FT/10/67902 -

SARACEN HOUSE
FREEGROUNDS AVENUE
HEDGE END
SOUTHAMPTON

DRAINAGE STRATEGY
AND
FLOOD RISK ASSESSMENT

November 2010

Such·Salinger·Peters

CONSULTING ENGINEERS

Issue Record

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Second Issue		
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Saracen House
Flood Risk Assessment

1.0 Introduction

1.1 The site under consideration is currently an office building and the proposal is to change its use to a dental surgery. The site is situated at Hedge End to the east of Southampton . The building is on the southern fringe of a shopping precint and there is a residential area to the south. The NGR IS SU 4915,1285. Site area is 1.45 hectares. A location plan is attached in Appendix A.

1.2 The Local Planning Authority have requested a flood risk assessment to accompany the planning application.

1.3 The Environment Agency flood mapping shows the site to be Zone 3 if the defences are ignored . The defences comprise culverts which have been recently inspected and found to be in sound condition.

1.4 There is no record of flooding since 1975..

1.5 Surface water run-off will be unaffected by the proposal. Foul sewage disposal will be to the public sewer and the rate of flow will be similar to the previous use.

2.0 Topography (Levels in metres AOD)

2.1 The site falls from steeply from the south –west corner to the north-east. The high floor level is related to the high south-west corner. We have obtained some LIDAR data which is attached in Appendix B and this gives levels of 27.8 of 27.8 outside the front door falling to 27.0 in the road at the rear. A cross section along the passage beside the building is attached in Appendix B.

2.2 The natural drainage is from west to East where the local streams discharge to the River Hamble.

2.3 Data obtained from the FEH CD shows that the catchment of the local watercourse is quite small at 0.5 sq.km i.e 50 hectares. And 73 % urban.

2.4 Photographs of the site are attached in Appendix Dj

3.0 Flood Risk

3.1 We have consulted the Environment Agency and their response is attached in Appendix C. They say that the only recorded flood was in 1975 but no details are available. The site is shown to lie in Flood Zone 3 if defences are ignored. The defences they list are the culverts which lie to the north of the site and these were inspected in 2010 and found to be in sound condition.

3.2 The culvert runs under the shops about 30 m to the north and it appers that a flood path in extreme events is across the car park of the shopping precinct and down the passage between Saracen House and No 4. This is a wide steep passage and flood depths would be small.

3.3 The E.A have provided some predicted flood depths using a technique called JFLOW ,they emphasise that these levels are prone to innacuracies and are not suitable for site specific flood risk assessments.

3.4 The topography is such that interior flooding of the building is virtually impossible because of the wide steep flood path to the north of the site and a narrower but also steep path to the south.

3.5 We should also consider other flood risks apart from fluvial flooding . We have considered the following :-

a/ Surface water flooding- this catchment area is small and has a comprehensive system of urban drainage ,if this is surcharged there is a flood path . Conclusion – this risk is small.

b/ Groundwater – This area is not vulnerable to high water tables. Conclusion –this risk is small.

c/ Foul Sewage Flooding- we have consulted Southerm Water and are waiting for their response .

4 Surface Water Drainage

4.1 The building has an existing surface water drainage system and there are no planned alterations to the building which will increase the peak flow rates. It would be prudent before submitting building regulation details to analyse the system to ensure that it complies with current design standards. If the pipework is inadequate then attenuation should be introduced to ensure that peak flows leaving the site are no larger than at present.

5 Conclusions and Recommendations.

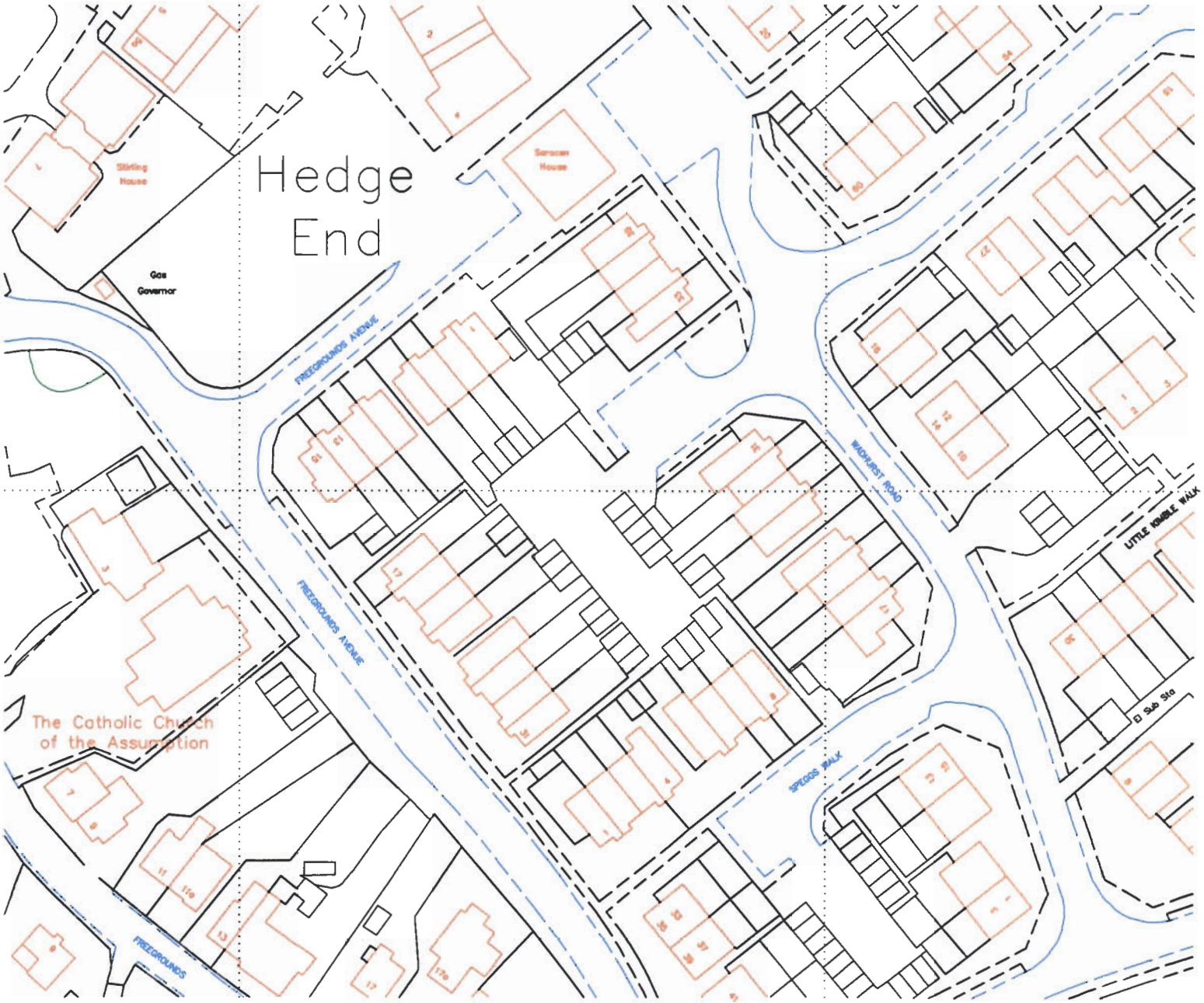
5.1 The site is not known have flooded since 1975 and although it is thought to lie within flood zone 3 for fluvial flooding the topography is such that internal flooding is very unlikely. The exception test within PPS 25 considers non residential professional use as suitable within Zone 3 .

5.2 We have considered other forms of flooding and concluded that these are all low risk.

5.3 Surface water discharge from the redeveloped site will remain the same as before.

R J SALINGER B.Eng. MICE C. Eng.
30800

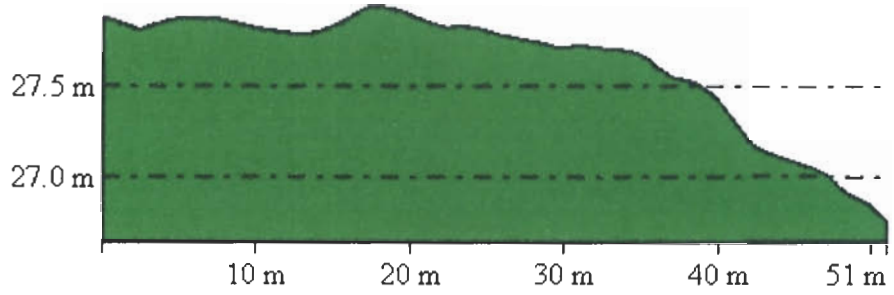
APPENDIX A
LOCATION PLAN

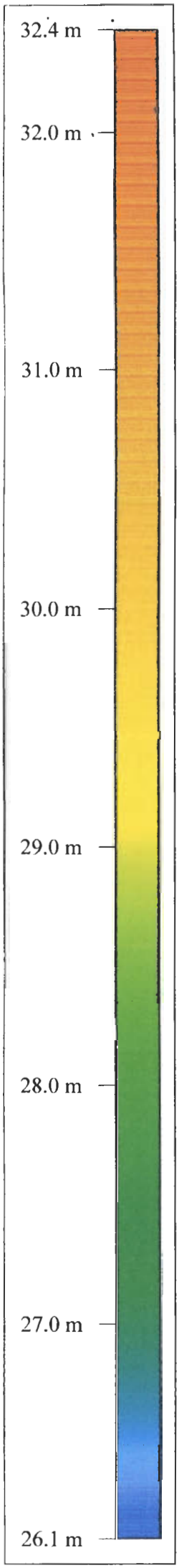


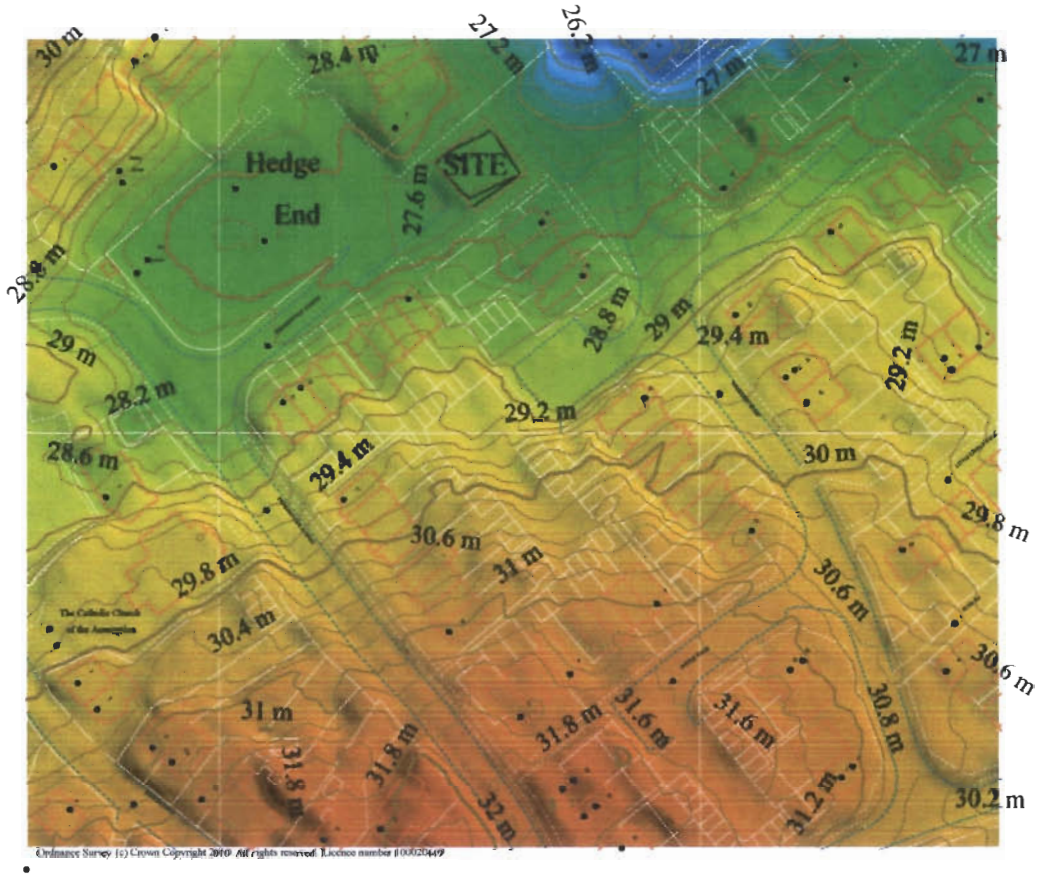
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APPENDIX B
LEVEL DATA

From Pos: 449125.095, 112845.589 To Pos: 449165.988, 112875.959




32.4 m
32.0 m
31.0 m
30.0 m
29.0 m
28.0 m
27.0 m
26.1 m


Hedge
End
SITE
27.6 m
28.4 m
27 m
28.8 m
29 m
28.2 m
28.6 m
29.4 m
29.2 m
30 m
30.6 m
31 m
29.8 m
30.4 m
31.8 m
32 m
31.6 m
30.8 m
31.2 m
30.2 m
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APPENDIX C
ENVIRONMENT AGENCY RESPONSE

From: SSD Enquiries [sossd@environment-agency.gov.uk]
Sent: 01 November 2010 13:01
To: Ron Salinger
Subject: SSD/2010/003415: SARACEN HOUSE FREEGROUNDS AVENUE HEDGE END SO30 OZU

Attachments: Standard Notice - Commercial.pdf; Flood Defences_Saracen House.pdf; Flood Map_Saracen House.pdf; JFLOW appendix.pdf; Jflow map_levels.pdf
Dear Ron,

Provision of Product 4 for Saracen House, Freegrounds Avenue, Hedge End, SO30 0ZU

Thank you for your recent request to use Environment Agency data, Product 4, for the above site. The information is attached.

If you have requested this information to help inform a development proposal, then you should note the detail in the attached advisory text on the use of Environment Agency Information for Flood Risk Assessments/Flood Consequence Assessments.

I can confirm that the above site is located in Flood Zone 3 - an area which may have a 1% chance of fluvial flooding annually (1 in 100), **ignoring** the presence and effect of any flood defences.

The nearby defences met the required standard (good/fair condition) when last inspected by the Agency earlier in the year, and a detailed map is enclosed.

Please also find enclosed is a map outlining the location of the data points for 100 and 1:1000 year from the 2008 National Generalised Modelling (JFLOW) together with the associated data license.

The Agency is aware of flooding in the area in November 1975, but have no specific details. Further information may be available from Eastleigh Borough Council.

I hope that we have correctly interpreted your request. Please see the attached Notice for details of permitted use.

Requests for information that is recorded are generally governed by the Freedom of Information Act 2000 (FOIA). The information you have requested is environmental and it is therefore exempted from the provisions of FOIA by FOIA s.39(1). We have therefore considered your request under the provisions of the Environmental Information Regulations 2004 (EIR).

If you are not satisfied with our response to your request for information you can contact us to ask for our decision to be reviewed. If you are still not satisfied following this, you can then make an appeal to the Information Commissioner, who is the statutory regulator for Freedom of Information.

Should you have any further queries, please do not hesitate to contact me.

Kind regards,

Claire Mairey
External Relations Officer
Solent & South Downs Area

Internal: 7-23-4820
External: 01962 764820
www.environment-agency.gov.uk

Environment Agency, Solent & South Downs Area Office, Colvedene Court, Wessex Business Park, Wessex Way, Colden Common, Winchester. SO21 1WP

Please note: I work Mondays, Tuesdays, Thursdays & Fridays - 9.30am to 2.30pm

Over 5 million people in England and Wales live and work in properties that are at risk of flooding from rivers or the sea. Are you one of them? Check your flood risk at www.environment-agency.gov.uk/floodsouth

Flood Map centred on Saracen House, Freegrounds Avenue - created 21 October 2010



Environment Agency

Scale 1:10,001

N W E S

- Flood Map - Defences
- Areas Benefiting from Flood Defences
- Flood Map - Flood Storage Areas
- Flood Map - Flood Zone 3
- Flood Map - Flood Zone 2

Flood Map Areas (assuming no defences)

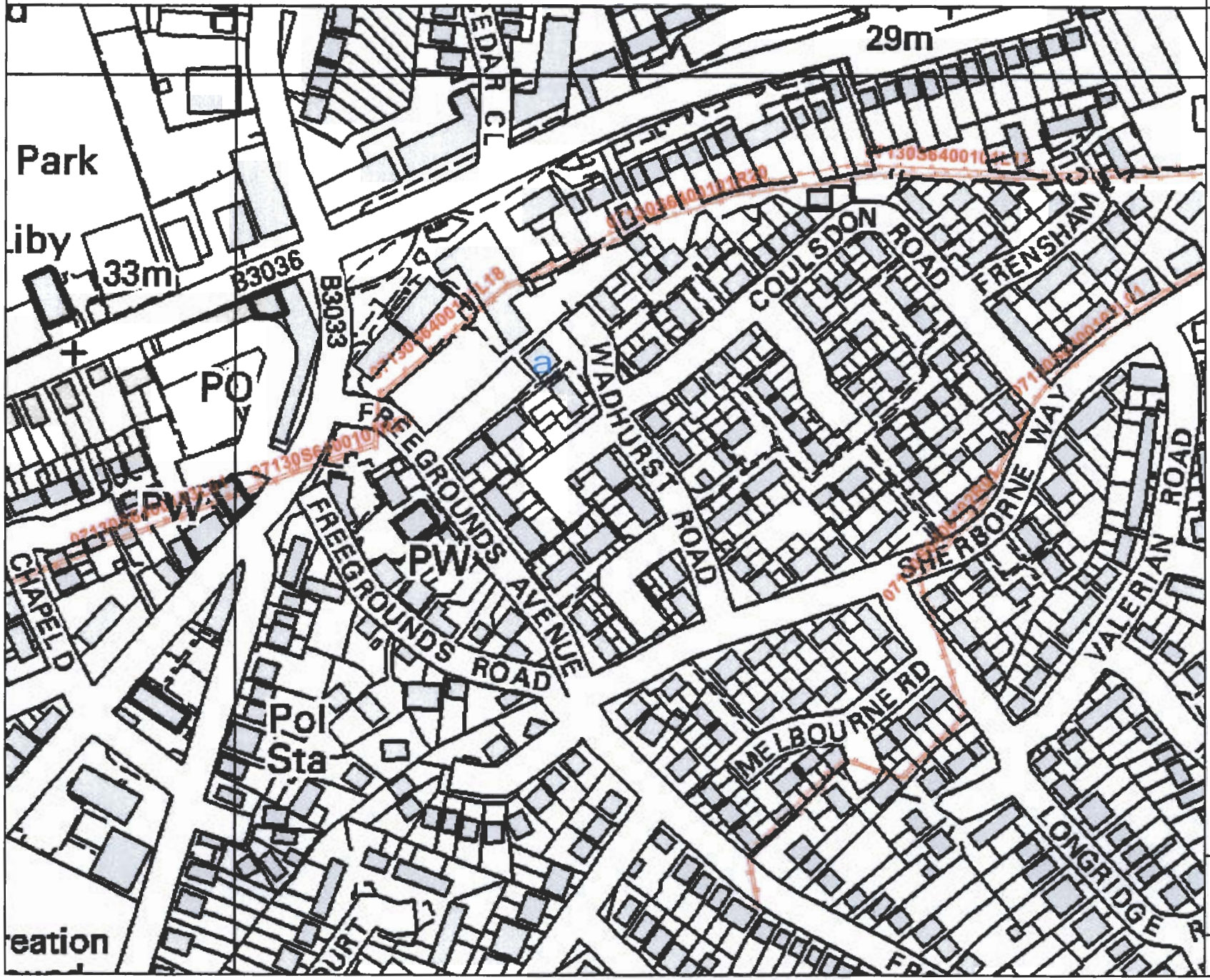
Flood Zone 3 shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

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.

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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 08708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Flood Defences near Saracen House



Environment Agency

Legend

Defences (p.t.o.)

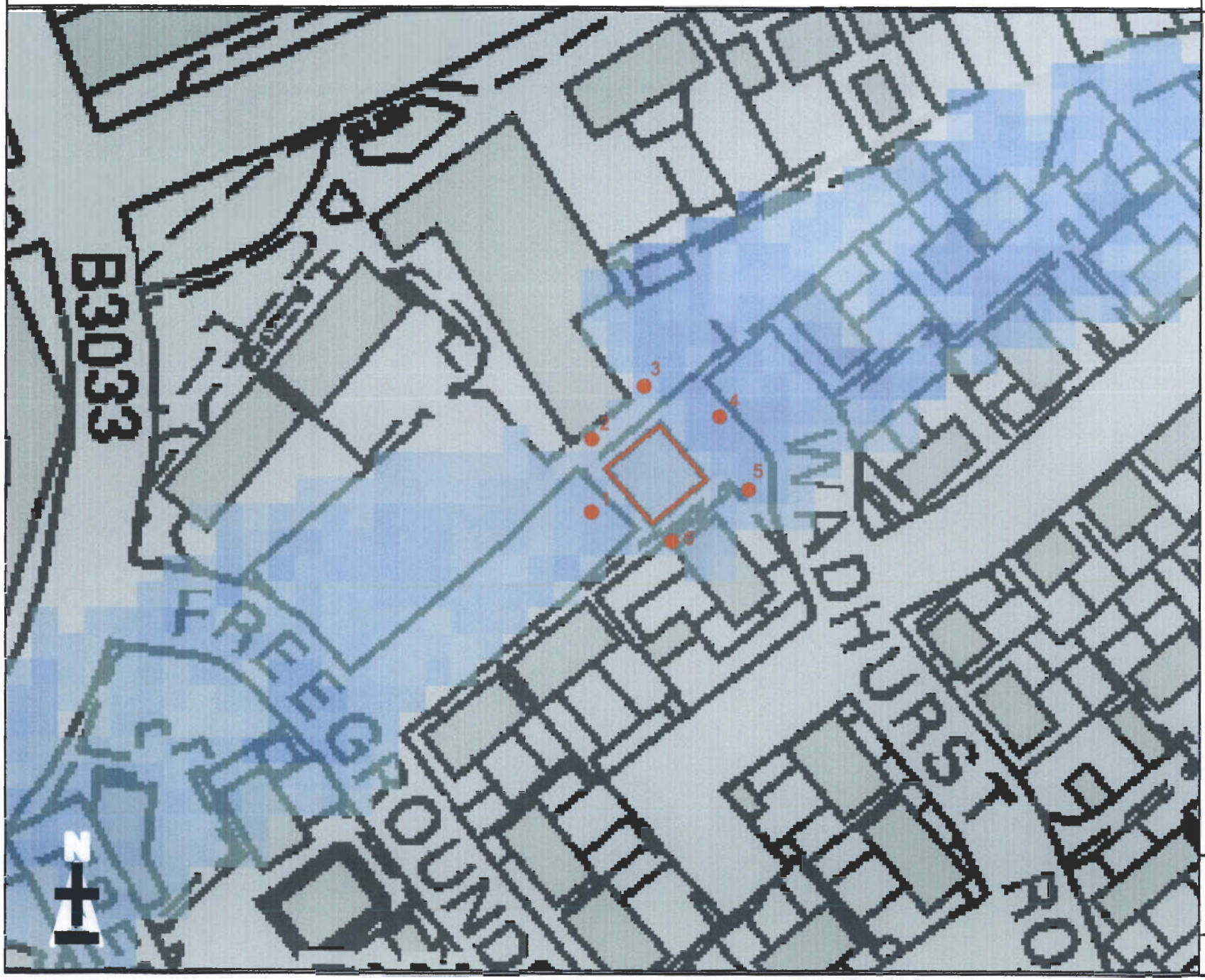
0 0.06 0.12

Kilometres

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REFERENCE	TYPE	MAINTAINER	DESCRIPTION	LOCATION	BANK
07130S6400101R20	maintained channel	Environment Agency	Natural Defence	Nr. Frensham ct. Hedge End	right
07130S6400101L17	maintained channel	Environment Agency	Channel (collapsed revetments)	Nr. Frensham ct. Hedge End	left
07130S6400101R21	culverted channel	private	Culvert	u/s of Somerfield,Hedge End.	right
07130S6400101L18	culverted channel	private	Culvert	D/S of Somerfield, Hedge End	left
07130S6400101R19	natural channel	Environment Agency	Natural Channel	Hobb Lane. Hedge End	right
07130S6400101L16	natural channel	Environment Agency	Natural Defence	Hobb Lane. Hedge End	left
07130S6400102L01	culverted channel	private	Culvert	Hobb lane. Hedge End	left
07130S6400102R01	culverted channel	private	Culvert	Hobb lane. Hedge End	right
07130S6400103R01	culverted channel	private	1 pipe - culvert	from St Johns Road to 6 Chapel Drove	right
07130S6400103L01	culverted channel	private	1 pipe culverted	from St Johns Road to 6 Chapel Drove	left

Jflow levels for Saracen House, Freegrounds Avenue



Environment Agency

LEGEND

Ground Level (p.t.o.)

Value

High : 44.985

Low : 16.4125

Flood Depth (p.t.o.)

Value

High : 8.0009

Low : 0

0 0.02 0.04

Kilometres

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Environment Agency, 100026380, 2005.

JFLOW LEVELS FOR SARACEN HOUSE
in Metres AoD

1:100 year levels

Point	Level	Depth	Total
1	27.65	0.34	27.99
2	28.03	0.01	28.04
3	27.49	0.35	27.84
4	26.95	0.81	27.76
5	27.22	0.52	27.74
6	27.83	0.03	27.86

1:1000 year levels

Point	Level	Depth	Total
1	27.65	0.39	28.04
2	28.03	0.01	28.04
3	27.49	0.40	27.89
4	26.95	0.81	27.76
5	27.22	0.56	27.78
6	27.83	0.10	27.93

APPENDIX D
PHOTOGRAPHS



From Building Looking West



Passage Between Building and No 4



Building From Rear



Rear of Building Looking North



Front of Building Looking North



Front of Building

APPENDIX E
CATCHMENT DATA

449200	112900	SU,49200,12900
AREA	0.51	
FARL	1	
PROPWET	0.33	
ALTBAR	49	
ASPBAR	46	
ASPVAR	0.7	
BFIHOST	0.273	
DPLBAR	0.83	
DPSBAR	49.2	
LDP	1.61	
RMED-1H	9.5	
RMED-1D	33.1	
RMED-2D	43.4	
SAAR	805	
SAAR4170	806	
SPRHOST	45	
URBCONC	0.732	
URBEXT19	0.342	
URBLOC	0.697	
C	-0.026	
D1	0.424	
D2	0.312	
D3	0.4	
E	0.302	
F	2.288	
C(1km)	-0.027	
D1(1km)	0.424	
D2(1km)	0.315	
D3(1km)	0.404	
E(1km)	0.302	
F(1km)	2.289	

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