

From: Laura Gibbons
Sent: 24 June 2019 08:38
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Subject: RE: Planning Consultation on BN/40/19/DOC

Engineers Comments Regarding Condition 4 Surface Water Drainage

I recommend that condition 4 is discharged based on the supplied information and the attached details.

Regards,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

Laura Gibbons | Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre,
Maltravers Road, Littlehampton, BN17 5LF

Internal: 37818 | External: +44 (0) 1903 737818 | Fax: +44 (0) 1903 716018 | E-mail: laura.gibbons@arun.gov.uk

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Save the environment - think before you print.

From: planning.responses@arun.gov.uk [<mailto:planning.responses@arun.gov.uk>]
Sent: 13 June 2019 16:36
To: Land Drainage
Subject: Planning Consultation on BN/40/19/DOC

To: Engineers (Drainage)

NOTIFICATION FROM ARUN DISTRICT COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

APPLICATION BN/40/19/DOC
NO:

Registered: 12-JUN-19

Site Address: The Fallows Highground Lane Barnham PO22

0BT

Description of Works:

Approval of details reserved by condition imposed under ref BN/50/18/PL relating to Condition No 4 - proposed surface water drainage.

The Council have received the above application to discharge conditions. I shall be pleased to receive any observations you may wish to make in respect of those conditions relating to your field of expertise.

[Click here to view the Discharge of Condition application](#)

[Click here to view conditions on original application - click on decision tab](#)

Should you have any comments to make, these should be sent by replying to this email by 27th June 2019.

www.arun.gov.uk/planning

Please be aware that any comments you may make will be available on our website so please do not insert personal details or signatures on your reply.

In the absence of a reply within the period stated, I shall assume that you have no observations to make.

The officer dealing with this application is Mr S Davis who can be contacted on telephone number 01903 737874.

Thanking you in anticipation

Planning Case Officer
Arun District Council

post_con_email

Archibald Shaw Limited		Page 1
One Little London Chichester Sussex PO19 1PP	MEADOW VIEW BARNHAM 310 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 310 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 590 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.3	0.3	100.1048	0.1048	7.5	O K
30 Summer	0.3	0.3	100.1393	0.1393	9.9	O K
60 Summer	0.3	0.3	100.1748	0.1747	12.5	O K
120 Summer	0.3	0.3	100.2077	0.2077	14.8	O K
180 Summer	0.3	0.3	100.2227	0.2227	15.9	O K
240 Summer	0.3	0.3	100.2302	0.2302	16.4	O K
360 Summer	0.3	0.3	100.2367	0.2367	16.9	O K
480 Summer	0.3	0.3	100.2367	0.2367	16.9	O K
600 Summer	0.3	0.3	100.2357	0.2357	16.8	O K
720 Summer	0.3	0.3	100.2337	0.2337	16.6	O K
960 Summer	0.3	0.3	100.2282	0.2282	16.2	O K
1440 Summer	0.3	0.3	100.2142	0.2142	15.3	O K
2160 Summer	0.3	0.3	100.1917	0.1917	13.7	O K
2880 Summer	0.3	0.3	100.1702	0.1702	12.1	O K
4320 Summer	0.3	0.3	100.1318	0.1318	9.4	O K
5760 Summer	0.3	0.3	100.1012	0.1013	7.2	O K
7200 Summer	0.3	0.3	100.0782	0.0783	5.6	O K
8640 Summer	0.3	0.3	100.0618	0.0618	4.4	O K
10080 Summer	0.3	0.3	100.0512	0.0512	3.7	O K
15 Winter	0.3	0.3	100.1178	0.1178	8.4	O K
30 Winter	0.3	0.3	100.1568	0.1567	11.2	O K
60 Winter	0.3	0.3	100.1967	0.1967	14.0	O K
120 Winter	0.3	0.3	100.2347	0.2347	16.7	O K
180 Winter	0.3	0.3	100.2527	0.2527	18.0	O K
240 Winter	0.3	0.3	100.2622	0.2622	18.7	O K
360 Winter	0.3	0.3	100.2717	0.2717	19.4	O K
480 Winter	0.3	0.3	100.2742	0.2742	19.5	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	131.85	23
30 Summer	88.57	37
60 Summer	56.71	68
120 Summer	35.00	125
180 Summer	25.97	186
240 Summer	20.88	246
360 Summer	15.37	364
480 Summer	12.34	452
600 Summer	10.40	505
720 Summer	9.04	568
960 Summer	7.24	696
1440 Summer	5.28	970
2160 Summer	3.85	1368
2880 Summer	3.07	1764
4320 Summer	2.23	2552
5760 Summer	1.77	3232
7200 Summer	1.48	3960
8640 Summer	1.28	4584
10080 Summer	1.14	5240
15 Winter	131.85	23
30 Winter	88.57	37
60 Winter	56.71	66
120 Winter	35.00	124
180 Winter	25.97	182
240 Winter	20.88	240
360 Winter	15.37	354
480 Winter	12.34	464

Archibald Shaw Limited		Page 2
One Little London Chichester Sussex PO19 1PP	MEADOW VIEW BARNHAM 310 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 310 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+40%)

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
600 Winter	0.3	0.3	100.2722	0.2722	19.4	O K
720 Winter	0.3	0.3	100.2682	0.2682	19.1	O K
960 Winter	0.3	0.3	100.2612	0.2612	18.6	O K
1440 Winter	0.3	0.3	100.2412	0.2412	17.2	O K
2160 Winter	0.3	0.3	100.2073	0.2072	14.8	O K
2880 Winter	0.3	0.3	100.1748	0.1747	12.4	O K
4320 Winter	0.3	0.3	100.1178	0.1178	8.4	O K
5760 Winter	0.3	0.3	100.0758	0.0758	5.4	O K
7200 Winter	0.3	0.3	100.0508	0.0508	3.6	O K
8640 Winter	0.2	0.2	100.0443	0.0442	3.2	O K
10080 Winter	0.2	0.2	100.0393	0.0392	2.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	10.40	570
720 Winter	9.04	656
960 Winter	7.24	746
1440 Winter	5.28	1056
2160 Winter	3.85	1496
2880 Winter	3.07	1908
4320 Winter	2.23	2684
5760 Winter	1.77	3344
7200 Winter	1.48	3824
8640 Winter	1.28	4504
10080 Winter	1.14	5248

Archibald Shaw Limited		Page 3
One Little London Chichester Sussex PO19 1PP	MEADOW VIEW BARNHAM 310 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 310 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+40
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.031

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from: to:		from: to:	
0 4	0.000	4 8	0.031

Archibald Shaw Limited		Page 4
One Little London Chichester Sussex PO19 1PP	MEADOW VIEW BARNHAM 310 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 310 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.018100	Length (m)	15.0
Infil Coef - Sides (m/hr)	0.018100	Invert Level (m)	100.000
Safety Factor	1.5	Cover Level (m)	100.600
Porosity	0.95	Slope (1:x)	0.0
Width (m)	5.0		

$$\text{PLAN AREA} = 5 \times 15 \text{m} = 75 \text{m}^2$$

AS USING PERMAVOID CRATES

SIZED 0.355m WIDE X 710mm LONG

$$\text{USE WIDTH} = 4.97 \text{m}$$

$$\text{LENGTH} = 15.27 \text{m}$$

$$4.97 \times 15.27 \text{m} = 75.9 \text{m}^2$$

Archibald Shaw Limited		Page 1
One Little London	MEADOW VIEW	
Chichester	BARNHAM	
Sussex PO19 1PP	120 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 120 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 585 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	100.1127	0.1128	2.9	O K
30 Summer	0.1	0.1	100.1503	0.1502	3.8	O K
60 Summer	0.1	0.1	100.1882	0.1882	4.8	O K
120 Summer	0.1	0.1	100.2233	0.2232	5.7	O K
180 Summer	0.1	0.1	100.2397	0.2397	6.1	O K
240 Summer	0.1	0.1	100.2477	0.2477	6.3	O K
360 Summer	0.1	0.1	100.2547	0.2547	6.5	O K
480 Summer	0.1	0.1	100.2547	0.2547	6.5	O K
600 Summer	0.1	0.1	100.2533	0.2532	6.5	O K
720 Summer	0.1	0.1	100.2513	0.2512	6.4	O K
960 Summer	0.1	0.1	100.2458	0.2457	6.3	O K
1440 Summer	0.1	0.1	100.2312	0.2312	5.9	O K
2160 Summer	0.1	0.1	100.2077	0.2077	5.3	O K
2880 Summer	0.1	0.1	100.1852	0.1852	4.8	O K
4320 Summer	0.1	0.1	100.1458	0.1458	3.7	O K
5760 Summer	0.1	0.1	100.1133	0.1133	2.9	O K
7200 Summer	0.1	0.1	100.0882	0.0883	2.3	O K
8640 Summer	0.1	0.1	100.0697	0.0698	1.8	O K
10080 Summer	0.1	0.1	100.0567	0.0568	1.5	O K
15 Winter	0.1	0.1	100.1267	0.1268	3.2	O K
30 Winter	0.1	0.1	100.1687	0.1687	4.3	O K
60 Winter	0.1	0.1	100.2117	0.2117	5.4	O K
120 Winter	0.1	0.1	100.2523	0.2522	6.5	O K
180 Winter	0.1	0.1	100.2718	0.2717	7.0	O K
240 Winter	0.1	0.1	100.2817	0.2817	7.2	O K
360 Winter	0.1	0.1	100.2922	0.2922	7.5	O K
480 Winter	0.1	0.1	100.2947	0.2947	7.6	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	131.85	23
30 Summer	88.57	37
60 Summer	56.71	68
120 Summer	35.00	126
180 Summer	25.97	186
240 Summer	20.88	246
360 Summer	15.37	364
480 Summer	12.34	450
600 Summer	10.40	504
720 Summer	9.04	564
960 Summer	7.24	694
1440 Summer	5.28	970
2160 Summer	3.85	1368
2880 Summer	3.07	1768
4320 Summer	2.23	2552
5760 Summer	1.77	3280
7200 Summer	1.48	3960
8640 Summer	1.28	4664
10080 Summer	1.14	5248
15 Winter	131.85	23
30 Winter	88.57	37
60 Winter	56.71	66
120 Winter	35.00	124
180 Winter	25.97	182
240 Winter	20.88	240
360 Winter	15.37	354
480 Winter	12.34	464

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One Little London	MEADOW VIEW	
Chichester	BARNHAM	
Sussex PO19 1PP	120 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 120 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+40%)

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
600 Winter	0.1	0.1	100.2927	0.2927	7.5	O K
720 Winter	0.1	0.1	100.2882	0.2882	7.4	O K
960 Winter	0.1	0.1	100.2813	0.2812	7.2	O K
1440 Winter	0.1	0.1	100.2602	0.2602	6.7	O K
2160 Winter	0.1	0.1	100.2253	0.2252	5.8	O K
2880 Winter	0.1	0.1	100.1917	0.1917	4.9	O K
4320 Winter	0.1	0.1	100.1332	0.1333	3.4	O K
5760 Winter	0.1	0.1	100.0878	0.0878	2.3	O K
7200 Winter	0.1	0.1	100.0577	0.0578	1.5	O K
8640 Winter	0.1	0.1	100.0468	0.0467	1.2	O K
10080 Winter	0.1	0.1	100.0417	0.0417	1.1	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	10.40	568
720 Winter	9.04	604
960 Winter	7.24	744
1440 Winter	5.28	1046
2160 Winter	3.85	1496
2880 Winter	3.07	1908
4320 Winter	2.23	2684
5760 Winter	1.77	3392
7200 Winter	1.48	3960
8640 Winter	1.28	4504
10080 Winter	1.14	5240

Archibald Shaw Limited		Page 3
One Little London Chichester Sussex PO19 1PP	MEADOW VIEW BARNHAM 120 SQ M CONTRIBUTING	
Date MAR 2019 File 120 SQ M CONTRIBUTING.SRC	Designed By PF Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+40
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.012

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from: to:		from: to:	
0 4	0.000	4 8	0.012

Archibald Shaw Limited		Page 4
One Little London Chichester Sussex PO19 1PP	MEADOW VIEW BARNHAM 120 SQ M CONTRIBUTING	
Date MAR 2019	Designed By PF	
File 120 SQ M CONTRIBUTING.SRC	Checked By	
Micro Drainage		Source Control W.11.2

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.018100	Length (m)	9.0
Infil Coef - Sides (m/hr)	0.018100	Invert Level (m)	100.000
Safety factor	1.5	Cover Level (m)	100.600
Porosity	0.95	Slope (1:x)	0.0
Width (m)	3.0		

$$\text{PLAN AREA} = 3 \times 9\text{m} = 27\text{m}^2$$

AS USING PERMAVOID CRATES
SIZED 0.355m WIDE $\times$ 710mm LONG

$$\text{USE WIDTH} = 3.55\text{m}$$

$$\text{LENGTH} = 7.81\text{m}$$

$$3.55 \times 7.81\text{m} = 27.7\text{m}^2$$

All dimensions are in millimetres.

For dimensions of soakaways refer to schedules on contract specific drawings.

HR400 B125 covers are suitable for the following locations :

- A) Verges
- B) Footways / Pedestrian Areas
- C) Car Parks

Units shall be Charcon Permavoid 150, or equivalent contact Charcon Tel : 01509 615100

Units shall be laid fully in accordance with manufacturers instructions

All details shall otherwise be in accordance with The Department of Transport Specification For Highway Works, 7th Edition.

Soakaways shall be 5m away from any buildings or structures.



Soakaway Serving 120m² (Garage) : Length (L) = 7.81m. Width (W) = 3.55m

REV	DESCRIPTION	DATE			
 Archibald Shaw Consulting Civil & Structural Engineers One 1200a London Road, London Road, PO15 1PP Telephone: 01243 798471 Fax: 01243 779618 e: info@archibaldshaw.co.uk w: www.archibaldshaw.co.uk					
PROJECT Standard Detail High Storage Soakaway : Permavoid 150 Units Meadow View, Barnham					
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> DRAWN BY RJL </td> <td style="width: 33%; vertical-align: top;"> CHECKED BY PEF </td> <td style="width: 33%; vertical-align: top;"> DESIGNED BY RJL </td> </tr> </table>			DRAWN BY RJL	CHECKED BY PEF	DESIGNED BY RJL
DRAWN BY RJL	CHECKED BY PEF	DESIGNED BY RJL			
SCALE DATE N.T.S. Mar. 2019					
STD NO. 30253-STD.01.63		REVISION -			

Our Ref: PEF/SD/30253

2 January 2019

Dear Mr Keef

**Meadow View, Barnham
Soakage Test**

Further to my site investigation undertaken on 20 December 2018, please find herewith the following information:

- Trial Pit Location Plan
- Trial Pit Logs TP1, TP2 and TP3
- Marked-up Drawing STD-01-63 – Proposed Soakaway (2 No.)

Local soils were found to have poor soakage potential, with an infiltration rate of 0.0181m per hour (5.02×10^{-6} m/s).

To serve the new house roof (310m²) at Meadow View, a high storage soakaway sized 14m long x 4m wide x 0.8m total depth will be required for a 1: 100 year storm event, plus 40% for climate change. To serve the garage roof (120m²), a high storage soakaway sized 7m long x 3m wide x 0.8m total depth will be required for the storm event noted above. The exact layout of the soakaways should be agreed with me after the groundwater level monitoring has been completed. The soakaway storage volumes though at 22.4m³ and 8.4m³ should not change.

The soakaways could be installed as one of the last operations of the build, such that the groundwater level monitoring can be completed. Ideally, the monitoring should be undertaken every two weeks between December and March.

I trust that this drainage information is sufficient for now, however should you have any questions or queries please do not hesitate to contact me.

Yours sincerely

Philip Faulkner EngTech MICE
for ARCHIBALD SHAW

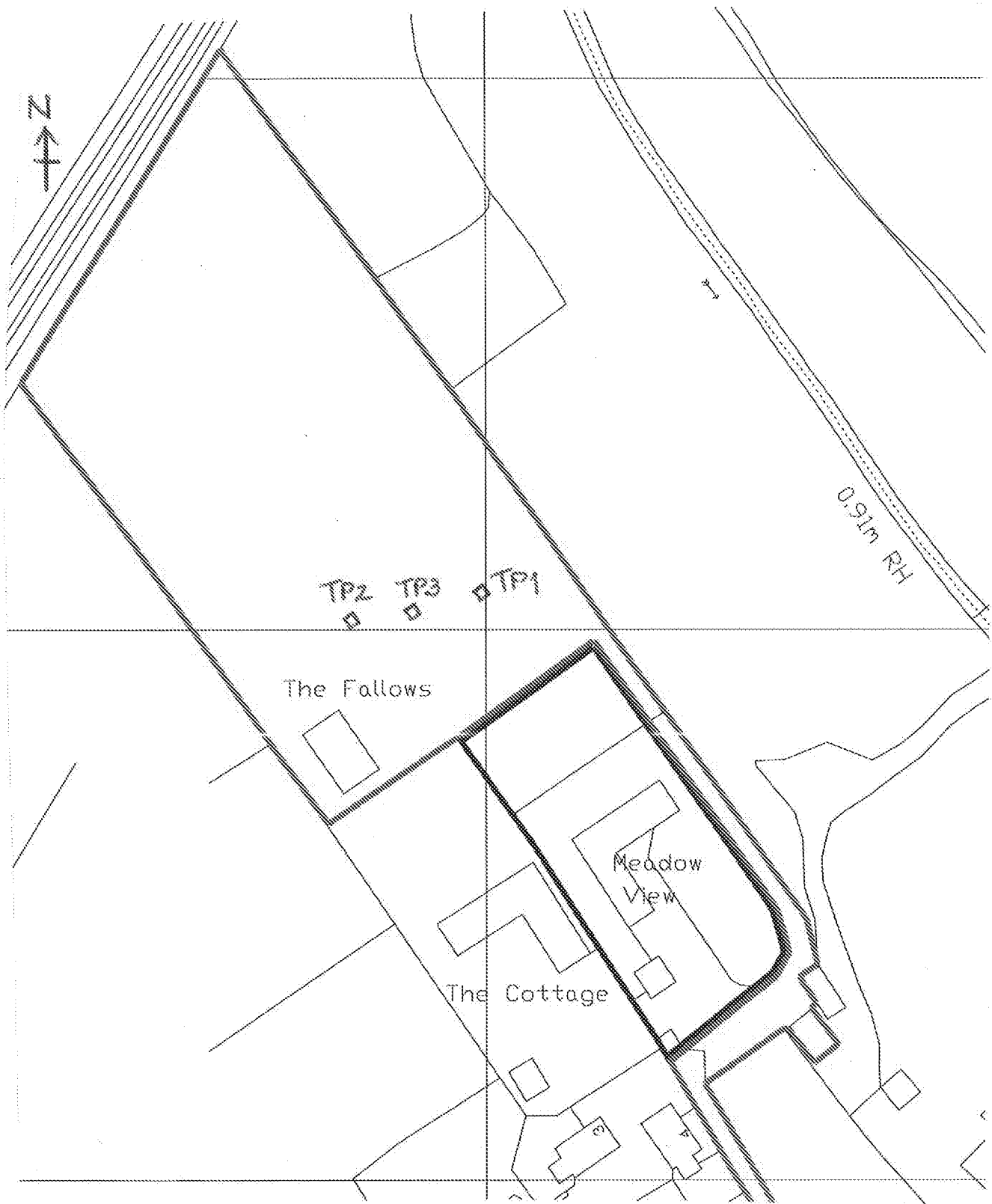
Enc

For Sign: Jan Lord BEng (Hons)
Ian Sheppard BEng (Hons) CEng MInstCE
For sig. Vincent Carpenter BSc (Hons) CEng MICE FHEM MInst MIBD

For Sign: Neil Gribham CEng MInstCE
Neil Stanway BEng (Hons) CEng MInstCE

For Sign: Peter Willmott CEng FInstCE
Jonathan Rains BSc CEng MICE
Lawrence Jupp BSc (Hons) CEng MInstCE

Archibald Shaw LLP uses the word 'Partner' to refer to a Member of the LLP



NOTES

- 1 This drawing to be read in conjunction with all relevant Architect's, Client's and Engineer's reports, drawings and specifications.

REV	DESCRIPTION	DATE
Archibald Shaw 		
Consulting Civil & Structural Engineers One Little London, Oldbuckley, West Sussex PO16 1PF Telephone: 01243 726471 Facsimile: 01243 778348 info@archibaldshaw.co.uk www.archibaldshaw.co.uk		
PROJECT Meadow View, Barnham		
SECTION Trial Pit Location Plan		
DRAWN BY PF	CHECKED BY -	DESIGNED BY PF
SCALE @ A4 1:1000 approx	DATE Dec. 2018	STATUS Preliminary
JOB NO. 30253	DRAWING NO. Figure 1	REVISION P1

Dimensions
Pit sizes not recorded

Client
Danny Keel

Job
Number
30253

Location
See Location Plan

Dates 10/12/2018

Engineer
Archibald Shaw

Sheet
1/1

Depth
{m}

Sample / Tests

Water
Depth

Field Records

Level
{MOD}

Depth
{m}
(Thickness)

Description

Legend

Water

Grass over TOPSOIL

(0.30)

0.39

Orange/brown, silty, very sandy CLAY, with some flint gravel

{0.60}

0.90

{0.60}

1.50

Complete at 1.50m

Plan

Remarks

Groundwater found at 1.3m depth.

Scale (approx)

1:20

Logged By

PEF/SD/30253

Figure No.

30253.TP1

				One Little London, Chichester West Sussex, PO19 1PP Tel. 01243 785471 Fax. 01243 779346		Site Meadow View, Barnham		Trial Pit Number TP2	
Excavation Method Trial pit was machine excavated by a JCB		Dimensions Pit sizes not recorded		Ground Level (mOD)		Client Danny Keet		Job Number 30253	
		Location See Location Plan		Dates 10/12/2016		Engineer Archibald Shaw		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
						Grass over TOPSOIL			
					0.30	Orange/brown, silty, very sandy CLAY, with some flint gravel			
					0.70				
					1.00	Firm, brown CLAY			
					1.20	Complete at 1.20m			
Plan						Remarks			
						Groundwater found at 1.2m depth. Piezometer tube installed in pit.			
						Scale (approx) 1:20	Logged By PEF/SD/30253	Figure No. 30253.TP1	

108

Number
30253

Sheet

111

100

Complete at 0.90m

Remarks

Soakaway test undertaken.
Soil infiltration rate = 5.02×10^{-6} m/sec.

Figure No. _____

30253.TP1

30 SEP 1964

Notes

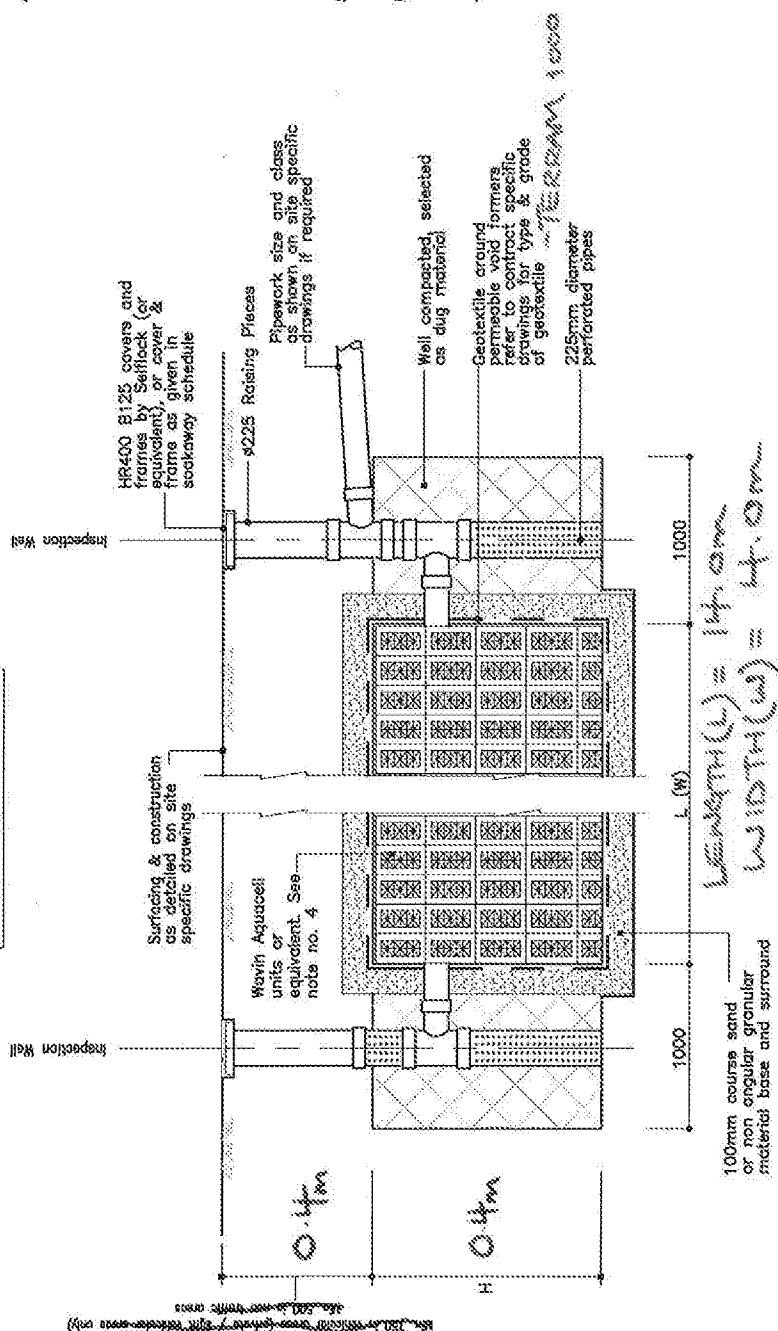
- 1 All dimensions are in millimetres.
- 2 For dimensions of sookways refer to schedules on contract specific drawings.
- 3 HR400 B125 covers are suitable for the following

A) Verges
B) Footways / Pedestrian Areas
C) Car Parks

- | | | |
|----|--|------------------------------------|
| 4. | Units shall be Aquacell by Wavin, or equivalent contact wavin tel : 01249 766600 | |
| | Trafficked areas to a total depth of 4.1m | - Aquacell Core (Blue Units) |
| | Trafficked areas 4.1 to 4.8m total depth | - Aquacell Plus (Light Blue Units) |
| | Non - trafficked areas/ landscaped areas up to a total depth of 1.5m | - Aquacell Eco (Black Units) |

- Non -- trafficked areas/
landscaped areas
1.5 to 4.5m total depth
- 5 units shall be laid fully in accordance with
manufacturers instructions
- 6 All details shall otherwise be in accordance
with The Department of Transports Specification
For Highway Works, 7th Edition.

- Prior to acceptance, the contractor shall submit to the engineer supporting calculations as to the load carrying capacity of the storage units, and the predicted long term fill settlement under dead and live load.



Typical Section

BOARDS ALWAYS SHALL BE IN FORM
ANY BUILDING OR STRUCTURES

DATE	DESCRIPTION	AMOUNT	BALANCE
22-06-11	NOTE No. 6 DEPOSITED		
05-12-09	NOTE No. 7 DEPOSITED		
15-05-08	NOTE No. 4 DEPOSITED		
24-05			

[illegible]

Corresponding Civil & Structural Engineer
200 Wilton London SW6 2NN
Telephone: 01273 789474 Fax: 01273 779588
http://www.civilandstructural.co.uk

Standard Detail
High Storage Soakaway

DRAWN BY	CHECKED BY	DESIGNED BY
R.L.	REF	R.L.
SCALE	DATE	
N.T.S.	MAY 68	
SHEET NO.		REVISION
5109163		C

Notes

- 1 All dimensions are in millimetres.
- 2 For dimensions of soakways refer to schedules on contract specific drawings.
- 3 HR400 B125 covers are suitable for the following locations:

A) Vergas
B) Footways / Pedestrian Areas
C) Car Parks

- | | | | | | | | | | | | | | |
|--|--|---|---|----------------------------|--|---|-------------------------------------|--|---|----------------------------|--|---|----------------------------|
| 4 | Units shall be Aquacell by Wavin, or equivalent
contact wavin tel : 01249 766800 | | | | | | | | | | | | |
| | <table border="0"> <tr> <td>Tracked areas to a
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manufacturers instructions | | | | | | | | | | | | |
| 6 | All details shall otherwise be in accordance
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For Highway Works, 7th Edition. | | | | | | | | | | | | |
| 7 | Prior to acceptance, the contractor shall submit to
the engineer supporting calculations as to the load
carrying capacity of the storage units, and the
predicted long term fill settlement under dead and
live load. | | | | | | | | | | | | |

C	NOTE NO. 4 UPDATED.	02-06-11
D	NOTE NO. 7 ADDED.	03-12-09
A	NOTE NO. 4 UPDATED.	18-05-08

1000

10

[illegible]

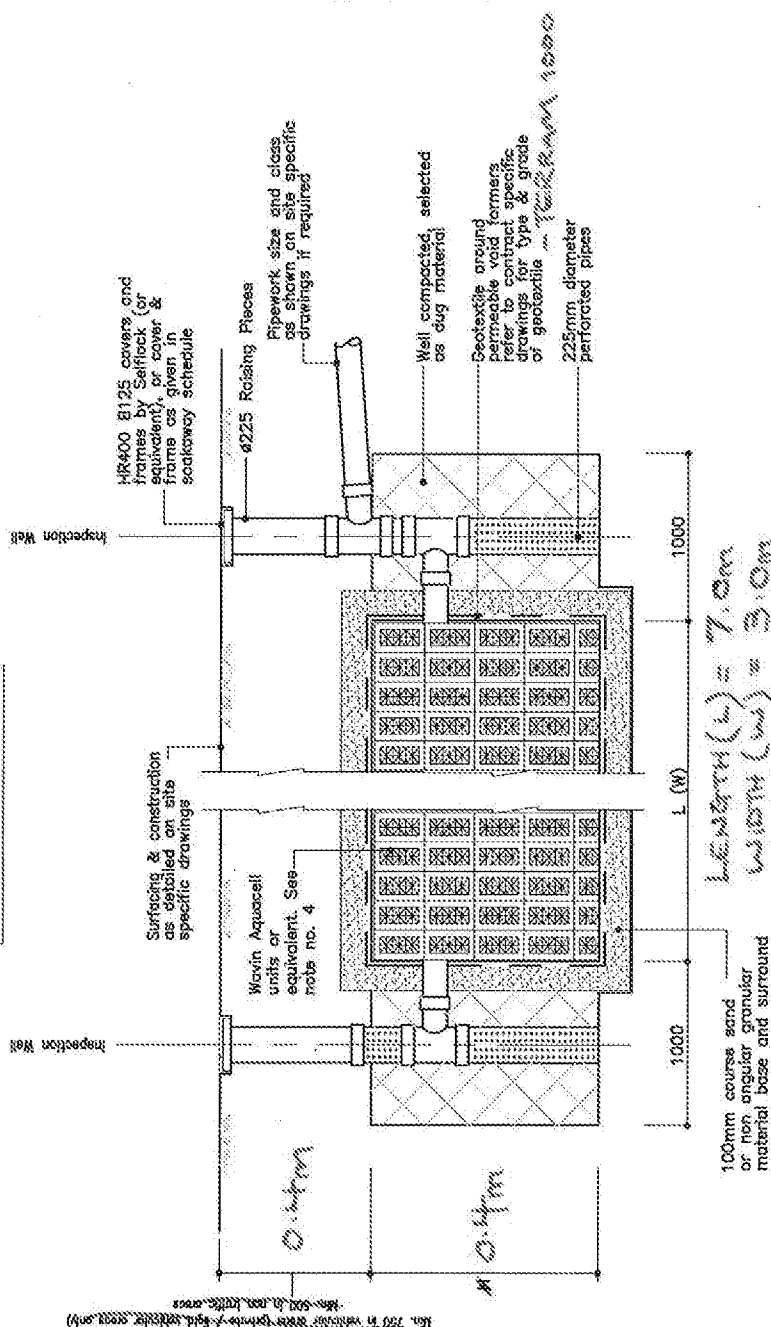
Consulting CIVIL & Structural Engineers
One 1556 London Boulevard West Suite 1010
Vancouver BC V6Z 1P9
Telephone: 604-681-7887 Fax: 604-681-7888
E-mail: info@bushnells.com

PROJECT
Standard Detail
High Storage Seaway

DESIGNED BY	CHECKED BY	APPROVED BY
DATE	SIGNATURE	SIGNATURE

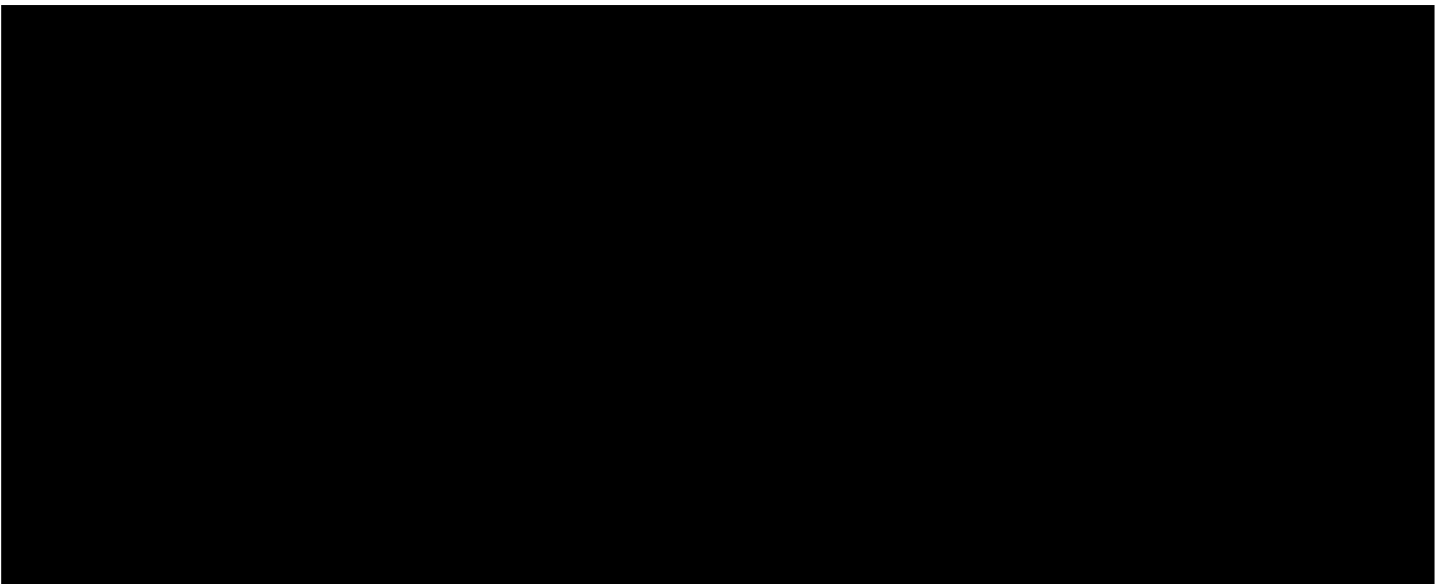
DATE: MAY 03
BY: N.T.S.
REVISION: 1

ST0.01.53



Typical Section

COAXIALS SHALL BE 5m FROM ANY BUILDINGS OR STRUCTURES



From: stephen jupp [REDACTED]
Sent: 25 March 2019 11:58
To: Simon Davis <Simon.Davis@arun.gov.uk>
Cc: Danny Keet [REDACTED]
Subject: Re: BN/50/18/PL The Fallows

Simon

the groundwater winter monitoring results are as follows:

23rd December 2018 Sunday 4:20pm - 800mm

1st January 2019 Tuesday 11:31am - 797mm

14th Jan 2019 Monday 8:23am - 802mm

28th Jan 2019 Monday 8:40am - 780mm

11th Feb 2019 Monday 3:55pm - 775mm

19th Feb 2019 Tuesday 7:30am - 765mm

28th Feb 2019 Thursday 8:22am - 765mm

4th March 2019 Monday 10:35am - 770mm

11th March 2019 Monday 7:45am - 770mm

17th March 2019 Sunday 12:00pm - 780mm

25th March 2019 Monday 7:15am - 795mm

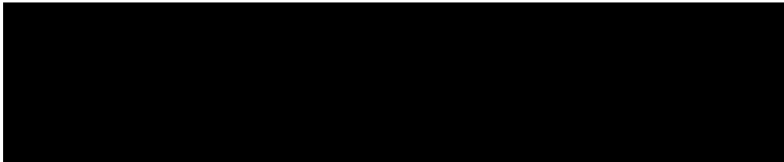
On this basis the soakway design has been amended as per attached.

I trust that this is what the drainage engineers require.

Kind regards

Steve Jupp

Stephen Jupp MRTPI
Chartered Town Planner
Sally Field Lodge
Rotten Row
Sidlesham
West Sussex
PO20 7QB



On 13 Mar 2019, at 15:01, Simon Davis <Simon.Davis@arun.gov.uk> wrote:

Dear Steve,

Not sure I sent you this at the time I received it (although it has been on the website since receipt). Anyway, this relates to why we are still requesting a pre-commencement drainage condition (as per the email you will have just received).

Kind Regards

Simon J Davis MRTPI | Principal Planning Officer, Planning Department, Directorate of Place, Arun District Council |
Location: Planning, First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
Internal: 37874 | External: +44 (0) 1903 737874 | E-mail: simon.davis@arun.gov.uk
Please note that I typically work from home on Thursdays when I am unreachable on my work phone

Visit Arun's web site at www.arun.gov.uk  Save the environment - think before you print.

From: Laura Gibbons
Sent: 04 January 2019 13:55
To: Simon Davis <Simon.Davis@arun.gov.uk>
Subject: RE: BN/50/18/PL The Fallows

Hi Simon,

The condition is still required.

It is unclear from the supplied information if three consecutive infiltration tests were completed as is required. The information also states that a piezometer was installed to monitor ground water levels. These ongoing monitoring results have not been provided.

At DOC stage the applicant will need to ensure that our checklist (attached) is complied with. I.e. supply layout drawings and calculations too.

Kind Regards,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

Laura Gibbons | Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltrovers Road, Littlehampton, BN17 5LF
Internal: 37818 | External: +44 (0) 1903 737818 | Fax: +44 (0) 1903 716018 | E-mail: laura.gibbons@arun.gov.uk
Arun is Working in Partnership with Chichester District Council
Visit Arun's web site at <http://www.arun.gov.uk/> and www.chichester.gov.uk



Save the environment - think before you print.

From: Simon Davis
Sent: 04 January 2019 10:24
To: Laura Gibbons
Subject: FW: BN/50/18/PL The Fallows

Dear Laura,

Please see below./attached. Does this alter your response of 23/11/18 at all?

Kind Regards

Simon J Davis MRTPI | Principal Planning Officer, Planning Department, Directorate of Place, Arun District Council | Location: Planning, First Floor, Arun Civic Centre, Maltrovers Road, Littlehampton, BN17 5LF
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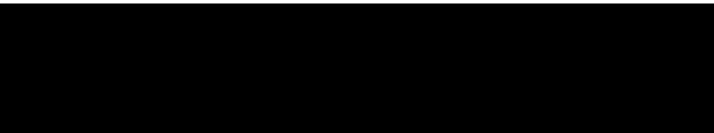
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Sally Field Lodge
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PO20 7QB



<http://www.arun.gov.uk>

DX 57406 Littlehampton

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[REDACTED]

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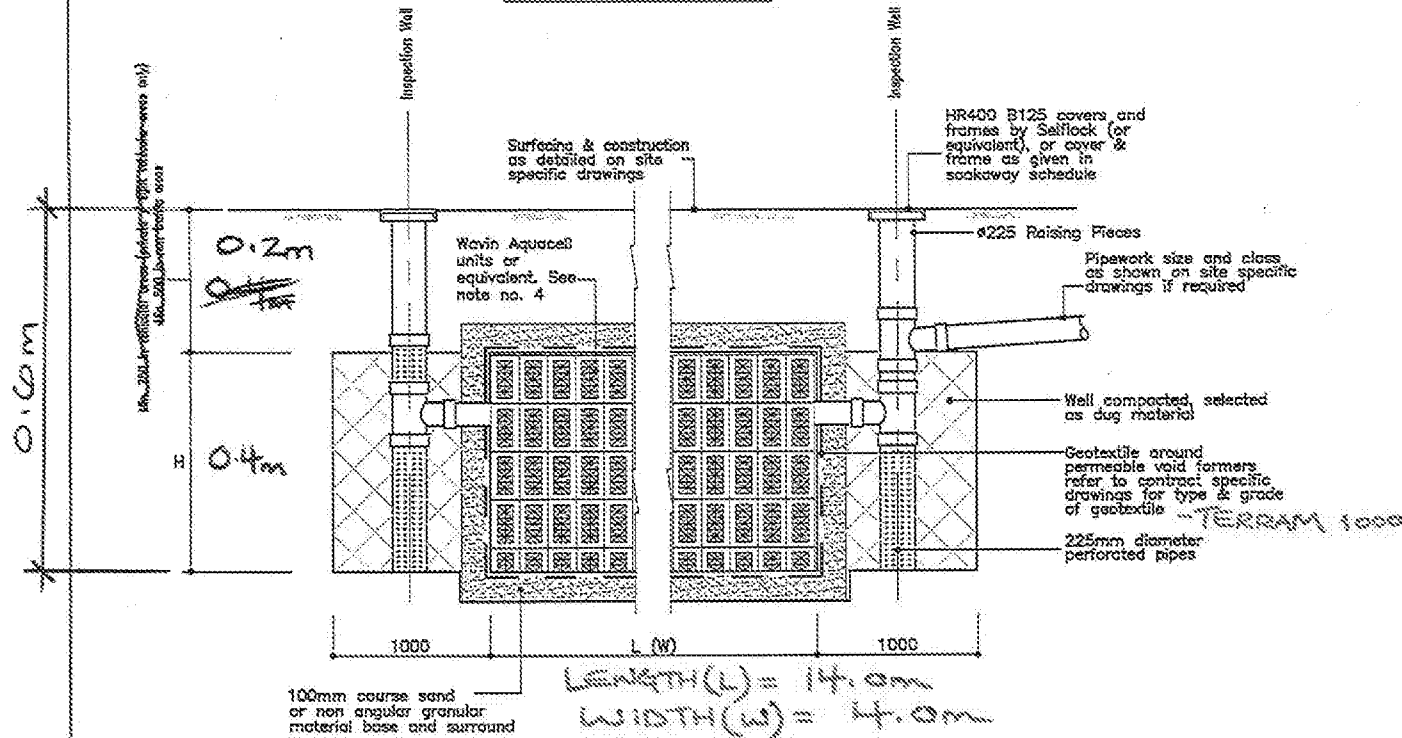
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SOAKAWAY SERVING 310 sq.m (HOUSE)

WARNING:

For Industrial / H.G.V. Areas
Refer to Engineer's Details



Typical Section

* SOAKAWAYS SHALL BE 5m FROM
ANY BUILDINGS OR STRUCTURES.

* AQUACELL TYPE SOAKAWAYS SHALL NOT BE
LOCATED UNDER VEHICULAR AREAS.

Notes

- All dimensions are in millimetres.
- For dimensions of soakaways refer to schedules on contract specific drawings.
- HR400 B125 covers are suitable for the following locations:
 - Verges
 - Footways / Pedestrian Areas
 - Car Parks
- Units shall be Aquacell by Wavin, or equivalent contact wavin tel : 01249 786600
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C	NOTE No. 4 UPDATED.	22-05-11
B	NOTE No. 7 ADDED.	03-12-08
A	NOTE No. 4 UPDATED.	15-05-05

REV	DESCRIPTION	DATE
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REV 'A'

Archibald Shaw

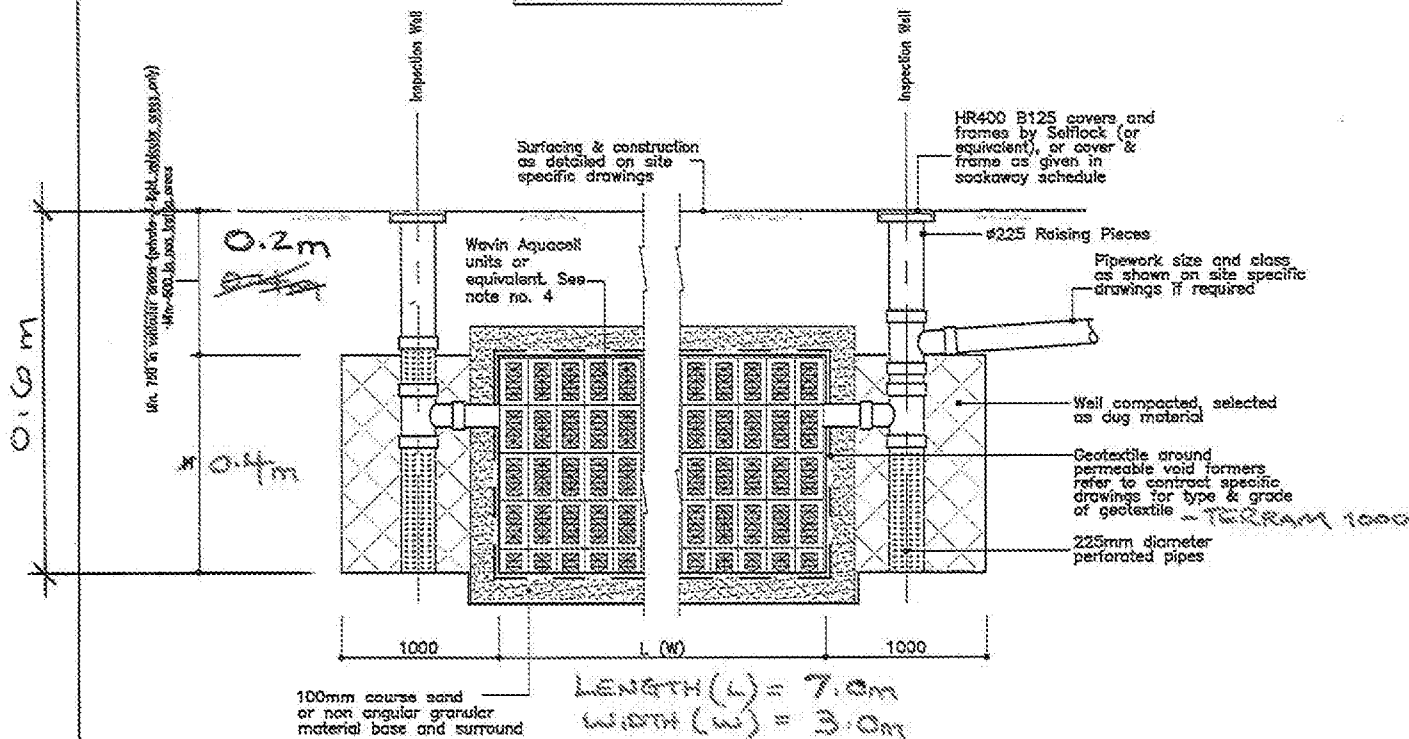
Consulting Civil & Structural Engineers
Cor 1896 Leeds, Yorkshire LS10 1PP
Telephone: 01243 786601 Fax: 01243 776606
mob: 07830 444444 www.archibaldshaw.co.uk

PROJECT Standard Detail High Storage Soakaway		
DRAWN BY R.L.	CHECKED BY PEF	DESIGNED BY R.L.
SCALE N.T.S.	DATE MAY 03	REVISION
STD 01.03		8

SOAKAWAY SERVING 120 SQ.M (GARAGE)

WARNING:

For Industrial / H.G.V. Areas
Refer to Engineer's Details



Typical Section

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B	NOTE No. 7 ADDED.	03-12-08
A	NOTE No. 4 UPDATED.	18-05-05

NO.	DESCRIPTION	DATE
-----	-------------	------

REV 'A'

Archibald Shaw

Consulting Civil & Structural Engineers
One Dore Lodge, Dore, Derbyshire, Derby, DE9 8PP
Telephone: 01543 336271 Facsimile: 01543 372340
info@archibaldshaw.co.uk www.archibaldshaw.co.uk

PROJECT Standard Detail High Storage Soakaway		
DRAWN BY R.L.	CHECKED BY PEF	DESIGNED BY R.L.
SCALE N.T.S.	DATE MAY 03	REVISION
SITE NO.		REVISION
STD.01.63		