silt pit	4"	Clay	Land Drain	450mm x 600mm
	700mm Invert of pipe – heavily silted				
15 – Land Drain?	1180mm silt pit	4"	Clay	Land Drain	450mm x 600mm
	1050mm Invert of pipe – heavily silted				
16	2250mm	4" & 6"	Clay	Combined	900mm x 1150mm
17	840mm	4"	Clay	Combined	650mm x 800mm
18	5650mm	6" & 9"	Clay	Combined	900mm x 1300mm
18A	4980mm	4" & 9"	Clay	Combined	800mm x 1200mm
18B	3380mm	9"	Clay	Combined	800mm x 900mm
19	5850mm	6" & 9"	Clay	Combined	900mm Diameter
	1380mm Invert of back-drop from M/H20				
20	1380mm	4"	Pitch Fibre	Combined	800mm x 800mm
21	1150mm	4" & 6"	Pitch Fibre	Combined	700mm x 900mm

Manhole	Invert	Pipe Size	Material	Service	Chamber size
22	830mm	4"	Clay	Combined	460mm Diameter
23	1050mm	4"	Clay	Combined	700mm x 800mm
24	660mm	4"	Clay	Combined	460mm Diameter
25	1000mm	4"	Clay	Combined	560mm x 580mm
26	3750mm	4" 9" & 10"	Clay	Combined	700mm x 1200mm
	2700mm Invert of B1				Chamber collapsing
	1680mm Invert of B2				
	1320mm Invert of drain from M/H25				
	1240mm Invert of drain from old WC				

**WITHIN THE FOLLOWING REPORT WE ARE ONLY COMMENTING ON THE DRAINAGE
SYSTEMS THAT WE KNOW ARE OF INTEREST – OUTFALLS ECT:**

M/H6 – B2 -OUTFALL TO M/H18

00.0 – Start scan
 00.0 to 07.5 – Debris & root intrusions
 07.1 – Blind branch 9.0'clock
 09.0 – Blind branch 9.0'clock
 17.0 – Blind branch 12.0'clock – from M/H17
 17.3 – End survey at an internal cast iron back-drop within M/H18
 17.3 – Film in reverse
 00.0 – End survey back at M/H6

Conclusion

Please see comments at the end of the report.

M/H13 – B1

00.0 – Start scan
 00.0 – Mass root intrusions – survey abandoned

Conclusion

Please see comments at the end of the report.

M/H13 – B2 – (Named M/H13 – B1 by mistake on the recordings)

00.0 – Start scan
 00.0 to 07.5 – Mass root intrusions
 04.2 – Blind branch 9.0'clock
 09.4 – Blind branch 10.0'clock
 10.3 – Blind branch 10.0'clock
 15.7 – Survey abandoned at a mass of debris

Conclusion

This drainage run probably served some surface water in the past (all grown over). Please see comments at the end of the report.

M/H13 – B3 – OUTFALL TO M/H18

00.0 – Start scan
 12.3 – Enter M/H16 - debris within chamber
 17.7 – Blind branch 12.0'clock
 21.8 – Back-drop
 24.1 – End survey at the invert of the back-drop within M/H18

Conclusion

Please see comments at the end of the report.

M/H17 – B1 – OUTFALL

00.0 – Start scan
 00.0 to 00.5 – Silt & debris within the drain
 01.2 – Root intrusions
 04.1 – Line of the drain deviates left
 05.7 – Line of the drain deviates down
 06.0 – End survey at the outfall drain from M/H6

Conclusion

Please see comments at the end of the report.

M/H18 – B1 - OUTFALL

00.0 – Start scan
 00.0 to 44.2 – Scale at the joints of the system
 09.2 – Radial crack
 44.2 – End survey at M/H18A
 44.2 – Film in reverse
 00.0 – End survey back at M/H18

Conclusion

Please see comments at the end of the report.

M/H18A – B1 – OUTFALL

00.0 – Start scan
 01.0 00.0 to 80.4 – Scale at the joints of the system
 02.0 – Radial crack
 80.4 – End survey at M/H18B
 80.4 – Film in reverse
 00.0 – End survey back at M/H18A

Conclusion

Please see comments at the end of the report.

M/H18A – B2

00.0 – Start scan
 00.0 to 03.6 – Mass root intrusions
 03.6 – Survey abandoned at a mass of root intrusions

Conclusion

Please see comments at the end of the report.

M/H19 – B1

00.0 – Start scan
 00.0 to 04.8 – Silt & debris within the system
 01.0 – Major radial fracture
 04.8 – End of survey
 04.8 – Film in reverse
 00.0 – End survey back at M/H19

Conclusion

This system serves another dwelling (adjacent nursing home). We only surveyed this system to prove that other properties were discharging into M/H19, M/H18, M/H18A, M/H18B and beyond. This is of significance, as it would make the outfall system from those chambers a combined sewer. Please see comments at the end of the report.

M/H19 – B2

00.0 – Start scan
 00.0 to 20.8 – Silt & debris within the drain/sewer
 00.0 to 02.0 – Radial & longitudinal cracks
 20.8 – End survey at M/H18
 20.8 – Film in reverse
 00.0 – End survey back at M/H19

Conclusion

This system serves another dwelling (adjacent nursing home). We only surveyed this system to prove that other properties were discharging into M/H19, M/H18, M/H18A, M/H18B and beyond. This is of significance, as it would make the outfall system from those chambers a combined sewer. Please see comments at the end of the report.

M/H21 – B1 – OUTFALL TOWARDS M/H20 & M/H19

00.0 – Start scan
 18.0 to 33.3 – Silt & debris within the drain
 19.5 – Enter M/H20
 33.3 – Blind branch 12.0'clock
 35.9 – Drain subsided
 37.3 – Material changes from pitch fibre to clay
 39.0 – End survey at a back-drop at M/H19
 39.0 – Film in reverse
 00.0 – End survey back at M/H21

Conclusion

Please see comments at the end of the report.

M/H26 – B1

00.0 – Start scan
 00.0 to 26.7 – Silt & debris within the drain – no picture
 26.7 – Survey abandoned – unable to push camera any further
 26.7 – Film in reverse
 00.0 – End survey back at M/H26

Conclusion

We think that this is a very old system and has not been in use for a while. Please see comments at the end of the report.

M/H26 – B2

00.0 – Start scan
 00.0 to 12.1 – Silt & debris within the drain
 12.0 – Blind branch 12.0'clock
 12.1 – Survey abandoned at a mass of rubble

Conclusion

We think that this is a very old system and has not been in use for a while. Please see comments at the end of the report.

M/H26 – B2A

00.0 – Start scan
 00.0 to 10.9 – Silt & rubble within the drain
 00.0 to 10.9 – Offset joints
 00.6 – Blind branch 1.0'clock
 10.9 – Drain appears to be capped off

Conclusion

We think that this is a very old system and has not been in use for a while. Please see comments at the end of the report.

M/H26 – B3 - OUTFALL

00.0 – Start scan

07.0 – Line of the drain deviates slightly left

16.5 – Blind branch 9.0'clock

22.9 – Line of the drain deviates slightly right

22.9 to 25.4 – No picture at all due to debris

25.4 – Mass of debris – survey abandoned

Conclusion

This outfall drainage system used to serve some very old drainage that has been out of use for a while (M/H26 – B1, B2, B2A & B3), but it also served as an outfall for M/H25 & M/H24 and also the abandoned WC area (please see drawing) We have to assume that the outfall drain from M/H26 may have been grubbed up and abandoned within the land that serves the adjacent nursing home. We recommend that this outfall drain is not fit for purpose and should not be re-used as a potential outfall for the proposed development.

M-H27 – B1 – OUTFALL

00.0 – Start scan

00.6 – Line of the drain deviates down

01.9 – Drain levels out and enters the Sewer from M/H18B

07.9 – End survey at a back-drop into another chamber within another properties land – no access

07.9 – Film in reverse

00.0 – End survey back at M/H27

Conclusion

M/H27 serves all of the drainage for the private dwelling that is part of the project. All of the incoming drains into M/H27 were silted with debris and impossible to survey. We would suggest as a very minimum that all of these drains are high-pressure jet/vac cleaned and then C.C.T.V. Surveyed to prove that they are fit for purpose. A decision can then be made on what work (if any) is required. We have proved that this house also drains into the existing system from M/H18, M/H18A & M/H18B, please see comments at the end of the report.

COMMENTS ON OUR FINDINGS.

We were instructed to attend site to prove the connectivity of the old abandoned building and to see where the old drainage systems actually discharged.

We have proved that the majority of the site discharges via M/H19 & M/H18 that then discharges via M/H18A, M/H18B and beyond. Although not marked on the Sewer records as a Sewer, the outfall system from M/H19, M/H18, M/H18A M/H18B and beyond must be a Sewer, as the system serves the adjacent nursing home.

We would suggest that any of these chambers or the system in between those chambers could be used as connection points for the new drainage from the proposed development.

Please see drawings for reference.

END OF SURVEY.



APPENDIX 5: Existing network InfoDrainage calculations – 100yr storm event

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



Catchment Area

Type : Catchment Area

Area (ha)	0.119
-----------	-------

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



Catchment Area (1)

Type : Catchment Area

Area (ha)	0.026
-----------	-------

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



Catchment Area (2)

Type : Catchment Area

Area (ha)	0.093
-----------	-------

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



Catchment Area (3)

Type : Catchment Area

Area (ha)	0.09
-----------	------

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: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



Catchment Area (4)

Type : Catchment Area

Area (ha)	0.045
-----------	-------

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



Catchment Area (5)

Type : Catchment Area

Area (ha)	0.045
-----------	-------

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



Catchment Area (6)

Type : Catchment Area

Area (ha)	0.062
-----------	-------

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



Catchment Area (7)

Type : Catchment Area

Area (ha)	0.016
-----------	-------

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: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



Catchment Area (8)

Type : Catchment Area

Area (ha)	0.032
-----------	-------

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



Catchment Area (9)

Type : Catchment Area

Area (ha)	0.069
-----------	-------

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



Catchment Area (10)

Type : Catchment Area

Area (ha)	0.034
-----------	-------

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: Winners Chapel Blackley		Date: 03/04/2025	
Report Details: Type: Junctions Storm Phase: Phase		Designed by: JT	Checked by: JT
		Approved By: JT	
		Roscoe : Existing site network 100yr storm event	



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
MH1	Manhole	385558.833	404659.575	106.800	0.980	105.820	Circular	1.200
MH2	Manhole	385558.069	404646.778	106.480	0.850	105.630	Circular	1.200
MH3	Manhole	385557.067	404639.254	106.340	0.730	105.610	Circular	1.200
MH4	Manhole	385587.518	404635.568	106.240	1.360	104.880	Circular	1.200
MH5	Manhole	385608.257	404633.767	106.190	1.500	104.690	Circular	1.200
MH6	Manhole	385637.198	404639.203	104.700	0.540	104.160	Circular	1.200
MH9	Manhole	385609.303	404644.172	106.870	1.620	105.250	Circular	1.200
MH18	Manhole	385639.720	404655.503	105.920	5.650	100.270	Circular	1.200
MH18A	Manhole	385680.595	404643.700	104.650	4.980	99.670	Circular	1.200
MH18B	Manhole	385701.288	404565.888	102.000	3.380	98.620	Circular	1.200
Outfall	Manhole	385731.701	404560.878	101.000	2.800	98.200	Circular	1.200
MH21	Manhole	385604.124	404681.498	106.930	1.150	105.780	Circular	1.200
MH20	Manhole	385622.351	404679.527	106.740	1.380	105.360	Circular	1.200
MH19	Manhole	385641.837	404674.218	106.200	5.750	100.450	Circular	1.200

Name	Lock
MH1	None
MH2	None
MH3	None
MH4	None
MH5	None
MH6	None
MH9	None
MH18	None
MH18A	None
MH18B	None
Outfall	None
MH21	None
MH20	None
MH19	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
MH1	Inlet	Catchment Area	(None)	No Restriction
MH2	Inlet	1 -> 2	(None)	No Restriction
MH3	Inlet	2 -> 3	(None)	No Restriction
	Inlet (1)	Catchment Area (1)	(None)	No Restriction
MH4	Inlet	3 -> 4	(None)	No Restriction
	Inlet (1)	Catchment Area (3)	(None)	No Restriction
MH5	Inlet	4 -> 5 9 -> 5	(None)	No Restriction
	Inlet (1)	Catchment Area (6)	(None)	No Restriction
MH6	Inlet	5 -> 6	(None)	No Restriction
	Inlet (1)	Catchment Area (8)	(None)	No Restriction
MH9	Inlet	Catchment Area (5)	(None)	No Restriction
MH18	Inlet	6 -> 18 19 -> 18	(None)	No Restriction
	Inlet	18 -> 18A	(None)	No Restriction
MH18A	Inlet	Catchment Area (9)	(None)	No Restriction
	Inlet (1)	18A -> 18B	(None)	No Restriction
MH18B	Inlet	Catchment Area (10)	(None)	No Restriction
	Inlet (1)	18B -> Outfall	(None)	No Restriction
Outfall	Inlet	Catchment Area (2)	(None)	No Restriction
MH21	Inlet	21 -> 20	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
MH20	Inlet	20 -> 19	(None)	No Restriction
	Inlet (1)	Catchment Area (7)	(None)	No Restriction

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junctions Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
MH1	Outlet	1 -> 2	Free Discharge
MH2	Outlet	2 -> 3	Free Discharge
MH3	Outlet	3 -> 4	Free Discharge
MH4	Outlet	4 -> 5	Free Discharge
MH5	Outlet	5 -> 6	Free Discharge
MH6	Outlet	6 -> 18	Free Discharge
MH9	Outlet	9 -> 5	Free Discharge
MH18	Outlet	18 -> 18A	Free Discharge
MH18A	Outlet	18A -> 18B	Free Discharge
MH18B	Outlet	18B -> Outfall	Free Discharge
MH21	Outlet	21 -> 20	Free Discharge
MH20	Outlet	20 -> 19	Free Discharge
MH19	Outlet	19 -> 18	Free Discharge

Project: Winners Chapel Blackley		Date: 03/04/2025			
Report Details: Type: Connections Storm Phase: Phase		Designed by: JT	Checked by: JT		Approved By: JT
		Roscoe : Existing site network 100yr storm event			

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 -> 2	12.820	Pipe	67.475		0.6	100	106.800	105.820
2 -> 3	7.590	Pipe	379.523		0.6	100	106.480	105.630
3 -> 4	30.673	Pipe	42.018		0.6	100	106.340	105.610
4 -> 5	20.817	Pipe	109.564		0.6	100	106.240	104.880
5 -> 6	29.447	Pipe	55.561		0.6	150	106.190	104.690
6 -> 18	16.494	Pipe	14.219		0.6	150	104.700	104.160
18 -> 18A	42.545	Pipe	70.908		0.6	225	105.920	100.270
18A -> 18B	80.517	Pipe	76.682		0.6	225	104.650	99.670
18B -> Outfall	30.823	Pipe	73.389		0.6	225	102.000	98.620
21 -> 20	18.333	Pipe	43.650		0.6	150	106.930	105.780
20 -> 19	20.196	Pipe	10.858		0.6	150	106.740	105.360
19 -> 18	18.834	Pipe	104.633		0.6	225	106.200	100.450
9 -> 5	10.458	Pipe	18.675		0.6	150	106.870	105.250

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock
1 -> 2	106.480	105.630	All
2 -> 3	106.340	105.610	All
3 -> 4	106.240	104.880	All
4 -> 5	106.190	104.690	All
5 -> 6	104.700	104.160	All
6 -> 18	105.920	103.000	All
18 -> 18A	104.650	99.670	All
18A -> 18B	102.000	98.620	All
18B -> Outfall	101.000	98.200	All
21 -> 20	106.740	105.360	All
20 -> 19	106.200	103.500	All
19 -> 18	105.920	100.270	All
9 -> 5	106.190	104.690	All

Project: Winners Chapel Blackley		Date: 03/04/2025			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: JT	Checked by: JT		Approved By: JT
		Roscoe : Existing site network 100yr storm event			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
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	☐

Pipe Size Library

Default

Add. Increment (mm)	75
---------------------	----

Diameter (mm)	Min. Slope (1:x)	Max. Slope (1:x)
100	0.00	0.00
150	0.00	0.00

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Network Design Criteria Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



Manhole Options

Apply Offset	☐
Synchronise Manhole Invert Levels	☒

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Rainfall Analysis Criteria	Roscoe : Existing site network 100yr storm event		



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	☐

Project: Winners Chapel Blackley		Date: 03/04/2025	
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: JT	Checked by: JT
		Approved By: JT	
		Roscoe : Existing site network 100yr storm event	



Critical Storm

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area	FSR: 100 years: +0 %: 15 mins: Winter	0.12	45.3	21.091
Catchment Area (1)	FSR: 100 years: +0 %: 15 mins: Winter	0.03	10.1	4.707
Catchment Area (2)	FSR: 100 years: +0 %: 15 mins: Winter	0.09	35.7	16.605
Catchment Area (3)	FSR: 100 years: +0 %: 15 mins: Winter	0.09	34.6	16.074
Catchment Area (4)	FSR: 100 years: +0 %: 15 mins: Winter	0.04	17.1	7.964
Catchment Area (5)	FSR: 100 years: +0 %: 15 mins: Winter	0.04	17.1	7.952
Catchment Area (6)	FSR: 100 years: +0 %: 15 mins: Winter	0.06	23.6	10.965
Catchment Area (7)	FSR: 100 years: +0 %: 15 mins: Winter	0.02	6.0	2.788
Catchment Area (8)	FSR: 100 years: +0 %: 15 mins: Winter	0.03	12.3	5.706
Catchment Area (9)	FSR: 100 years: +0 %: 15 mins: Winter	0.07	26.3	12.239
Catchment Area (10)	FSR: 100 years: +0 %: 15 mins: Winter	0.03	13.0	6.066

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junctions Summary Storm Phase: Phase		Roscoe : Existing site network 100yr storm event	



Critical Storm

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
MH1	FSR: 100 years: +0 %: 30 mins: Winter	106.8 00	105.8 20	106.81 2	0.992	30.8	13.214	12.106	10.2	27.659	Flood
MH2	FSR: 100 years: +0 %: 120 mins: Winter	106.4 80	105.6 30	106.48 6	0.856	10.0	6.910	5.948	8.1	45.576	Flood
MH3	FSR: 100 years: +0 %: 60 mins: Winter	106.3 40	105.6 10	106.35 4	0.744	13.3	14.673	13.847	10.7	44.755	Flood
MH4	FSR: 100 years: +0 %: 15 mins: Winter	106.2 40	104.8 80	106.24 8	1.368	38.2	10.022	8.484	16.8	22.173	Flood
MH5	FSR: 100 years: +0 %: 15 mins: Winter	106.1 90	104.6 90	105.87 7	1.187	44.3	1.343	0.000	39.2	40.738	Surcharged
MH6	FSR: 100 years: +0 %: 15 mins: Winter	104.7 00	104.1 60	104.47 6	0.316	51.5	0.357	0.000	46.8	46.181	Flood Risk
MH9	FSR: 100 years: +0 %: 15 mins: Winter	106.8 70	105.2 50	105.93 0	0.680	17.1	0.769	0.000	11.7	7.950	Surcharged
MH18	FSR: 100 years: +0 %: 15 mins: Winter	105.9 20	100.2 70	102.94 4	2.674	84.8	3.024	0.000	80.3	73.033	Surcharged
MH18A	FSR: 100 years: +0 %: 15 mins: Winter	104.6 50	99.67 0	102.07 8	2.408	96.4	2.723	0.000	95.2	84.458	Surcharged
MH18B	FSR: 100 years: +0 %: 15 mins: Winter	102.0 00	98.62 0	99.696	1.076	98.8	1.217	0.000	101.9	89.917	Surcharged
Outfall	FSR: 100 years: +0 %: 15 mins: Summer	101.0 00	98.20 0	98.425	0.225	96.3	0.000	0.000	96.2	82.183	OK
MH21	FSR: 100 years: +0 %: 15 mins: Winter	106.9 30	105.7 80	106.17 1	0.391	35.7	0.442	0.000	31.3	16.608	Surcharged
MH20	FSR: 100 years: +0 %: 15 mins: Winter	106.7 40	105.3 60	105.47 8	0.118	48.4	0.134	0.000	47.3	24.559	OK
MH19	FSR: 100 years: +0 %: 15 mins: Winter	106.2 00	100.4 50	102.98 7	2.537	53.3	2.869	0.000	38.1	27.365	Surcharged

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Connections Summary Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



Critical Storm

Project: Winners Chapel Blackley		Date: 03/04/2025		
		Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Connections Summary Storm Phase: Phase		Roscoe : Existing site network 100yr storm event		



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 -> 2	FSR: 100 years: +0 %: 30 mins: Winter	Pipe	MH1	MH2	106.8	106.81 ₂	0.100	27.598	1.3	1.38	10.2	Flood
2 -> 3	FSR: 100 years: +0 %: 240 mins: Summer	Pipe	MH2	MH3	106.5	106.48 ₃	0.100	49.130	1.0	2.67	8.1	Flood
3 -> 4	FSR: 100 years: +0 %: 60 mins: Winter	Pipe	MH3	MH4	106.3	106.35 ₄	0.100	44.693	1.4	1.15	10.7	Flood
4 -> 5	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH4	MH5	106.2	106.24 ₈	0.100	22.173	2.1	2.91	16.8	Flood
5 -> 6	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH5	MH6	106.2	105.87 ₇	0.150	40.738	2.2	1.64	39.2	Surcharged
6 -> 18	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH6	MH18	104.7	104.47 ₆	0.150	46.181	2.8	0.99	46.8	Flood Risk
18 -> 18A	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH18	MH18A	105.9	102.94 ₄	0.225	73.033	2.0	1.3	80.3	Surcharged
18A -> 18B	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH18A	MH18B	104.7	102.07 ₈	0.225	84.458	2.4	1.6	95.2	Surcharged
18B -> Outfall	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH18B	Outfall	102.0	99.696	0.225	89.917	2.6	1.68	101.9	Surcharged
21 -> 20	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH21	MH20	106.9	106.17 ₁	0.150	16.608	1.8	1.16	31.3	Surcharged
20 -> 19	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH20	MH19	106.7	105.47 ₈	0.113	24.559	3.3	0.87	47.3	OK
19 -> 18	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH19	MH18	106.2	102.98 ₇	0.225	27.365	1.0	0.75	38.1	Surcharged
9 -> 5	FSR: 100 years: +0 %: 15 mins: Winter	Pipe	MH9	MH5	106.9	105.93 ₀	0.150	7.950	0.7	0.28	11.7	Surcharged

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Phase Management Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



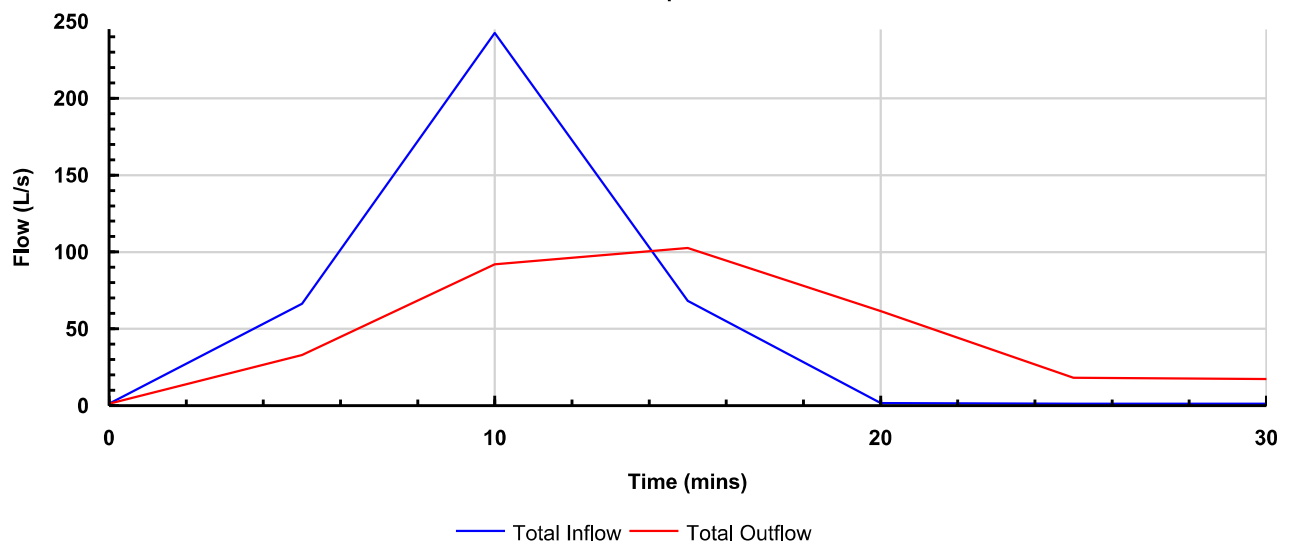
 **Phase**
FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Tables

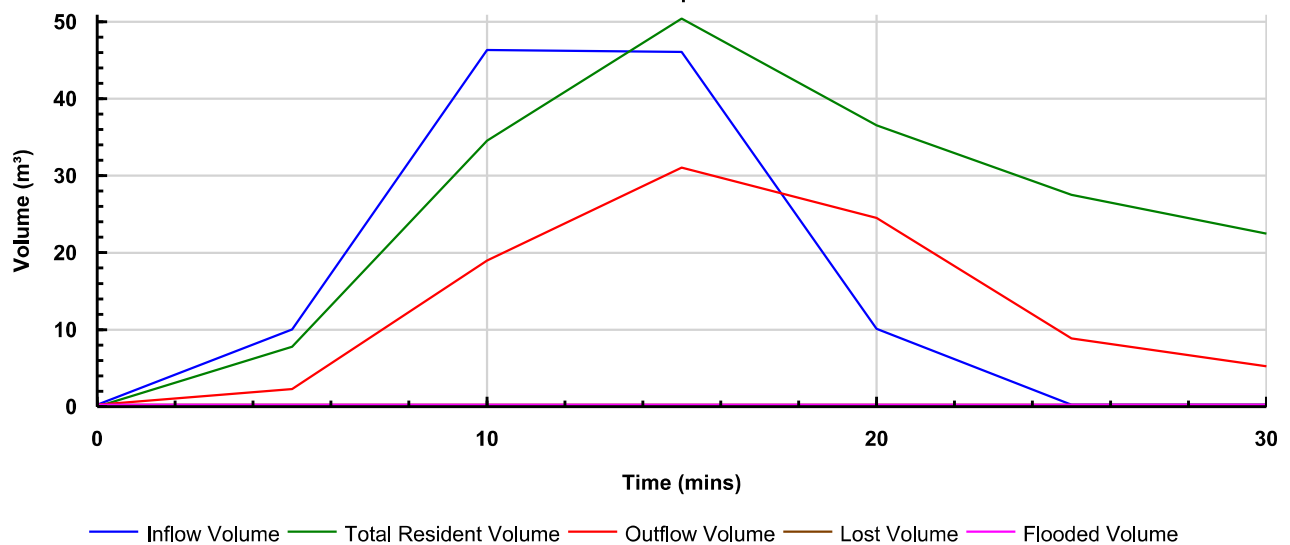
Name	Max. Inflow (L/s)	Total Inflow Volume (m³)	Max. Outflow (L/s)	Total Outflow Volume (m³)
Outfall			101.9	89.917
TOTAL	242.4	112.158	101.9	89.917

Graphs

Flow Graph



Volume Graph



Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS
Report Details: Type: Junction Results Storm Phase: Phase		Designed by: JT	Checked by: JT	
		Roscoe : Existing site network 100yr storm event		



MH1
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 30 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	5.6	0.064	0.072	0.000	5.4
10	10.9	0.441	0.499	0.000	8.0
15	30.6	0.983	3.715	2.606	10.0
20	30.8	0.989	9.932	8.823	10.1
25	11.1	0.992	13.214	12.106	10.2
30	5.7	0.992	12.673	11.565	10.1
35	0.1	0.989	10.507	9.399	10.1
40	0.0	0.986	7.489	6.380	10.0
45	0.0	0.983	4.487	3.379	10.0
50	0.0	0.980	1.504	0.395	9.9
55	0.1	0.660	0.747	0.000	-0.1
60	0.0	0.661	0.748	0.000	0.1

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH2
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 120 mins: Winter

Type : Manhole

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event	



Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	1.0	0.033	0.037	0.000	0.7
10	2.3	0.057	0.064	0.000	2.2
15	2.8	0.064	0.073	0.000	2.7
20	2.8	0.065	0.074	0.000	2.8
25	2.9	0.067	0.076	0.000	2.9
30	3.5	0.074	0.083	0.000	3.4
35	4.6	0.097	0.110	0.000	4.4
40	5.8	0.155	0.176	0.000	5.4
45	7.1	0.399	0.451	0.000	5.8
50	9.0	0.831	0.940	0.000	7.4
55	10.0	0.851	1.474	0.513	8.1
60	10.0	0.851	2.041	1.080	8.1
65	10.0	0.852	2.628	1.667	8.0
70	10.0	0.852	3.235	2.274	8.0
75	10.0	0.853	3.858	2.896	7.9
80	10.0	0.854	4.487	3.526	7.9
85	10.0	0.854	5.114	4.153	7.9
90	10.0	0.855	5.730	4.769	7.9
95	9.9	0.855	6.330	5.368	8.0
100	9.9	0.856	6.910	5.948	8.0
105	2.8	0.855	5.815	4.853	8.0
110	2.8	0.853	4.273	3.311	7.9
115	2.4	0.852	2.687	1.726	7.9
120	2.4	0.804	0.909	0.000	6.8
125	0.0	0.717	0.811	0.000	0.1
130	0.0	0.714	0.807	0.000	0.0
135	0.0	0.711	0.804	0.000	0.0
140	0.5	0.110	0.125	0.000	4.2
145	0.0	0.011	0.012	0.000	0.1
150	0.0	0.005	0.006	0.000	0.0
155	0.0	0.004	0.004	0.000	0.0
160	0.0	0.003	0.004	0.000	0.0
165	0.0	0.003	0.004	0.000	0.0
170	0.0	0.003	0.003	0.000	0.0
175	0.0	0.003	0.003	0.000	0.0
180	0.0	0.003	0.003	0.000	0.0
185	0.0	0.003	0.003	0.000	0.0
190	0.0	0.002	0.003	0.000	0.0
195	0.0	0.002	0.003	0.000	0.0
200	0.0	0.002	0.003	0.000	0.0
205	0.0	0.002	0.003	0.000	0.0
210	0.0	0.002	0.002	0.000	0.0
215	0.0	0.002	0.002	0.000	0.0
220	0.0	0.002	0.002	0.000	0.0
225	0.0	0.002	0.002	0.000	0.0
230	0.0	0.002	0.002	0.000	0.0
235	0.0	0.002	0.002	0.000	0.0
240	0.0	0.002	0.002	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event	



MH3
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 60 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	2.9	0.036	0.041	0.000	2.6
10	5.1	0.053	0.060	0.000	5.0
15	6.2	0.060	0.068	0.000	6.2
20	7.5	0.246	0.278	0.000	6.1
25	11.7	0.730	1.141	0.316	5.1
30	13.3	0.733	3.742	2.916	3.7
35	13.3	0.736	6.611	5.785	3.7
40	11.6	0.738	9.214	8.389	3.8
45	9.9	0.741	11.302	10.476	3.8
50	9.0	0.742	12.993	12.167	3.9
55	8.9	0.744	14.503	13.678	4.0
60	8.5	0.744	14.673	13.847	9.7
65	7.9	0.743	14.107	13.281	10.5
70	8.0	0.742	13.280	12.454	10.7
75	7.9	0.742	12.444	11.619	10.7
80	7.9	0.741	11.598	10.773	10.7
85	7.5	0.740	10.738	9.913	10.7
90	0.3	0.737	7.803	6.977	10.7
95	0.0	0.734	4.593	3.768	10.7
100	0.0	0.731	1.390	0.565	10.7
105	3.8	0.076	0.086	0.000	7.4
110	0.1	0.008	0.009	0.000	0.1
115	0.0	0.004	0.004	0.000	0.0
120	0.0	0.002	0.003	0.000	0.0

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event			



MH4
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	15.1	0.636	0.719	0.000	11.1
10	38.2	1.363	4.808	3.270	9.0
15	13.3	1.368	10.022	8.484	12.7
20	3.8	1.366	7.889	6.350	16.8
25	3.8	1.362	3.978	2.440	16.8
30	9.7	0.762	0.862	0.000	12.2

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH5
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	21.9	0.120	0.136	0.000	20.6
10	44.3	1.187	1.343	0.000	39.2
15	29.7	0.779	0.881	0.000	34.7
20	17.2	0.105	0.119	0.000	17.8
25	16.8	0.102	0.115	0.000	16.8
30	12.2	0.083	0.094	0.000	12.6

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH6
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	23.9	0.078	0.088	0.000	23.0
10	51.5	0.316	0.357	0.000	46.8
15	38.2	0.139	0.157	0.000	45.3
20	17.9	0.068	0.077	0.000	18.5
25	16.8	0.064	0.073	0.000	16.8
30	12.6	0.055	0.063	0.000	12.9

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH9
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	4.6	0.032	0.037	0.000	4.5
10	17.1	0.680	0.769	0.000	11.7
15	4.8	0.259	0.293	0.000	10.4
20	0.1	0.009	0.010	0.000	0.3
25	0.0	0.002	0.002	0.000	0.0
30	0.0	0.001	0.002	0.000	0.0

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event			



MH18

Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	37.4	0.126	0.143	0.000	34.8
10	84.8	1.882	2.128	0.000	70.0
15	72.2	2.674	3.024	0.000	80.3
20	21.2	0.104	0.118	0.000	27.5
25	16.9	0.082	0.092	0.000	16.9
30	12.9	0.072	0.081	0.000	13.6

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event			



MH18A

Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	41.9	0.133	0.151	0.000	35.9
10	96.4	1.750	1.979	0.000	82.9
15	87.6	2.408	2.723	0.000	95.2
20	27.6	0.195	0.220	0.000	56.5
25	16.9	0.083	0.094	0.000	16.9
30	13.6	0.077	0.087	0.000	15.1

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH18B
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	39.4	0.124	0.140	0.000	31.1
10	96.0	0.851	0.963	0.000	90.8
15	98.8	1.076	1.217	0.000	101.9
20	56.6	0.263	0.297	0.000	60.3
25	16.9	0.084	0.095	0.000	17.0
30	15.1	0.081	0.092	0.000	16.1

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event			



Outfall

Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Summer

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	22.7	0.095	0.000	0.000	23.4
10	86.4	0.225	0.000	0.000	87.0
15	96.3	0.225	0.000	0.000	96.2
20	58.8	0.177	0.000	0.000	58.6
25	16.9	0.081	0.000	0.000	16.9
30	12.1	0.068	0.000	0.000	12.1

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH21
Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	9.6	0.065	0.073	0.000	9.3
10	35.7	0.391	0.442	0.000	31.3
15	10.0	0.069	0.077	0.000	10.8
20	0.1	0.017	0.019	0.000	0.7
25	0.0	0.002	0.002	0.000	0.0
30	0.0	0.001	0.001	0.000	0.0

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 100yr storm event			



MH20

Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	13.8	0.052	0.059	0.000	13.3
10	48.4	0.118	0.134	0.000	47.3
15	15.6	0.059	0.067	0.000	17.0
20	0.8	0.018	0.020	0.000	1.6
25	0.0	0.003	0.003	0.000	0.0
30	0.0	0.001	0.001	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 100yr storm event		



MH19

Critical Storm: FSR: 100 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	14.9	0.083	0.094	0.000	14.4
10	53.3	1.812	2.049	0.000	38.1
15	18.6	2.537	2.869	0.000	26.9
20	1.6	0.034	0.038	0.000	2.7
25	0.0	0.006	0.006	0.000	0.1
30	0.0	0.004	0.004	0.000	0.0



Appendix 6: Existing network InfoDrainage calculations – 2yr storm event

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Catchment Area

Type : Catchment Area

Area (ha)	0.119
-----------	-------

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



Catchment Area (1)

Type : Catchment Area

Area (ha)	0.026
-----------	-------

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



Catchment Area (2)

Type : Catchment Area

Area (ha)	0.093
-----------	-------

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



Catchment Area (3)

Type : Catchment Area

Area (ha)	0.09
-----------	------

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: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Catchment Area (4)

Type : Catchment Area

Area (ha)	0.045
-----------	-------

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



Catchment Area (5)

Type : Catchment Area

Area (ha)	0.045
-----------	-------

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



Catchment Area (6)

Type : Catchment Area

Area (ha)	0.062
-----------	-------

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



Catchment Area (7)

Type : Catchment Area

Area (ha)	0.016
-----------	-------

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: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Catchment Area (8)

Type : Catchment Area

Area (ha)	0.032
-----------	-------

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



Catchment Area (9)

Type : Catchment Area

Area (ha)	0.069
-----------	-------

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



Catchment Area (10)

Type : Catchment Area

Area (ha)	0.034
-----------	-------

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: Winners Chapel Blackley		Date: 03/04/2025	
Report Details: Type: Junctions Storm Phase: Phase		Designed by: JT	Checked by: JT
		Approved By: JT	
		Roscoe : Existing site network 2yr storm event	



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
MH1	Manhole	385558.833	404659.575	106.800	0.980	105.820	Circular	1.200
MH2	Manhole	385558.069	404646.778	106.480	0.850	105.630	Circular	1.200
MH3	Manhole	385557.067	404639.254	106.340	0.730	105.610	Circular	1.200
MH4	Manhole	385587.518	404635.568	106.240	1.360	104.880	Circular	1.200
MH5	Manhole	385608.257	404633.767	106.190	1.500	104.690	Circular	1.200
MH6	Manhole	385637.198	404639.203	104.700	0.540	104.160	Circular	1.200
MH9	Manhole	385609.303	404644.172	106.870	1.620	105.250	Circular	1.200
MH18	Manhole	385639.720	404655.503	105.920	5.650	100.270	Circular	1.200
MH18A	Manhole	385680.595	404643.700	104.650	4.980	99.670	Circular	1.200
MH18B	Manhole	385701.288	404565.888	102.000	3.380	98.620	Circular	1.200
Outfall	Manhole	385731.701	404560.878	101.000	2.800	98.200	Circular	1.200
MH21	Manhole	385604.124	404681.498	106.930	1.150	105.780	Circular	1.200
MH20	Manhole	385622.351	404679.527	106.740	1.380	105.360	Circular	1.200
MH19	Manhole	385641.837	404674.218	106.200	5.750	100.450	Circular	1.200

Name	Lock
MH1	None
MH2	None
MH3	None
MH4	None
MH5	None
MH6	None
MH9	None
MH18	None
MH18A	None
MH18B	None
Outfall	None
MH21	None
MH20	None
MH19	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
MH1	Inlet	Catchment Area	(None)	No Restriction
MH2	Inlet	1 -> 2	(None)	No Restriction
MH3	Inlet	2 -> 3	(None)	No Restriction
	Inlet (1)	Catchment Area (1)	(None)	No Restriction
MH4	Inlet	3 -> 4	(None)	No Restriction
	Inlet (1)	Catchment Area (3)	(None)	No Restriction
MH5	Inlet	4 -> 5 9 -> 5	(None)	No Restriction
	Inlet (1)	Catchment Area (6)	(None)	No Restriction
MH6	Inlet	5 -> 6	(None)	No Restriction
	Inlet (1)	Catchment Area (8)	(None)	No Restriction
MH9	Inlet	Catchment Area (5)	(None)	No Restriction
MH18	Inlet	6 -> 18 19 -> 18	(None)	No Restriction
	Inlet	18 -> 18A	(None)	No Restriction
MH18A	Inlet	Catchment Area (9)	(None)	No Restriction
	Inlet (1)	18A -> 18B	(None)	No Restriction
MH18B	Inlet	Catchment Area (10)	(None)	No Restriction
	Inlet (1)	18B -> Outfall	(None)	No Restriction
Outfall	Inlet	Catchment Area (2)	(None)	No Restriction
MH21	Inlet	21 -> 20	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
MH20	Inlet	20 -> 19	(None)	No Restriction
	Inlet (1)	Catchment Area (7)	(None)	No Restriction

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junctions Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
MH1	Outlet	1 -> 2	Free Discharge
MH2	Outlet	2 -> 3	Free Discharge
MH3	Outlet	3 -> 4	Free Discharge
MH4	Outlet	4 -> 5	Free Discharge
MH5	Outlet	5 -> 6	Free Discharge
MH6	Outlet	6 -> 18	Free Discharge
MH9	Outlet	9 -> 5	Free Discharge
MH18	Outlet	18 -> 18A	Free Discharge
MH18A	Outlet	18A -> 18B	Free Discharge
MH18B	Outlet	18B -> Outfall	Free Discharge
MH21	Outlet	21 -> 20	Free Discharge
MH20	Outlet	20 -> 19	Free Discharge
MH19	Outlet	19 -> 18	Free Discharge

Project: Winners Chapel Blackley		Date: 03/04/2025	
Report Details: Type: Connections Storm Phase: Phase		Designed by: JT	Checked by: JT
		Approved By: JT	
		Roscoe : Existing site network 2yr storm event	



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 -> 2	12.820	Pipe	67.475		0.6	100	106.800	105.820
2 -> 3	7.590	Pipe	379.523		0.6	100	106.480	105.630
3 -> 4	30.673	Pipe	42.018		0.6	100	106.340	105.610
4 -> 5	20.817	Pipe	109.564		0.6	100	106.240	104.880
5 -> 6	29.447	Pipe	55.561		0.6	150	106.190	104.690
6 -> 18	16.494	Pipe	14.219		0.6	150	104.700	104.160
18 -> 18A	42.545	Pipe	70.908		0.6	225	105.920	100.270
18A -> 18B	80.517	Pipe	76.682		0.6	225	104.650	99.670
18B -> Outfall	30.823	Pipe	73.389		0.6	225	102.000	98.620
21 -> 20	18.333	Pipe	43.650		0.6	150	106.930	105.780
20 -> 19	20.196	Pipe	10.858		0.6	150	106.740	105.360
19 -> 18	18.834	Pipe	104.633		0.6	225	106.200	100.450
9 -> 5	10.458	Pipe	18.675		0.6	150	106.870	105.250

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock
1 -> 2	106.480	105.630	All
2 -> 3	106.340	105.610	All
3 -> 4	106.240	104.880	All
4 -> 5	106.190	104.690	All
5 -> 6	104.700	104.160	All
6 -> 18	105.920	103.000	All
18 -> 18A	104.650	99.670	All
18A -> 18B	102.000	98.620	All
18B -> Outfall	101.000	98.200	All
21 -> 20	106.740	105.360	All
20 -> 19	106.200	103.500	All
19 -> 18	105.920	100.270	All
9 -> 5	106.190	104.690	All

Project: Winners Chapel Blackley		Date: 03/04/2025			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: JT	Checked by: JT		Approved By: JT
		Roscoe : Existing site network 2yr storm event			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
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	☐

Pipe Size Library

Default

Add. Increment (mm)	75
---------------------	----

Diameter (mm)	Min. Slope (1:x)	Max. Slope (1:x)
100	0.00	0.00
150	0.00	0.00

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Network Design Criteria Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Manhole Options

Apply Offset	☐
Synchronise Manhole Invert Levels	☒

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Rainfall Analysis Criteria	Roscoe : Existing site network 2yr storm event		



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	☐

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Inflows Summary Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Critical Storm

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow (m³)
Catchment Area	FSR: 2 years: +0 %: 15 mins: Winter	0.12	18.6	8.636
Catchment Area (1)	FSR: 2 years: +0 %: 15 mins: Winter	0.03	4.1	1.924
Catchment Area (2)	FSR: 2 years: +0 %: 15 mins: Winter	0.09	14.6	6.799
Catchment Area (3)	FSR: 2 years: +0 %: 15 mins: Winter	0.09	14.2	6.586
Catchment Area (4)	FSR: 2 years: +0 %: 15 mins: Winter	0.04	7.0	3.257
Catchment Area (5)	FSR: 2 years: +0 %: 15 mins: Winter	0.04	7.0	3.254
Catchment Area (6)	FSR: 2 years: +0 %: 15 mins: Winter	0.06	9.7	4.489
Catchment Area (7)	FSR: 2 years: +0 %: 15 mins: Winter	0.02	2.5	1.145
Catchment Area (8)	FSR: 2 years: +0 %: 15 mins: Winter	0.03	5.0	2.340
Catchment Area (9)	FSR: 2 years: +0 %: 15 mins: Winter	0.07	10.8	5.013
Catchment Area (10)	FSR: 2 years: +0 %: 15 mins: Winter	0.03	5.3	2.484

Project: Winners Chapel Blackley		Date: 03/04/2025	
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: JT	Checked by: JT
		Approved By: JT	
		Roscoe : Existing site network 2yr storm event	



Critical Storm

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
MH1	FSR: 2 years: +0 %: 15 mins: Winter	106.8 00	105.8 20	106.80 1	0.981	18.6	1.680	0.571	11.6	8.647	Flood
MH2	FSR: 2 years: +0 %: 30 mins: Winter	106.4 80	105.6 30	106.48 1	0.851	10.0	1.704	0.743	8.1	11.465	Flood
MH3	FSR: 2 years: +0 %: 15 mins: Winter	106.3 40	105.6 10	106.34 2	0.732	10.5	2.426	1.600	10.3	10.533	Flood
MH4	FSR: 2 years: +0 %: 30 mins: Winter	106.2 40	104.8 80	106.09 7	1.217	15.3	1.376	0.000	14.9	22.754	Flood Risk
MH5	FSR: 2 years: +0 %: 15 mins: Winter	106.1 90	104.6 90	105.01 2	0.322	30.7	0.364	0.000	26.5	24.727	Surcharged
MH6	FSR: 2 years: +0 %: 15 mins: Winter	104.7 00	104.1 60	104.25 5	0.095	31.5	0.107	0.000	30.9	26.985	OK
MH9	FSR: 2 years: +0 %: 15 mins: Winter	106.8 70	105.2 50	105.29 1	0.041	7.0	0.046	0.000	6.9	3.251	OK
MH18	FSR: 2 years: +0 %: 15 mins: Winter	105.9 20	100.2 70	100.43 5	0.165	53.5	0.187	0.000	51.1	37.971	OK
MH18A	FSR: 2 years: +0 %: 15 mins: Winter	104.6 50	99.67 0	99.856	0.186	61.9	0.211	0.000	56.9	42.516	OK
MH18B	FSR: 2 years: +0 %: 15 mins: Winter	102.0 00	98.62 0	98.813	0.193	62.3	0.219	0.000	58.3	44.692	OK
Outfall	FSR: 2 years: +0 %: 15 mins: Winter	101.0 00	98.20 0	98.375	0.175	58.3	0.000	0.000	57.7	44.692	OK
MH21	FSR: 2 years: +0 %: 15 mins: Winter	106.9 30	105.7 80	105.86 4	0.084	14.6	0.095	0.000	14.3	6.797	OK
MH20	FSR: 2 years: +0 %: 15 mins: Winter	106.7 40	105.3 60	105.42 7	0.067	21.3	0.076	0.000	20.8	10.048	OK
MH19	FSR: 2 years: +0 %: 15 mins: Winter	106.2 00	100.4 50	100.55 9	0.109	23.2	0.123	0.000	22.7	11.193	OK

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Connections Summary Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Critical Storm

Project: Winners Chapel Blackley				Date: 03/04/2025		
				Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Connections Summary Storm Phase: Phase				Roscoe : Existing site network 2yr storm event		



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 -> 2	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH1	MH2	106.8	106.80 ₁	0.100	8.623	1.5	1.58	11.6	Flood
2 -> 3	FSR: 2 years: +0 %: 30 mins: Summer	Pipe	MH2	MH3	106.5	106.48 ₀	0.100	10.244	1.0	2.66	8.1	Flood
3 -> 4	FSR: 2 years: +0 %: 15 mins: Summer	Pipe	MH3	MH4	106.3	106.34 ₁	0.100	9.415	1.3	1.1	10.3	Flood
4 -> 5	FSR: 2 years: +0 %: 30 mins: Summer	Pipe	MH4	MH5	106.2	106.04 ₄	0.100	20.318	1.9	2.58	14.9	Flood Risk
5 -> 6	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH5	MH6	106.2	105.01 ₂	0.150	24.727	1.7	1.11	26.5	Surcharged
6 -> 18	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH6	MH18	104.7	104.25 ₅	0.091	26.985	2.7	0.65	30.9	OK
18 -> 18A	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH18	MH18A	105.9	100.43 ₅	0.176	37.971	1.5	0.83	51.1	OK
18A -> 18B	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH18A	MH18B	104.7	99.856	0.190	42.516	1.6	0.96	56.9	OK
18B -> Outfall	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH18B	Outfall	102.0	98.813	0.183	44.692	1.7	0.96	58.3	OK
21 -> 20	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH21	MH20	106.9	105.86 ₄	0.075	6.797	1.6	0.53	14.3	OK
20 -> 19	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH20	MH19	106.7	105.42 ₇	0.066	10.048	2.8	0.38	20.8	OK
19 -> 18	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH19	MH18	106.2	100.55 ₉	0.137	11.193	0.9	0.45	22.7	OK
9 -> 5	FSR: 2 years: +0 %: 15 mins: Winter	Pipe	MH9	MH5	106.9	105.29 ₁	0.150	3.251	0.4	0.17	6.9	OK

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Phase Management Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		

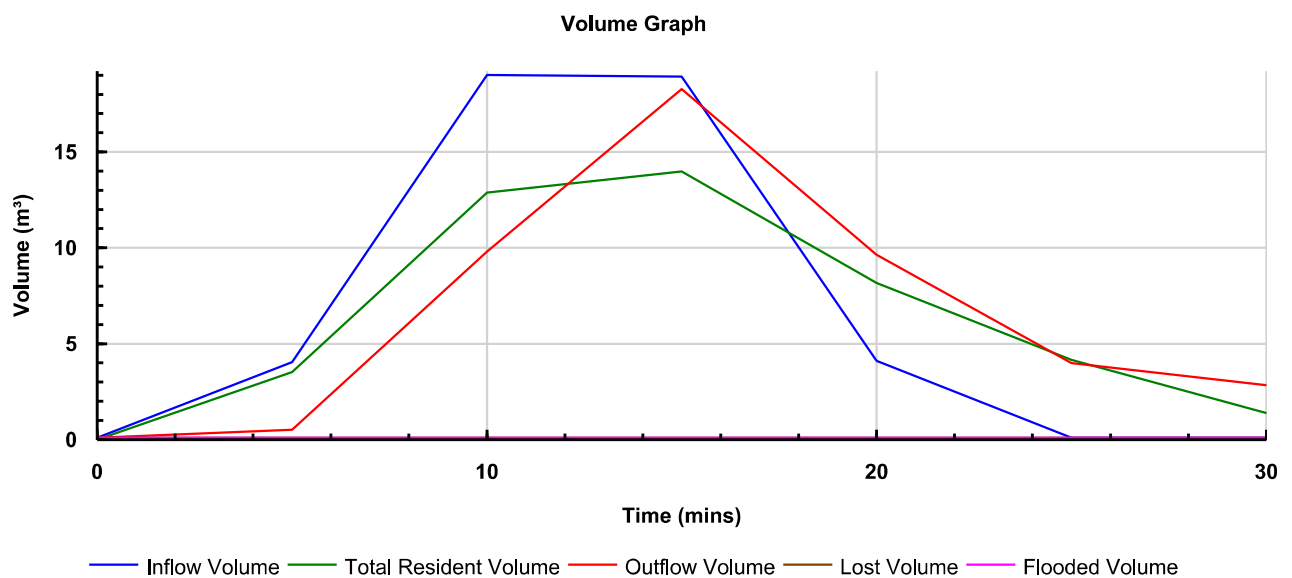
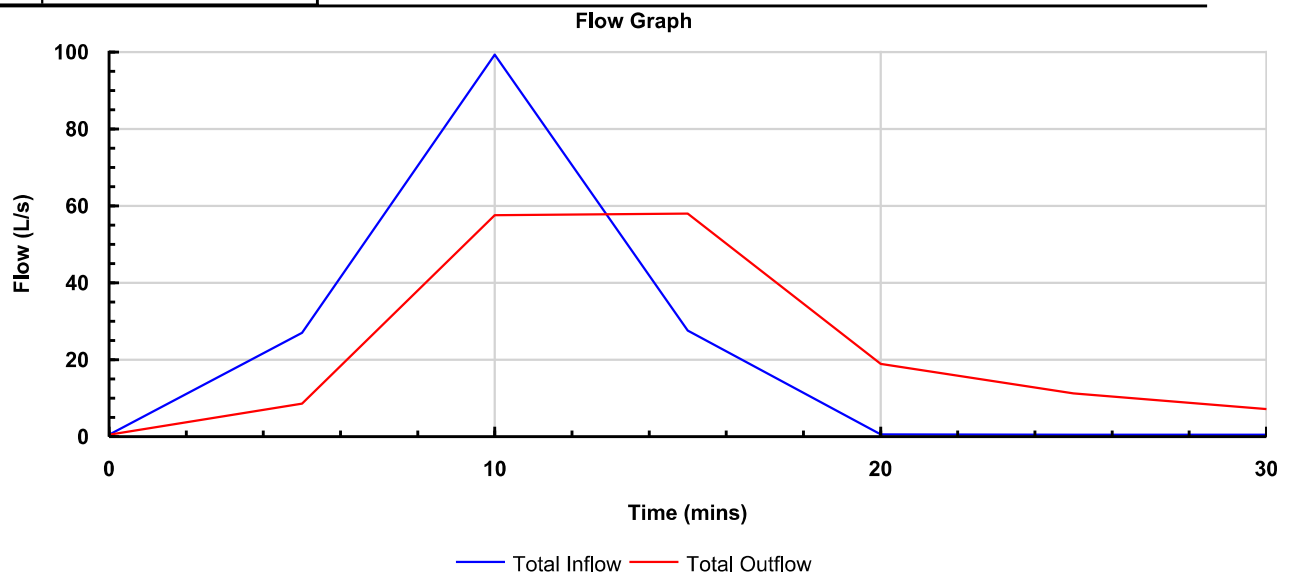


 **Phase**
FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Tables

Name	Max. Inflow (L/s)	Total Inflow Volume (m³)	Max. Outflow (L/s)	Total Outflow Volume (m³)
Outfall			57.7	44.692
TOTAL	99.3	45.926	57.7	44.692

Graphs



Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH1
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	5.0	0.059	0.067	0.000	4.8
10	18.6	0.970	1.099	0.000	11.6
15	5.2	0.981	1.680	0.571	10.0
20	0.1	0.612	0.692	0.000	3.5
25	0.0	0.170	0.192	0.000	2.8
30	0.0	0.003	0.004	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH2
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 30 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	2.1	0.052	0.059	0.000	1.8
10	4.3	0.086	0.097	0.000	4.0
15	8.6	0.402	0.454	0.000	5.8
20	10.0	0.850	1.176	0.215	8.1
25	8.1	0.851	1.704	0.743	8.1
30	3.4	0.743	0.840	0.000	4.0
35	3.0	0.412	0.466	0.000	5.8
40	0.0	0.017	0.020	0.000	0.2
45	0.0	0.007	0.008	0.000	0.0
50	0.0	0.004	0.005	0.000	0.0
55	0.0	0.004	0.004	0.000	0.0
60	0.0	0.003	0.004	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH3
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	5.2	0.051	0.058	0.000	4.9
10	10.5	0.649	0.734	0.000	5.4
15	9.3	0.732	2.426	1.600	7.5
20	5.0	0.731	2.218	1.393	10.3
25	5.6	0.274	0.309	0.000	8.2
30	0.1	0.011	0.012	0.000	0.2

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 2yr storm event			



MH4

Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 30 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	3.8	0.053	0.060	0.000	2.9
10	8.1	0.162	0.183	0.000	6.7
15	15.2	0.806	0.912	0.000	12.5
20	15.3	1.217	1.376	0.000	14.9
25	12.0	0.920	1.040	0.000	13.6
30	11.6	0.736	0.832	0.000	12.0
35	8.4	0.512	0.579	0.000	10.1
40	0.3	0.033	0.037	0.000	1.4
45	0.1	0.009	0.011	0.000	0.1
50	0.0	0.006	0.007	0.000	0.0
55	0.0	0.003	0.004	0.000	0.0
60	0.0	0.002	0.003	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH5
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	10.8	0.073	0.083	0.000	10.0
10	30.7	0.322	0.364	0.000	26.5
15	19.1	0.140	0.158	0.000	23.2
20	11.6	0.081	0.091	0.000	12.0
25	9.5	0.072	0.081	0.000	9.7
30	0.8	0.026	0.030	0.000	1.5

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH6
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	11.3	0.050	0.057	0.000	10.7
10	31.5	0.095	0.107	0.000	30.9
15	24.6	0.081	0.092	0.000	24.8
20	12.0	0.054	0.061	0.000	12.4
25	9.7	0.048	0.054	0.000	9.9
30	1.5	0.022	0.025	0.000	2.1

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH9
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	1.9	0.021	0.024	0.000	1.8
10	7.0	0.041	0.046	0.000	6.9
15	2.0	0.022	0.024	0.000	2.1
20	0.0	0.006	0.007	0.000	0.2
25	0.0	0.002	0.002	0.000	0.0
30	0.0	0.001	0.001	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH18
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	16.4	0.078	0.088	0.000	14.7
10	53.5	0.165	0.187	0.000	51.1
15	33.3	0.123	0.139	0.000	35.3
20	13.6	0.074	0.084	0.000	14.5
25	9.9	0.062	0.070	0.000	10.2
30	2.2	0.035	0.040	0.000	3.2

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 2yr storm event			



MH18A
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	17.6	0.075	0.085	0.000	12.4
10	61.9	0.186	0.211	0.000	56.9
15	38.4	0.143	0.162	0.000	43.4
20	14.5	0.081	0.092	0.000	16.6
25	10.2	0.064	0.073	0.000	10.5
30	3.2	0.045	0.051	0.000	5.2

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH18B
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	13.8	0.058	0.066	0.000	7.9
10	62.3	0.193	0.219	0.000	57.0
15	44.9	0.189	0.214	0.000	58.3
20	16.6	0.088	0.099	0.000	18.7
25	10.5	0.066	0.074	0.000	10.8
30	5.2	0.051	0.057	0.000	6.7

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



Outfall

Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	7.9	0.055	0.000	0.000	8.2
10	57.0	0.172	0.000	0.000	57.3
15	58.3	0.175	0.000	0.000	57.7
20	18.7	0.085	0.000	0.000	18.5
25	10.8	0.064	0.000	0.000	10.8
30	6.7	0.050	0.000	0.000	6.7

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH21
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	3.9	0.040	0.045	0.000	3.8
10	14.6	0.084	0.095	0.000	14.3
15	4.1	0.043	0.048	0.000	4.5
20	0.1	0.012	0.014	0.000	0.4
25	0.0	0.002	0.002	0.000	0.0
30	0.0	0.001	0.001	0.000	0.0

Project: Winners Chapel Blackley		Date: 03/04/2025		 Roscoe CIVIL & STRUCTURAL ENGINEERS INSPIRING BUILT ENVIRONMENTS	
		Designed by: JT	Checked by: JT		Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase		Roscoe : Existing site network 2yr storm event			



MH20

Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	5.6	0.032	0.037	0.000	5.3
10	21.3	0.067	0.076	0.000	20.8
15	6.5	0.037	0.042	0.000	7.1
20	0.4	0.013	0.015	0.000	0.8
25	0.0	0.003	0.003	0.000	0.0
30	0.0	0.001	0.001	0.000	0.0

Project: Winners Chapel Blackley	Date: 03/04/2025		
	Designed by: JT	Checked by: JT	Approved By: JT
Report Details: Type: Junction Results Storm Phase: Phase	Roscoe : Existing site network 2yr storm event		



MH19
Critical Storm: FSR: 2 years: Increase Rainfall (%): +0: 15 mins: Winter

Type : Manhole

Tables

Time (mins)	Total Inflow (L/s)	Depth (m)	Volume (m³)	Flooded Volume (m³)	Total Outflow (L/s)
0	0.0	0.000	0.000	0.000	0.0
5	6.0	0.051	0.058	0.000	5.7
10	23.2	0.109	0.123	0.000	22.7
15	7.8	0.061	0.069	0.000	8.5
20	0.8	0.023	0.026	0.000	1.3
25	0.0	0.005	0.006	0.000	0.1
30	0.0	0.004	0.004	0.000	0.0