

# **Flood Consequence Assessment – Greenmoor Farm**

**Version 2**

**December 2022**

**[www.jbaconsulting.com](http://www.jbaconsulting.com)**

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## Contract

This report describes work commissioned by Andrew Bates (Amenity Planning), on behalf of Helen Thomas, by an email dated 28<sup>th</sup> October 2021. Hannah Bard and Hannah Booth of JBA Consulting carried out this work.

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## Purpose

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## Abbreviations

AEP	Annual Exceedance Probability
BGS	British Geological Survey
FCA	Flood Consequence Assessment
FRAW	Flood Risk Assessment Wales
JBA	Jeremy Benn Associates
LDP	Local Development Plan
mAOD	Metres Above Ordnance Datum
NRW	Natural Recourses Wales
PPW	Planning Policy Wales
TAN-15	Technical Advice Note 15

# **1 Introduction**

## **1.1 Terms of Reference**

JBA Consulting were commissioned by Amity Planning in Wales on behalf of Helen Thomas to undertake a Level 1 Flood Consequence Assessment (FCA) to support a planning application for the proposed residential development of Greenmoor Farm, St Brides, Newport.

## **1.2 FCA Requirements**

This FCA follows Welsh Government guidance on development and flood risk set out in Technical Advice Note 15: Development and Flood Risk (TAN-15). Where appropriate the following aspects of flood risk will be addressed in all planning applications over its expected lifetime in flood risk areas:

- 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 flow routes
- The effect of access and egress and infrastructure, for example public sewer outfalls, combined sewer outflows, surface water sewers and effluent discharge pipes from wastewater treatment works
- The impacts of the development in terms of flood risk on neighbouring properties and elsewhere on the floodplain

## 2 Site Description

### 2.1 Site Location

The proposed development site is located within Greenmoor Farm, St Brides, as shown in Figure 2-1. Greenmoor Farm is comprised of a number of businesses including a farm, plant nursery, shop and Home and Away Boarding Kennels.

The B4239 forms the southern boundary and Hawse Lane the western boundary of Greenmoor Farm, with agricultural land surrounding the site in all other directions. The site is situated 1km north of the Gwent coast. The proposed development, shown by the red line boundary, is located on brownfield land, currently used for storage, 10m north of the associated kennels. The orange boundary represents the indicative wider site ownership, however this FCA will focus on the proposed site boundary shown in red.

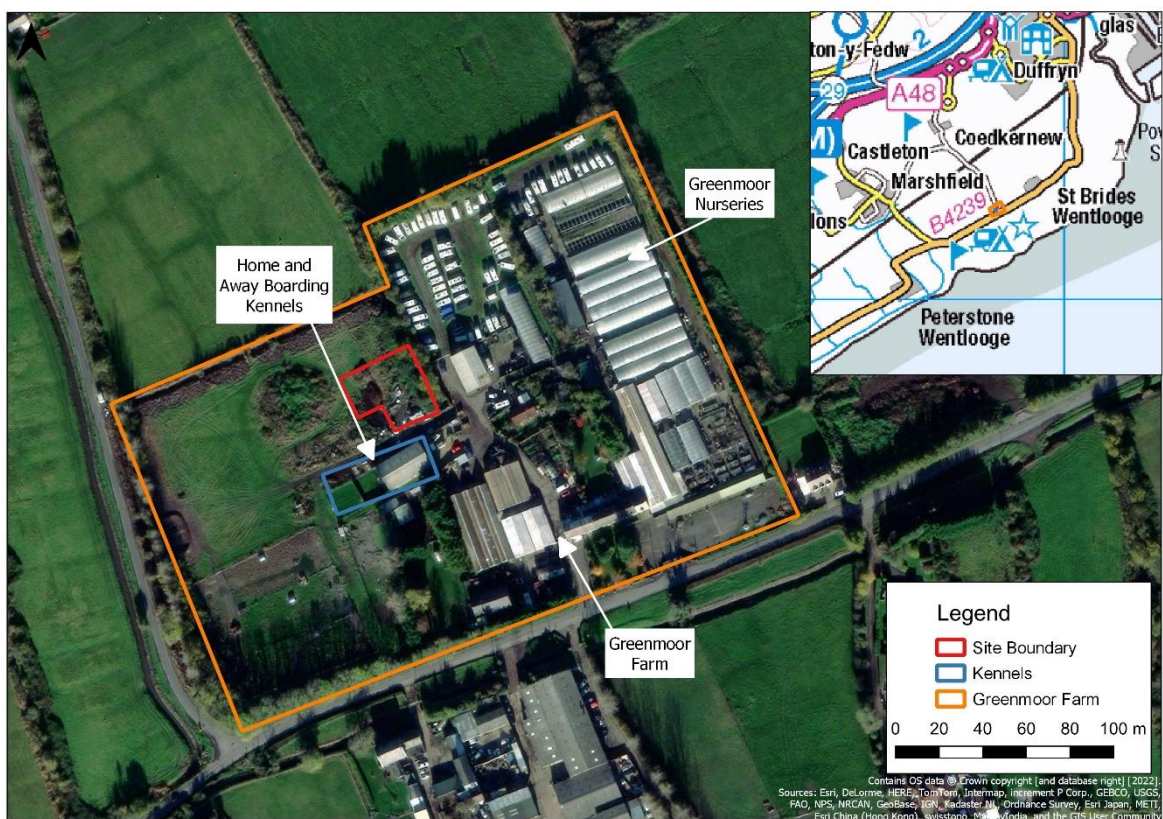


Figure 2-1 Site Location

### 2.2 Site Topography

The Natural Resources Wales (NRW) Open Source 1m Light Detection and Ranging (LiDAR) data<sup>1</sup> across the site is shown in Figure 2-2. The site is located within tidal flats with small topographic changes across the area. Ground levels are generally flat with an average of 5.85mAOD across the site. Localised topographic depressions are present in the western part of the site and along the eastern boundary where ground levels decrease at the bank of the watercourse that borders the site.

<sup>1</sup> LLE Geoportal for Wales: <http://lle.gov.wales/catalogue/item/LidarCompositeDataset/?lang=en>

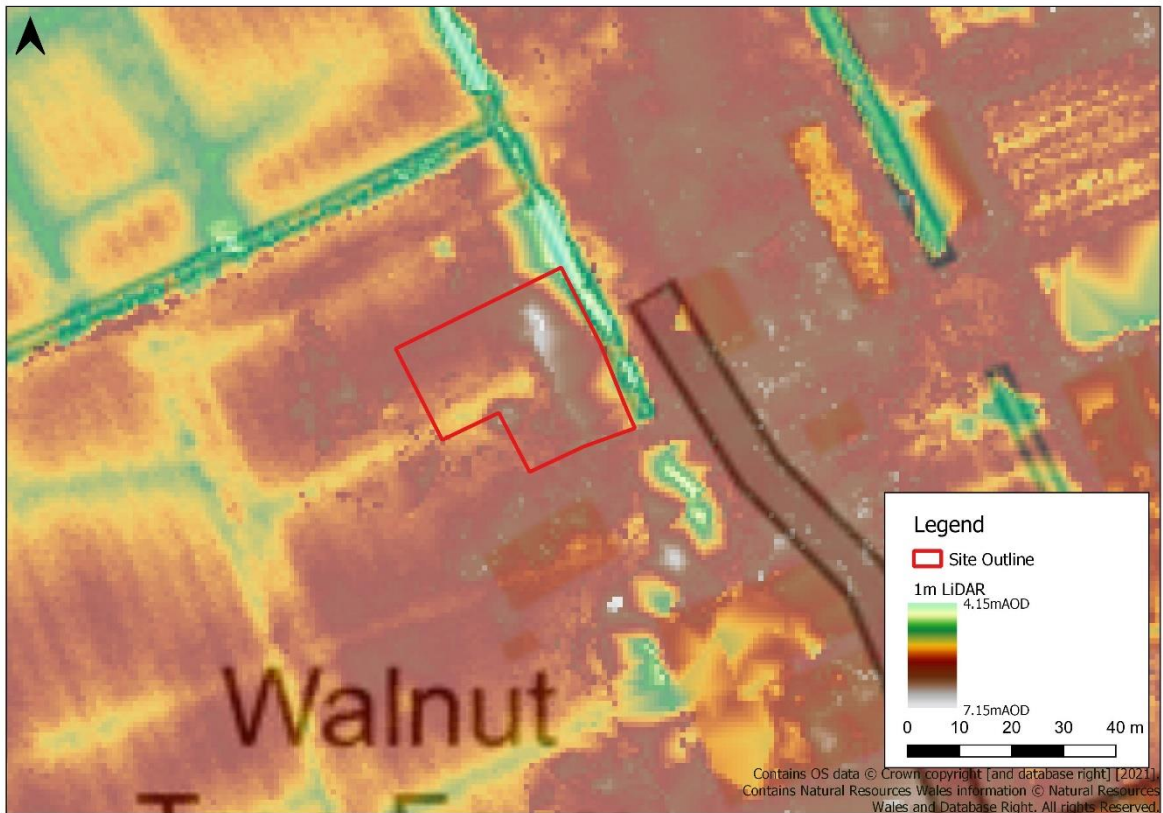


Figure 2-2 Site topography using NRW 1m LiDAR

### 2.3 Watercourses

The site is situated on the Wentlooge Levels, part of the Caldicot & Wentlooge Drainage District which is made up of an extensive network of reens and several main rivers as classified by NRW. Consequently, land drainage is actively managed by NRW in their function as the Internal Drainage Board. Unnamed reens form the northern, eastern and western boundaries of Greenmoor Farm, as shown in Figure 2-3. The proposed development sites eastern boundary is bordered by a reen. Due to the flat nature of the topography in the area the flow direction in each reen is unclear, although the overall flow is likely to be towards the main watercourses shown in Figure 2-3. These watercourses discharge in various locations along the Gwent coastline into the Severn Estuary as shown in Figure 2-3.

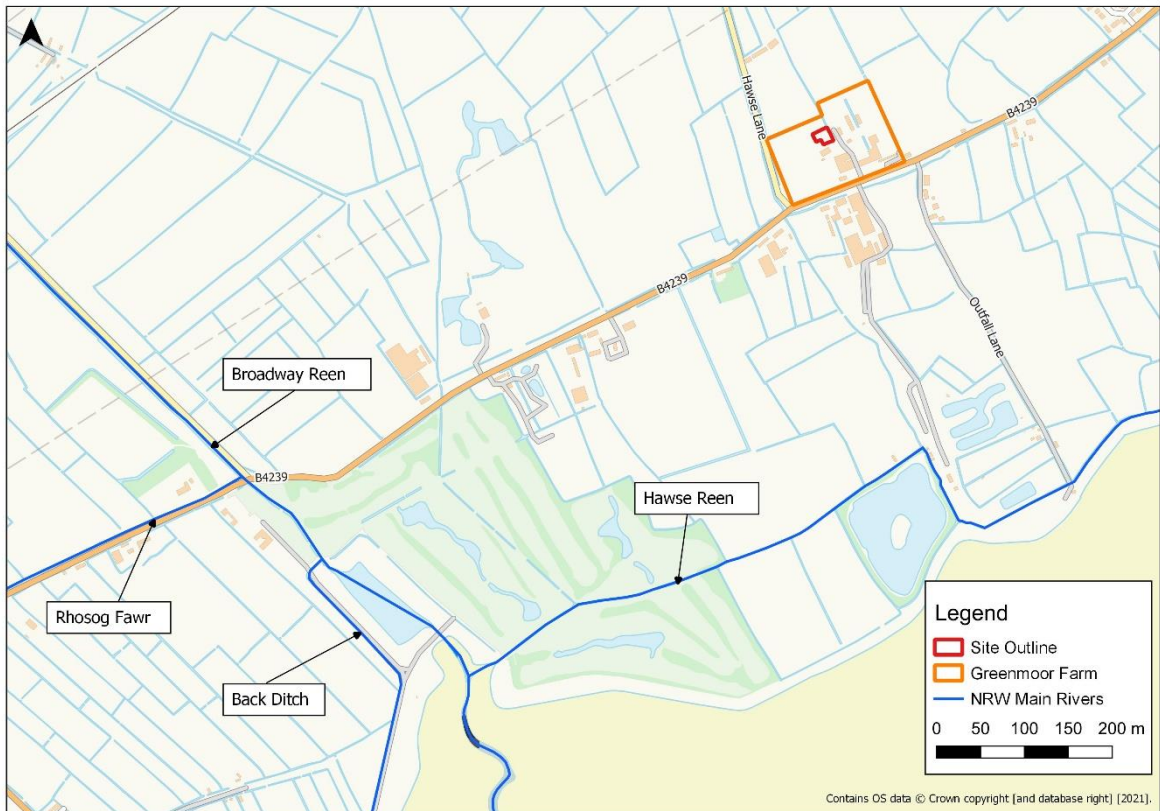


Figure 2-3 Watercourses

## 2.4 Soils and Geology

The geology of the site has been assessed using the BGS Geology of Britain Viewer<sup>2</sup>. The bedrock geology is shown to be Mercia Mudstone Formation comprised of siltstone, mudstone and sandstone. Superficial geology at the site is comprised of clay and silt forming tidal flat deposits.

The soils on site have been assessed on the Cranfield University Soils Scapes Viewer<sup>3</sup> and are shown to be loamy and clayey soils of coastal flats with naturally high groundwater.

## 2.5 Proposed Development

The proposed development is a rural enterprise dwelling with associated parking and landscaping to house the owner and a full time worker of the associated kennels business. The proposed development is 2 bed dwelling, sized circa 103m<sup>2</sup> in floorspace. The proposed development plans are contained in Appendix A.

<sup>2</sup> Geology of Britain Viewer. <https://bgs.ac.uk/map-viewers/geology-of-britain-viewer/>

<sup>3</sup> Cranfield Soil Scapes Viewer. <https://landis.org.uk/soilsclapes/>

### 3 Planning Policy

#### 3.1 Planning context

Planning Policy Wales (PPW) sets out the core planning policies required by the Welsh Government. These policies have the aim that all development in Wales is sustainable and improve the social, economic, environmental, and cultural wellbeing of Wales as set out in the Wellbeing of Future Generations Act 2015. PPW uses a series of Technical Advice Notes to provide more guidance on areas of planning and development in Wales. Technical Advice Note 15 (TAN-15), introduced by the Welsh Government in 2004, provides technical guidance relating to development planning and flood risk in Wales. The initial requirements of TAN-15 are to identify the vulnerability classification(s) and flood zones relevant to the proposed development, and to apply this information to the application of the Justification Tests.

#### 3.2 Vulnerability classification

As shown in Table 3-1, TAN-15 assigns one of three flood risk vulnerabilities to a development. As this development is proposed for residential purposes it is classified under TAN-15 as a 'highly vulnerable' development.

Table 3-1 Vulnerability classification

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	<b>All residential premises</b> (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.

#### 3.3 Development Advice Map Zoning

The Development Advice Map (DAM) created by the Welsh Government is used to trigger different planning actions based on a precautionary assessment of flood risk. Figure 3-1 shows that the site is located in Zone C1 which is described as "areas of the floodplain served by significant infrastructure, including flood defences".

Highly vulnerable development can take place within Zone C1 subject to the application of the Justification Test, including acceptability of consequences.



Figure 3-1 Development Advice Map

### 3.4 Newport Adopted Local Development Plan (2011-2026)

The Newport Local Development Plan (LDP)<sup>4</sup>, adopted in 2015, provides land use policies and proposals to encourage sustainable growth within the Newport Council area until 2026. The proposed development will contribute to Objective 3 'to enable a diverse economy that meets the needs of the people of Newport and those of the wider South East Wales economic region'. Providing accommodation for the kennels' employees will enhance the safety of the kennels, improving reputation and enabling expansion of the business as intended.

In accordance with the Strategic Policy SP5, the LDP states 'new dwellings in the countryside will be permitted only when it is essential for them to be on the site of a rural enterprise or when they will provide affordable housing for which there is a demonstrable local need.' The proposed development is essential to be on the site of the kennels as there is an operational requirement for someone to be onsite 24/7 to ensure the safety, security and health of the dogs. This will also provide more affordable housing for the employees due to the greater financial challenge of converting other buildings on the site.

### 3.5 Justification Test

Table 3-2 below summarises how the proposed development meets the requirements set out within the Justification Test. All of the criteria have been satisfied with regards to the proposed development.

<sup>4</sup> Newport City Council (2015) <https://www.newport.gov.uk/documents/Planning-Documents/LDP-2011-2026/LDP-Adopted-Plan-January-2015.pdf>

Table 3-2 Justification criteria

TAN-15 Justification Criteria	Comments	Achievable?
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 contribute to delivering Newport City Council's Objective 3 of the adopted Local Development Plan (2011-2026).	✓
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 proposed development site is located within Greenmoor Farm. The site is currently used for storage with a dirt track running through the site.	✓
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] ... in order to be considered acceptable	An assessment of the flood consequences at the site has been undertaken to demonstrate the proposed development's acceptability. See Section 4 and Section 5.	✓

## 4 Flood Risk Assessment

A review of publicly available data from Natural Resources Wales and Newport City Council on flood risk from all sources has been undertaken and is summarised in Table 4-1 below.

Table 4-1 Flood Risk Assessment

Source of Flooding	Onsite Presence	Description
Flood Risk from Rivers	x	The site is at very low risk of flooding from rivers (Section 4.2).
Flood Risk from the Sea	✓	The site is at low risk of flooding from the sea (Section 4.3)
Flood Risk from Surface Water and Small Watercourses	x	The site has a very low risk of surface water flooding (Section 4.4).
Reservoirs	x	The site is not at risk from reservoir flooding (Section 4.5).
Groundwater	x	The site is at very low risk of groundwater flooding (Section 4.6).
Canals	x	The site is not at risk of flooding from canals.
Sewers	x	The site is considered to be at low risk from sewer flooding.

### 4.1 Historical Flooding

NRW's Historic Flood Map does not present any historical flood outlines for the site. No other historic flooding records were identified at the site in the Newport City Council Preliminary Flood Risk Assessment<sup>5</sup> and Flood Risk Management Strategy<sup>6</sup>.

### 4.2 Flood risk from rivers

The site is **at very low risk** of flooding from rivers. This means that there is less than a 0.1% Annual Exceedance Probability (AEP) chance of fluvial flooding in any given year. This is shown by a transparent layer on the Flood Risk Assessment Wales (FRAW) mapping and as such a map has not been provided in this assessment.

The proposed development site is surrounded by a number of reens. It is advisable that any proposed dwelling should be located away from the reen network.

### 4.3 Flood risk from the sea

As shown in the NRW FRAW Flood Risk from the Sea map in Figure 4-1, the site is at **low risk** of tidal flooding. This means there is between a 0.1% AEP and 0.5% AEP chance of tidal flooding in any given year.

The site is in an area benefitting from flood defences, as shown in Figure 4-1. These are the Wentlooge flood defences which is a 1.8km embankment along the northern bank of the River Severn with a 0.5% AEP standard of protection.

<sup>5</sup> Newport City Council- Preliminary Flood Risk Assessment (2011) <https://www.newport.gov.uk/documents/Council-and-Democracy/Civil-Contingencies/Preliminary-Flood-Risk-Assessment-final-report-April-2011.pdf>

<sup>6</sup> Newport City Council: Local Flood Risk Management Strategy (2014) <https://www.newport.gov.uk/documents/Policies/Newport-LFRMS-Report-Issue-Rev.pdf>

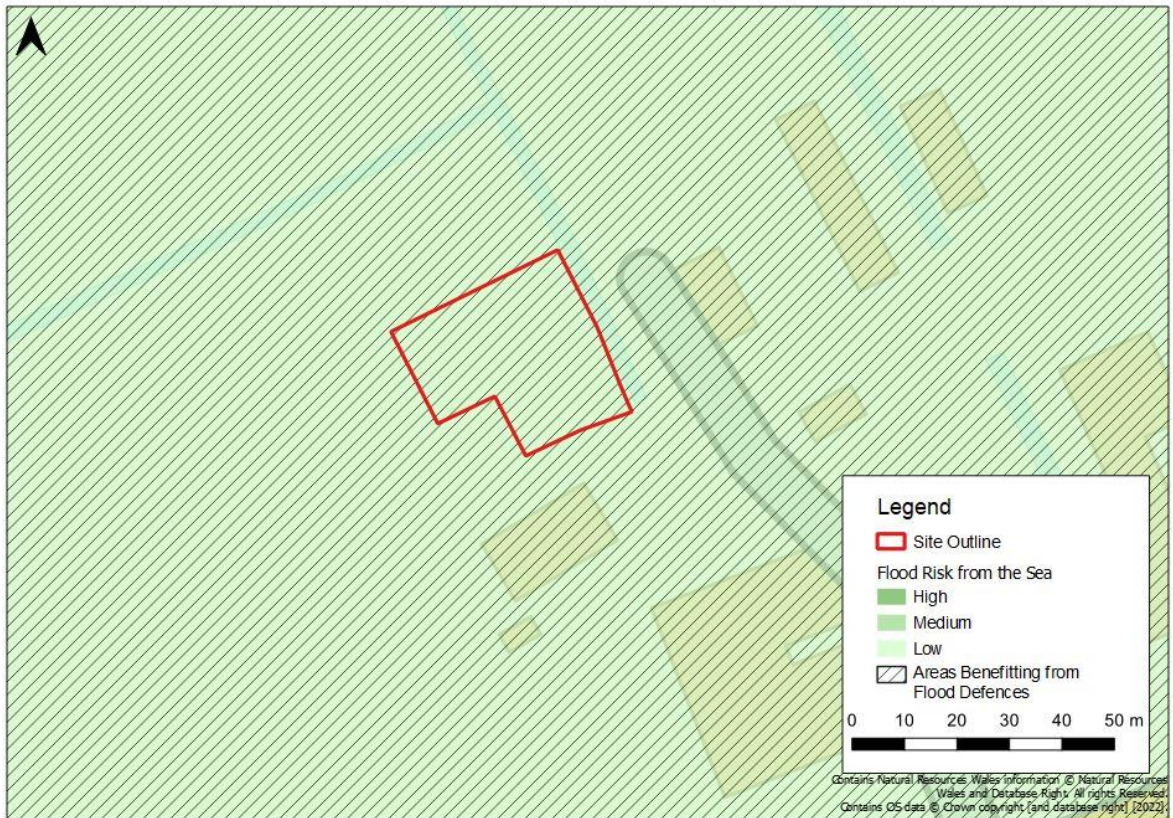


Figure 4-1 Risk of flooding from the sea

#### 4.4 Flood risk from surface water and small watercourses

As shown by the NRW FRAW Flood Risk from the Surface Water and Small Watercourses layer in Figure 4-2, the site is at **very low** risk of surface water flooding. This means there is a less than 0.1% AEP chance of flooding from these sources in any given year.

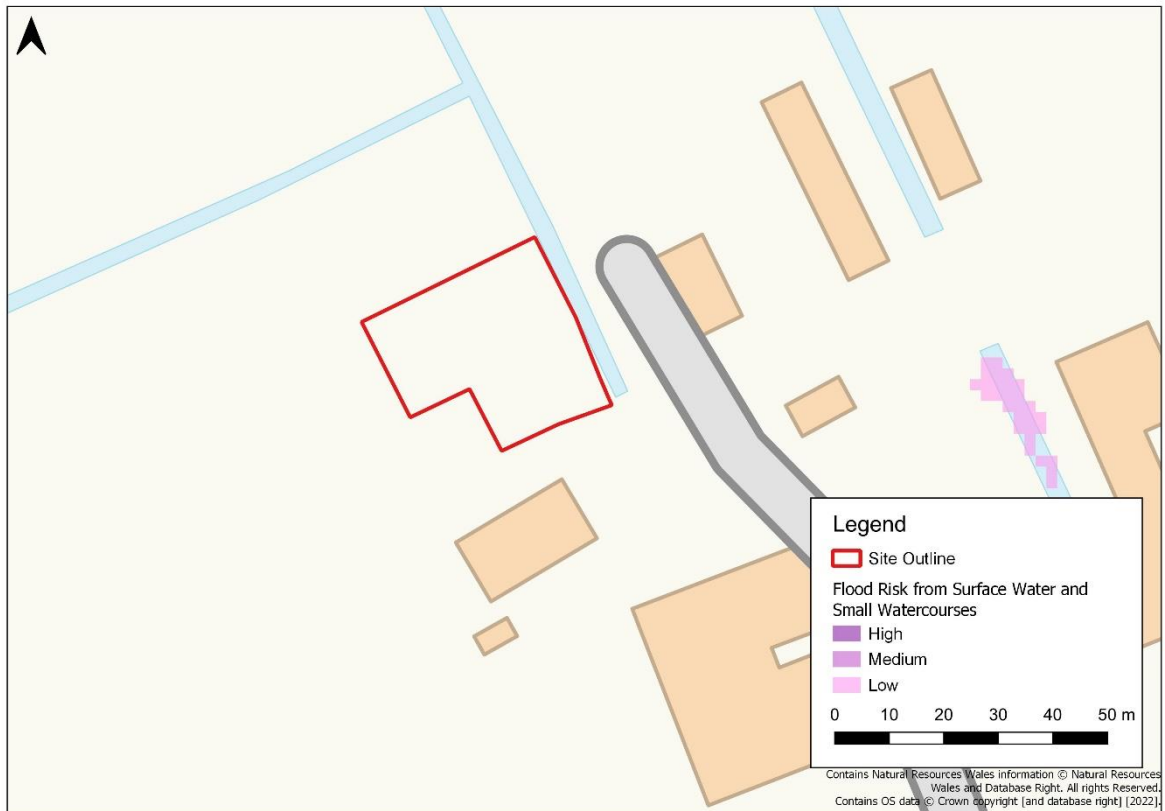


Figure 4-2 Risk of flooding from surface water and small watercourses.

#### 4.5 Flood risk from reservoirs

Given the absence of any nearby reservoirs, the NRW's reservoir flood map shows the site, and its surrounding area is **not at risk** of reservoir flooding. This is shown by a transparent layer on the NRW mapping and as such a map has not been provided in this assessment.

#### 4.6 Flood risk from groundwater

Groundwater flooding is caused by unusually high groundwater levels. It occurs as excess water emerging 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 significant damage to property. The risk of groundwater flooding depends on the nature of the geological strata underlying the sites, as well as on local topography.

Newport City Council Preliminary Flood Risk Assessment<sup>5</sup> states that '*groundwater is not considered to be a significant flood risk and is considered to rise and fall relatively slowly. The local geology is not considered to yield considerable volumes of groundwater.*' The site is therefore considered to be at **low risk** of groundwater flooding.

## 5 Assessment of Tidal Flood Risk

### 5.1 Background

As tidal flooding is the main flood risk to the site, a more detailed assessment of tidal flooding has been carried out to understand predicted flood depths at the site. Extreme sea level estimates have been used to calculate projected sea level for the 0.5% and 0.1% AEP events for the present day and with 100 years lifetime of development (2122).

### 5.2 Extreme sea level estimates

Extreme sea level estimates have been taken from the Environment Agency Coastal Flood Boundary Conditions for UK Mainland and Islands; Design Sea Levels (ref. SC060064)<sup>7</sup>. Extreme sea level predictions are provided at node locations at approximately 2km spacing along the coastline. For this assessment the closest extreme sea level node is Node 400 located to the south of the Newport coastline, approximately 3km from the site. The extreme sea level estimates for this node are shown in Table 5-1:

Table 5-1 Extreme Sea Level Estimates (2017)

Event (AEP)	Predicted sea level (mAOD)
0.5%	8.18
0.1%	8.52

For all coastal locations, future sea level rise is a major consideration and should be applied to the extreme sea level estimates. Welsh Government guidance suggests that the lifetime of a development for a residential site is 100 years and so extreme sea level estimates have been uplifted to include sea level rise to 2122.

The UKCP18 User Interface<sup>8</sup> has been used in accordance with Welsh Government Guidance on Climate Change Allowances for Planning Purposes (September 2021)<sup>9</sup> to provide climate change uplifts for the Newport coastline. The cumulative increase in sea level has been calculated between 2017 and 2022 to uplift extreme sea level estimates to present day.

However, the UKCP18 dataset only extends to 2100. To calculate sea level estimates for 2122, the average incremental increase from the last 5 years of the dataset (2095-2099) has been calculated and multiplied by 22. This has been added to the cumulative increase between 2017 and 2100. The climate change uplifts applied to the extreme sea level estimate are shown in Table 5-2.

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<sup>7</sup> UK Government (2019) Coastal flood boundary conditions for the mainland UK coasts and islands <https://www.gov.uk/flood-and-coastal-erosion-risk-management-research-reports/coastal-flood-boundary-conditions-for-the-mainland-uk-coasts-and-islands>

<sup>8</sup> UK Climate Projections User Interface. <https://ukclimateprojections-ui.metoffice.gov.uk/ui/home>.

<sup>9</sup> Welsh Government. Flood Consequences Assessment: Climate Change Allowances (Sept 2021) [https://gov.wales/sites/default/files/publications/2021-09/climate-change-allowances-and-flood-consequence-assessments\\_0.pdf](https://gov.wales/sites/default/files/publications/2021-09/climate-change-allowances-and-flood-consequence-assessments_0.pdf).

Table 5-2 Cumulative sea level rise

Period	Cumulative sea level rise (m increase)
2017-2022	0.03
2017-2122	1.04

Using the extreme sea level estimates and climate change uplifts, the projected still water levels have been calculated for the 0.5% AEP and 0.1% AEP events for 2022 and 2122, as provided in Table 5-3.

Table 5-3 Predicted tidal flood levels

Event (AEP)	2022 Still Water Level (mAOD)	2122 Still Water Level (mAOD)
0.5%	8.20	9.23
0.1%	8.54	9.57

### 5.3 Tidal Flood risk

A summary of flood depths and levels across the site are provided in Table 5-4. As the site is offered protection by the Wentlooge flood defences the site is predicted to be flood free in all events, apart from the 2122 0.1% AEP flood event where depths of 210mm are experienced.

The level of the flood defences has been taken from the elevations used in the 2017 JBA Wentlooge model which was based on the JBA model completed for NRW in 2016. Elevations for a section of the defences between Peterstone Lake Golf Club and West Usk Lighthouse are in the range of 9.36mAOD to 10.1mAOD. To be conservative, the lowest value of 9.36mAOD has been used in Table 5-4 to show the predicted flood depths to the site in all events.

Table 5-4 Predicted flood depths

Event	Still Water Level (mAOD)	Freeboard based on defence level of 9.36mAOD (mm)	Flood depth on site (mm)
2022 0.5%	8.20	1160	0
2022 0.1%	8.54	820	0
2122 0.5%	9.23	130	0
2122 0.1%	9.57	-210	210

The proposed dwelling is predicted to be flood free in the 2022 0.5% AEP, 2022 0.1% AEP and 2122 0.5% AEP events. It is recommended that the Finished Floor Level of the proposed dwelling should be raised above predicted flood levels on the site to ensure it will be flood free during the 2122 0.1% AEP event.

### 5.4 Access and Egress

Due to the tidal nature of flooding at the site significant flood warning lead time (> 24 hours) can be assumed. Therefore, future residents of the development should have evacuated long before flood water enters the site. In the unlikely event that persons

should still be on site during a flood event, external flood water is expected to be no deeper than 200mm and safe access and egress to the site is still possible.

## 6 Assessment of Acceptability Criteria

Section 3.5 describes the application of the Justification Test within TAN-15 and concludes that the proposed development meets the test's requirements. Table 6-1 shows how the development meets each of the Acceptability Criteria.

Table 6-1 TAN-15 Acceptability Criteria

TAN-15 Acceptability Criteria	Comments	Assessment
Developer is required to demonstrate that the site is designed to be flood-free for the lifetime of development for a 1 in 100 (1% AEP) chance (fluvial) and 1 in 200 (0.5%) chance (tidal) 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 2122 0.5% tidal flood event and all fluvial flooding events.	✓
In respect of the residual risk to the development it should be designed so that in an extreme (1 in 1000 chance) [0.1% AEP] event there would be less than 600mm of water on access roads and within the property, the velocity of any water flowing across the development would be less than 0.4m/s.	The site is flood free in the 0.1% AEP 2022 event. In the 0.1% AEP 2122 event flood depths are predicted to be approximately 200mm. It is recommended that the Finished Floor Level of the proposed dwelling should be raised above predicted flood levels on the site to ensure it will be flood free during the 2122 0.1% AEP event	✓
No flooding elsewhere	The proposed development does not increase flood risk elsewhere as it is not possible to displace tidal flood waters due to the effectively infinite volume of the sea.	✓
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 site is protected by the Wentlooge flood defences. This defence is an embankment which is the responsibility of NRW to maintain.	✓
The developer must ensure that future occupiers of the development are aware of the flooding risks and consequences.	Upon sale or transfer of the land to new occupiers, the developer should inform occupiers of flood risk at the site.	✓
Effective flood warnings are provided at the site.	The site is located within the 'Coast from Aberthaw to Severn Bridge' Flood Alert area and the 'Coast at the Wentlooge Levels in the Newport Area' Flood Warning area.	✓
Escape/evacuation routes are shown by the developer to be operational under all conditions.	Due to the protection of the embankment, the evacuation routes are expected to be flood free during the majority of tidal flood events.	✓

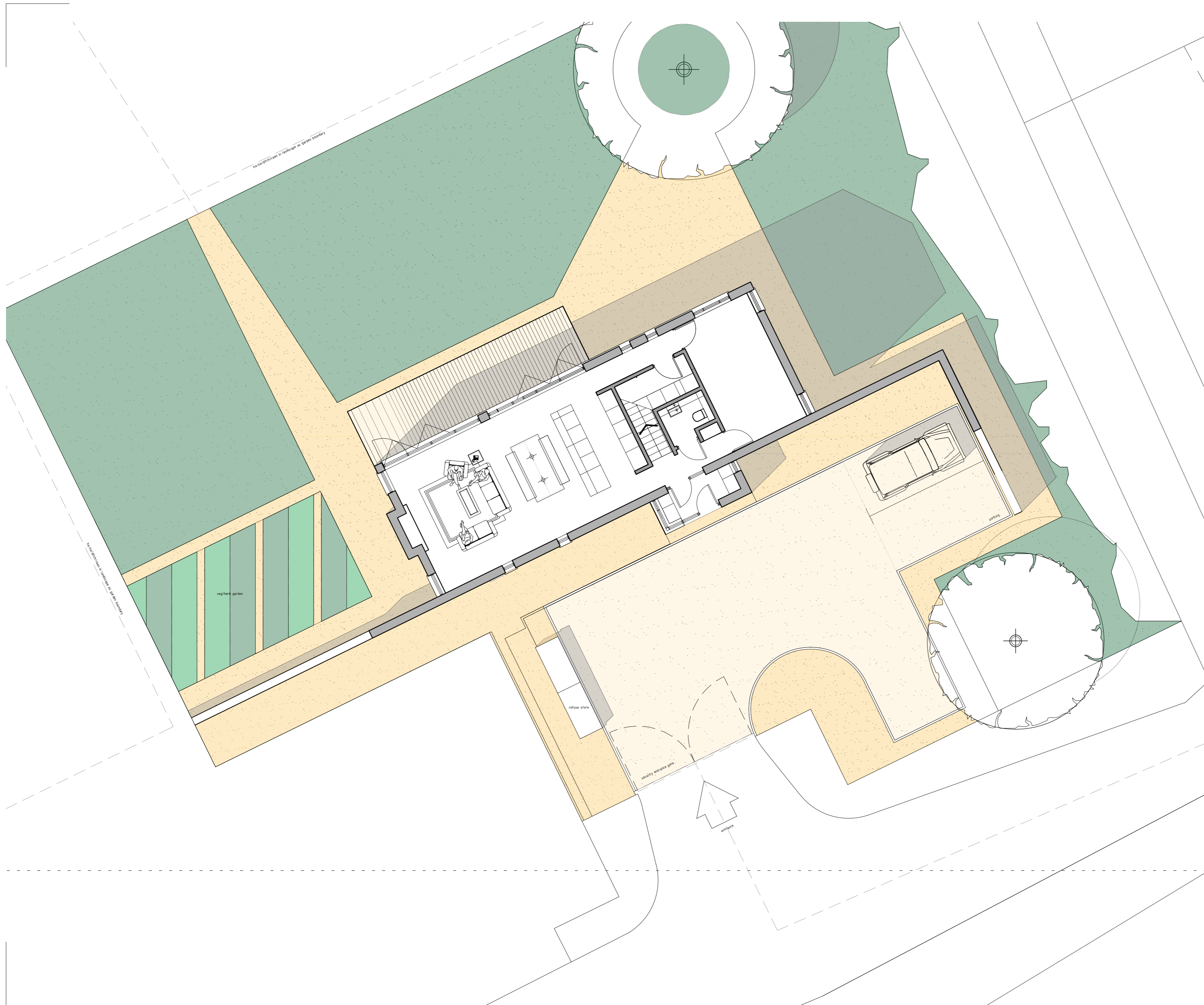
	<p>Flood depths are not expected to exceed 200mm in the 0.1% AEP 2122 event, allowing safe access and egress from the site.</p> <p>Due to the nature of flooding a greater lead time (&gt;24 hours) is available to allow for safe evacuation.</p>	
<p>The development is designed by the developer to allow the occupier of the facility for rapid movement of goods/possessions to areas away from flood waters.</p>	<p>Due to the protection of the embankment, the site is predicted to be flood free in most events. If the finished floor levels of the building are raised to above the 2122 0.1% AEP flood level, the building will remain flood free. If goods need to be removed from the building the tidal nature of flooding provides a long lead time (&gt; 24 hours).</p>	✓
<p>Development is designed to minimise structural damage during a flood event and is flood proofed to enable it to be returned to its prime use quickly in the aftermath of a flood.</p>	<p>If the finished floor levels of the building are raised to above the 2122 0.1% AEP flood level, the building will remain flood free. The structure should be able to withstand the shallow flood waters that will be present in the 2122 0.1% AEP event.</p>	✓

## 7 Conclusion and Recommendations

- JBA consulting were commissioned by Amity Planning in Wales on behalf of Helen Thomas to undertake a Flood Consequence Assessment to support a planning application for a proposed residential dwelling in Greenmoor Farm, St Brides.
- The proposed development is a residential dwelling 10m north of the associated kennels, to enable an employee to be onsite 24/7 to ensure the safety, security, and health of the dogs.
- The site has a vulnerability classification of 'Highly Vulnerable' development as defined by TAN-15.
- The proposed development lies within Zone C1 of the Natural Resources Wales (NRW) Development Advice Map (DAM). Zone C1 denotes areas of the floodplain that are developed and are served by significant infrastructure, including flood defences. Development is permitted in Zone C1 subject to application of the Justification Test, and the acceptability of flood consequences.
- The NRW's Flood Risk Assessment Wales maps shows the site has a low risk of tidal flooding and a very low risk of all other sources of flooding.
- The site is protected by the Wentlooge flood defences that have a varying level of 9.36mAOD to 10.01mAOD. 9.36mAOD was used in the assessment to provide conservative values.
- Detailed assessment of tidal flood risk shows that the proposed development site and its access roads are predicted to be flood free in all events except for the 2122 0.1% AEP event where flood depths are expected to be 210mm.
- The proposed development will not increase flood risk to third party land as it is not possible to displace tidal flood water.
- This FCA has demonstrated that all aspects of the acceptability criteria set out in TAN-15 have been satisfied. Consequently, we conclude that on the grounds of flood risk, the proposed development meets the requirement set out in TAN-15 and the aims of Planning Policy Wales.

## **Appendices**

### **A Proposed Development Plans**



This drawing is copyright of Stephen Quin Architects. It should not be used to scale, and all dimensions to be checked on site, with any discrepancy to be reported to the Architect.

Rev	Date	Initials	Checked	Revision Note
01	11.11.22	SQ	--	Issued for Planning.

THIS DRAWING RELATES TO PROPOSED WORKS AT GREENMOOR, ST. BRIDES NP10 8SQ, AND IS PRODUCED FOR PLANNING PURPOSES ONLY.

FOR STRUCTURAL DETAILS PLEASE REFER TO CLIENT APPOINTED STRUCTURAL ENGINEER'S DESIGN AND FULL SPECIFICATION.

ALL DEMOLITION WORKS SUBJECT TO STRUCTURAL ENGINEERS APPROVAL AND FULL DESIGN AND SPECIFICATION.

ALL PLANNING CONDITIONS TO BE APPROVED PRIOR TO COMMENCEMENT OF RELATED WORKS.

DRAINAGE DETAILS ARE INDICATIVE ONLY. APPROVAL BY BUILDING CONTROL AND WELSH WATER REQUIRED PRIOR TO INSTALLATION. DRAINAGE DESIGN TO BE PROVIDED BY DRAINAGE ENGINEER.

CONTRACTOR TO CHECK ALL DIMENSIONS ON SITE, BEFORE COMMENCEMENT OF ANY WORKS, ANY ANOMALIES MUST BE REPORTED. DO NOT SCALE FROM DRAWINGS, FIGURED DIMENSIONS ONLY TO BE USED.

PRIOR TO COMMENCEMENT OF WORKS FULL DISCUSSION AND AGREEMENT TO BE MADE WITH IMMEDIATE NEIGHBOURS FOR CONFIRMATION OF INTENDED WORKS TO BE CARRIED OUT. CONTRACTOR MUST ENSURE FULL PROTECTION IS PROVIDED TO BOUNDARY. CLIENT APPOINTED PARTY WALL SURVEYOR TO CONFIRM IF PARTY WALL NOTICE IS REQUIRED TO BE SERVED.

Client  
Helen Thomas

Project  
New Dwelling associated with business operations at Greenmoor Kennels, St. Brides NP10 8SQ

Title  
Proposed Site Plan

Drawing Status	Drawn	Date	Scale
RIBA Stage 3/ Developed Design	SQ	11.11.22	1:100@A2
Drawing No	Rev		
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