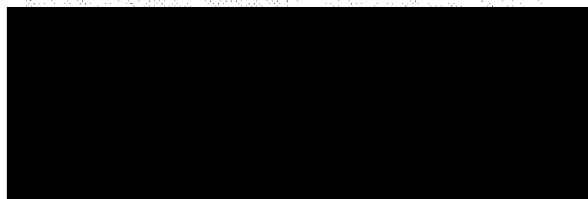


Archibald Shaw



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One Little London, Chichester, West Sussex, PO19 1PP



PROPOSED 2ND FLOOR CHANGE OF USE

**9A BEACH ROAD
LITTLEHAMPTON
WEST SUSSEX
BN17 5HZ**

SITE SPECIFIC FLOOD RISK ASSESSMENT

ISSUE 1

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Issue	Copies	Distribution	Format	Date	Status
1	1	J Funnell Esq		04 April 2017	Planning

1.0 EXECUTIVE SUMMARY

- 1.1 This documents reports upon the flood risk associated with the proposed change of use of a second floor office to a two bedroom flat.
- 1.2 This desk top study concludes that the flood risk to future occupants of the proposed flat would be very low in the context of flood risk within the conurbation of Littlehampton, West Sussex.

2.0 INTRODUCTION

2.1 Archibald Shaw were instructed by Mr Jo Funnell a Director of Nash and Partners to produce a Flood Risk Assessment [FRA] to support the proposed change of use of a second floor office to a two bedroom flat.

2.1.2 9A Beach Road lies close to Littlehampton's civic centre and council offices. The local postcode is BN17 5HZ.

2.1.3 Nothing in this report confers or purports to confer on any third party, any benefit or any right to enforce any term of this report pursuant to the Contract [Rights of Third Parties Act] 1999.

2.2 Terms of Reference

This report comprises a Level 1 FRA in accordance with the requirements and guidance of:

- The National Planning Policy Framework
- Technical Guidance to the National Planning Policy Framework
- Flooding – Engineering Resilience, ICE
- Flood Risks to People – FD2321/TR2 defra

2.3 Flood Risk in Summary

2.3.1 Vehicular and pedestrian access to the flat would be from Beach Road to south, East Street to the north, Church Street or Maltravers Road from the east, or the High Street from the west.

2.3.2 According to the Environment Agency's flood mapping 9A Beach Road lies within Flood Zone 3, a tidal flood plain. Statistically the likelihood of flooding from the sea is 0.5% or a 1 in 200 chance of flooding each year.

2.4 Summary of Brief

- 2.4.1 In accordance with the Client's specific objectives, the purpose of this report is primarily:
- (i) To provide a contemporary record of current flood risks affecting the site and future proposals.
 - (ii) To advise on exceptional flooding events that may have an influence on developing the site.

3.0 SOURCES OF INFORMATION

3.1 Desk Top and Site Based Research

3.1.1 The flood risk assessment research comprised

Site Information	YES	NO
Review of Information supplied by Client	✓	
Site walkover		✓
Preliminary discussion with owner/occupier		✓

Public Domain Information	YES	NO
Geological Mapping		✓
Statutory Services Information		✓
Local Authority enquiry		✓
Strategic Flood Risk Assessment	✓	
Topographic site survey		✓
Internet data	✓	
Anecdotal flooding information		✓
Aerial photographs	✓	
LIDAR Survey		✓
Historic mapping		✓

Key: NA = Not applicable
 NR = No records available
 AR = Awaiting response

3.2 Response to Enquiries

3.2.1 Environment Agency

3.2.1.1 The Environment Agency's flood mapping indicates the site lies within a flood zone which has a 1 in 200 probability of tidal flooding with sea defences in place. Modelled flood depths local to 9A Beach Road lie in the order of 2.0 to 2.4m for both defended and undefended flood scenarios. These estimates allow for climate change to the year 2115.

4.0 DISCUSSIONS AND CONCLUSIONS

- 4.1 The primary flood risk is tidal flooding. The Arun to Adur Flood Model produced in 2012 and updated in 2015 indicates that flood depths to 9A Beach Road would, in the year 2115, lie in the region of 2.0 to 2.4m, with flood levels in the order of 4.9m AOD. Current estimates for the year 2017 would have flood depths some 1.2m lower than the 2115 projection.
- 4.2 Highway levels fronting 9A Beach Road are estimated to lie in the region of 2.5m AOD assuming ground floor to 2nd floor height equates to 5.0m, the 2nd floor flat level will approximate to 7.5m AOD, which lies 2.6m above the estimated flood level of 4.9m AOD.
- 4.3 Given the proximity of the flood plain to 9A Beach Road the most likely course of action to be taken by tenants would be to sit out the flood event, which would be expected to last no longer than 12 hours.
- 4.4 Emergency access can be sought from the east from Church Street or Maltravers Road. At the estimated peak depth of 2.4m access by boat would be required. Noting that 9A Beach Road lies to the northern extent of the tidal flood plain it is most likely that the local speed of flood waters will be low and therefore safe to traverse.

4.5 Conclusion

- 4.5.1 The second floor flat of 9A Beach Road lies some 2.6m above tidal flood levels predicted for the year 2115. Therefore the flat can be considered reasonably safe from flooding.
- 4.5.2 Emergency access to 9A Beach Road can be sought from the east in times of high flood with low flow.

Prepared by: Eur Ing Vincent Carpenter BSc (Hons) CEng MICE FCIWEM MIHT Mood

Date: 04 April 2017

APPENDIX

A. Environment Agency Flood Mapping Data



Product 4 Flood Risk Data Requested by: Phil Faulkner

Site: 9 Beach Road, Littlehampton BN17 5HZ

Table 1: Water Levels: Tidal Undefended

Node Reference	NGR		Modelled Flood Levels in Metres			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			5%	0.5%	0.5% (2115)	0.1%
1	502952	102050	-	3.74	4.94	4.05
2	502958	102055	-	3.74	4.94	4.05
3	502965	102059	-	3.74	4.94	4.05

Table 2: Water Levels: Tidal Defended

Node Reference	NGR		Modelled Flood Levels in Metres			
	Eastings	Northings	Defended Annual Exceedance Probability			
			5%	0.5%	0.5% (2115)	0.1%
1	502952	102050	-	-	4.88	2.94
2	502958	102055	-	-	4.88	2.94
3	502965	102059	-	-	4.88	-

Table 3: Water Depth: Tidal Undefended

Node Reference	NGR		Modelled Flood Depth in Metres			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			5%	0.5%	0.5% (2115)	0.1%
1	502952	102050	-	1.23	2.44	1.55
2	502958	102055	-	0.94	2.14	1.25
3	502965	102059	-	0.81	2.01	1.13

Table 4: Water Depth: Tidal Defended

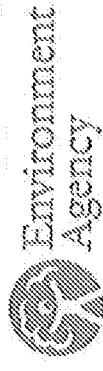
Node Reference	NGR		Modelled Flood Depth in Metres			
	Eastings	Northings	Defended Annual Exceedance Probability			
			5%	0.5%	0.5% (2115)	0.1%
1	502952	102050	-	-	2.38	0.43
2	502958	102055	-	-	2.08	0.14
3	502965	102059	-	-	1.96	-

All levels taken from: Arun to Adur Flood Model, completed in 2012 by JBA Consulting

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

Produced on 29/03/2017

Flood Map for Planning (Rivers and Sea). Centred BN17 5HZ. Created 29/03/2017.



Scale 1: 10,000

Flood Map for Planning (Rivers & Sea)

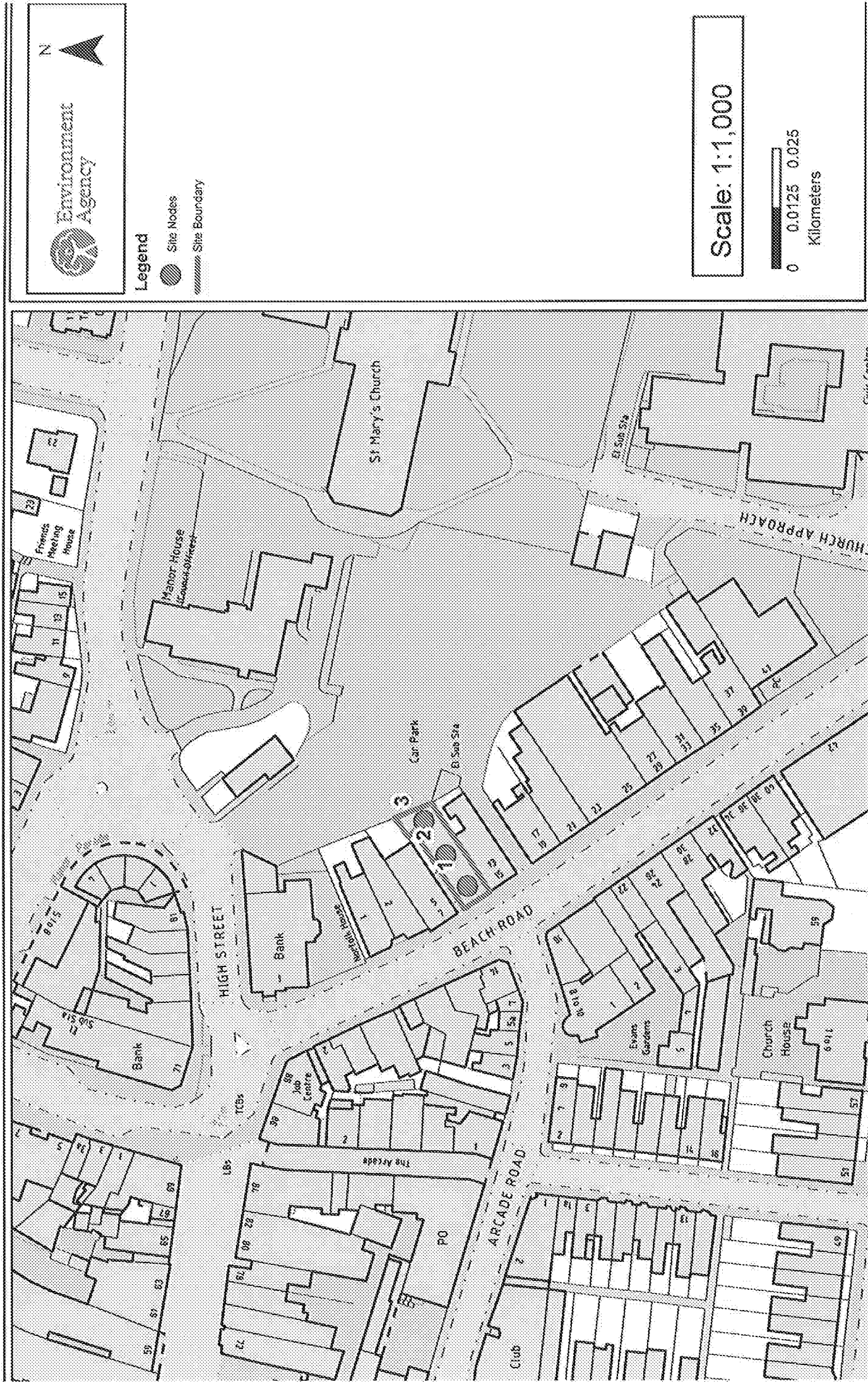
- Defences
- Flood Storage Areas
- Areas benefiting from flood defences
- Flood Zone 3
- Flood Zone 2

Flood Map Areas (assuming no defences)

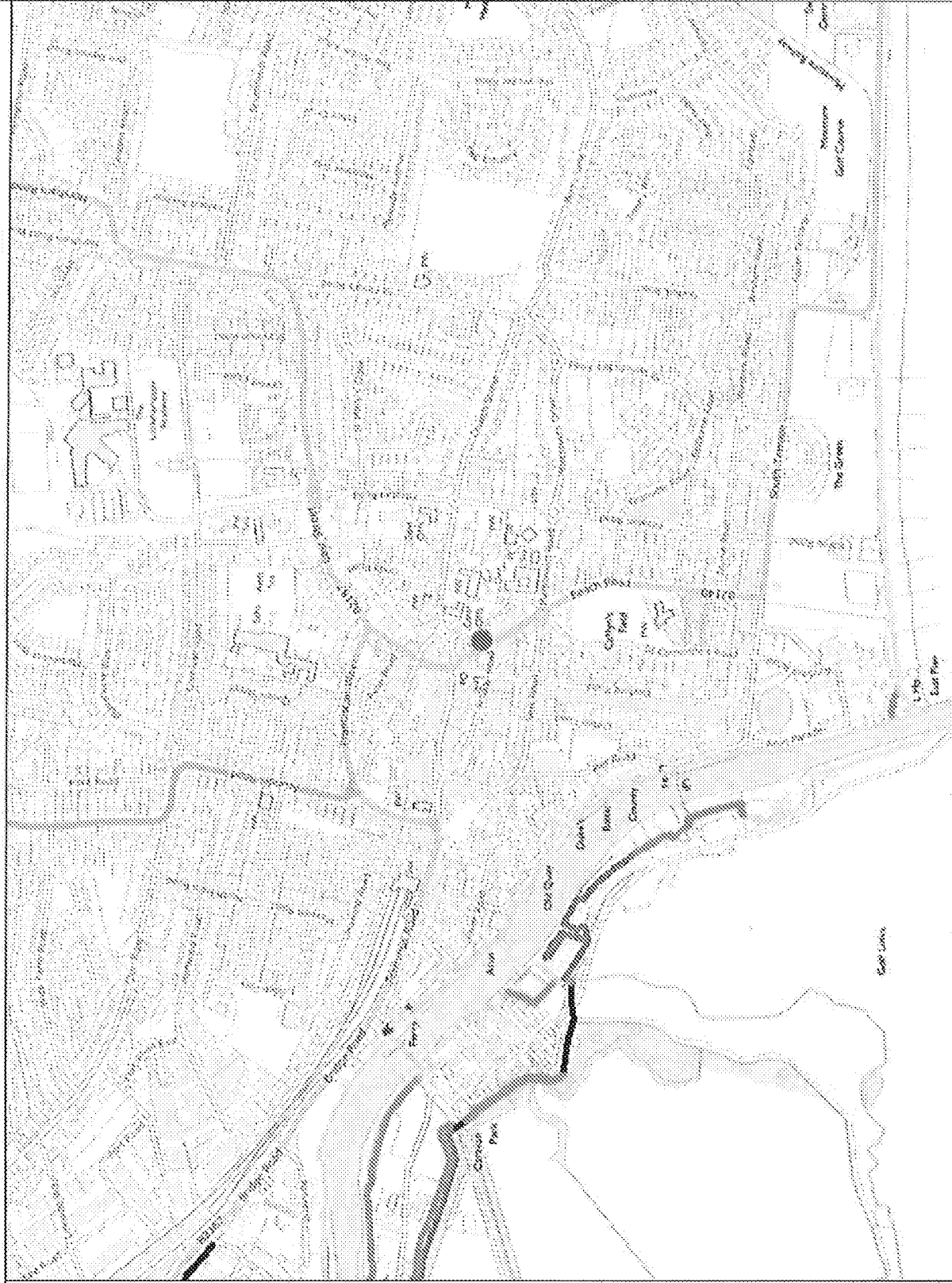
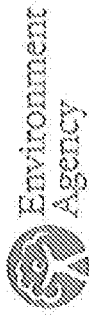
Flood Zone 3 shows the area that could be affected by flooding:

- 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.

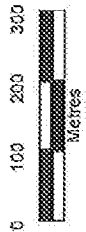


Flood Defence Locations. Centred BN17 5HZ. Created 29/03/2017.

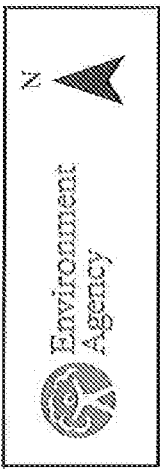
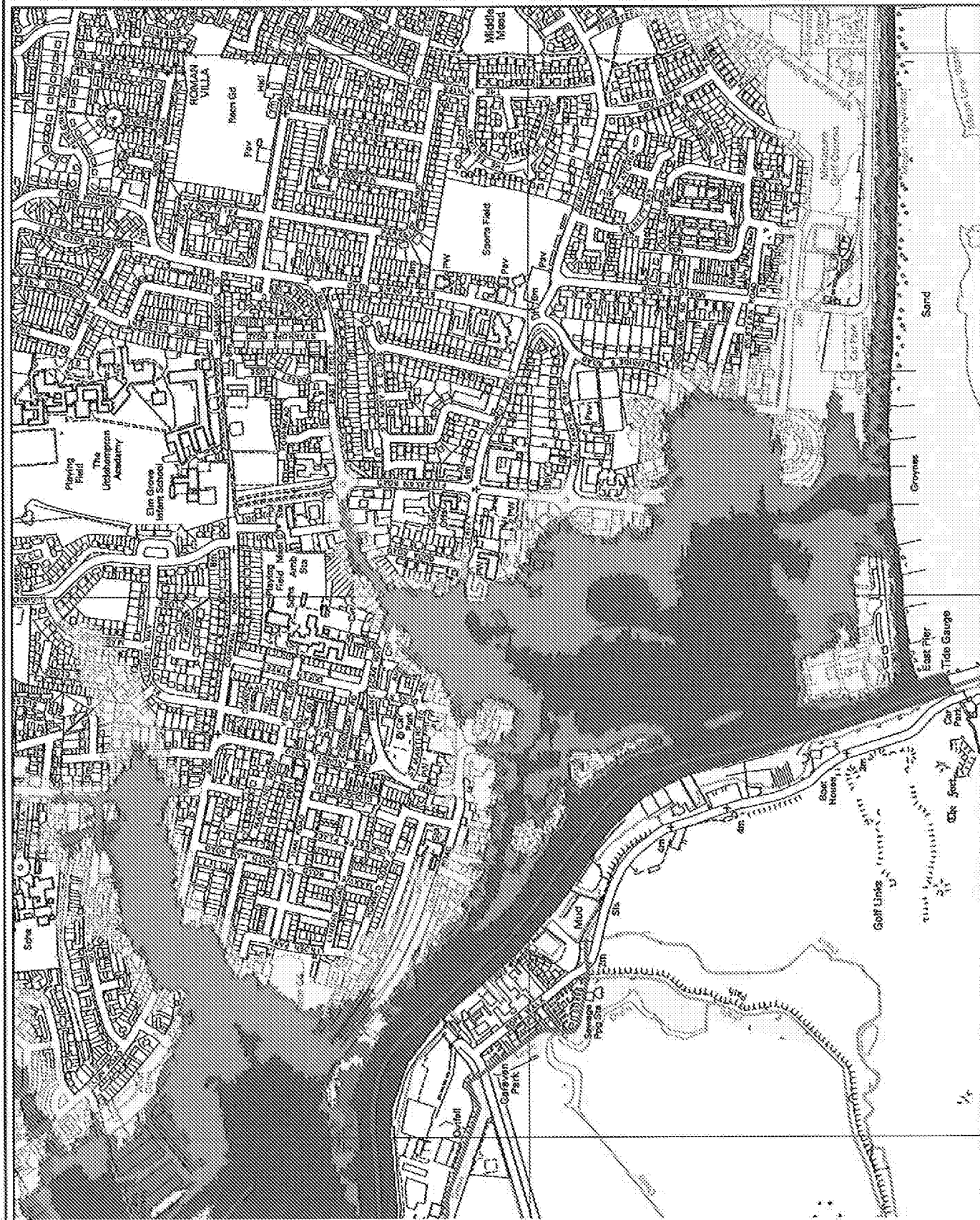


Legend

- Defences
- Embankment
- Wall
- Flood Gate
- Demountable Defence
- Bridge Abutment
- High Ground
- Beach
- Barrier Beach
- Promenade
- Quay
- Cliff
- Dunes
- Culvert



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Legend

- Site Boundary
- Main River
- 5% AEP (2012) (Undertended)
- 0.5% AEP (2012) (Undertended)
- 0.1% AEP (2012) (Undertended)
- 0.5% AEP (2115) (Undertended)

Scale: 1:10,000

