

Seaway Parade Flood Consequence Assessment

S2

June 2021

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**A1 Loo Hire Ltd
Silver Birches,
Highlands Avenue,
Wokingham,
RG41 4SP**



JBA Project Manager

Abigail Betts
JBA Consulting
35 Perrymount Road
Haywards Heath
United Kingdom
RH16 3BW

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Contract

This report describes work commissioned by Clive Owen, on behalf of A1 Loo Hire, by an email dated the 10th of May 2021. Abigail Betts of JBA Consulting carried out this work.

Prepared by Abigail Betts BSc (Hons) MSc

Analyst

Reviewed by George Baker BEng AIEMA CEnv IEng MCIWEM
C.WEM

Associate Director

Purpose

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Abbreviations

Abb	Abbreviation
AEP	Annual Exceedance Probability
BGS	British Geological Survey
CC	Climate change
DAM	Development Advice Map
ESTRY	1D solver component of TUFLOW
FCA	Flood Consequence Assessment
Flood Modeller	1D hydraulic modelling software
JBA	Jeremy Benn Associates
m AOD	metres Above Ordnance Datum
NPTCBC	Neath Port Talbot County Borough Council
LDP	Local Development Plan
NRW	Natural Resources Wales
TAN	Technical Advice Note
TUFLOW	Two-dimensional Unsteady FLOW (a hydraulic model)

1 Introduction

JBA Consulting were commissioned by A1 Loo Hire Ltd in May 2021 to prepare a Level 1 Flood Consequence Assessment (FCA) to support a planning application for a proposed industrial development at Seaway Parade, Port Talbot. This FCA demonstrates the suitability of the proposed development and describes the flood mitigation measures recommended to manage flooding at the site.

This FCA has been prepared in accordance with Planning Policy Wales and Technical Advice Note 15: Development and Flood Risk (TAN-15)¹

1.1 FCA requirements

This FCA follows Welsh Government guidance on development and flood risk, as set out within TAN-15. Where appropriate, the following aspects of flood risk will be addressed over the expected lifetime of any potential future development:

- The likely mechanisms of flooding;
- The likely source of flooding;
- The depths of flooding through the site;
- The speed of inundation of the site;
- The rate of rise of flood water through the site;
- Velocities of floodwater across the site;
- Overland flood routes;
- The effect of access and egress and infrastructure; and
- The impact of the development in terms of flood risk on neighbouring properties and elsewhere on the floodplain.

¹ Welsh Assembly Government. Planning Policy Wales. Technical Advice Note 15: Development and Flood Risk. July 2004.

2 Site Description

The proposed development site is located on Seaway Parade in the north-west of Port Talbot, South Wales. The approximately 0.34ha site is surrounded by industrial and residential developments, including industrial units to the north and west, a school to the south, and residential areas to the east. Access to the unit is available off Central Avenue to the north-west of the site. Further detailed are provided in Table 2-1.

Table 2-1: Site summary

Site name	Seaway Parade
Site area	0.34ha
Existing land use	Industrial
Purpose of development	Industrial
OS NGR	SS 74375 91926
Local Planning Authorities	Neath Port Talbot County Borough Council
Lead Local Flood Authority	Neath Port Talbot County Borough Council



Figure 2-1: Proposed development site

2.1 Existing land use and site topography

The site of the proposed development is currently brownfield land in the Seaway Parade industrial estate. Figure 2-2 shows a satellite image of the current site and surrounding areas.

A topographic survey for the site was not available during the production of this FCA. Instead, Natural Resources Wales (NRW) Open Source 1m Light Detection and Ranging (LiDAR) data² has been used to analyse the existing ground levels across the site and within the surrounding area. This is shown in Figure 2-3.

The LiDAR data demonstrates that the site is generally flat with average ground levels of approximately 6.96mAOD. Site levels are lowest along the south-eastern boundary of the site at approximately 6.19mAOD and levels are highest along the north-western boundary at approximately 7.34mAOD. There are two raised areas to the north-east and south-east at 7.28mAOD and 7.3mAOD, respectively. There is an area of lower elevation in the centre of the site at approximately 6.41mAOD. The elevation of the access road to the north-west of the site ranges between 6.33mAOD and 7.44mAOD.



Figure 2-2: Aerial view of development site

² LLe Geoportal for Wales: <http://lle.gov.wales/catalogue/item/LidarCompositeDataset/?lang=en>

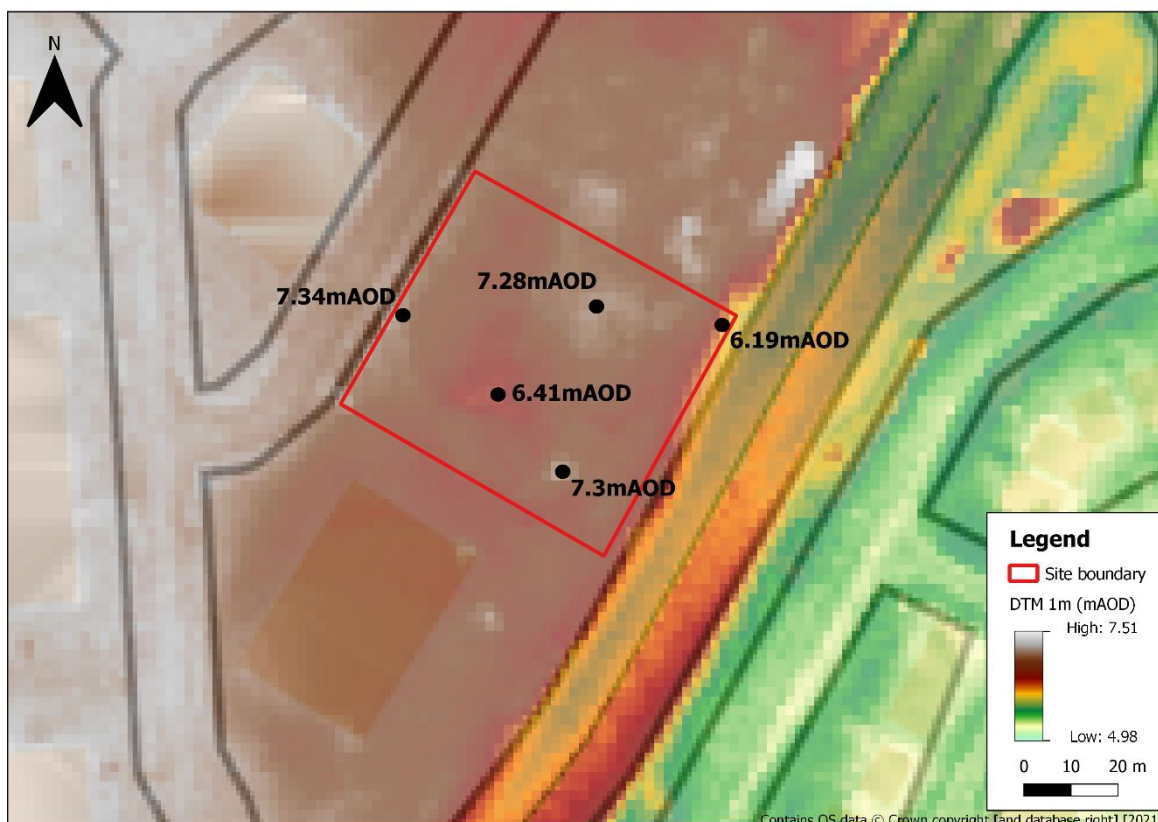


Figure 2-3: LiDAR topographic data from NRW (1m resolution)

2.2 Soils, geology, and watercourses

The Cranfield University Soilscape³ viewer describes the underlying strata as loamy and clayey soils of coastal flats with naturally high groundwater.

According to the British Geological Survey (BGS) Geology of Britain Viewer⁴, bedrock at the site is described as South Wales Lower Coal Measures Formation, comprised of mudstone, siltstone, and sandstone. The superficial deposits are identified as being Tidal Flat Deposits, comprised of clay, silt, and sand.

As the site is surrounded by tarmacked areas, the site is likely to drain through overland flow to surface water sewers and via evapotranspiration.

The Baglan Brook flows approximately 0.5km east of the site and the River Neath flows approximately 1.8km north of the proposed development site. Aberavon Beach is located approximately 1.7km south-east of the site.

2.3 Development proposal

The development proposal for the 0.34ha site is for the construction of a warehouse, which will also include an office and a W/C. A permeable storage/yard area will be constructed to surround the warehouse. The site will also include an area for car parking, two W/Cs, and a refuse area on the northern boundary of the site. The line of trees and vegetation along the south-east boundary of the site are to remain untouched, as will the existing entrance gates to the site.

A plan of the proposed development from I.M. Design Studio has been included in Figure 2-4 and Appendices A and B.

3 Cranfield University Soilscape: <http://www.landis.org.uk/soilscape/>

4 BGS Geology of Britain Viewer: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html?>

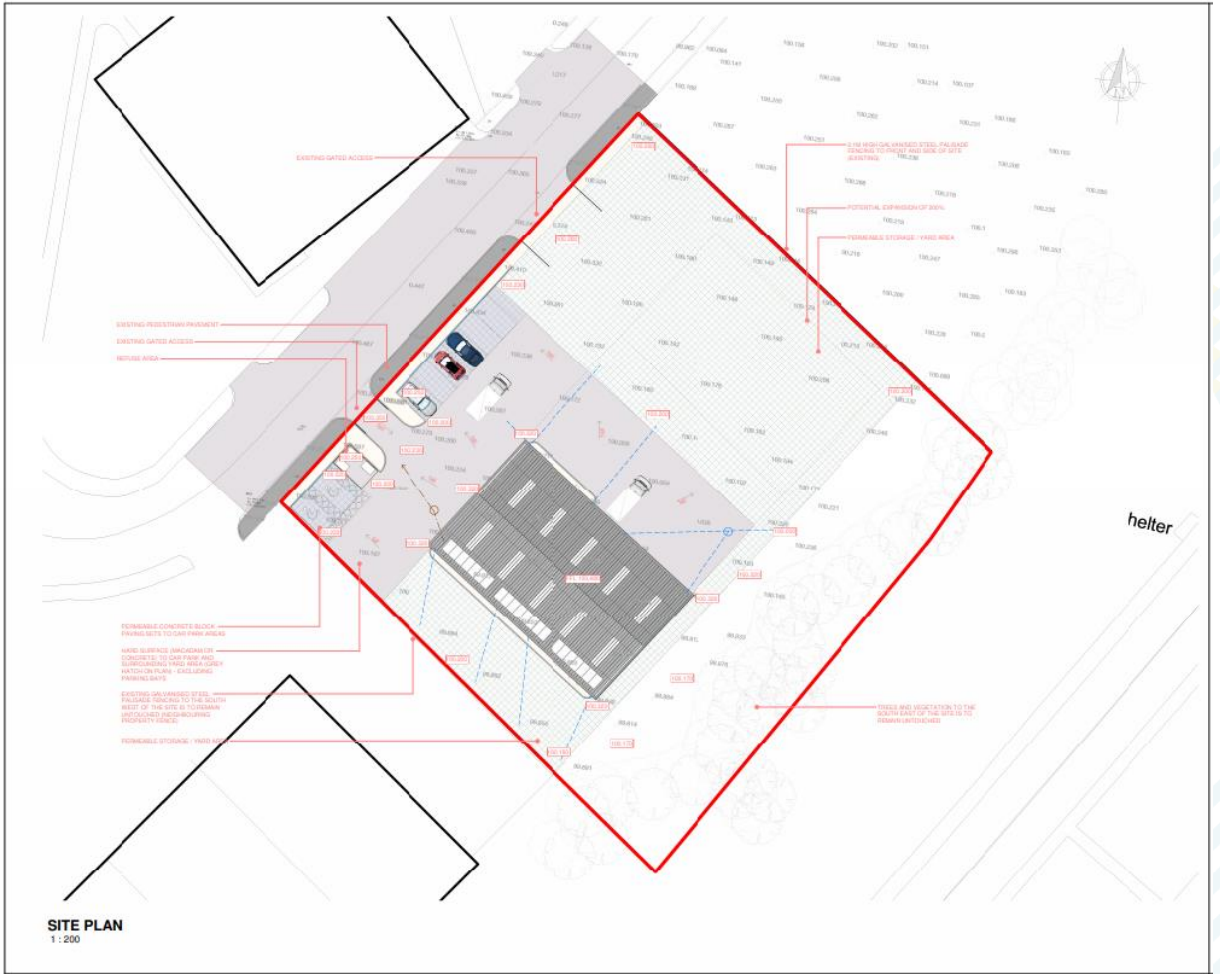


Figure 2-4: Proposed development site plan

3 Planning Policy and Flood Risk

3.1 Planning context

TAN-15 was introduced in 2004 by the Welsh Assembly Government. It provides technical guidance related to development planning and flood risk using a sequential characterisation of risk based on the Welsh Government's Development Advice Map (DAM). Its initial requirement is to identify the flood zones and vulnerability classification relevant to the proposed development, based on an assessment of current and future conditions.

TAN-15 assigns one of the three flood risk vulnerability classifications to a development as shown in Table 3-1. The proposed development is for construction of a warehouse facility, which is considered general industrial use. As a result, the proposed development is classed as **less vulnerable development**.

Table 3-1: Development categories as defined by TAN-15

Development category	Types
Emergency services	Hospitals, ambulance stations, fire stations, police stations, coastguard stations, command centres, emergency depots and buildings used to provide emergency shelter in time of flood.
Highly vulnerable development	All residential premises (including hotels and caravan parks), public buildings, (e.g., schools, libraries, leisure centres), especially vulnerable industrial development (e.g., power stations, chemical plants, incinerators), and waste disposal sites.
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.

3.2 DAM Zoning and vulnerability classification

Figure 3-1 shows that the majority of the proposed development site falls into Zone C1 of the DAM. The DAM is used to trigger different planning actions based on a precautionary assessment of flood risk. Zone C1 is described as areas of the floodplain which are developed and served by significant infrastructure, including flood defences. The rest of the site falls into Zone B, which is described as areas that are known to have flooded in the past.

Less vulnerable development, such as that proposed, is only acceptable in Zone C1 if it can be shown to satisfy the requirements of the Justification Test, including the acceptability of consequences.

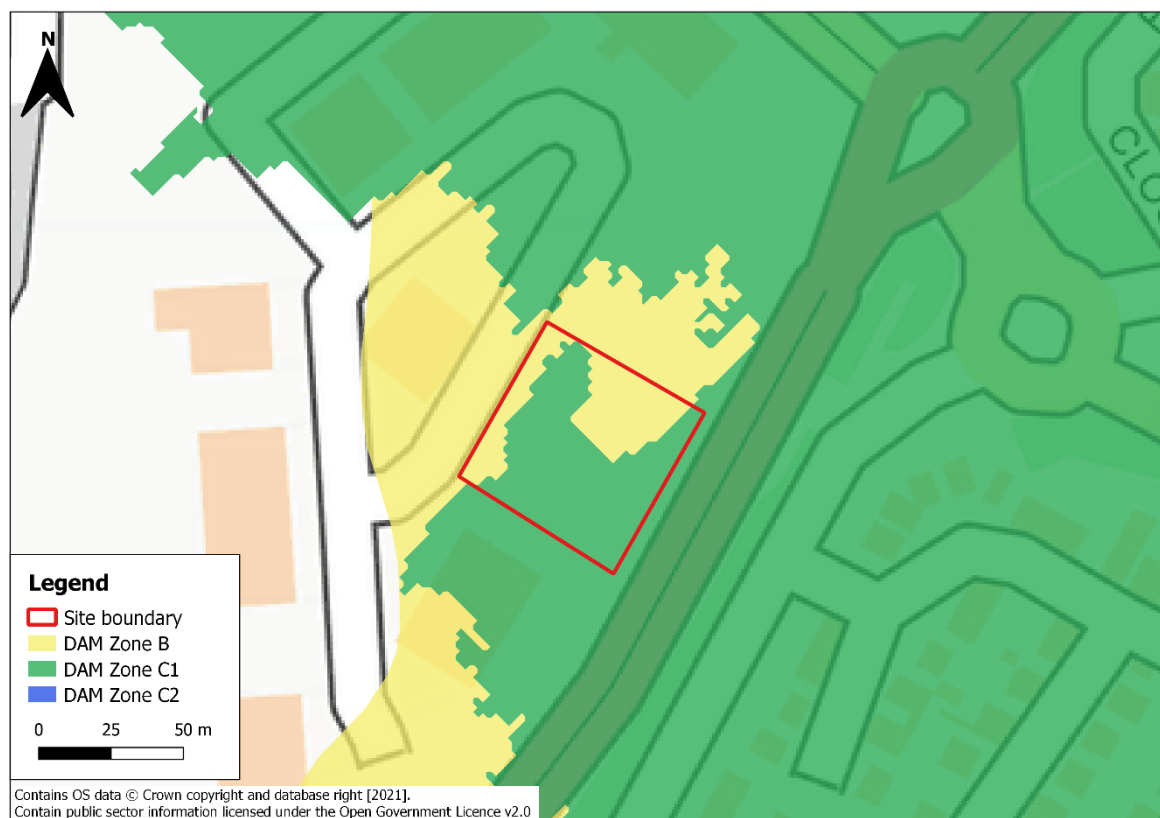


Figure 3-1: Development Advice Map

3.3 Local Development Plan

The Local Development Plan (LDP) is a land-use document in which the County Borough Council sets out its land use development over a 15-year period. The current LDP, entitled 'Neath Port Talbot County Borough Council Local Development Plan (2011-2026)'⁵, was adopted by Neath Port Talbot County Borough Council (NPTCBC) in January 2016.

The proposed development will help to meet Strategic Policy 5 (SP5) of the NPTCBC LDP. SP5 focuses on facilitating growth within Neath Port Talbot as a part of the Coastal Corridor Strategy Area and promoting sustainable development and regeneration of brownfield land in the Baglan Bay area.

The strategy identifies that large areas of the County Borough are brownfield land (formerly developed land) and that these areas should be prioritised through regeneration schemes to prevent the unnecessary loss of greenfield land. Policies SP16 and BE1-C require that the development of brownfield land be prioritised over greenfield sites. The proposed development would help satisfy these objectives.

3.4 Justification test

TAN-15 states that "new development" will be justified if it can be demonstrated that:

⁵ Neath and Port Talbot County Borough Council (2016) Neath Port Talbot County Borough Council Local Development Plan, Retrieved from: https://www.npt.gov.uk/media/7321/ldp_written_statement_jan16.pdf?v=20170727124344

Its location in zone C is necessary to assist, or be part of, a local authority regeneration initiative or a local authority strategy required to sustain an existing settlement;

or

Its location in zone C is necessary to contribute to key employment objectives supported by the local authority, and other key partners, to sustain an existing settlement or region;

and

It concurs with the aims of Planning Policy Wales and meets the definition of previously developed land;

and,

The potential consequences of a flooding event for the particular type of development have been considered and found to be acceptable.

The proposed development has been assessed against the requirements of the Justification Test, with the results summarised in Table 3-2: Justification Test applied to the proposed development. All the criteria have been satisfied with regards to the proposed development.

Table 3-2: Justification Test applied to the proposed development

TAN 15 Justification Criteria	Comments	Achieved
Its location is necessary to assist a local authority regeneration initiative or strategy or contribute to key employment objectives necessary to sustain an existing settlement or region.	The proposed development will assist with SP5, SP16 and BE1-C of the Local Development Plan (ref. Section 3.3)	✓
The site meets the definition of previously developed land (i.e., it is not a Greenfield site) and concurs with the aims of Planning Policy Wales (i.e., the presumption in favour of sustainable development).	The proposal involves the development of previously developed land (ref. Section 2.2). The site therefore concurs with the aims of Planning Policy Wales.	✓
A Flood Consequence Assessment has been produced to demonstrate that the potential consequences of a flood event up to the extreme flood event (1 in 1000 chance of occurring in any year) have been considered and meet the [Acceptability Criteria] to be considered acceptable.	An assessment of the flood risk at the site has been undertaken to demonstrate the proposed development's acceptability. See Section 4 and Section 5.	✓ Full details provided in section 5

4 Flood Risk Assessment

This section assesses the risk to the proposed development from all sources of flooding, the risk of increased flooding to others, and how flood risks can be managed. As a Level 1 FCA, the flood risk assessment is based solely on a desk-based analysis of existing flood risk data.

The primary objectives of this FCA are to determine the following:

- Whether the site is at significant risk from any source of flooding;
- If the site is at risk of flooding, to determine if safe access to and from the site will be maintained during an extreme flood event; and,
- The impact of the development on flood risk to others.

4.1 Review of existing flood risk data

The latest available information of flood risk at the site, published by NRW and Neath Port Talbot County Borough Council, is summarised in Table 4-1 below.

Table 4-1: Summary of flood risk

Source of Flooding	Onsite Presence	Description
Fluvial	✓ (see section 4.3)	The site is at low risk of fluvial flooding
Tidal	✗	The site is located outside of the area at risk of tidal flooding.
Surface Water and Small Watercourses	✓ (see section 4.5)	The site is at low risk of surface water flooding.
Groundwater	✗	The site is at very low risk of flooding from groundwater.
Reservoirs	✗	The site is at very low risk of flooding from reservoirs.
Sewers	✗	The site is at very low risk of flooding from sewers.

4.2 Historical flooding

The site is not located within NRW's historic flood outline. Additionally, no specific mention is made within the Neath Port Talbot County Borough Council Flood Risk Management Plan (FRMP)⁶ and Preliminary Flood Risk Assessment (PFRA)⁷ of any historical flooding across the proposed development site.

4.3 Fluvial flood risk

NRW's Flood Risk Assessment Wales (FRAW) map for flood risk from rivers shows that the majority of the site is located within a **low risk area** for flooding from rivers. Low risk indicates that each year, the site has a chance of flooding of between 1 in 1000 (0.1% AEP) and 1 in 100 (1% AEP), as shown in Figure 4-1.

⁶ Neath Port Talbot County Borough Council Flood Risk Management Plan/FRMP:
<https://www.npt.gov.uk/media/5399/floodriskmanagementplan15.pdf?v=20170627002320>

⁷ Neath and Port Talbot Council, Preliminary Flood Risk Assessment, (2011), Retrieved from:
https://www.npt.gov.uk/media/4629/pfra_report_2011.pdf?v=20171123145433

Flood defences are present in Port Talbot, protecting the site against flooding from the River Afan and the Baglan Brook. Consequently, the site is located within an 'Area Benefitting from Flood Defences (Rivers and Sea)' as designated by NRW's Flood Risk Assessment Wales Map (Figure 4-1).

To better understand the risk of flooding posed by fluvial flooding sources, further assessment using modelled data was undertaken and discussed in Section 5.

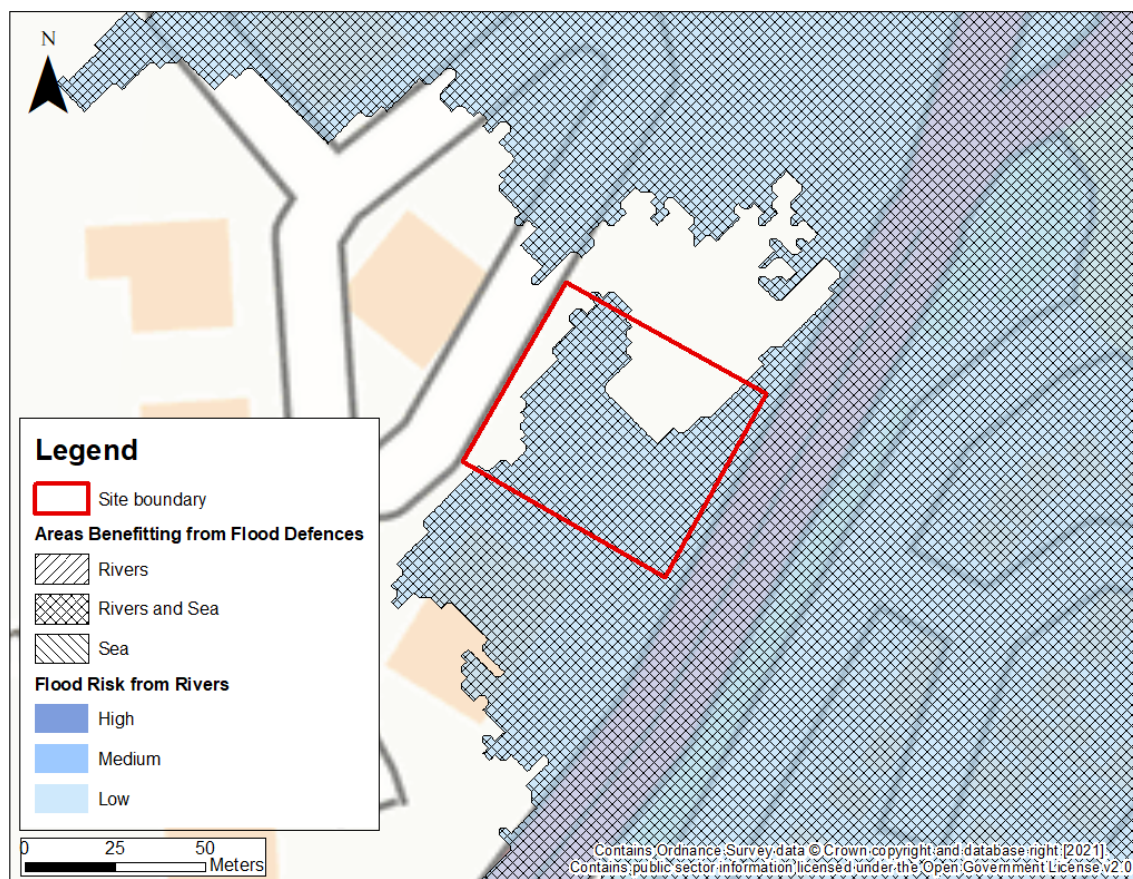


Figure 4-1: FRAW – Flood Risk from River and areas benefitting from flood defences

4.4 Tidal flood risk

The NRW FRAW Flood Risk from the Sea map illustrates that the site is **not at risk of tidal flooding**, as shown in Figure 4-2.

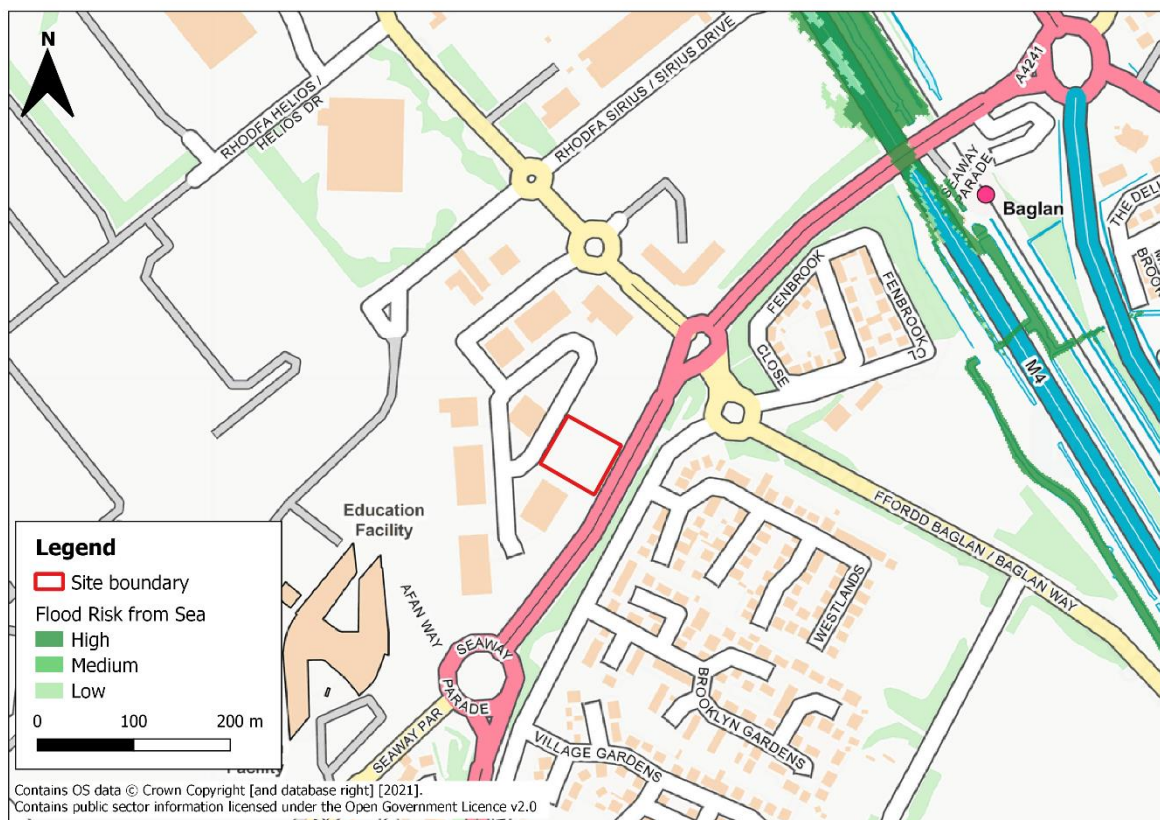


Figure 4-2: FRAW – Flood Risk from the Sea

4.5 Surface water and small watercourse flood risk

Surface water flooding occurs when rain falling on saturated ground flows overland, following the local topography. Surface water flooding and subsequent overland flow can also originate from surcharging blocked sewers or drains. Depending on the return period, sewer flooding can also occur from overloading of sewers due to their capacity being exceeded by large amounts of surface water. This typically occurs in events exceeding the 1 in 30-year (3.3%) AEP. Overland flow can therefore pose a risk to both the development site and surrounding land. Overland flows may originate from the site itself or adjoining land at a higher elevation from which flow migrates onto the development area.

The NRW FRAW Surface Water and Small Watercourses map shows that the majority of the site is at **very low risk of flooding** from surface water and small watercourses. This means that most of the site has less than a 1 in 1,000 (0.1% AEP) chance of flooding from this source, as shown in Figure 4-3. A small, localised area in the south-west of the site has a low (1 in 1,000-year or 0.1% AEP) chance of flooding.

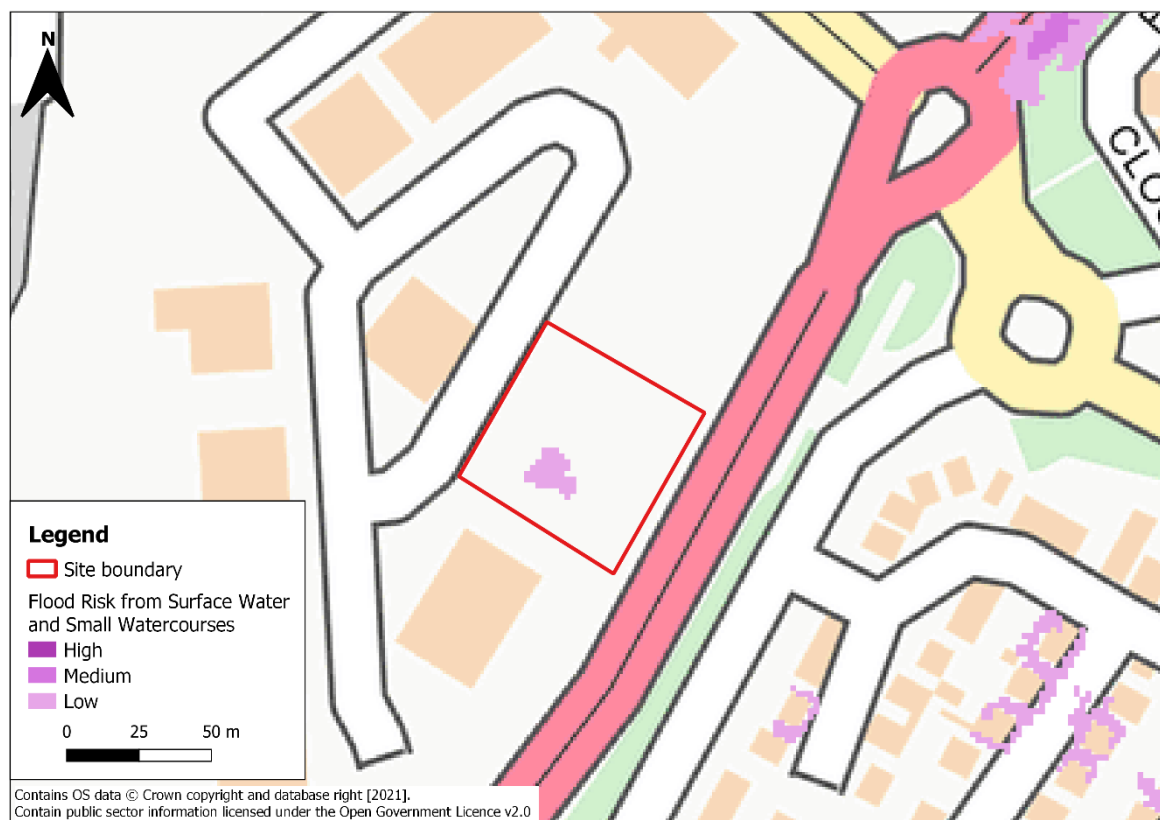


Figure 4-3: FRAW - risk of flooding from surface water and small watercourses

4.6 Groundwater flood risk

Groundwater flooding is caused by unusually high groundwater levels. It occurs as excess water emerges at the ground surface or within manmade structures such as basements. Groundwater flooding tends to be more persistent than surface water flooding, in some cases lasting for weeks or months, and can result in damage to property. This risk of groundwater flooding depends on the nature of the geological strata underlying the site and the local topography.

The site is underlain by areas of naturally high groundwater – see section 2.2, however, the Neath Port Talbot County Borough Council Flood Risk Management Plan⁸ states that 'there are no specific areas of historical groundwater flooding recorded in the Neath and Port Talbot area'. It can therefore be concluded that the site is not considered to be at risk of flooding from groundwater.

4.7 Reservoirs flood risk

NRW flood maps indicate that the proposed development site is not at risk of flooding due to reservoir failure. It can therefore be concluded that there is **no risk** of reservoir flooding at the site.

4.8 Sewers flood risk

Flood risk from sewers is a result of excess surface water entering the sewer drainage network. The Neath Port Talbot Local Flood Risk Management Plan⁸ states that 430 sewer events have been recorded by Dŵr Cymru Welsh Water within the council area, however

⁸ Neath Port Talbot County Borough Council Flood Risk Management Plan/FRMP:
<https://www.npt.gov.uk/media/5399/floodriskmanagementplan15.pdf?v=20170627002320>

the Flood Risk Management Plan does not show any evidence of historic sewer flooding on or close to the site. It can therefore be concluded that the risk of sewer flooding at the site is **very low**.

5 Detailed Fluvial Flood Risk Assessment

5.1 Hydraulic modelling availability

The Port Talbot flood model was originally developed by Hyder Consulting in 2010. This model was updated by JBA Consulting in 2016 to create a unified detailed flood model of Port Talbot. The updates included new hydrology, construction of a new 1D-2D model element for Baglan Brook and Ffrwd Wylt and incorporated new survey data of the Baglan Brook.

The updated Port Talbot flood model was thoroughly reviewed and accepted by Natural Resources Wales (NRW) in July 2017.

In 2020, to support a Flood Consequence Assessment for a nearby site (planning reference P2020/0471) JBA made further updates to the model since it was accepted by NRW. The updates included:

- Updated the TUFLOW version to 2016-03-AE
- Amended the network layer to account for altered operation of the Seaway Parade pumping station, as recommended by NRW
- New tide curves were generated for 2117 as the previous model assessed climate change at 2116
- Updated initial conditions of the model to account for the above changes
- Updated climate change allowances to 30% in line with the latest guidance⁹

The 2020 JBA modelling has been used without amendment to support this FCA. This model currently represents the best available data for assessing flood risk at the Seaway Parade site.

5.2 Baseline flood modelling

This section details the modelled flood extents and depths for the 1% AEP plus climate change and the 0.1% AEP events, as required by TAN-15.

5.2.1 1% AEP plus climate change event

Figure 5-1 shows the maximum flood depths at the proposed development site during the 1% AEP plus climate change event. This illustrates that the proposed development site is predicted to be flood free during this event.

⁹ Welsh Government. Flood Consequence Assessment: Climate Change Allowances (2016)
<https://gov.wales/sites/default/files/publications/2018-11/flood-consequence-assessments.pdf>

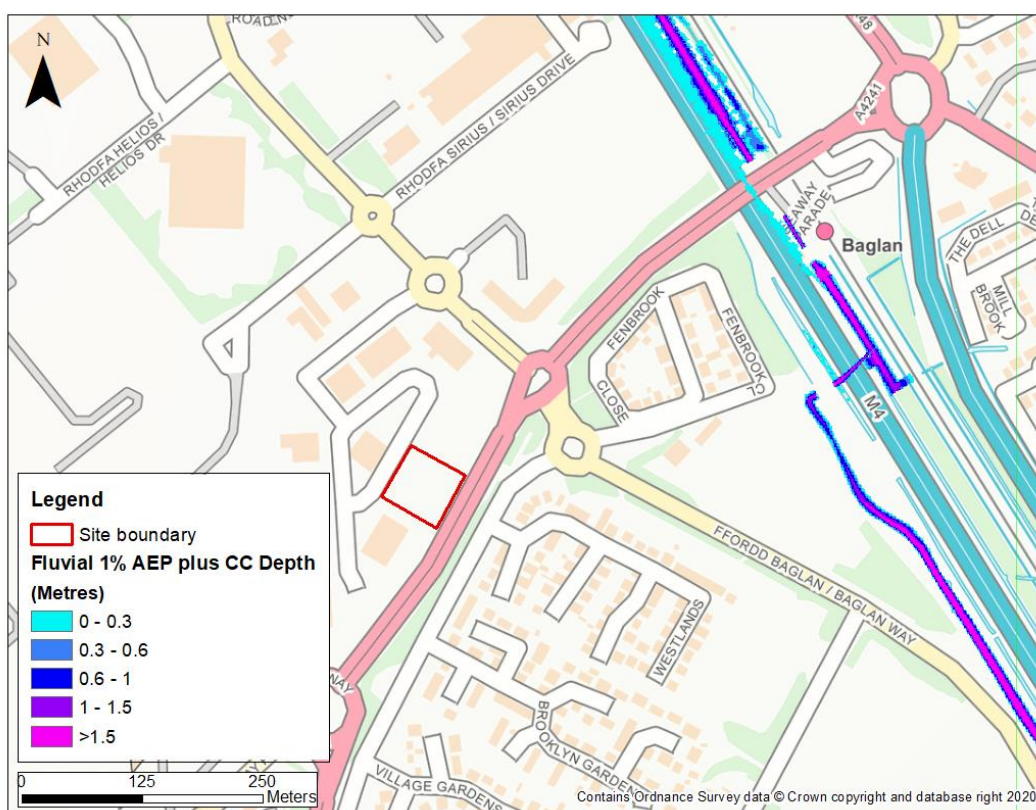


Figure 5-1: 1% AEP plus climate change maximum flood depths

5.2.2 0.1% AEP event

Figure 5-2 shows the maximum flood depths at the proposed development site during the 0.1% AEP event. This shows that the proposed development site is predicted to be flood free during this event.

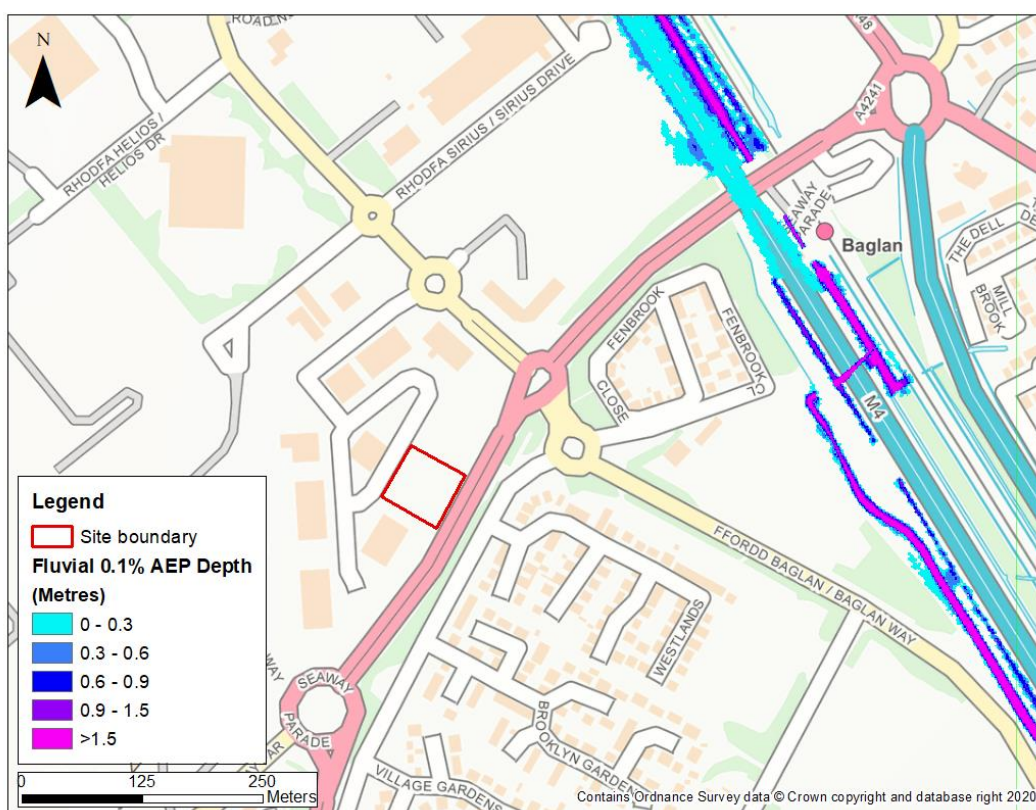


Figure 5-2: 0.1% AEP maximum flood depths

5.3 Residual Flood Risk

Residual risk is the risk that remains after management actions have been taken. Residual risks often have a low probability of occurrence, although the impacts can be severe. NRW have previously advised that develop this area of Port Talbot should consider the residual risk of a blockage on the River Afan and the failure of the Baglan Brook pumping station. These residual risks are assessed in the following section.

5.3.1 High Street Bridge Blockage

High Street Bridge on the River Afan is the most significant hydraulic constriction on the River Afan, and the bridge most vulnerable to blockage during a flood event. The bridge comprises of three masonry arches and is located adjacent to the Aberafan Shopping Centre and Tesco on the western and eastern banks, respectively. NRW had requested that a blockage of 25% be tested against this bridge for previous studies, and so this is the percentage blockage used to inform the residual risk at the Seaway Parade site.

Figure 5-3 shows the maximum flood depths at the proposed development site during the 1% AEP plus climate change event, including the High Street bridge blockage. This illustrates that the proposed development site is predicted to be flood free during this event.

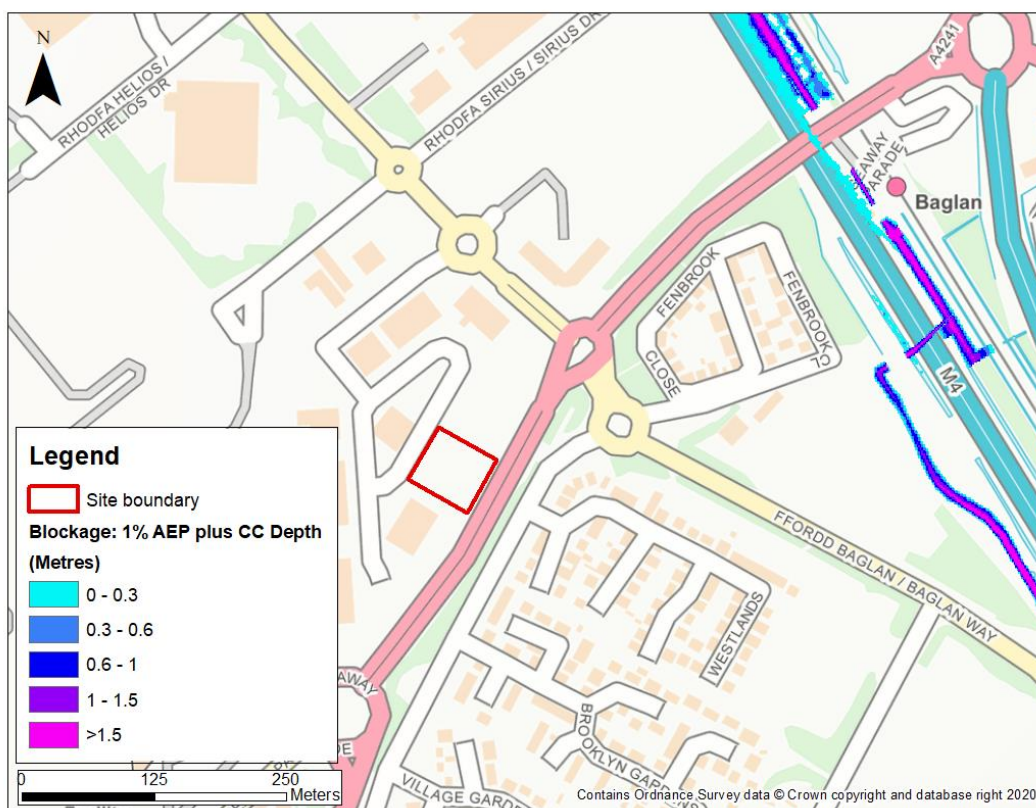


Figure 5-3: Maximum flood depths from the 1% AEP plus climate change scenario including the High Street bridge blockage.

Figure 5-4 shows the maximum flood depths at the proposed development site during the 0.1% AEP event, including the High Street bridge blockage. This illustrates that the proposed development site is predicted to be flood free during this event.

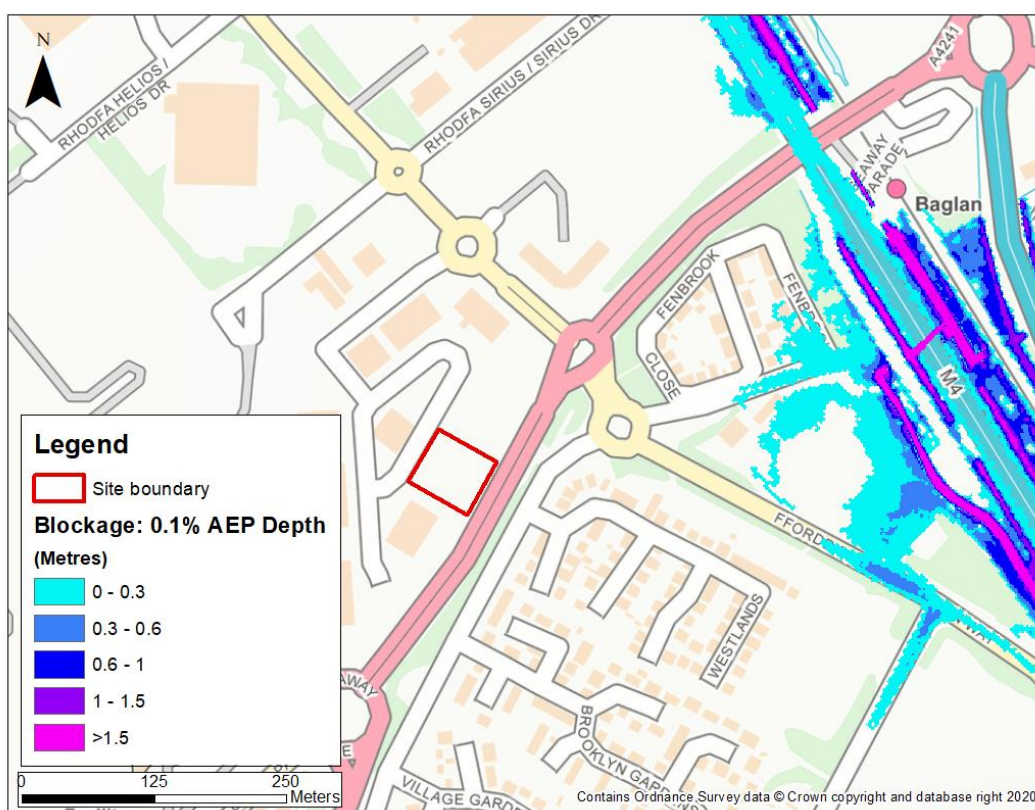


Figure 5-4: Maximum flood depths from the 0.1% AEP scenario including the High Street bridge blockage.

5.3.2 Baglan Brook Pump Failure

The failure of the Welsh Water Seaway Parade pumping station on the Baglan Brook downstream of the site has also been considered. The station consists of a dry weather pump, three storm pumps and a back-up storm pump. The failure of Storm Pump 3 was assessed, as this pump commences operation with an upstream water level of between 0.8m and 1.10m. Typically, the failure of a storm pump will result in the operation of the back-up storm pump. However, the back-up pump was not activated in the pump failure scenario, as to provide a conservative estimate of the potential impact. The model assumes the failure of Storm Pump 3 by reducing the maximum capacity of the station by 2 cumecs.

Figure 5-5 shows the maximum flood depths at the proposed development site during the 1% AEP plus climate change event, including the failure of the Baglan Brook pump. This illustrates that the proposed development site is predicted to be flood free during this event.

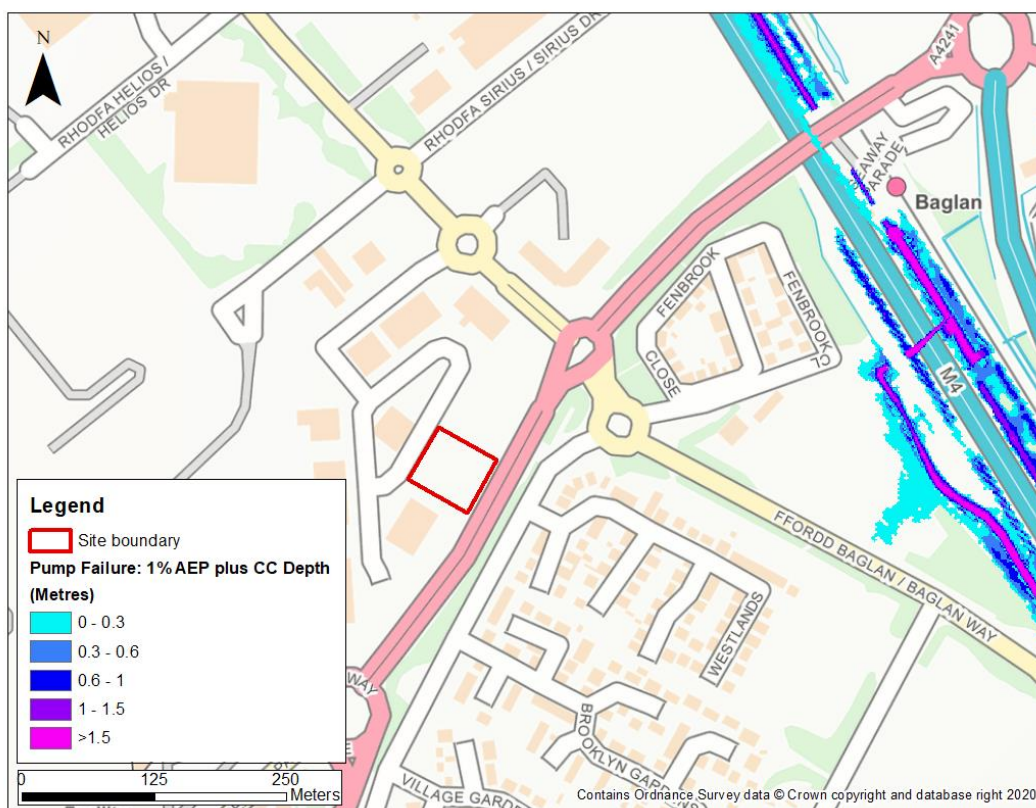


Figure 5-5: Maximum flood depths from the 1% AEP plus climate change scenario including the failure of the Baglan Brook pump.

Figure 5-6 shows the maximum flood depths at the proposed development site during the 0.1% AEP event, including the failure of the Baglan Brook pump. This illustrates that the proposed development site is predicted to be flood free during this event.

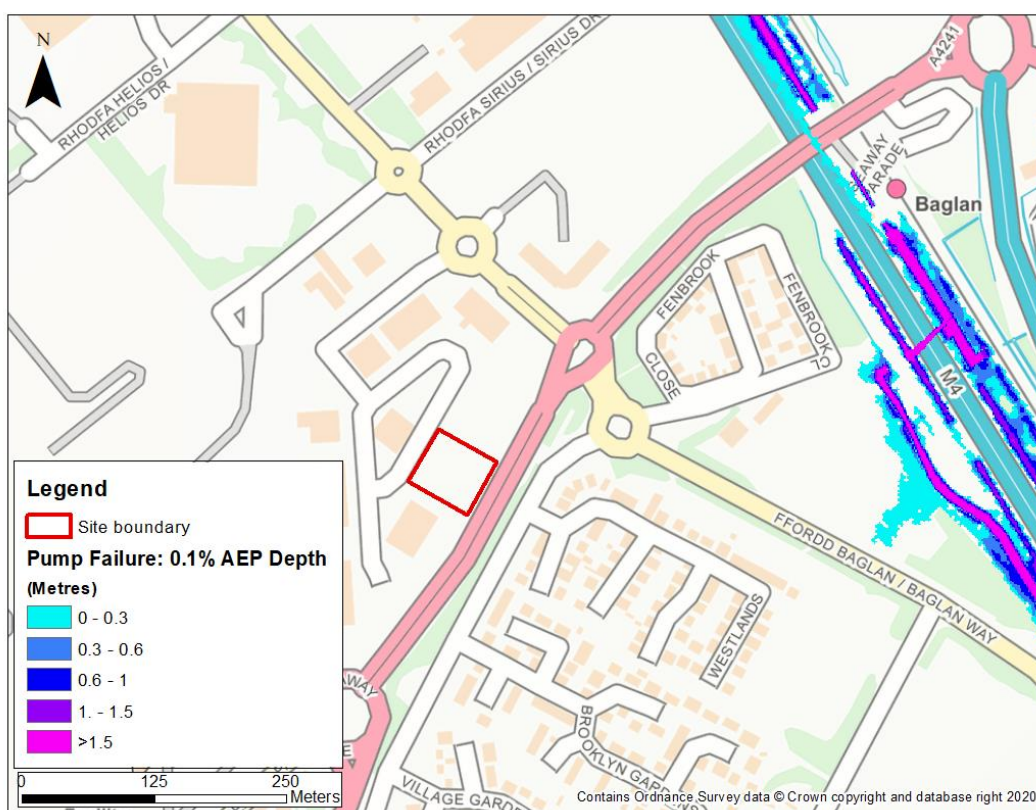


Figure 5-6: Maximum flood depths from the 0.1% AEP scenario including the Baglan Brook Pump Failure.

5.4 Flood risk summary and compliance with TAN-15

A1.14 of TAN-15 outlines the requirement for development to be flood-free in the 1% AEP plus climate change flood event. The site is located entirely above the 1% AEP plus climate change flood level; therefore, it is considered to pass A1.14 of TAN-15.

A1.15 of TAN-15 provides indicative guidance concerning the tolerable conditions during the 0.1% AEP event. The site is located entirely above the 0.1% AEP flood level; therefore, it is also considered to pass A1.15 of TAN-15.

6 Assessment of Acceptability Criteria

6.1 Acceptability Assessment

Table 6-1: Assessment of acceptability criteria assesses the proposed re-development against the acceptability requirements required to be met for the development zone.

Table 6-1: Assessment of acceptability criteria

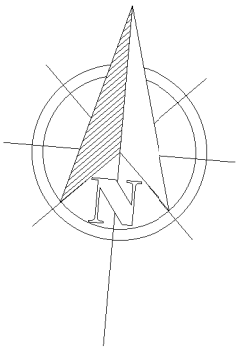
TAN 15 Justification Criteria	Comments	Achieved
Developer is required to demonstrate that the site is designed to be flood free for the lifetime [Ref: TAN-15 A1.5] of development for a 1 in 100 (1%) chance (fluvial) flood event including an allowance for climate change in accordance with TAN-15 table A1.14.	The site is predicted to be flood-free during the 1% AEP plus climate change event.	Yes
The development should be designed so that in an extreme (1 in 1000 chance) event, there would be less than 600mm of water on access roads and within the property.	The site is predicted to be flood-free during the 0.1% AEP plus climate change event.	Yes
No flooding elsewhere.	As detailed in Section 5.3, the proposed redevelopment and surrounding area are flood free in both modelled flood scenarios. Therefore, flood risk to others will not be increased.	Yes
Flood defences must be shown by the developer to be structurally adequate particularly under extreme overtopping conditions (i.e., that flood with a 1 in 1000 chance of occurring in any given year).	The proposed re-development is protected by the presence of flood defences upstream of the site. These are NRW owned assets that must be maintained to offer protection throughout Neath Port Talbot	Yes
The developer must ensure that future occupiers of development are aware of the flooding risks and consequences.	The developer should ensure future occupiers are aware of the risk of flooding to the site.	Yes
Effective flood warnings are provided at the site.	The site is predicted to be flood free in both modelled events, therefore signing up for flood warnings for the site is not recommended.	Yes
The developer must ensure that future occupiers of the development are aware of the	The site is predicted to be flood free in both modelled events. Therefore, the preparation of a Flood	Yes

flooding risks and consequences.	Emergency Plan is not recommended.	
Escape/evacuation routes are shown by the developer to be operational under all conditions.	The evacuation route onto Central Avenue is flood free during both the 1% AEP plus climate change flood event and the 0.1% AEP flood event.	Yes
The development is designed by the developer to allow the occupier of the facility for rapid movement of goods/possessions to areas away from flood waters.	The site is predicted to remain flood free in all design events, but it is recommended that the occupier signs up to the NRW flood warning service so that they are aware of the potential for any flooding.	Yes
Development is designed to minimise structural damage during a flooding event and is flood proofed to enable it to be returned to its prime use quickly in the aftermath of the flood.	The site is predicted to be flood free, so structural damage is very unlikely and further flood proofing not justified in these circumstances.	Yes

7 Conclusions

- JBA Consulting were commissioned in May 2021 to prepare a Flood Consequence Assessment (FCA) to support a planning application for the development of an industrial unit on Seaway Parade, Baglan, Port Talbot.
- The site is a brownfield site within an industrial park, approximately 0.34 hectares in size. The site is surrounded by industrial and residential developments, including industrial units to the north and west, a school to the south-west, and residential areas to the east. Access to the unit is available off Central Avenue to the north-west of the site.
- The proposed development consists of a warehouse, which will also include an office and a W/C. The site will feature a permeable storage yard surrounding the warehouse building. The site will also include an area for car parking constructed of permeable concrete blocks, two W/Cs, and a refuse area on the northern boundary of the site. The site is classed as a less vulnerable development by TAN-15.
- TAN-15 uses the Development Advice Map (DAM) to trigger different planning actions. The majority of the site is located in Zone C1, defined as areas of the floodplain which are developed and served by significant infrastructure, including flood defences. Development within this zone is acceptable subject to satisfying the requirements of the Justification Test, including a demonstration of the acceptability of the flood consequences.
- The site is at low risk from fluvial flooding, according to NRW FRAW mapping, however detailed flood modelling, undertaken in 2017, shows that the site is not at risk. The proposed development site is predicted to be flood-free during both the 1% AEP plus climate change event and the 0.1% AEP event.
- The residual risk of a blockage on the River Afan and the failure of the Baglan Brook pumping station have also been assessed in this report. Detailed flood modelling shows that in the occurrence of a pump failure or bridge blockage, the site is not at risk during the 1% AEP plus climate change event or the 0.1% AEP event.
- The site is at little or no risk of flooding from the sea, surface water and small watercourses, reservoirs, groundwater, and sewers.
- An assessment of the Justification Test and Acceptability Criteria has been undertaken, with all aspects found to be satisfied for the site.
- It is concluded that on the grounds of flood risk, the proposed development site is compliant with the aims and objectives of Planning Policy Wales and TAN-15.

A **Appendices**
Site plan



SITE PLAN

1 : 200

- 
- PROPOSED NEW FOUL DRAINAGE
 - EXISTING FOUL DRAINAGE
 - PROPOSED NEW SURFACE DRAINAGE
 - AS EXISTING - SURVEY
 - PERMEABLE AREA TO BE INCORPORATED INTO SUDS DESIGN
- 100,000
- PROPOSED LEVELS RELATIVE TO SURVEY

[illegible]

STATUS	PURPOSE OF ISSUE PLANNING APPLICATION
--------	--

i.m. *Design Studio*

 Chartered Institute of
Architectural Technologists
Registered Practice

27 Park Avenue,
Skewen, SA106RU

PROJECT		
Seaway Parade Baglan South Wales		
TITLE		
SITE PLAN		
CLIENT		
A1 Loo Hire		
DRAWN BY JM	CHECKED BY Checker	DATE 10 Apr 21
SCALE (@ A1) As indicated	PROJECT NUMBER Project Number	
DRAWING NUMBER		REV
A1 - A111		

B Site elevation and floor plan



- ### 3D View 1



STATUS	PURPOSE OF ISSUE PLANNING APPLICATION
--------	--

i.m.*Design Studio*



PROJECT

Seaway Parade
Baglan
South Wales

TITLE

PROPOSED ELEVATIONS

CLIENT
A1 Loo Hire

DRAWN BY JM	CHECKED BY Checker	DATE 10 Apr 21
SCALE (@ A1) As indicated	PROJECT NUMBER Project Number	
DRAWING NUMBER A1 - A110		REV

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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
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