

BRE 365 INFILTRATION TEST RECORD

TRIAL PIT A

TEST HOLE DIMENSIONS

Depth of water at 100% (m)	Depth (m)	Width (m)	Length (m)	Base Area (m ²)	Vp75-25% (m ³)
1	1.5	0.3	1	0.3	0.15
TEST 1		TEST 2		TEST 3	
Time (min)	Fall (m)	Time (min)	Fall (m)	Time (min)	Fall (m)
0	0.000	0	0.000	0	0.000
1	0.250	1	0.250	1	0.250
2	0.750	3	0.750	5	0.750
75% - 25% (min)	1	75% - 25% (min)	2	75% - 25% (min)	4
f (m/s)	1.563E-03	f (m/s)	7.813E-04	f (m/s)	3.906E-04
f (m/hr)	5.625E+00	f (m/hr)	2.813E+00	f (m/hr)	1.406E+00

NOTES:

Three tests sucessfully carried out in line with BRE 365.

BRE 365 INFILTRATION TEST RECORD

TRIAL PIT B

TEST HOLE DIMENSIONS

Depth of water at 100% (m)	Depth (m)	Width (m)	Length (m)	Base Area (m ²)	Vp75-25% (m ³)
1	1.5	0.3	1	0.3	0.15
TEST 1		TEST 2		TEST 3	
Time (min)	Fall (m)	Time (min)	Fall (m)	Time (min)	Fall (m)
0	0.000	0	0.000	0	0.000
1	0.250	1	0.250	1	0.250
3	0.750	4	0.750	7	0.750
75% - 25% (min)	2.00	75% - 25% (min)	3.00	75% - 25% (min)	6.00
f (m/s)	7.813E-04	f (m/s)	5.208E-04	f (m/s)	2.604E-04
f (m/hr)	2.813E+00	f (m/hr)	1.875E+00	f (m/hr)	9.375E-01

NOTES:

Three tests sucessfully carried out in line with BRE 365.

Three tests sucessfully carried out in line with BRE 365.

Site Photos

Trial Pit A



Trial Pit B



Trial Pit C



Appendix H – Attenuation Calculations

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	45	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
Storage	0.000	5.00	164.000		0.000	0.000	1.500	162.500
inlet	1.762	5.00	166.550	1500			4.050	162.500

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
100	45	0	0

Node Storage Infiltration Basin Storage Structure

Base Inf Coefficient (m/hr)	0.51120	Invert Level (m)	162.500
Side Inf Coefficient (m/hr)	0.51120	Time to half empty (mins)	
Safety Factor	10.0	Analyse flow through structure	x
Porosity	1.00		

Inlets

inlet

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	813.9	813.9	1.500	1785.1	1785.1

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.99%

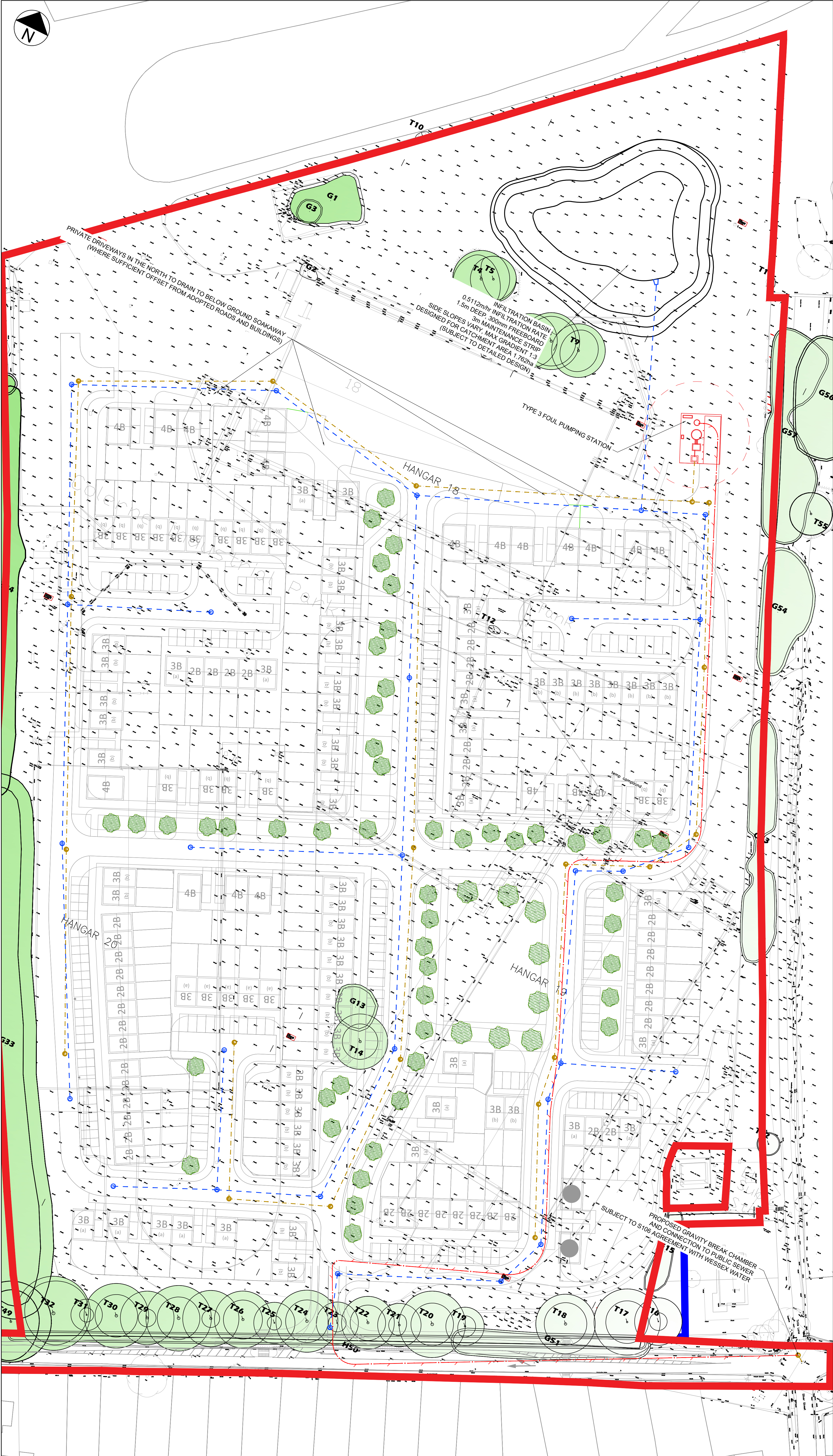
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	Storage	750	163.683	1.183	59.2	1427.9470	0.0000	OK
960 minute winter	inlet	735	163.696	1.196	100.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)
960 minute winter	Storage	Infiltration	22.3

Appendix I – Drainage Strategy

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- Notes:
- Do not scale from this drawing. All dimensions are in metres, unless stated otherwise.
 - This drawing is based on the BBA Architect's Proving Layout by BBA 19-05-2026.
 - Drawing to be read in conjunction with all other drawings. Any discrepancies are to be reported to the engineer 5 working days in advance of undertaking any work.
 - Roof areas to drain to private soakaways in rear gardens, maintaining minimum 5m offsets from foundations and 2m offsets from boundary fences.
 - Private driveways to be permeable paving where feasible and drain to the infiltration basin via proposed surface water sewers.
 - Subject to Detailed Design.

Key:

- Surface Water Manhole and Sewer
- Foul Water Manhole and Sewer
- Foul Water Rising Main
- Foul Pumping Station

Rev	27.05.26	First Issue for Planning	JB	KR	JB
Date		Details	By	Chkd	Appd

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CLIENT: Simon Waterfield

PROJECT: Colerne Industrial Estate

TITLE: Drainage Strategy

STATUS: For Information

DRAWING NO: 251502-RAP-XX-XX-DR-500

SCALE @ 77: 1:500

REVISION: -

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