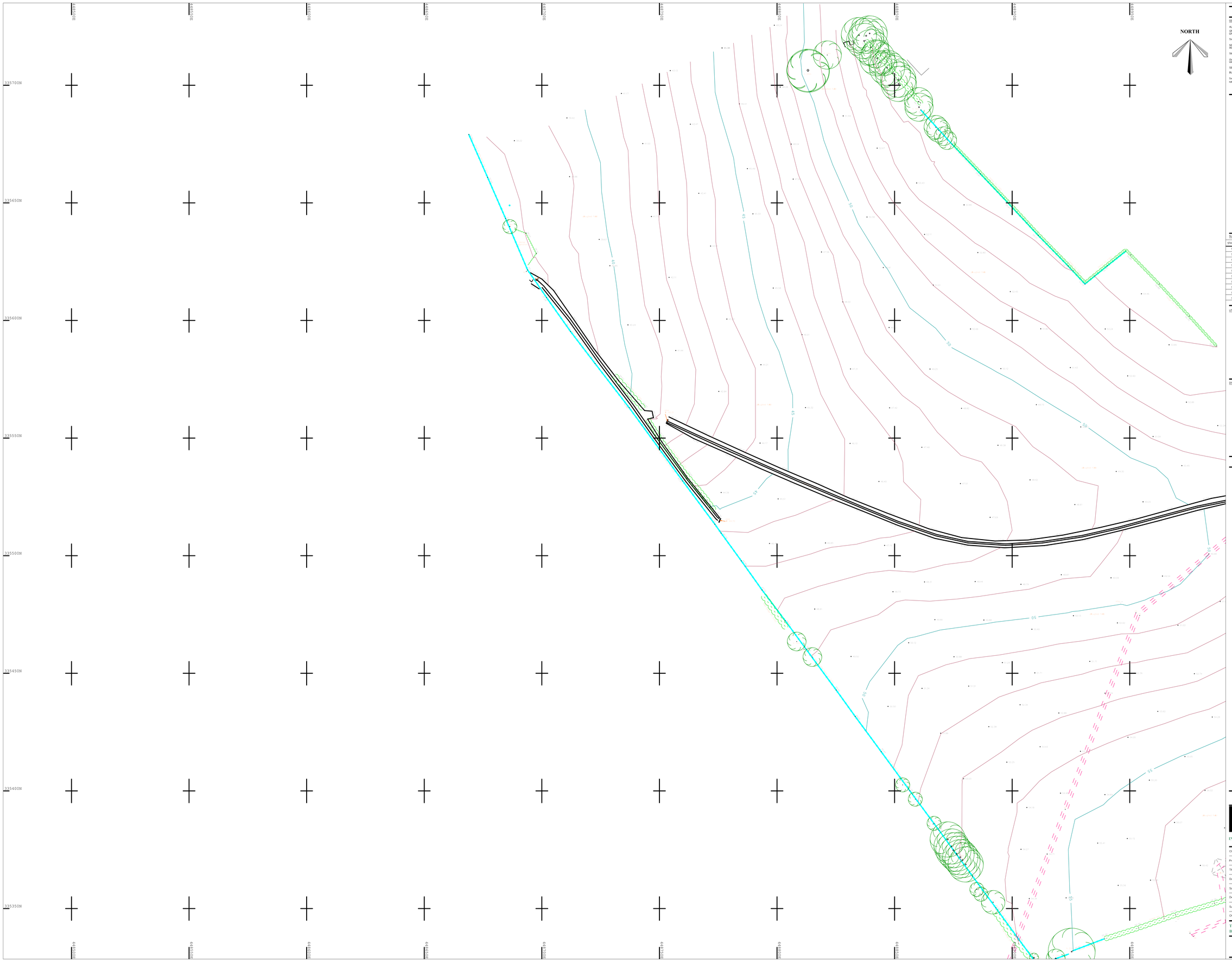
Appendix A1: Topographical Survey



NOTES

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SERVICE COVERS INDICATED WHERE VISIBLE. PIPE INVERTS / DETAILS SURVEYED FROM SURFACE INSPECTION ONLY. GENERALLY DAMAGED COVERS AND COVERS WITHIN HIGHWAYS WILL NOT BE LIFTED

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TOPOGRAPHICAL SURVEY/UTILITY KEY :-

(14) – height
t – tumbler
● – pier top
a/g – above ground
a/r – assumed route
b/w – bollard
bb – bellaho beacon
bd – back drop
bl – bed level
bob – bollard
bos – bottom of shaft
bt – telecom
c/b fence – closeboard fence
cbl – cable television
cdw – cable television
cl – cover level
cp – control pole
cr – cable riser
cws – combined water sewer
d/chan – drainage channel
ejb – electric junction box
ew – electric
ext – end of trace
ep – electric pole
f – fence
f/bed – flower bed
fh – fire hydrant
fl – floor level
fs – fire switch
f/sew – foul water sewer
g – gully
g/run – gully run
h/beam – hedge
h/chestnut – horse chestnut
h/thorn – hawthorn
ic – inspection cover
il – invert level
ir – iron railing
int – interceptor
lp – lamp post
mc – manhole cover
mkr – marker
o/h – over head
ol – off let
osa – off survey area
OSBM – ordnance survey bench mark
p & r fence – post & rail fence
pd – pd depth
pf – pump fill
ptg – pipe to ground
pts – pipe to surface
r/w – rain water
ret wall – retaining wall
rs – road sign
rw/pipe – rain water pipe
s/birch – silver birch
s/pin – scots pining
sap – sapling
sec fence – security fence
sc – sign post chamber
sf – sash light
sp – soil pipe
sp – stop pipe
sv – stop valve
svp – soil vent pipe
swa – storm water sewer
TBM – temporary bench mark
tc – tennis court kerb
tl – threshold level
toc – top of cap
tob – top of bank
tot – top of tank
tp – telecom pole
tr – trial hole/pit
t/a – trench scar
u/a – underside
ul – unable to lift
ur – unable to rod
ut – unable to survey
utl – unable to trace
vp – vent pipe
w/c – water cold chamber
w – water level
wm – water meter
wp – waste pipe
wr – water riser

SURVEY CONTROL :-

STATION	EASTINGS	NORTHINGS	LEVEL
ST01	449633.879	335646.945	62.5874
ST02	449600.414	335741.747	61.9180
ST03	449672.305	335548.814	63.446
ST04	449562.198	335612.158	63.067
ST05	449729.752	335694.027	61.297
ST07	449404.404	335545.440	63.984
ST08	449588.033	335524.684	65.447
ST09	449052.171	335492.150	63.101
ST10	448929.623	335591.076	55.163
ST11	448830.965	335665.222	51.108

SHEET LAYOUT :-

UTILITY SURVEY KEY :-

HATCHED AREA
BOREHOLE
CPT
TRIAL PIT
HAND PIT
WINDOW SAMPLE

ELECTRIC CABLE
WATER PIPE
FOUL SEWER
STORM SEWER
COMBINED SEWER
GAS PIPE
CABLE TELEVISION
DATA CABLE
TELECOM CABLE
LNG PIPE
UNIDENTIFIED SERVICE
CATV
CCTV
TRAFFIC LIGHT
STEET FILL
VENT
FUEL PIPE
CAUSE LINES
PIPE
ASSUMED ROUTE
TAKEN FROM RECORDS

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TGA Standards – "Even an appropriate and professionally executed survey may not be able to achieve a 100% detection rate."

UTILITY NOTES

0 5 10 20 30 40 50

[redacted]

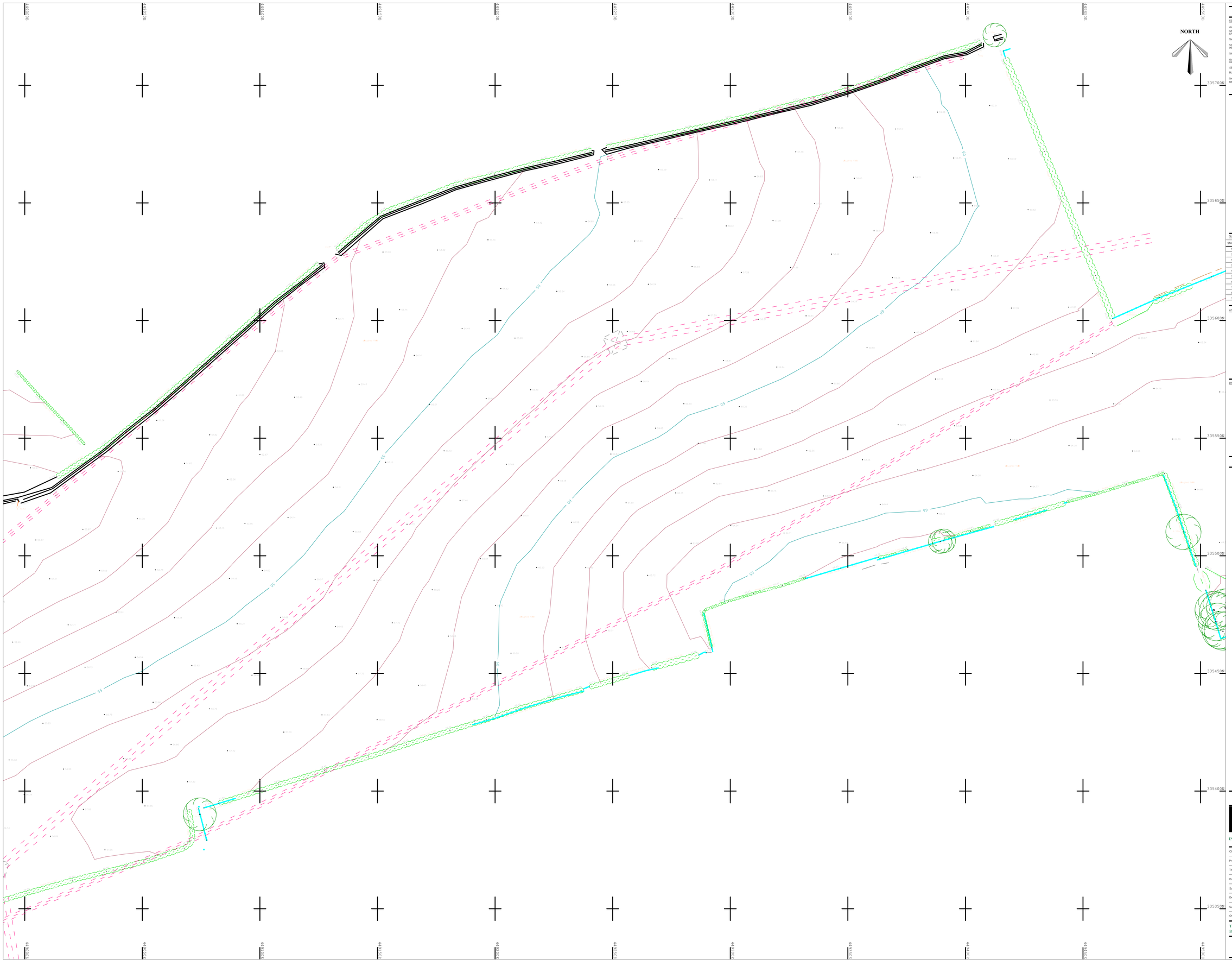
INFO@TAGSURVEYS.CO.UK WWW.TAGSURVEYS.CO.UK

Client	BLOOR HOMES (EAST MIDLANDS)
Project	LAND OFF STAPLEFORD LANE, TOTON, NG9 7JB
Title	TOPOGRAPHICAL SURVEY
Date	OCTOBER 2021
Scale	1:500@A0
Dwg No	T0109-(30)-1
Surveyor	SM±
Checked	SB

Revisions

TOPOGRAPHICAL (LAND) SURVEYORS / UTILITY SURVEYORS
BUILDING MEASUREMENT SURVEYORS / 3D LASER SCANNING

MAS
MEMBER OF THE ASSOCIATION OF ROCHDALE TOPOGRAPHICAL SURVEYORS



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(H) – height
T – tumulus
● – pier trap
a/g – above ground
a/r – assumed route
b – bollard
bb – bellaho beacon
bd – back drop
bl – bed level
bot – bottom
bos – bottom of shaft
bt – telecom
c/b fence – closeboard fence
cb – cable box
cdw – cable television
cl – cover level
cp – control
cr – cable riser
cws – combined water sewer
d/chan – drainage channel
ejb – electric junction box
ew – electric
ext – end of trace
ep – electric pole
f – fence
f/bed – flower bed
fh – fire hydrant
fl – floor level
fs – fire switch
fws – foul water sewer
g – gully
g/run – gully run
h – hedge
h/chestnut – horse chestnut
h/thorn – hawthorn
i – inspection cover
il – invert level
ir – iron railing
int – interceptor
lp – lamp post
m/cover – manhole cover
mkr – marker
o/h – over head
ol – off lot
osa – off survey area
OSBM – ordnance survey bench mark
p & r fence – post & rail fence
pd – pd depth
pf – pump fill
ptg – pipe to ground
pts – pipe to surface
r/w – rainwater
ret wall – retaining wall
rs – road sign
s/pump – non water pipe
s/birch – silver birch
s/bor – sorbus aria
sap – sapling
sec fence – security fence
sc – sewer chamber
sf – sent fight
sp – soil pipe
sp – spot level
sv – stop valve
svp – soil vent pipe
swa – storm water sewer
TBM – temporary bench mark
tc – tennis court
tl – threshold level
toc – top of cdg
tos – top of slab
tot – top of tank
tp – telecom pole
tr – trial hole
t/a – trench scar
u/a – underside
ul – unable to lift
ulr – unable to rod
ulv – unable to survey
utl – unable to trace
vp – vent pipe
w/ch – water head chamber
w – water level
wm – water meter
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wr – water riser

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CPT
TRIAL PIT
HAND PIT
WINDOW SAMPLE

ELECTRIC CABLE
WATER PIPE
FOUL SEWER
STORM SEWER
COMBINED SEWER
DUCTS
CABLE TELEVISION
DATA CABLE
TELECOM CABLE
GAS PIPE
UNIDENTIFIED SERVICE
CATV
CCTV
TRAFFIC LIGHT
FUEL FILL
VENT
FUEL PIPE
CAUSE LINES
PIPE
ASSUMED ROUTE
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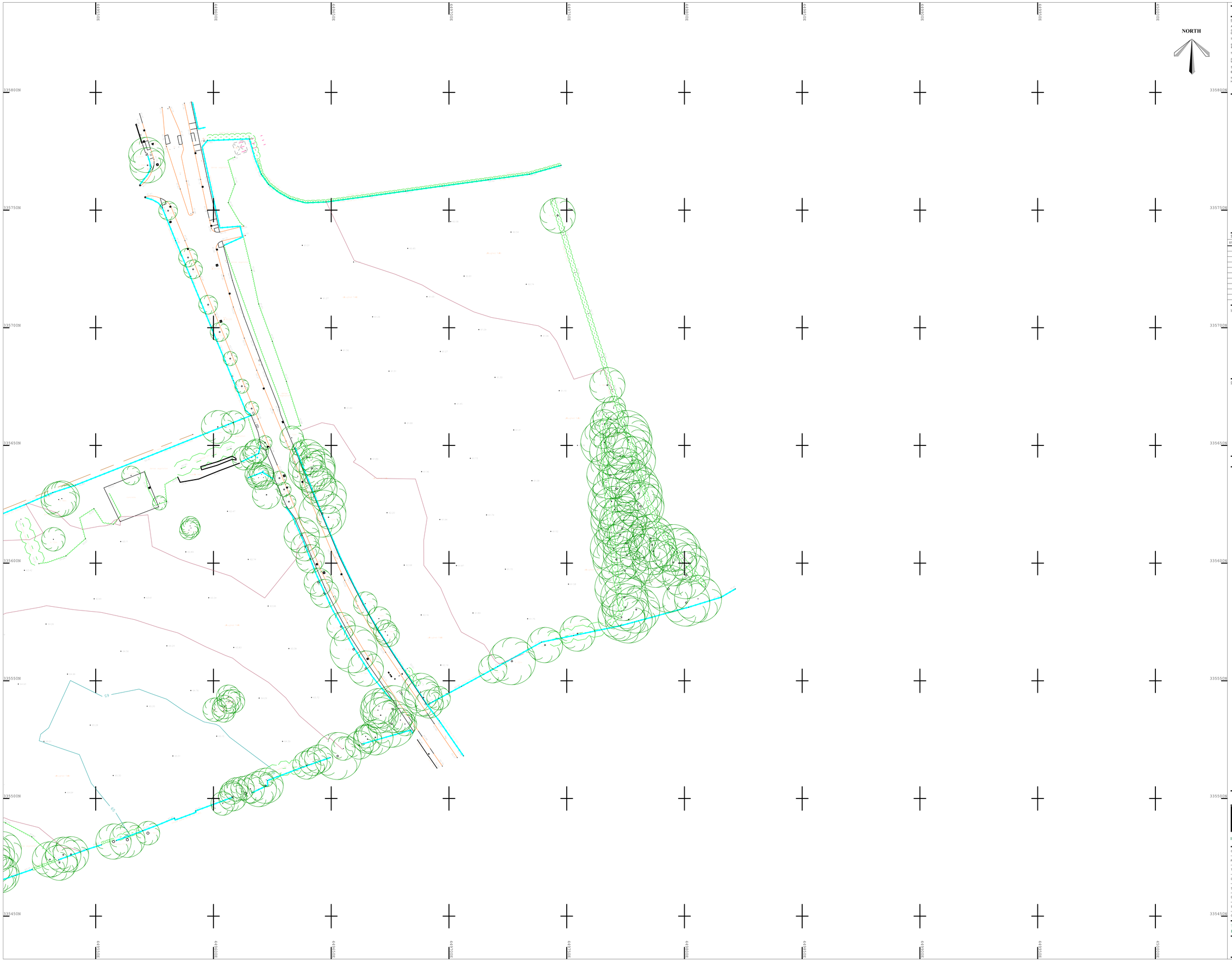
Date	OCTOBER 2021
Scale	1:500@A0
Dwg No	T0109-(30)-2
Surveyor	SMJ
Checked	SB

Revisions

TOPOGRAPHICAL (LAND) SURVEYORS / UTILITY SURVEYORS
BUILDING MEASUREMENT SURVEYORS / 3D LASER SCANNING

HAS
Accredited Contractor



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sp – soil pipe
sp – spot level
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tl – threshold level
toc – top of cdg
tos – top of slope
tot – top of tank
tp – telecom pole
t/pad – tarmac pad
t/s – trench scar
u/s – underside
ufl – unable to lift
ufr – unable to rod
ufs – unable to survey
utl – unable to trace
vp – vent pipe
w/ – water/ feed chamber
wl – water level
wm – water meter
wp – waste pipe
wr – water riser

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CPT
TRIAL PIT
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WINDOW SAMPLE

ELECTRIC CABLE
WATER PIPE
FOUL SEWER
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Title	TOPOGRAPHICAL SURVEY
Date	OCTOBER 2021
Scale	1:500@A0
Dwg No	T0109-(30)-3
Surveyor	SM;
Checked	SB

Revisions

TOPOGRAPHICAL (LAND) SURVEYORS / UTILITY SURVEYORS
BUILDING MEASUREMENT SURVEYORS / 3D LASER SCANNING

TAG SURVEYS
Accredited Contractor

Appendix B1: Illustrative Master Plan

KEY

- **Site Boundary** 18.95Ha
- **Development** Residential 12.00Ha @35dph = 420 dwellings
- **Public Open Space**
- **Vehicular Site Access** B6003
- **Primary Street** Indicative Alignment
- **Streets & Lanes** Illustrative street network
- **Existing Trees & Hedgerows** Retained
- **Drainage Basins**
- **Public Rights of Way** Retained Footpaths & Bridleways
- **Pedestrian & Cycle Links**
- **Pedestrian Links**
- **Pedestrian & Cycle Links** Connections dependent on land ownership
- **Pedestrian & Cycle Priority Crossings**
- **Play Space** LEAP
- **Proposed Landscaping** Buffer planting
- **Allocated Sites**
- **Illustrative Terminal Tower Location** 20m offset

0 50 100 m

Land west of the B6003, Toton West, Broxtowe, Nottinghamshire – **Illustrative Masterplan**

| Drawn by: AW | Approved by: JF | Date: 06/02/25 | Scale: 1:2500 @ A2 | DRG: P23_2377_DE_014 Sheet No: 01 Rev: B | Client: Bloor Homes |

PEGASUS GROUP

Appendix C1: InfoDrainage Calculations (including network simulations for 3.33%, 1.0% AEP events, with Climate Change and Urban Creep allowances).

Project:	Date:		
Toton West Capacity Analysis 1 in 100+40%CC + 10% Urban Creep Basin	21/03/2025		
	Designed by:	Checked by:	Approved By:
	TB	ST	ST
Report Title:	Company Address:		
Rainfall Analysis Criteria	Vision Park, Histon Cambridge CB24 9NL		

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

Rainfall

1_100+40%CC

Type: FEH

Site Location	GB 450000 336150 SK 50000 36150
Rainfall Version	1999
C (1km)	-0.026
D1 (1km)	0.335
D2 (1km)	0.366
D3 (1km)	0.259
E (1km)	0.307
F (1km)	2.363
Summer	☑
Winter	☑

Return Period

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

Storm Durations

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

Project:	Date:		
Toton West Capacity Analysis 1 in 100+40%CC + 10% Urban Creep Basin	21/03/2025		
	Designed by:	Checked by:	Approved By:
	TB	ST	ST
Report Details:	Company Address:		
Type: Inflow Summary Storm Phase: 1_100+40%CC	Vision Park, Histon Cambridge CB24 9NL		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Basin Area	Basin		Time of Concentration	0.610	100	10	110.0	0.671
Catchment Area (1)	MH8		Time of Concentration	0.249	55	10	60.5	0.151
Catchment Area (3)	MH1		Time of Concentration	0.334	55	10	60.5	0.202
Catchment Area (4)	MH5		Time of Concentration	0.206	55	10	60.5	0.125
Catchment Area (5)	MH3		Time of Concentration	0.231	55	10	60.5	0.140
Catchment Area (6)	MH2		Time of Concentration	0.019	55	10	60.5	0.012
Catchment Area (7)	MH7		Time of Concentration	0.766	55	10	60.5	0.463
Catchment Area (8)	MH4		Time of Concentration	0.307	55	10	60.5	0.185
Catchment Area (9)	MH6		Time of Concentration	0.211	55	10	60.5	0.127
Catchment Area (10)	MH24		Time of Concentration	0.200	55	10	60.5	0.121
Catchment Area (11)	MH22		Time of Concentration	0.581	55	10	60.5	0.352
Catchment Area (12)	MH9		Time of Concentration	0.210	55	10	60.5	0.127
Catchment Area (13)	MH23		Time of Concentration	0.737	55	10	60.5	0.446
Catchment Area (14)	MH19		Time of Concentration	0.228	55	10	60.5	0.138
Catchment Area (15)	MH20		Time of Concentration	0.081	55	10	60.5	0.049
Catchment Area (16)	MH15		Time of Concentration	0.465	55	10	60.5	0.282
Catchment Area (17)	MH16		Time of Concentration	0.295	55	10	60.5	0.179
Catchment Area (18)	MH17		Time of Concentration	0.103	55	10	60.5	0.062
Catchment Area (19)	MH10		Time of Concentration	0.222	55	10	60.5	0.134
Catchment Area (20)	MH11		Time of Concentration	0.472	55	10	60.5	0.285
Catchment Area (21)	MH13		Time of Concentration	0.269	55	10	60.5	0.163
Catchment Area (22)	MH12		Time of Concentration	0.412	55	10	60.5	0.249
Catchment Area (23)	MH18		Time of Concentration	0.140	55	10	60.5	0.084
Catchment Area (24)	MH25		Time of Concentration	0.254	55	10	60.5	0.154
Catchment Area (25)	MH21		Time of Concentration	0.110	55	10	60.5	0.067
Catchment Area (26)	MH26		Time of Concentration	0.487	55	10	60.5	0.294
Catchment Area (27)	MH30		Time of Concentration	0.091	55	10	60.5	0.055
Catchment Area (28)	MH29		Time of Concentration	0.152	55	10	60.5	0.092
Catchment Area (29)	MH27		Time of Concentration	0.474	55	10	60.5	0.287
Catchment Area (30)	MH28		Time of Concentration	0.186	55	10	60.5	0.112
Catchment Area (31)	MH37		Time of Concentration	0.262	55	10	60.5	0.158
Catchment Area (32)	MH40		Time of Concentration	0.099	55	10	60.5	0.060

Catchment Area (33)	MH41		Time of Concentration	0.054	55	10	60.5	0.033
Catchment Area (34)	MH38		Time of Concentration	0.139	55	10	60.5	0.084
Catchment Area (35)	MH39		Time of Concentration	0.480	55	10	60.5	0.290
Catchment Area (36)	MH44		Time of Concentration	0.238	55	10	60.5	0.144
Catchment Area (37)	MH45		Time of Concentration	0.240	55	10	60.5	0.145
Catchment Area (38)	MH47		Time of Concentration	0.212	55	10	60.5	0.128
Catchment Area (39)	MH43		Time of Concentration	0.380	55	10	60.5	0.230
Catchment Area (40)	MH42		Time of Concentration	0.022	55	10	60.5	0.014
Catchment Area (41)	MH46		Time of Concentration	0.375	55	10	60.5	0.227
Catchment Area (42)	MH33		Time of Concentration	0.138	55	10	60.5	0.083
Catchment Area (43)	MH34		Time of Concentration	0.063	55	10	60.5	0.038
Catchment Area (44)	MH35		Time of Concentration	0.115	55	10	60.5	0.070
Catchment Area (45)	MH31		Time of Concentration	0.050	55	10	60.5	0.030
Catchment Area (46)	MH32		Time of Concentration	0.109	55	10	60.5	0.066
Catchment Area (47)	MH26		Time of Concentration	0.167	55	10	60.5	0.101
Catchment Area (48)	MH36		Time of Concentration	0.020	55	10	60.5	0.012
Catchment Area (49)	MH50		Time of Concentration	0.323	55	10	60.5	0.196
Catchment Area (50)	MH49		Time of Concentration	0.391	55	10	60.5	0.237
Catchment Area (51)	MH48		Time of Concentration	0.251	55	10	60.5	0.152
TOTAL		**0.0**		**13.230**				**8.306**

Project:	Date:		
Toton West Capacity Analysis 1 in 100+40%CC + 10% Urban Creep Basin	21/03/2025		
	Designed by:	Checked by:	Approved By:
	TB	ST	ST
Report Details:	Company Address:		
Type: Stormwater Controls Storm Phase: 1_100+40%CC	Vision Park, Histon Cambridge CB24 9NL		

Basin

Type : Pond

Dimensions

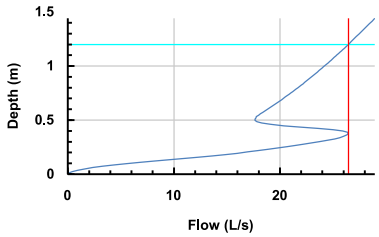
Exceedance Level (m)	43.750
Depth (m)	1.500
Base Level (m)	42.250
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	2.00
Total Volume (m³)	6735.993

Depth (m)	Area (m²)	Volume (m³)
0.000	5297.68	0.000
1.200	5935.01	6735.993
1.500	6100.00	8541.188

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Hydro-Brake®
Invert Level (m)	42.250
Design Depth (m)	1.200
Design Flow (L/s)	26.46
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☐
Unit Reference	CHE-0209-2646-1200-2646



Advanced

Perimeter	Circular
Length (m)	152.796
Friction Scheme	Manning's n
n	0.03

Project:	Date:		
Toton West Capacity Analysis 1 in 100+40%CC + 10% Urban Creep Basin	21/03/2025		
	Designed by:	Checked by:	Approved By:
	TB	ST	ST
Report Details:	Company Address:		
Type: Stormwater Controls Summary Storm Phase: 1_100+40%CC	Vision Park, Histon Cambridge CB24 9NL		

Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Basin	1_100+40% CC: 100 years: +40 %: 2160 mins: Winter	43.361	43.361	1.111	1.111	166.1	6208.083	0.000	0.000	26.5	5100.834	2336	7.837

Project:	Date:		
Toton West Capacity Analysis 1 in 100+40%CC + 10% Urban Creep Basin	21/03/2025		
	Designed by: TB	Checked by: ST	Approved By: ST
Report Details: Type: Stormwater Controls Summary Storm Phase: 1_100+40%CC	Company Address: Vision Park, Histon Cambridge CB24 9NL		

Status
OK

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Title:	Company Address:		
Rainfall Analysis Criteria	Vision Park, Histon Cambridge CB24 9NL		

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

Rainfall

1_30+35%CC

Type: FEH

Site Location	GB 450000 336150 SK 50000 36150
Rainfall Version	2022
Summer	☑
Winter	☑

Return Period

Return Period (years)	Increase Rainfall (%)
30.0	35.000

Storm Durations

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

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Details:	Company Address:		
Type: Junctions Storm Phase: 1_30+35%CC	Vision Park, Histon Cambridge CB24 9NL		

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
MH7	Manhole	449628.434	335642.172	62.380	1.750	60.630	Circular	1.350
MH6	Manhole	449533.081	335601.976	64.000	3.715	60.285	Circular	1.500
MH8	Manhole	449455.304	335568.331	63.210	3.200	60.010	Circular	1.500
MH22	Manhole	449412.753	335583.218	63.990	1.600	62.390	Circular	1.500
MH9	Manhole	449425.416	335596.311	62.937	3.200	59.737	Circular	1.200
MH11	Manhole	449386.914	335704.601	59.800	2.123	57.677	Circular	1.350
MH21	Manhole	449222.747	335539.105	57.760	1.600	56.160	Circular	1.500
MH23	Manhole	449335.393	335565.744	62.750	1.600	61.150	Circular	1.500
MH13	Manhole	449279.647	335613.835	57.364	1.847	55.517	Circular	1.200
MH12	Manhole	449266.094	335675.785	57.724	2.420	55.304	Circular	1.350
MH17	Manhole	449233.944	335595.244	56.185	2.792	53.393	Circular	1.350
MH18	Manhole	449194.130	335569.486	55.740	3.374	52.366	Circular	1.500
MH14	Manhole	449149.428	335634.459	53.388	2.498	50.890	Circular	1.500
MH26	Manhole	449056.090	335555.039	51.320	2.648	48.672	Circular	1.800
MH33	Manhole	449018.269	335524.180	50.770	2.403	48.367	Circular	1.800
MH36	Manhole	448955.043	335507.579	50.300	3.420	46.880	Circular	1.800
MH43	Manhole	449008.839	335436.782	53.830	2.612	51.218	Circular	1.500
MH47	Manhole	448938.425	335433.075	53.940	2.269	51.671	Circular	1.200
MH44	Manhole	449036.828	335375.659	56.900	2.300	54.600	Circular	1.200
MH31	Manhole	449102.703	335516.891	53.927	2.668	51.258	Circular	1.350
MH40	Manhole	449100.959	335510.236	54.154	1.474	52.680	Circular	1.200
MH38	Manhole	449115.943	335469.382	56.119	1.425	54.694	Circular	1.200
MH37	Manhole	449132.129	335420.793	58.200	1.630	56.570	Circular	1.200
MH29	Manhole	449136.918	335546.851	53.661	2.273	51.388	Circular	1.350
MH25	Manhole	449174.494	335596.559	54.177	2.498	51.679	Circular	1.500
MH19	Manhole	449241.042	335456.803	60.990	1.600	59.390	Circular	1.200
MH20	Manhole	449221.707	335516.632	58.113	1.600	56.513	Circular	1.200
MH10	Manhole	449411.345	335646.553	60.591	2.048	58.543	Circular	1.200
MH4	Manhole	449554.000	335546.015	64.970	3.861	61.109	Circular	1.350
MH3	Manhole	449589.869	335515.297	65.460	1.600	63.860	Circular	1.200
MH5	Manhole	449498.396	335525.000	64.590	1.600	62.990	Circular	1.200
MH1	Manhole	449635.666	335576.567	63.000	1.600	61.400	Circular	1.350
MH2	Manhole	449574.757	335553.798	64.680	3.497	61.183	Circular	1.350
MH46	Manhole	448984.008	335470.511	52.254	2.348	49.906	Circular	1.500
MH27	Manhole	449186.084	335439.993	59.200	2.997	56.203	Circular	1.200
MH28	Manhole	449162.097	335518.557	55.522	2.772	52.750	Circular	1.200
MH24	Manhole	449354.336	335504.652	65.960	1.600	64.360	Circular	1.200
MH15	Manhole	449397.095	335643.356	60.267	2.758	57.509	Circular	1.200
MH16	Manhole	449270.905	335607.898	57.203	2.758	54.445	Circular	1.200
MH30	Manhole	449172.179	335578.002	54.342	1.973	52.370	Circular	1.200
MH48	Manhole	448941.071	335527.283	50.804	4.044	46.759	Circular	1.800
MH49	Manhole	448942.743	335544.977	51.243	4.572	46.670	Circular	1.875
MH51	Manhole	448891.989	335570.354	49.140	2.848	46.292	Circular	1.875
MH50	Manhole	448980.760	335582.469	53.798	1.425	52.373	Circular	1.200
MH39	Manhole	449101.701	335472.877	55.630	3.353	52.278	Circular	1.500
MH41	Manhole	449107.130	335488.807	55.162	2.581	52.581	Circular	1.200
MH42	Manhole	449026.866	335447.861	53.986	1.866	52.120	Circular	1.500
MH34	Manhole	449053.856	335461.243	54.580	2.211	52.369	Circular	1.200
MH45	Manhole	449026.534	335412.084	55.084	2.032	53.052	Circular	1.200
MH32	Manhole	449086.120	335518.988	53.278	2.273	51.005	Circular	1.350
MH35	Manhole	449047.930	335478.546	53.622	2.259	51.362	Circular	1.200
Outfall to Basin	Manhole	448844.945	335598.028	43.750	1.500	42.250	Circular	1.200
MH12.2	Manhole	449186.461	335652.688	55.056	2.468	52.588	Circular	1.200

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Details:	Company Address:		
Type: Junctions Storm Phase: 1_30+35%CC	Vision Park, Histon Cambridge CB24 9NL		

Name	Lock
MH7	None
MH6	None
MH8	None
MH22	None
MH9	None
MH11	None
MH21	None
MH23	None
MH13	None
MH12	None
MH17	None
MH18	None
MH14	None
MH26	None
MH33	None
MH36	None
MH43	None
MH47	None
MH44	None
MH31	None
MH40	None
MH38	None
MH37	None
MH29	None
MH25	None
MH19	None
MH20	None
MH10	None
MH4	None
MH3	None
MH5	None
MH1	None
MH2	None
MH46	None
MH27	None
MH28	None
MH24	None
MH15	None
MH16	None
MH30	None
MH48	None
MH49	None
MH51	None
MH50	None
MH39	None
MH41	None
MH42	None
MH34	None
MH45	None
MH32	None
MH35	None
Outfall to Basin	None
MH12.2	None

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Details:	Company Address:		
Type: Junctions Summary Storm Phase: 1_30+35%CC	Vision Park, Histon Cambridge CB24 9NL		

Critical Storm Per Item: Rank By: Max. Flooded Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
MH7	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	62.380	60.630	61.983	1.353	223.1	1.936	0.000	206.7	96.792	Surcharged
MH6	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	64.000	60.285	61.509	1.224	470.7	2.163	0.000	442.7	261.501	Surcharged
MH8	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	63.210	60.010	60.704	0.694	515.1	1.227	0.000	473.0	292.532	Surcharged
MH22	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	63.990	62.390	62.560	0.170	169.2	0.301	0.000	163.0	73.524	OK
MH9	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	62.937	59.737	60.097	0.360	534.3	0.407	0.000	502.1	318.702	OK
MH11	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	59.800	57.677	58.141	0.464	660.8	0.664	0.000	654.4	405.717	OK
MH21	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	57.760	56.160	56.400	0.240	516.4	0.424	0.000	487.6	244.940	OK
MH23	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	62.750	61.150	61.359	0.209	421.9	0.369	0.000	403.5	192.060	OK
MH13	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	57.364	55.517	56.055	0.539	78.4	0.609	0.000	74.9	33.970	Surcharged
MH12	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	57.724	55.304	55.808	0.504	802.6	0.721	0.000	775.4	490.955	OK
MH17	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	56.185	53.393	53.629	0.236	202.2	0.337	0.000	199.7	108.577	OK
MH18	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	55.740	52.366	52.783	0.417	727.9	0.737	0.000	715.8	370.827	OK
MH14	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.388	50.890	52.118	1.228	1597.6	2.170	0.000	1404.5	894.179	Surcharged
MH26	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	51.320	48.672	50.637	1.965	1559.6	5.002	0.000	1557.9	1110.318	Surcharged
MH33	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	50.770	48.367	50.331	1.964	1597.8	4.999	0.000	1614.5	1149.194	Surcharged
MH36	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	50.300	46.880	49.949	3.069	2092.1	7.812	0.000	2087.0	1421.257	Surcharged
MH43	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.830	51.218	51.531	0.312	496.6	0.552	0.000	495.9	241.315	OK
MH47	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.940	51.671	51.808	0.137	61.7	0.155	0.000	60.4	26.628	OK
MH44	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	56.900	54.600	54.733	0.132	69.4	0.150	0.000	68.3	30.102	OK

MH31	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.927	51.258	51.536	0.277	231.2	0.397	0.000	228.9	120.278	OK
MH40	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	54.154	52.680	52.868	0.187	28.9	0.212	0.000	23.0	12.547	OK
MH38	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	56.119	54.694	55.649	0.955	115.5	1.080	0.000	110.5	50.640	Surcharged
MH37	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	58.200	56.570	56.719	0.149	76.2	0.168	0.000	75.1	33.063	OK
MH29	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.661	51.388	51.848	0.460	230.2	0.658	0.000	216.6	113.904	Surcharged
MH25	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	54.177	51.679	52.305	0.626	789.8	1.106	0.000	837.7	402.948	OK
MH19	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	60.990	59.390	59.515	0.125	66.5	0.141	0.000	65.5	28.851	OK
MH20	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	58.113	56.513	57.052	0.539	89.1	0.609	0.000	80.9	39.144	Surcharged
MH10	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	60.591	58.543	59.009	0.466	566.7	0.527	0.000	529.0	346.663	OK
MH4	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	64.970	61.109	62.280	1.171	247.5	1.675	0.000	202.7	138.627	Surcharged
MH3	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	65.460	63.860	63.973	0.113	67.4	0.128	0.000	66.8	29.212	OK
MH5	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	64.590	62.990	63.122	0.132	60.0	0.149	0.000	59.0	25.951	OK
MH1	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	63.000	61.400	62.641	1.241	97.3	1.776	0.000	72.6	42.670	Surcharged
MH2	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	64.680	61.183	62.397	1.214	144.9	1.737	0.000	106.1	74.003	Surcharged
MH46	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	52.254	49.906	50.427	0.521	665.4	0.920	0.000	476.2	315.445	OK
MH27	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	59.200	56.203	57.071	0.868	138.1	0.982	0.000	114.5	60.101	Surcharged
MH28	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	55.522	52.750	52.972	0.222	168.6	0.252	0.000	164.2	83.262	OK
MH24	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	65.960	64.360	65.235	0.875	58.2	0.989	0.000	44.3	25.340	Surcharged
MH15	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	60.267	57.509	57.705	0.196	135.6	0.222	0.000	128.9	58.459	OK
MH16	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	57.203	54.445	54.798	0.354	214.9	0.400	0.000	172.3	95.471	Surcharged
MH30	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	54.342	52.370	52.557	0.187	26.4	0.212	0.000	21.6	11.326	Surcharged
MH48	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	50.804	46.759	49.598	2.839	2124.4	7.226	0.000	2163.1	1434.678	Surcharged
MH49	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	51.243	46.670	49.117	2.446	2370.3	6.754	0.000	2398.9	1493.358	Surcharged

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by: TB	Checked by: SD	Approved By: SD
Report Details: Type: Junctions Summary Storm Phase: 1_30+35%CC	Company Address: Vision Park, Histon Cambridge CB24 9NL		

MH51	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	49.140	46.292	48.356	2.064	2398.9	5.698	0.000	2445.9	1463.221	OK
MH50	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.798	52.373	52.493	0.119	94.2	0.135	0.000	93.4	40.763	OK
MH39	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	55.630	52.278	52.725	0.448	287.4	0.791	0.000	268.6	130.625	OK
MH41	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	55.162	52.581	52.832	0.251	38.7	0.284	0.000	37.2	19.343	Surcharged
MH42	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.986	52.120	52.321	0.201	275.1	0.356	0.000	264.5	133.294	OK
MH34	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	54.580	52.369	52.438	0.069	18.4	0.078	0.000	18.2	7.965	OK
MH45	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	55.084	53.052	53.315	0.262	138.1	0.297	0.000	121.5	60.452	Surcharged
MH32	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.278	51.005	51.189	0.184	260.6	0.264	0.000	259.2	133.729	OK
MH35	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	53.622	51.362	52.156	0.794	51.7	0.898	0.000	34.4	22.495	Surcharged
Outfall to Basin	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	43.750	42.250	42.620	0.370	2445.9	0.000	0.000	2447.0	1463.220	OK
MH12.2	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	55.056	52.588	53.495	0.907	775.4	1.025	0.000	780.6	491.789	Surcharged

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Details:	Company Address:		
Type: Connections Storm Phase: 1_30+35%CC	Vision Park, Histon Cambridge CB24 9NL		

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)
4.000	103.478	Pipe	299.937		0.6	450	62.380	60.630
1.003	84.742	Pipe	308.154		0.6	525	64.000	60.285
1.002	59.743	Pipe	72.472		0.6	375	64.970	61.109
3.000	59.443	Pipe	31.608		0.6	225	64.590	62.990
1.000	65.026	Pipe	300.000		0.6	375	63.000	61.400
1.001	22.167	Pipe	300.000		0.6	375	64.680	61.183
2.000	41.361	Pipe	15.452		0.6	225	65.460	63.860
1.009	122.554	Pipe	55.251		0.6	750	53.388	50.890
1.010	48.814	Pipe	159.858		0.6	975	51.320	48.672
1.011	65.369	Pipe	43.972		0.6	975	50.770	48.367
13.000	51.215	Pipe	27.290		0.6	225	58.200	56.570
5.000	63.415	Pipe	297.920		0.6	300	57.364	55.517
1.007	124.209	Pipe	52.335		0.6	525	59.800	57.677
1.006	62.980	Pipe	72.746		0.6	525	60.591	58.543
6.002	47.420	Pipe	46.155		0.6	375	56.185	53.393
6.003	33.444	Pipe	48.681		0.6	675	55.740	52.366
6.004	45.439	Pipe	57.609		0.6	675	54.177	51.679
7.000	62.876	Pipe	21.856		0.6	225	60.990	59.390
7.001	22.497	Pipe	63.702		0.6	225	58.113	56.513
7.002	41.737	Pipe	20.000		0.6	675	57.760	56.160
8.001	115.752	Pipe	23.197		0.6	675	62.750	61.150
8.000	79.310	Pipe	63.959		0.6	675	63.990	62.390
1.005	52.176	Pipe	43.688		0.6	525	62.937	59.737
10.002	45.478	Pipe	350.000		0.6	450	53.661	51.388
13.004	41.883	Pipe	31.923		0.6	525	53.830	51.218
13.005	47.043	Pipe	15.544		0.6	525	52.254	49.906
16.000	58.985	Pipe	33.433		0.6	225	53.940	51.671
1.012	24.155	Pipe	200.000		0.6	975	50.300	46.880
1.013	17.772	Pipe	200.000		0.6	900	50.804	46.759
1.014	56.745	Pipe	150.000		0.6	975	51.243	46.670
17.000	53.395	Pipe	9.362		0.6	225	53.798	52.373
10.001	37.876	Pipe	31.256		0.6	300	55.522	52.750
10.000	82.144	Pipe	23.791		0.6	225	59.200	56.203
11.000	47.050	Pipe	69.041		0.6	150	54.342	52.370
6.001	39.067	Pipe	40.000		0.6	300	57.203	54.445
6.000	131.076	Pipe	42.779		0.6	300	60.267	57.509
9.000	63.962	Pipe	19.926		0.6	150	65.960	64.360
13.001	14.664	Pipe	150.000		0.6	225	56.119	54.694
14.000	22.300	Pipe	225.000		0.6	225	54.154	52.680
14.001	16.830	Pipe	55.449		0.6	225	55.162	52.581
13.003	21.159	Pipe	23.476		0.6	525	53.986	52.120
13.002	78.906	Pipe	500.000		0.6	525	55.630	52.278
15.000	37.851	Pipe	24.454		0.6	225	56.900	54.600
15.001	30.383	Pipe	16.567		0.6	225	55.084	53.052
10.003	16.715	Pipe	65.985		0.6	450	53.927	51.258
10.004	46.920	Pipe	20.112		0.6	450	53.278	51.005
1.004	40.940	Pipe	150.067		0.6	525	63.210	60.010
12.000	18.291	Pipe	18.168		0.6	150	54.580	52.369
12.001	54.426	Pipe	18.168		0.6	150	53.622	51.362
1.015	54.580	Pipe	9.592		0.6	975	49.140	47.940
1.008	82.915	Pipe	30.534		0.6	525	57.724	55.304
1.008.2	41.276	Pipe	24.305		0.6	525	55.056	52.588

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Details:	Company Address:		
Type: Connections Storm Phase: 1_30+35%CC	Vision Park, Histon Cambridge CB24 9NL		

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Culvert Type	Culvert Entrance
4.000	64.000	60.285		None	(None)	(None)
1.003	63.210	60.010		None	(None)	(None)
1.002	64.000	60.285		None	(None)	(None)
3.000	64.970	61.109		None	(None)	(None)
1.000	64.680	61.183		None	(None)	(None)
1.001	64.970	61.109		None	(None)	(None)
2.000	64.680	61.183		None	(None)	(None)
1.009	51.320	48.672		None	(None)	(None)
1.010	50.770	48.367		None	(None)	(None)
1.011	50.300	46.880		None	(None)	(None)
13.000	56.119	54.694		None	(None)	(None)
5.000	57.724	55.304		None	(None)	(None)
1.007	57.724	55.304		None	(None)	(None)
1.006	59.800	57.677		None	(None)	(None)
6.002	55.740	52.366		None	(None)	(None)
6.003	54.177	51.679		None	(None)	(None)
6.004	53.388	50.890		None	(None)	(None)
7.000	58.113	56.513		None	(None)	(None)
7.001	57.760	56.160		None	(None)	(None)
7.002	55.740	54.073		None	(None)	(None)
8.001	57.760	56.160		None	(None)	(None)
8.000	62.750	61.150		None	(None)	(None)
1.005	60.591	58.543		None	(None)	(None)
10.002	53.927	51.258		None	(None)	(None)
13.004	52.254	49.906		None	(None)	(None)
13.005	50.300	46.880		None	(None)	(None)
16.000	52.254	49.906		None	(None)	(None)
1.012	50.804	46.759		None	(None)	(None)
1.013	51.243	46.670		None	(None)	(None)
1.014	49.140	46.292		None	(None)	(None)
17.000	51.243	46.670		None	(None)	(None)
10.001	53.661	51.538		None	(None)	(None)
10.000	55.522	52.750		None	(None)	(None)
11.000	53.661	51.688		None	(None)	(None)
6.001	56.185	53.468		None	(None)	(None)
6.000	57.203	54.445		None	(None)	(None)
9.000	62.750	61.150		None	(None)	(None)
13.001	55.630	54.596		None	(None)	(None)
14.000	55.162	52.581		None	(None)	(None)
14.001	55.630	52.278		None	(None)	(None)
13.003	53.830	51.218		None	(None)	(None)
13.002	53.986	52.120		None	(None)	(None)
15.000	55.084	53.052		None	(None)	(None)
15.001	53.830	51.218		None	(None)	(None)
10.003	53.278	51.005		None	(None)	(None)
10.004	51.320	48.672		None	(None)	(None)
1.004	62.937	59.737		None	(None)	(None)
12.000	53.622	51.362		None	(None)	(None)
12.001	50.770	48.367		None	(None)	(None)
1.015	43.750	42.250		Levels	(None)	(None)
1.008	55.056	52.588		None	(None)	(None)
1.008.2	53.388	50.890		None	(None)	(None)

Project:	Date:		
Toton West Capacity Analysis 1 in 30 + 35%CC + 10%UC Pipes and Manholes Results	15/04/2025		
	Designed by:	Checked by:	Approved By:
	TB	SD	SD
Report Details:	Company Address:		
Type: Connections Summary Storm Phase: 1_30+35%CC	Vision Park, Histon Cambridge CB24 9NL		

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
4.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH7	MH6	62.380	61.983	0.450	96.792	1.3	1.11	206.7	Surcharged
1.003	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH6	MH8	64.000	61.509	0.525	261.501	2.0	1.61	442.7	Surcharged
1.002	1_30+35%CC: 30 years: +35 %: 30 mins: Summer	Pipe	MH4	MH6	64.970	61.795	0.375	180.683	1.8	0.86	202.8	Surcharged
3.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH5	MH4	64.590	63.122	0.225	25.951	1.5	0.63	59.0	OK
1.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH1	MH2	63.000	62.641	0.375	42.670	0.7	0.63	72.6	Surcharged
1.001	1_30+35%CC: 30 years: +35 %: 30 mins: Summer	Pipe	MH2	MH4	64.680	61.883	0.375	96.354	1.1	0.93	107.1	Surcharged
2.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH3	MH2	65.460	63.973	0.225	29.212	1.7	0.5	66.8	OK
1.009	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH14	MH26	53.388	52.118	0.750	894.179	3.2	0.84	1404.5	Surcharged
1.010	1_30+35%CC: 30 years: +35 %: 15 mins: Winter	Pipe	MH26	MH33	51.320	50.596	0.975	1109.609	2.5	0.82	1590.8	Surcharged
1.011	1_30+35%CC: 30 years: +35 %: 15 mins: Winter	Pipe	MH33	MH36	50.770	50.335	0.975	1148.628	2.2	0.45	1677.2	Surcharged
13.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH37	MH38	58.200	56.719	0.225	33.063	1.9	0.75	75.1	OK
5.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH13	MH12	57.364	56.055	0.300	33.970	1.1	1.17	74.9	Surcharged
1.007	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH11	MH12	59.800	58.141	0.484	405.717	3.3	0.97	654.4	OK
1.006	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH10	MH11	60.591	59.009	0.454	346.663	2.7	0.93	529.0	OK

6.002	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH17	MH18	56.185	53.629	0.326	108.577	2.0	0.68	199.7	OK
6.003	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH18	MH25	55.740	52.783	0.436	370.827	2.9	0.53	715.8	OK
6.004	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH25	MH14	54.177	52.305	0.675	402.948	2.3	0.68	837.7	OK
7.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH19	MH20	60.990	59.515	0.225	28.851	1.6	0.59	65.5	OK
7.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH20	MH21	58.113	57.052	0.225	39.144	2.0	1.24	80.9	Surcharged
7.002	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH21	MH18	57.760	56.400	0.230	244.940	4.5	0.23	487.6	OK
8.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH23	MH21	62.750	61.359	0.224	192.060	3.9	0.21	403.5	OK
8.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH22	MH23	63.990	62.560	0.190	73.524	2.0	0.14	163.0	OK
1.005	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH9	MH10	62.937	60.097	0.413	318.702	2.7	0.68	502.1	OK
10.002	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH29	MH31	53.661	51.848	0.369	113.904	1.6	1.26	216.6	Surcharged
13.004	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH43	MH46	53.830	51.531	0.416	241.315	2.7	0.58	495.9	OK
13.005	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH46	MH36	52.254	50.427	0.525	315.445	2.2	0.39	476.2	OK
16.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH47	MH46	53.940	51.808	0.225	26.628	1.5	0.67	60.4	OK
1.012	1_30+35%CC: 30 years: +35 %: 30 mins: Summer	Pipe	MH36	MH48	50.300	49.884	0.975	1872.688	2.8	1.21	2101.9	Surcharged
1.013	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH48	MH49	50.804	49.598	0.900	1434.426	3.4	1.54	2163.1	Surcharged
1.014	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH49	MH51	51.243	49.117	0.975	1493.163	3.2	1.2	2398.9	Surcharged
17.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH50	MH49	53.798	52.493	0.225	40.763	2.3	0.55	93.4	OK

10.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH28	MH29	55.522	52.972	0.266	83.262	2.5	0.82	164.2	OK
10.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH27	MH28	59.200	57.071	0.225	60.101	2.9	1.07	114.5	Surch arged
11.000	1_30+35%CC: 30 years: +35 %: 15 mins: Winter	Pipe	MH30	MH29	54.342	52.514	0.141	11.366	1.3	1.04	22.2	OK
6.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH16	MH17	57.203	54.798	0.296	95.471	2.4	0.98	172.3	Surch arged
6.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH15	MH16	60.267	57.705	0.275	58.459	1.9	0.76	128.9	OK
9.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH24	MH23	65.960	65.235	0.150	25.340	2.5	1.11	44.3	Surch arged
13.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH38	MH39	56.119	55.649	0.225	50.640	2.8	2.61	110.5	Surch arged
14.000	1_30+35%CC: 30 years: +35 %: 15 mins: Winter	Pipe	MH40	MH41	54.154	52.840	0.191	12.539	0.8	0.73	25.1	OK
14.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH41	MH39	55.162	52.832	0.225	19.343	0.9	0.53	37.2	Surch arged
13.003	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH42	MH43	53.986	52.321	0.257	133.294	2.5	0.26	264.5	OK
13.002	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH39	MH42	55.630	52.725	0.324	130.625	1.9	1.25	268.6	OK
15.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH44	MH45	56.900	54.733	0.197	30.102	1.8	0.65	68.3	OK
15.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH45	MH43	55.084	53.315	0.225	60.452	3.1	0.95	121.5	Surch arged
10.003	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH31	MH32	53.927	51.536	0.231	120.278	2.8	0.57	228.9	OK
10.004	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH32	MH26	53.278	51.189	0.450	133.729	1.6	0.36	259.2	OK
1.004	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH8	MH9	63.210	60.704	0.524	292.532	2.4	1.2	473.0	Surch arged
12.000	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH34	MH35	54.580	52.438	0.150	7.965	1.0	0.43	18.2	OK

12.001	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH35	MH33	53.622	52.156	0.150	22.495	1.9	0.82	34.4	Surcharged
1.015	1_30+35%CC: 30 years: +35 %: 15 mins: Summer	Pipe	MH51	Outfall to Basin	49.140	48.356	0.393	1463.220	8.7	0.31	2445.9	OK
1.008	1_30+35%CC: 30 years: +35 %: 15 mins: Winter	Pipe	MH12	MH12.2	57.724	55.769	0.525	490.797	4.2	0.89	787.3	OK
1.008.2	1_30+35%CC: 30 years: +35 %: 15 mins: Winter	Pipe	MH12.2	MH14	55.056	53.431	0.525	491.395	3.7	0.81	798.9	Surcharged

Appendix C2: Greenfield Runoff Rate Calculations

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

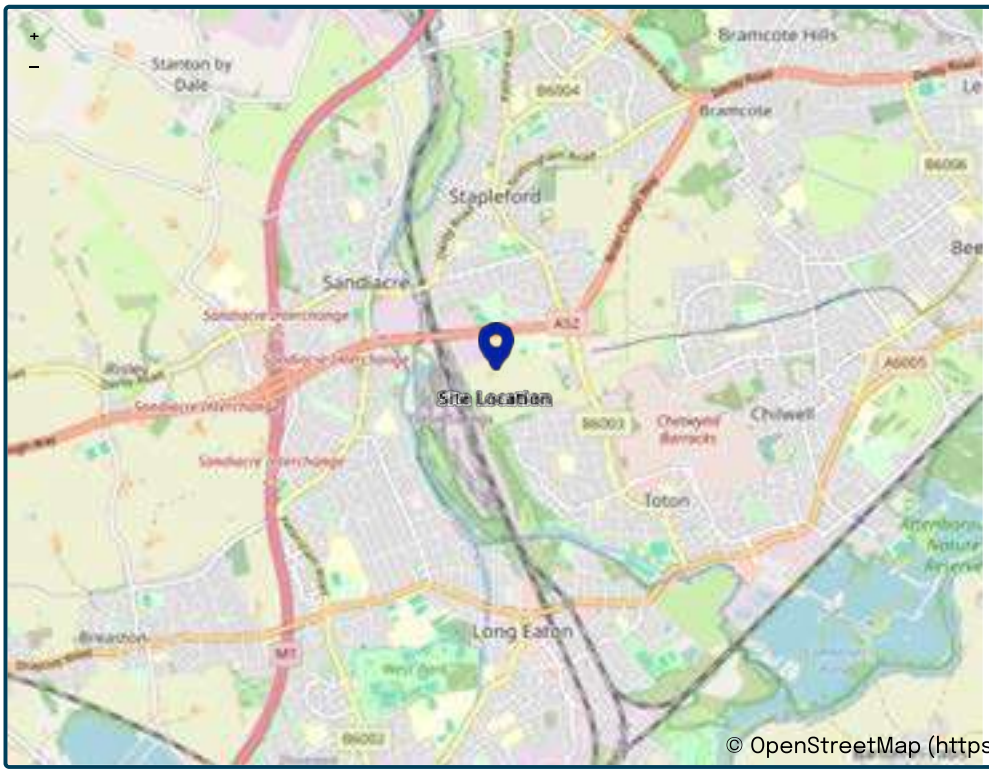
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	14/04/2025
Calculated by	
Reference	
Model version	0.6.5

Location

Site name	Toton West
Site location	Land off Stapleford Road



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Site easting	448911
Site northing	335588

Site details

Total site area (ha)	18.88 ha

Greenfield runoff

Method

Method	FEH statistical

FEH statistical

	My value		Map value
SAAR (mm)	626	mm	626
BFIHOST	0.593		
QMed-QBar conversion	1.124		1.124
QMed (l/s)	29.5	l/s	
QBar (FEH statistical) (l/s)	33.2	l/s	

Growth curve factors

	My value	Map value
Hydrological region	4	4
1 year growth factor	0.83	
2 year growth factor	0.89	
10 year growth factor	1.49	
30 year growth factor	2	
100 year growth factor	2.57	
200 year growth factor	3.04	

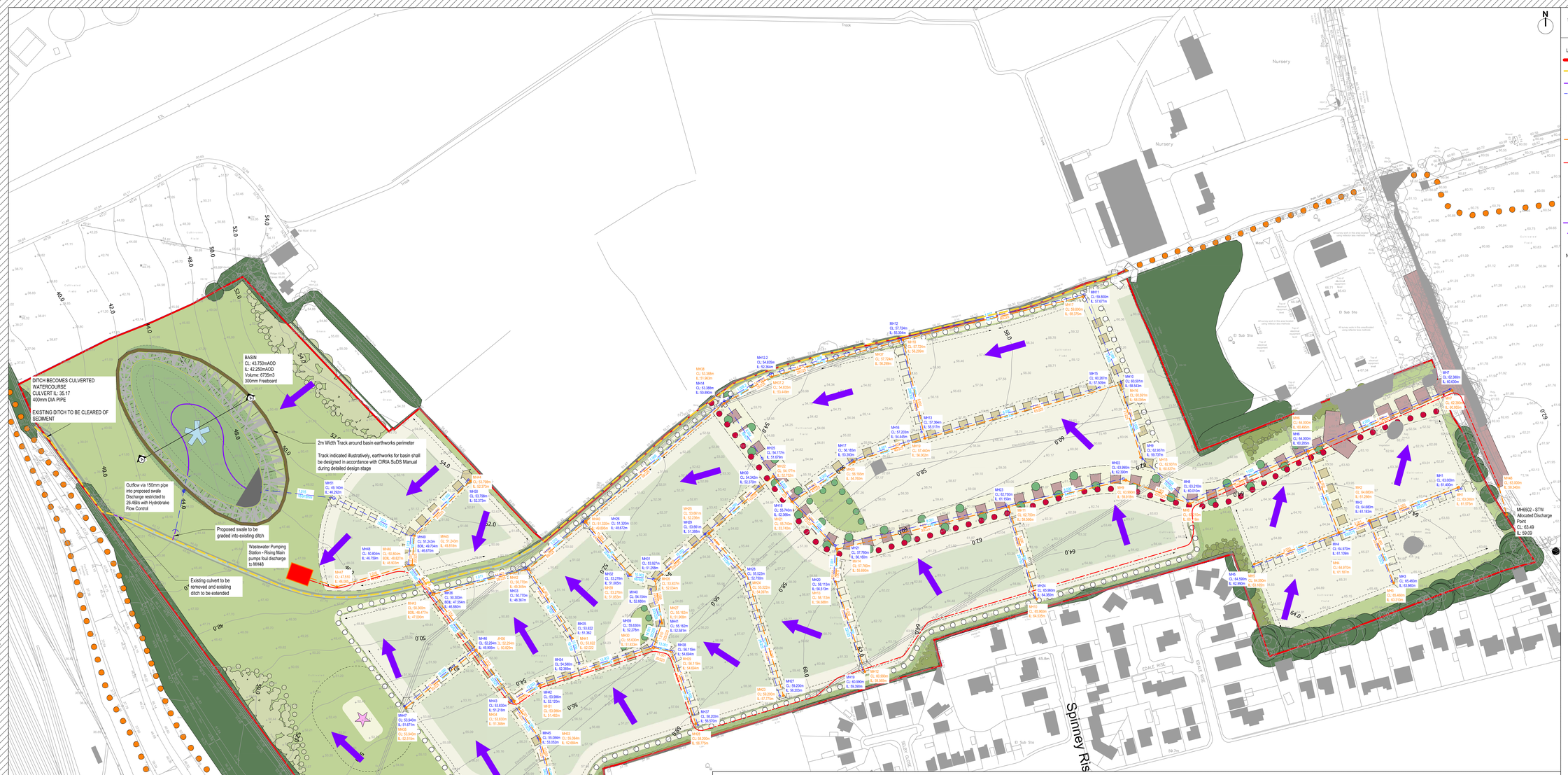
Results

Method	FEH statistical	
Flow rate 1 year (l/s)	27.6	l/s
Flow rate 2 year (l/s)	29.5	l/s
Flow rate 10 years (l/s)	49.5	l/s
Flow rate 30 years (l/s)	66.4	l/s
Flow rate 100 years (l/s)	85.3	l/s
Flow rate 200 years (l/s)	100.9	l/s

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (0.6.5) developed by HR Wallingford and available at uksuds.com (https://www.uksuds.com/). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (https://www.uksuds.com/terms-conditions). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

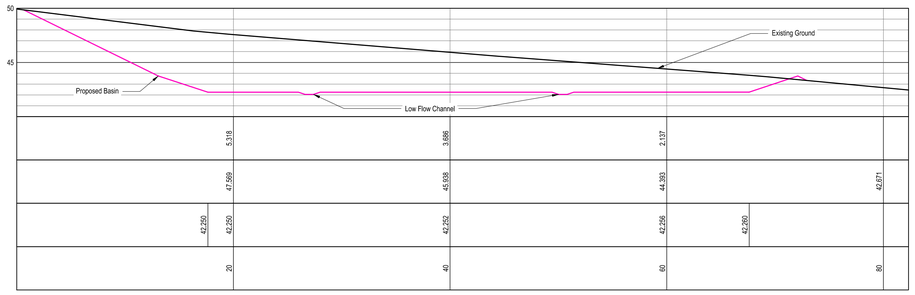
Appendix D1: Drainage Strategy – General Arrangement Drawing



LONGSECTION ALIGNMENT AA

SCALES:
Horizontal 1:200
Vertical 1:200

DATUM 40.000



| | | |

Appendix D2: Drainage Strategy – Catchment Plan

Name	Connected to	Area (Ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious	Adjusted Impervious Area (Ha)
Catchment Area (3)	MH1	0.334	55	10	60.5	0.202
Catchment Area (4)	MH5	0.206	55	10	60.5	0.125
Catchment Area (5)	MH3	0.231	55	10	60.5	0.140
Catchment Area (6)	MH2	0.019	55	10	60.5	0.011
Catchment Area (7)	MH7	0.766	55	10	60.5	0.463
Catchment Area (8)	MH4	0.307	55	10	60.5	0.186
Catchment Area (9)	MH6	0.211	55	10	60.5	0.128
Catchment Area (1)	MH8	0.249	55	10	60.5	0.151
Catchment Area (10)	MH24	0.2	55	10	60.5	0.121
Catchment Area (11)	MH22	0.581	55	10	60.5	0.352
Catchment Area (12)	MH9	0.21	55	10	60.5	0.127
Catchment Area (13)	MH23	0.737	55	10	60.5	0.446
Catchment Area (14)	MH19	0.228	55	10	60.5	0.138
Catchment Area (15)	MH20	0.081	55	10	60.5	0.049
Catchment Area (16)	MH15	0.465	55	10	60.5	0.281
Catchment Area (17)	MH16	0.295	55	10	60.5	0.178
Catchment Area (18)	MH17	0.103	55	10	60.5	0.062
Catchment Area (19)	MH10	0.222	55	10	60.5	0.134
Catchment Area (20)	MH11	0.472	55	10	60.5	0.286
Catchment Area (21)	MH13	0.269	55	10	60.5	0.163
Catchment Area (22)	MH12	0.412	55	10	60.5	0.249
Catchment Area (23)	MH18	0.14	55	10	60.5	0.085
Catchment Area (24)	MH25	0.254	55	10	60.5	0.154
Catchment Area (25)	MH21	0.11	55	10	60.5	0.067
Catchment Area (26)	MH26	0.487	55	10	60.5	0.295
Catchment Area (27)	MH30	0.091	55	10	60.5	0.055
Catchment Area (28)	MH29	0.152	55	10	60.5	0.092
Catchment Area (29)	MH27	0.474	55	10	60.5	0.287
Catchment Area (30)	MH28	0.186	55	10	60.5	0.113
Catchment Area (31)	MH37	0.262	55	10	60.5	0.159
Catchment Area (32)	MH40	0.099	55	10	60.5	0.060
Catchment Area (33)	MH41	0.054	55	10	60.5	0.033
Catchment Area (34)	MH38	0.139	55	10	60.5	0.084
Catchment Area (35)	MH39	0.48	55	10	60.5	0.290
Catchment Area (36)	MH44	0.238	55	10	60.5	0.144
Catchment Area (37)	MH45	0.24	55	10	60.5	0.145
Catchment Area (38)	MH47	0.212	55	10	60.5	0.128
Catchment Area (39)	MH43	0.38	55	10	60.5	0.230
Catchment Area (40)	MH42	0.022	55	10	60.5	0.013
Catchment Area (41)	MH46	0.375	55	10	60.5	0.227
Catchment Area (42)	MH33	0.138	55	10	60.5	0.083
Catchment Area (43)	MH34	0.063	55	10	60.5	0.038
Catchment Area (44)	MH35	0.115	55	10	60.5	0.070
Catchment Area (45)	MH31	0.05	55	10	60.5	0.030
Catchment Area (46)	MH32	0.109	55	10	60.5	0.066
Catchment Area (47)	MH36	0.167	55	10	60.5	0.101
Catchment Area (48)	MH36	0.02	55	10	60.5	0.012
Catchment Area (49)	MH50	0.323	55	10	60.5	0.195
Catchment Area (50)	MH49	0.391	55	10	60.5	0.237
Catchment Area (51)	MH48	0.251	55	10	60.5	0.152
Basin Area	Basin	0.61	100	10	110	0.671

REV	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
P1	15.04.2025	For Issue	TB	ST	SO

Toton West
Catchment Plan

Land at Stapleford Lane, Toton
Nottingham, NG9 7JA

CLIENT:
Bloor Homes

DATE: 15.04.2025
SCALE: 1:1000@A0
DRAWN BY: TB
CHECKED BY: ST
APPROVED BY: ST

DRAWING NUMBER: P23-2379- PEG -XX- ZZ -DR-C- 0201 - P1
PG OFFICE / TEAM: CAM/IN

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DRAWING STATUS: SO

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