

Monbank, Newport
Residential Development



Monmouthshire Housing Association

Flood Consequence Assessment

2nd Issue

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A	21/05/2024	Updated Site Layout	Stephen Davis	Director

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1. Introduction

PHG Consulting is involved in a project located in Newport and has been appointed to undertake a drainage strategy report to support a planning application for a residential development at Monbank, Newport.

The FCA is compliant with TAN15 (2004) and Planning policy Wales. The new FMfP (Flood Map for Planning) has also been included as these maps represent a more accurate extents of Flood Zones, as explained in a letter from Welsh Government dated 15 December 2021, reference MA-JJ-3967-21.

Existing Site

The existing site is brownfield. The development site is split into two areas either side of Monmouth Castle Drive and covers a combined area of 0.91 ha. It is located just off B4237, Newport, at the National Grid reference ST303867. Site location is presented in Figure 1 below.



Figure 1. Site Location Plan. OS Grid Reference ST303867

2. Flood Consequence Assessment

The assessment will examine all potential sources of flooding pertaining the site and the immediate vicinity, determine the risk (flood frequency) and the effects (flood consequences) of flooding. In Wales, planning policy relating to flooding is governed by Technical Advice Note (TAN) 15: development and flood risk. This assessment has been prepared in accordance with TAN15.

Flood Maps – DAM

The Natural Resources Wales (NRW) have produced Development Advice Map (DAM) that is in accordance with TAN15, all of Wales has been assigned a flood zone. DAM is the currently used map to accompany the current TAN15 (2004).

According to DAM the site is positioned within Flood Zone B, i.e., area is known to have been flooded in the past evidenced by sedimentary deposits. TAN15 advises to check the extent of 0.1% AEP flooding in the context of site boundary.

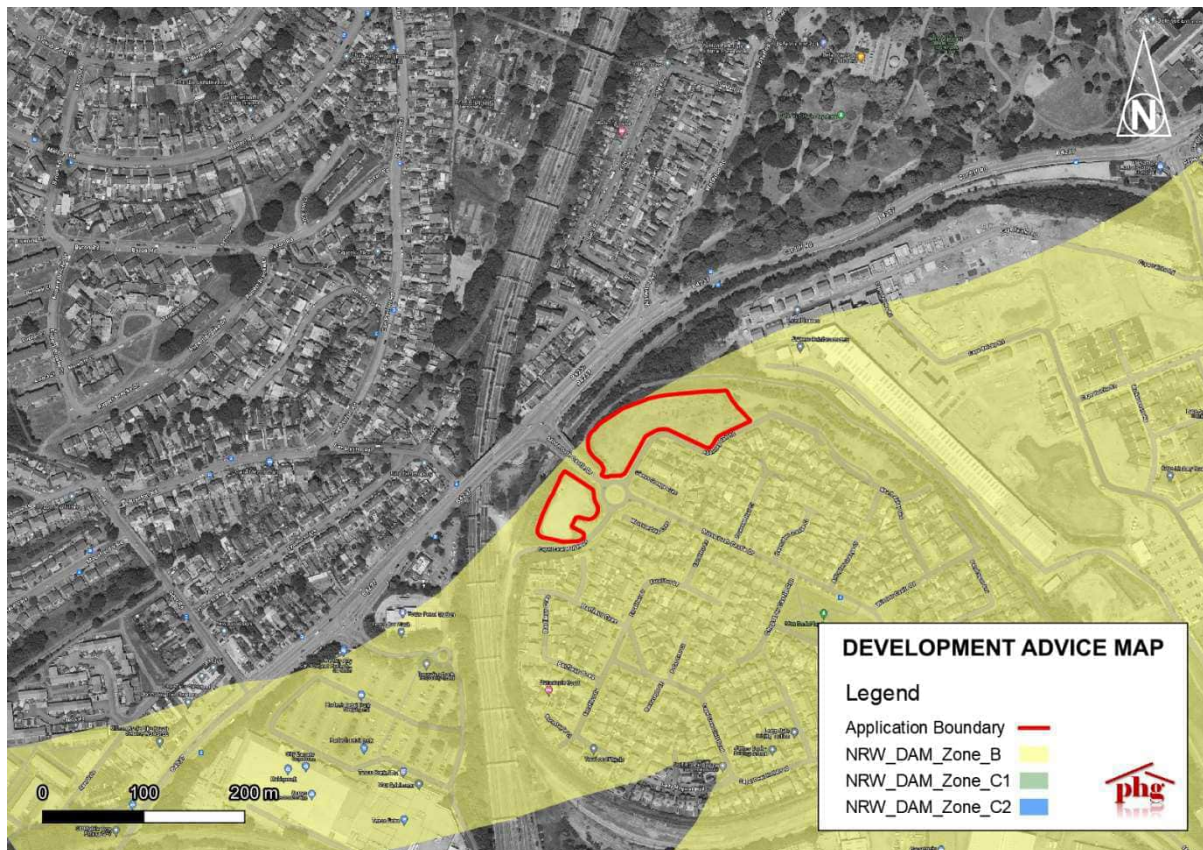


Figure 2. DAM

Table 1 in conjunction with maps included in Appendix B illustrates the Flood Risks associated with the site from all sources according to TAN15 (2004).

As per TAN15, Figure 1:

Table 1. Technical Advice Note (TAN) 15: development and flood risk *Figure 1*

Description of Zone		Use within the precautionary framework
Considered to be at little or no risk of fluvial or tidal/coastal flooding.	A	Used to indicate that justification test is not applicable and no need to consider flood risk further.
Areas known to have been flooded in the past evidenced by sedimentary deposits.	B	Used as part of a precautionary approach to indicate where site levels should be checked against the extreme (0.1%) flood level. If site levels are greater than the flood levels used to define adjacent extreme flood outline there is no need to consider flood risk further.
Based on Environment Agency extreme flood outline, equal to or greater than 0.1% (river, tidal or coastal)	C	Used to indicate that flooding issues should be considered as an integral part of decision making by the application of the justification test including assessment of consequences.
Areas of the floodplain which are developed and served by significant infrastructure, including flood defences.	C1	Used to indicate that development can take place subject to application of justification test, including acceptability of consequences.
Areas of the floodplain without significant flood defence infrastructure.	C2	Used to indicate that only less vulnerable development should be considered subject to application of justification test, including acceptability of consequences. Emergency services and highly vulnerable development should not be considered.

Development Category – Flood Zones Compatibility to Flood Map for Planning

The development site is classified as *Highly vulnerable development*¹ and its design life is 100 years². The Flood Map for Planning (FMfP) maps, which are advisory only, have been included in the assessment. As confirmed in the letter from Welsh Government dated 15 December 2021, the FMfP represents better and more up-to-date information on areas at flood risk than the DAM.

Flood Map for Planning - Rivers

The site is located in DAM Zone B as per Technical Advice Note 15. The site has been checked against the Flood Map for Planning to assess the risk of flooding from rivers, see Figure 3 below. The site is outside the flood zone, i.e. Flood Zone 1.



Figure 3. NRW – Flood Map for Planning - Flood Zone Rivers

Flood Map for Planning - Seas

The site is located in Flood Zone 1 from Sea, which aligns with the DAM.

¹ Technical Advice Note15: Development and Flood Risk (December 2021), Figure 3

² Guidance on Climate Change Allowances for Planning Purposes, CL-03-16, Welsh Government

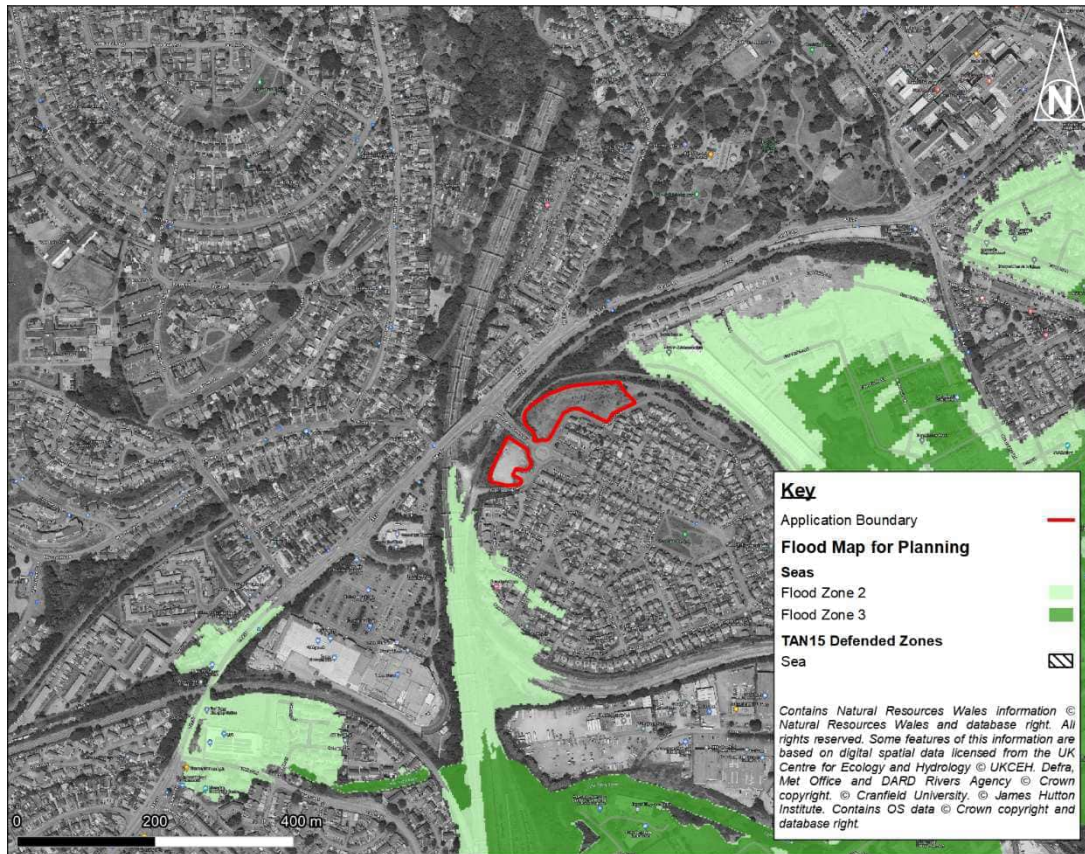


Figure 4. NRW – Flood Map for Planning - Flood Zone Seas

Flood Map for Planning - Surface Water and Small Water Courses

The site is located entirely outside Flood Zone 2 or Flood Zone 3 of Surface Water and Small Watercourses. The site will be positively drained post development, therefore the extents of Flood Zones from Surface Water and Small Watercourses are unlikely to change.



Figure 5. NRW – Flood Map for Planning - Surface Water and Small Watercourses

Impact on flooding elsewhere

In line with TAN15, the development must insure no increase in flooding elsewhere.

Given the site is located outside of the Flood Zones from Sea, Rivers, and Surface Water, and the fact that the development will be positively drained, there will be no adverse effects on flooding elsewhere.

Therefore, it is considered that in an event of flooding, the development will not result in an increase of flooding elsewhere.

Summary of flood risk

Given the site is located outside the Flood Zone from Sea, Rivers, and Surface Water and Small Watercourses, it is concluded that on the grounds of flood risk, the proposed development site is compliant with Planning Policy Wales and TAN15.

3. Conclusions

- The proposed development site is of 0.91 ha plan area. The proposed development is of residential use and is classed as highly vulnerable development.
- The proposed development is shown to be in Zone B (DAM). Flood Map for Planning identifies it to be outside Flood Zones from Sea, Rivers, and Surface Water and Small Watercourses.
- The proposed development will not result in an increase in flooding elsewhere.
- It is concluded that on the grounds of flood risk, the proposed development site is compliant with Planning Policy Wales and TAN15.

Appendix A Site Location Plan

Site Location Plan		Scale: 1 in 1800 @ A4		Key Application Boundary —
Project: 2460 - Monbank, Newport Produced by: Pat Obermajer Printed on: 19.02.2024 Client: Monmouthshire Housing Association	OS Grid Reference: ST303867	PHG Consulting 107 Cowbridge Rd East, Cardiff CF11 9AG		



Appendix B NRW Maps

Development Advice Map (TAN15 2004)

Flood Map for Planning

Flood Map for Planning - Flood Map for Planning - Surface Water and Small Watercourses

Flood Map for Planning - Rivers

Flood Map for Planning - Sea

Development Advice Map

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Produced by: Pat Obermajer
Printed on: 21.02.2024
Client: Monmouthshire Housing Association

OS Grid Reference: ST303867

Scale: 1 in 5000 @ A3

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Key

- Application Boundary
- Development Advice Map
- Zone B
- Zone C1
- Zone C2



The **Development Advice Map (DAM)** shows areas at risk of flooding for the purposes of land-use planning.

Zone A Considered to be at little or no risk of fluvial or tidal/coastal flooding.

Zone B Areas known to have been flooded in the past, evidenced by sedimentary deposits.

Zone C Based on Environment Agency extreme flood outline, equal to or greater than 0.1% (river, tidal, or coastal)

Zone C1 Areas of the floodplain which are developed and served by significant infrastructure, including flood defences.

Zone C2 Areas of the floodplain without significant flood defence infrastructure.

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Flood Map for Planning

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Client: Monmouthshire Housing Association

OS Grid Reference: ST303867

Scale: 1 in 4000 @ A3

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Key

- Application Boundary
- Flood Map for Planning**
- Rivers**
- Flood Zone 2
- Flood Zone 3
- Seas**
- Flood Zone 2
- Flood Zone 3
- Surface Water and Small Watercourses**
- Flood Zone 2
- Flood Zone 3
- TAN15 Defended Zones**
- Rivers
- Sea

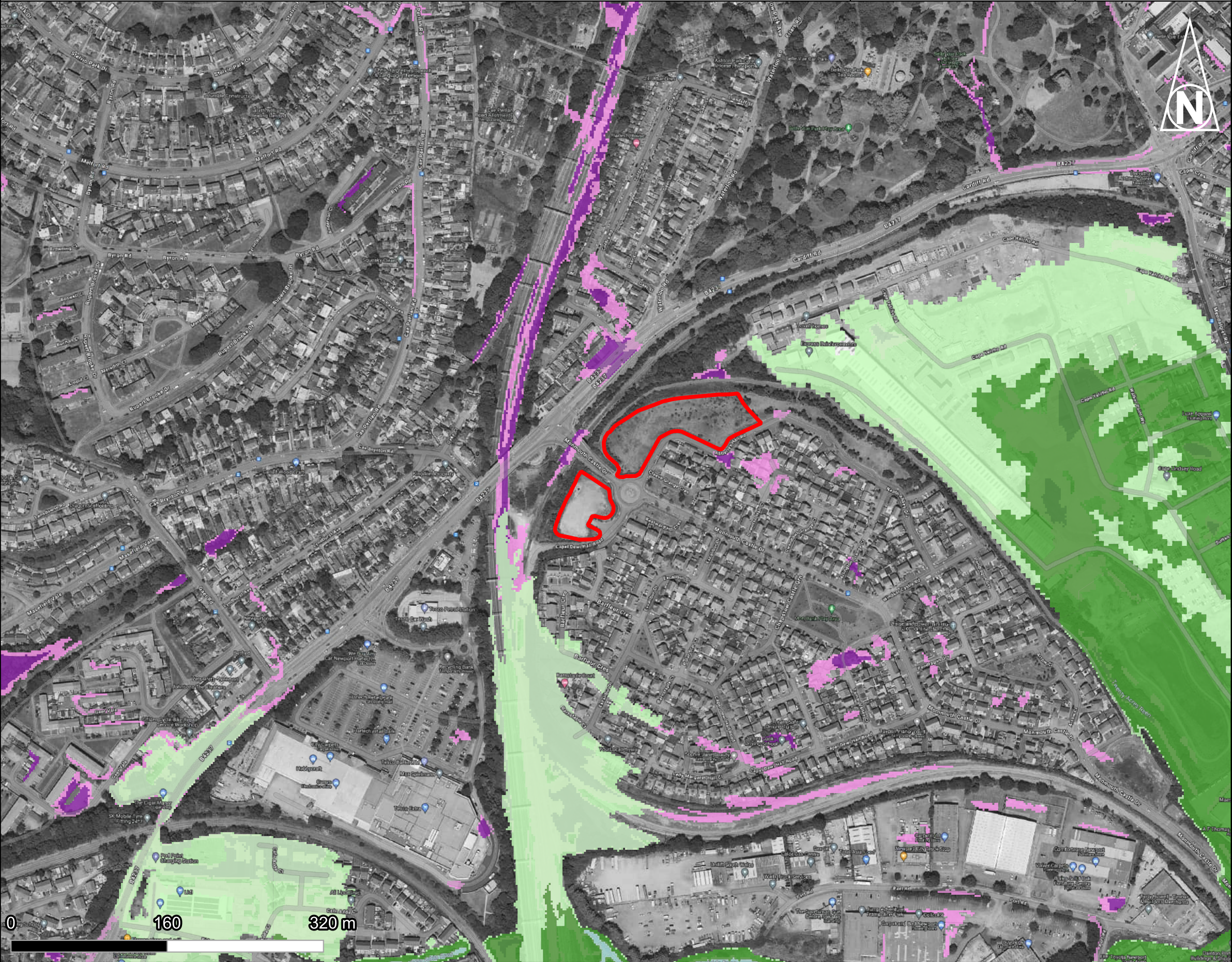
Flood Zone 3 displays the extent of flooding from:

- rivers with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change.
- the sea with a 0.5% (1 in 200) chance or greater of happening in any given year, including an allowance for climate change.
- Surface water & small watercourses with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change.

Flood Zone 2 displays the extent of flooding from:

- Rivers with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change.
- the Sea with less than 0.5% (1 in 200) but greater than or equal to 0.1% (1 in 1,000) chance of flooding in any given year, including an allowance for climate change.
- Surface water & small watercourses with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change.

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Flood Map for Planning - Surface Water and Small Watercourses

Scale: 1 in 2500 @ A3



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Key

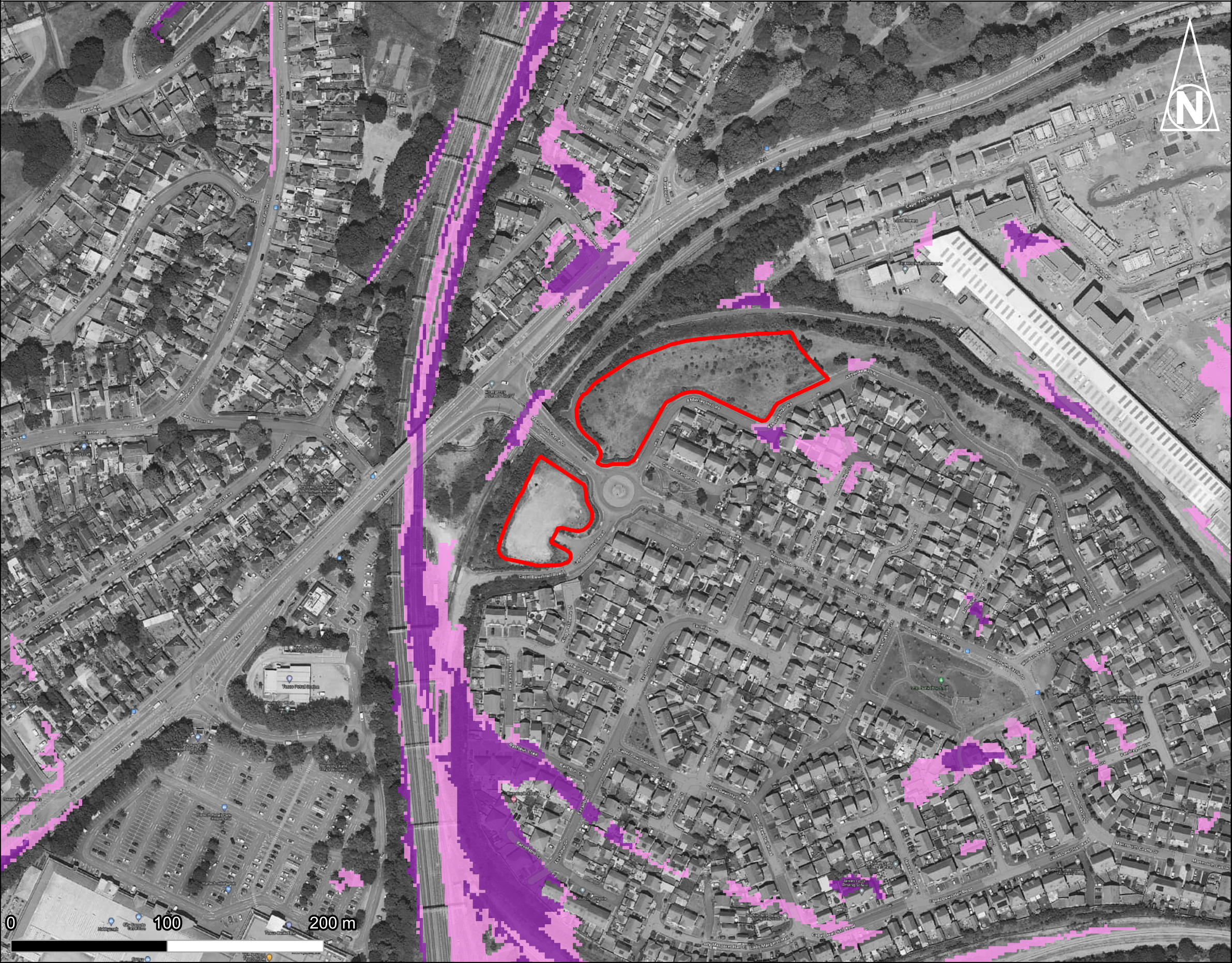
Application Boundary

Flood Map for Planning

Surface Water and Small Watercourses

Flood Zone 2

Flood Zone 3



Flood Zone 3 displays the extent of flooding from:

- rivers with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change.
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- Rivers with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change.
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Flood Map for Planning - Sea

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Scale: 1 in 4000 @ A3

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Key

Application Boundary

Flood Map for Planning

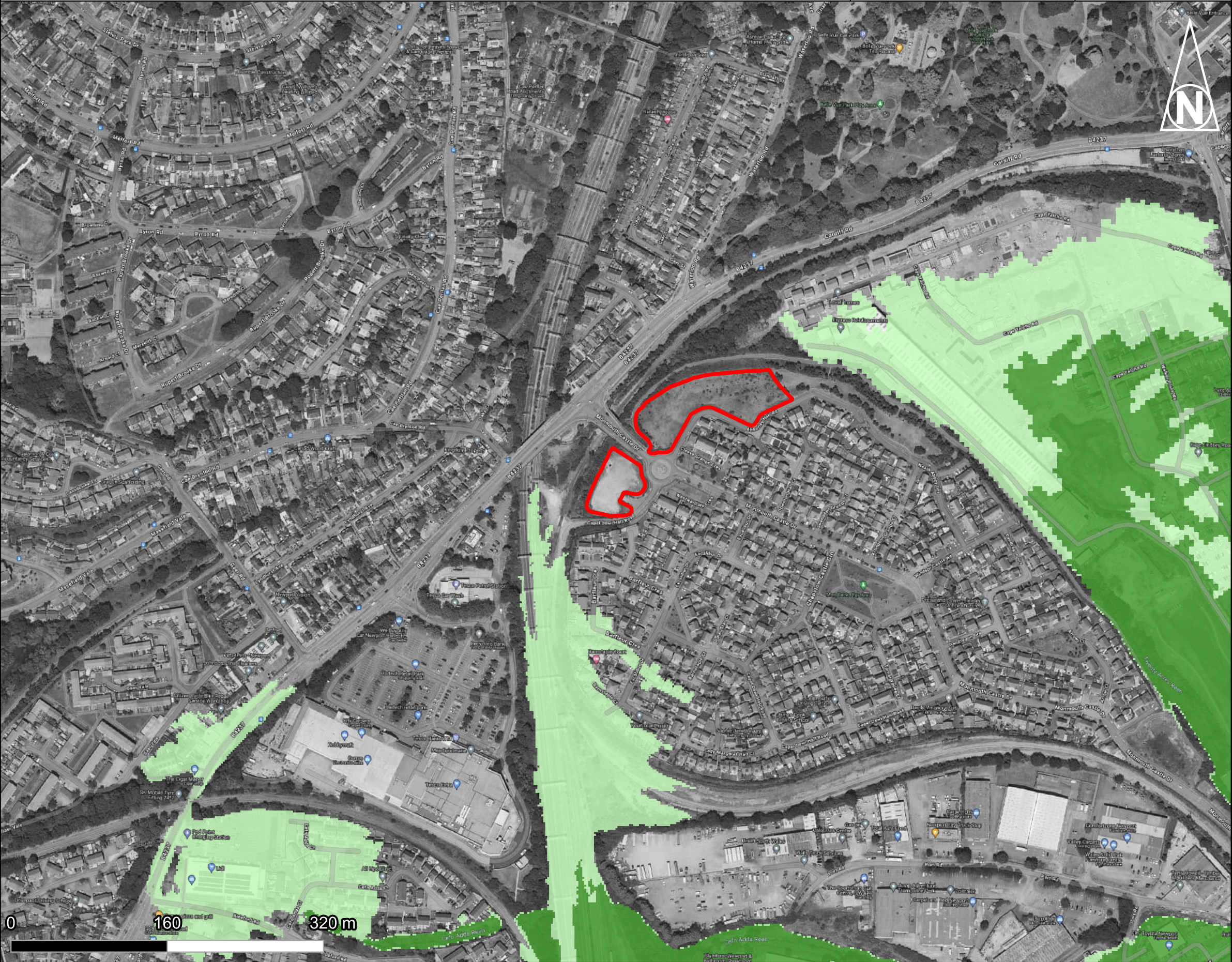
Seas

Flood Zone 2

Flood Zone 3

TAN15 Defended Zones

Sea



Flood Zone 3 displays the extent of flooding from:

- rivers with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change.
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Flood Map for Planning - Rivers

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OS Grid Reference: ST303867

Scale: 1 in 8000 @ A3

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Key

Application Boundary

Flood Map for Planning

Rivers

Flood Zone 2

Flood Zone 3

TAN15 Defended Zones

Rivers



Flood Zone 3 displays the extent of flooding from:

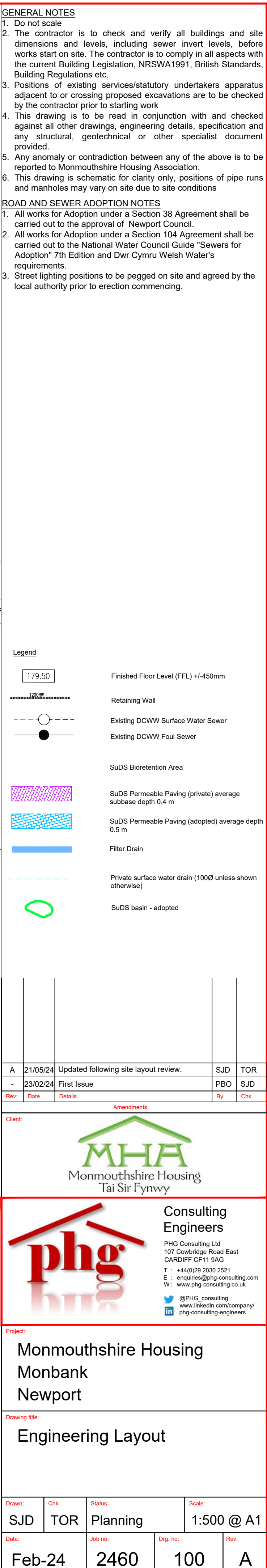
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Appendix C Proposed Engineering Layout



FREE FW & SW DISCHARGE TO
EXISTING INFRASTRUCTURE.
SW ATTENUATION ACCOMMODATED
WITHIN LOCAL SYSTEM VIA CELLS
AND POND.
FW TO SITE FOUL PUMPING STATION
TO THE SOUTH EAST OF THE SITE.

FREE FW & SW DISCHARGE TO EXISTING INFRASTRUCTURE.
SW ATTENUATION ACCOMMODATED WITHIN LOCAL SYSTEM VIA
CELLS AND POND.
FW TO SITE FOUL PUMPING STATION TO THE SOUTH EAST OF
THE SITE.
AGREED AS PART OF 12/0433 - PARTIAL DISCHARGE OF
CONDITION 22 (SURFACE WATER DRAINAGE)