

APPENDIX J: PRE/POST DRAINAGE PLANS

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DO NOT SCALE

Legend

- Site Outline
- General Topography
- Ordinary Watercourse
- Private Surface Water Sewer
- Public Surface Water Sewer
- Public Combined Sewer
- Public Foul Water Sewer

A	28/8/20	MB	PRELIMINARY FOR ISSUE	CHK	
REV	DATE	BY	DESCRIPTION		
DRAWING STATUS:					

Unit 6, Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire CH5 2LY
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Dickens Property Group

PROJECT:

**BROWNSHILL CLOSE
TOTTINGTON
BURY**

TITLE:

**PRE-DEVELOPMENT
DRAINAGE PLAN**

DATE:	28/8/20	SCALE @ SIZE:	1:725@A3	DRAWN:	MB	CHECKED:	KW
PROJECT No:	HYD543	DRAWING No:	103	REV:	A		



DO NOT SCALE

Legend

- Site Outline
- Ordinary Watercourse
- Private Surface Water Sewer
- Public Foul Water Sewer
- Public Surface Water Sewer
- Public Combined Sewer
- Attenuation
- Surface Water Sewer
- Foul Water Sewer

C	20/07/21	MB	PRELIMINARY FOR ISSUE	CHK
REV	DATE	BY	DESCRIPTION	

DRAWING STATUS:

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Dickens Property Group

PROJECT:
BROWNSHILL CLOSE
TOTTINGTON
BURY

TITLE:

POST-DEVELOPMENT
DRAINAGE PLAN

DATE: 20/07/21	SCALE @ SIZE: 1:725@A3	DRAWN: MB	CHECKED: KW
PROJECT No.: HYD543	DRAWING No.: 104	REV: C	

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APPENDIX K: STORMWATER STORAGE ESTIMATES

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QUICK STORAGE ESTIMATES

BROWNHILLS CLOSE, BURY

1 YEAR RETURN PERIOD STORM EVENT

Variables	
FEH Rainfall	Cv (Summer) 0.750
Return Period (years) 2	Cv (Winter) 0.840
Version 2013	Impervious Area (ha) 0.236
Point	Maximum Allowable Discharge (l/s) 6.1
Site GB 378411 412404 SD 78411 12404	Infiltration Coefficient (m/hr) 0.00000
	Safety Factor 2.0
	Climate Change (%) 0

Results	
Global Variables require approximate storage of between 10 m ³ and 24 m ³ .	
These values are estimates only and should not be used for design purposes.	

30 YEAR RETURN PERIOD STORM EVENT

Variables	
FEH Rainfall	Cv (Summer) 0.750
Return Period (years) 30	Cv (Winter) 0.840
Version 2013	Impervious Area (ha) 0.236
Point	Maximum Allowable Discharge (l/s) 6.1
Site GB 378411 412404 SD 78411 12404	Infiltration Coefficient (m/hr) 0.00000
	Safety Factor 2.0
	Climate Change (%) 0

Results	
Global Variables require approximate storage of between 43 m ³ and 66 m ³ .	
These values are estimates only and should not be used for design purposes.	

QUICK STORAGE ESTIMATES

BROWNHILLS CLOSE, BURY

100 YEAR RETURN PERIOD STORM EVENT + 20% CLIMATE CHANGE

Micro Drainage		Variables		
Variables Results Design Overview 2D Overview 3D Vt	FEH Rainfall	Cv (Summer)	0.750	
	Return Period (years)	100	Cv (Winter)	0.840
	Version	2013	Point	...
	Site	GB 378411 412404 SD 78411 12404	Impemeable Area (ha)	0.236
			Maximum Allowable Discharge (l/s)	6.1
			Infiltration Coefficient (m/hr)	0.00000
			Safety Factor	2.0
		Climate Change (%)	20	

Micro Drainage		Results
Global Variables require approximate storage of between 80 m³ and 115 m³. These values are estimates only and should not be used for design purposes.		

100 YEAR RETURN PERIOD STORM EVENT + 40% CLIMATE CHANGE

Micro Drainage		Variables		
Variables Results Design Overview 2D Overview 3D Vt	FEH Rainfall	Cv (Summer)	0.750	
	Return Period (years)	100	Cv (Winter)	0.840
	Version	2013	Point	...
	Site	GB 378411 412404 SD 78411 12404	Impemeable Area (ha)	0.236
			Maximum Allowable Discharge (l/s)	6.1
			Infiltration Coefficient (m/hr)	0.00000
			Safety Factor	2.0
		Climate Change (%)	40	

Micro Drainage		Results
Global Variables require approximate storage of between 97 m³ and 141 m³. These values are estimates only and should not be used for design purposes.		

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APPENDIX L: NOTES OF LIMITATIONS

The data essentially comprised a study of available documented information from various sources together with discussions with relevant authorities and other interested parties. There may also be circumstances at the site that are not documented. The information reviewed is not exhaustive and has been accepted in good faith as providing representative and true data pertaining to site conditions. If additional information becomes available which might impact our conclusions, we request the opportunity to review the information, reassess the potential concerns and modify our opinion if warranted.

It should be noted that any risks identified in this report are perceived risks based on the available information.

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