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FLOOD RISK STATEMENT

PREPARED FOR: HOME PLAN-IT Ltd

REFERENCE #: 1334

DATE: November 2009

AMBIENTAL TECHNICAL SOLUTIONS LTD.
DOCUMENT ISSUE RECORD

PROJECT: FLOOD RISK STATEMENT

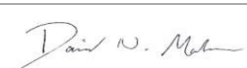
LOCATION: THE BRICKFIELDS

PREPARED FOR: HOME PLAN-IT LTD

PROPOSED RESIDENTIAL DEVELOPMENT

**THE BRICKFIELDS
HOE LANE
BOGNOR REGIS
PO22 8NW**

PROJECT #: 1334

	Name	Date	Signature
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Commercial In Confidence
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1 INTRODUCTION

- 1.0 This report presents the findings of a Flood Risk Assessment (FRA) that has been carried out for the proposed residential development at The Brickfields, Hoe Lane, Bognor Regis, PO22 8NW. This FRA has been carried out using current best practices, and against the criteria set out in Planning Policy Statement (PPS) 25 - 'Development and Flood Risk'.
- 1.1 As part of the planning process it is necessary to demonstrate that new development can be achieved in a sustainable manner, with an acceptable risk of flooding, and that the development does not increase the risk of flooding elsewhere. As such, Ambiental were commissioned to undertake a FRA of the site by HOME PLAN-IT Ltd.

2 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

2.0 The proposed development is residential and is located at: The Brickfields, Hoe Lane, Bognor Regis, PO22 8NW. Figures 1, 2 and 3 below show the site location.

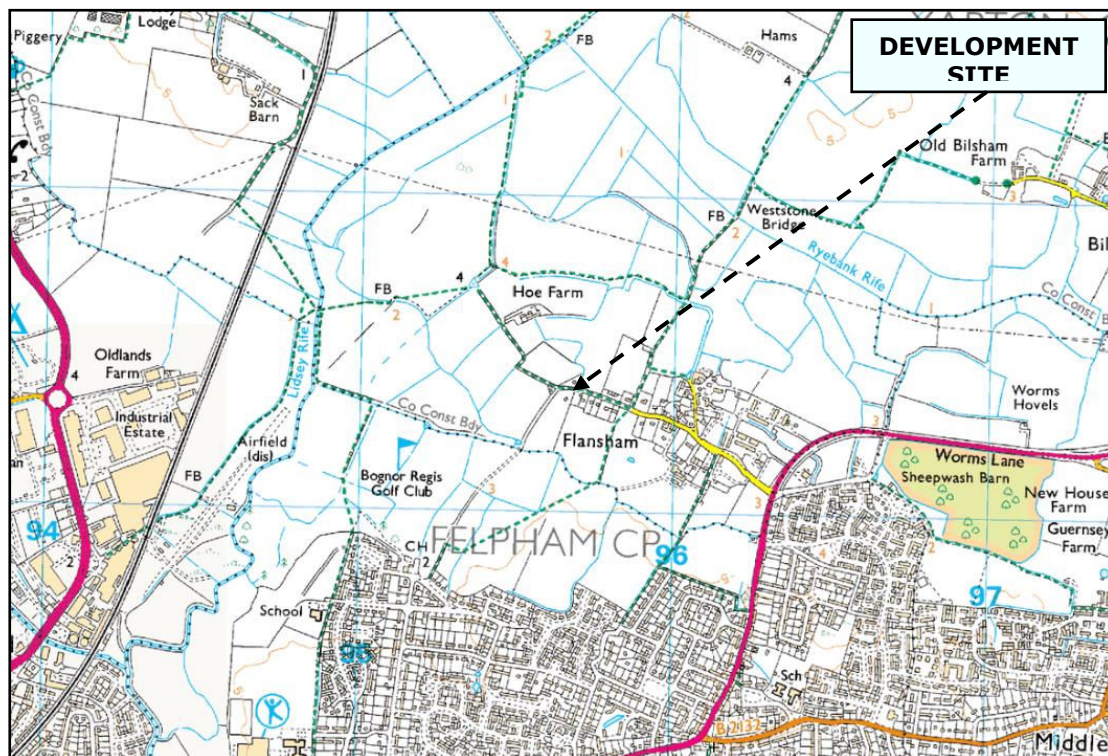


Figure 1: Wider Location Plan. (Source: Multimaps)

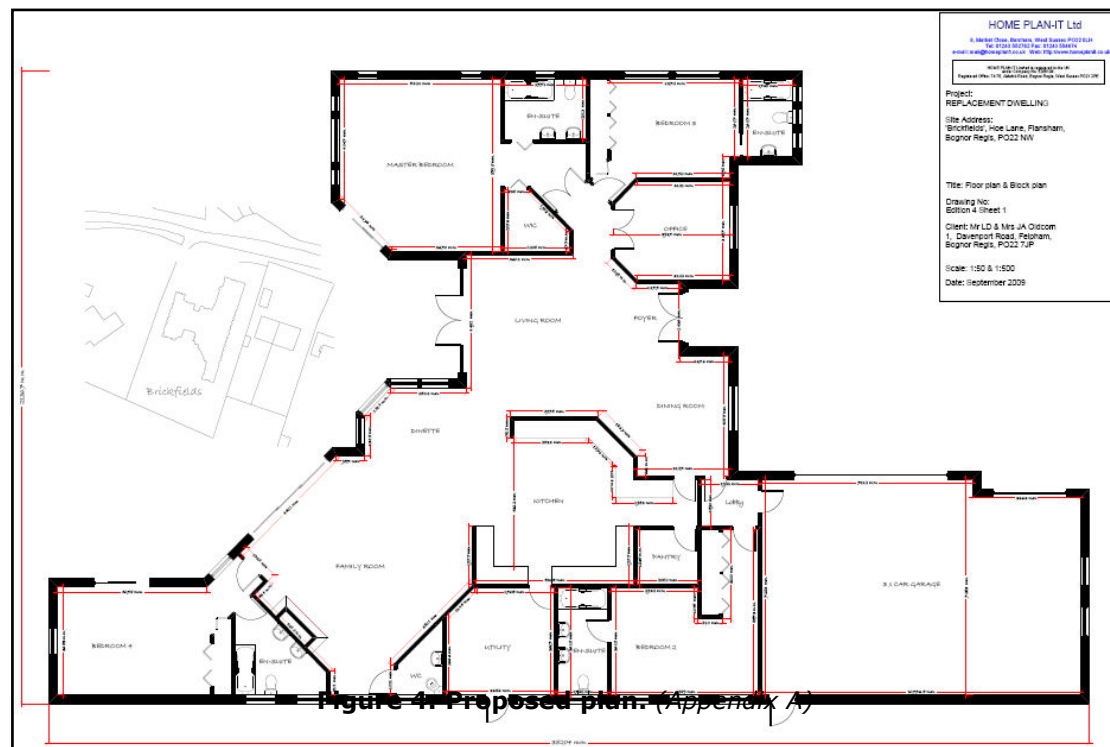


Figure 2: Site outlined in red. (Source: OS)



Figure 3: Oblique aerial view of the site facing south. (Source: MS Virtual Earth)

- 2.1 The proposed development is for the construction of a single four-bedroom bungalow. Figure 4 shows the proposed plan.



- 2.2 Under PPS25, the proposed development is residential and therefore classified as 'More Vulnerable'.

3 FLOOD RISK ASSESSMENT

3.0 Low detailed J-FLOW flood modelling provided by the EA suggests that the proposed development site lies partially within EA Flood Zone 2 ("Medium Probability of flooding") and partially within EA Flood Zone 3a ("High Probability of flooding"). As such, the Local Planning Authority (LPA) has objected to the application until such time as a FRA in compliance with *Planning Policy Statement Note 25: Development and Flood risk* (PPS25) has been submitted.

3.1 Figure 5 below shows the site in relation to the EA Flood Map:

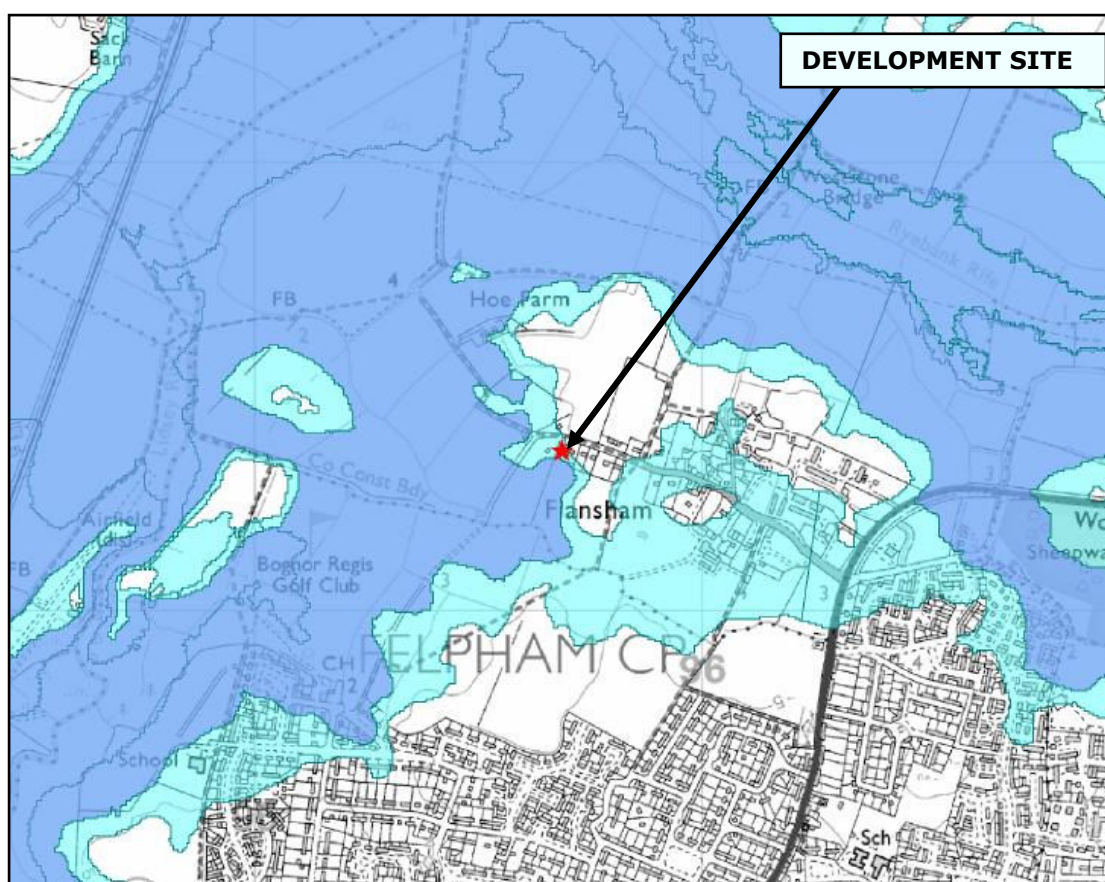


Figure 5: EA JFLOW derived Flood Map. (Source: Environment Agency)

3.2 Flows and water levels associated with very extreme events can only be estimated using detailed hydrodynamic modelling. The aforementioned low detail JFLOW modelling strategy cannot be used to derive extreme river or tide levels.

3.3 Communication with the EA revealed that detailed modelled information for extreme flood events is available for this area. Modelled flood levels and extents are taken from the SFRM Modelling Arun to Pagham coastal defence strategy carried out by Atkins in the summer 2009. (Source: EA).

- 3.4 Water levels and flood extents associated with extreme flood events have been estimated by the EA and are presented in Figure 6, below.

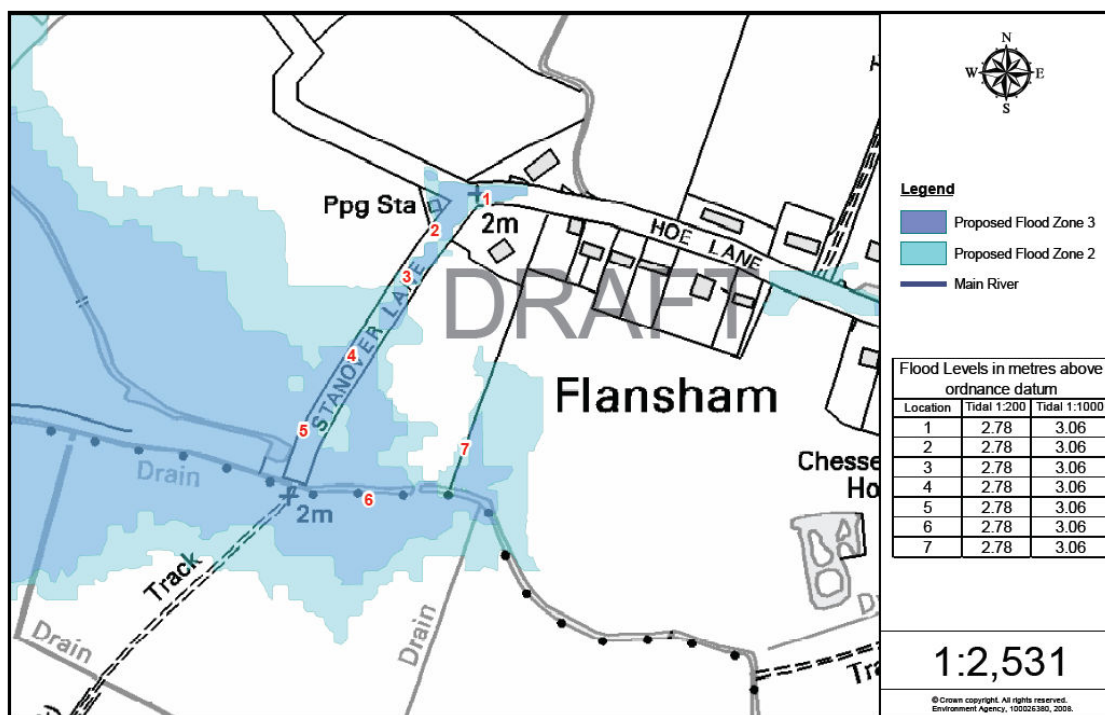


Figure 6: Modelled Flood Extents and Levels taken from the SFRM Modelling Arun to Pagham coastal defence strategy carried out by ATKINS in the summer 2009. (Source: EA).

- 3.5 As can be seen in Figure 6, the site is located outside of the extent of the 1:200 year and 1:1000 year flood events, and is thus located within Flood Zone 1.
- 3.6 Topographic levels across the site range between approximately 3.1mAOD and 3.5mAOD (Figure 7).
- 3.7 A comparison of modelled flood levels with topographic levels across the site confirm that the site is located above the modelled 1:200 year and 1:1000 year flood levels, and is thus located within Flood Zone 1.

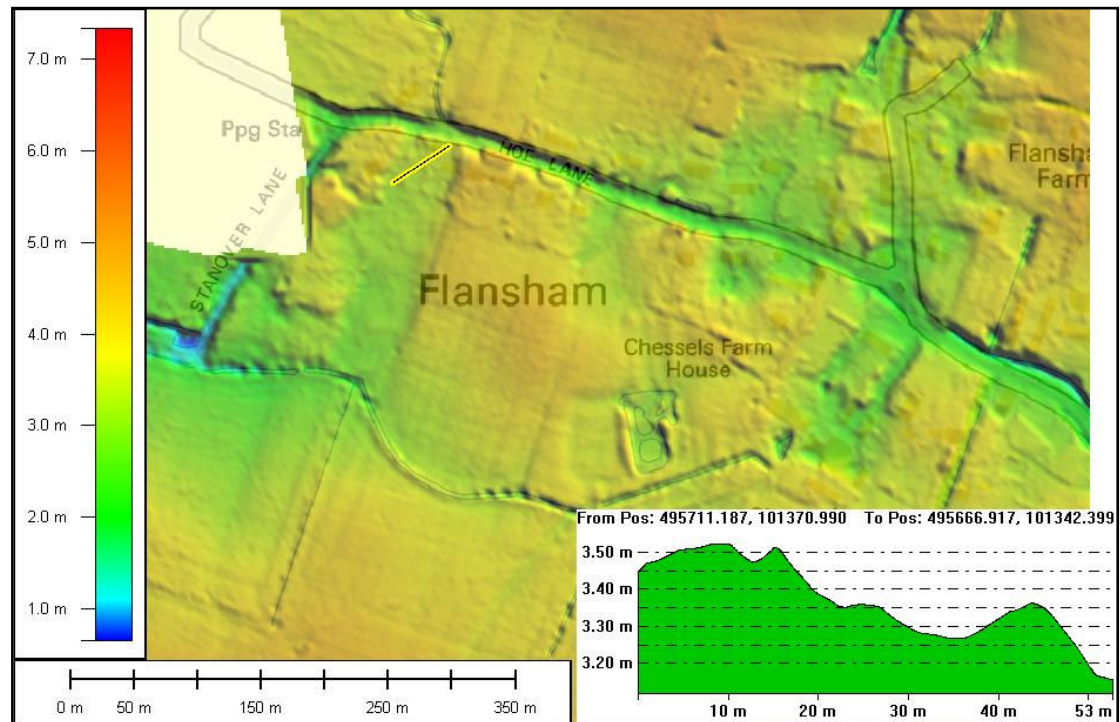


Figure 7: LiDAR derived Digital Terrain Model showing topographic levels across the site. Transect runs from north to south. (Source: EA 2m LiDAR)

- 3.8 Communication with the EA has confirmed that their Flood Maps are currently being updated. Figure 8 below, shows that the site will be located within Flood Zone 1 when the updates are made and the SFRM Modelling Arun to Pagham coastal defence strategy is incorporated.

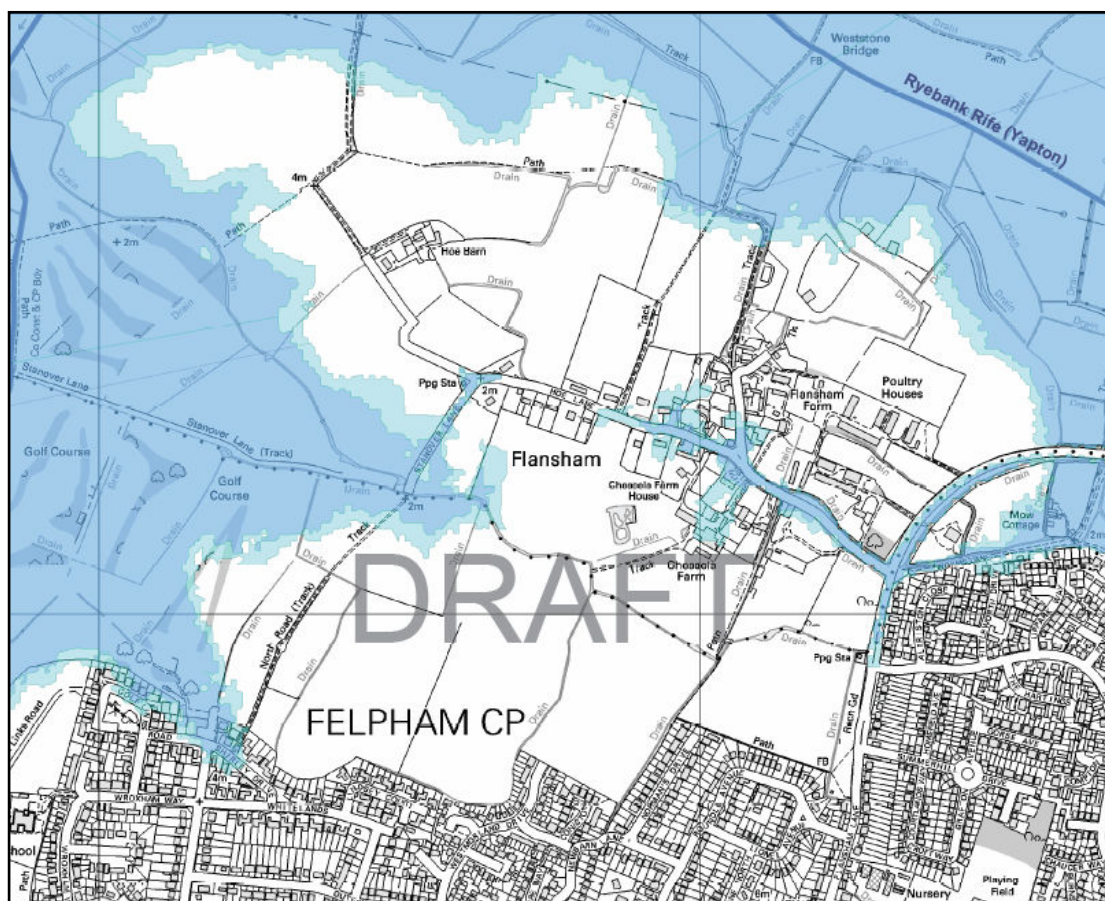


Figure 7: Updated EA Flood Map (Source: EA)

- 3.9 As such, the site is considered to be located within Flood Zone 1, at "Low Probability" of flooding.
- 3.10 Communication with Keely Mowatt (Development and Flood Risk Engineer) at the EA however, has suggested that finished floor levels should be raised above external ground levels to mitigate against other potential sources of flooding (such as surface water) (Appendix A).
- 3.11 As such, it is recommended that the developer raise the finished ground floor level of the proposed bungalow by 300mm above external ground levels.
- 3.12 As such, and based on Planning Policy Statement (PPS) 25 - 'Development and Flood Risk', the proposed development is considered to be **suitable**. Further, for planning purposes, the site should be 'rezoned' and now considered to be within EA Flood Zone 1 ("low probability of flooding").

Dr. J. B. Butler

B.Sc., M.Phil., PhD.

Ambiental Technical Solutions Ltd.

November 2009

APPENDIX A

1. OS Siteplan (1:500 Scale);
2. OS Siteplan (1:1250 Scale);
3. Proposed Plan;
4. Current EA Floodmap;
5. Detailed SFRM Modelling Arun to Pagham coastal defence strategy Flood Map and Levels;
6. Updated EA Floodmap;
7. Communication with Keely Mowatt (Development and Flood Risk Engineer at the EA).



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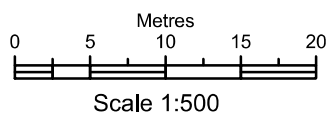
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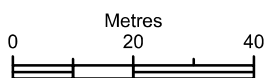
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Scale 1:1250

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SCALE FROM THESE DRAWINGS FOR PLANNING PURPOSES ONLY. ALL MEASUREMENTS TO BE CHECKED ON SITE FOR CONSTRUCTION PURPOSES

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HOME PLAN-IT Limited is registered in the UK
Registered Office: 74-76, Adelaide Road, Bognor Regis, West Sussex PO21 2PE

Project:
REPLACEMENT DWELLING

Site Address:
"Brickfields", Hoe Lane, Flansham,
Bognor Regis, PO22 7NW

Title: Floor plan & Block plan

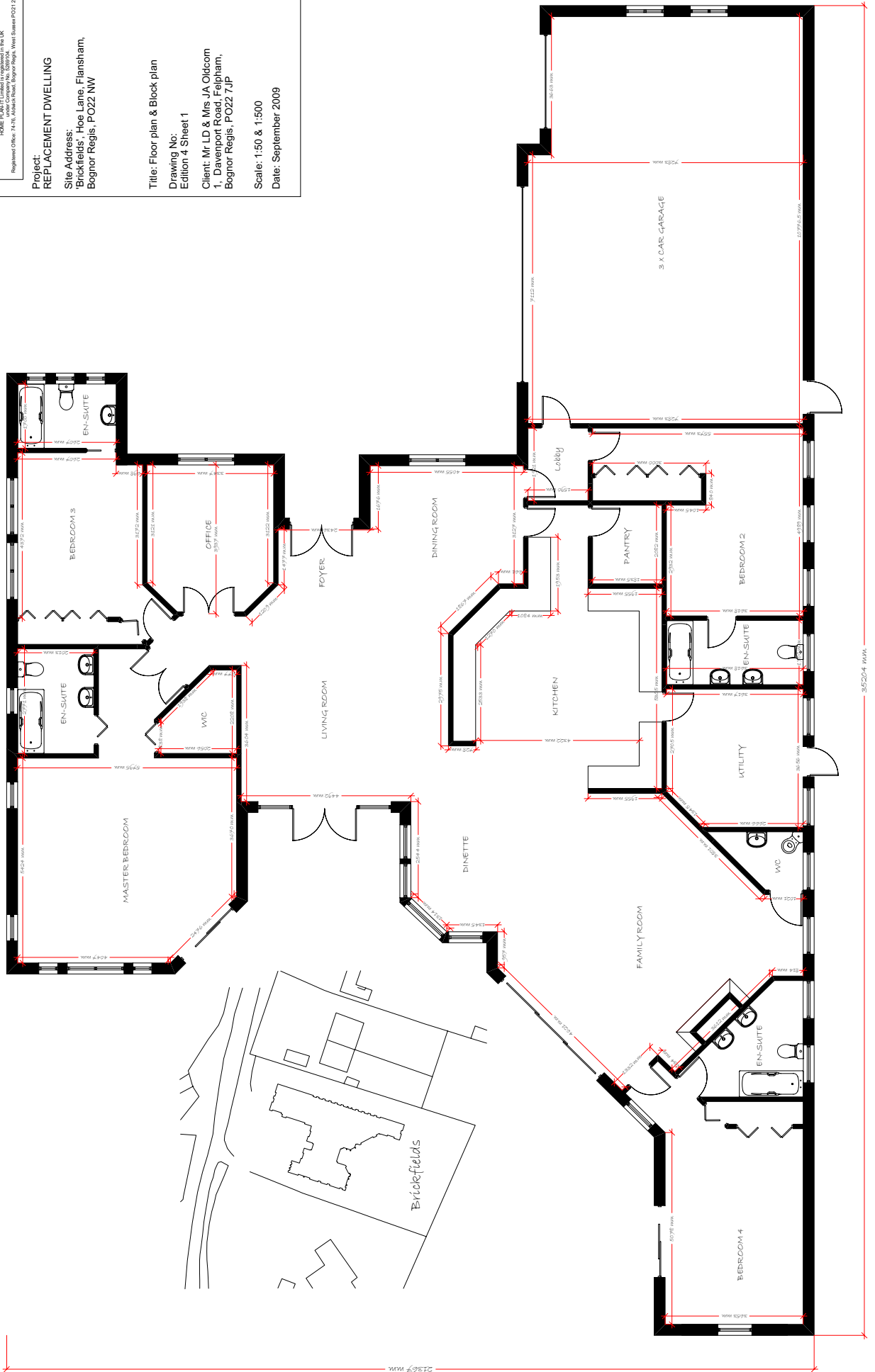
Drawing No:
Edition 4 Sheet 1

Client: Mr LD & Mrs JA Oldcom
1, Davenport Road, Felpham,
Bognor Regis, PO22 7JP

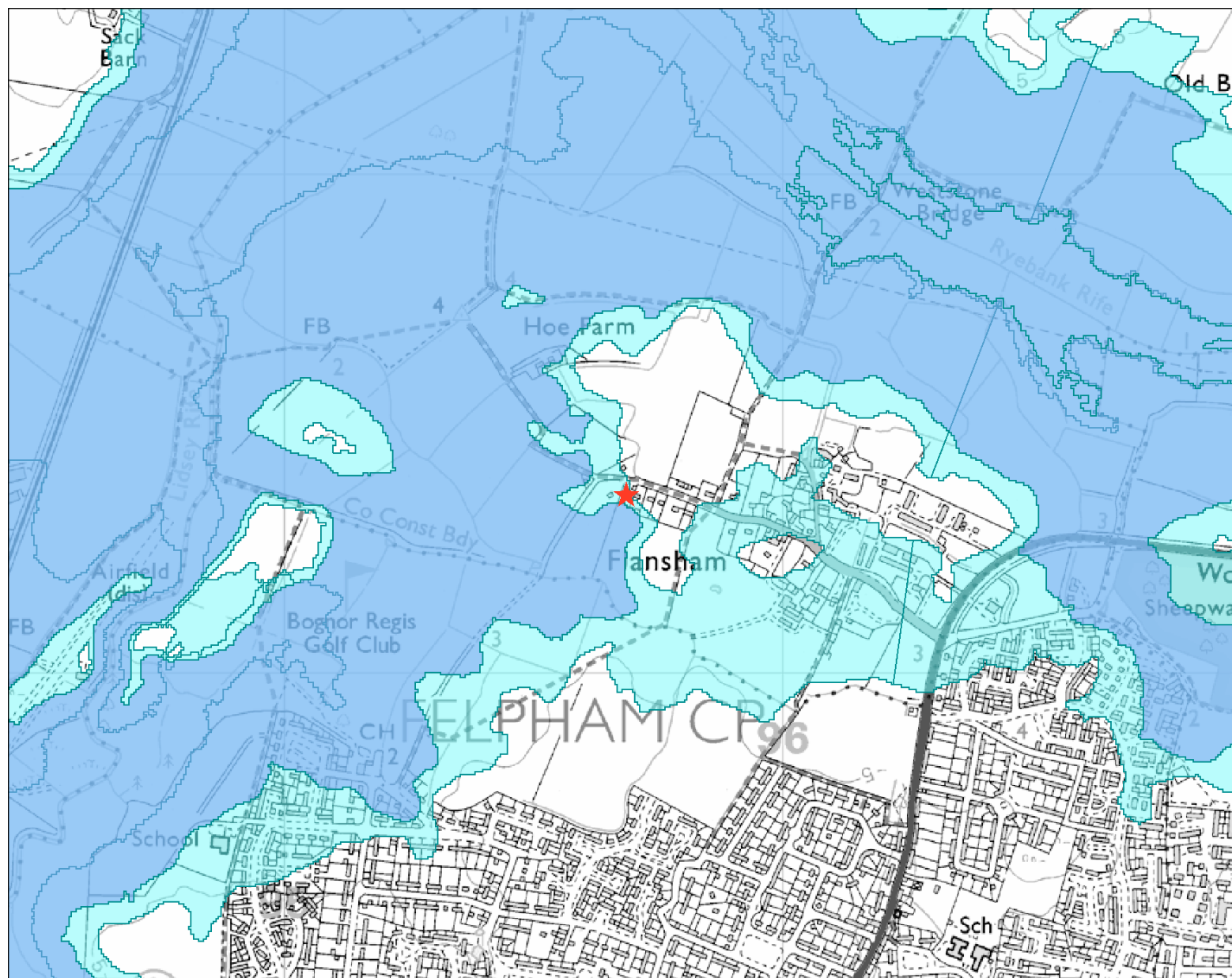
Scale: 1:50 & 1:500

Date: September 2009

10.00 mm
Scale comparator at 1:50



Flood Map Centred on Hoe Lane - Created 21 October 2009



Scale 1:12,000



- 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)

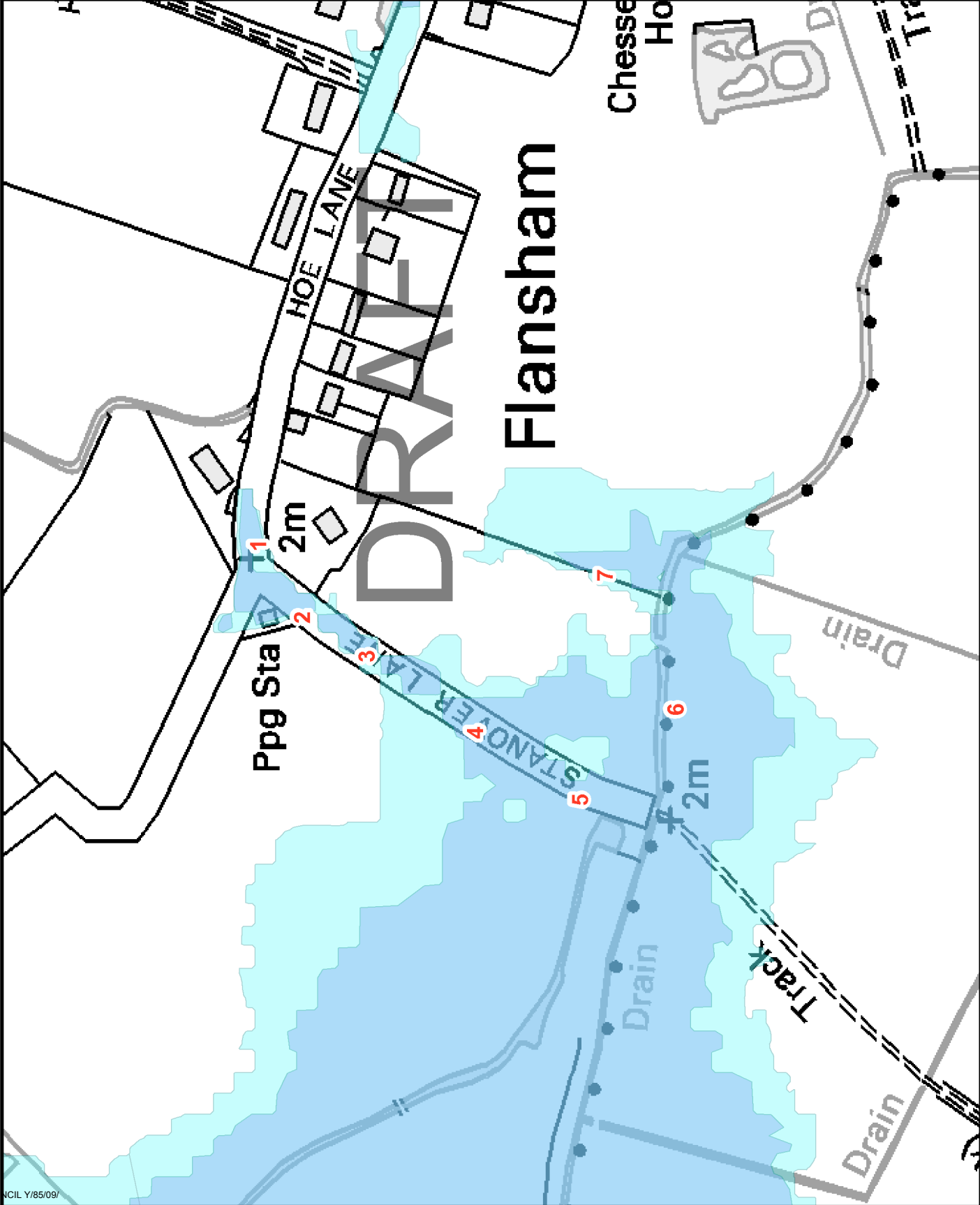
Flood Zone 3 shows the area that could be affected by flooding:

- 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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Proposed Flood Map Centred on Hoe Lane - Created 21 October 2009



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Legend



Proposed Flood Zone 3



Proposed Flood Zone 2



Main River

Flood Levels in metres above ordnance datum		
Location	Tidal 1:200	Tidal 1:1000
1	2.78	3.06
2	2.78	3.06
3	2.78	3.06
4	2.78	3.06
5	2.78	3.06
6	2.78	3.06
7	2.78	3.06

1:2,531

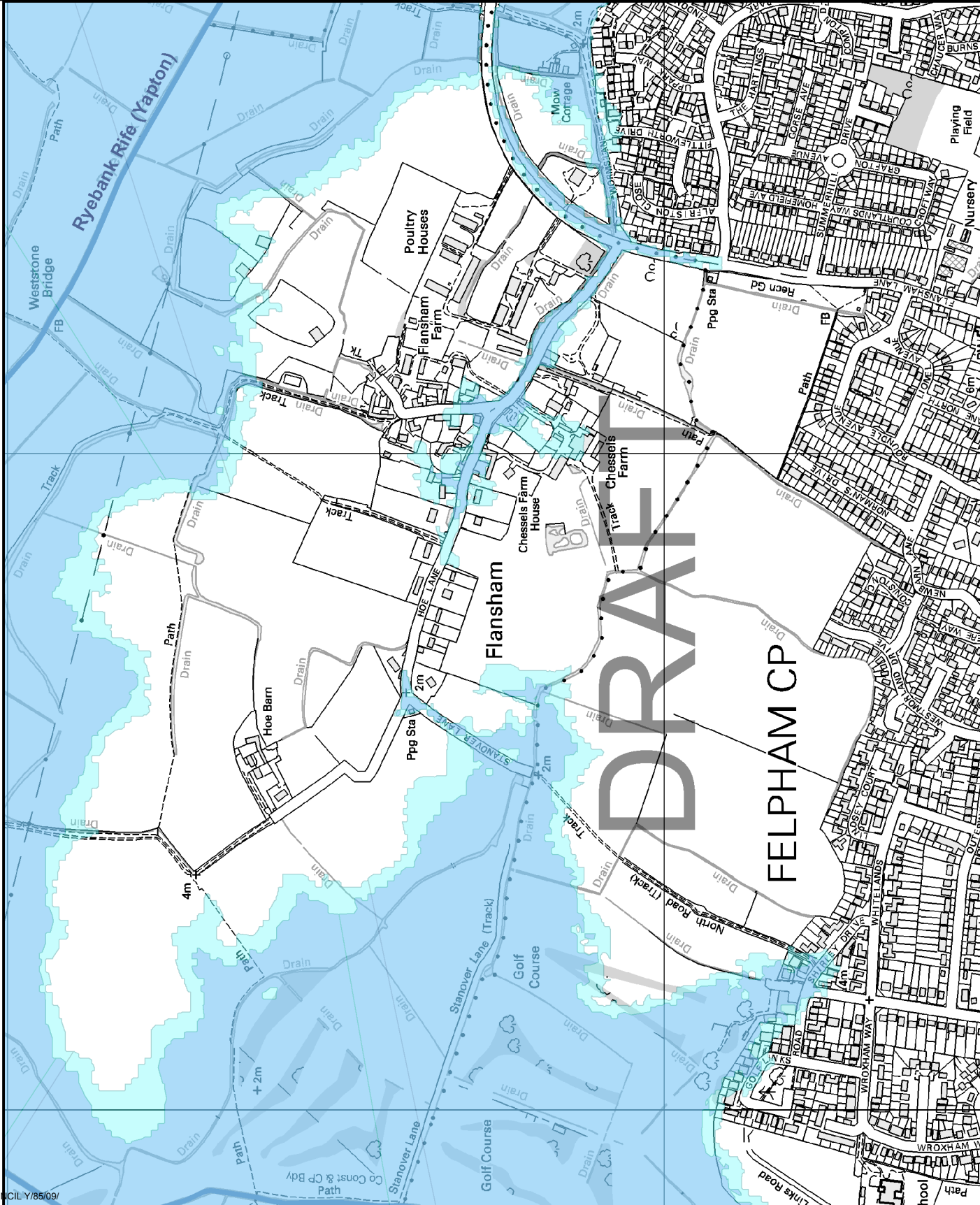


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Legend

- Proposed Flood Zone 3
- Proposed Flood Zone 2
- Main River

1:8,053



Emma Roberts

From: Mowatt, Keely [keely.mowatt@environment-agency.gov.uk]
Sent: 05 November 2009 11:12
To: Emma Roberts
Subject: RE: Flood Risk Assessment: THE BRICKFIELDS, HOE LANE, BOGNOR REGIS, FLANSHAM, PO22 8NW

Emma,

I would suggest that you send both the maps in with the planning application with a short statement explaining that the flood maps are about to change and therefore a flood risk assessment is not required. We would normally recommend that finished floor levels are raised as this mitigates against other forms of flooding. Should the applicant wish to do anything on the land within the blue line, then an FRA would be required.

Hope this answers your question

Regards

Keely

Development & Flood Risk Officer

Environment Agency
Solent & South Downs Area

Direct Dial: 01903 703948
Email: keely.mowatt@environment-agency.gov.uk
Web: www.environment-agency.gov.uk
Guildbourne House, Worthing, BN11 1LD

From: Emma Roberts [mailto:emma.roberts@ambiental.co.uk]
Sent: 04 November 2009 15:31
To: Mowatt, Keely
Subject: Flood Risk Assessment: THE BRICKFIELDS, HOE LANE, BOGNOR REGIS, FLANSHAM, PO22 8NW

Dear Keely,

Please find site location plans for the above site attached. I've also attached the current and new flood maps. The proposal is for the construction of a single Bungalow.

I look forward to hearing from you.

Best Regards,

Emma Roberts

[Click here to find out how the Draft Flood Bill will affect you and your business](#)



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