

Graham Nicolls Limited

building design+technology

13 Washington Street Chichester
West Sussex PO19 3BN

Anita Gardner
Planning Department
Arun District Council
Civic Centre
Maltravers Drive
Littlehampton
Sussex



02. 01. 2021

Planning Reference: LU/295/20/PL

Dear Anita Gardner , RE:15 Beach Road. Littlehampton. Sussex BN17 5HZ

I refer to your email dated 02.10.2020 regarding the above application requesting an enhanced Flood Risk Assessment. I have obtained Product 4 information from The Environment Agency and set out below the relevant matters:

FLOOD RISK ANALYSIS OF SITE SPECIFIC PRODUCT 4 INFORMATION:

GENERAL MATTERS:

1. The site lies within Flood Zone 3 [see attached plan]
2. The proposal is to retain the existing office use on the Ground Floor and form one flat on each of the two upper floors by change of use. This change of use comes under the permitted development rights however, this application was required to be a full application due to other changes to the building and a potential noise source adjacent to the rear of the property. This latter item has been satisfactorily resolved.
3. The lowest new habitable floor level will be at AOD 5.435 at the rear part of the First Floor and AOD 5.595 at the front part of the First floor. See attached building section showing existing floor levels.
4. Reference has been made to the undefended Tidal Event Data in Table 3 and adjusted as required to incorporate the later 2019 Climate Change Allowance See attached updated Tables which show the adjusted values:
TABLE 1 UNDEFENDED WATER LEVELS at Nodes 1 and 2 at both Higher Central and Upper End
TABLE 3 UNDEFENDED WATER DEPTH at Nodes 1 and 2 at both Higher Central and Upper End

CONCLUSION:

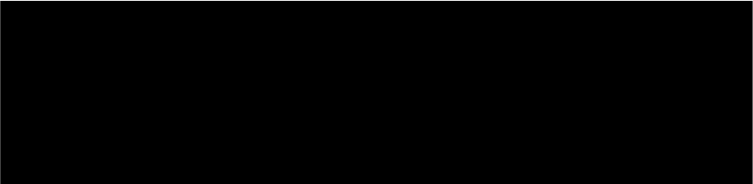
ALL NEW HABITABLE FLOOR LEVELS ARE FOUND TO BE ABOVE THE PROJECTED LEVELS AS ADJUSTED TO 2019 CLIMATE CHANGE FIGURES

ALLEVIATION MEASURES:

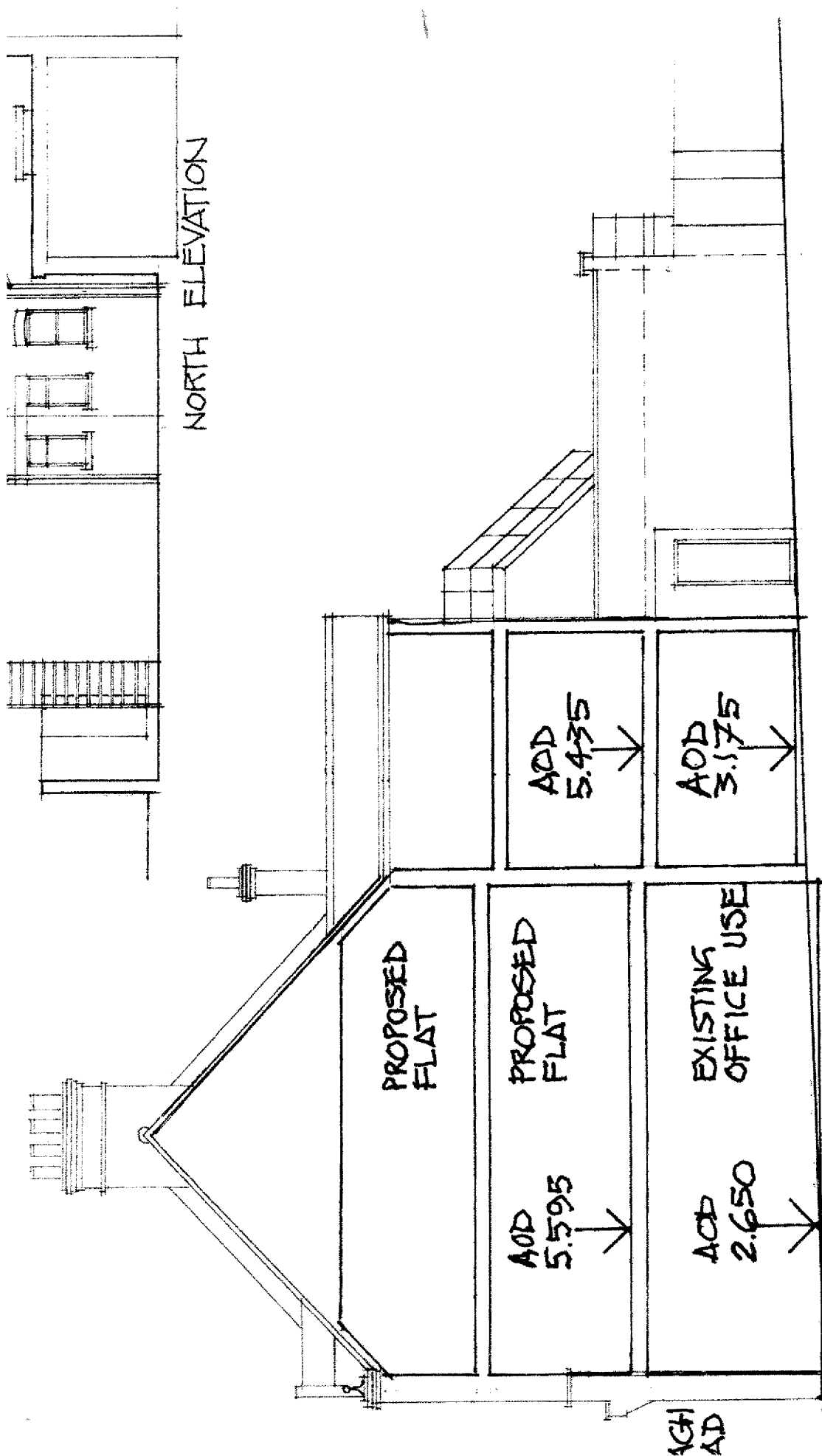
1. Alleviation measures proposed are as follows:

- [a] New electrical intake/distribution box/meter positions to be located above First floor level
- [b] Any alterations to the electrical intake/distribution box/meter position within the existing Ground Floor offices to be located as high as possible within the Ground floor and any new power outlets located 350 above floor level.
- [c] Ground Floor office tenants/owners to be advised to sign up to automatic telephone flood warnings to provide earl warning of potential flooding risks to allow time for evacuation.
- [d] Flat tenants/owners to be advised to sign up to automatic telephone flood warnings to provide earl warning of potential flooding risks to allow time for evacuation.
2. Flat occupants to remain in their properties until the tide recedes and then escape or await rescue.
 - 3 Localised surface water flooding in Beach Road is shown on the 'Risk of flooding from Surface Water Map' attached. This could directly effect the existing Ground Floor offices who are advised to have removable flood barriers fitted externally and sandbag all external doors and fit removable covers to any underfloor ventilators.
 - 4 A removable barrier should also be available to fit the new external flat door opening off Beach Road.

If there are any further queries relating to this application please contact me as above.



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SURVEY AS EXISTING @ 27.10.2016 / ELEVATIONS
 15, BEACH ROAD, LITTLEHAMPTON, SUSSEX.
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ADJUSTED VALUES

Product 4 Flood Risk Data - Adjusted for Climate Change Allowances

Site: 15 Beach Road, Littlehampton, BN17 5HZ

Table 1: Water Levels: Tidal Undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
			Undefended Annual Exceedance Probability			
			0.50%	0.5% (2070)**	0.5% (2115)**	0.10%
1	502957	102045	3.74	4.35	4.94	4.05
			3.74	4.1418	4.6938	4.05
			3.74	4.259	5.018	4.05
2	502968	102053	3.74	4.35	4.94	4.05
			3.74	4.1418	4.6938	4.05
			3.74	4.259	5.018	4.05

With cumulative climate change allowance 2019 to 2070

Higher Central
Upper End

Higher Central
Upper End

Table 2: Water Levels: Tidal Defended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
			Defended Annual Exceedance Probability			
			0.50%	0.5% (2065)**	0.5% (2115)**	0.10%
1	502957	102045			3.71	
				0.4018	0.9538	
				0.519	1.278	
2	502968	102053			3.73	
				0.4018	0.9538	
				0.519	1.278	

With cumulative climate change allowance 2019 to 2070

Higher Central
Upper End

Table 3: Water Depths: Tidal Undefended

Node Ref	NGR		Modelled Flood Depths in Metres			
			Undefended Annual Exceedance Probability			
			0.50%	0.5% (2070)**	0.5% (2115)**	0.10%
1	502957	102045	1.08	1.69	2.28	1.39
			1.08	1.4818	2.0338	1.39
			1.08	1.599	2.358	1.39
2	502968	102053	0.65	1.26	1.85	0.96
			0.65	1.0518	1.6038	0.96
			0.65	1.169	1.928	0.96

Higher Central
Upper End

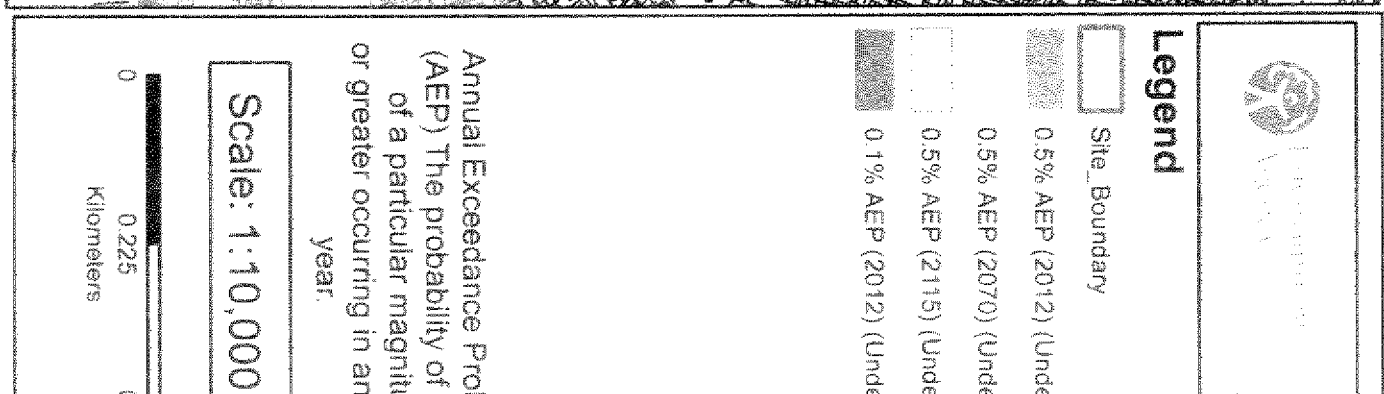
Higher Central
Upper End

Table 4: Water Depths: Tidal Defended

Node Ref	NGR		Modelled Flood Depths in Metres			
			Defended Annual Exceedance Probability			
			0.50%	0.5% (2065)**	0.5% (2115)**	0.10%
1	502957	102045			0.93	
				0.4018	0.9538	
				0.519	1.278	
2	502968	102053			0.58	
				0.4018	0.9538	
				0.519	1.278	

Higher Central
Upper End

Higher Central
Upper End





ARUN DISTRICT COUNCIL

Legend

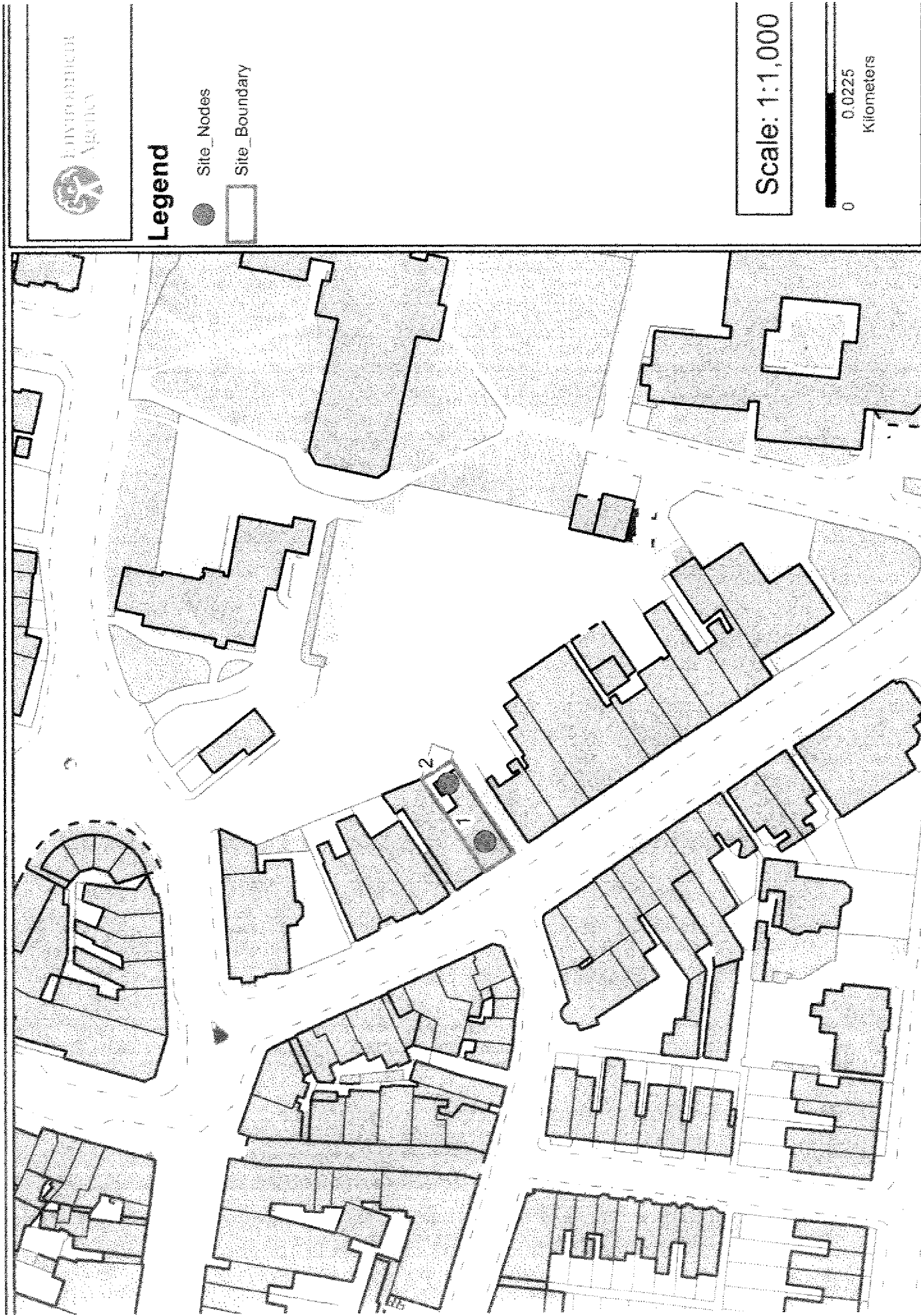
-  Site Boundary
-  0.5% AEP Defended T1c
-  0.5% AEP (2065) Defen
-  0.5% AEP (2115) Defen
-  0.1% AEP Defended T1c

Annual Exceedance Prob
(AEP) The probability of
of a particular magnit
or greater occurring in an
year.

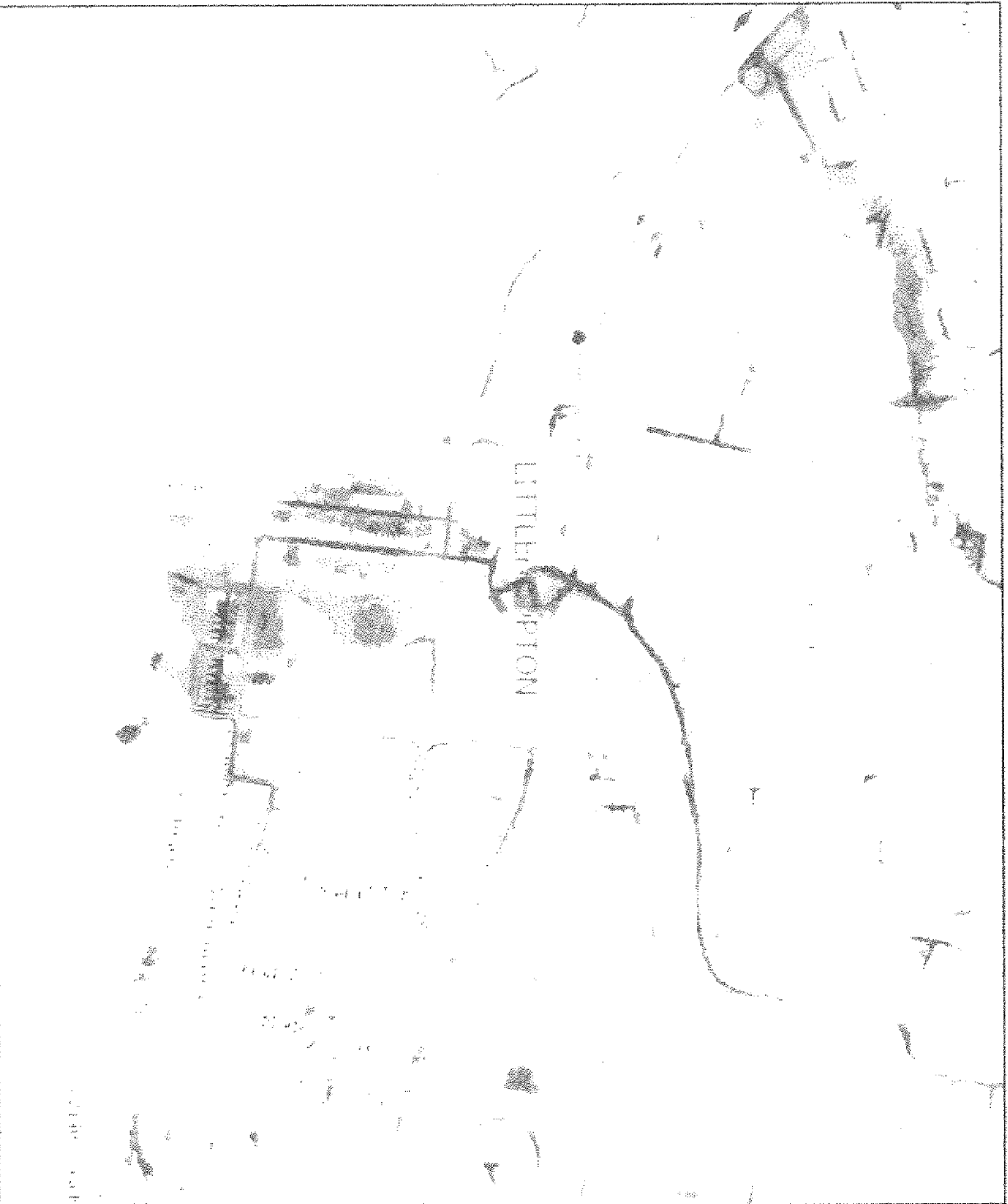
Scale: 1:10,000



SITE BOUNDARY & NODE POINTS. GENERATED BY 3DPL. CREATED 21/12/2020.



Risk of flooding from Surface Water. Centred BN17 5HZ. Created 21/12/2020.



Likelihood of flooding from Surface Water

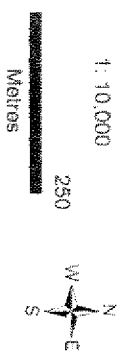
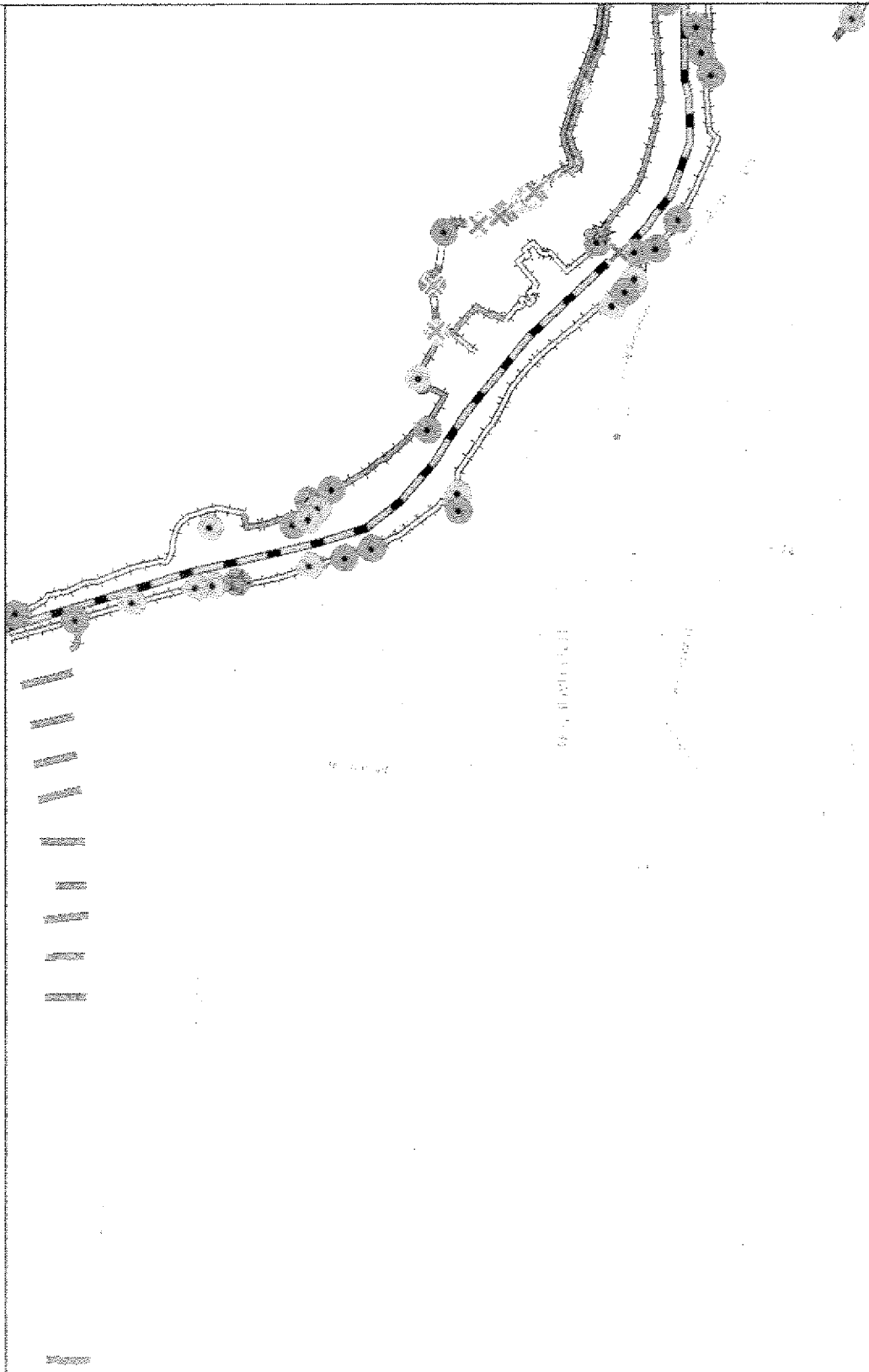
- ☒ High ($\geq 3.3\%$)
- ☒ Medium (3.3% - 1%)
- ☒ Low (1% - 0.1%)
- ☐ Very Low
- ☒ Flood Extent 1 in 30
- ☒ Flood Extent 1 in 100
- ☐ Flood Extent 1 in 1000

- 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 GOV.UK.

land

see see page 2 for asset
biology



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Structures	Instruments	Defences	Land
Control Gate	Active Monitoring	Embankment	Mudflats
Draw Off Tower	Passive Monitoring	Wall	Saltmarsh
Fish Pass		Flood Gate	Washland
Hydrobrake	Channel Crossings	Demountable defence	Sites
In Channel Stoplogs	Bridge	Bridge abutment	
	Utility Services		Amenity
Inspection Chamber	Aids to Navigation	High Ground	Control Structure
Jetty	Beacon	Beach	Erosion Protection
Outfall	Buoy	Barrier Beach	General
Screen	Dolphin	Promenade	Harbour
Spillway	Squade	Quay	Monitoring
Stilling Basin	Signal	Cliff	Navigation Lock
Weir	Building Assets	Dunes	Pumping Station
	Pump House		Reservoir
Beach Structures	Major Civils	Channels	Tidal Barrier
Breakwater	Abutment	Open channel	
Ramp	Central Pier	Simple culvert	
Slipway		Complex culvert	
Steps			
Groyne			