

## Proof of Evidence - Flood Risk and Surface Water Drainage

On behalf of Mead Realisations Ltd

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Nick Bosanko BSc (Hons) MSc (Hons) MCIWEM C.WEM  
Technical Director  
+44 7947 220 321  
nick.bosanko@slrconsulting.com

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# 1 Introduction

## About the Author

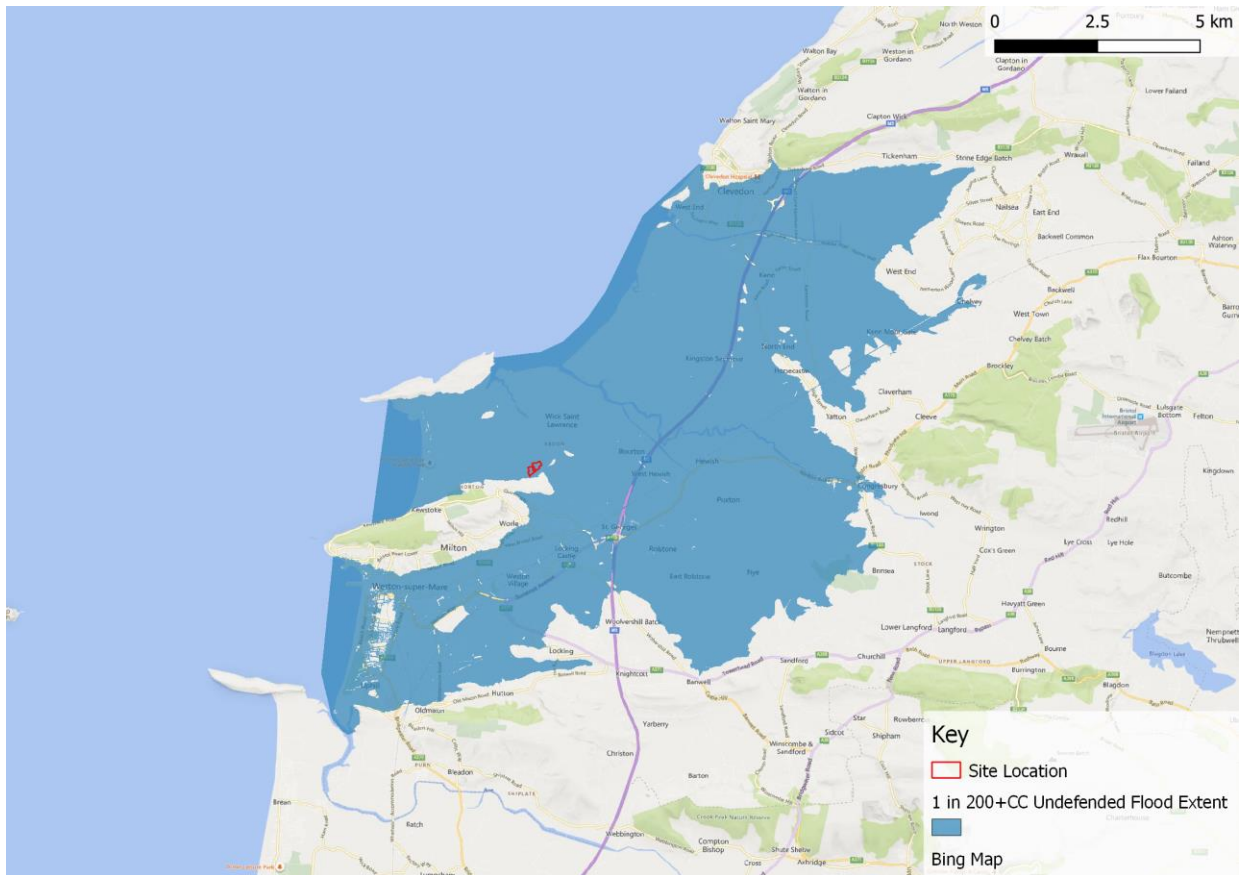
- 1.1 I am Nick Bosanko; a chartered member of the Chartered Institute of Water and Environmental Management (CIWEM). I have approximately 20 years' experience in flood risk and drainage consultancy. I have worked in the Bristol region since 2006. I have prepared countless Flood Risk Assessments and drainage strategies to support planning applications for residential development. I have also worked on behalf of the Environment Agency and various Local Planning Authorities. This work has included the preparation of strategic flood modelling studies, including coastal defence and breach assessments to inform Strategic Flood Risk Assessments.

## Background

- 1.2 A Flood Risk Assessment (FRA) was prepared by Vectos in July 2019 (**CD1.13**), which supported the outline application for residential development at land at Lynchmead Farm (hereafter the 'appeal site'). The FRA included a surface water drainage strategy.
- 1.3 The FRA (**CD1.13**) identifies that the appeal site is defended from coastal flooding under present day conditions, but is likely to experience flooding in the future, i.e. as a result of the anticipated implications of climate change on rising sea level, which will overtop the existing defences and propagate inland. No other significant sources of flood risk were identified.
- 1.4 The FRA (**CD1.13**) was informed through information from, and/or consultation with, the Environment Agency (EA), Lead Local Flood Authority (LLFA) and North Somerset Levels Internal Drainage Board (IDB).
- 1.5 These statutory consultees had no objection with respect to the FRA (**CD1.13**); flood risk and surface water drainage was not a reason for refusal.

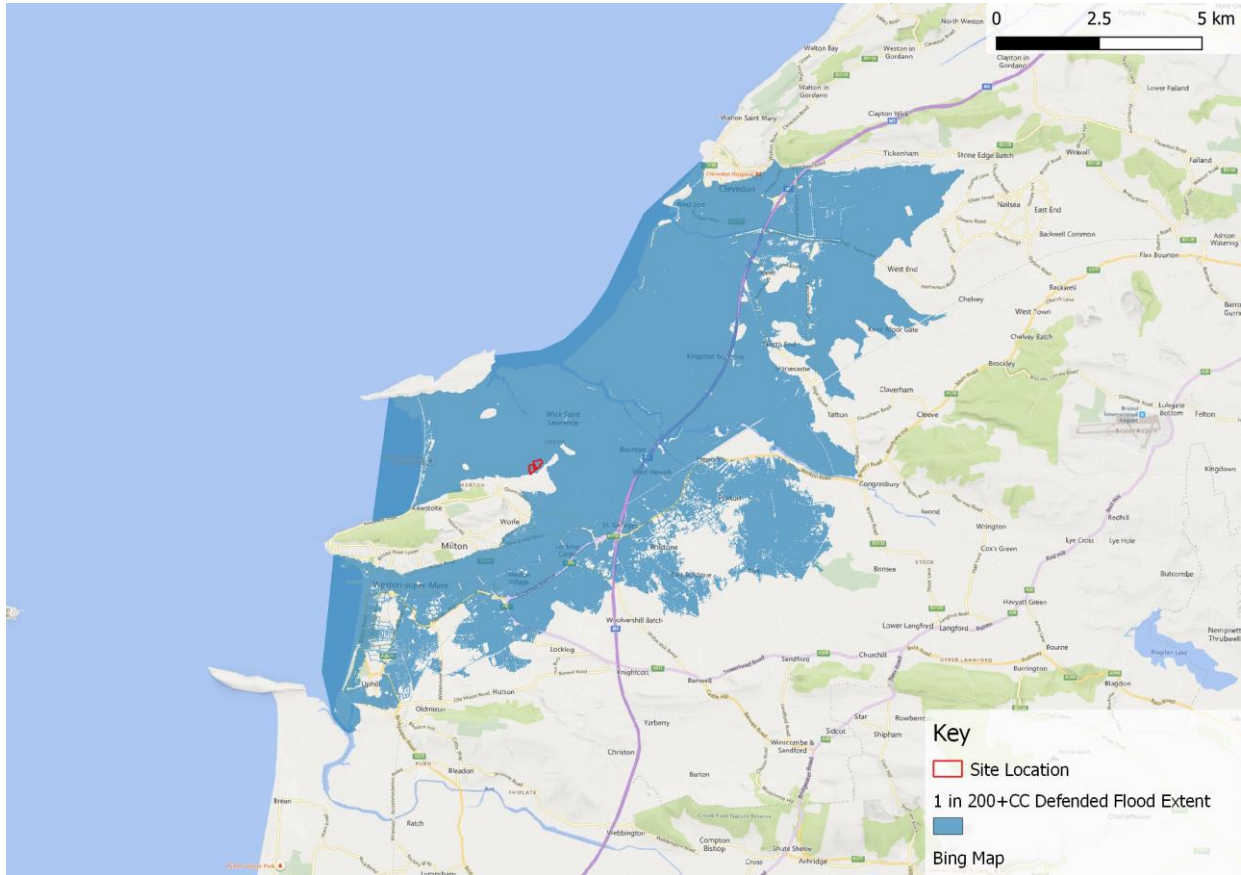
## 2 EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report

- 2.1 Following the approval from the aforementioned statutory consultees, new flood data become available for the appeal site and surrounding area. This relates to the EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report prepared by JBA Consulting (CD8.6).
- 2.2 Whilst the validity of the FRA (CD1.13) has not been called into question, the North Somerset Council Statement of Case (CD6.1) lists the EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report (CD8.6) as evidence.
- 2.3 The Flood Risk and Surface Water Drainage Statement of Case (CD5.4) sets out the flood risk conditions, and the agreed strategy used to overcome these, which need not be replicated here. This same approach has been adopted elsewhere in Weston-super-Mare and the wider region.
- 2.4 However, it is the purpose of this Proof of Evidence to review the EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report (CD8.6) and associated information, to identify what impact this data could have on the agreed flood risk management strategy.
- 2.5 The results from the EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report (CD8.6) were obtained and reviewed. The 1 in 200 year (0.5% AEP) undefended tidal plus climate change flood extent is presented in Figure 1.



**Figure 1: EA Woodspring Bay and Severn House Farm Coastal Flood Modelling – 1 in 200+CC Undefended Flood Extent (data files ref wsb\_t200\_2118\_nppf\_undef\_005\_h\_asc.txt)**

- 2.6 This shows the full extent of the theoretical floodplain, which covers most of Weston-super-Mare and Clevedon, as well as other smaller settlements and rural areas. The total floodplain area is approximately 100 km<sup>2</sup>.
- 2.7 Figure 2 shows 1 in 200 year (0.5% AEP) defended tidal plus climate change flood extent.



**Figure 2: EA Woodspring Bay and Severn House Farm Coastal Flood Modelling – 1 in 200+CC Defended Flood Extent (data files ref wsb\_t200\_2118\_nppf\_def\_005\_h\_asc.txt)**

**Impact of Existing Coastal Flood Defences**

- 2.8 The EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report (CD8.6) shows that the appeal site remains defended from coastal flooding under present day conditions (and up to and including the 1 in 1,000 year (0.1% AEP) event), but is still likely to experience flooding in the future, as a result of the anticipated effects of climate change.
- 2.9 The relevant shoreline management plans for the region identify how coastal flood protection could be achieved in the short to long term. It is accepted that there is uncertainty around funding for maintenance and improvement of defence infrastructure in the future. This existing infrastructure provides an important role and protects the densely populated areas of Weston-super-Mare and Clevedon, as well as the appeal site.
- 2.10 Works have been undertaken in recent years to improve and existing coastal defences that protect the appeal site and wider areas, such as the Seafront Enhancement Scheme in Weston-super-Mare (CD8.59) and Congresbury Yeo Tidal Banks (CD8.6). As confirmed in the Local Flood Risk

Management Strategy for North Somerset Part G – Coastal Flood Risk Awareness (**CD8.61**), the new sea wall, which formed part of the Seafront Enhancement Scheme in Weston-super-Mare, was designed so that it can be raised when needed in the future due to sea level rise.

### **Flood Mitigation Strategy**

- 2.11 A series of key flood mitigation requirements were agreed with the EA to protect the appeal site from residual risk (i.e. overtopping of the coastal defences), as a result of climate change. This included finished floor levels (FFLs) set 300 mm above existing ground level and a safe refuge above the extreme flood level (i.e. above the 1 in 200 year (0.5% AEP) undefended tidal flood plus climate change level). This required a safe refuge level of at least 8.81 m AOD to be secured by condition.
- 2.12 The results from the EA (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report (**CD8.6**) show that the extreme flood levels have increased at the appeal site. This would require a refuge level of at least 9.41 m AOD, which is 0.6 m higher than that previously agreed. There is no reason why this cannot still be achieved and there is no concern that this new EA data will jeopardise what has previously been agreed.
- 2.13 However, North Somerset Council have proposed changes to the draft conditions, which stipulated the flood mitigation requirements previously agreed with the EA. The changes will require FFLs to be raised higher than previously agreed. Specifically, it requires FFLs to be set 300 mm above the 1 in 200 year (0.5% AEP) defended tidal flood plus climate change level. A safe refuge is required 300 mm above the 1 in 200 year (0.5% AEP) undefended tidal flood plus climate change level.
- 2.14 Whilst the previous approach was agreed with the EA, we are satisfied with this revised approach should it be necessary.

### **Summary**

- 2.15 Paragraph 159 of the National Planning Policy Framework (NPPF) states “Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.”
- 2.16 Whilst existing flood defences offer protection to the appeal site under present day conditions, the flood mitigation strategy to be implemented will ensure the development is safe from flooding in the future, i.e. for its lifetime, in accordance with the NPPF. This strategy is therefore not reliant on the coastal flood defences.

### 3 Exception Test

- 3.1 Paragraph 164 of the NPPF states “The application of the exception test should be informed by a strategic or site specific flood risk assessment, depending on whether it is being applied during plan production or at the application stage. To pass the exception test it should be demonstrated that:
- a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and
  - b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.”
- 3.2 Paragraph 165 of the NPPF states “both elements of the exception test should be satisfied for development to be allocated or permitted.”
- 3.3 As previously noted, the statutory consultees had no objection with respect the FRA; flood risk and surface water drainage was not a reason for refusal. Therefore, ‘part b’ was therefore passed.
- 3.4 Walsingham Planning addressed ‘part a’ of the test, which was a reason for refusal. In the Decision Notice (**CD3.2**), North Somerset Council stated that “The proposal would not provide wider sustainability benefits to the community that outweigh the flood risk. The application therefore fails the Exception Test. This is contrary to Policy CS3 of the North Somerset Local Plan, paragraphs 164, and 165 of the National Planning Policy Framework”.
- 3.5 Mr Jewson will address the various aspects of the Exception Test, but I have been asked to summarise further flood risk sustainability benefits to the community that the Appellant is prepared to offer that contribute towards ‘part a’ of the test. These measures are presented in Appendix A.

## 4 Summary

- 4.1 The proposed development will deliver much needed new housing that has been designed to be safe from flooding, without impacting third parties. It considers the impacts of climate change and will be safe from flooding now and in the future.
- 4.2 Flood risk and surface water drainage matters were not a reason for refusal to the planning application and the EA, LLFA and IDB had no objection on this regard.
- 4.3 Following the approval from relevant statutory consultees, new flood data become available for the site and surrounding area. This relates to the Environment Agency (2020) Woodspring Bay and Severn House Farm Coastal Flood Modelling Report prepared by JBA Consulting (**CD8.6**). The deliverables of this study have been reviewed and will not jeopardise what has previously been agreed.
- 4.4 Given this, there are no clear reasons to refuse development on flood risk grounds.
- 4.5 Mr Jewson will address the various aspects of the Exception Test, but a series of additional flood risk measures have now been offered by the Appellant, which will be wider community sustainability benefits that contribute towards 'part a' of the test.



# Appendix A

Exception Test (part a) – Flood Risk Opportunities

## Contact

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### **London**

Network Building,  
97 Tottenham Court Road,  
London W1T 4TP.  
Tel: 020 7580 7373

### **Bristol**

3rd Floor, Brew House,  
Jacob Street  
Bristol, BS2 0EQ  
Tel: 0117 203 5240

### **Cardiff**

Helmont House, Churchill Way,  
Cardiff CF10 2HE  
Tel: 029 2072 0860

### **Exeter**

6 Victory House,  
Dean Clarke Gardens,  
Exeter EX2 4AA  
Tel: 01392 422 315

### **Birmingham**

Great Charles Street,  
Birmingham B3 3JY  
Tel: 0121 2895 624

### **Manchester**

Oxford Place, 61 Oxford Street,  
Manchester M1 6EQ.  
Tel: 0161 228 1008

### **Leeds**

7 Park Row, Leeds LS1 5HD  
Tel: 0113 512 0293

### **Bonn**

Stockenstrasse 5, 53113,  
Bonn, Germany  
Tel: +49 176 8609 1360  
[www.vectos.eu](http://www.vectos.eu)

### **Registered Office**

**Vectos (South) Limited**  
**Network Building,**  
**97 Tottenham Court Road,**  
**London W1T 4TP**  
**Company no. 7591661**