



Seven Stiles Avenue, Newport Retail Park– Flood Consequences Assessment

Version 2

Prepared for
**Hagley Building & Civil
Engineering Ltd**

Date
July 2026



Document Status

Issue date	July 2026
Issued to	Hagley Building & Civil Engineering Ltd
BIM reference	SSL-JBA-XX-XX-RP-HM-0001-D3-C01-Land_at_Severn_Stiles_Avenue_FCA
Revision	Version 2
Prepared by	Hannah Booth BSc (Hons) Flood Risk Analyst
Reviewed by	George Baker BEng, FCIWEM, C.WEM, CEnv, IEng, AIEMA Associate Director
Authorised by	George Baker BEng, FCIWEM, C.WEM, CEnv, IEng, AIEMA Project Director

Carbon Footprint

The format of this report is optimised for reading digitally in pdf format. Paper consumption produces substantial carbon emissions and other environmental impacts through the extraction, production and transportation of paper. Printing also generates emissions and impacts from the manufacture of printers and inks and from the energy used to power a printer. Please consider the environment before printing.

Accessibility

JBA aims to align with [governmental guidelines on accessible documents](#) and [WGAG 2.2](#) AA standards, so that most people can read this document without having to employ special adaptation measures. This document is also optimised for use with assistive technology, such as screen reading software.

Contract

JBA Project Manager	Hannah Booth
Address	7-8 High Street, Kings Chambers, Newport, South Wales, NP20 1FQ
JBA Project Code	2026s0761

This report describes work commissioned by Hagley Building & Civil Engineering Ltd by an instruction dated 11th May 2026. The Client's representative for the contract was Stephen Bailey of Hagley Building & Civil Engineering Ltd. Hannah Booth of JBA Consulting carried out this work.

Purpose and Disclaimer

Jeremy Benn Associates Limited ("JBA") has prepared this Report for the sole use of Hagley Building & Civil Engineering Ltd and its appointed agents in accordance with the Agreement under which our services were performed.

JBA has no liability for any use that is made of this Report except to Hagley Building & Civil Engineering Ltd for the purposes for which it was originally commissioned and prepared.

No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by JBA. This Report cannot be relied upon by any other party without the prior and express written agreement of JBA.

JBA disclaims any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to JBA's attention after the date of the Report.

The methodology adopted and the sources of information used by JBA in providing its services are outlined in this Report. The work described in this Report was undertaken between May 2026 and July 2026 and is based on the conditions encountered and the information available during the said period. The scope of this Report and the services are accordingly factually limited by these circumstances.

Copyright

© Jeremy Benn Associates Limited 2026

Contents

1	Introduction	1
1.1	Terms of Reference	1
1.2	FCA Requirements	1
2	Site Description	2
2.1	Site Summary	2
2.2	Site Topography	3
2.3	Soils and Geology	4
2.4	Watercourses and Flood Defences	5
2.5	Development Proposals	6
3	Planning Policy and Flood Risk	7
3.1	Planning Context	7
3.2	Form of Development	7
3.3	Vulnerability Classification	7
3.4	Lifetime of Development	8
3.5	Flood Map for Planning Classifications	8
4	Flood Risk Assessment	12
4.1	Historical Flooding	12
4.2	Flood Risk from Rivers	12
4.3	Flood Risk from Surface Water and Small Watercourses	12
4.4	Flood Risk from Groundwater	13
4.5	Flood Risk from Reservoirs	13
4.6	Flood Risk from Sewers	13
5	Detailed Tidal Flood Risk Assessment	14
5.1	Hydraulic Modelling Availability	14
5.2	Tidal flood risk results	15
5.3	Tidal defence breach modelling	18
6	Flooding and the Plan Led System	22
6.1	Application of Flood Zones to Development Management Decisions	22
6.2	Acceptability of Flood Consequences	22

7	Conclusions	25
A	Topographic Survey	A-26
B	Development Plans	B-27

List of Figures

Figure 2-1 Site Overview	3
Figure 2-1 1m LiDAR	4
Figure 2-2 Watercourses and Nearby Defences	5
Figure 2-4 Development Proposals	6
Figure 3-1 Flood Map for Planning - Rivers	9
Figure 3-2 Flood Map for Planning - Sea	10
Figure 3-3 FMfP - Flood Risk from Surface Water and Small Watercourses	11
Figure 5-1 Tidal 2100 0.5% AEP scenario- maximum flood depth	16
Figure 5-2 Tidal 2100 0.5% AEP 95th percentile scenario - maximum flood depth	17
Figure 5-3 Tidal 2100 0.1% AEP scenario - maximum flood depth	18
Figure 5-4 Breach locations	19
Figure 5-5 Tidal 2100 0.1% AEP scenario - maximum flood depth	21

List of Tables

Table 2-1 Site Summary	2
Table 3-1 Form of Development	7
Table 3-2 TAN-15 Vulnerability Classification	8
Table 4-1 Summary of Flood Risk	12
Table 5-1 Coastal flood boundary (CFB) data	14
Table 5-2 Sea level rise uplifts and peak tide levels	15
Table 5-4 Flood depths within the building with and without breach scenario	20
Table 5-5 Flood levels on site with and without breach scenario	20
Table 6-1 Assessment of Acceptability Criteria	22

1 Introduction

1.1 Terms of Reference

JBA Consulting (JBA) was commissioned by Hagley Building & Civil Engineering Ltd to prepare a Flood Consequences Assessment (FCA) to support a planning application for redevelopment of land at Severn Stiles Avenue, Newport.

This FCA assesses the suitability of the proposed development in flood risk terms and identifies the measures required to manage flood risk appropriately at the site.

1.2 FCA Requirements

This FCA follows the Welsh Government guidance on development and flood risk set out in the Technical Advice Note 15: Development, Flood Risk and Coastal Erosion (TAN-15). TAN-15 states that:

'The prime objective of a Flood Consequences Assessment is to develop a full appreciation of:

- The risks and consequences of flooding on the development; and
- The risk and consequences (i.e the overall impacts) of the development on flood risk elsewhere.'

To achieve this, the FCA should establish whether suitable avoidance and mitigation measures can be incorporated into the site design, in a manner compatible with the placemaking aims of Planning Policy Wales. The development should be safe and should achieve:

- Minimal risk to life;
- Minimal disruption to people living and working in the area;
- Minimal potential damage to property;
- Minimal impact of the proposed development on flood risk generally; and
- Minimal disruption to the sustainable management of natural resources.

2 Site Description

2.1 Site Summary

The proposed development site is located on land east of Severn Stiles Avenue, Newport, as shown in Figure 2-1. The site is approximately 0.23ha and comprises previously developed brownfield land and a car forecourt to the south west. The site has been vacant for several years and has partially re-greened during this period. The land within the client's ownership is shown by the blue boundary in Figure 2-1.

The site is bound to the north by brownfield land, to the east by greenfield land, to the south by a car dealership building and car forecourt and to the west by Severn Stiles Avenue. Table 2-1 summarises the key site characteristics.

Table 2-1 Site Summary

Site name	Severn Stiles Avenue
Site Area	0.23ha
Existing land use	Brownfield land
Purpose of Development	Car forecourt
OS NGR	ST 34801 86867
Local Planning Authorities	Newport City Council
Lead Local Flood Authority	Newport City Council



Figure 2-1 Site Overview

2.2 Site Topography

Zenith Land Surveys Ltd completed a topographic survey in June 2026, which is provided in Appendix A. NRW 1m LiDAR data has also been used to provide a visual summary of ground levels in the surrounding area, as shown in Figure 2-1.

The site is predominantly flat, with raised areas of rubble in the western, centre and eastern areas of the site associated with previous works. The highest levels are within these raised areas and reach up to 7.32m AOD. The lowest levels are in the centre of the site at 6.13m AOD.

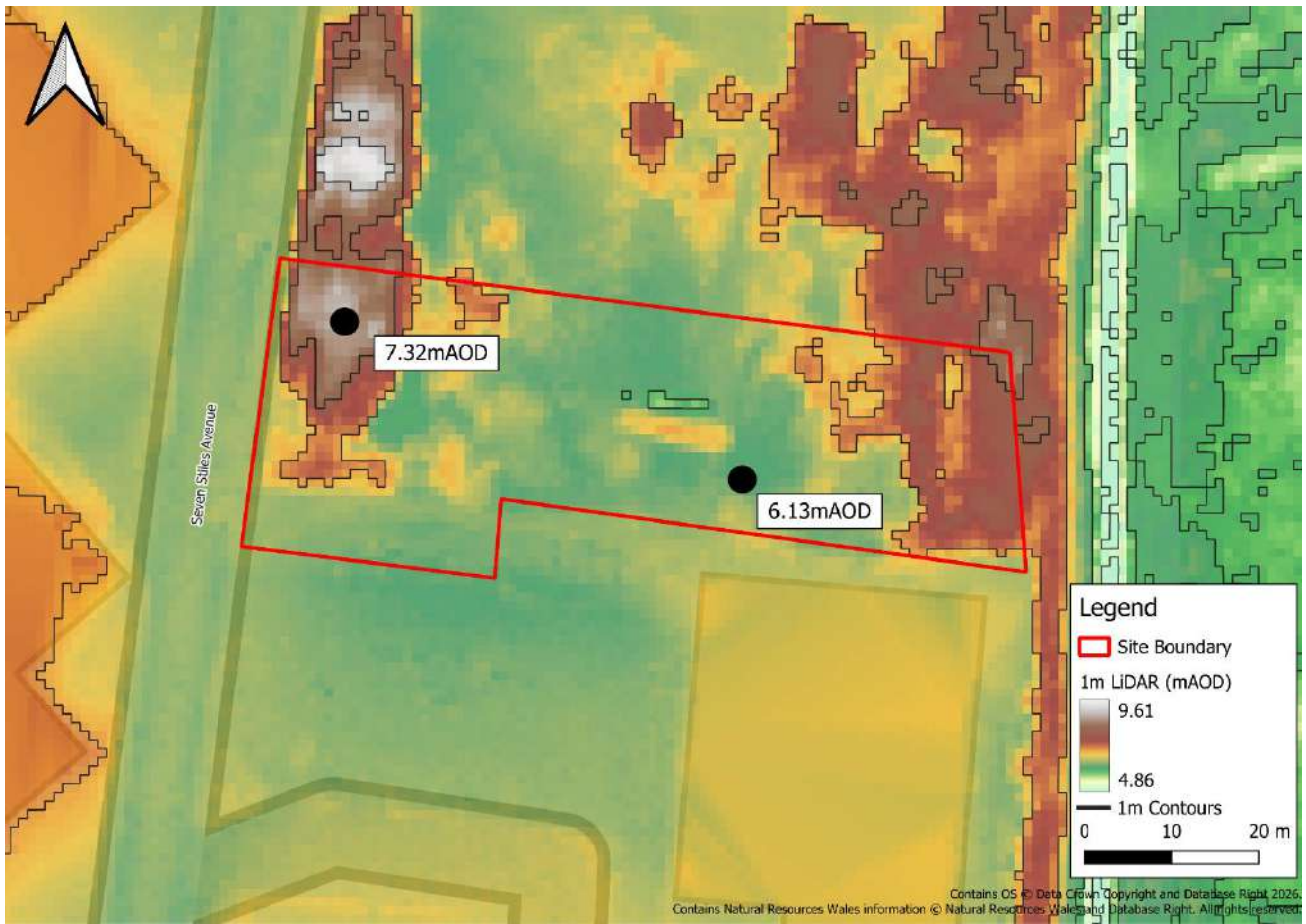


Figure 2-2 1m LiDAR

2.3 Soils and Geology

The British Geological Survey (BGS) Geology of Britain Viewer identifies the bedrock beneath the site as Mercia Mudstone Group, comprising mudstone. Superficial deposits are recorded as Tidal Flat Deposits, comprising clay and silt.

The Cranfield University Soilscape viewer describes the underlying soils as loamy and clayey soils of coastal flats with naturally high groundwater.

2.5 Development Proposals

The proposals comprise hardstanding for car parking for 49 vehicles, forming an extension to the forecourt of the existing vehicle dealership.

An extract of the plans is provided in Figure 2-4 and full plans are contained in Appendix B.

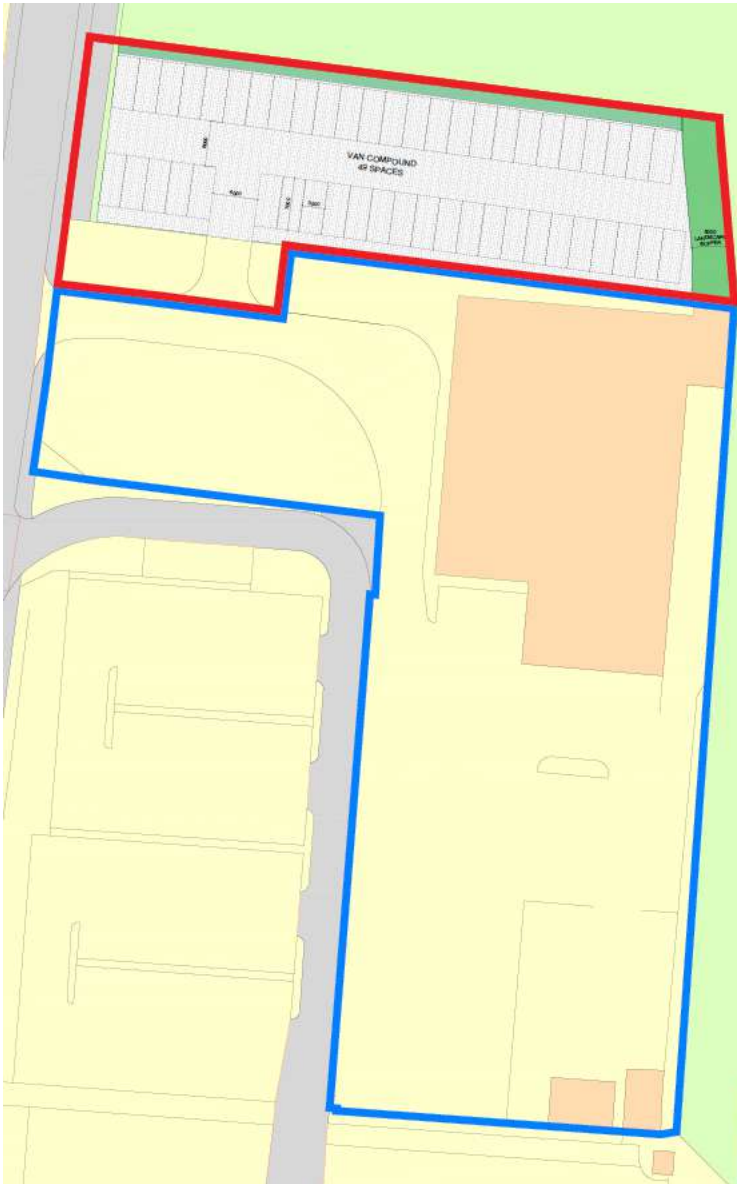


Figure 2-4 Development Proposals

3 Planning Policy and Flood Risk

3.1 Planning Context

Planning Policy Wales (PPW) sets out the Welsh Government's land-use planning policies. It is supported by Technical Advice Notes (TANs), Welsh Government Circulars and policy clarification letters, which together form the national planning policy framework for Wales. These policies seek to ensure that development in Wales is sustainable and supports the social, economic, environmental and cultural wellbeing goals of the Well-being of Future Generations Act 2015.

Technical Advice Note 15 (TAN-15), first introduced by the Welsh Government in 2004 and most recently updated in March 2025, provides technical guidance on development, flood risk and coastal erosion in Wales. TAN-15 establishes the framework for assessing flood risk from rivers, the sea, surface water and coastal erosion. The updated approach ensures that flood risk and coastal erosion are given appropriate weight in plan-making and development management decisions.

3.2 Form of Development

"The National Strategy is clear that risk needs to be managed appropriately, and the TAN requires a proportionate response depending upon that risk. It is evident that many communities are located in areas at higher risk from flooding, but these communities must be allowed to adapt, change, and regenerate in the knowledge of what the science is showing." TAN-15 8.3

TAN-15 therefore recognises two main forms of development: New Development and Redevelopment. These terms are defined in Table 3-1.

Table 3-1 Form of Development

Form of Development	Definition
New Development	Any development on greenfield land
Redevelopment	Any development on previously developed land, as defined in Planning Policy Wales

The proposals are for car parking on a previously developed site. The proposals are therefore classified as **Redevelopment**.

3.3 Vulnerability Classification

TAN-15 assigns development to one of three flood risk vulnerability classifications, as shown in Table 3-2. As the proposed use is car parking, the development falls within the **Less Vulnerable Development** classification.

Table 3-2 TAN-15 Vulnerability Classification

Development category	
Highly vulnerable development	All residential premises (including hotels, Gypsy and Traveller sites, caravan parks and camping sites). Schools and childcare establishments, colleges and universities. Hospitals and GP surgeries. Especially vulnerable industrial development (e.g. power generating and distribution elements of power stations, transformers, chemical plants, incinerators), and waste disposal sites. Emergency services, including ambulance stations, fire stations, police stations, command centres, and emergency depots. Buildings used to provide emergency shelter in time of flood.
Less vulnerable development	General industrial, employment, commercial and retail development. Transport and utilities infrastructure. Car parks. Mineral extraction sites and associated processing facilities (excluding waste disposal sites). Public buildings including libraries, community centres and leisure centres (excluding those identified as in Highly Vulnerable category and emergency shelters). Places of worship. Cemeteries. Equipped play areas. Renewable energy generation facilities (excluding hydro generation).
Water Compatible Development	Boatyards, marinas and essential works required at mooring basins. Development associated with canals. Flood defences and management infrastructure. Open spaces (excluding equipped play areas). Hydro renewable energy generation.

3.4 Lifetime of Development

Section 10.28 of TAN-15 advises that "*Generally, it is appropriate to think of new dwellings as having a lifetime of 100 years. Lifetimes for other types of development will vary, but 75 years is considered a reasonable rule of thumb.*"

Therefore, a lifetime of development of 75 years has been applied to this assessment.

3.5 Flood Map for Planning Classifications

The Flood Map for Planning (FMfP) is the starting point for considering flood risk in the planning system. It uses flood zones to identify the degree to which land is at risk from

ivers, the sea, surface water and small watercourses. The main zones are Flood Zone 1, Flood Zone 2, Flood Zone 3 and the Defended Zone. The FMfP shows predicted future flood risk, including an allowance for climate change.

Proposals for development located partially or wholly in Flood Zone 2 or 3 must be supported by a Flood Consequences Assessment (FCA).

3.5.1 Flood Map for Planning - Rivers

The site is within Flood Zone 1 of the FMfP for Rivers, as shown in Figure 3-1. Flood Zone 1 represents land with a less than 0.1% AEP (1 in 1,000 annual probability) chance of flooding.

This source of flooding risk is assessed further in Section 4.2 of the FCA.

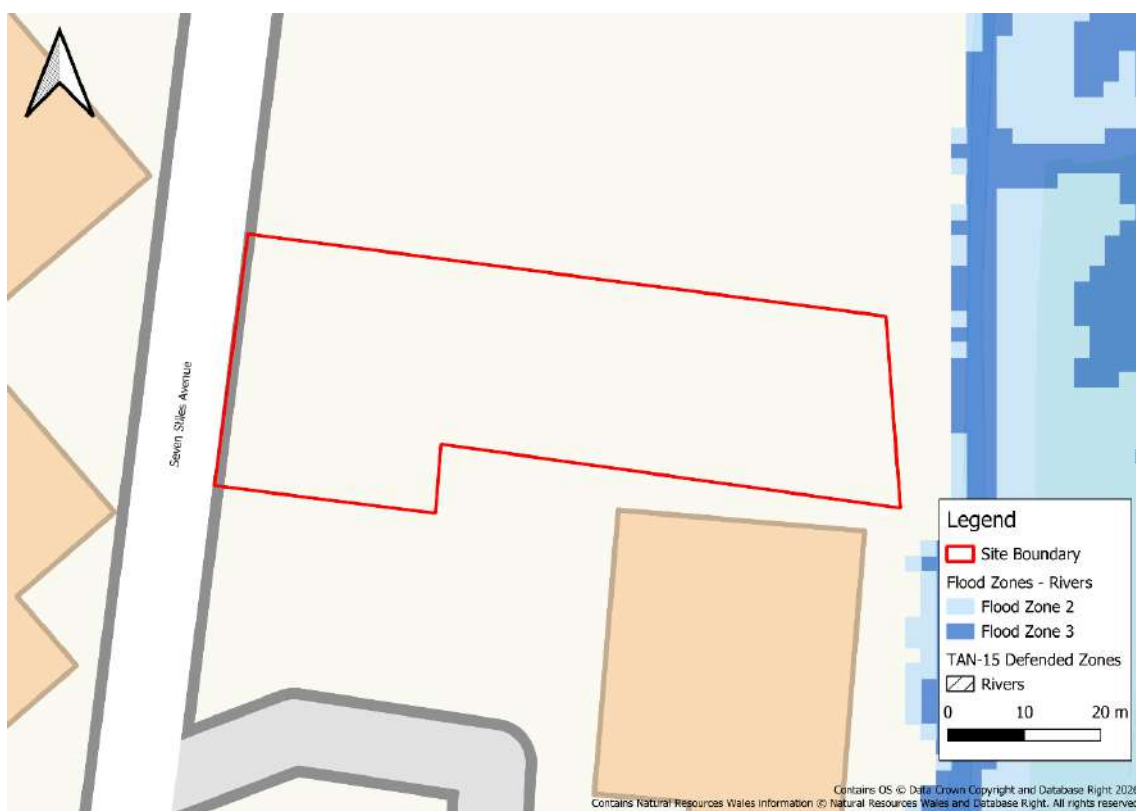


Figure 3-1 Flood Map for Planning - Rivers

3.5.2 Flood Map for Planning - Sea

As shown in Figure 3-2, the site is entirely within the TAN-15 Defended Zone for flood risk from the sea. This identifies areas where flood risk management infrastructure provides a minimum standard of protection from sea flooding of 1 in 200 years, including climate change and freeboard.

This source of flooding risk is assessed in detail in Section 5 of the FCA.

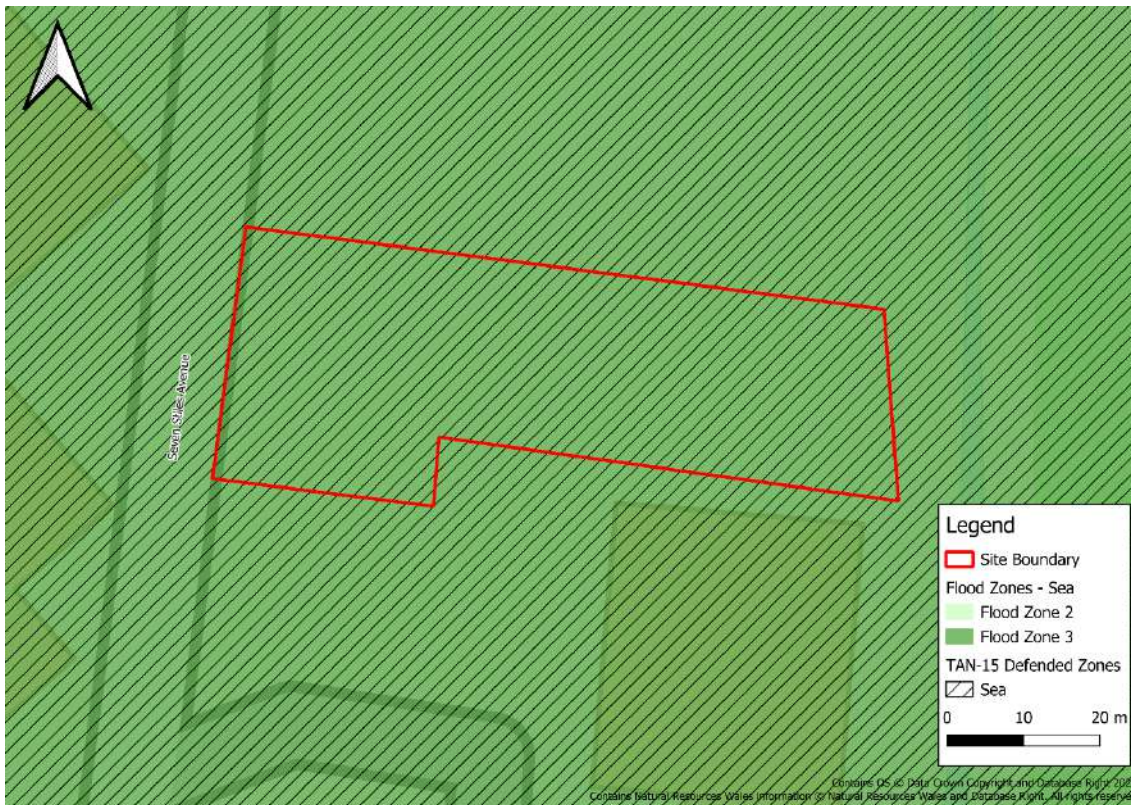


Figure 3-2 Flood Map for Planning - Sea

3.5.3 Flood Map for Planning - Flood Risk from Surface Water and Small Watercourses

Figure 3-3 shows that parts of the site are within Flood Zones 2 and 3 of the FMfP for Surface Water and Small Watercourses. Flood Zone 2 indicates land with a less than 1% AEP but greater than 0.1% AEP chance of surface water flooding in any given year, including climate change. Flood Zone 3 indicates land with a 1% AEP or greater chance of flooding in any given year, including an allowance for climate change.

This source of flooding risk is assessed further in Section 4.3 of the FCA.

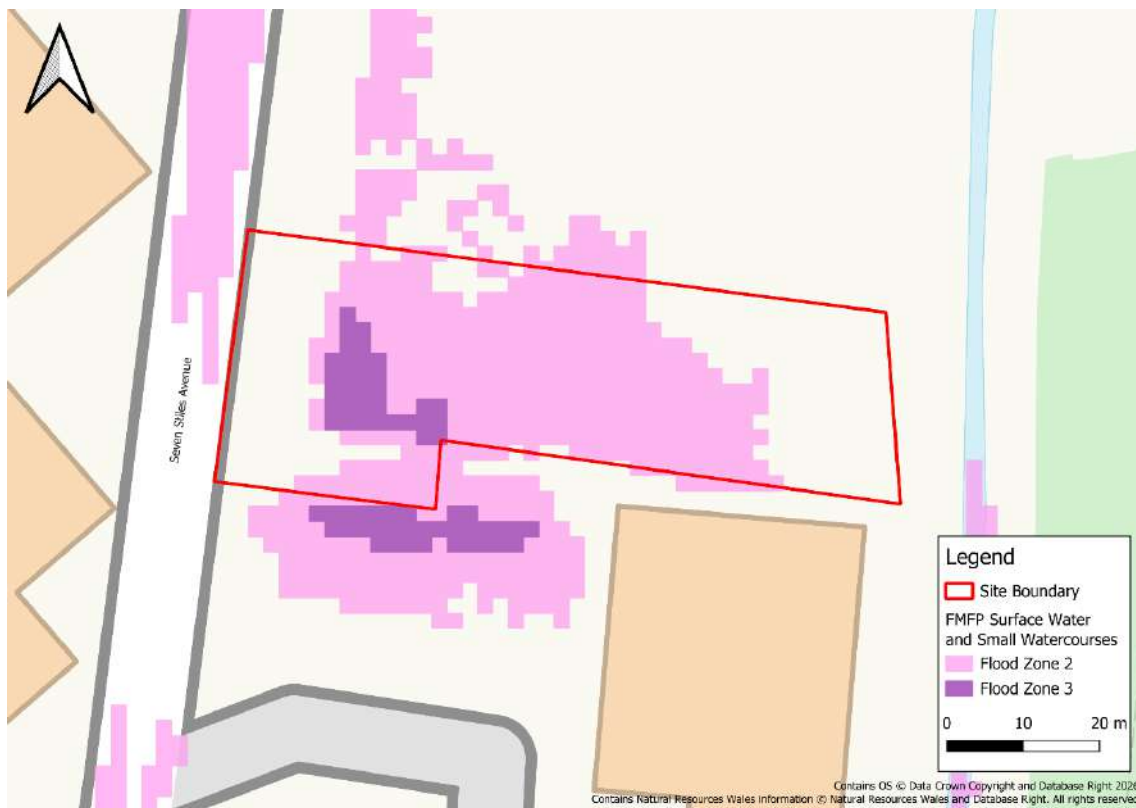


Figure 3-3 FMfP - Flood Risk from Surface Water and Small Watercourses

4 Flood Risk Assessment

This section has been prepared using publicly available information, including NRW datasets.

Table 4-1 summarises the flood risk to the site from all assessed sources.

Table 4-1 Summary of Flood Risk

Source of Flooding	Onsite Presence	Description
Flood Risk from Rivers	✗	Very Low- Located in an area at very low risk of river flooding
Flood Risk from the Sea	✓	Refer to Chapter 5 for detailed assessment
Flood Risk from Surface Water and Small Watercourses	✓	Low- The site is at low risk of surface water flooding.
Flood Risk from Groundwater	✗	Low- The site is at low risk of flooding from groundwater.
Flood Risk from Reservoirs	✓	Low- The site is at low risk of flooding from reservoirs.
Flood Risk from Sewers	✗	Low- The site is at low risk of flooding from sewers.

4.1 Historical Flooding

NRW's recorded flood extents mapping does not identify any historic flooding at the site.

Newport City Council's Preliminary Flood Risk Assessment and Flood Risk Management Strategy identify no other recorded historic flooding at the site.

4.2 Flood Risk from Rivers

Flood risk should be assessed with appropriate consideration of climate change. Of the available NRW datasets, the FMfP is considered to provide the most up-to-date assessment of flood risk, including an allowance for climate change.

As shown in Figure 3-1, the FMfP for Rivers shows that the redevelopment site is at **very low risk** of river flooding and lies within Flood Zone 1. This means there is a less than 0.1% AEP chance of flooding in any given year, including an allowance for climate change.

Therefore, the risk of flooding is concluded to be **very low**.

4.3 Flood Risk from Surface Water and Small Watercourses

As shown in Figure 3-3, the FMfP for Surface Water and Small Watercourses shows that large parts of the site are at risk of flooding and lie within Flood Zones 2 and 3.

Surface water flooding at the site is associated with rainfall ponding in local topographic depressions. It is currently unknown whether surface water drainage infrastructure is present within the undeveloped part of the site.

Given the nature of the site, surface water flooding can be managed through Sustainable Drainage Systems (SuDS), designed in accordance with the statutory standards. A Drainage Statement is required to support the application and should demonstrate how this risk will be managed within the site.

On the basis of the nature of the risk and the expectation that it can be appropriately managed through site drainage design, surface water risk is not considered further in this FCA. The site is therefore concluded to be at **very low** risk from surface water and small watercourse flooding once appropriate drainage measures are implemented.

4.4 Flood Risk from Groundwater

Groundwater flooding occurs when groundwater levels rise and excess water emerges at the ground surface or within structures such as basements. It can be more persistent than surface water flooding, sometimes lasting for weeks or months, and can damage property. The risk depends on the underlying geology and local topography.

Newport City Council's Local Flood Risk Management Strategy notes that groundwater is not considered to be a significant flood risk and is expected to rise and fall relatively slowly. The risk of groundwater flooding at the site is therefore concluded to be **low**.

4.5 Flood Risk from Reservoirs

The NRW Flood Risk Assessment Wales (FRAW) Flood Risk from Reservoirs map shows that the site is at **very low risk** from reservoir failure flooding.

4.6 Flood Risk from Sewers

Newport's Preliminary Flood Risk Assessment identifies no evidence of historic sewer flooding at the site. The PFRA concludes that sewer flooding does not have significant consequences at a strategic scale. No known sewerage infrastructure crosses the site. The risk of sewer flooding at the site is therefore concluded to be **low**.

5 Detailed Tidal Flood Risk Assessment

As identified in Section 3.5.2, the predominant source of flood risk to the site is tidal flooding from the sea. This section provides a more detailed assessment of tidal flood risk to the site and considers the potential implications of climate change using detailed hydraulic modelling.

5.1 Hydraulic Modelling Availability

The detailed tidal flood risk assessment is based on Version 7.0 of the Newport Tidal Flood Model (June 2020). This is a 1D-2D ESTRY-TUFLOW tidal model of Newport, prepared by JBA Consulting to support a successful Flood Map Challenge. Following the Flood Map Challenge updates, JBA further updated the Newport Tidal Model in 2022 and 2025 to incorporate several improvements.

The latest JBA model of Newport includes the recently completed Crindau flood defences. The ESTRY-TUFLOW version was updated to 2025.1.0-iSP-w64. The tidal boundary conditions were also updated in line with the latest Welsh Government climate change guidance for Flood Consequence Assessments (September 2021) to consider flood risk over the lifetime of development.

Table 5-1 summarises the coastal flood boundary data used for updating the tidal boundary conditions in the Newport Tidal Flood Model.

Table 5-1 Coastal flood boundary (CFB) data

Highest Astronomical Tide (HAT) Location	Surge Donor Location	CFB dataset point chainage
Newport	22, Newport	_396

To represent the present-day 2025 scenario, the tidal boundary conditions were uplifted from the 2017 CFB dataset base year using the Higher Central allowance (70th percentile) of the UK Climate Projections (UKCP18) for 2100 under Representative Concentration Pathway 8.5 (RCP8.5).

To account for sea level rise over the lifetime of the development, a further uplift was calculated for the 2125 epoch based on the Higher Central allowance (70th percentile) of the UKCP18 2100 RCP8.5 dataset. The uplift for the additional 25 years beyond 2100 was based on the dataset's average increase over the final five years. Table 5-2 summarises the sea level rise uplifts applied to the tidal boundary conditions and the resulting peak tide levels for the 2025 model update.

Table 5-2 Sea level rise uplifts and peak tide levels

Scenario	Sea level rise uplift (m)	Peak tide level (m AOD)	
		0.5% AEP	0.1% AEP
2017 (CFB dataset base year)	N/A	8.33	8.67
2025	0.044	8.37	8.71
2125 (70th)	1.087	9.42	9.76
2125 (95th)	1.469	9.80	10.14

Model performance was reviewed following these updates. The review identified 1D negative depths in the River Usk 1D domain at cross-section USK08125, approximately 3km upstream of the proposed development site. These occurred twice during the simulations for very short periods at low water levels in tidal troughs, at approximately 11.75 hours and 48.9 hours. They do not affect peak water level results in the 2D domain, which occur near the site at approximately 17.5 hours. 1D negative depths were also observed in the Crindau Pill tributary on the opposite bank of the River Usk, again during periods of low water levels in tidal troughs. These do not affect peak water levels in the 2D domain.

The Newport Tidal Flood Model uses a 10m grid size, meaning features smaller than 10m may not be fully represented. This grid size provides an appropriate balance between representing floodplain detail and flow routes across the mainly rural catchment, maintaining efficient model run times and limiting the computational size of model outputs. NRW previously accepted the 10m grid size as part of the Flood Map Challenge in circa June 2020.

The model was run for the Higher Central allowance (70th percentile) and Upper End allowance (95th percentile), using 75-year (2100) and 100-year (2125) development lifetimes. The 75-year lifetime results for 2100 have been used to assess flood risk to the development site.

5.2 Tidal flood risk results

5.2.1 2100 0.5% AEP Event

During the 2100 0.5% AEP tidal flood event, the site is predicted to remain flood-free, as shown in Figure 5-1.

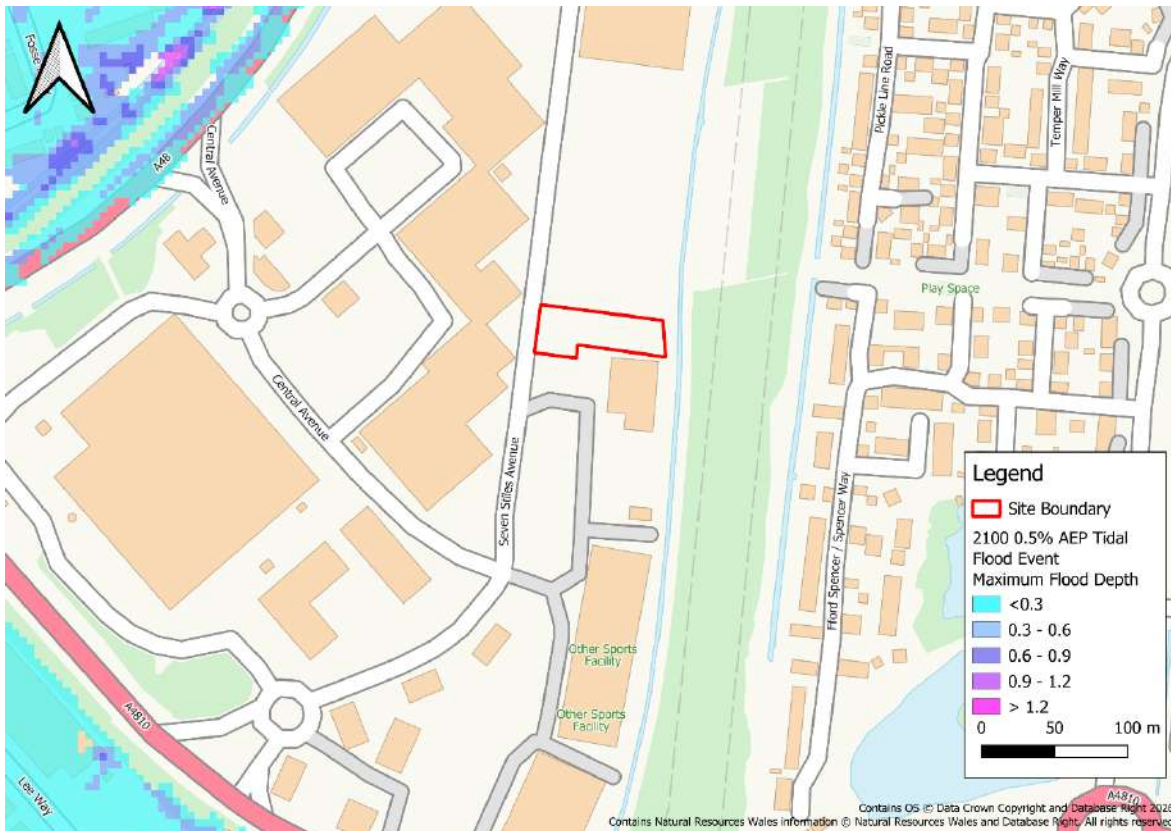


Figure 5-1 Tidal 2100 0.5% AEP scenario- maximum flood depth

5.2.2 2100 0.5% AEP Event with higher end estimate

Section 4.3 of TAN-15 advises that an FCA should consider a range of climate change scenarios, including upper end estimates, with reference to Welsh Government guidance on climate change allowances for planning purposes.

Figure 5-2 shows the predicted maximum flood depths before development for this event. The site is predicted to remain flood-free.

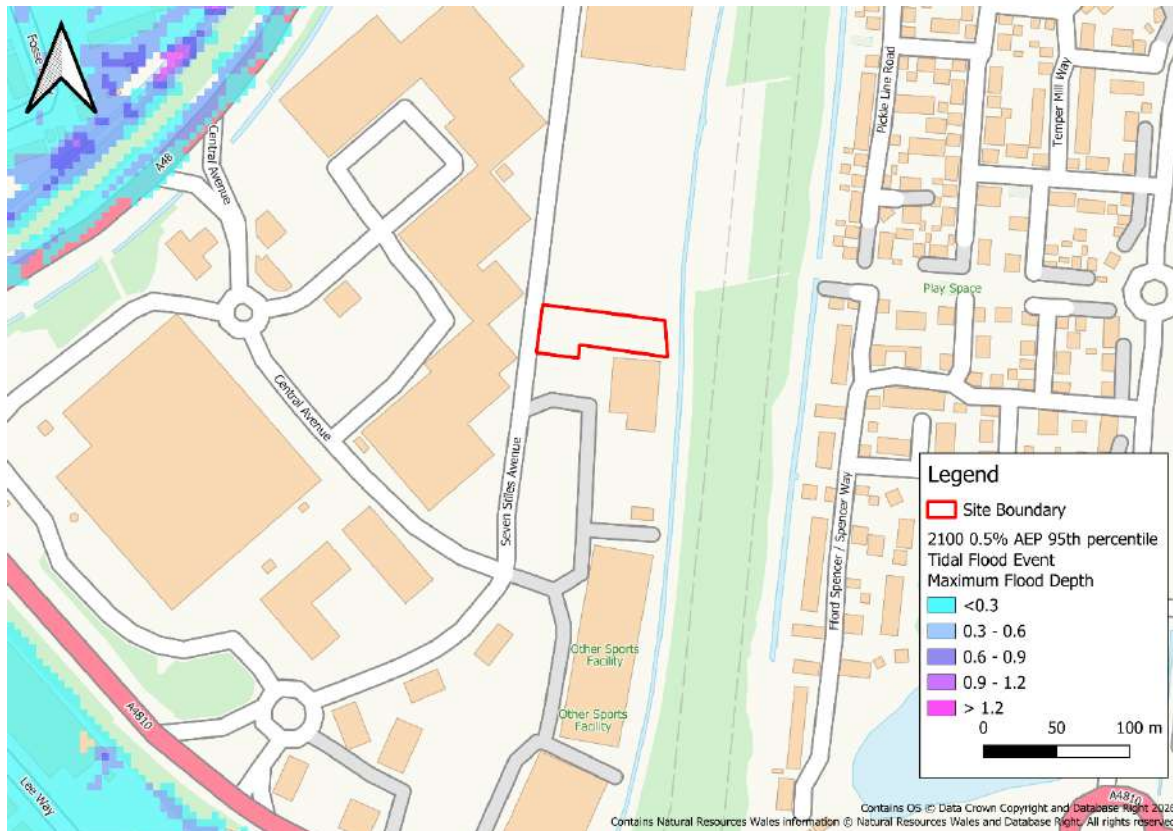


Figure 5-2 Tidal 2100 0.5% AEP 95th percentile scenario - maximum flood depth

5.2.3 2100 0.1% AEP Event

During the 2100 0.1% AEP event, the site is predicted to remain flood-free, as shown in Figure 5-3.

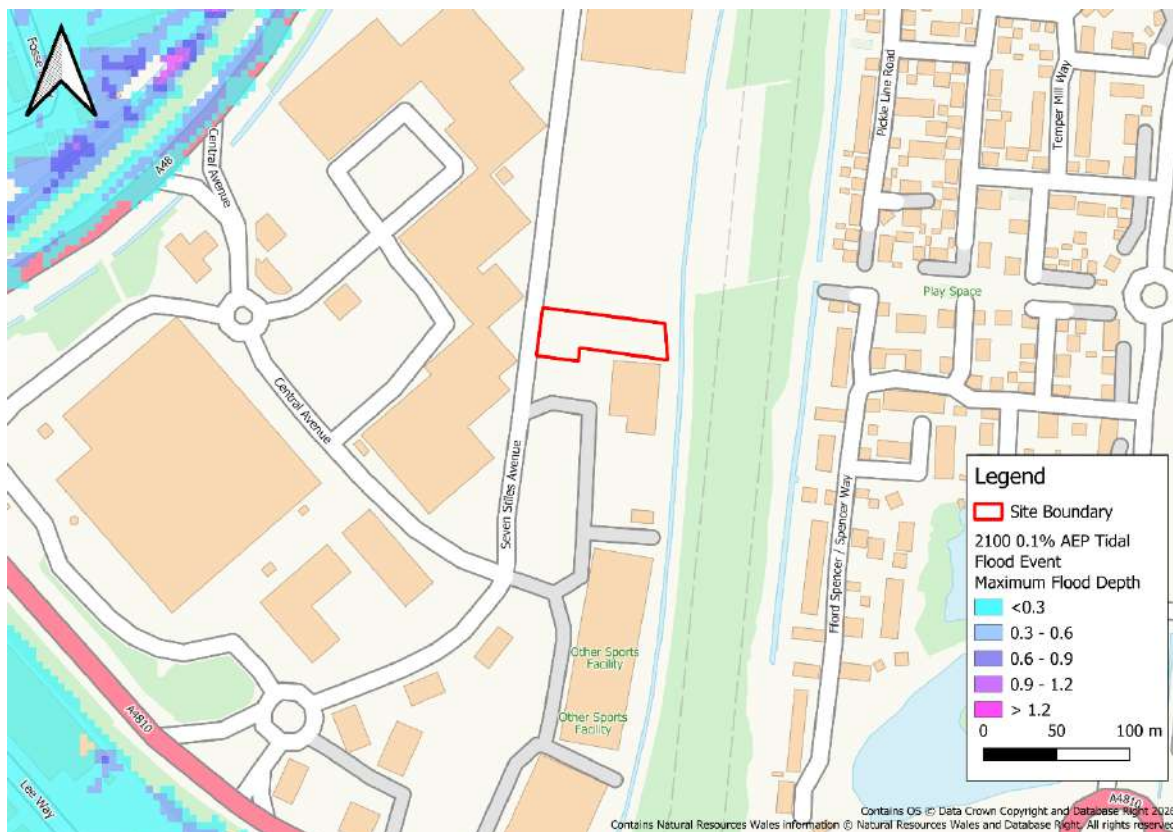


Figure 5-3 Tidal 2100 0.1% AEP scenario - maximum flood depth

5.3 Tidal defence breach modelling

The site lies within a TAN-15 Defended Zone. Breach modelling has therefore been undertaken in accordance with Section 10.26 of TAN-15 to assess the residual risk associated with potential failure of the NRW flood defences.

5.3.1 Breach methodology

Two breach locations have been assessed to understand the residual risk associated with potential failure of the tidal defences on the banks of the River Usk. The locations were modelled separately. They were selected because the model results indicate that these are among the first defence locations susceptible to overtopping and may therefore be more prone to failure. The breach locations are shown in Figure 5-4.

The breach failure schematisation was completed in line with NRW GN43 guidance. The breach initiates when overtopping first occurs, and the breach lowers the defence crest to the toe elevation on the landward side of the defences. Details for each breach are summarised below:

Breach 1

Defence crest height = 9.14mAOD

Defence toe height = 8.04mAOD

Breach initiates at water level within the Usk of 9.13mAOD

Breach period = 0.25 hours

Breach 2

Defence crest height = 9.25mAOD

Defence toe height = 8.1mAOD

Breach initiates at water level within the Usk of 9.25mAOD

Breach period = 0.25 hours

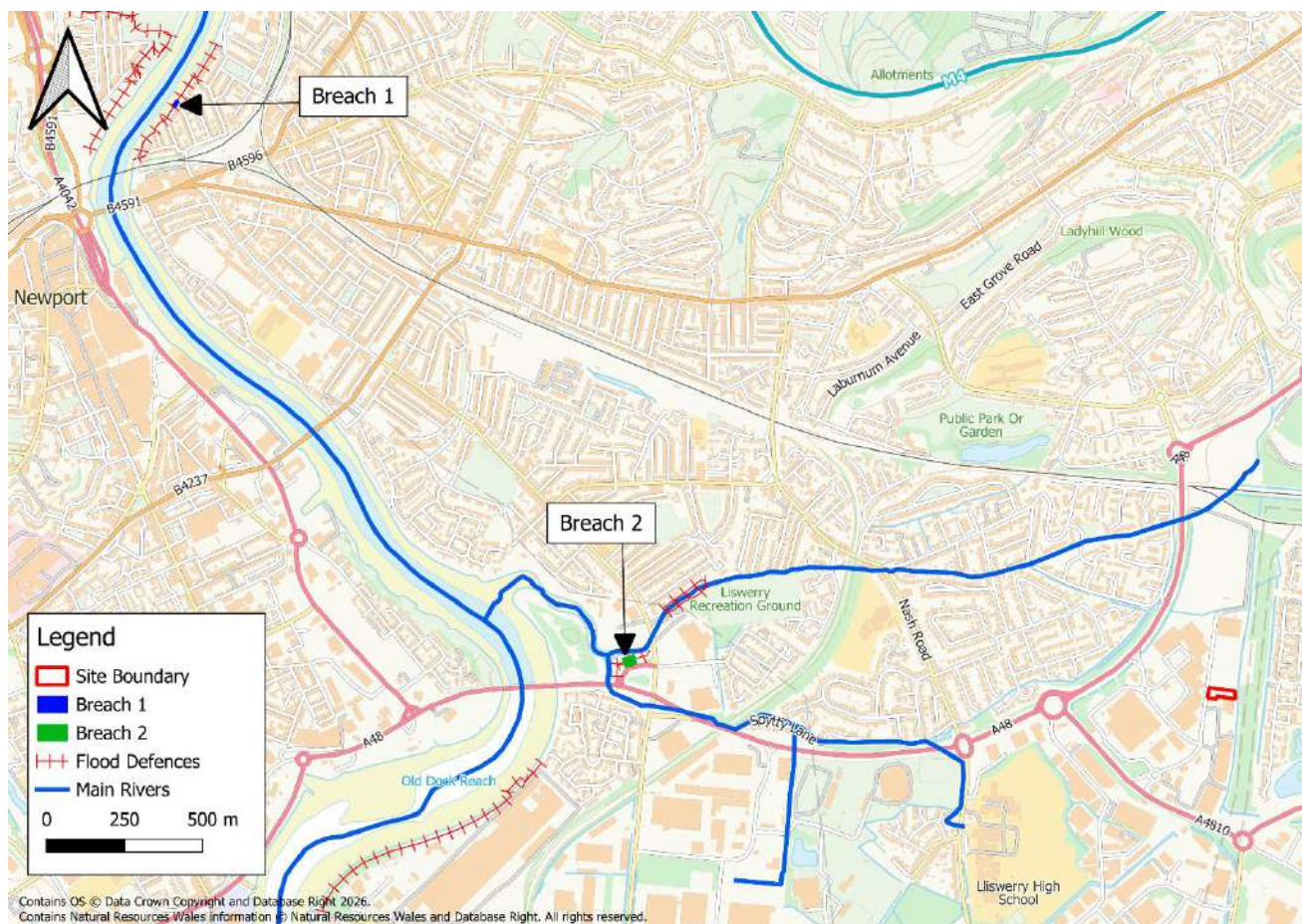


Figure 5-4 Breach locations

5.3.2 Results

The 2100 0.5% AEP and 2100 0.1% AEP scenarios have been assessed to consider residual flood risk to the site from a breach of the tidal defences protecting Newport.

The maximum flood depths and levels in the proposed building during the breach scenarios for the 0.5% AEP and 0.1% AEP flood events are presented in Table 5-4 and Table 5-5.

Table 5-3 Flood **depths** within the building with and without breach scenario

Epoch	Breach Location	0.5% AEP without breach scenario (m)	0.5% AEP breach scenario (m)	0.1% AEP without breach scenario (m)	0.1% AEP breach scenario (m)
2100	Breach 1	Flood free	Flood free	Flood free	Flood free
2100	Breach 2	Flood free	Flood free	Flood free	0.44

Table 5-4 Flood **levels** on site with and without breach scenario

Epoch	Breach Location	0.5% AEP without breach scenario (mAOD)	0.5% AEP breach scenario (mAOD)	0.1% AEP without breach scenario (mAOD)	0.1% AEP breach scenario (mAOD)
2100	Breach 1	Flood free	Flood free	Flood free	Flood free
2100	Breach 2	Flood free	Flood free	Flood free	6.59

The breach scenarios show that the site remains flood-free during the 2100 0.5% AEP event. In the 2100 0.1% AEP breach 2 event, the site is predicted to flood to shallow depths of up to 0.44m, as shown in Figure 5-5.

This represents a residual risk. Given the regular inspection and scheduled maintenance of the flood defences, a breach is considered very unlikely.

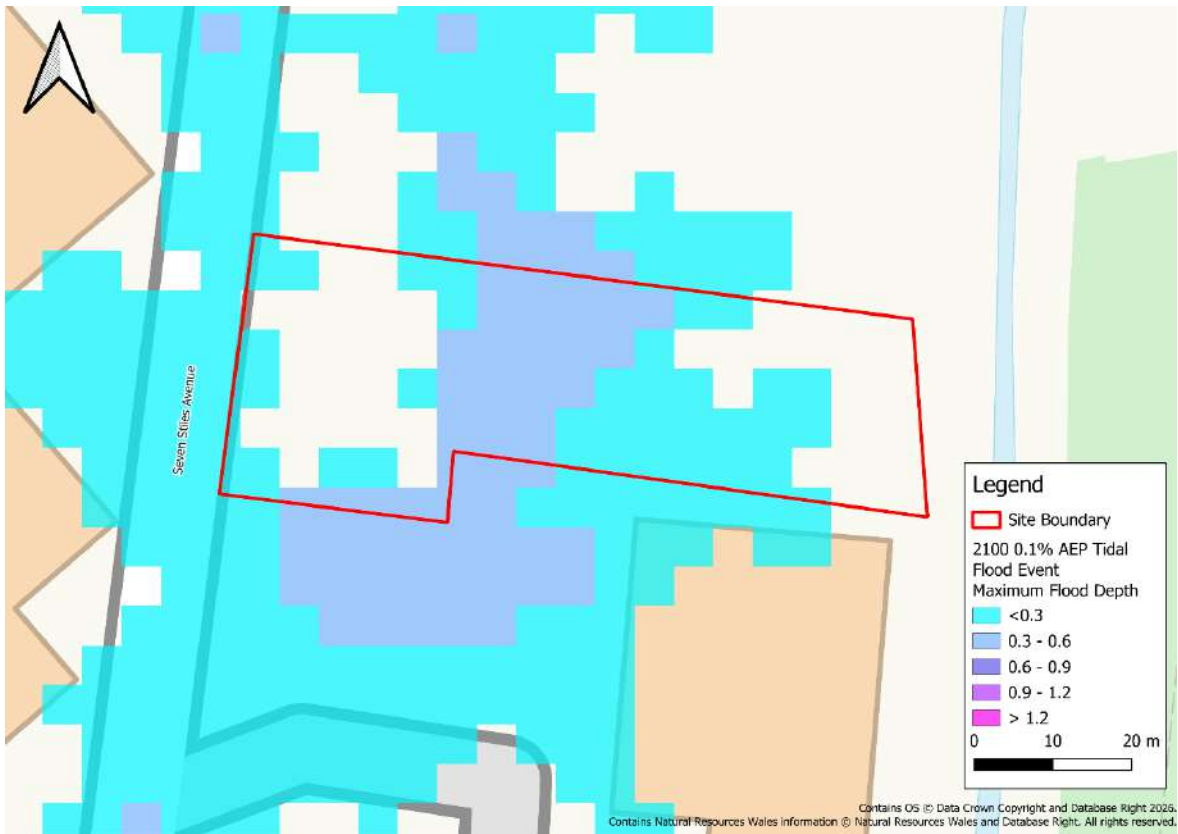


Figure 5-5 Tidal 2100 0.1% AEP scenario - maximum flood depth

6 Flooding and the Plan Led System

6.1 Application of Flood Zones to Development Management Decisions

TAN-15 sets out how the form of development should be considered in relation to the flood zone in which a site is located.

The site is located within the TAN-15 Defended Zone, which is understood to supersede the site's location within Flood Zone 3, regardless of the source of risk. For redevelopment within a Defended Zone, Section 10.17 of TAN-15 states:

"On brownfield sites redevelopment proposals should not over intensify use neither should they reduce the area's ability to absorb flood water nor cause problems with flooding elsewhere. All applications should consider opportunities to incorporate flood resilient design as appropriate and any proposal involving highly vulnerable development must be compliant with the tolerable conditions set out in section 11".

As set out in Section 2.5, the proposals are for car parking forming an extension to the forecourt of the existing vehicle dealership. The proposals would not over-intensify development within the wider site. The development is proposed within a predominantly commercial area of Newport and supports the existing use of the wider site.

Provided the principle of development is justified, the proposals must demonstrate compliance with the acceptability considerations set out in Section 11 of TAN-15. This is demonstrated in Section 6.2.

6.2 Acceptability of Flood Consequences

Whether development should proceed depends on whether the consequences of flooding can be safely managed, including any effects on flood risk elsewhere. TAN-15 sets out the key conditions that should be met to demonstrate that development is appropriate for its location.

The site has been assessed against the Section 11 TAN-15 Acceptability Criteria, as shown in Table 6-1.

Table 6-1 Assessment of Acceptability Criteria

TAN-15 Acceptability Criteria	Comments	Achieved
No increase in flooding elsewhere.	The proposed development would not increase flood risk elsewhere. No built development is proposed, and typical ground levels will remain unchanged. Consequently, the development will not displace or interfere with floodwater.	Yes

TAN-15 Acceptability Criteria	Comments	Achieved
Occupiers aware of flood risk	The site owners will be informed of the flood risk to the site through this report.	Yes
Escape/evacuation routes present	Evacuation routes are predicted to flood during the 0.5% AEP plus climate change event and the 0.1% AEP plus climate change breach event, with shallow depths of less than 400mm.	Yes
Flood emergency plans and procedures agreed and in place	Access and egress arrangements would remain unchanged from the existing site use.	Yes
Flood resistant and resilient design	Not required.	Yes
Acceptable consequences for type of use	Detailed in Section 6.2.1 and 6.2.2.	Yes

6.2.1 Frequency thresholds: designing development to be flood free

Section 11.7 of TAN-15 requires new development to be flood-free during the 0.5% AEP tidal event, including an allowance for climate change over the development lifetime. As the site is located behind flood defences, which carry a residual risk of breach, the breach events have been used as the design event.

The site is predicted to remain flood-free during this event. The proposals therefore meet the requirements of Figure 5 of TAN-15.

6.2.2 Tolerable conditions: managing consequences in an extreme flood event

The flood-free thresholds apply to very serious, but not extreme, flood events. TAN-15 recognises that it may not be possible to keep development flood-free during extreme events. Figure 6 of TAN-15 provides indicative tolerable flood depth and velocity conditions for the 0.1% AEP event, including an allowance for climate change. For Less Vulnerable Development, flood depths of up to 600mm are considered tolerable.

As the site is located behind flood defences, which carry a residual risk of breach, the breach events have been used as the design event.

The proposed site is predicted to flood to depths of up to 440mm in the 2100 0.1% AEP breach event. The proposals therefore satisfy the tolerable conditions set out in Figure 6 of TAN-15.

7 Conclusions

JBA Consulting (JBA) was commissioned by Hagley Building & Civil Engineering Ltd to prepare a Flood Consequences Assessment (FCA) to support a planning application for proposed redevelopment at a site off Severn Stiles Avenue, Newport.

The proposed development site is located on land east of Severn Stiles Avenue, Newport. The 0.23ha site comprises brownfield land and car parking. The proposals are for a car parking area, forming an extension to the forecourt of the existing vehicle dealership.

The Flood Map for Planning shows that the site is within the TAN-15 Defended Zone for flood risk from the sea and within Flood Zones 2 and 3 for surface water and small watercourses.

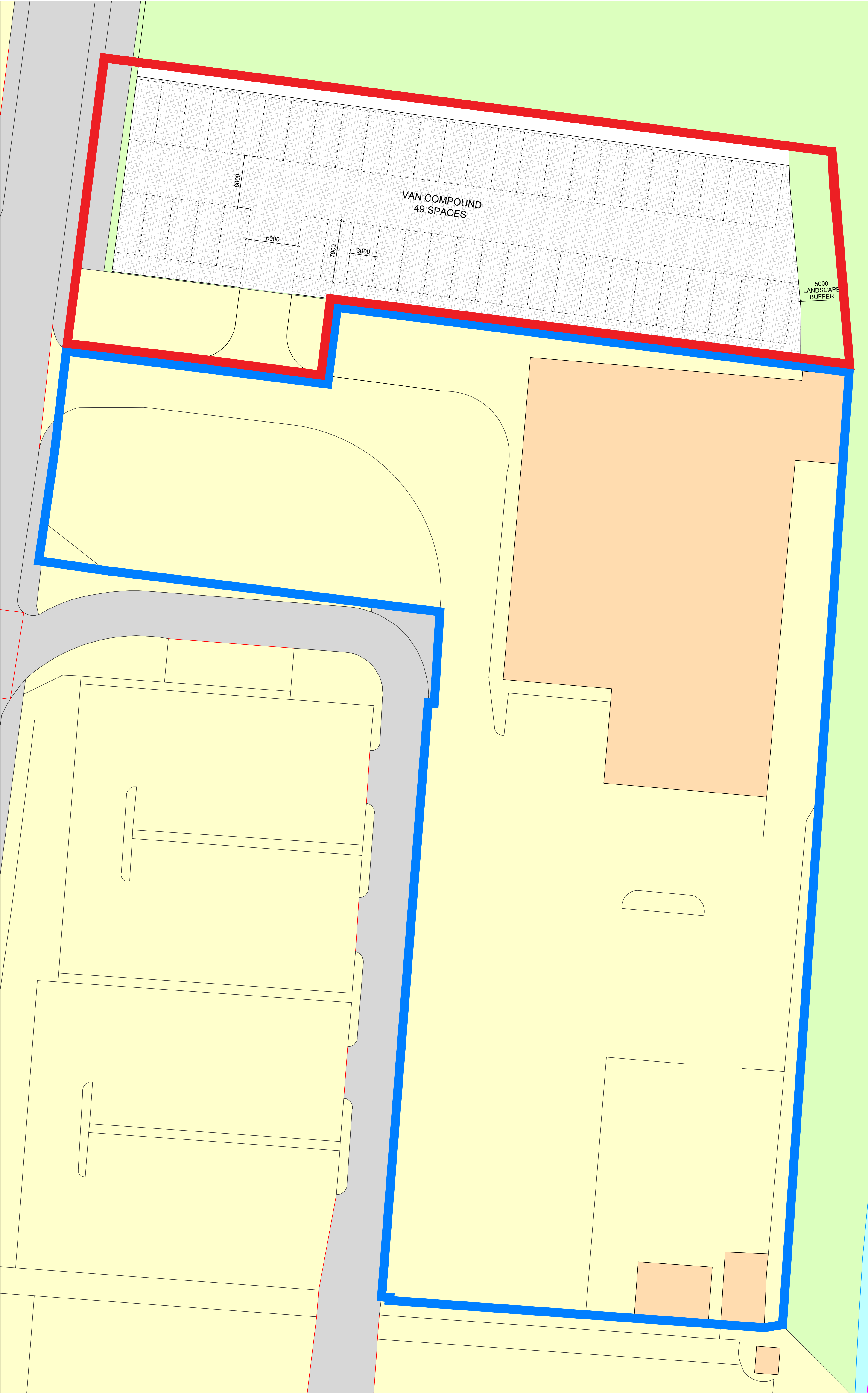
The site is at low to very low risk from groundwater, sewers and reservoirs. Surface water flooding is expected to be managed through SuDS features, and the residual risk is therefore considered very low.

A review of JBA's Newport Tidal Flood Model, updated in 2025 and further updated to simulate breach events, shows that the proposed development site is predicted to remain flood-free during the 2100 0.5% AEP event and to flood only to very shallow depths during the 2100 0.1% AEP event.

This FCA demonstrates that the proposed development satisfies the relevant TAN-15 Acceptability Criteria. On flood risk grounds, the development is acceptable and meets the requirements of TAN-15 and the aims of Planning Policy Wales.

A Topographic Survey

B Development Plans



- Notes
1. All sizes to be checked on site by the contractor prior to preparation of shop drawings or fabrication of parts
 2. This drawing should not be scaled. Any discrepancies to be brought to the immediate attention of the architect.

PLANNING

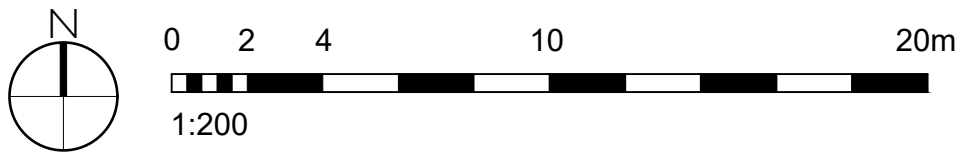
A	Northern Boundary Landscape Strip added	NC	07/26
Rev	Description	By	Date

OLA
Opfer Logan Architects

130 Cubie Street / Glasgow / G40 2AF /
t: (0141) 332 9300 Scotland e: info@olarchitects.com

Client: HAGLEY BUILDING & CIVIL ENGINEERS LTD
Project: STELLANTIS VAUXHALL
Title: SITE PLAN AS PROPOSED
Project No: 22625
Scale: 1:200 A1
Drawing No: SP-01
Date: APRIL 2026
Rev: A

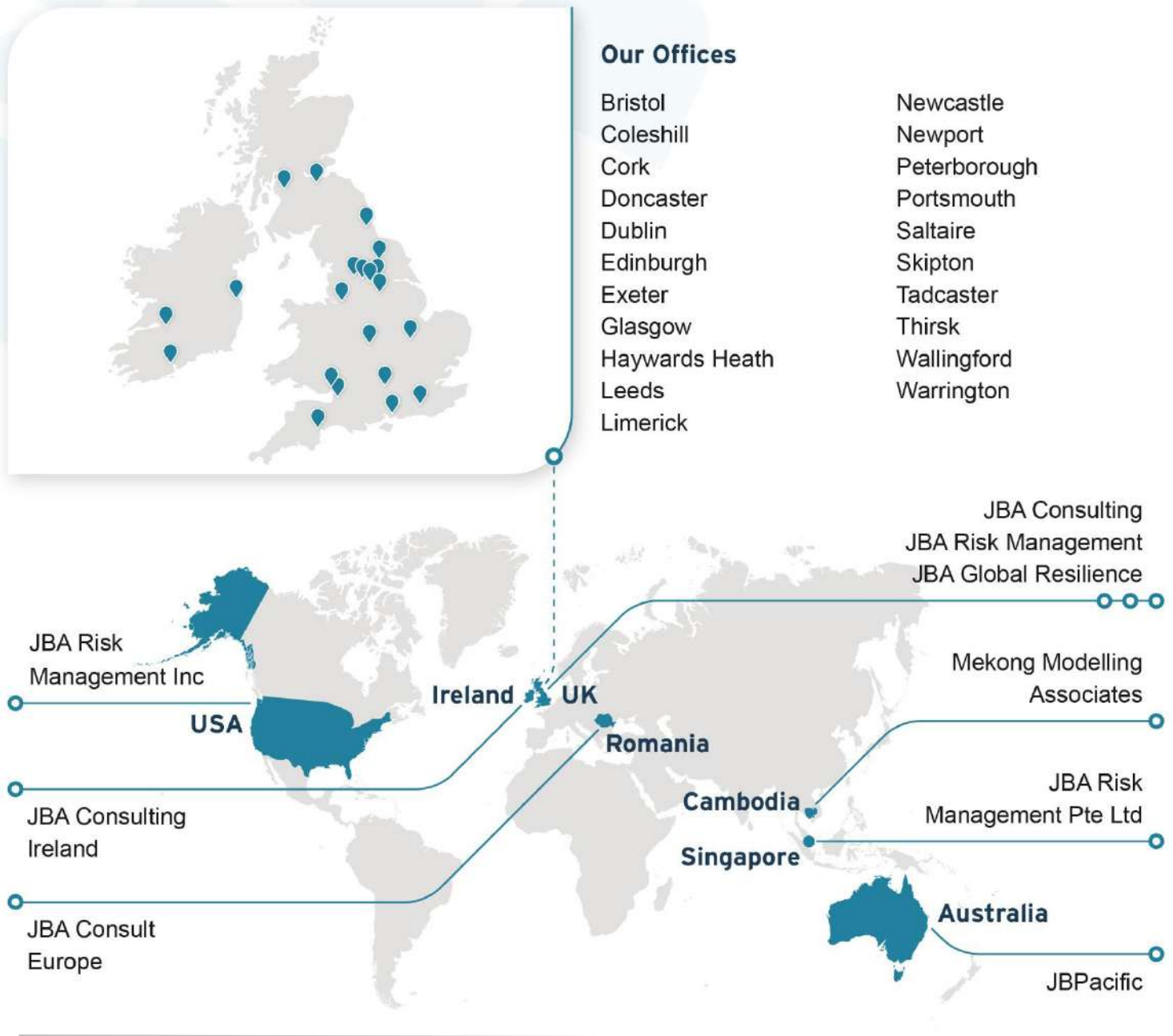
Drawn By: NC Checked By: DW
COPYRIGHT OF DESIGN & DRAWING RESERVE
Unauthorised copying, distribution or reuse of this drawing without the written consent of OLA Ltd may constitute an infringement of copyright. If in doubt please contact OLA Ltd



Our Offices

Bristol
Coleshill
Cork
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Leeds
Limerick

Newcastle
Newport
Peterborough
Portsmouth
Saltaire
Skipton
Tadcaster
Thirsk
Wallingford
Warrington



Registered Office

1 Broughton Park
Old Lane North
Broughton
SKIPTON
North Yorkshire
BD23 3FD
United Kingdom

+44(0) 1756 799919
info@jbaconsulting.com
www.jbaconsulting.com

Follow us on  

Jeremy Benn
Associates Limited
Registered in
England
3246693

JBA Group Ltd is
certified to
ISO 9001:2015
ISO 14001:2015
ISO 27001:2022
ISO 45001:2018

