

Golder Associates (UK) Limited

Kensal House
77 Springfield Road
Chelmsford
Essex CM2 6JG
England

Tel: [44] (0)1245 291949
Fax: [44] (0)1245 291950
E-mail: chelmsford@golder.com
<http://www.golder.com>

Mr V Gizzi
Architect
317 Dyke Road
Hove
BN3 6PE

18 April 2008
08514620031.500

Dear Mr Gizzi

BOGNOR FLOOD RISK ASSESSMENT

Golder Associates (UK) Ltd (Golder) was commissioned by Mr Gizzi to complete a Flood Risk Assessment (FRA) for the redevelopment of 4 Felpham Road, Bognor Regis, PO22 7AZ (hereafter known as the Site), in accordance with our fee proposal (P8514620031/1/V.0) sent to Mr Gizzi on 13 March 2008.

This letter report has been produced in accordance with guidance provided in Planning Policy Statement (PPS) 25.

BACKGROUND

The Site is currently a care home within a single building. The proposed redevelopment of the Site will comprise the conversion of the existing building into a three storey residence containing five flats and a carport, which will be accessible from Felpham Road.

Following a telephone conversation and email communication on 12 March 2008 between Andrew Morsley of Golder and Mr Gizzi, it is understood that the footprint of the Site will not change and there is a possibility of raising floor levels by up to 400 mm, subject to compliance with the building regulations for access.

DATA ACQUISITION

Golder have obtained the following information:

- Topographical site data from Mr Gizzi;
- Tidal and fluvial flood level data and extent maps from the Environment Agency (EA); and
- A Landmark Flood Report.

The Site Plan and topographical survey 9270/SU/01, completed on March 2008 and provided by Mr Gizzi shows that the lowest elevation at the Site, located to the west of the Site on Felpham Road, is 3.48 m (All values are assumed to be Above Ordnance Datum (AOD)). The lowest elevation directly adjacent to the building is 3.68 m, which is located at the northwestern extent of the building's footprint.

Flood risk data, which was purchased from the EA (at a cost of £54.25), is presented in the flood outline plans attached to this letter. These plans show that there is a risk of tidal flooding at the Site.

Mr V Gizzi

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16 April 2008
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The Aldingbourne Rife is a main river which presents the only potential fluvial risk to the Site. The Aldingbourne Rife is located approximately 0.25 km to the west of the Site.

Potential tidal flood risk is presented by the English Channel, which is located approximately 0.3 km south of the Site. The EA provided the following predicted flood levels at the Site:

- 1 in 100 year return period flood level, fluvial only = 1.4 m AOD
- 1 in 100 year return period flood level, fluvial only (plus climate change) = 1.5 m AOD
- 1 in 200 year return period flood level, tidal (plus climate change) = 4.7 m AOD
- 1 in 1000 year return period flood level, tidal (plus climate change) = 4.95 m AOD

The EA stated in their letter to Golder (FE/AR/08/06) that they have no record of flooding affecting the Site location in the past. However not all flooding incidents are reported to the EA.

A Landmark Flood Report, purchased by Golder on 16 April 2008 at a cost of £18,98, states that there are no recorded flood insurance claims for the Site's postcode sector. This supports the EA comment that they have no record of flooding affecting the Site in the past. In addition, the Landmark Flood Report states that Norwich Union's assessment of risk to insurability is low. Norwich Union's assessment of flood risk at the Site indicates that there is a low probability of flooding and they would be prepared to offer cover for flooding if they were to insure this property.

Following the receipt of the flood outline plans and data from the EA, Richard Evans of Golder spoke to Robb Carr of the EA by telephone on 10 April 2008. Mr Carr stated that the elevation of the crest of the sea wall to the south of the Site, for which the EA is responsible, is approximately 6.5 m AOD and the elevation at the top of the shingle beach fronting the sea wall is approximately 5.6mAOD. Mr Carr also indicated that the sea wall protecting the coast extends from the promenade located southwest of the Site to at least the outfall southeast of the Site. The EA did however note that the elevations of sea defences are approximated. A new survey to update their records for the area is to be conducted later in 2008.

Further information relating to the benefit provided by the sea defences south of the Site was provided by Roger Spencer of Arun District Council (ADC) during a telephone conversation with Richard Evans of Golder on 18 April 2008. Mr Spencer stated that the sea wall height fronting Butlins Holiday Centre is approximately 6.5 m AOD and extends to a point adjacent to the eastern extent of Outram Road. From there the sea wall height is approximately 5.5 m AOD plus a 375mm splash wall. Mr Spencer confirmed that the EA is responsible for sea wall maintenance to the west and ADC to the east. The boundary between the two is indicated by the sea wall elevation change.

DATA ANALYSIS

The Site, intended for residential use, is located in Flood Zone 3a and is classified as "more vulnerable" in PPS 25, Table D.2. This requires the development to pass an 'Exception Test' to class the development as appropriate, according to Table D.3 in PPS 25.

The Site Plan 9270/SU/01 indicates the entire Site is located at an elevation above the a 1 in 100 year return period flood level plus consideration for climate change (1.5 m AOD). Therefore there is no risk of fluvial flooding at the Site.

Tidal flooding poses a potential risk to the Site. However the sea wall with an estimated elevation of between 5.5 and 6.5 m AOD provides significant benefit to reduce this risk as it has been constructed to above the 1 in 1 in 1000 year tidal flood level (4.95 m AOD). Therefore there is not considered to be a significant residual risk of tidal flooding at the Site.

As mentioned previously in this report, the proposed areal footprint will not increase, subject to development and therefore would not impact on flood plain storage.

RECOMMENDATIONS

Although the residual risk of tidal flooding is not significant, Golder recommends a prudent approach to flood protection by flood proofing the development e.g. placing electricity plug sockets above the 1 in 200 year tidal flood level (4.7 m AOD) and ensuring that the residents are fully informed of the procedure should there be a breach of the tidal defences. Access should be provided at all times from the ground floor to the first floor.

CONCLUSIONS

The development of the Site will pose no increase in flood risk for any third parties. There is no fluvial risk on the Site. The tidal flood risk is managed by the defences but flood proofing of the development is recommended up to 4.7 m AOD.

Should you have any further queries regarding the above please do not hesitate to contact Andrew Morsley.

Yours sincerely

GOLDER ASSOCIATES (UK) LIMITED



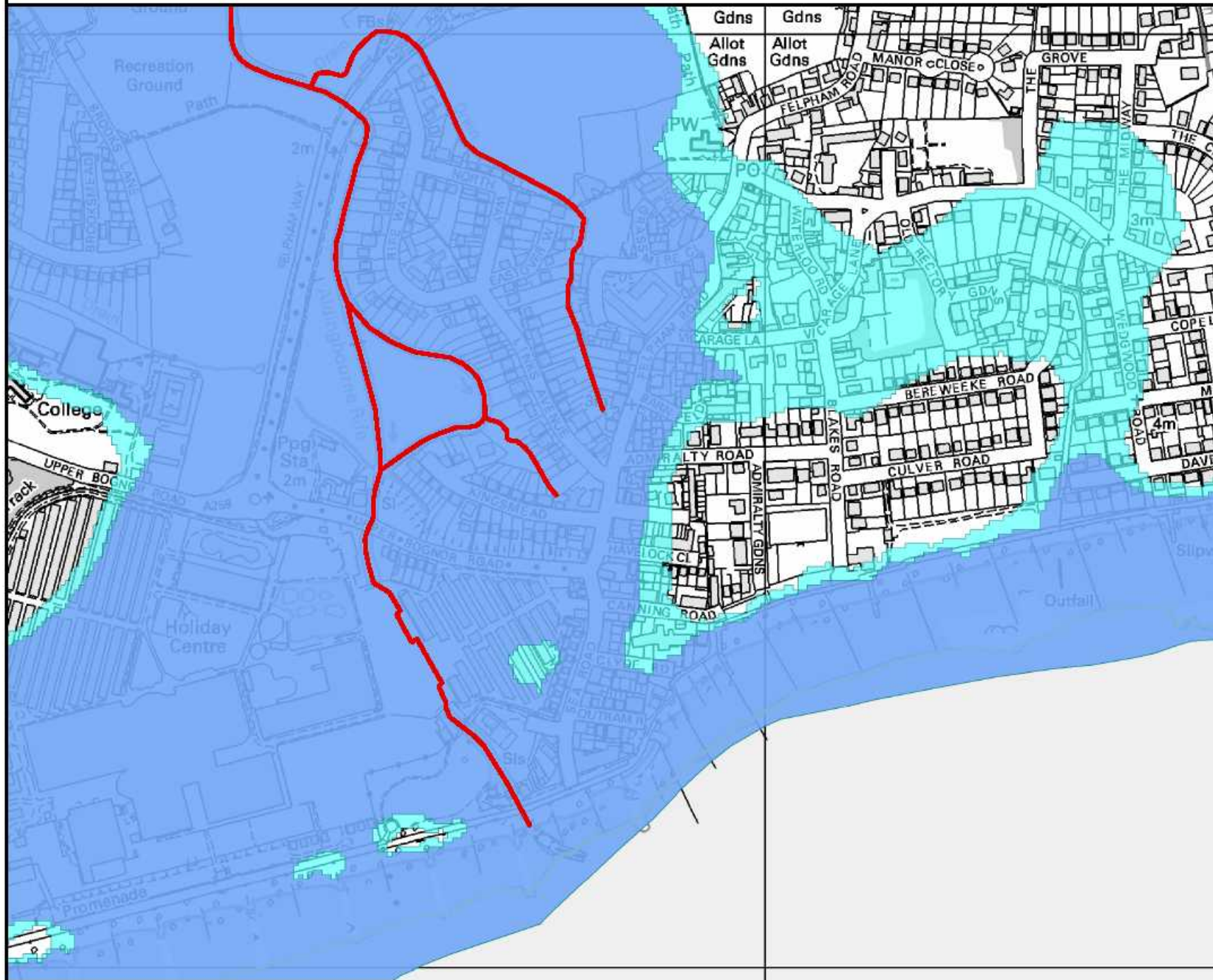
Senior Hydrologist



Principal Geotechnical Engineer

AJM/gm

Bognor Regis Flood Map



Legend

- Main River
- Flood Zone 2 (1:1000yr)
- Flood Zone 3 (1:100yr Fluvial 1:200yr Coastal)

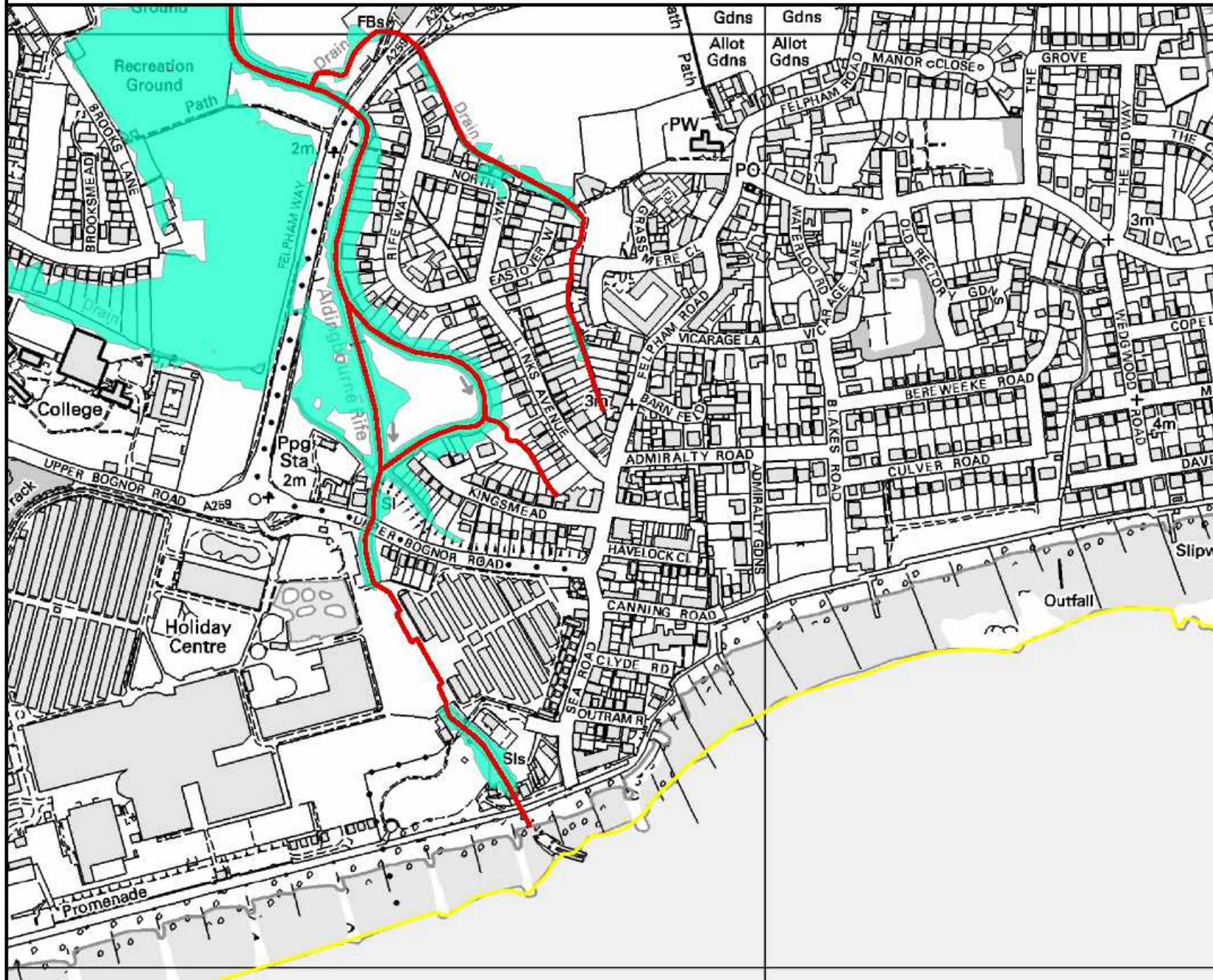
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Metres

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100yr Fluvial Outline



Legend

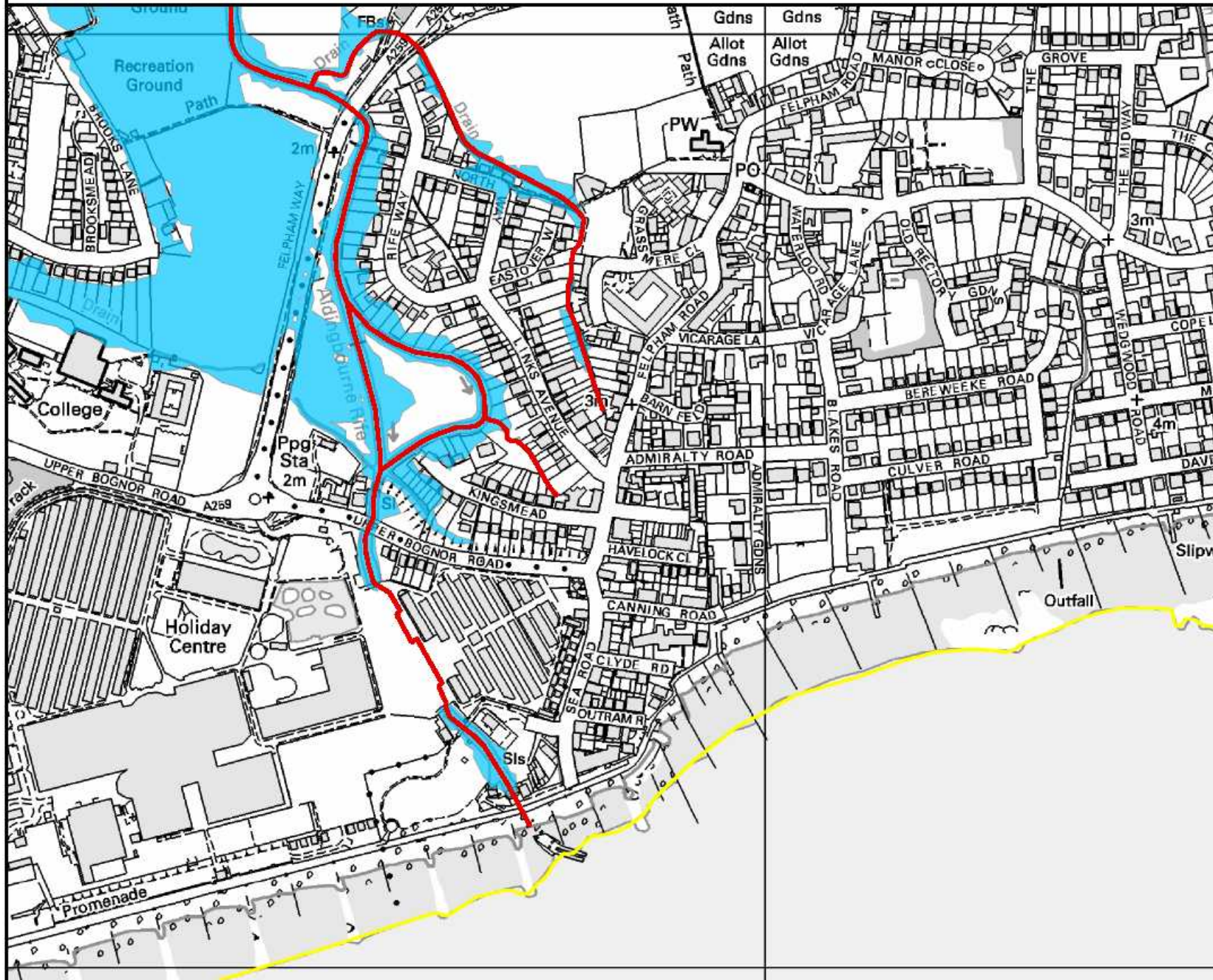
- Main River
- 100yr Fluvial Outline

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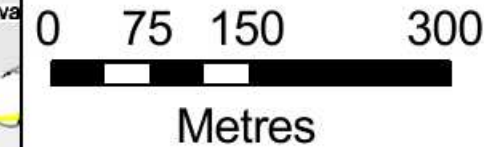
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100yr Fluvial Climate Change.



Legend

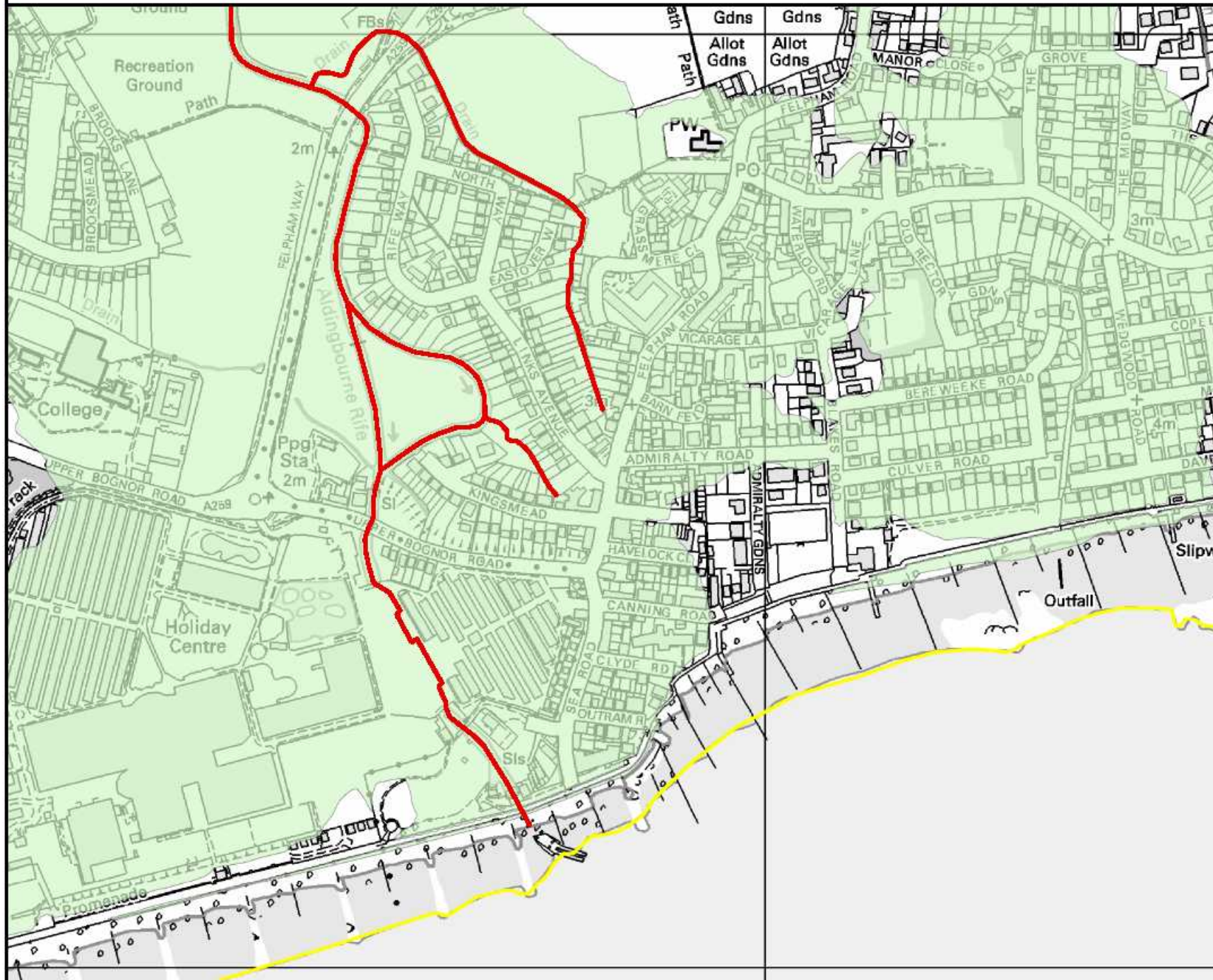
- Main River
- 100y Fluvial Climate Change Outline



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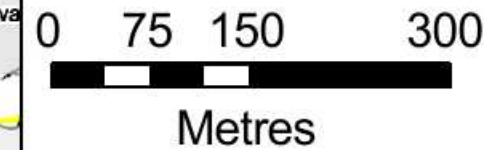
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1:200yr Tidal Undefended Outline. 2115



Legend

- Main River
- 1:200yr Tidal Undefended. 2115



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