



Project Title: 00104 25a Edwards Yard, Llandarcy

Product: Bespoke Flood Evacuation Plan

Date: 09 October 2021

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This flood evacuation plan has been undertaken using datasets made available at the time of writing this report.

**Report Revision Log**

| Report Reference                     | Date Issued | Issued To | Notes |
|--------------------------------------|-------------|-----------|-------|
| 00104 25a Edwards<br>Yard, Llandarcy | 09/10/2021  | Client    |       |
|                                      |             |           |       |

# **1. INTRODUCTION**

## **1.1. PURPOSE OF THE REPORT**

FloodPlan have been commissioned on behalf of Ms Z. Bevan to produce a Flood Evacuation Plan (FEP) for a site at 25a Edwards Yard, Llandarcy, Neath, SA10 6JY. This assessment has been conducted with the understanding that the document will be used as part of a planning permission proposal by Mr N. Davies.

## **1.2. LOCATION OF SUBJECT SITE**

The site is located a site at 25a Edwards Yard, Llandarcy, Neath, SA10 6JY (272670,194860)  
The site is located to the west of the M4. Access to the site is gained via Junction 43 of the M4 motorway. LiDAR downloaded on the 9<sup>th</sup> October 2021 identify the site to have a ground level of 7.1mAoD.

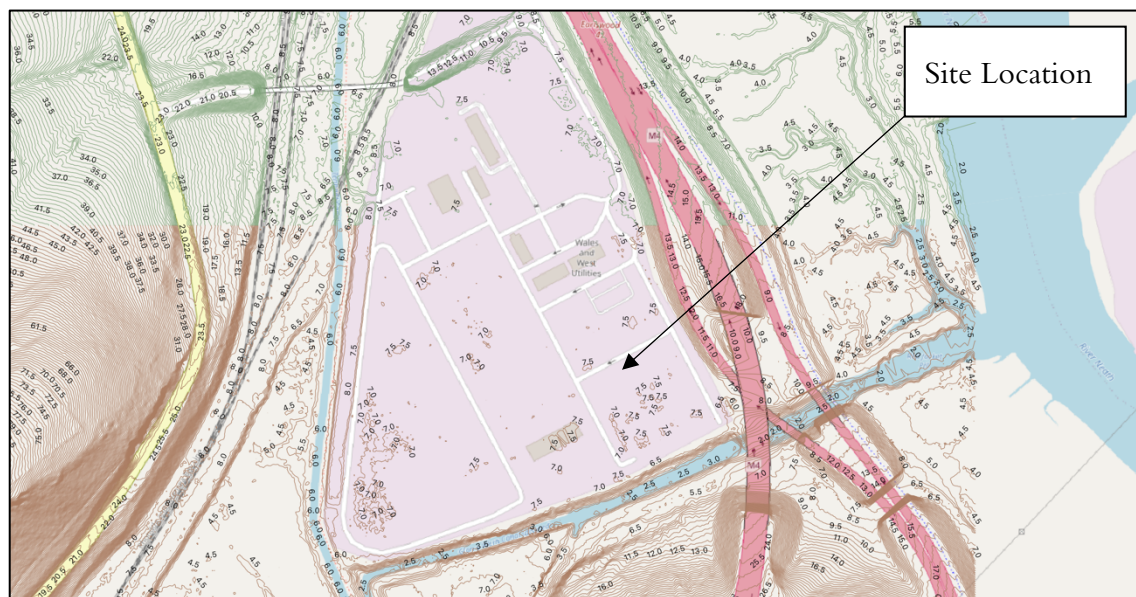


Figure 1: Site Location

## **1.3. SITE DETAILS**

The existing site is used as a public house. Development plans can be seen below and in Appendix A. The site is primarily at risk from tidal sources. Site specific flood risk assessment can be seen in Appendix B. The development proposes the construction of an industrial use unit. The development is expected to be in situ for 6 years (2028).

## **2. FLOOD WARNINGS**

### **2.1. INTRODUCTION TO FLOOD WARNINGS**

Natural Resources Wales provide a flood warning service for areas believed to be at risk from fluvial or tidal flooding (Wales only). The service runs 24 hours a day, 7 days a week, 365 days a year. The NRW flood warning website can be found linked below:

<https://flood-warning.naturalresources.wales>

### **2.2. FLOOD WARNING TIER SYSTEM**

Flood Alert: Flooding is possible, be prepared.

- Prepare flood kit of essential items
- monitor local river levels and 5 day flood risk.

Flood Warning: Flooding is expected,

- move family, pets and valuables to a safe place.
- Turn off gas, electricity, and water supplies if it is safe to do so.
- Put flood protection equipment in place.

Severe Flood Warnings: Severe flooding, danger to life.

- Stay in a safe place with means of escape
- Be ready to leave your home
- Cooperate with the emergency services
- Call 999 if you are in immediate danger

\*If there is an emergency that threatens life the Emergency Services (999) should be the first point of contact.

### **2.3. FLOOD WARNING SERVICE**

Flood Warnings is a free service that is conducted directly by NRW. This service provides warnings to businesses and property owners via telephone, text, and emails. It is strongly recommended that users (staff) of the facility are signed up to receive this service. Link below:

<https://naturalresources.wales/flooding/sign-up-to-receive-flood-warnings/?lang=en>

### **2.4. FLOOD WARNING LEAD TIME**

Lead times can vary wildly depending on variables such as catchment, flood type. Tidal and forecasted heavy rainfall events can be predicted consistently.

### ***3. PRE-FLOOD OBJECTIVES***

#### ***3.1. HAZARDOUS MATERIALS***

The applicant may house hazardous materials on site. A conscious effort should be made to ensure that chemicals, oils etc are above the predicted flood level and therefore do not enter the flood water.

#### ***3.2. INSURANCE***

The applicant may wish to include flood protection, business interruption and loss of revenue insurance. An effort should be made to ensure that the policy kept updated with any potential future changes to the facility.

#### ***3.3. BUILDING MATERIALS***

If applicable, it is recommended that any building works be conducted with respect to CIRIA published document 'code of practice for property flood resilience (C790)'. For existing buildings, consideration should be given to the improvement of facilities and the ease of 'cleanup' post flooding.

#### ***3.4. PREPARING FOR POST FLOOD***

Consideration should be given to having contact information for persons available to return the facility to an operational state post flood. The quicker the clean-up can be done, the sooner the facility can be returned to operation. It is recommended to have a list of contractors who have viewed the property pre flood and understand the predicted scope of works.

#### ***3.5. FLOOD KIT***

Flood kits should be prepared and kept on site in accessible locations. A schedule of inspection should be kept ensuring items are not damaged, missing or out of date. Ideally these should be left in an area that is above the predicted flood level and out of the reach of children.

Items to be included within a flood kit:

- First Aid Kit
- Wind up torches
- Bottled water
- Wind up radio
- A fully charged mobile phone
- Tinned or non-perishable foods
- Blankets
- Waterproof clothing

Items to be included within a typical first aid kit:

- Scissors

- Antiseptic wipes
- Cleansing wipes
- Tweezers
- Bandages
- Safety pins
- Sterile eye dressing
- Medical gloves
- Plasters (Including non-allergic)

### ***3.6. CONTACT DETAILS***

The site owner/manager should have the contact details of all tenants, staff, site users where possible. Contact details may include mobile phone numbers, landline numbers. Special consideration should be given to those most vulnerable, elderly, disabled etc. Some standard forms have been included within Appendix B. These should be used as a guide and doctored to suit.

### ***3.7. KEY EQUIPMENT***

The site users should know where key locations are on the premises and how to operate safely. Locations such as cut off points for gas, electric and water. Other key equipment such as flood protection equipment such as sandbags, flood barriers etc should be stored in easily accessible places to be deployed in the event of a flood. Please ensure that persons responsible for deploying these devices are adequately trained and risk assessed. For deploying temporary flood protection equipment, please follow advice set out by CIRIA publishes guidance 'Code of practice for property flood resilience (C790)'. link below:

<https://naturalresources.wales/flooding/sign-up-to-receive-flood-warnings/?lang=en>

## ***4. DURING A FLOOD OBJECTIVES***

### ***4.1.FLOOD ALERT AND WARNING***

Once a flood alert has been made to the site it should be communicated to all stakeholders and/or persons at risk. Once a flood warning has been made this must also be communicated to persons at risk. The message can be conveyed by siren alarm with a pre-recorded message or by person. This process should not be delayed. The site owner / manager has a duty of care to the persons using the facility. The designated 'person in charge' should inform persons at risk of the pre-designated evacuation route.

### ***4.2.EVACUATION ROUTE***

The site evacuation plan should be adhered to where possible. The evacuation route attempts to steer development from the site to an area expected to be flood free. The route should avoid areas at a high hazard rating where possible.

### ***4.3.EVACUATION BY FOOT AND VEHICLE***

Site users of the should exit the industrial park using the access road at the northern boundary of the industrial estate. Users should follow the access road and turn right at the B4290 junction. Users should follow the B4290 for some 700m and convene at the 'Glamorgan Health Club car park. This location is at higher ground (31.5mAoD) and within key infrastructure links. The entire evacuation route is expected to remain dry during the T200 and T1000 events with climate change values applied for the design life, 2028.



Figure 2: Evacuation Route

#### 4.4. ON SITE REFUGE

The site has no upper floors and therefore no facility for safe refuge. Refuge within the building should only be used as a last resort. If safe refuge must be found in the building the emergency services should be contacted immediately.

## ***5. POST FLOOD OBJECTIVES***

### ***5.1. STRUCTURAL DAMAGE***

Depending on the severity of the flooding, the building may have suffered structural damage. A structural engineer should be consulted if you suspect damage.

### ***5.2. HAZARDOUS MATERIAL***

There is potential for hazardous material and waste to be present after a flood. The clean-up crew should hold the necessary permits, insurances and be adequately risk assessed.

### ***5.3. INSURANCE CLAIM***

It would be advantageous if photographs could be taken of the damage for inclusion within the insurance claim. Damages should be listed in an itemised manner.

### ***5.4. RE-OCCUPYING THE FACILITY***

Every effort should be made to ensure services (electrical, gas etc) are inspected by a qualified professional and are fit for purpose. Potential users of the site should be able to clearly distinguish that the site is closed. If people are displaced, they should be kept informed with the progress of the clean up and aware of timescale. It is important to realise that just because a flood event has occurred does not mean that another may not be possible.

## ***6. REPORT CLOSING STATEMENTS***

### ***6.1. REPORT LIMITATIONS***

This report has been conducted as a desktop study of information supplied by third party sources only. Whilst every effort has been made to ensure the most recent data has been used, this document could become 'out of date' with further data iterations. FloodPlan Limited also holds no liability for the validity of third-party data.

### ***6.1. FURTHER STUDY***

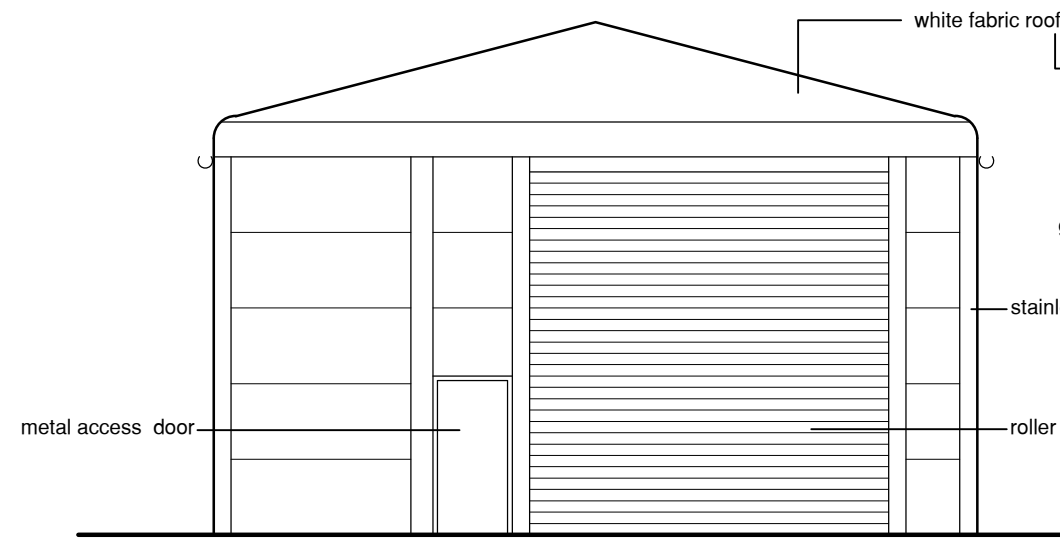
This document has been conducted using third party data. The applicant may wish to validate the findings of this assessment by commissioning their own bespoke studies into catchment hydrology, topography, and hydraulic flood modelling data. It should be known that as guidance and regulation changes, this report will be outdated.

## ***7. CONCLUSIONS AND RECOMMENDATIONS***

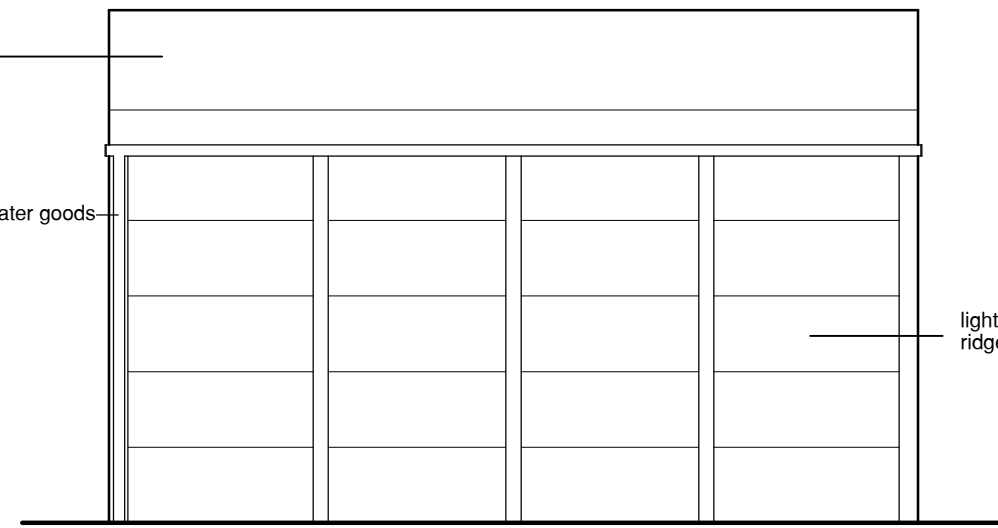
The site is located within flood zone C2. The evacuation route has been created for the shortest possible route to an area expected to remain dry during the T200 (2028) tidal flood event.

- This document should be made available to site users
- NRW flood alerts and Warnings should be signed up to
- Flood kits should be placed in responsible locations throughout the site
- This document should be reviewed within 3 years.

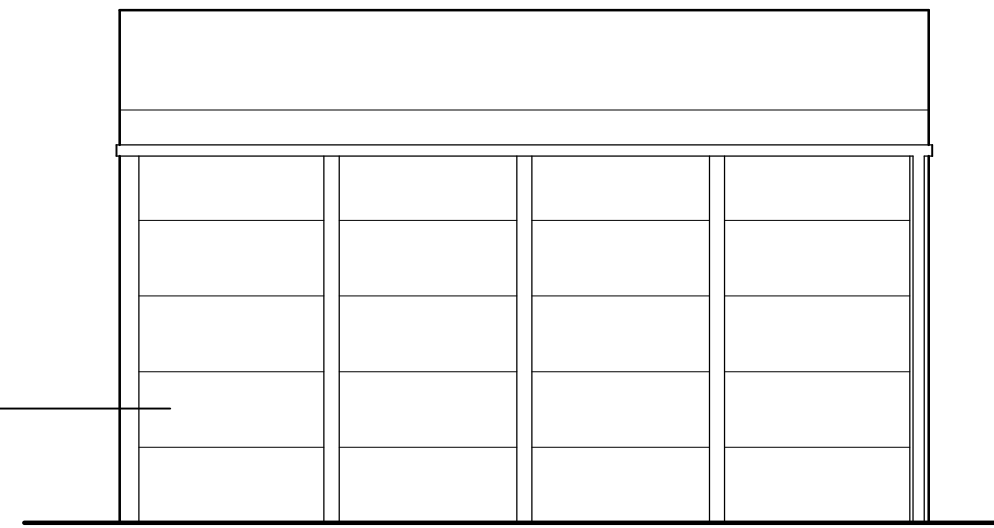
## Appendix A: Site Plans



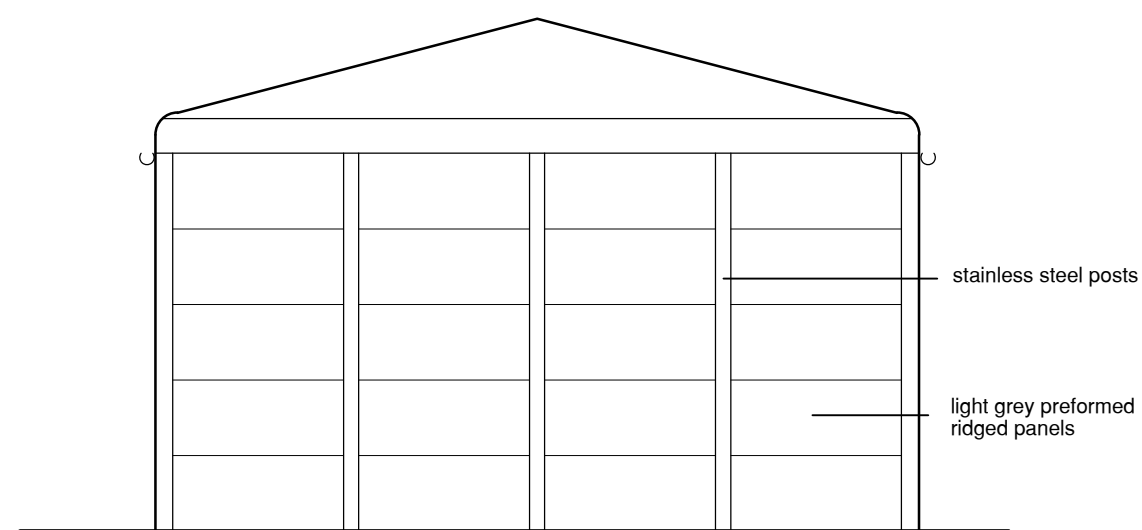
Front Elevation (North)



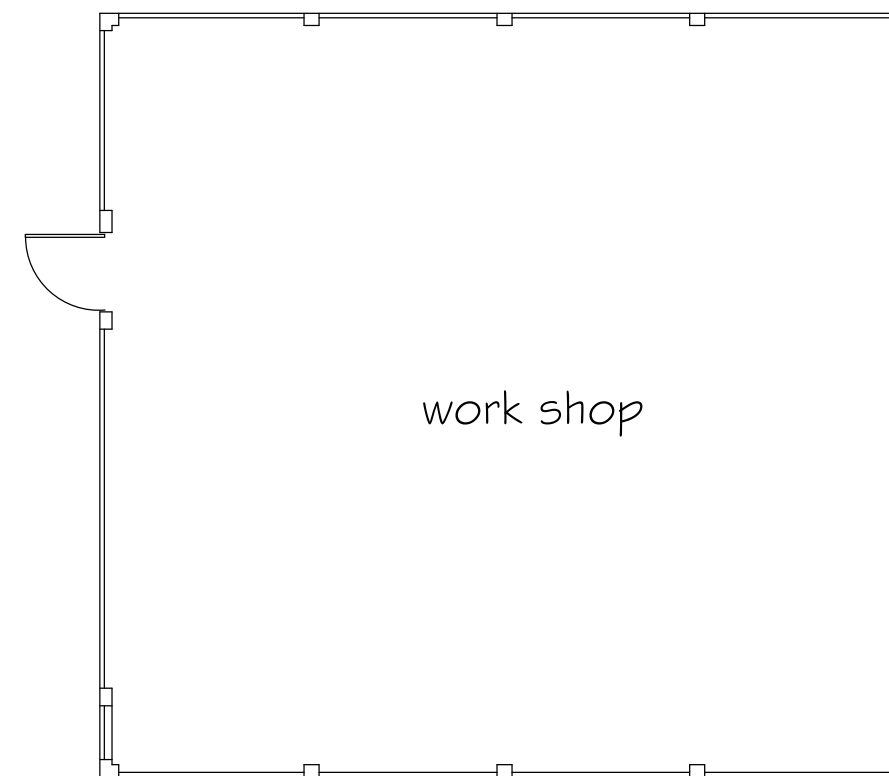
Side Elevation( East)



Side Elevation(West)



Rear Elevation (South)



Floor Plan

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**Ken Bateman**  
Chartered Surveyor  
Solicitor, Planning, M&C, C, B&E, M&C

Appln Fairview Cleyd y Fagen Merthyr Tydfil  
CF48 1HW

project  
**Proposed Industrial Building  
at  
Unit 25a  
Edwards Works  
Llandarcy  
Neath  
SA10 6JY**

title  
**Proposed Plans and  
Elevations**

Date: August 2021

Scale: A2@ 1 : 100

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| Drawing No.<br><b>GA 001</b> | Rev. |
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**Ken Bateman**  
Chartered Surveyor  
Solicitors: MRCS, C. BURE MCARE

Appln Fairview Cleyd y Fagen Merthyr Tydfil  
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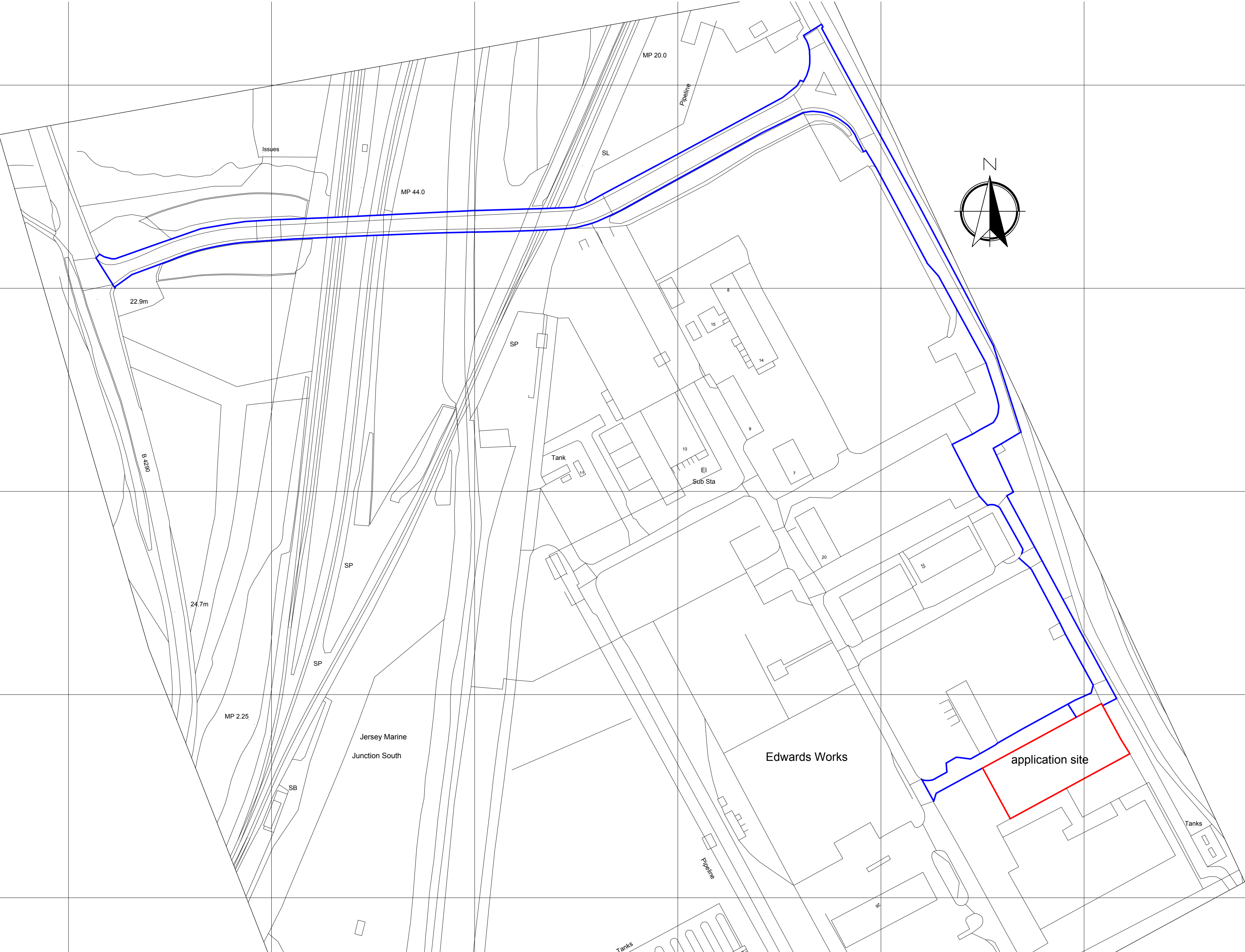
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**Site Plan**

Date: August 2021

Scale: A2@ 1 : 200

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**Ken Bateman**  
Chartered Surveyor  
B.Sc. (Hons), MRICS, C. Busk & MCARD  
Appln Ffwrdd Chyd y Ffwrdd Morthyr Tydill  
CF48 1HW

project  
**25a Edwards Works**  
**Llandarcy**  
**Neath**  
**SA10 6JY**

title  
**Location plan showing**  
**access point from adopted**  
**highway**

Date: December 2020  
Scale: A2 @ 1:100  
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www.smart-space.co.uk  
TEL: 01827 330000

ERA

Warehouse Visitor  
Safety Station  
All Visitors Must Report to Reception  
Safety Rules  
1. No Smoking  
2. No Open Flames  
3. No Hot Works  
4. No Drunkenness  
5. No Running or Rough Play  
6. No Climbing on Structures  
7. No Use of Mobile Phones  
8. No Use of Tools or Equipment  
9. No Use of Ladders  
10. No Use of Forklifts  
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First aid  
box

THIEVES  
BEWARE  
SMARTWATER  
POLICE AWARE  
DON'T RISK IT

Danger  
Vehicles  
unloading

Warning  
Forklifts  
in use  
Please ensure  
to be aware  
at all times

FIRE

Safety  
at 1174  
These signs  
regulations  
above at







## Appendix B: Example key forms

## Emergency Contacts

[illegible]

## Key Contact List

[illegible]

### Important People Contact List (staff, tenants etc)

[illegible]

## Key Service Locations

[illegible]

### Flood resistant Items

[illegible]

## Appendix C: Bespoke flood risk assessment



Project Title: 00104 25a Edwards Yard, Llandarcy

Product: Level 3 Flood Consequence Assessment

Date: 09 October 2021

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**Report Revision Log**

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# 1. INTRODUCTION

## 1.1. PURPOSE OF THE REPORT

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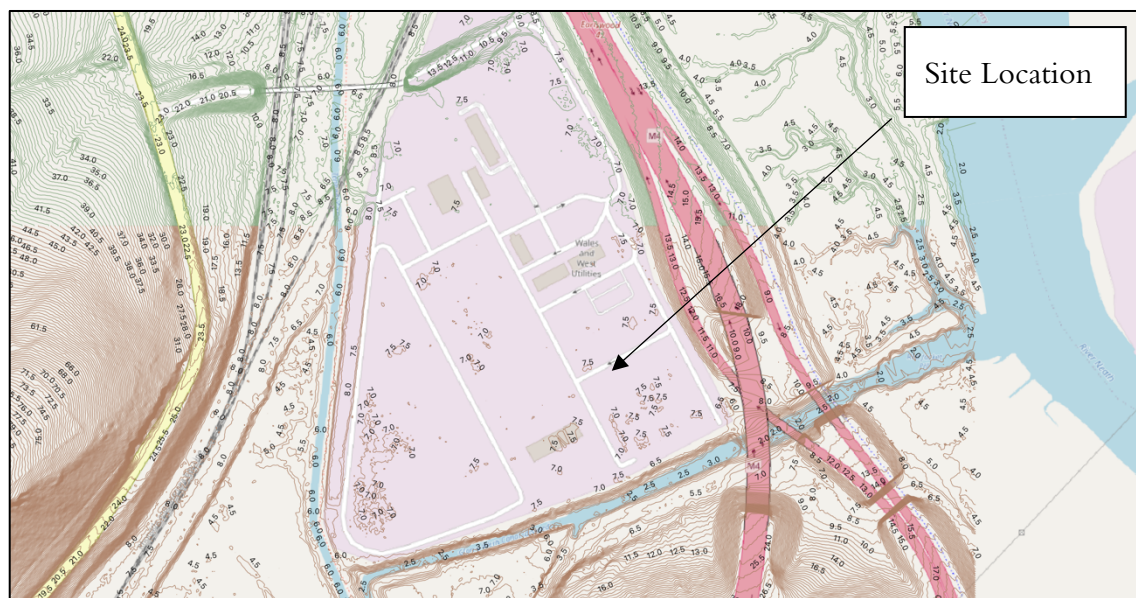


Figure 1: Site Location

## 1.3. SITE PROPOSALS

The existing site is hardstanding carpark. The development proposes the construction of a temporary industrial warehouse unit. The development is expected to be in situ for circa 6 years. The development is unlikely to increase the impermeable area on site due to the hardstand nature of the exiting surface. Development proposals can be seen below and in Appendix A: Development Proposals.

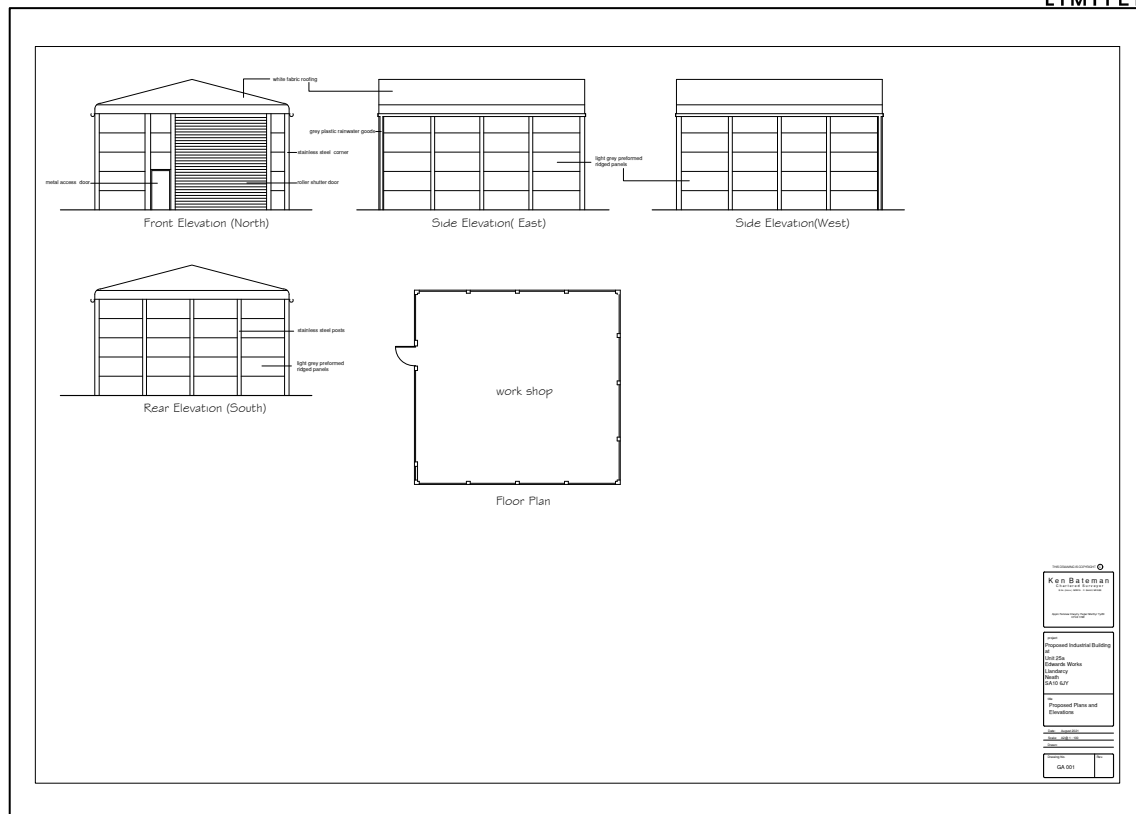


Figure 2: Development Proposal

## **2. ASSESSMENT OF TAN15**

### **2.1. INTRODUCTION TO TAN15**

Technical Advice Note 15 (TAN15 is a Welsh Government published document. This document provides guidance to local planning authorities to ensure the effective implementation of the planning policy. The policy seeks to direct development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. For these purposes:

- Direct new development away from those areas which are at high risk of flooding.
- Where development has to be considered in high-risk areas (zone C) only those developments which can be justified on the basis of the tests outlined in section 6 and section 7 are located within such areas

Flood risk (from river and sea) are categorised into one of the below:

### **2.2. FLOOD RISK CLASSIFICATIONS**

| Flood Zone | Description                                                                                                |
|------------|------------------------------------------------------------------------------------------------------------|
| Zone A     | Little or no risk                                                                                          |
| Zone B     | Known to have flooded in the past                                                                          |
| Zone C     | EA extreme flood outline (0.1%)                                                                            |
| Zone C1    | Areas of floodplain which are developed and served by significant infrastructure, including flood defence. |
| Zone C2    | Areas of the floodplain without significant flood defence infrastructure                                   |

### 2.3. FLOOD RISK VULNERABILITY CLASSIFICATION

TAN15 categorises buildings by vulnerability. A summary of categories can be seen below:

| Vulnerability Class | Infrastructure                                                      |
|---------------------|---------------------------------------------------------------------|
| Emergency Services  | Hospitals, emergency depots, police stations etc                    |
| Highly vulnerable   | All residential premises, public buildings, schools, libraries etc. |
| Less vulnerable     | General industrial, commercial, retail, car parks etc               |

### 2.4. SUITABLE DEVELOPMENT MATRIX

The below table outlines the suitable development type for the flood zone classification assigned by the Environment Agency flood maps.

| Flood risk vulnerability classification | Emergency Services          | Highly Vulnerable           | Less Vulnerable             |
|-----------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Zone A                                  |                             |                             |                             |
| Zone B                                  |                             |                             |                             |
| Zone C1                                 | Justification Test Required | Justification Test Required | Justification Test Required |
| Zone C2                                 |                             |                             | Justification Test Required |

Figure 3: Suitable Development Matrix

Key: Blue Development is appropriate; Red Development should not be permitted; Green Development is appropriate with a sufficient Justification Test.

### **3. TAN15 SITE ASSESSMENT**

#### **3.1. FLOOD ZONE CLASSIFICATION**

As per Figure 4, the site is wholly within flood zone C2. The site does not benefit from flood defences.

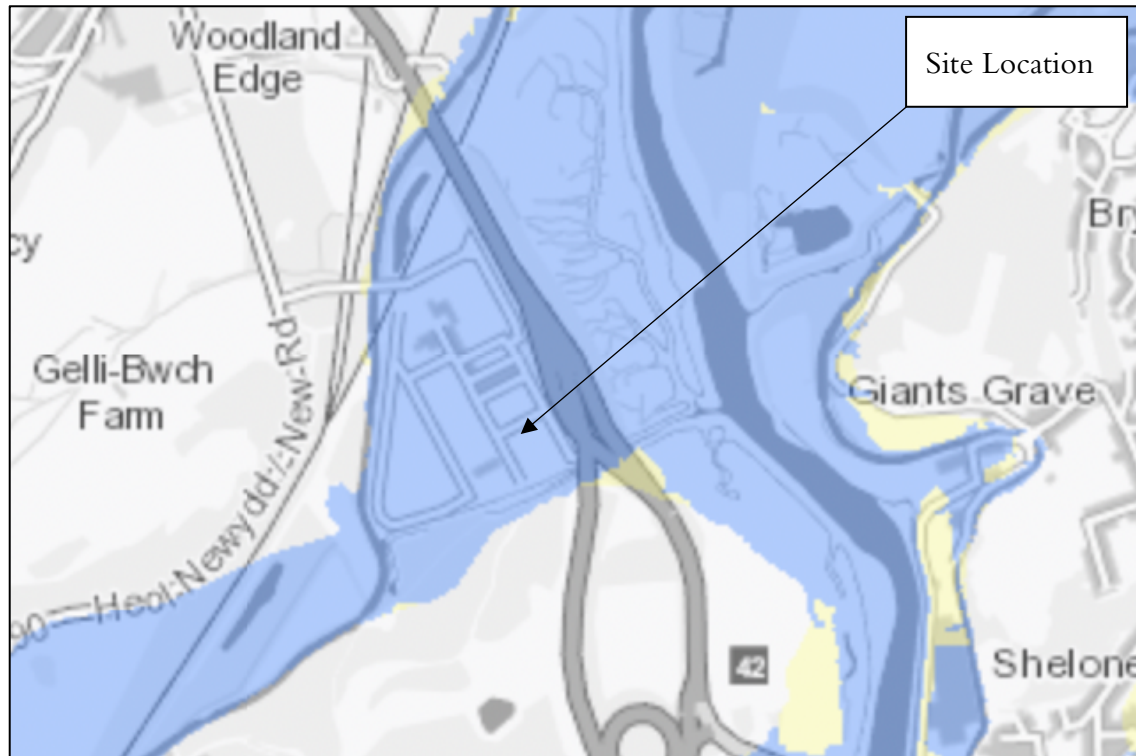


Figure 4: NRW Flood Zone

Where the blue shaded area notates flood zone C2, the green shaded area notated flood zone C1, yellow area notates flood zone B, and the non-shaded areas notates flood zone A.

As part of this FCA, Natural Resources Wales were contacted to release hydraulically modelled flood depths and velocities for the subject site, no detailed flood modelling data was available as per the 8<sup>th</sup> of February 2021.

#### **3.2. LAND VULNERABILITY CLASSIFICATION**

The existing site is used as carparking and is therefore designated as 'less vulnerable development' by Tan15. The proposed development will also be designated 'less vulnerable development'. The development therefore proposes no increases the vulnerability classification.

#### **3.3. SITE SUITABILITY (TAN15)**

'Less vulnerable development' is suitable for flood zone C2, with a successful justification test, as per Figure 3.

## **4. SITE FLOOD RISK**

### **4.1. THIRD PARTY FLOOD RISK DATA SUMMERY**

A 'Groundsure' flood report has been acquired for advising this assessment. The full report can be found in Appendix B. The main findings are summarised below:

| Type of Risk                    | Assessment of Risk |
|---------------------------------|--------------------|
| Overall Flood Risk              | Low                |
| Rivers and the Sea              | Low                |
| Surface Water                   | Negligible         |
| Groundwater                     | Low                |
| Historic Flood                  | Not identified     |
| Flood Defences                  | No                 |
| FloodScoreTM – insurance rating | Very Low           |

### **4.2. SURFACE WATER FLOODING**

The Environment Agency surface water flood map Figure 5, shows the site is not considered to be at risk from surface water flooding. The risk profile is consistent with the groundsure flood report.



Figure 5: NRW Surface Water Flood Map

Where the dark purple shaded area denotes high risk of surface water flooding; the lighter purple denotes medium risk, and the pink area denotes low risk.

#### **4.3. TIDAL AND FLUVIAL FLOODING**

The site is classified as having a negligible and low risk from tidal or river sources by the Groundsure flood report.

The site is believed to be 'at most' risk from tidal flooding. LiDAR data shows the site to be at an elevated level of 7.1mAoD. The coastal flood boundary extreme sea levels node '482' is the closest node to the development site. The T200 level for 2021 (present day) is 6.388mAoD. The expected lifetime of the development is 6 years (2028). The predicted T200 still water 2028 level (climate change applied) is 6.430mAoD. The site is therefore 0.67m above the extreme tidal water level. Furthermore, the development is to remain dry in the T1000 (2028) event with the maximum still water level being 6.73mAoD. It is the findings of this report that the site is not at risk from tidal nor fluvial sources.

#### **4.4. GROUNDWATER FLOODING**

The 'Groundsure' flood report indicates that the site has a low risk of groundwater flooding.

#### **4.5. RESERVOIR FLOODING**

The site is not believed to be at risk of flooding from reservoir sources.

#### **4.6. CANAL AND ARTIFICIAL WATER FLOODING**

The site is not believed to be at risk of flooding from artificial water sources.

#### ***4.1. HISTORIC FLOODING***

A google search for 'Llandarcy historic flooding' yielded no definitive flood history. The 'Groundsure' flood report also failed to identify any historic flood events for the site.

## **5. FURTHER SITE ASSESSMENT**

### **5.1. SITE ACCESS AND EGRESS ROUTES**

Access to the site is gained via Junction 43 of the M4 motorway. The access road may experience some fluvial and surface water flood risk.

### **5.2. FLOOD COMPENSATION**

The development is not proposing the increase in impermeable area. Any development proposals should have suitable SuDS features to compensate for water pollution generated by the proposed development.

### **5.3. FLOOD WARNING AREAS**

The below Figure 6, highlights the areas that are considered to benefit from Natural Resources Wales flood alerts. The site is within the flood alert area.

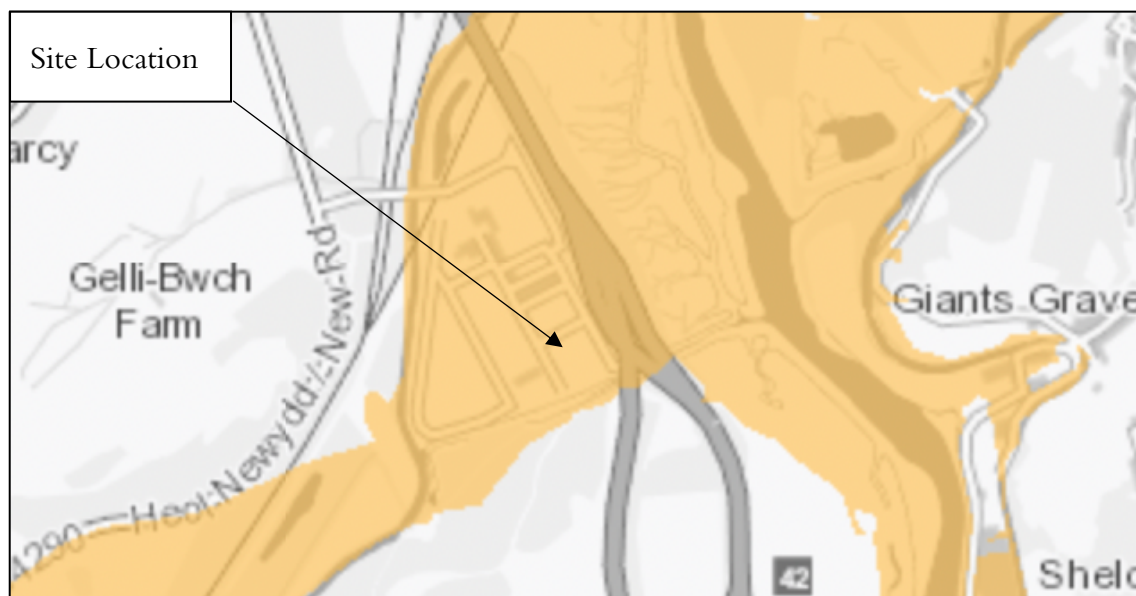


Figure 6: NRW Flood Warning Areas

Where the yellow shaded area denoted flood alert areas and red shaded areas notates flood warning areas.

### **5.4. AWARENESS OF FLOOD RISK**

The developer should be aware that the site is not immune from flooding. It is recommended that future occupiers take the opportunity to develop emergency and non-emergency plans. Further, it is recommended that anyone responsible for the building sign up to receive flood alerts as soon as available.

### ***5.5. JUSTIFICATION TEST***

New development should be directed away from zone C and towards suitable land in zone A, otherwise to zone B, where river or coastal flooding will be less of an issue. In zone C the tests outlined in sections 6 and 7 will be applied, recognising, however, that highly vulnerable development and Emergency Services in zone C2 should not be permitted. All other new development should only be permitted within zones C1 and C2 if determined by the planning authority to be justified in that location. Development, including transport infrastructure, will only be justified if it can be demonstrated that: –

- i. 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,
- ii. 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

- iii. It concurs with the aims of PPW and meets the definition of previously developed land (PPW fig 2.1); and,
- iv. The potential consequences of a flooding event for the particular type of development have been considered, and in terms of the criteria contained in sections 5 and 7 and appendix 1 found to be acceptable.

The Neath Port Talbot County Borough Council Local Development Plan (2011–2026) identifies the need for high quality jobs and economic growth within its literature. The document iterates the requirement for local business to develop to be able to generate economic growth. The proposed development will stimulate economic growth in the area and provide opportunity for employment for local people. This report concludes that the development proposal meets the requirements i & ii.

The development proposes the construction of a temporary industrial unit. The existing land use is an industrial car park. The existing land is classified as brownfield and is therefore previously developed land. This report concludes that the development proposal meets the requirements iii.

Natural Resources Wales flood mapping shows the site is not considered to be at risk from fluvial, tidal nor pluvial sources. The Groundsure flood report is in agreement. The site has been calculated to be 0.67m above the T200 (2028) sea level. The site is to be used for industrial purposes; no persons are to be sleeping within the development. The potential consequences of flooding are deemed to be minimal. This report concludes that the development proposal meets the requirements iv.

## **6. FINDINGS AND RECOMMENDATIONS**

### **6.1. FINDINGS**

The development plans propose the change of use from a commercial car park to industrial use warehouse. TAN15 categorises warehouses as 'less vulnerable development'. 'Less vulnerable development' is suitable for flood zone C2. NRW flood risk mapping indicates that the site is free from fluvial, tidal and surface water flooding. The risk of flooding is not negligible but should be found acceptable for the development vulnerability classification with the inclusion of a justification test, as per TAN15.

### **6.2. RECOMMENDATIONS**

This report recommends the following be considered to lower the risk and/or consequences that flooding may cause to the proposed development:

- Any impermeable areas created should be subject to SuDS treatment and attenuation with a controlled discharge.
- Anyone responsible for the site should sign up to the receive flood alerts as soon as possible. Further, the developer / occupier should take this opportunity to ensure that a flood plan is in place.
- If the development exceeds the 6 year design life, a revision of extreme sea level should be made.

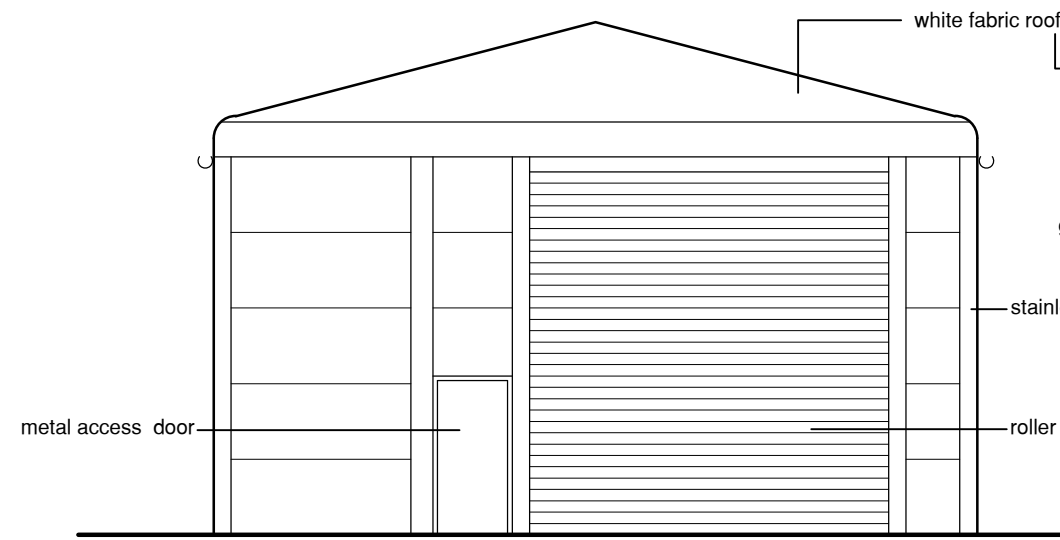
**List of Appendices**

Appendix A: Development Proposals

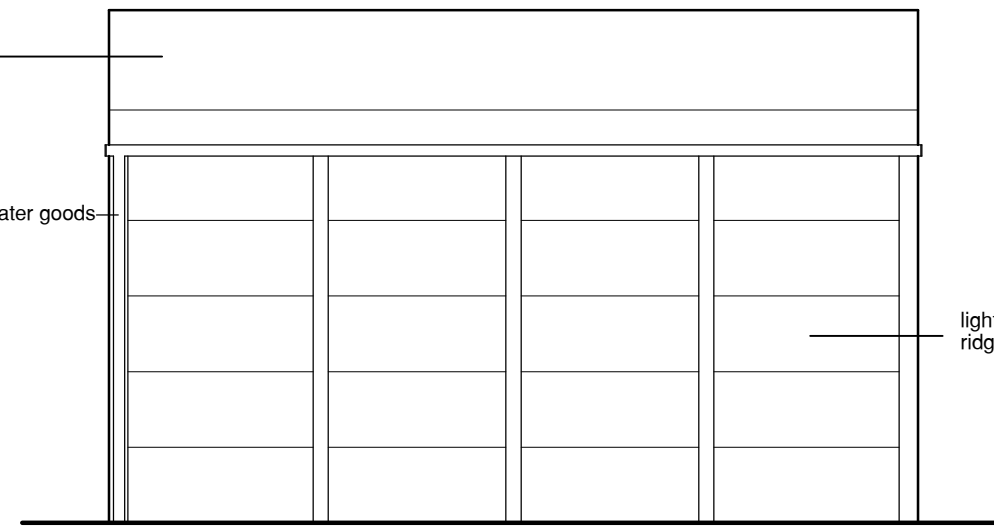
Appendix B: Groundsure Flood Report

**List of Appendices**

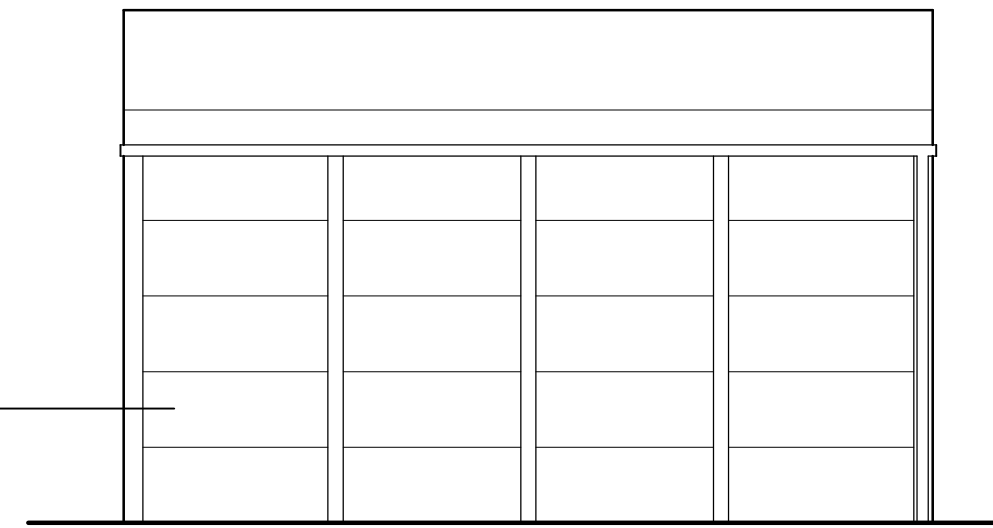
***Appendix A: Development Proposals***



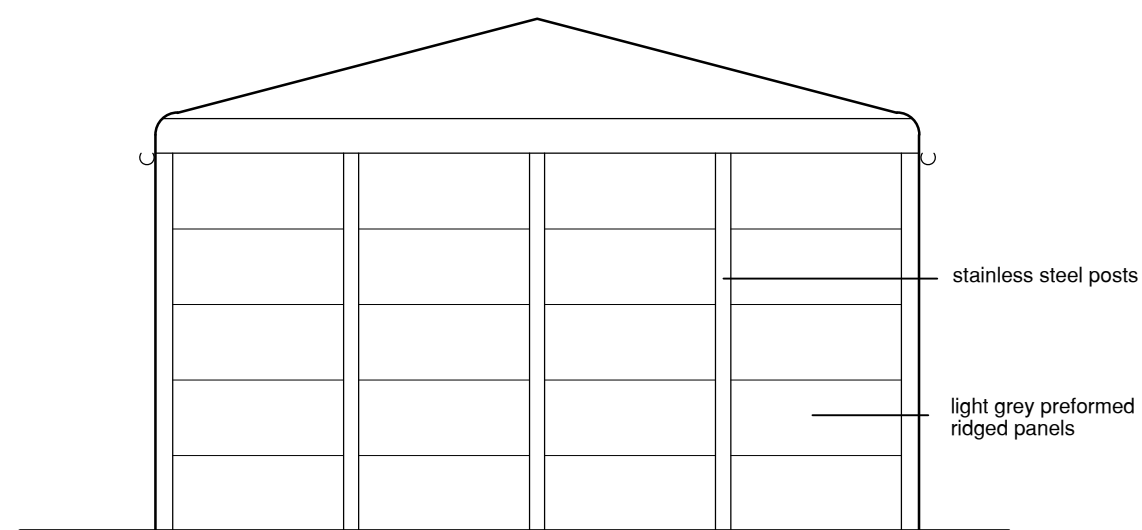
Front Elevation (North)



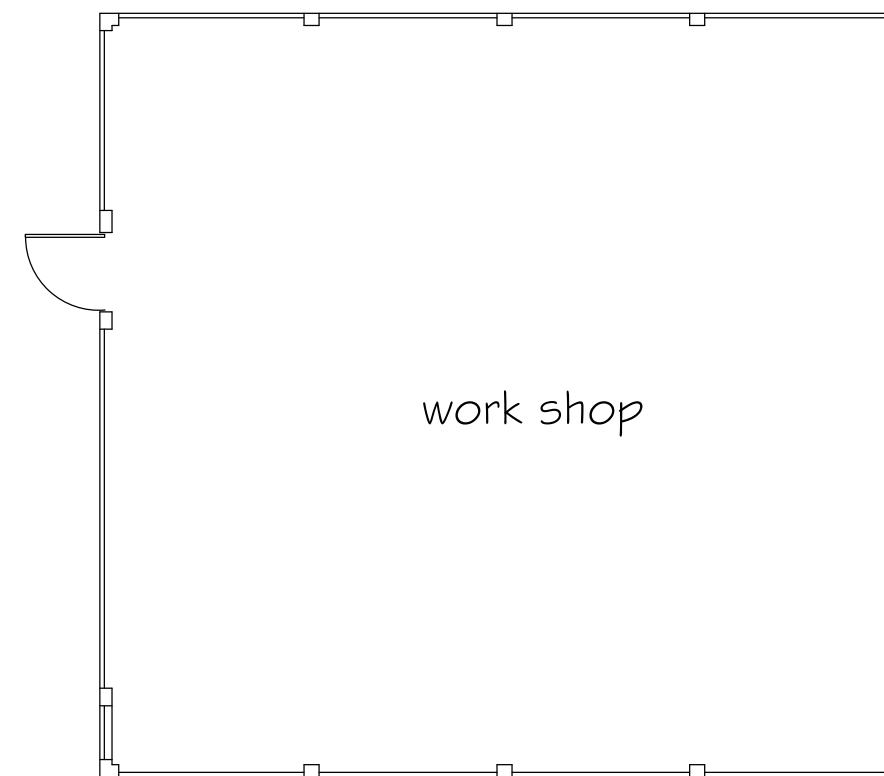
Side Elevation( East)



Side Elevation(West)



Rear Elevation (South)



Floor Plan

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**Ken Bateman**  
Chartered Surveyor  
Solicitor, Planning, M&C, C, B&E, M&C&E

Appln Fairview Cleyd y Fagen Merthyr Tydfil  
CF48 1HW

project  
**Proposed Industrial Building  
at  
Unit 25a  
Edwards Works  
Llandarcy  
Neath  
SA10 6JY**

title  
**Proposed Plans and  
Elevations**

Date: August 2021

Scale: A2@ 1 : 100

Drawn:

|             |      |
|-------------|------|
| Drawing No. | Rev. |
| GA 001      |      |



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**Ken Bateman**  
Chartered Surveyor  
Edin. (Prest.) MRCGS. C. SURVEYOR

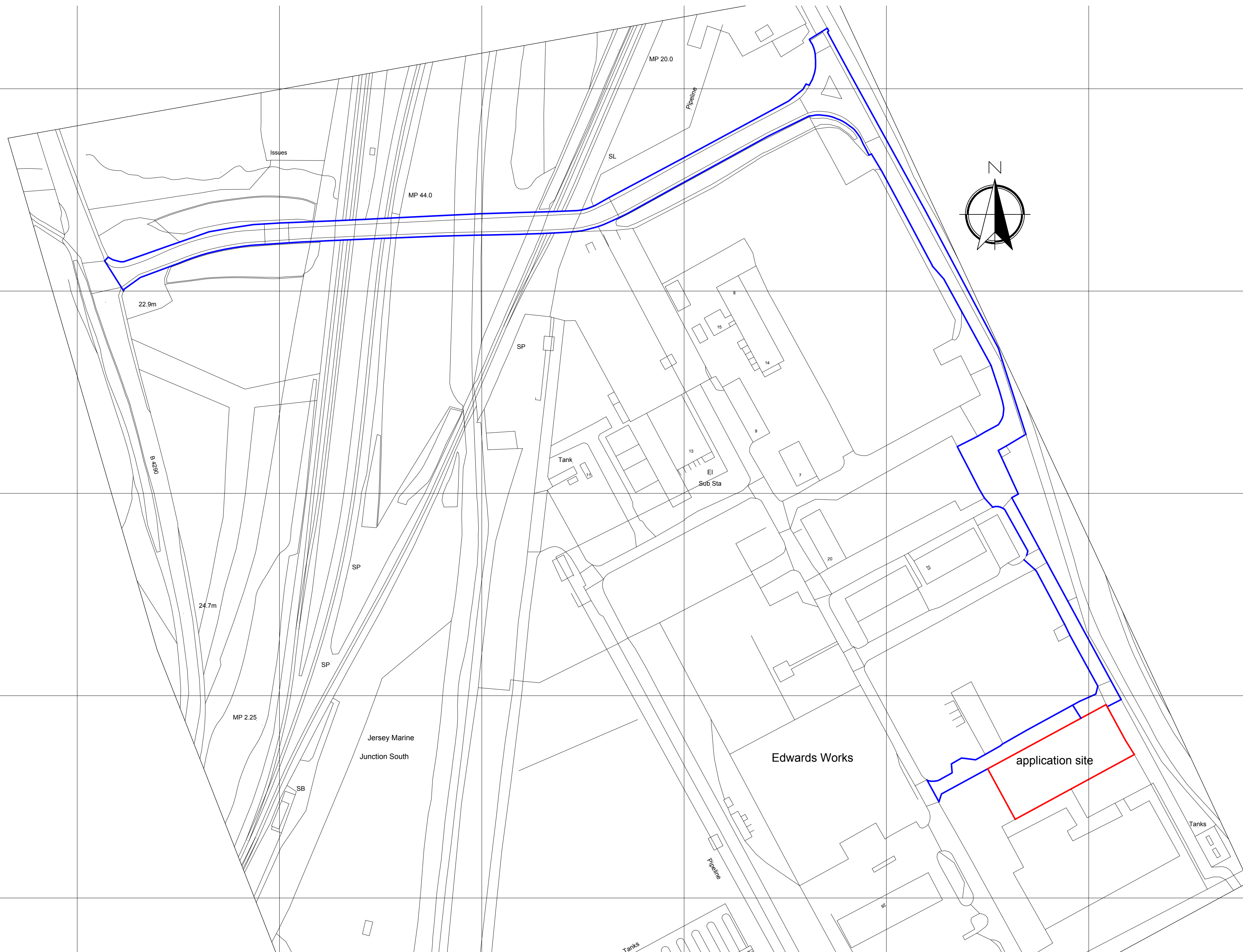
Appln Fairview Cleyd y Fagen Merthyr Tydfil  
CF48 1HW

project  
**Proposed Industrial Building  
at  
Unit 25a  
Edwards Works  
Llandarcy  
Neath  
SA10 6JY**

title  
**Site Plan**

Date: August 2021  
Scale: A2@ 1 : 200  
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|                              |          |
|------------------------------|----------|
| Drawing No.<br><b>GA 004</b> | Rev.<br> |
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**Ken Bateman**  
Chartered Surveyor

Appin Fairview Clwyd y Fagwr Merthyr Tydfil  
CF48 1HW

project  
25a Edwards Works  
Llandarcy  
Neath  
SA10 6JY

Location plan showing access point from adopted highway

Date: December 2020

Scale: A2@ 1 : 100

Drawn

Drawing No.

Rev.

GA 005









*Appendix B: Groundsure Flood Report*

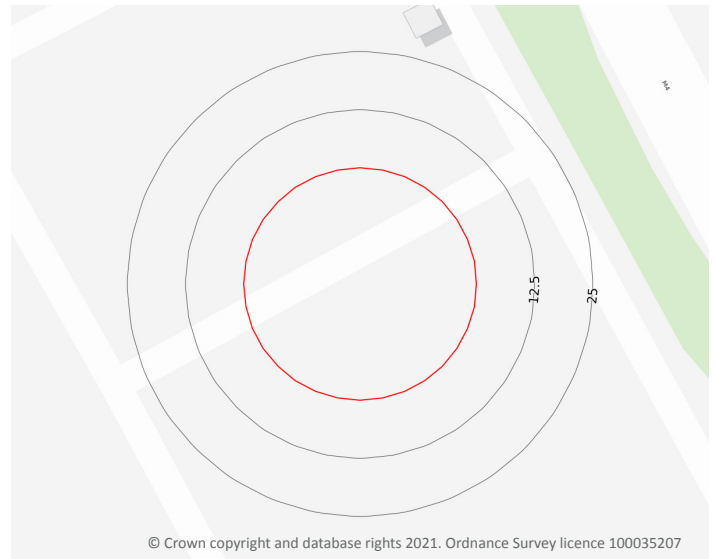
272673 194874

## Overall Flood Risk

**LOW**

Groundsure Flood complies with relevant Law Society practice notes on flood risk in property transactions.

## Site plan



## Search Results



### Rivers and the Sea

**Low**

page 3



### Surface Water

**Negligible**

### Groundwater

**Low**

### Historic Flood

**Not identified**

### Flood Defences

**No**

### FloodScore™ insurance rating

**Very Low**

page 6

Full assessments for other environmental risks are available in additional Groundsure searches including the Groundsure Avista 7 in 1 report. Contact Groundsure or your search provider for further details.

## Overview of findings and recommendations

To save you time when assessing the report, we only provide maps and data tables of features within the search radius that we have identified to be of note. These relate to environmental risks that may have liability implications, affect insurance premiums, property values and/or a lender's willingness to lend.

You can view the fully comprehensive library of information we have searched on **page 5**.

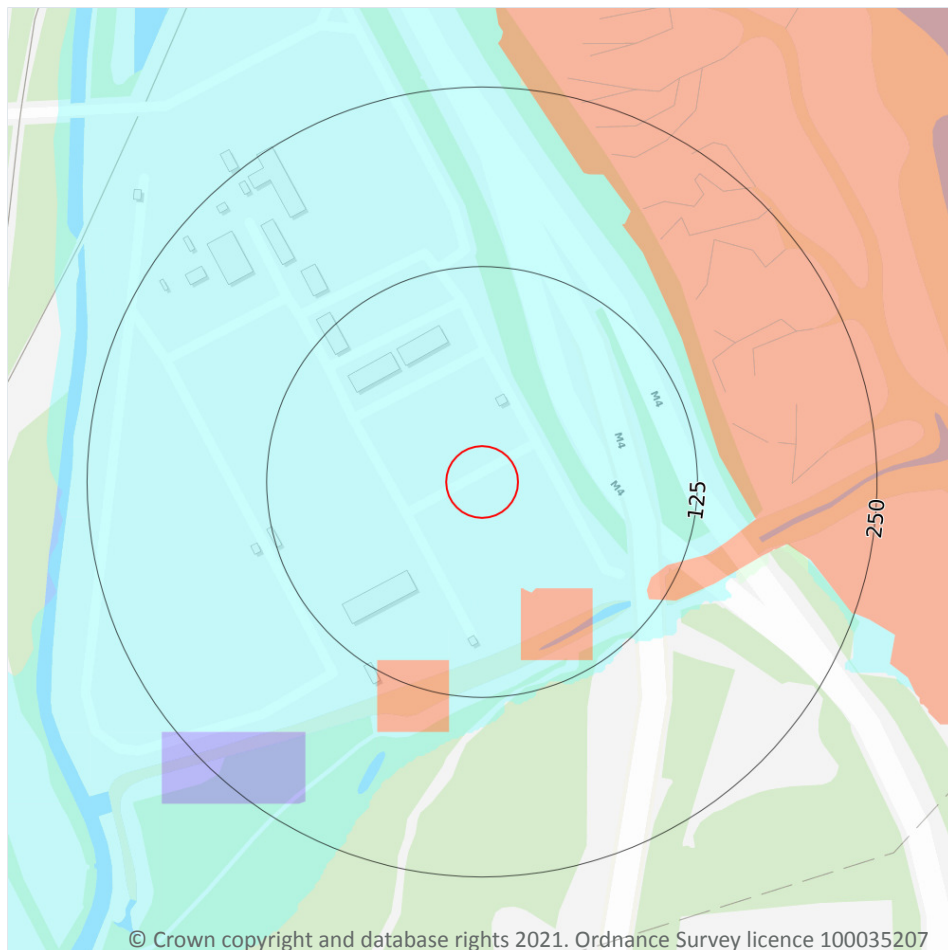
No environmental risks that Groundsure believe require further action have been identified in relation to the property.

Please note this report has been run on a point location buffered to 25m to account for uncertainties of the size of the property. Therefore some risk assessments and measurements may be overestimated.

## Flood Risk



### Risk of flooding from rivers and the sea



Site Outline

Search buffers in metres (m)

Environment Agency river and coastal flooding:

- High
- Medium
- Low
- Very Low

Historical Flood Events

Areas Used for Flood Storage

Areas Benefiting from Flood Defences

Proposed Flood Defence Scheme

Flood Defences

### Risk of flooding from rivers and the sea

The property has a Low chance of flooding in any given year, according to Risk of Flooding from Rivers and Sea (RoFRaS) data. This could cause problems with insuring the property against flood risk. However, if built before 2009, it may be eligible for insurance assistance from the Flood Re scheme: <http://www.floodre.co.uk/>

RoFRaS assesses flood risk from rivers and the sea in England and Wales, using local data and expertise. It shows the chance of flooding from rivers or the sea, taking account of flood defences and the condition those defences are in. The RoFRaS model uses local water level and flood defence data to model flood risk. See below for explanation of the RoFRaS levels of flood risk.

Please see **page 2** for further advice.

### Environment Agency RoFRaS risk ratings

# Flood

272673 194874

Ref: CMAPS-CM-940255-60191-190221

Your ref: 60191

Grid ref: 272673 194874

| Very Low                                                                                                        | Low                                                                                                                                                        | Medium                                                                                                                                       | High                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| The chance of flooding from rivers or the sea is considered to be less than 1 in 1000 (0.1%) in any given year. | The chance of flooding from rivers or the sea is considered to be less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) in any given year. | The chance of flooding from rivers or the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 100 (1%) in any given year. | The chance of flooding from rivers or the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year. |

## Datasets searched

This is a full list of the data searched in this report. If we have found results of note we will state "Identified". If no results of note are found, we will state "Not identified". Our intelligent filtering will hide "Not identified" sections to speed up your workflow.

### Flood Risk

| Risk of flooding from rivers and the sea | Identified     |
|------------------------------------------|----------------|
| Flood storage areas: part of floodplain  | Not identified |
| Historical flood areas                   | Not identified |
| Areas benefiting from flood defences     | Not identified |
| Flood defences                           | Not identified |
| Proposed flood defences                  | Not identified |
| Surface water flood risk                 | Not identified |
| Groundwater flooding                     | Not identified |

## Flood information

The Flood Risk Assessment section is based on datasets covering a variety of different flooding types. No inspection of the property or of the surrounding area has been undertaken by Groundsure or the data providers. The modelling of flood hazards is extremely complex and in creating a national dataset certain assumptions have been made and all such datasets will have limitations. These datasets should be used to give an indication of relative flood risk rather than a definitive answer. Local actions and minor variations, such as blocked drains or streams etc. can greatly alter the effect of flooding. A low or negligible modelled flood risk does not guarantee that flooding will not occur. Nor will a high risk mean that flooding definitely will occur. Groundsure's overall flood risk assessment takes account of the cumulative risk of river and coastal data, historic flood events and areas benefiting from flood defences provided by the Environment Agency/Natural Resources Wales (in England and Wales) and surface water (pluvial) and groundwater flooding provided by Ambiantal Risk Analytics. In Scotland the river and coastal flood models are also provided by Ambiantal Risk Analytics.

### Risk of flooding from rivers and the sea

This is an assessment of flood risk for England and Wales produced using local data and expertise, provided by Environment Agency. It shows the chance of flooding from rivers or the sea presented in categories taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk.

### Historic flood events

Over 86,000 events are recorded within this database. This data is used to understand where flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded, but only that Environment Agency/Natural Resources Wales do not currently have records of flooding within the area. Equally, a record of a flood footprint in previous years does not mean that an area will flood again, and this information does not take account of flood management schemes and improved flood defences.

### Surface water flooding

Ambiantal Risk Analytics surface water flood map identifies areas likely to flood following extreme rainfall events, i.e. land naturally vulnerable to surface water or "pluvial" flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though older ones may even flood in a 1 in 5 year rainstorm event.

### Proposed flood defences

The data includes all Environment Agency/Natural Resources Wales's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards.

### Flood storage areas

Flood Storage Areas may also act as flood defences. A flood storage area may also be referred to as a balancing reservoir, storage basin or balancing pond. Its purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval. These areas are also referred to as Zone 3b or 'the functional floodplain' and has a 5% or greater chance of flooding in any given year, or is designed to flood in the event of

an extreme (0.1%) flood or another probability which may be agreed between the Local Planning Authority and Environment Agency/Natural Resources Wales, including water conveyance routes. Development within Flood Storage Areas is severely restricted.

## Groundwater flooding

Groundwater flooding is flooding caused by unusually high groundwater levels. It occurs as excess water emerging at the ground surface or within underground structures such as basements. Groundwater flooding tends to be more persistent than surface water flooding, in some cases lasting for weeks or months, and it can result in significant damage to property. This risk assessment is based on a 5m Digital Terrain Model (DTM) and 1 in 100 year and 1 in 250 year return periods.

## Ambiental FloodScore™ insurance rating

The property has been rated as **Very Low** risk.

Ambiental's FloodScore™ risk rating gives an indicative assessment of the potential insurance risk classification from flooding, which can provide an indication of how likely it is that a property's policy will be ceded to Flood Re. The assessment is based on Ambiental's river, tidal and surface water flood data and other factors which some insurers may use in their assessment are not included.

Flood Re is a re-insurance scheme that makes flood cover more widely available and affordable as part of your residential property home insurance. Properties at higher risk of flooding may have the flood part of their policy ceded to Flood Re by their insurer. It is important to understand that Flood Re does not apply to all situations. Exclusions from Flood Re includes properties constructed after 1 January 2009; properties not within domestic Council Tax bands A to H (or equivalent); commercial properties, certain buy to let scenarios and buildings comprising four or more residential units. A full list of the exemptions can be found on the Flood Re website (<https://www.floodre.co.uk/can-flood-re-help-me/eligibility-criteria/>).

The Ambiental FloodScore™ insurance rating is classified into six different bandings:

**Very High** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a very high possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

**High** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a high possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

**Moderate-High** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a moderate possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

**Moderate** indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a low possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, unless the property has flooded in the past.

**Low** indicates a level of risk that is likely to mean standard cover and premiums are available for flood cover. There is a low possibility the cover for flooding at the property will be ceded into the Flood Re scheme, unless the property has flooded in the past.

# Flood

272673 194874

Ref: CMAPS-CM-940255-60191-190221

Your ref: 60191

Grid ref: 272673 194874

**Very Low** indicates a level of flood risk that should not have any impact on the provision of flood cover for the property.

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- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:

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