

Appendix B



Appendix B.1

ENVIRONMENT AGENCY



WSP

Mountbatten House

Basing View

Basingstoke

Hampshire

RG21 4HJ

Our ref: SSD90563

Date: 10/07/2018

Dear [REDACTED],

Enquiry Regarding Product 4 for Flood Risk Assessment for 94-100 Hook Lane, Bognor Regis, PO22 8AT.

Thank you for your enquiry which was received on 19 June 2018.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. The information is attached.

The information on Flood Zones in the area relating to this address is as follows:

The site is in an area located within Flood Zone 3 as shown on our Flood Map for Planning (Rivers and Sea).

Note - This information relates to the area that the above named property is in and is not specific to the property itself as it is influenced by factors such as the height of door steps, air bricks or the height of surrounding walls. We do not have access to this information and is not currently used in our flood modelling.

Flood Zone definitions can be found at www.gov.uk/guidance/flood-risk-and-coastal-change#Table-1-Flood-Zones

Flood Defences

There are flood defences in the form of an embankment. The Asset ID is 149096. The upstream effective crest level is 5.64. The estimated standard of protection is 1 in 200 years (0.5% AEP). The estimated condition grade is good.

Model Information

The model used for tidal flood risk was the Ems to Littlehampton Modelling (Arun to East Head Model), which was completed in 2016 by JBA Consulting. The model used for fluvial flood risk was the Aldingbourne which was completed in 2015 by JBA Consulting.

Flood History

We hold no record of previous flooding events affecting this site.

Please note our records are not comprehensive and may not include all events. I recommend contacting the Lead Local Flood Authority, **West Sussex County**

Council or the Local Authority, **Arun District Council** for a more comprehensive flood history check.

[FRA advisory text](#)

Name	Product 4
Description	Detailed Flood Risk Assessment Map for 94 – 100 Hook Lane, Bognor Regis, PO22 8AT.
Licence	Open Government Licence
Information Warnings	The current climate change allowances should be checked here: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances .
Information Warning - OS background mapping	<i>The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply to this background mapping. You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which the Environment Agency makes it available. You are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form. Third party rights to enforce the terms of this licence shall be reserved to OS.</i>
Attribution	Contains Environment Agency information © Environment Agency and/or database rights. Contains Ordnance Survey data © Crown copyright 2017 Ordnance Survey 100024198.

Data Available Online

Many of our flood datasets are available online:

- Flood Map For Planning ([Flood Zone 2](#), [Flood Zone 3](#), [Flood Storage Areas](#), [Flood Defences](#), [Areas Benefiting from Defences](#))
- [Risk of Flooding from Rivers and Sea](#)
- [Historic Flood Map](#)
- [Current Flood Warnings](#)

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely,

Leanne Prentice

FCRM Officer - PSO West Sussex

Risk of flooding from Surface Water. Centred on PO22 8AT. Created 10/7/18.



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Scale 1: 10,000



Likelihood of flooding from Surface Water

- High ($\geq 3.3\%$)
- Medium (3.3% - 1%)
- Low (1% - 0.1%)
- Very Low

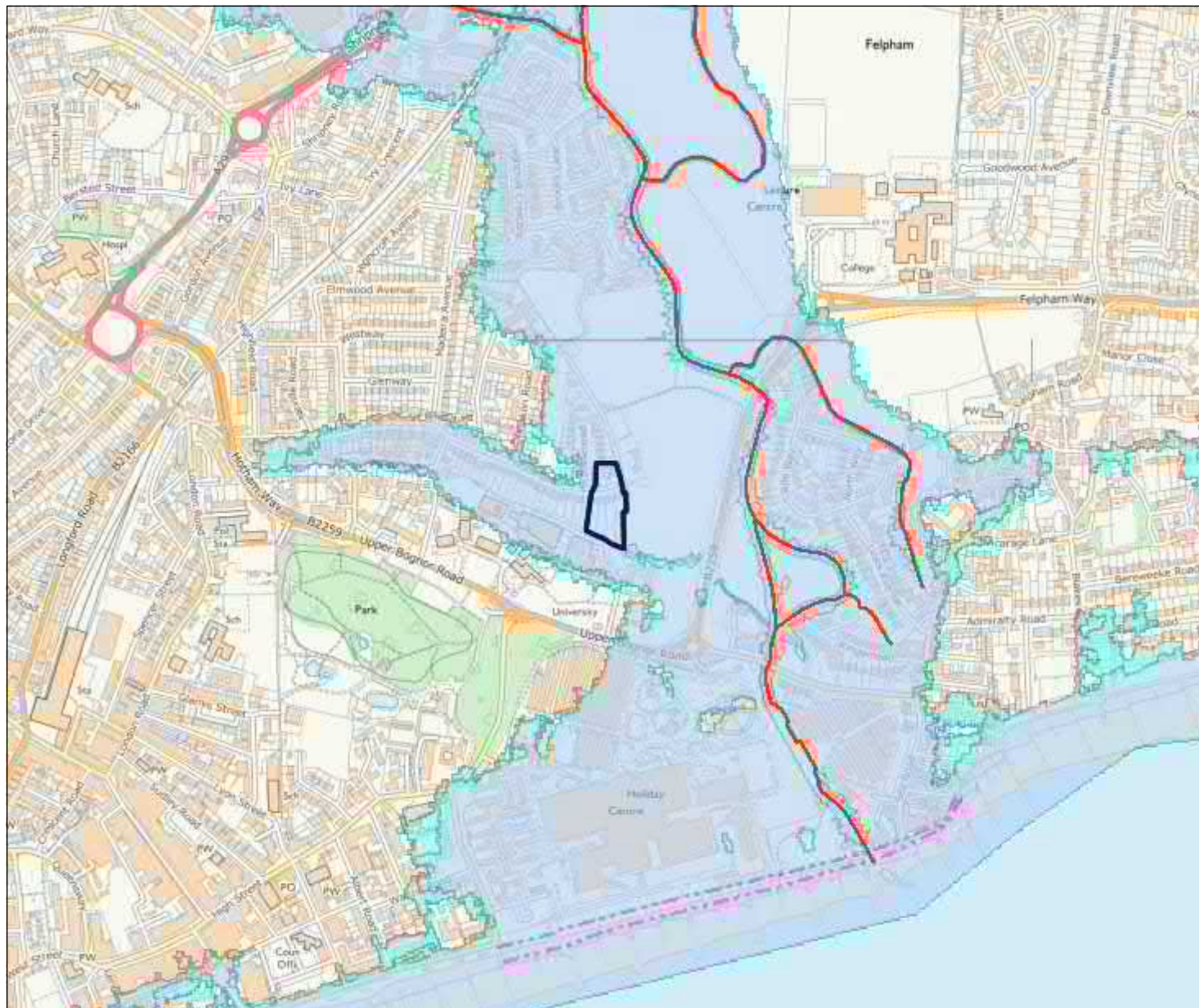
Likelihood of flooding from Surface Water

- High:** Greater than or equal to 3.3% (1 in 30) chance in any given year
- Medium:** Less than 3.3% (1 in 30) but greater than or equal to 1% (1 in 100) chance in any given year
- Low:** Less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance in any given year
- Very Low:** Less than 0.1% (1 in 1,000) chance in any given year

This information is shown on the Risk of Flooding from Surface Water map on our website.

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). E-mail: enquires@environment-agency.gov.uk

Flood Map for Planning (Rivers and Sea). Centred on PO22 8AT. Created 10/7/18.



Scale 1: 10,000



Flood Map for Planning (Rivers & Sea)

- Sealed Main Rivers
- - - Defences
- ▤ Flood Storage Areas
- ▨ Areas benefiting from flood defences
- Flood Zone 3
- Flood Zone 2

Flood Map Areas (assuming no defences)

Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

AIMS Flood Defence Map (EA Maintained). Centred on PO22 8AT. Created

Legend

Defences (EA maintained)

-  Asset type not defined
-  Embankment
-  Wall
-  Flood Gate
-  Demountable Defence
-  Bridge Abutment
-  High Ground
-  Beach
-  Barrier Beach
-  Promenade
-  Quay
-  Cliff
-  Dunes



0 100 200 300
Metres



AIMS Flood Defence Map (3rd Party Maintained). Centred on PO22 8AT. Created

Legend

Defences (3rd party maintained)

-  Asset type not defined
-  Embankment
-  Wall
-  Flood Gate
-  Demountable Defence
-  Bridge Abutment
-  High Ground
-  Beach
-  Barrier Beach
-  Promenade
-  Quay
-  Cliff
-  Dunes

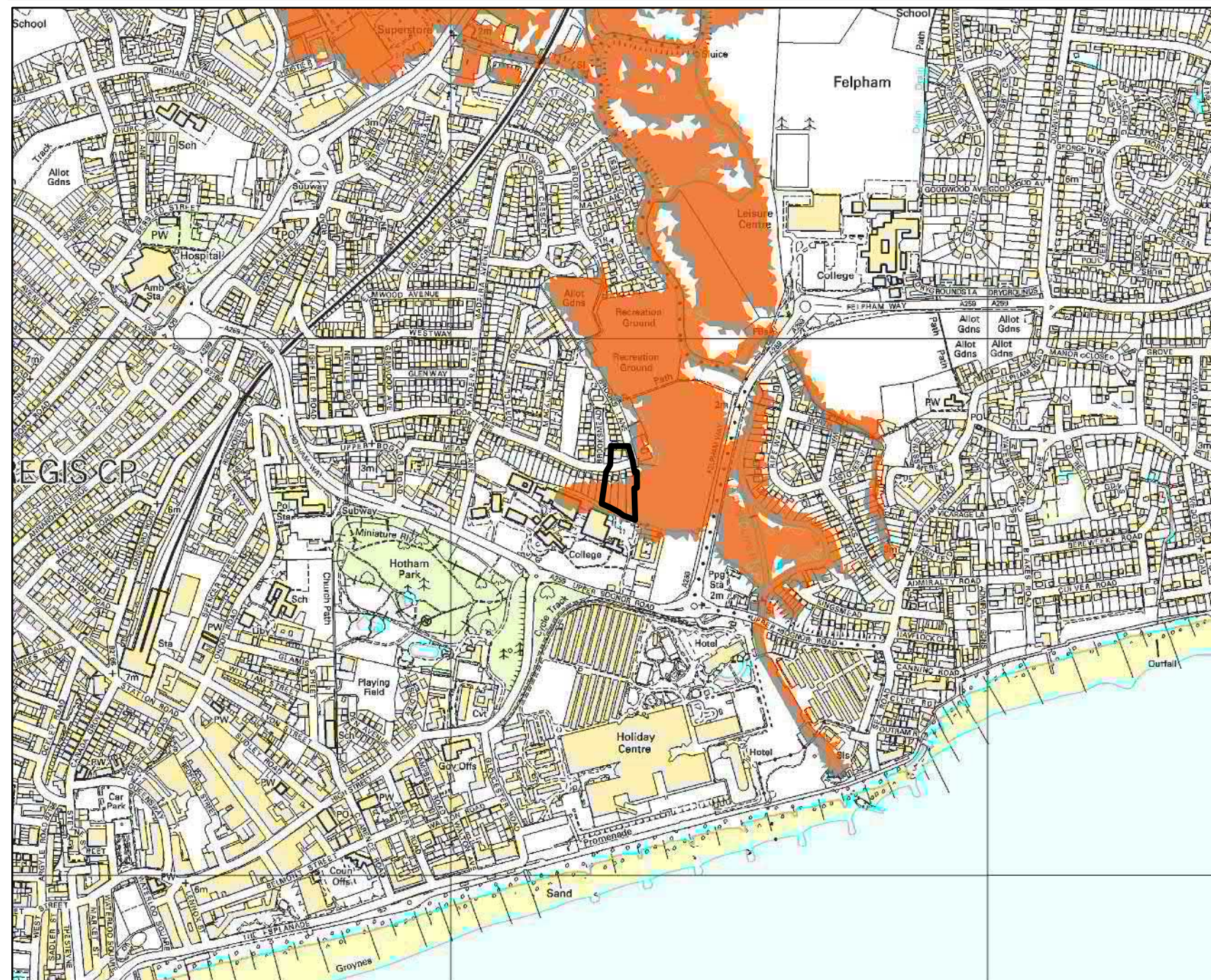


0 100 200 300
Metres



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Modelled Flood Outlines (Fluvial) Map. Centred PO22 8AT. Created 10/7/18.

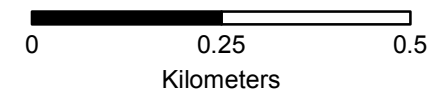


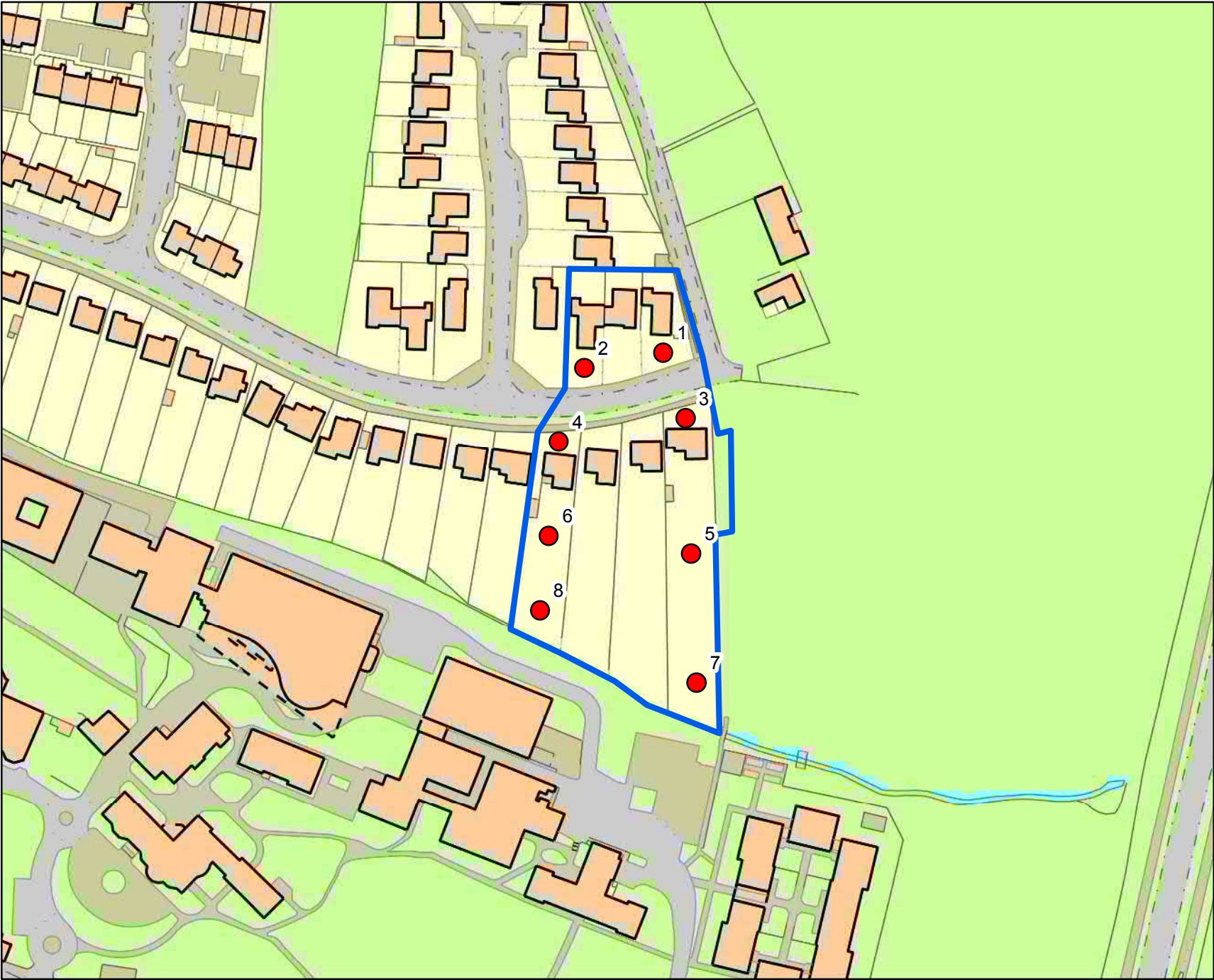
Legend

-  Site Boundary
-  0.1% AEP (Defended Fluvial)
-  0.1% AEP (Undefended Fluvial)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

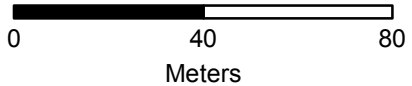




Legend

- Site Nodes
- Site Boundary

Scale: 1:1,600





Product 4 Flood Risk Data Requested by: WSP

Site: 94 – 100 Hook Lane, Bognor Regis, PO22 8AT

Table 1: Water Levels: Fluvial Defended

Node Ref	NGR		Modelled Flood Levels in Metres
	Eastings	Northings	Defended Annual Exceedance Probability
			0.1%
1	494326	99775	N/A
2	494303	99770	N/A
3	494333	99755	N/A
4	494295	99748	N/A
5	494334	99715	1.93
6	494292	99720	1.93
7	494336	99676	N/A
8	494289	99698	1.93

Table 2: Water Levels: Tidal Undefended

Node Ref	NGR		Modelled Flood Levels in Metres			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			0.5%	0.5% (2070)	0.5% (2115)	0.1%
1	494326	99775	3.02	3.62	4.26	3.28
2	494303	99770	3.03	3.63	4.27	3.29
3	494333	99755	3.02	3.63	4.27	3.29
4	494295	99748	3.03	3.63	4.27	3.30
5	494334	99715	3.03	3.64	4.28	3.30
6	494292	99720	3.03	3.64	4.28	3.30
7	494336	99676	3.03	3.64	4.28	3.30
8	494289	99698	3.03	3.64	4.28	3.30

Office Address: Guildbourne House, Chatsworth Road, Worthing BN11 1LD.
 Customer services line: 03708 506 506. Email: enquiries@environment-agency.gov.uk
www.gov.uk/government/organisations/environment-agency

Table 3: Water Depth: Fluvial Defended

Node Ref	NGR		Modelled Flood Depths in Metres
			Defended Annual Exceedance Probability
Node Ref	Eastings	Northings	0.1%
1	494326	99775	N/A
2	494303	99770	N/A
3	494333	99755	N/A
4	494295	99748	N/A
5	494334	99715	0.53
6	494292	99720	0.45
7	494336	99676	N/A
8	494289	99698	0.49

Table 4: Water Depth: Tidal Undefended

Node Ref	NGR		Modelled Flood Depths in Metres			
			Undefended Annual Exceedance Probability			
Node Ref	Eastings	Northings	0.5%	0.5% (2070)	0.5% (2115)	0.1%
1	494326	99775	0.68	1.28	1.92	0.94
2	494303	99770	0.34	0.94	1.58	0.60
3	494333	99755	1.09	1.69	2.33	1.35
4	494295	99748	0.91	1.52	2.15	1.18
5	494334	99715	1.66	2.27	2.91	1.93
6	494292	99720	1.65	2.25	2.89	1.91
7	494336	99676	1.36	1.97	2.61	1.63
8	494289	99698	1.64	2.25	2.89	1.91

All levels taken from: Ems to Littlehampton Modelling (Arun to East Head Model) (tidal) & Aldingbourne (fluvial)

Produced on: 10/07/2018

There are only defended levels and depths available from the Aldingbourne Model

There is no additional information or health warnings for these levels/depths or the model from which they have been produced.

Station name **SHRIPNEY**
 Station number 2.45E+08
 External number ---
 River ---
 Operator ---
 NGR **SU9290701615**
 Easting **492907**
 Northing **101615**
 Parameter-name WL [Water Level]
 Parameter Type Groundwater Level
 Time series name SSD/245420001/WL/Cmd.RelAbs.P
 Time series unit m
 Time level High-resolution
 Time series type Other -1.8
 Equidistant time s no 1.81
 Time series value --- -0.3508
 Time series quality Production
 Time series measi ---
 Period of record in file: 24/04/1980 12:00:00 to 08/05/2018 13:29:00

G = good; E = estimated; S = suspect; U = unchecked; M = missing; C = complete; I = incomplete; Ed = edited; WR = within rating; NR = no rating; EX> = extrapolated upper part; EX< = extrapolated lower part; BL> = beyond upper limit; BL< = beyond lower limit; MH = weir modular (head); NH = weir non modular (head); EH = weir extremely non modular (head); MT = weir modular (tail); NT = weir non modular (tail); ET = weir extremely non modular (tail); MC = weir modular (crest); NC = weir non modular (crest); EC = weir extremely non modular (crest); -H = weir head only; RAS = rastered time stamp; A = apportioned/interpolated; D = dry; SN = snow; T = trace

Quality code	description	Time stamp	Dip[m]	State of va	Interpolatic	Groundwa	State of ab	Interpolatic	Tags	Comments
		24/04/1980 12:00	3.28 G	101	-0.17 G	101				
		27/05/1980 12:00	3.63 G	101	-0.52 G	101				
		04/07/1980 12:00	3.56 G	101	-0.45 G	101				
		07/08/1980 12:00	3.64 G	101	-0.53 G	101				
		12/09/1980 12:00	3.68 G	101	-0.57 G	101				
		17/10/1980 12:00	2.86 G	101	0.25 G	101				
		17/10/1980 12:01 ---	M	101 ---	M	101				
		09/04/1981 12:00	2.8 G	101	0.31 G	101				
		13/05/1981 12:00	3.3 G	101	-0.19 G	101				
		19/06/1981 12:00	3.46 G	101	-0.35 G	101				
		16/07/1981 12:00	3.71 G	101	-0.6 G	101				
		16/09/1981 12:00	3.75 G	101	-0.64 G	101				
		16/10/1981 12:00	3.22 G	101	-0.11 G	101				
		11/11/1981 12:00	3.09 G	101	0.02 G	101				
		19/02/1982 12:00	3.16 G	101	-0.05 G	101				
		15/04/1982 12:00	3.33 G	101	-0.22 G	101				
		09/06/1982 12:00	3.64 G	101	-0.53 G	101				
		07/07/1982 12:00	2.75 G	101	0.36 G	101				
		22/09/1982 12:00	4.91 G	101	-1.8 G	101				
		03/11/1982 12:00	2.95 G	101	0.16 G	101				
		12/01/1983 12:00	2.66 G	101	0.45 G	101				
		17/02/1983 12:00	3.4 G	101	-0.29 G	101				
		29/04/1983 12:00	3.07 G	101	0.04 G	101				
		10/06/1983 12:00	3.28 G	101	-0.17 G	101				
		14/07/1983 12:00	3.62 G	101	-0.51 G	101				
		17/09/1983 12:00	3.59 G	101	-0.48 G	101				
		09/01/1984 12:00	3.32 G	101	-0.21 G	101				
		09/05/1984 12:00	3.65 G	101	-0.54 G	101				

Time stamp	Dip[m]	State of va Interpolatic	Groundwa	State of ab Interpolatic	Tags	Comments
10/07/1984 12:00	3.86 G	101	-0.75 G	101		
11/09/1984 12:00	4 G	101	-0.89 G	101		
15/10/1984 12:00	3.62 G	101	-0.51 G	101		
15/10/1984 12:01 ---	M	101 ---	M	101		
01/05/1985 12:00	3.42 G	101	-0.31 G	101		
26/09/1985 12:00	3.75 G	101	-0.64 G	101		
27/11/1985 12:00	3.27 G	101	-0.16 G	101		
21/02/1986 12:00	3.43 G	101	-0.32 G	101		
09/04/1986 12:00	3.2 G	101	-0.09 G	101		
18/06/1986 12:00	3.6 G	101	-0.49 G	101		
10/09/1986 12:00	3.64 G	101	-0.53 G	101		
05/11/1986 12:00	3.56 G	101	-0.45 G	101		
28/01/1987 12:00	3.51 G	101	-0.4 G	101		
13/05/1987 12:00	3.54 G	101	-0.43 G	101		
22/07/1987 12:00	3.65 G	101	-0.54 G	101		
11/08/1987 12:00	3.85 G	101	-0.74 G	101		
15/10/1987 12:00	3.44 G	101	-0.33 G	101		
31/12/1987 12:00	3.53 G	101	-0.42 G	101		
31/12/1987 12:01 ---	M	101 ---	M	101		
11/08/1988 12:00	4.01 G	101	-0.9 G	101		
25/01/1989 12:00	3.77 G	101	-0.66 G	101		
15/06/1989 12:00	4 G	101	-0.89 G	101		
11/10/1989 12:00	4.26 G	101	-1.15 G	101		
16/11/1989 12:00	3.78 G	101	-0.67 G	101		
12/12/1989 12:00	2.73 G	101	0.38 G	101		
23/01/1990 12:00	3.18 G	101	-0.07 G	101		
23/01/1990 12:01 ---	M	101 ---	M	101		
27/09/1990 12:00	4.14 G	101	-1.03 G	101		
20/12/1990 12:00	3.86 G	101	-0.75 G	101		
24/01/1991 12:00	3.33 G	101	-0.22 G	101		
27/02/1991 12:00	3.61 G	101	-0.5 G	101		
22/03/1991 12:00	3.96 G	101	-0.85 G	101		
25/04/1991 12:00	3.55 G	101	-0.44 G	101		
29/05/1991 12:00	3.79 G	101	-0.68 G	101		
28/06/1991 12:00	3.66 G	101	-0.55 G	101		
26/07/1991 12:00	3.6 G	101	-0.49 G	101		
26/07/1991 12:01 ---	M	101 ---	M	101		
13/12/1991 12:00	3.59 G	101	-0.48 G	101		
24/01/1992 12:00	3.89 G	101	-0.78 G	101		
27/02/1992 12:00	3.78 G	101	-0.67 G	101		
30/03/1992 12:00	3.73 G	101	-0.62 G	101		
23/04/1992 12:00	3.7 G	101	-0.59 G	101		
20/05/1992 12:00	3.66 G	101	-0.55 G	101		
08/06/1992 12:00	2.45 S	101	0.66 S	101		
15/06/1992 12:00	2.6 S	101	0.51 S	101		
22/06/1992 12:00	3.95 S	101	-0.84 S	101		
30/06/1992 12:00	2.72 S	101	0.39 S	101		
06/07/1992 12:00	2.53 S	101	0.58 S	101		
13/07/1992 12:00	2.54 S	101	0.57 S	101		
27/07/1992 12:00	2.55 S	101	0.56 S	101		
30/07/1992 12:00	3.8 S	101	-0.69 S	101		
21/08/1992 12:00	3.85 S	101	-0.74 S	101		
07/09/1992 12:00	2.48 S	101	0.63 S	101		
23/09/1992 12:00	3.79 S	101	-0.68 S	101		
27/10/1992 12:00	3.44 S	101	-0.33 S	101		
24/11/1992 12:00	1.87 S	101	1.24 S	101		

Time stamp	Dip[m]	State of va Interpolatic Groundwa	State of ab Interpolatic Tags	Comments
26/11/1992 12:00	2.74 S	101	0.37 S	101
01/12/1992 12:00	1.3 S	101	1.81 S	101
10/12/1992 12:00	1.58 S	101	1.53 S	101
17/12/1992 12:00	3.18 S	101	-0.07 S	101
07/01/1993 12:00	1.93 S	101	1.18 S	101
21/01/1993 12:00	3.03 S	101	0.08 S	101
04/02/1993 12:00	1.89 S	101	1.22 S	101
18/02/1993 12:00	2.2 S	101	0.91 S	101
19/02/1993 12:00	3.44 S	101	-0.33 S	101
05/03/1993 12:00	3.63 S	101	-0.52 S	101
18/03/1993 12:00	2.51 S	101	0.6 S	101
01/04/1993 12:00	2.36 S	101	0.75 S	101
15/04/1993 12:00	2.17 S	101	0.94 S	101
27/04/1993 12:00	2.19 S	101	0.92 S	101
04/05/1993 12:00	2.34 S	101	0.77 S	101
11/05/1993 12:00	2.42 S	101	0.69 S	101
14/05/1993 12:00	3.67 S	101	-0.56 S	101
18/05/1993 12:00	2.49 S	101	0.62 S	101
01/06/1993 12:00	2.43 S	101	0.68 S	101
07/06/1993 12:00	2.52 S	101	0.59 S	101
15/06/1993 12:00	2.41 S	101	0.7 S	101
18/06/1993 12:00	2.2 S	101	0.91 S	101
22/06/1993 12:00	2.39 S	101	0.72 S	101
24/06/1993 12:00	3.75 S	101	-0.64 S	101
05/07/1993 12:00	2.64 S	101	0.47 S	101
14/07/1993 12:00	2.59 S	101	0.52 S	101
22/07/1993 12:00	2.59 S	101	0.52 S	101
29/07/1993 12:00	2.44 S	101	0.67 S	101
05/08/1993 12:00	2.58 S	101	0.53 S	101
09/08/1993 12:00	2.62 S	101	0.49 S	101
16/08/1993 12:00	2.59 S	101	0.52 S	101
23/08/1993 12:00	2.57 S	101	0.54 S	101
31/08/1993 12:00	2.69 S	101	0.42 S	101
09/09/1993 12:00	3.81 S	101	-0.7 S	101
15/09/1993 12:00	2.6 S	101	0.51 S	101
16/09/1993 12:00	3.33 S	101	-0.22 S	101
18/09/1993 12:00	2.67 S	101	0.44 S	101
20/09/1993 12:00	2.21 S	101	0.9 S	101
22/09/1993 12:00	2.68 S	101	0.43 S	101
29/09/1993 12:00	2.34 S	101	0.77 S	101
04/10/1993 12:00	1.67 S	101	1.44 S	101
11/10/1993 12:00	1.61 S	101	1.5 S	101
18/10/1993 12:00	1.74 S	101	1.37 S	101
20/10/1993 12:00	2.43 S	101	0.68 S	101
25/10/1993 12:00	2 S	101	1.11 S	101
12/11/1993 12:00	1.99 S	101	1.12 S	101
14/12/1993 12:00	1.69 S	101	1.42 S	101
14/12/1993 12:01 ---	M	101 ---	M	101
22/06/1994 12:00	3.63 G	101	-0.52 G	101
19/07/1994 12:00	3.81 G	101	-0.7 G	101
16/08/1994 12:00	4.02 G	101	-0.91 G	101
14/09/1994 12:00	3.56 G	101	-0.45 G	101
19/10/1994 12:00	3.84 G	101	-0.73 G	101
10/01/1995 12:00	2.97 G	101	0.14 G	101
17/03/1995 12:00	2.84 G	101	0.27 G	101
02/05/1995 12:00	3.59 G	101	-0.48 G	101

Time stamp	Dip[m]	State of va	Interpolatic	Groundwa	State of ab	Interpolatic	Tags	Comments
02/05/1995 12:01	---	M	101	---	M	101		
05/12/1995 12:00	3.92	G	101	-0.81	G	101		
04/01/1996 12:00	3.51	G	101	-0.4	G	101		
08/03/1996 12:00	3.48	G	101	-0.37	G	101		
02/04/1996 12:00	3.69	G	101	-0.58	G	101		
02/05/1996 12:00	3.81	G	101	-0.7	G	101		
04/06/1996 12:00	3.89	G	101	-0.78	G	101		
05/07/1996 12:00	3.97	G	101	-0.86	G	101		
02/08/1996 12:00	4.35	G	101	-1.24	G	101		
06/09/1996 12:00	4.42	G	101	-1.31	G	101		
04/10/1996 12:00	4.34	G	101	-1.23	G	101		
08/11/1996 12:00	4.06	G	101	-0.95	G	101		
05/12/1996 12:00	3.53	G	101	-0.42	G	101		
03/01/1997 12:00	3.9	G	101	-0.79	G	101		
06/02/1997 12:00	3.83	G	101	-0.72	G	101		
07/03/1997 12:00	3.37	G	101	-0.26	G	101		
04/04/1997 12:00	3.87	G	101	-0.76	G	101		
07/05/1997 12:00	4.41	G	101	-1.3	G	101		
03/06/1997 12:00	4.51	G	101	-1.4	G	101		
01/07/1997 12:00	3.53	G	101	-0.42	G	101		
01/08/1997 00:00	4.12	G	101	-1.01	G	101		
01/09/1997 00:00	3.89	G	101	-0.78	G	101		
01/10/1997 00:00	4.28	G	101	-1.17	G	101		
03/11/1997 00:00	3.94	G	101	-0.83	G	101		
02/12/1997 12:00	3.04	G	101	0.07	G	101		
02/01/1998 00:00	2.68	G	101	0.43	G	101		
03/02/1998 12:00	3.45	G	101	-0.34	G	101		
03/03/1998 12:00	3.71	G	101	-0.6	G	101		
02/04/1998 12:00	3.6	G	101	-0.49	G	101		
05/05/1998 12:00	3.45	G	101	-0.34	G	101		
01/07/1998 12:00	3.69	G	101	-0.58	G	101		
03/08/1998 12:00	4.01	G	101	-0.9	G	101		
01/10/1998 12:00	3.95	G	101	-0.84	G	101		
02/11/1998 12:00	3.18	G	101	-0.07	G	101		
04/12/1998 12:00	3.58	G	101	-0.47	G	101		
04/01/1999 12:00	3.03	G	101	0.08	G	101		
11/02/1999 12:00	3.49	G	101	-0.38	G	101		
08/03/1999 12:00	3.48	G	101	-0.37	G	101		
06/04/1999 12:00	3.78	G	101	-0.67	G	101		
05/05/1999 12:00	3.84	G	101	-0.73	G	101		
04/06/1999 12:00	3.75	G	101	-0.64	G	101		
05/07/1999 12:00	4.04	G	101	-0.93	G	101		
05/08/1999 12:00	4.25	G	101	-1.14	G	101		
03/09/1999 12:00	4.18	G	101	-1.07	G	101		
01/10/1999 12:00	3.77	G	101	-0.66	G	101		
01/11/1999 12:00	3.77	G	101	-0.66	G	101		
01/12/1999 12:00	3.97	G	101	-0.86	G	101		
30/12/1999 12:00	3.07	G	101	0.04	G	101		
28/01/2000 12:00	3.59	G	101	-0.48	G	101		
24/02/2000 12:00	3.61	G	101	-0.5	G	101		
03/04/2000 12:00	3.66	G	101	-0.55	G	101		
03/05/2000 12:00	3.31	G	101	-0.2	G	101		
02/06/2000 12:00	3.24	G	101	-0.13	G	101		
03/07/2000 12:00	3.8	G	101	-0.69	G	101		
02/08/2000 12:00	4	G	101	-0.89	G	101		
31/08/2000 12:00	4.16	G	101	-1.05	G	101		

Time stamp	Dip[m]	State of va Interpolatic	Groundwa	State of ab Interpolatic	Tags	Comments
02/10/2000 12:00	3.56 G	101	-0.45 G	101		
09/11/2000 12:00	2.55 G	101	0.56 G	101		
14/11/2000 12:00	2.57 G	101	0.54 G	101		
01/12/2000 12:00	2.66 G	101	0.45 G	101		
03/01/2001 12:00	2.95 G	101	0.16 G	101		
01/02/2001 12:00	3.01 G	101	0.1 G	101		
01/03/2001 12:00	3.34 G	101	-0.23 G	101		
03/04/2001 12:00	3.09 G	101	0.02 G	101		
01/05/2001 12:00	3.11 G	101	0 G	101		
04/06/2001 12:00	3.85 G	101	-0.74 G	101		
02/07/2001 12:00	4.01 G	101	-0.9 G	101		
01/08/2001 12:00	4.16 G	101	-1.05 G	101		
03/09/2001 12:00	4.2 G	101	-1.09 G	101		
04/10/2001 12:00	3.7 G	101	-0.59 G	101		
05/11/2001 12:00	3.65 G	101	-0.54 G	101		
03/12/2001 12:00	3.6 G	101	-0.49 G	101		
02/01/2002 12:00	3.81 G	101	-0.7 G	101		
31/01/2002 12:00	3.11 G	101	0 G	101		
28/02/2002 12:00	2.95 G	101	0.16 G	101		
02/04/2002 12:00	3.42 G	101	-0.31 G	101		
29/04/2002 12:00	3.64 G	101	-0.53 G	101		
31/05/2002 12:00	3.6 G	101	-0.49 G	101		
24/06/2002 12:00	3.66 G	101	-0.55 G	101		
31/07/2002 12:00	3.82 G	101	-0.71 G	101		
30/08/2002 12:00	3.81 G	101	-0.7 G	101		
30/09/2002 12:00	3.85 G	101	-0.74 G	101		
25/10/2002 12:00	3.72 G	101	-0.61 G	101		
27/11/2002 12:00	3.02 G	101	0.09 G	101		
30/12/2002 12:00	2.65 G	101	0.46 G	101		
04/02/2003 12:00	3.16 G	101	-0.05 G	101		
28/02/2003 12:00	3.51 G	101	-0.4 G	101		
31/03/2003 12:00	3.67 G	101	-0.56 G	101		
01/05/2003 12:00	3.69 G	101	-0.58 G	101		
30/05/2003 11:12	3.85 G	101	-0.74 G	101		
13/07/2003 12:02	4 G	101	-0.89 G	101		
31/07/2003 14:20	3.97 G	101	-0.86 G	101		
01/09/2003 10:06	4.04 G	101	-0.93 G	101		
30/09/2003 10:55	4.36 G	101	-1.25 G	101		
28/10/2003 11:35	4.17 G	101	-1.06 G	101		
27/11/2003 11:44	3.41 G	101	-0.3 G	101		
31/12/2003 13:20	2.96 G	101	0.15 G	101		
28/01/2004 13:01	3.29 G	101	-0.18 G	101		
26/02/2004 11:58	3.62 G	101	-0.51 G	101		
31/03/2004 11:18	3.73 G	101	-0.62 G	101		
30/04/2004 10:57	3.65 G	101	-0.54 G	101		
28/05/2004 11:12	3.89 G	101	-0.78 G	101		
24/06/2004 12:13	3.94 G	101	-0.83 G	101		
27/07/2004 11:20	4.2 G	101	-1.09 G	101		
18/08/2004 10:52	4.21 G	101	-1.1 G	101		
23/09/2004 10:18	4.12 G	101	-1.01 G	101		
28/10/2004 11:44	3.43 G	101	-0.32 G	101		
29/11/2004 12:41	3.78 G	101	-0.67 G	101		
29/12/2004 12:24	3.27 G	101	-0.16 G	101		
27/01/2005 11:44	3.37 G	101	-0.26 G	101		
28/02/2005 12:00	3.78 G	101	-0.67 G	101		
23/03/2005 16:15	3.86 G	101	-0.75 G	101		

Time stamp	Dip[m]	State of va Interpolatic	Groundwa	State of ab Interpolatic	Tags	Comments
27/04/2005 14:09	3.73 G	101	-0.62 G	101		
26/05/2005 10:33	3.88 G	101	-0.77 G	101		
30/06/2005 13:20	4.18 G	101	-1.07 G	101		
01/08/2005 14:40	4.04 G	101	-0.93 G	101		
30/08/2005 15:09	4.04 G	101	-0.93 G	101		
26/09/2005 15:50	4.24 G	101	-1.13 G	101		
27/10/2005 16:43	3.5 G	101	-0.39 G	101		
29/11/2005 12:11	3.76 G	101	-0.65 G	101		
23/12/2005 15:08	3.61 G	101	-0.5 G	101		
27/01/2006 16:10	3.67 G	101	-0.56 G	101		
28/02/2006 12:18	3.35 G	101	-0.24 G	101		
28/03/2006 15:00	2.48 G	101	0.63 G	101		
27/04/2006 11:40	3.63 G	101	-0.52 G	101		
30/05/2006 15:45	3.58 G	101	-0.47 G	101		
29/06/2006 16:00	4.03 G	101	-0.92 G	101		
01/08/2006 15:16	4.31 G	101	-1.2 G	101		
31/08/2006 12:35	4.62 G	101	-1.51 G	101		
27/09/2006 13:10	3.92 G	101	-0.81 G	101		
02/11/2006 14:20	3.56 G	101	-0.45 G	101		
30/11/2006 13:45	3.28 G	101	-0.17 G	101		
29/12/2006 15:31	3.35 G	101	-0.24 G	101		
24/01/2007 15:00	3.16 G	101	-0.05 G	101		
26/02/2007 16:30	2.89 G	101	0.22 G	101		
13/04/2007 11:31	3.69 G	101	-0.58 G	101		
01/06/2007 10:27	3.5 G	101	-0.39 G	101		
05/07/2007 12:10	3.56 G	101	-0.45 G	101		
09/08/2007 12:50	3.88 G	101	-0.77 G	101		
19/09/2007 12:08	4.12 G	101	-1.01 G	101		
25/10/2007 12:30	4.05 G	101	-0.94 G	101		
29/11/2007 14:10	3.57 G	101	-0.46 G	101		
12/12/2007 12:35	3.22 G	101	-0.11 G	101		
11/01/2008 12:25	3.09 G	101	0.02 G	101		
04/02/2008 13:42	3.24 G	101	-0.13 G	101		
03/03/2008 13:21	3.59 G	101	-0.48 G	101		
17/04/2008 11:15	3.58 G	101	-0.47 G	101		
14/05/2008 11:45	3.69 G	101	-0.58 G	101		
03/06/2008 12:25	3.22 G	101	-0.11 G	101		
10/07/2008 12:20	3.54 G	101	-0.43 G	101		
21/08/2008 12:06	3.89 G	101	-0.78 G	101		
08/10/2008 12:37	3.71 G	101	-0.6 G	101		
05/11/2008 13:32	3.69 G	101	-0.58 G	101		
02/12/2008 13:09	3.4 G	101	-0.29 G	101		
06/01/2009 14:01	3.7 G	101	-0.59 G	101		
04/02/2009 12:23	3.18 G	101	-0.07 G	101		
04/03/2009 12:03	3.3 G	101	-0.19 G	101		
07/04/2009 10:45	3.7 G	101	-0.59 G	101		
13/05/2009 11:22	3.82 G	101	-0.71 G	101		
03/06/2009 11:18	3.9 G	101	-0.79 G	101		
01/07/2009 08:20	4.21 G	101	-1.1 G	101		
05/08/2009 13:18	4.09 G	101	-0.98 G	101		
02/09/2009 08:42	4.31 G	101	-1.2 G	101		
02/10/2009 09:58	4.44 G	101	-1.33 G	101		
02/11/2009 11:37	3.92 G	101	-0.81 G	101		
08/12/2009 10:59	2.84 G	101	0.27 G	101		
12/01/2010 15:37	3.07 G	101	0.04 G	101		
12/02/2010 15:26	3.24 G	101	-0.13 G	101		

Time stamp	Dip[m]	State of va Interpolatic	Groundwa	State of ab Interpolatic	Tags	Comments
24/03/2010 12:56	3.29 G	101	-0.18 G	101		
30/04/2010 09:10	3.64 G	101	-0.53 G	101		
26/05/2010 08:22	3.83 G	101	-0.72 G	101		
30/06/2010 09:40	4.2 G	101	-1.09 G	101		
20/07/2010 08:43	4.2 G	101	-1.09 G	101		
17/08/2010 09:13	4.42 G	101	-1.31 G	101		
17/09/2010 09:13	3.88 G	101	-0.77 G	101		
18/10/2010 14:47	3.7 G	101	-0.59 G	101		
18/11/2010 10:21	2.98 G	101	0.13 G	101		
08/12/2010 10:01	3.26 G	101	-0.15 G	101		
07/01/2011 10:23	3.02 G	101	0.09 G	101		
11/02/2011 09:54	3.26 G	101	-0.15 G	101		
22/03/2011 09:39	3.51 G	101	-0.4 G	101		
15/04/2011 08:22	3.74 G	101	-0.63 G	101		
19/05/2011 08:56	3.98 G	101	-0.87 G	101		
16/06/2011 08:45	3.94 G	101	-0.83 G	101		
21/07/2011 09:22	4 G	101	-0.89 G	101		
18/08/2011 08:40	4.03 G	101	-0.92 G	101		
15/09/2011 09:09	4.03 G	101	-0.92 G	101		
13/10/2011 13:34	4.18 G	101	-1.07 G	101		
16/11/2011 10:35	4 G	101	-0.89 G	101		
22/12/2011 09:23	3.57 G	101	-0.46 G	101		
12/01/2012 13:00	3.58 G	101	-0.47 G	101		
09/02/2012 11:21	3.67 G	101	-0.56 G	101		
08/03/2012 10:12	3.76 G	101	-0.65 G	101		
11/04/2012 09:00	3.81 G	101	-0.7 G	101		
15/05/2012 09:42	3.32 G	101	-0.21 G	101		
07/06/2012 09:54	3.52 G	101	-0.41 G	101		
17/07/2012 10:16	3.02 G	101	0.09 G	101		
08/08/2012 09:37	3.63 G	101	-0.52 G	101		
10/09/2012 09:41	3.86 G	101	-0.75 G	101		
08/10/2012 11:22	3.41 G	101	-0.3 G	101		
04/11/2012 10:51	3.2 G	101	-0.09 G	101		
13/12/2012 14:31	3.22 G	101	-0.11 G	101		
10/01/2013 10:31	3 G	101	0.11 G	101		
07/02/2013 15:00	2.99 G	101	0.12 G	101		
13/03/2013 12:01	3.3 G	101	-0.19 G	101		
16/04/2013 09:20	3.09 G	101	0.02 G	101		
14/05/2013 14:05	3.46 G	101	-0.35 G	101		
14/06/2013 10:18	3.62 G	101	-0.51 G	101		
18/07/2013 09:12	3.9 G	101	-0.79 G	101		
22/08/2013 11:10	4.04 G	101	-0.93 G	101		
25/09/2013 09:14	3.93 G	101	-0.82 G	101		
17/10/2013 13:19	3.78 G	101	-0.67 G	101		
26/11/2013 10:23	3.5 G	101	-0.39 G	101		
17/12/2013 11:10	3.44 G	101	-0.33 G	101		
13/01/2014 11:34	2.86 G	101	0.25 G	101		
26/02/2014 09:57	2.95 G	101	0.16 G	101		
19/03/2014 09:58	3.4 G	101	-0.29 G	101		
14/04/2014 09:27	3.54 G	101	-0.43 G	101		
28/05/2014 10:10	3.34 G	101	-0.23 G	101		
26/06/2014 10:54	3.78 G	101	-0.67 G	101		
28/07/2014 09:38	4.06 G	101	-0.95 G	101		
22/08/2014 11:49	4.07 G	101	-0.96 G	101		
16/09/2014 09:12	4.03 G	101	-0.92 G	101		
30/10/2014 12:03	4.25 G	101	-1.14 G	101		

Time stamp	Dip[m]	State of va Interpolatic	Groundwa	State of ab Interpolatic	Tags	Comments
27/11/2014 10:38	2.76 G	101	0.35 G	101		
19/12/2014 13:45	3.11 G	101	0 G	101		
27/01/2015 10:02	3.09 G	101	0.02 G	101		
17/02/2015 12:41	3.48 G	101	-0.37 G	101		
17/03/2015 16:15	3.5 G	101	-0.39 G	101		
22/04/2015 13:31	3.77 G	101	-0.66 G	101		
15/05/2015 13:36	3.71 G	101	-0.6 G	101		
15/06/2015 12:18	3.9 G	101	-0.79 G	101		
27/07/2015 12:45	3.93 G	101	-0.82 G	101		
19/08/2015 08:30	4.02 G	101	-0.91 G	101		
18/09/2015 13:05	3.59 G	101	-0.48 G	101		
19/10/2015 13:54	3.84 G	101	-0.73 G	101		
12/11/2015 11:43	3.51 G	101	-0.4 G	101		
10/12/2015 13:49	3.51 G	101	-0.4 G	101		
18/01/2016 12:05	2.89 G	101	0.22 G	101		
18/02/2016 14:30	3.04 G	101	0.07 G	101		
29/03/2016 16:00	3.28 G	101	-0.17 G	101		null
15/04/2016 16:00 ---	M;Ed	101 ---	M;Ed	101		Monthly diğ
27/05/2016 11:00	3.75 G	101	-0.64 G	101		null
23/06/2016 14:00	3.4 G	101	-0.29 G	101		null
20/07/2016 11:00	3.85 G	101	-0.74 G	101		null
12/08/2016 14:00	3.94 G	101	-0.83 G	101		null
30/09/2016 10:00	4.09 G	101	-0.98 G	101		null
06/10/2016 11:00	4.05 G	101	-0.94 G	101		null
07/11/2016 13:00	3.83 G	101	-0.72 G	101		null
16/12/2016 15:00	3.78 G	101	-0.67 G	101		null
19/01/2017 16:00	3.31 G	101	-0.2 G	101		null
09/02/2017 10:00	3.08 G	101	0.03 G	101		null
27/03/2017 17:00	3.48 G	101	-0.37 G	101		null
27/04/2017 10:00	3.79 G	101	-0.68 G	101		null
19/05/2017 09:00	3.63 G	101	-0.52 G	101		null
22/06/2017 09:00	3.8 G	101	-0.69 G	101		null
07/07/2017 09:00	3.84 G	101	-0.73 G	101		null
02/08/2017 09:00	3.6 G	101	-0.49 G	101		null
28/09/2017 09:00	3.73 G	101	-0.62 G	101		null
25/10/2017 09:00	3.67 G	101	-0.56 G	101		null
06/11/2017 09:00	3.8 G	101	-0.69 G	101		null
05/12/2017 09:00	3.71 G	101	-0.6 G	101		null
25/01/2018 09:00	2.91 G	101	0.2 G	101		null
08/02/2018 12:44	3.31 G	101	-0.2 G	101		
13/03/2018 10:32	3.14 G	101	-0.03 G	101		
10/04/2018 10:39	3.05 G	101	0.06 G	101		
08/05/2018 13:29	3.45 G	101	-0.34 G	101		

From: PSO West Sussex <PSOWestSussex@environment-agency.gov.uk>
Sent: 28 April 2021 15:52
To: [REDACTED]
Cc: SSD Enquiries
Subject: SSD214635- Product 4 - West Sussex
Attachments: FRA Advisory Text.pdf; SSD Pre-app advice note September 2019.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear [REDACTED],

Thank you for your Product 4 request for **94 – 100 Hook Lane, Bognor Regis, PO22 8AT**.

I can confirm that the Product 4 previously supplied is still the most up to date modelled data.

For FRA and pre-planning advice please see attached 'FRA Advisory Text' and 'SSD Pre-app advice note September 2019'.

For information on flooding from other sources such as surface water please contact the Lead Local Flood Authority, West Sussex County Council.

The flood risk data provided is based on existing EA hydraulic models for existing 0.5% annual probability events with an allowance for climate change. Please note the climate change allowances provided are not up to date. These were updated on 17 December 2019.

You should refer to '[Flood risk assessments: climate change allowances](#)' for the most up to date allowances. You will need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

Guidance on climate change allowances and how to use them in Flood Risk Assessments can be found [here](#).

For future reference, detailed flood information and maps can be viewed using the [Long Term Flood Risk Information](#) service and [Flood Map for Planning](#) service. Flood and Coastal Risk Management asset information, and details of all planned maintenance activities can be viewed using the [Asset Management](#) Service.

If you have any further queries about this request, please do not hesitate to contact us at psowestsussex@environment-agency.gov.uk.

Kind regards,

[REDACTED]

FCRM Officer, Partnership & Strategic Overview West Sussex, Solent and South Downs
Environment Agency, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD

From: [REDACTED] [[mailto:\[REDACTED\]@wsp.com](mailto:[REDACTED]@wsp.com)]
Sent: 25 March 2021 14:56
To: Enquiries, Unit <enquiries@environment-agency.gov.uk>
Subject: Product 4 - West Sussex

Hello

We've previously carried out a FRA for a site in Bognor Regis, West Sussex (located at approximately 494296, 099738) in 2018. The poropsoed site covers the addresses of 94 – 100 Hook Lane, PO22 8AT

The Product 4 at the time was based on the following models;
Tidal - Ems to Littlehampton Modelling 9Arun to East Head Model), JBA Consulting 2016
Fluvial – Aldingbourne, JBA consulting 2015

Can you confirm whether these models have since been updated? If so please can I request a new product 4 for the site?

Best regards

[REDACTED]

[REDACTED] BSc (Hons), MSc, MCIWEM C.WEM
Principal Water and Flood Risk Consultant
Water Risk Management & Engineering, WE&I



T+ 44 [REDACTED]
Please note I do not work on Mondays

Mountbatten House, Basing View
Basingstoke, Hampshire
RG21 4HJ

wsp.com

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Appendix B.2

ARUN DISTRICT COUNCIL



[REDACTED]

From: [REDACTED] <[REDACTED]@arun.gov.uk>
Sent: 29 June 2018 13:02
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: 94 - 100 Hook Lane, Bognor Regis FRA Enquiry

[REDACTED],
Thank you for your enquiry.

As you state the site is within flood zone 3. I would therefore recommend you contact the Environment Agency with a Product 4 (or higher) data request.

Our records show there is a watercourse running to the rear of the properties, this may be culverted, the exact location and condition of this should be identified early. And discussions held with us.

We hold no historic flooding records.

The site is at risk of surface water flooding and I recommend that you look at the SFRA on our website which details the risk of surface water flooding further.

Regards,

[REDACTED], MEng, GMICE
Engineer (Drainage & Coastal)

[REDACTED] | Engineer (Drainage & Coastal), Engineering Services, [Arun District Council](#) | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
Internal: [REDACTED] | External: +44 (0) [REDACTED] | Fax: +44 (0) [REDACTED] | E-mail: [REDACTED]@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: [REDACTED] On Behalf Of Planning
Sent: 22 June 2018 10:49
To: Land Drainage
Subject: FW: 94 – 100 Hook Lane, Bognor Regis FRA Enquiry

[REDACTED] | Technical Support Manager, Planning Department, [Arun District Council](#) | Location: First floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
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Save the environment - think before you print.

From: [REDACTED] [mailto:[REDACTED]@wsp.com]
Sent: 19 June 2018 12:02
To: Planning
Subject: 94 – 100 Hook Lane, Bognor Regis FRA Enquiry

Dear Sirs,

94 – 100 Hook Lane, Bognor Regis

Flood Risk Assessment – Enquiry

We have been instructed by our client to carry out an assessment of flood risk at the above site. The Proposed Development is to build 6 units at the site above.

We are writing to request the Lead Local Flood Authority provide any flood risk and flood defence data and information with respect to the above site and any other pertinent information or opinion regarding development at the application site. The Ordnance Survey grid reference for the site is 494296, 099738 and the nearest postcode is PO22 8AT.

From a review of data on the Environment Agency's Website we understand the site lies within Flood Zone 3.

Please could Arun District Council provide:

1. Flood risk and flood defence data and information with respect to the above site
2. Other pertinent information or opinion regarding development at the application site.
3. Historic records of flooding in the vicinity of the site.
4. Any assets or features which could significantly influence local flooding.

If you have any queries or require any further information from WSP please do not hesitate to get in contact

Kind regards,

 **MEng (Hons) MSc GradCIWEM**
Assistant Engineer - Water



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