

Flood Consequences Assessment (FCA) For:

Development at 15 Enfield Street,
Port Talbot,
CF11 9EA

Prepared for:

Sam Hawking
Property Lawyers

18721 – FCA

09/02/2024

Document Control

Project	15 Enfield Street, Port Talbot
Client	Sam Hawking Property Lawyers
Vale Consultancy Ref:	18721 – FCA

Document Checking:

Prepared By: R Peskett

Signed:



Checked By: S Hardacre

Signed:



Verified By: S Hardacre

Signed:



Issue	Date	Status
01	09/02/2024	First issue
02		
03		

Contents

LIMITATIONS.....	3
1 INTRODUCTION.....	4
1.1 EXISTING SITE & LOCATION	4
1.2 PROPOSED DEVELOPMENT	5
1.3 EXISTING TOPOGRAPHY	5
1.4 EXISTING GROUND CONDITIONS	5
1.5 EXISTING SITE DRAINAGE.....	5
2 FLOOD ZONE CATEGORY AND POLICY CONTEXT	6
2.1 FLOOD ZONE CATEGORY	6
2.2 DEVELOPMENT VULNERABILITY CLASSIFICATION.....	6
3 SOURCES OF FLOODING AND PROBABILITY	7
3.1 FLUVIAL.....	7
3.2 TIDAL	8
3.3 SURFACE WATER (PLUVIAL)	10
3.4 SEWER FLOODING.....	10
3.5 GROUNDWATER FLOODING.....	11
3.6 ARTIFICIAL SOURCES OF FLOODING	11
3.7 SUMMARY OF POTENTIAL FLOODING	11
4 TAN15 ASSESSMENT.....	12
4.1 JUSTIFYING THE LOCATION	12
5 MITIGATION & RECOMENDATIONS	13
5.1 ACCESS AND EGRESS	14
5.2 SAFE REFUGE AREA AND FLOOD PROCEDURE	15
5.3 FINISHED FLOOR LEVEL (FFL)	15
5.4 FLOOD RISK ELSEWHERE	15
6 CONCLUSIONS.....	16

Appendices

APPENDIX A: SITE LOCATION / EXISTING PLAN	17
APPENDIX B: PROPOSED DEVELOPMENT PLANS	18
APPENDIX C: LIDAR DATA.....	19
APPENDIX D: NRW FLOOD MAPS & PRODUCT 5 / 6 DATA	20

LIMITATIONS

This FCA has been prepared in support of a planning application and is for exclusive benefit of *The Client*. It may not be assigned to or relied upon by third party without the agreement of Vale Consultancy in writing. Vale Consultancy retains all copyright and other intellectual property rights in the document and its contents unless transferred by written agreement between Vale Consultancy and *The Client*.

All comments and proposals contained in this report, including any conclusions, are based on information available to Vale Consultancy during investigations. The conclusions drawn by could therefore differ if the information is found to be inaccurate or misleading. Vale Consultancy accepts no liability should this be the case, nor if additional information exists or becomes available with respect to this scheme.

Except as otherwise requested by the client, Vale Consultancy is not obliged to and disclaims any obligation to update the report for events taking place after: -

The date on which this assessment was undertaken, and the date on which the final report is delivered.

Vale Consultancy makes no representation whatsoever concerning the legal significance of its findings or the legal matters referred to in the following report.

All the Natural Resources Wales (NRW) mapping data used is under special license. Data is current as of **February 2024** and is subject to change.

The information presented and conclusions drawn are based on statistical data and are for guidance purposes only. The study provides no guarantee against flooding of the study site or elsewhere, nor of the absolute accuracy of water levels, flow rates and associated probabilities.

Purpose of the report

The purpose of this report is to outline the potential flood risk to the site, the impact of the proposed development on flood risk elsewhere, and the proposed measures which could be incorporated to mitigate the identified flood risk.

Consultation

The report has been prepared in accordance with the guidance contained in Planning Policy Wales (PPW) and Technical Advice Note 15 (TAN15): Development and Flood Risk. This report has been prepared in consultation with Natural Resources Wales (NRW) including the Development Advice Map (DAM) and Flood Map for Planning (FMfP) Wales. Flood modelled data (Product 5 and 6) has been acquired from NRW and has been interrogated to inform the FCA.

Neath Port Talbot Council have also been consulted as part of the FCA. The Local Development Plan (LDP) was adopted by the Local Authority and currently forms the development plan that will form the basis of decisions on land use for planning in the area. The relevant specific policies relating to flood risk, drainage and climate change have been reviewed and considered as part of this FCA. The following documents have been consulted;

- Neath Port Talbot County Borough Flood Risk Management Plan (2015);
- Neath Port Talbot County Borough Preliminary Flood Risk Assessment Report (2011) and Addendum (2017);
- Neath Port Talbot County Borough Council Local Flood Risk Management Strategy (2013)

1 INTRODUCTION

Vale Consultancy has been instructed by *The Client* to undertake a Flood Consequences Assessment (FCA) for the proposed development works at 15 Enfield Street, Aberavon, Port Talbot, Neath Port Talbot, SA12 6NN (275774E, 189830N). Refer to Figure 1, below.

1.1 Existing Site & Location

The existing site comprises a mid-row terraced property, occupied by 4 bedrooms (1 on the Ground Floor and 3 above), a communal room, kitchen, W/C, and an outside amenity / garden area to the rear (south).

The site is bounded by Enfield Street to the north, neighbouring properties to the east and west, and a derelict, disused warehouse / units to the south.

The site is located on what is considered to be *Brownfield* or *Previously Developed Land*.

Provision of site access / egress is from Enfield Street.

Refer to the Location and Existing Site Plan, Appendix A.



Figure 1: Site Location Satellite Plan

1.2 Proposed Development

The existing property is currently *Residential*.

The proposals are for re-configuration of the property so that there are 2 bedrooms located on the Ground Floor and 2 on the First Floor. The existing communal room located on the Ground Floor will become a bedroom whilst the existing First Floor Bedroom becomes / is converted to a communal room.

Therefore, the proposed development works are limited to internal reconfiguration / refurbishment of the property. There will be no alterations to the building footprint and thus no increase in impermeable surface area.

Refer to the Proposed Development Plans, Appendix B.

1.3 Existing Topography

In the absence of topographic survey data; levels to metres Above Ordnance Datum (m AOD) have been derived from a 1m resolution NRW composite 'Light Detecting and Ranging' (LiDAR) Digital Terrain Model (DTM). A review of LiDAR data records a maximum level of **6.00m AOD** and a minimum level of **5.74m AOD**.

The immediate surrounding topography is relatively flat. Further afield, the wider topography generally slopes from north west to south east.

In accordance with Building Regulations, finished floor levels (FFL) should be set 150mm above surrounding ground levels. Therefore; the existing property has a Finished Floor Level (FFL) in the order **6.00m AOD**.

Refer to Appendix C.

1.4 Existing Ground Conditions

Reference to the British Geological Survey (BGS) online mapping (1:50,000 scale) indicates that the site is underlain by Superficial deposits defined as Tidal Flat Deposits comprising Clay, Silt and Sand. Bedrock geology is recorded as South Wales Middle Coal Measures Formation comprising Mudstone, Siltstone and Sandstone.

1.5 Existing Site Drainage

Public sewer records have not been obtained from DCWW at this stage. The site and site access / egress routes are served by formal surface and foul water drainage infrastructure.

2 FLOOD ZONE CATEGORY AND POLICY CONTEXT

2.1 Flood Zone Category

The Welsh Government Development Advice Map (DAM) has been developed for land use planning purposes. It is based on Natural Resource Wales' extreme flood outlines and the British Geological Survey drift data. The DAM should be used alongside Planning Policy Wales and Technical Advice Note (TAN) 15 to direct new development with respect to flood risk. Together, they form a precautionary framework to guide planning applications.

The DAM is used as a screening tool by Local Authorities to understand where further assessment of flooding may be needed. The DAM has not been updated since 2020 and no further updates are anticipated. This is due to implementation of the forthcoming and revised TAN15 which is yet to be officially published / adopted.

Implementation of the new TAN15 is in a transitional phase. Review of the DAM indicates the site falls within **Zone C1** which is defined as;

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

Flood Maps for Planning (FMfP) Wales

A review of the forthcoming Flood Maps for Wales indicates the falls within Flood Zone 3 (Rivers and Sea) meaning that it has more than (>) 1% (1 in 100) chance of flooding from rivers in a given year, including the effects of climate change; and more than (>) 0.5% (1 in 200) chance of flooding from the sea in a given year, including the effects of climate change.

The site is defined as within a TAN15 Defended Zone (Rivers and Sea) and is served by formal fluvial and coastal flood defences. The Flood Map for Planning has no official status for planning purposes until June 2023 but should be considered as the 'best available information' on flood risk to inform our planning advice.

TAN15 Defended Zones are defined by NRW as;

TAN15 Defended Zones – Areas that benefit from Risk Management Authority flood defences with the following minimum Standard of Protection:

- *1 in 100 year (present day) for rivers*
- *1 in 200 year (present day) for the sea*

For flood defences built from 2016 onwards there must be allowance for climate change and freeboard.

There are no records or incidents of historical flooding of the site (from all sources).

2.2 Development Vulnerability Classification

Seeing as the existing site is of residential occupancy and the proposed works comprise internal reconfiguration and refurbishment; the proposals will not observe an increase in Development Vulnerability Classification. Residential is considered to be '*Highly Vulnerable Development*' in accordance with Figure 2 of the Welsh Government's TAN15 and has a lifetime expectancy of 100-years.

Paragraph 6.2 of TAN 15 states that highly vulnerable development should be permitted in Flood Zone C1, subject to the justification test and acceptability of consequence.

3 SOURCES OF FLOODING AND PROBABILITY

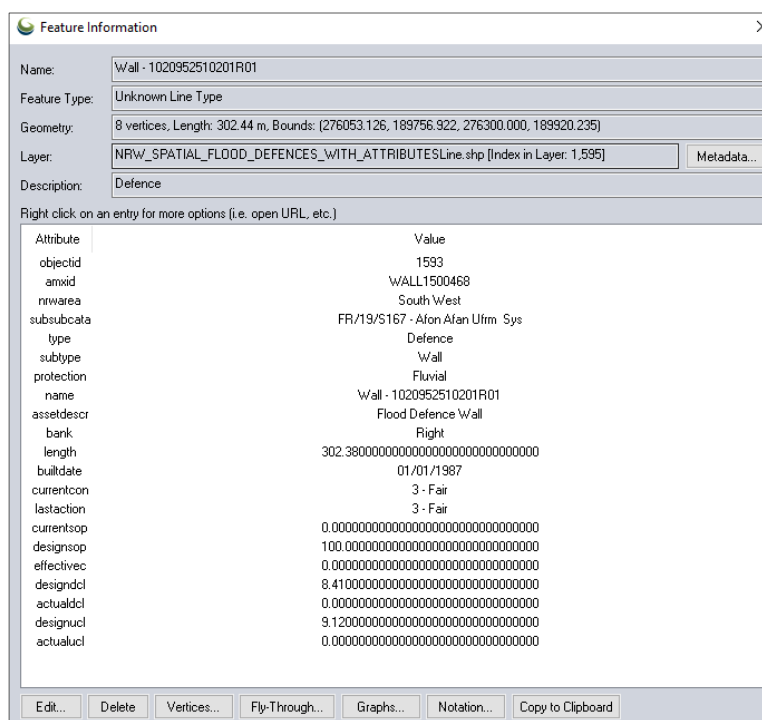
3.1 Fluvial

The nearest watercourse is the *River Afan* which lies approximately 175m south from the site at its nearest point. The watercourse flows south west from here before discharging into Swansea Bay further downstream. There are no other fluvial sources in the vicinity that pose or could pose a flood risk to the site.

The site is located within **Flood Zone 3 (Rivers)** on NRW's FMfP which defines 'Areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from rivers in a given year, including the effects of climate change.'

The site is served by and benefits from fluvial flood defences and is shown to be located within a **TAN15 Defended Zone (Rivers)**. The fluvial flood defence infrastructure serving the site comprises a Flood Defence Wall providing a minimum Standard of Protection (SOP) commensurate to the 1 in 100-year event.

Refer to Figure 2, below.



Attribute	Value
objectid	1593
anxid	WALL1500468
nwarea	South West
subsubcata	FR/19/S167 - Afon Afan Ufrm Sys
type	Defence
subtype	Wall
protection	Fluvial
name	Wall - 1020952510201R01
assetdescr	Flood Defence Wall
bank	Right
length	302.380000000000000000000000000000
builtdate	01/01/1987
currentlcon	3 - Fair
lastaction	3 - Fair
currentsop	0.00000000000000000000000000000000
designsop	100.000000000000000000000000000000
effectivsec	0.00000000000000000000000000000000
designndcl	8.41000000000000000000000000000000
actualndcl	0.00000000000000000000000000000000
designnucl	9.12000000000000000000000000000000
actualnucl	0.00000000000000000000000000000000

Figure 2: Fluvial Flood Defence Asset Serving The Site

NRW have stated; 'New or extended TAN15 Defended Zones will be created if and when NRW is satisfied that qualifying defences provide a standard of protection that meets or exceeds the definition provided in Figure 1. Risk Management Authorities should provide this information to NRW using the National Asset Database'.

Therefore, it is the responsibility of the Local Authority to retain, maintain and enhance the existing fluvial flood defences which, currently, do not protect from events associated with appropriate climate change projections / provide freeboard above the Q100 event.

It is highly likely that flood defences will be enhanced in line with climate change projections in order to protect the otherwise 'at risk from fluvial flooding' properties, infrastructure (including Hospital and School), and industrial / commercial units.

The FMfP has no official status for planning purposes until at least June 2023. Furthermore, it should be noted that the extreme flood extents shown by the new FMFP are run as *undefended scenarios* and therefore do not take into consideration flood defences; which will obviously display the site at a greater perceived risk compared to the actual risk. The NRW 'Historic Flood Map' shows that there are no recorded historical flooding events from fluvial sources at the site or within the vicinity.

Therefore, the fluvial flood risk posed to the site is considered to be residual and subject to the Flood Risk Management Plan.

NRW Flood Data

A review of Product 5 and 6 data indicates that the site remains flood-free during the Q100 Fluvial Defended Event + 30% Allowance for Climate Change (CC). Therefore, the proposal is compliant with A1.14 of TAN15.

During the Q1000 Defended Fluvial Event a maximum estimated flood depth of 0.47m is recorded within the extents of the Application Site Boundary and at a maximum estimate inundation velocity of 0.11 m/s. These parameters are within (below) the *indicative* maximum allowable threshold as stipulated by A1.15 of TAN15.

Unfortunately, there are no modelled outputs (grids) available within the Product 5 and 6 Data supplied by NRW to further assess the sites compliance with Paragraph A1.15 of TAN15 in terms of the following parameters:

- Maximum rate of rise of floodwaters (m/hr)
- Maximum speed of inundation of flood risk area (hrs).

Should these outputs become available in future; they should be analysed to inform and update (if necessary) evacuation and emergency procedures.

Refer to Appendix D.

3.2 Tidal

The FMfP indicates the site is located within **Flood Zone 3 (Sea)** which defines 'Areas with more than 0.5% (1 in 200) chance of flooding from the sea in a given year, including the effects of climate change. The site is served by and benefits from tidal flood defences and is shown to be located within a **TAN15 Defended Zone (Sea)**. The tidal flood defence infrastructure serving the site comprises a *hard – engineered* sea wall.

Refer to Figure 3, below.



Figure 3: Tidal Flood Defence Asset Serving The Site

Neath Port Talbot Council has just recently completed works to maintain, enhance and improve the existing sea walls protecting Aberavon as part of the Neath Port Talbot Council coastal protection project which involved structural concrete repairs to existing sea walls, toe protection with approximately 30,000 tons of rock armour and improved access. The Council have stated;

'The overall objective of the project is to prevent flooding and damage to the coastal area behind the promenade securing existing infrastructure for future generations and encouraging future regeneration and community benefits in the area'.



Figure 4: Google Earth Satellite Imagery showing the Sea Wall

The defences are highly unlikely to fail without suitable warning and thus the tidal flood risk to the site is considered a residual risk subject to the Flood Risk Management Plan.

NRW Flood Data

A review of Product 5 and 6 data indicates that the site remains flood – free during the Defended T200 Tidal Event + CC (2091). Therefore, the proposal is compliant with A1.14 of TAN15.

During the T200 Defended Tidal Event + CC (2116) the site is shown to flood. A maximum design flood level (DFL) of 6.09m AOD at the location of the property. Based on an existing FFL of 6.00m AOD; the property could, in theory, flood by up to 0.09m (or 9cm). During this event the maximum estimated inundation velocity at the site is recorded as 0.27 m/s.

During the T1000 Defended Tidal Event + CC (2091) the site is shown to flood by up to a maximum depth of 0.16m (or 16cm) at a velocity of 0.26 m/s.

These parameters are within (below) the *indicative* maximum allowable threshold as stipulated by A1.15 of TAN15. Unfortunately, there are no modelled outputs (grids) available within the Product 5 and 6 Data supplied by NRW to further assess the sites compliance with Paragraph A1.15 of TAN15 in terms of the following parameters:

- Maximum rate of rise of floodwaters (m/hr)
- Maximum speed of inundation of flood risk area (hrs).

Should these outputs become available in future; they should be analysed to inform and update (if necessary) evacuation and emergency procedures.

During the T1000 Defended Tidal Event + CC (2116) the site is shown to flood by up to a maximum depth of 0.76m and maximum velocity of 0.48 m/s. Technically these exceed the *indicative* maximum allowable threshold as stipulated by A1.15 of TAN15. However, following mitigation and recommendations; these risks and consequences can be deemed *residual*.

There are no records or incidents of tidal influenced flooding at the site or within the vicinity.

The site is served by significant tidal flood defence infrastructure.

Therefore, the tidal flood risk posed to the site is considered to be residual and subject to the Flood Risk Management Plan.

The risks and associated potential consequences of flooding are deemed acceptable and manageable by the developer, across the lifetime expectancy of the development.

Refer to Appendix D.

3.3 Surface Water (Pluvial)

Surface water (or pluvial) flooding occurs when rainwater does not drain away through the normal drainage system or soak into the ground. It is usually associated with high intensity rainfall events but can also occur with lower intensity rainfall or melting snow where the ground is saturated, frozen or developed, resulting in overland flow and ponding in depressions in topography. Surface water flooding can occur anywhere without warning. However, flow paths can be determined by consideration of contours and relative levels.

The NRW 'Risk of Flooding from Surface Water and Small Watercourses' map from the FRAW (Appendix D) indicates the extent of flood risk from pluvial flooding. The flood map shows that the proposed development site is *outside* the flood extent and therefore is at low risk of surface water flooding, meaning it has a less than 0.1% annual probability of flooding.

Site access / egress is also located within **Flood Zone 1**; or *outside* of the extreme flood extents.

There are no distinct flow routes in the area which would direct any excess surface water towards the site which is relatively flat. There are no records of pluvial flooding at the site.

Therefore, it can be concluded that the site is at low risk of surface water flooding.

3.4 Sewer Flooding

Flooding from sewers can occur when a sewer is overwhelmed by heavy rainfall, becomes blocked, is damaged, or is of inadequate capacity.

There are no known records of notable flooding from sewers at the site or in the near vicinity.

There are no distinct flow routes in the area which would direct any potential flooding arising from the sewer network within Enfield Street which provides site access. It can be concluded that the risk of sewer flooding to the proposed development is low.

3.5 Groundwater Flooding

Groundwater flooding occurs when water levels underneath the ground rise above normal levels. Prolonged heavy rainfall soaks into the ground and can cause the ground to become saturated. This results in rising groundwater levels which leads to flooding above ground.

The Flood Risk Management Plan states that there is no information on historic groundwater flooding which suggests the risk of groundwater flooding is low in the area.

There are no known records of groundwater flooding incidents at or near to the site. Furthermore, both the existing and proposed site is predominantly overlain by hardstanding which would prevent the ingress of groundwater to the surface.

It can be concluded that the risk of groundwater flooding is *low*.

3.6 Artificial Sources of Flooding

There are no canals or other artificial / anthropogenic surface water bodies within the area which would or could pose a flood risk to the site. The NRW 'Risk of Flooding from Reservoirs' map from the FMfP (**Appendix D**) shows that the site is not currently at risk of flooding from reservoirs. Furthermore, the risk of flooding from reservoirs is extremely unlikely to happen. All large reservoirs must be inspected and supervised by a reservoir panel engineer, as the enforcement agency the NRW ensure that reservoirs are inspected regularly, and essential safety work carried out. It can be concluded that the probability of flooding from artificial sources is *low*.

3.7 Summary of Potential Flooding

It can be concluded that fluvial flooding from the *River Afan* is the main potential source of flood risk to the site, albeit a *low / residual risk* as concluded by this report.

The site is at *low / residual risk* of flooding from the Sea.

The site (including access / egress) is at *low risk* of flooding from Surface Water and Small Watercourses (pluvial).

All other potential modes of flooding have been considered and the risk is deemed to be *low, very low or null*.

The potential risks and inherent associated consequences are accepted by the developer. Following implementation of Mitigation Measures and Recommendations (Section 5); they are considered residual and manageable across the development's lifetime.

The site is served by and benefits from significant flood defence infrastructure (fluvial and tidal) and is located within a **TAN15 Defended Zone (Rivers and Sea)**.

From a review of the NRW Product 5 and Product 6 data it can be ascertained that the site remains flood-free during the Q100 (Fluvial) and T200 (Tidal) Defended Events + an allowance for CC.

Refer to Appendix D.

4 TAN15 ASSESSMENT

4.1 Justifying the Location

NRWs TAN15 document defines **Zone C1** as;

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

And;

'Used to indicate that development can take place subject to application of justification test, including acceptability of consequences'.

TAN15 advises that all new developments should only be permitted within Zones C1 if determined by the planning authority to be justified in the relevant location. Development, including transport infrastructure, should only be considered justified if it can be demonstrated that:

- Its location in Zone C is necessary to assist, or be part of the local authority regeneration initiative or a local authority strategy required to sustain an existing settlement or region; 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 2002 and meets the definition of previously developed land; and
- The potential consequences of a flooding event for the development have been considered, and found to be acceptable.

Application of the justification test has been undertaken and it can be concluded that the site and proposals **pass**.

The proposed development will retain the original facilities (residential) provided by the property.

Furthermore, the development is consistent with the land use and image of the area.

It is fair to say that there is little scope for alternative development at this location.

Residential was the original site use and is also the current use.

Development proposals are limited to internal alterations, reconfiguration and refurbishment. The building footprint will remain the same and there will be no increase in impermeable surface area across the site.

Furthermore, moreover, and as demonstrated by this FCA – the site and proposals are **compliant** with A1.14 and A1.15 of TAN15 and therefore satisfy the justification test outlined in Section 6 of TAN15.

The works will improve the aesthetic value of the site. The existing property is in dire need of works, particularly internally.

The works will contribute to provision of affordable accommodation and present an opportunity to make the site more resilient and resistant to climate change and flooding in alignment with the aims and objectives of the LDP. It is concluded that the development concurs with the aims of PPW and that the site meets the definition of Previously Developed (*Brownfield*) land.

TAN15 states;

6.1 Much urban development in Wales has taken place alongside rivers and in the coastal plain. It is therefore inevitable, despite the overall aim to avoid flood risk areas, that some existing development will be vulnerable to flooding and fall within Zone C. Some flexibility is necessary to enable the risks of flooding to be addressed whilst recognising the negative economic and social consequences if policy were to preclude investment in existing urban areas, and the benefits of reusing previously developed land. Further development in such areas, whilst possibly benefiting from some protection, will not be free from risk and could in some cases exacerbate the consequences of a flood event for existing development and therefore a balanced judgement is required.

7.2 Whether a development should proceed or not will depend upon whether the consequences of flooding of that development can be managed down to a level which is acceptable for the nature / type of development being proposed, including its effects on existing development. It would certainly not be sensible for people to live in areas subject to flooding where timely flood warnings cannot be provided and where safe access / egress cannot be achieved.

Applications for Individual Householders

11.9 Applications for minor extensions or alterations should not raise significant issues unless they are likely to have a direct and adverse effect on a watercourse or its flood defences, would impede access to flood defence and management facilities or where the cumulative impact of such developments could have a significant effect on flood storage capacity or flood flows. In such cases there will be no requirement to justify the location of development but if such minor works are likely to have an adverse effect then the full consequences of a development will need to be appreciated and assessment undertaken commensurate with the scale and nature of development.

5 MITIGATION & RECOMENDATIONS

Fluvial flooding from the River Afan is the main source of flooding albeit a *low / residual* risk. The potential associated consequences are completely accepted by the developer and are deemed manageable over the lifetime expectancy of the property.

Taking a precautionary approach and as an additional factor of safety, mitigation measures should be incorporated into the proposed development as far as is practically possible.

Internal alterations that could and should be introduced where practically possible to the development include:

- Raised electronic control units and sockets;
- Install smart air bricks or air brick covers;
- Provide low level flood guards on all access points;
- Use plastic and stainless-steel fixtures and fittings and avoid wooden alternatives;
- Use solid flooring (tiled, resin, concrete) at lower ground level, where possible;
- Ensure that with the time afforded by advance warning, evacuation of property via safe egress and removal of valuables from the building can be implemented;

All construction methods to be inherently flood resilient as and where possible. Refer to the **BS 85500: 2015, Flood resistant and resilient construction. Guide to improving the flood performance of buildings** (November 2015).

Flood Alerts and Flood Warnings cover this area (**Appendix D**). Site owners should register to receive flood alerts and where possible, Flood Warnings. Flood Warnings Direct is a free service that provides prior warnings

of a fluvial flood event. Areas at risk of flooding from rivers (fluvial) and the sea (tidal) are warned, which relies on direct measurements of rainfall, river levels, tide levels, in-house predictive models, rainfall data and information from the Met Office. This service operates 24 hours / day 365 days a year. If flooding is forecast, warnings are issued using a set of easily recognisable codes.

Appropriate documentation should be displayed to inform any users of the site of the potential risk. Documentation will be displayed at an appropriate position in the building. The documentation will indicate the risk of flooding and contain information on how prior warnings will be sent to the building. Further information on the documentation will comprise of the Floodline Warnings Direct telephone number, emergency services numbers and exit plans and egress directions from the hall, as identified in the evacuation procedure for the site.

The site owner should draw up an evacuation procedure for implementation during an extreme event. This should be done in conjunction with the appropriate professional bodies. An evacuation procedure should be drawn up after the developer has completed an action plan. The action plan is carried out and based on an assessment of the consequences of an extreme flood on the building. The extent of 'dry proofing' measures incorporated is determined by the assessment of the social and economic impact of a flood.

The evacuation procedure should be a written document which should outline the course of action to hall occupants during a flood. The evacuation procedure should address the following topics:

- A list of important contacts, building services, suppliers and evacuation contacts for officers and users;
- A description or plan showing locations of key property, protective materials and service shut-off points;
- Basic strategies for protecting property and assisting recovery;
- Checklist of procedures that can be quickly accessed by users during a flood;
- Safe exit-plan (building and site);
- Safe exit route to higher ground outside the flood risk area (building and site), kept and displayed on site.

Flood proofing measures should be incorporated as far as is practically possible.

5.1 Access and Egress

Safe access / egress is provided by Enfield Street (west bound) towards a location outside of the extreme flood extent. **Refer to the Flood Evacuation / Safe Egress Route, Figure 5, below / overleaf.**



Figure 2: Proposed Flood Evacuation / Safe Egress Route

5.2 Safe Refuge Area and Flood Procedure

In the highly unlikely event that the site floods the competent warning authority is the NRW and a lead time of several hours in advance of flooding is typically provided, excluding breaches of defences.

Tidal flood events are managed and are subject to the FRMP, which will implement suitable monitoring and management responses to the most extreme tidal events.

The coastal sea defences providing Port Talbot with flood defence infrastructure are Council, Government and NRW maintained assets which are highly unlikely to fail without suitable warning.

When a flood is expected the LA, and the local emergency services will be responsible for public care and safety.

In the event of the site flooding before site users have an opportunity to evacuate via the route specified - the occupants should seek refuge on the first floor as and where possible until flood waters have dispersed and it is safe to leave the building. The first floor is well above the DFLs during the most extreme of modelled events with significant freeboard.

5.3 Finished Floor Level (FFL)

There is no need or scope to raise FFLs to alleviate flood risk.

5.4 Flood Risk Elsewhere

It is safe to say that the development proposals will not increase flood risk elsewhere. For instance, the proposals will not result in the loss of any floodplain / storage and there will be no displacement of flood waters. There will be no increase in flood risk elsewhere, or to any third-parties. The proposed development will not increase the impermeable area / hardstanding surface area across the site. Works are limited to internal reconfiguration and refurbishment.

6 CONCLUSIONS

The proposals are for re-configuration of the property so that there are 2 bedrooms located on the Ground Floor and 2 on the First Floor. The existing communal room located on the Ground Floor will become a bedroom whilst the existing First Floor Bedroom becomes / is converted to a communal room.

Therefore, the proposed development works are limited to internal reconfiguration / refurbishment of the property. There will be no alterations to the building footprint and thus no increase in impermeable surface area.

The DAM shows that the site falls within **Zone C1**.

It can be concluded that **Fluvial** (from the *Afan*) and Tidal flooding are the main potential sources of flood risk to the site. Having said this, it has been established that the risks are considered to be either **Low / Residual** and are deemed acceptable and manageable.

All other potential modes of flooding have been considered and the risk is deemed to be **Low, Very Low** or **Null**.

No risk of loss of human life / structural integrity of buildings is envisaged at the site from the consequences of the extreme flood events considered. Any damage / loss would likely be limited to material and inconvenience.

The risks are accepted by the developer and following implementation of Mitigation Measures and Recommendations (Section 5); considered residual and manageable across the development's lifetime.

From a review of the NRW Product 5 and Product 6 data it can be ascertained that the site remains flood-free during the Q100 (Fluvial) and T200 (Tidal) Defended Events + CC.

It can be concluded that this FCA demonstrates that the application site and proposed development achieve compliance with A1.14 of TAN15.

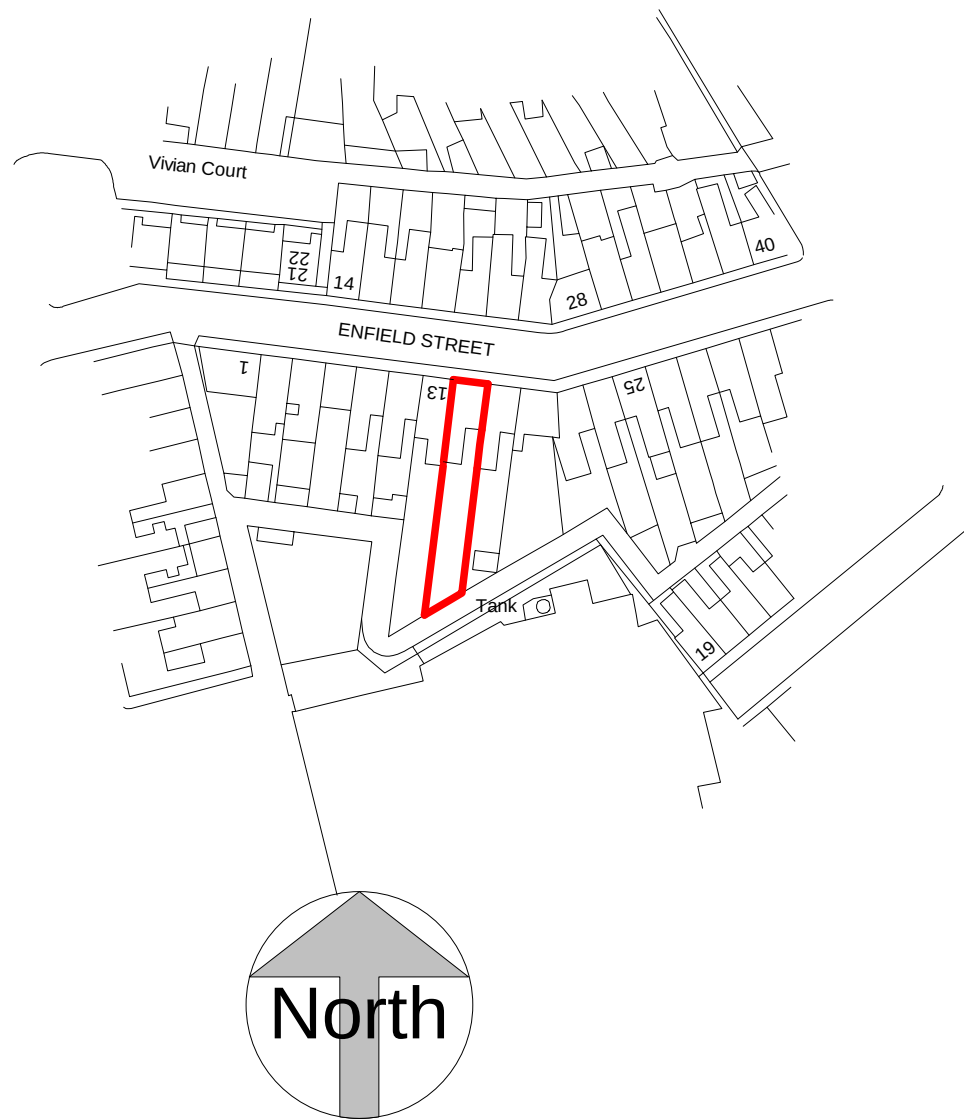
Most recent national climate change guidance has been followed, specifically, *Flood Consequences Assessments: Climate Change Allowances September 2021*.

It is concluded that the development proposal meets the requirements of the justification test including the acceptability of the consequences of flooding.

It is concluded that the development concurs with the aims of PPW and meets the definition of previously developed / brownfield land.

The proposals pass the requirements of the justification test.

APPENDIX A: Site Location / Existing Plan



1 Site Location Plan
1 : 1250



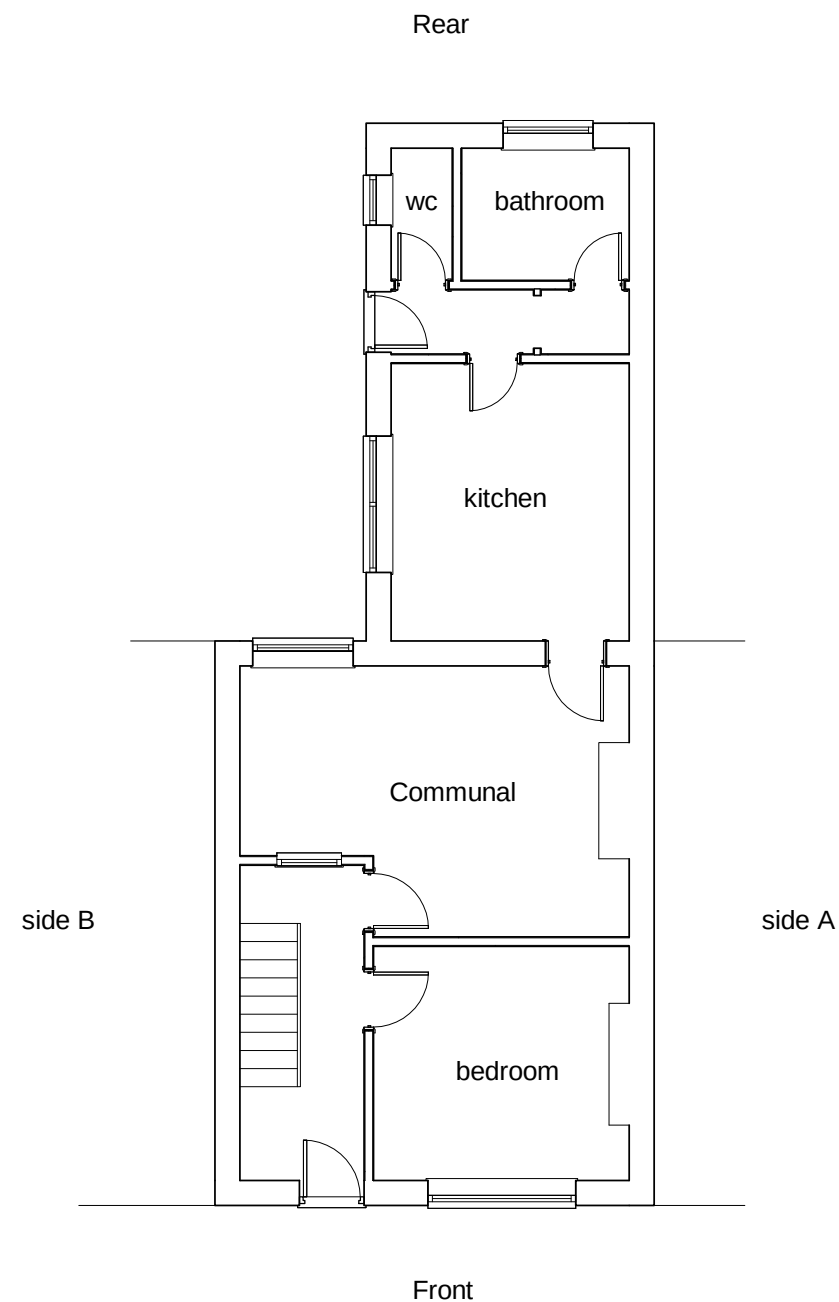
2 Block Plan
1 : 500

9 Pine Tree close
Burry port
Carmarthenshire
SA16 0TF

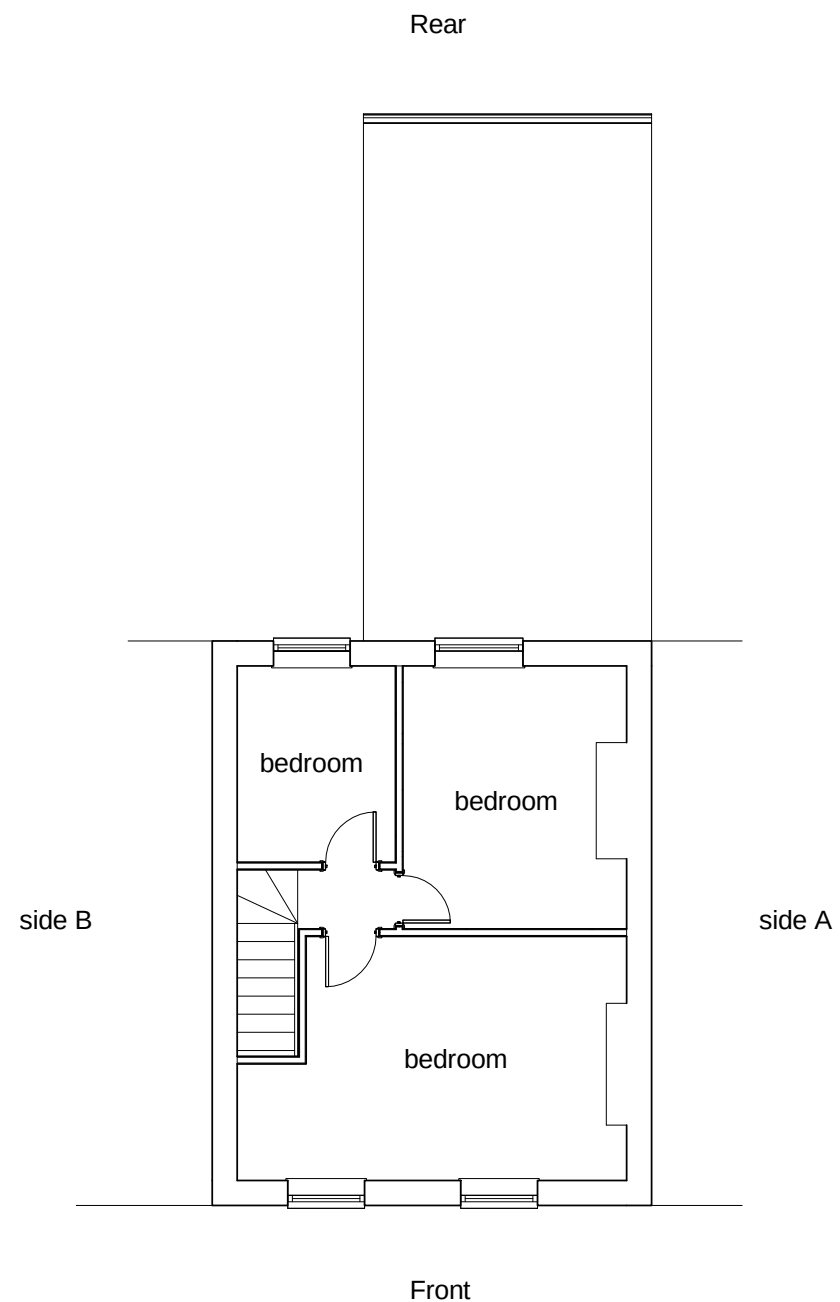
TEL 01554833725
07837594671



				PROJECT 15 Enfield Street, Port Talbot, SA12 6NN		CLIENT		
				Site-Block Plan		Date 08/11/2023	Project number AE3256	Scale (@ A3) As indicated
						DRAWING NUMBER A105		REV
CODE	STATUS	SUITABILITY DESCRIPTION	PURPOSE OF ISSUE Planning			Author Checked by		



1 **ground floor**
1 : 100



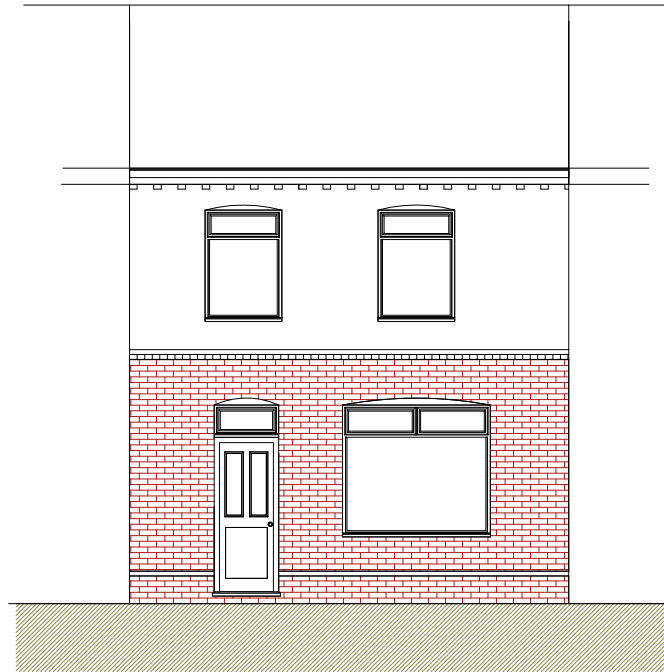
2 **First floor**
1 : 100

9 Pine Tree close
Burry port
Carmarthenshire
SA16 0TF

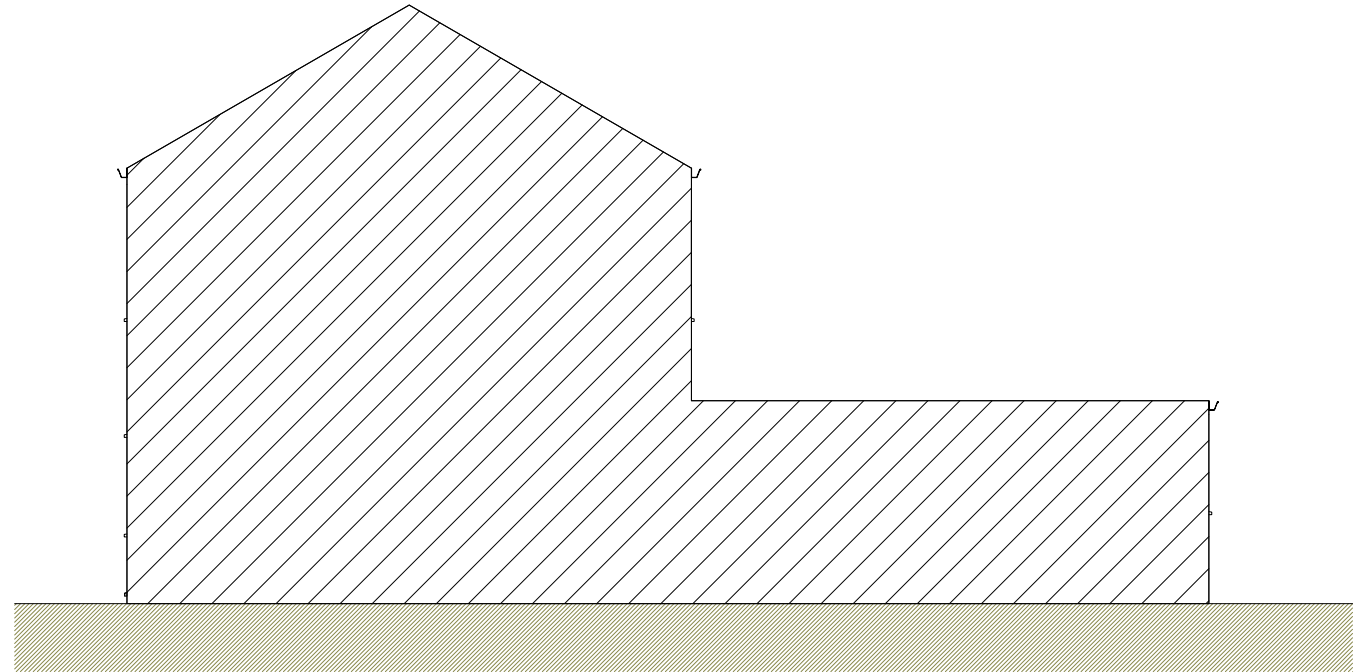
TEL 01554833725
07837594671



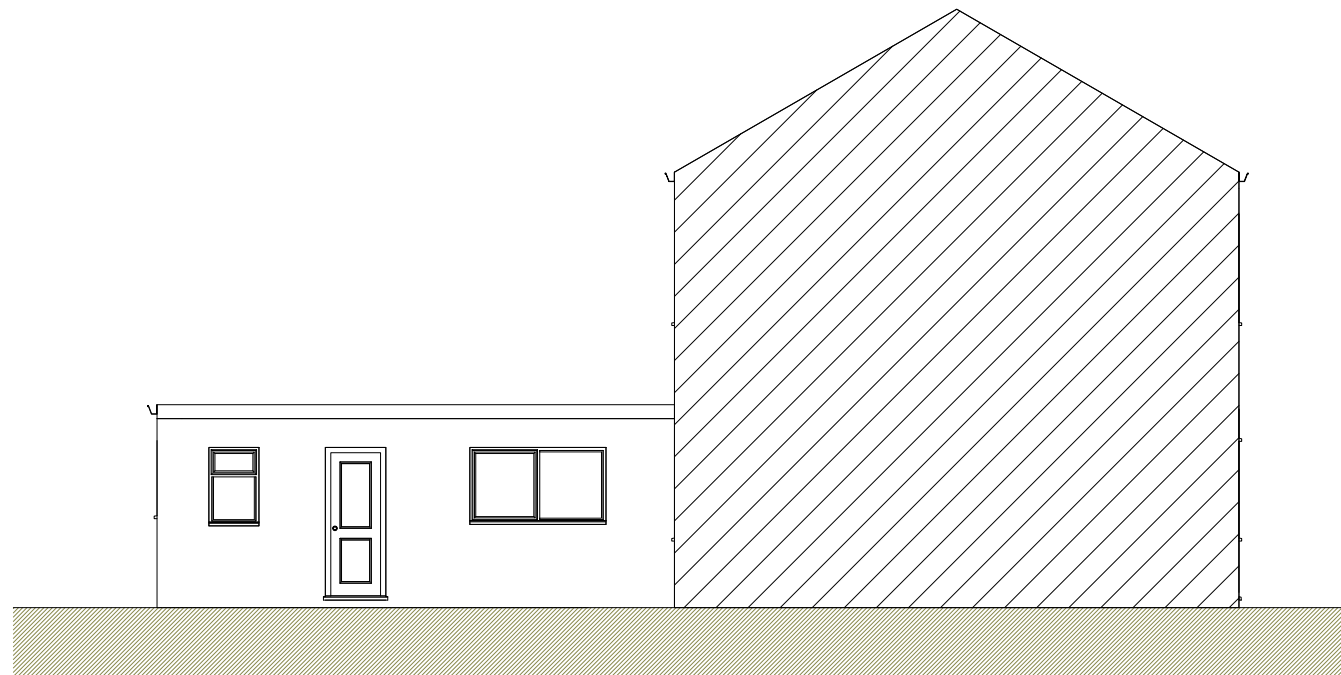
				PROJECT 15 Enfield Street, Port Talbot, SA12 6NN	CLIENT		
				Existing Floor plans	Date 08/11/2023	Project number AE3256	Scale (@ A3) 1 : 100
CODE	STATUS	SUITABILITY DESCRIPTION	PURPOSE OF ISSUE Planning		Author Checked by	DRAWING NUMBER A101	REV



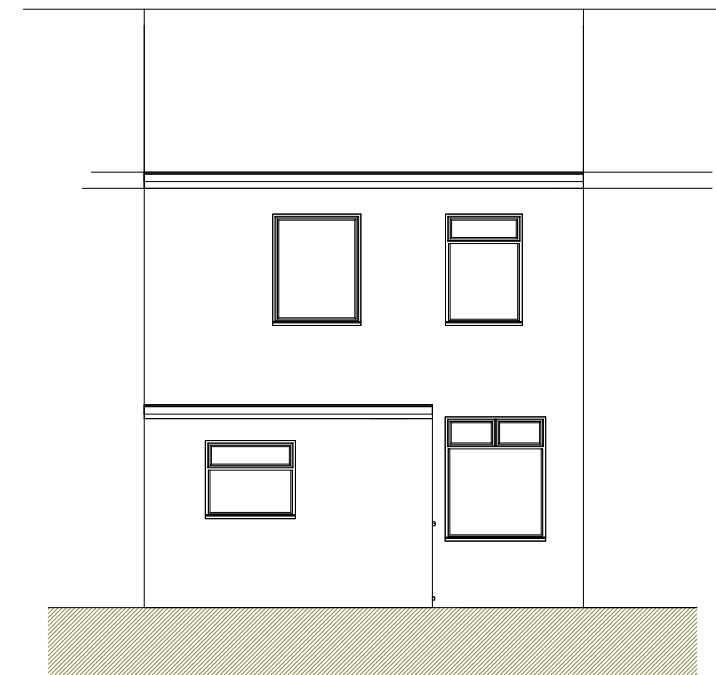
1 **Front Elevation**
1 : 100



2 **Elevation on A**
1 : 100



3 **Elevation on B**
1 : 100



4 **Rear Elevation**
1 : 100

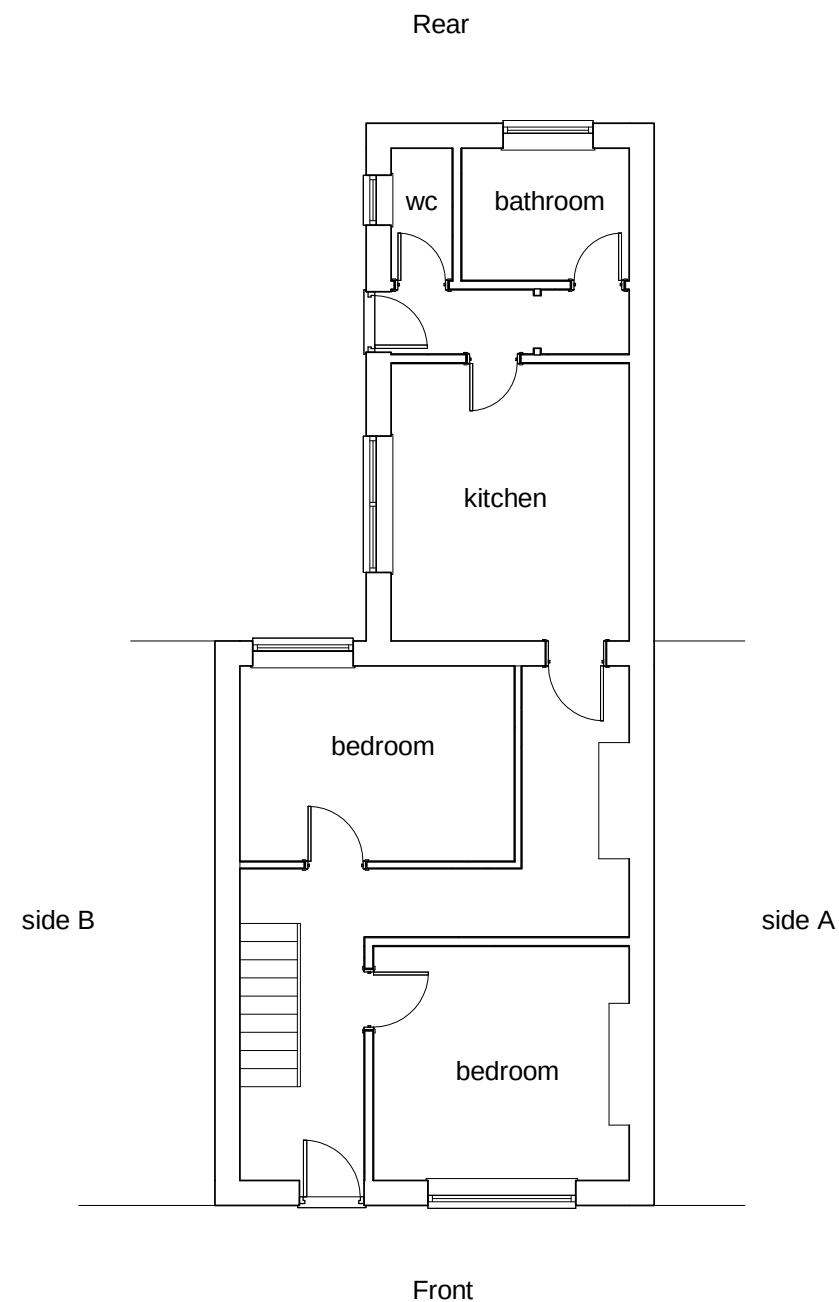
9 Pine Tree close
Burry port
Carmarthenshire
SA16 0TF

TEL 01554833725
07837594671

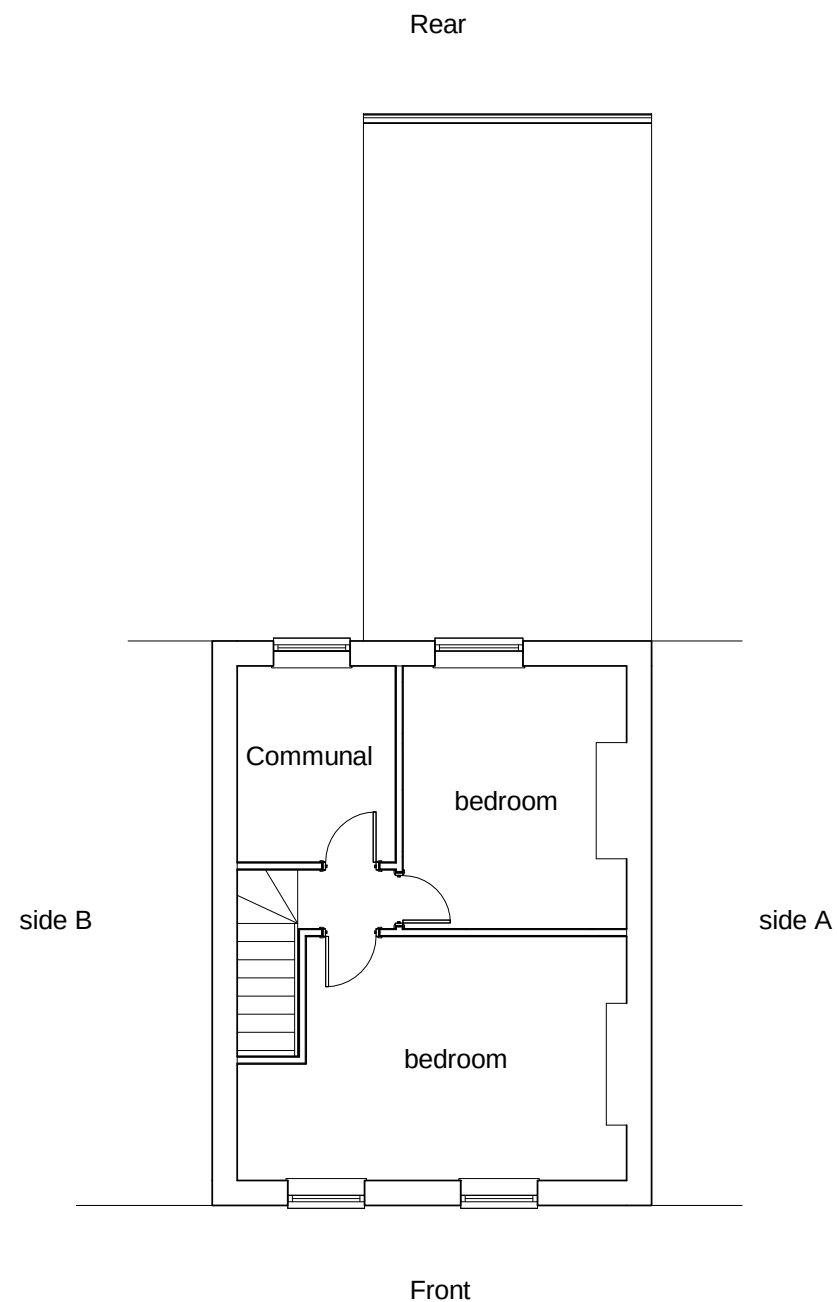


				PROJECT 15 Enfield Street, Port Talbot, SA12 6NN		CLIENT		
				Existing Elevations		Date 08/11/2023	Project number AE3256	Scale (@ A3) 1 : 100
CODE	STATUS	SUITABILITY DESCRIPTION	PURPOSE OF ISSUE Planning			Author Checked by	DRAWING NUMBER A102	REV

APPENDIX B: Proposed Development Plans



Front
1 ground floor
 1 : 100



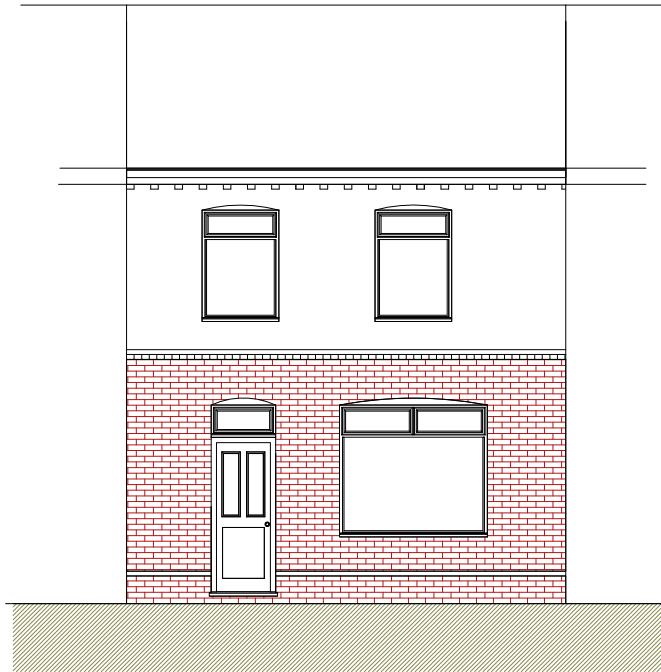
Front
2 First floor
 1 : 100

9 Pine Tree close
 Burry port
 Carmarthenshire
 SA16 0TF

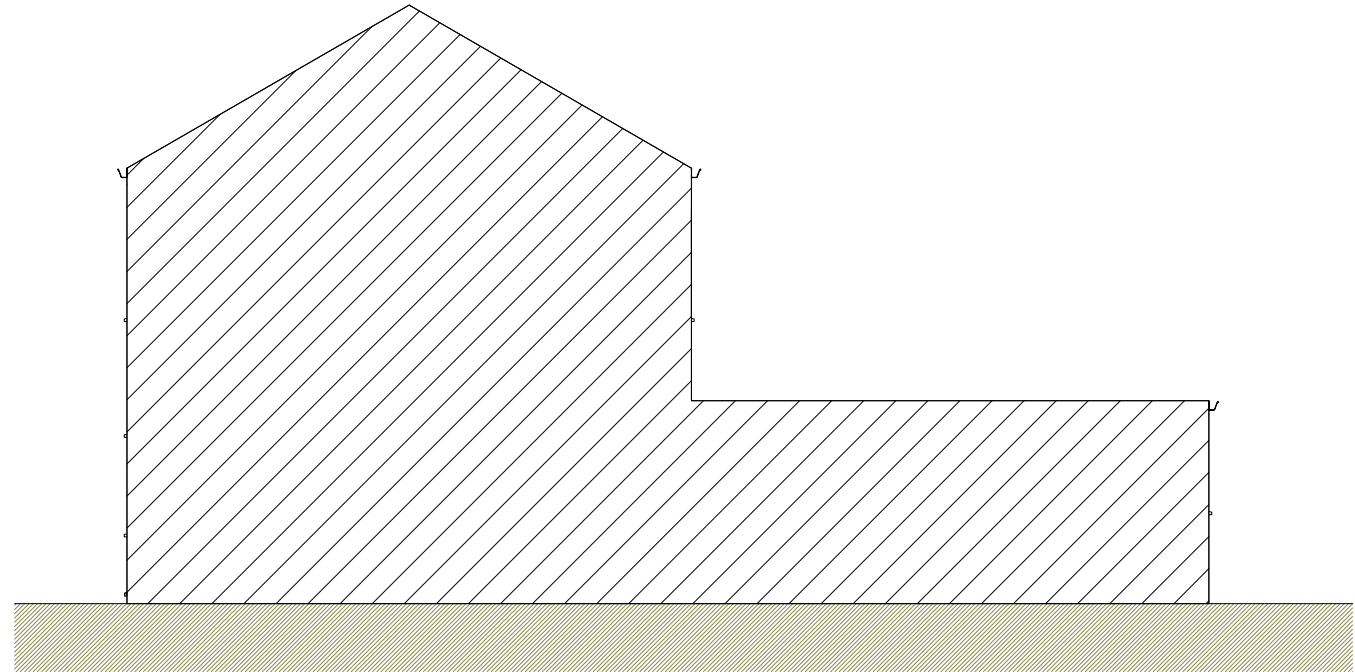
TEL 01554833725
 07837594671



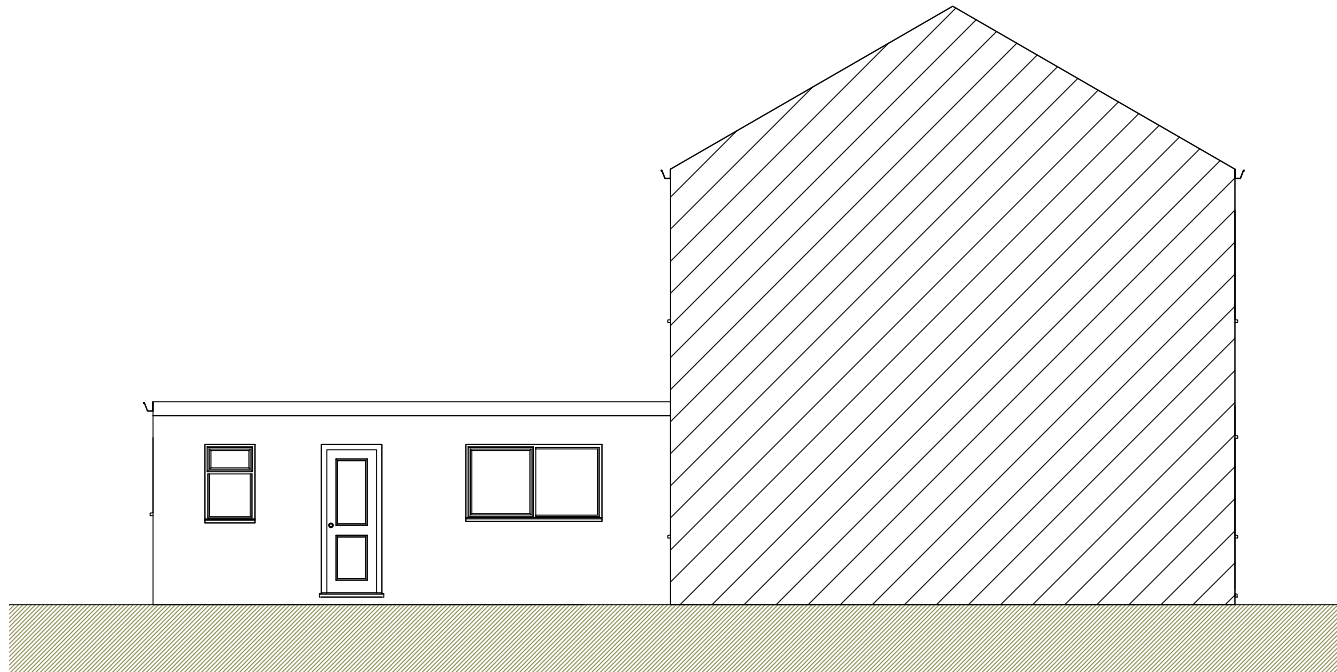
				PROJECT 15 Enfield Street, Port Talbot, SA12 6NN	CLIENT		
				Proposed Floor plans	Date 08/11/2023	Project number AE3256	Scale (@ A3) 1 : 100
CODE	STATUS	SUITABILITY DESCRIPTION	PURPOSE OF ISSUE Planning		Author Checked by	DRAWING NUMBER A103	REV



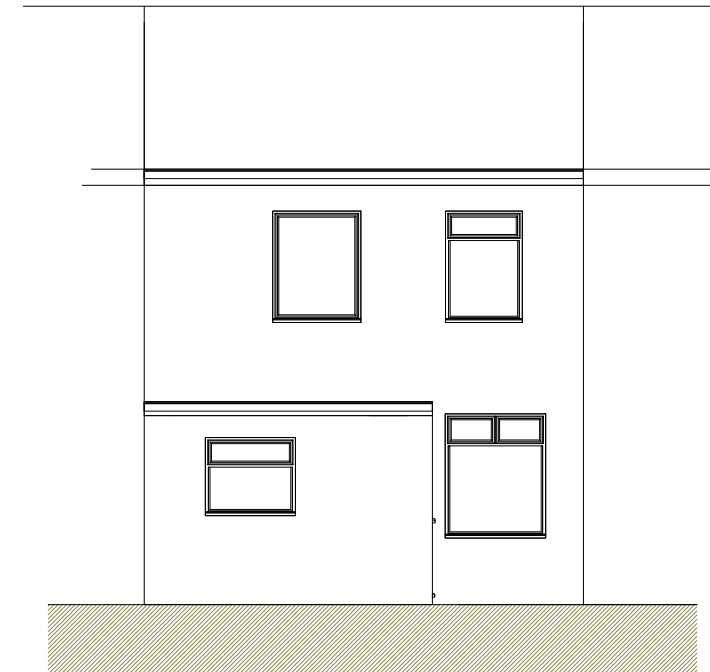
1 **Front Elevation**
1 : 100



2 **Elevation on A**
1 : 100



3 **Elevation on B**
1 : 100



4 **Rear Elevation**
1 : 100

9 Pine Tree close
Burry port
Carmarthenshire
SA16 0TF

TEL 01554833725
07837594671

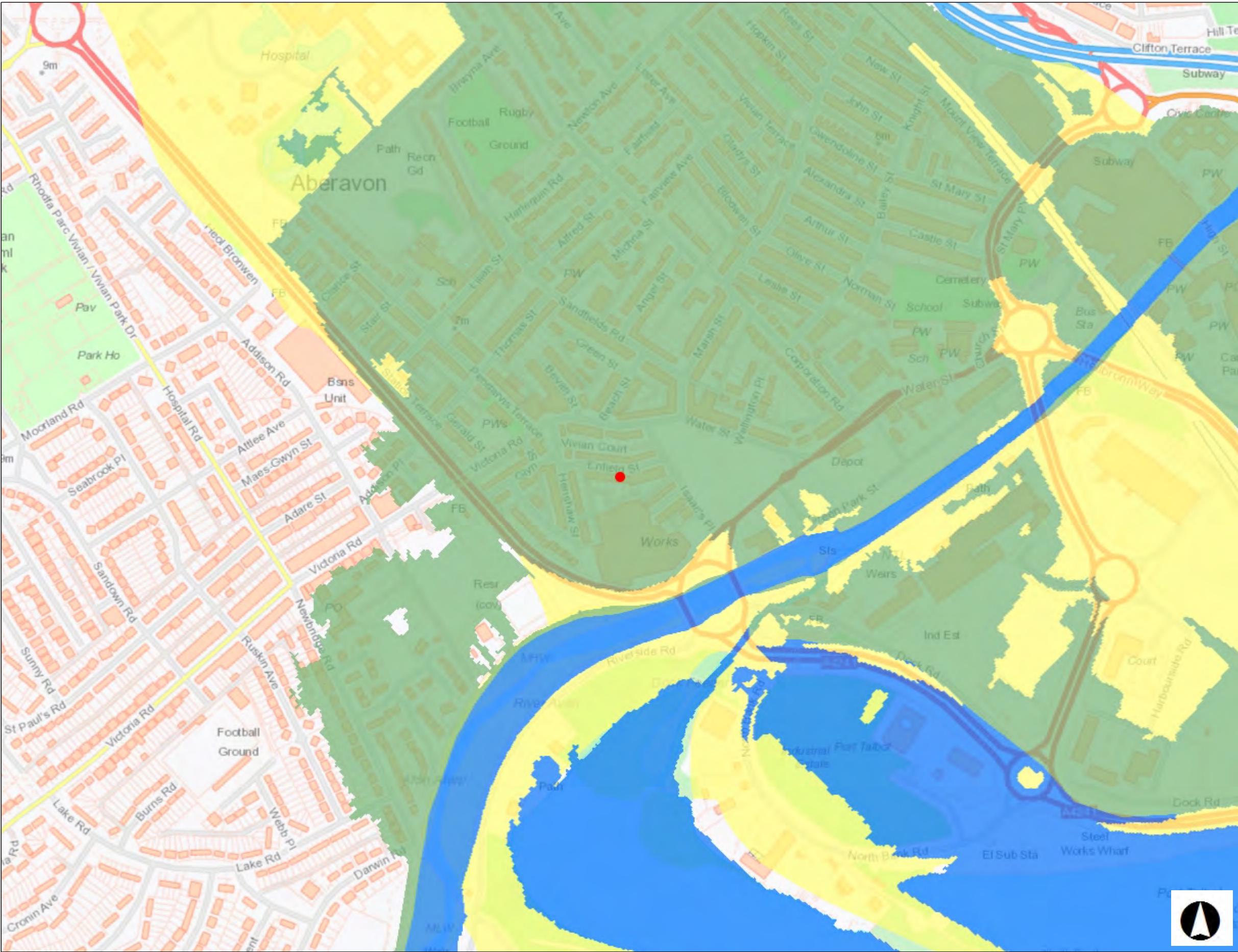


				PROJECT 15 Enfield Street, Port Talbot, SA12 6NN		CLIENT		
				Proposed Elevations		Date 08/11/2023	Project number AE3256	Scale (@ A3) 1 : 100
CODE	STATUS	SUITABILITY DESCRIPTION	PURPOSE OF ISSUE Planning			Author Checked by	DRAWING NUMBER A104	REV

APPENDIX C: LiDAR Data



APPENDIX D: NRW Flood Maps & Product 5 / 6 data



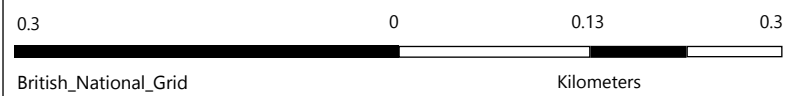
18721 - 15 Enfield St, Port Talbot
NRW - DAM

Allwedd / Map Key

- Zone C1
- Zone C2
- Zone B
- Zone A

Graddfa / Scale at A3 1: 5,000

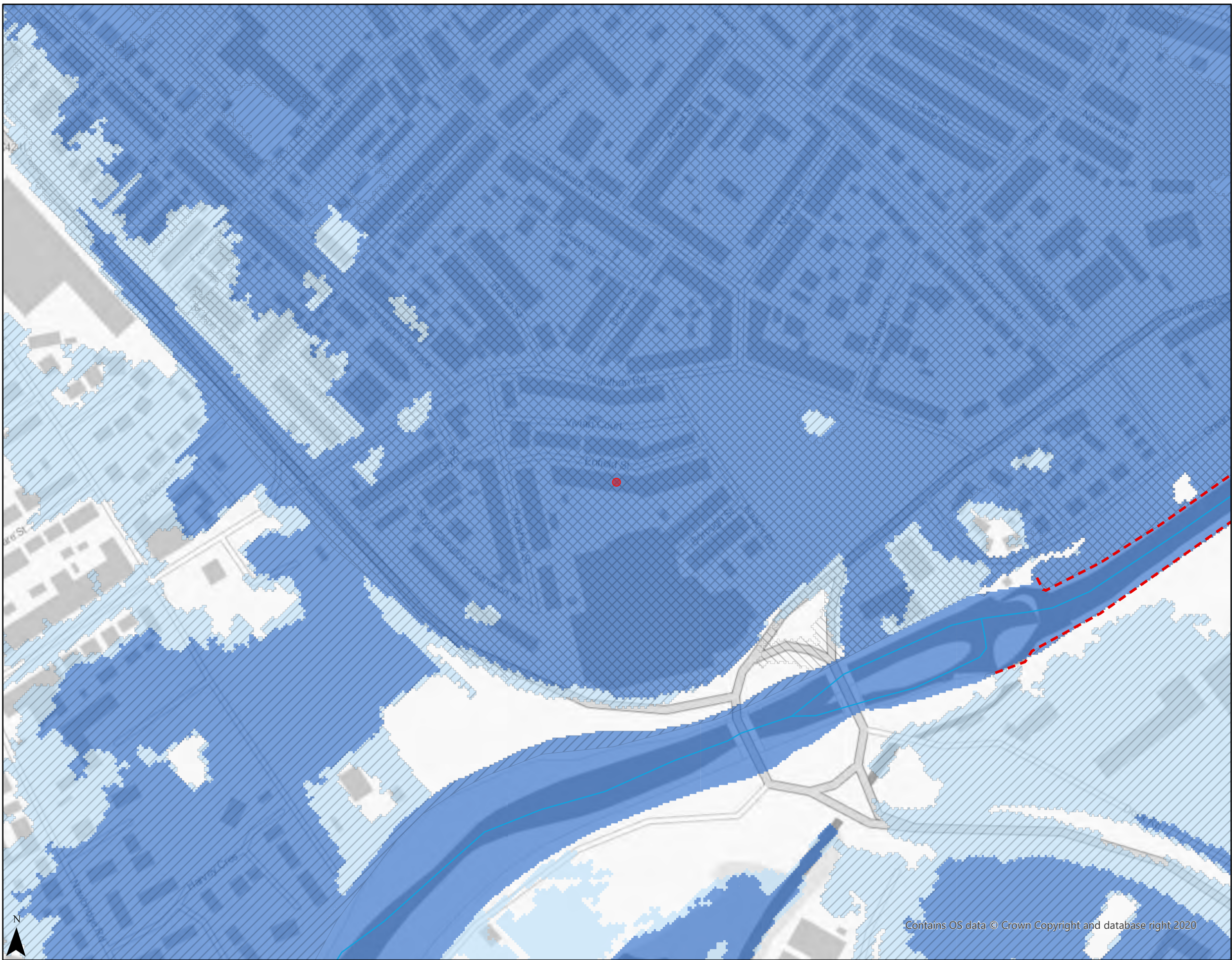
Dyddiad / Date
31/01/2024



Flood Map for Planning - Detail
18721 - 15 Enfield St, Port Talbot

Legend

-  Flood Defence Locations
- TAN15 Defended Zones
 -  Rivers
 -  Sea
 -  Rivers and Sea
- Rivers
 -  Flood Zone 3
 -  Flood Zone 2
 -  Main Rivers



Scale at A3: 1:2,500

Date: 31/01/2024

0.1 0.05 0 0.1
km
British National Grid

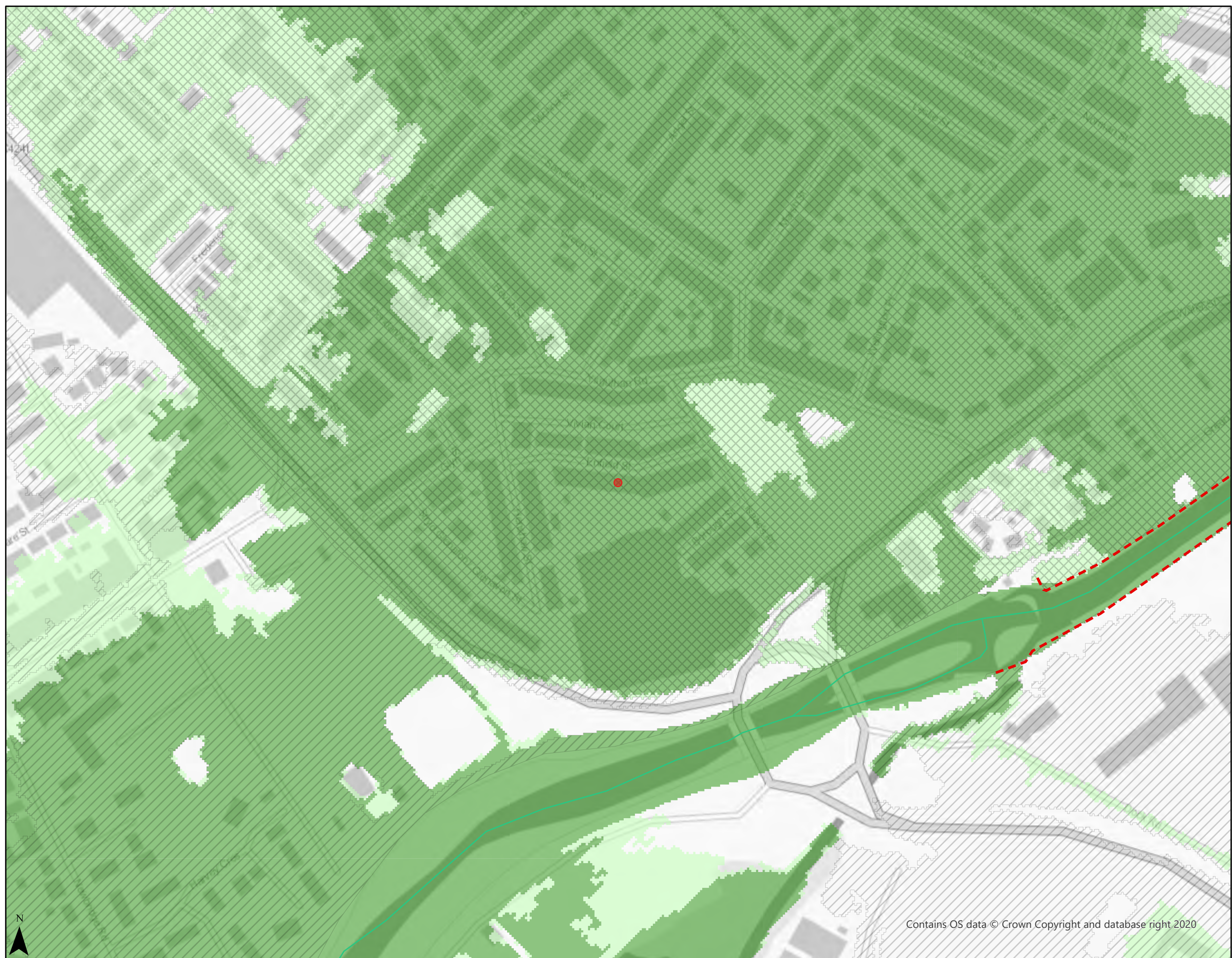
Disclaimer
<https://naturalresources.wales/flooding/disclaimer-for-our-flood-and-coastal-erosion-risk-maps/?lang=en>

© NRW/CNC. Some information derived from © UK Centre for Ecology & Hydrology © UKCEH, the Environment Agency © EA and Getmapping Plc and Bluesky International Limited, Defra, © Met Office and DARD Rivers Agency, © Cranfield University, © James Hutton Institute, © Ordnance Survey, © Land & Property Services. All rights reserved.

Flood Map for Planning - Detail
18721 - 15 Enfield St, Port Talbot

Legend

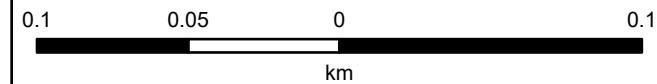
-  Flood Defence Locations
- TAN15 Defended Zones
 -  Rivers
 -  Sea
 -  Rivers and Sea
- Sea
 -  Flood Zone 3
 -  Flood Zone 2
-  Main Rivers



Contains OS data © Crown Copyright and database right 2020

Scale at A3: 1:2,500

Date: 31/01/2024



Disclaimer

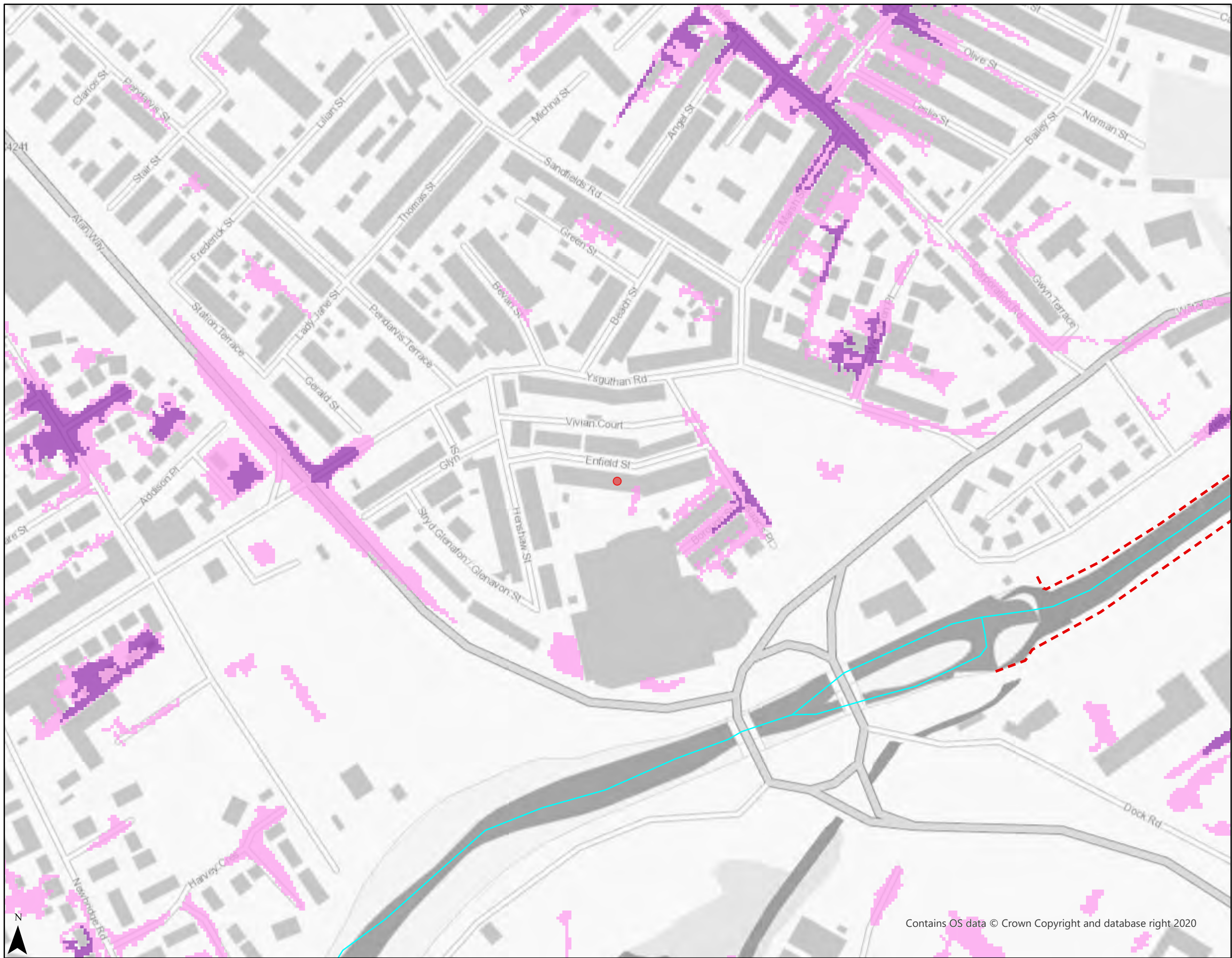
<https://naturalresources.wales/flooding/disclaimer-for-our-flood-and-coastal-erosion-risk-maps/?lang=en>

© NRW/CNC. Some information derived from © UK Centre for Ecology & Hydrology © UKCEH, the Environment Agency © EA and Getmapping Plc and Bluesky International Limited, Defra, © Met Office and DARD Rivers Agency, © Cranfield University, © James Hutton Institute, © Ordnance Survey, © Land & Property Services. All rights reserved.

Flood Map for Planning - Detail
18721 - 15 Enfield St, Port Talbot

Legend

- Flood Defence Locations
- Surface Water and Small Watercourses
- Flood Zone 3
- Flood Zone 2
- Recorded Flood Extents
- Flood Risk from Reservoirs
- Main Rivers



Contains OS data © Crown Copyright and database right 2020

Scale at A3: 1:2,500

Date: 31/01/2024

0.1 0.05 0 0.1
km

British National Grid

Disclaimer

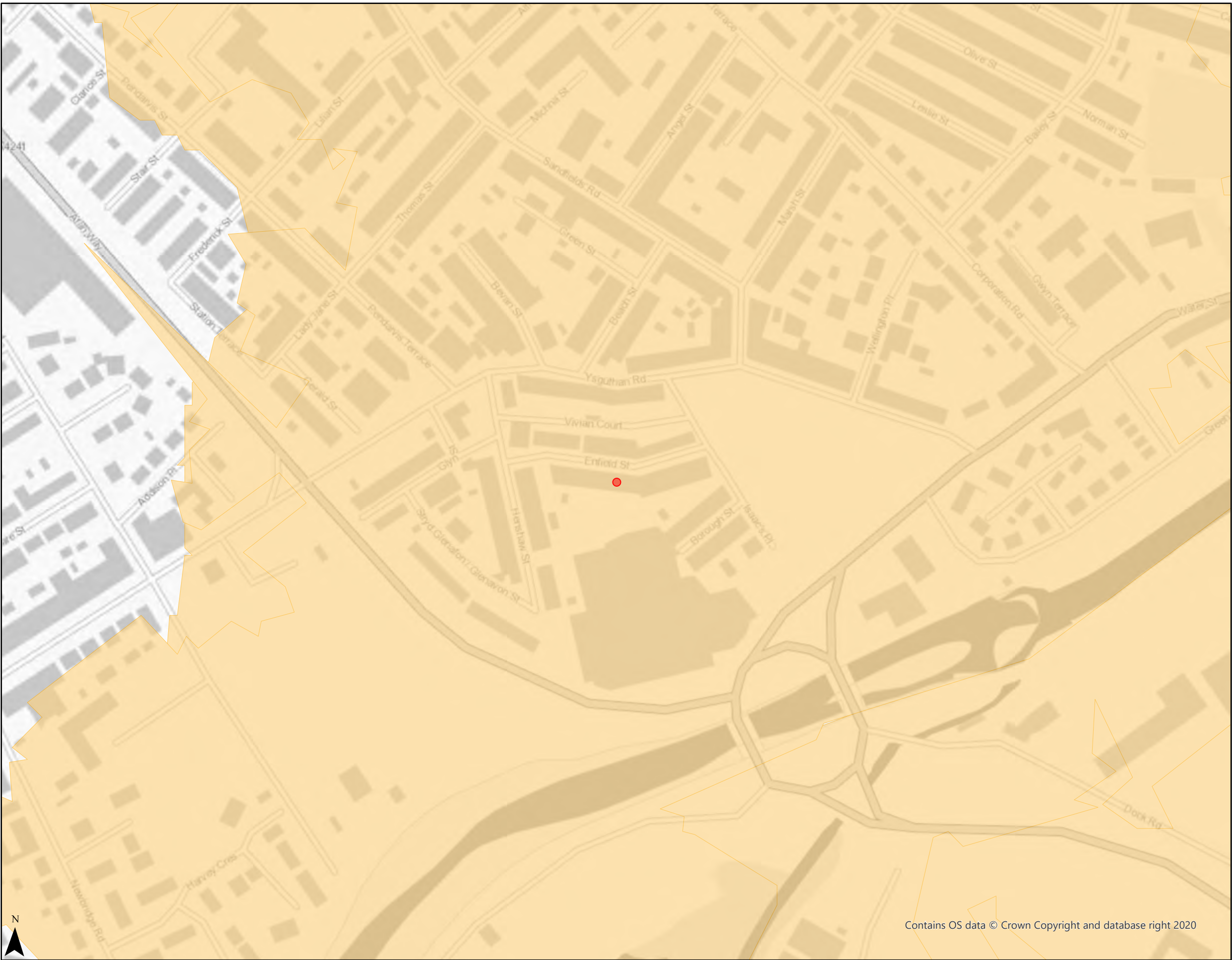
<https://naturalresources.wales/flooding/disclaimer-for-our-flood-and-coastal-erosion-risk-maps/?lang=en>

© NRW/CNC. Some information derived from © UK Centre for Ecology & Hydrology © UKCEH, the Environment Agency © EA and Getmapping Plc and Bluesky International Limited, Defra, © Met Office and DARD Rivers Agency, © Cranfield University, © James Hutton Institute, © Ordnance Survey, © Land & Property Services. All rights reserved.

Flood Warning and Alert Areas
18721 - Flood Alerts

Legend

Flood Alert Areas



Contains OS data © Crown Copyright and database right 2020

Scale at A3: 1:2,500

Date: 01/02/2024

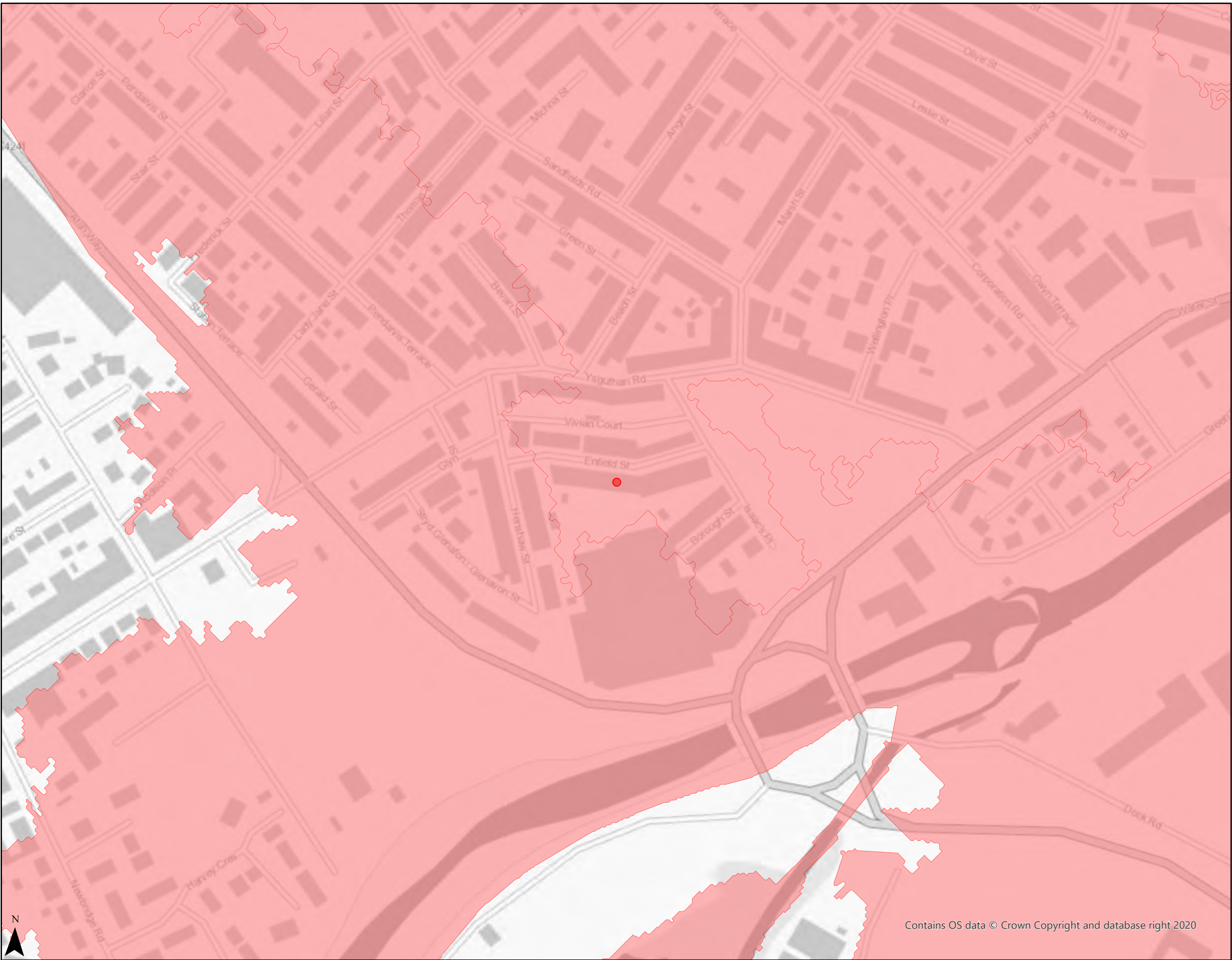
Disclaimer

<https://naturalresources.wales/flooding/disclaimer-for-our-flood-and-coastal-erosion-risk-maps/?lang=en>

© NRW/CNC. Some information derived from © UK Centre for Ecology & Hydrology © UKCEH, the Environment Agency © EA and Getmapping Plc and Bluesky International Limited, Defra, © Met Office and DARD Rivers Agency, © Cranfield University, © James Hutton Institute, © Ordnance Survey, © Land & Property Services. All rights reserved.

Flood Warning and Alert Areas
18721 - Flood Warning Coverage

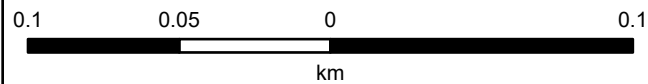
Legend
 Flood Warning Areas



Contains OS data © Crown Copyright and database right 2020

Scale at A3: 1:2,500

Date: 01/02/2024



British National Grid

Disclaimer
<https://naturalresources.wales/flooding/disclaimer-for-our-flood-and-coastal-erosion-risk-maps/?lang=en>

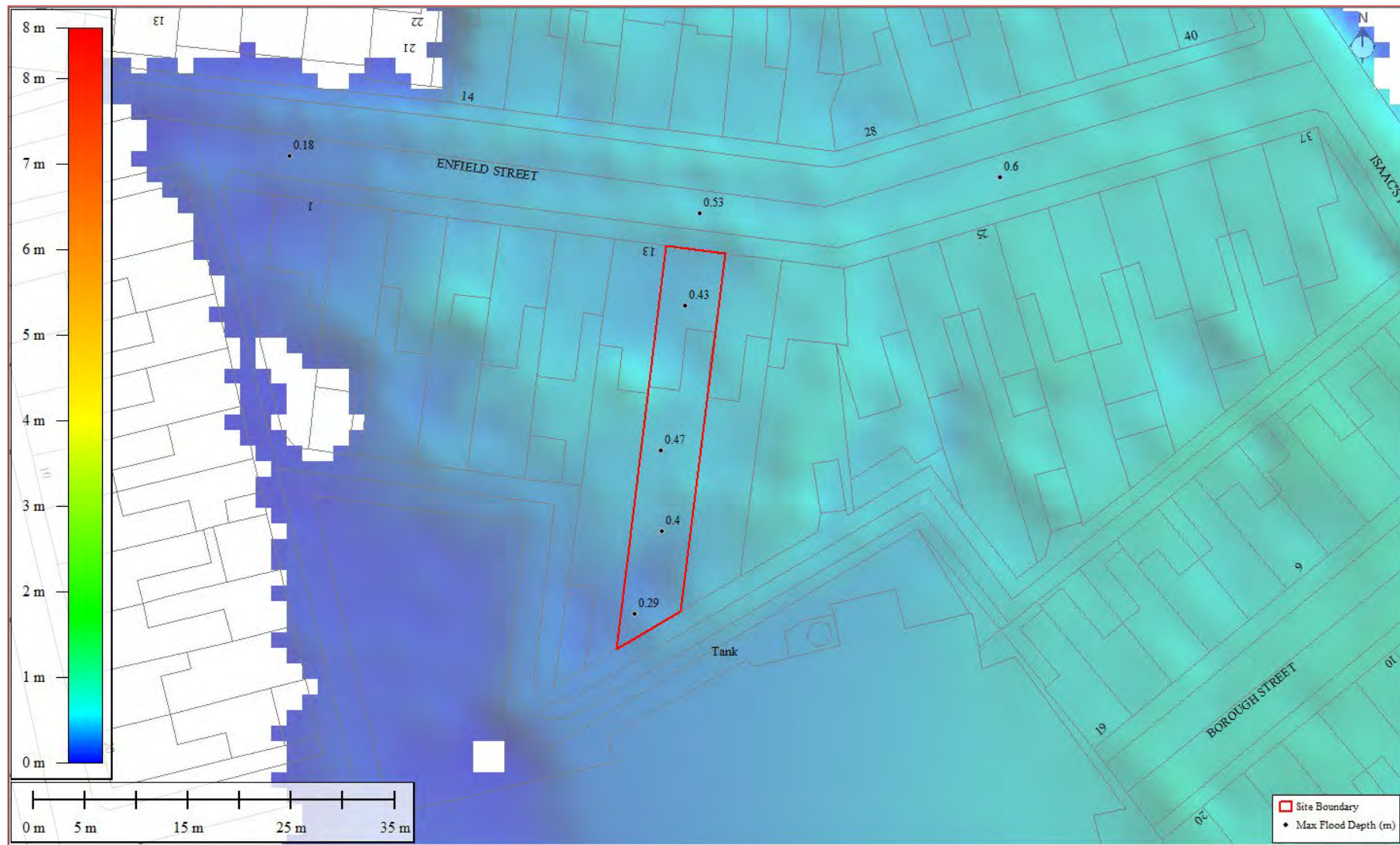
© NRW/CNC. Some information derived from © UK Centre for Ecology & Hydrology © UKCEH, the Environment Agency © EA and Getmapping Plc and Bluesky International Limited, Defra, © Met Office and DARD Rivers Agency, © Cranfield University, © James Hutton Institute, © Ordnance Survey, © Land & Property Services. All rights reserved.

18721 – 15 Enfield St, Port Talbot



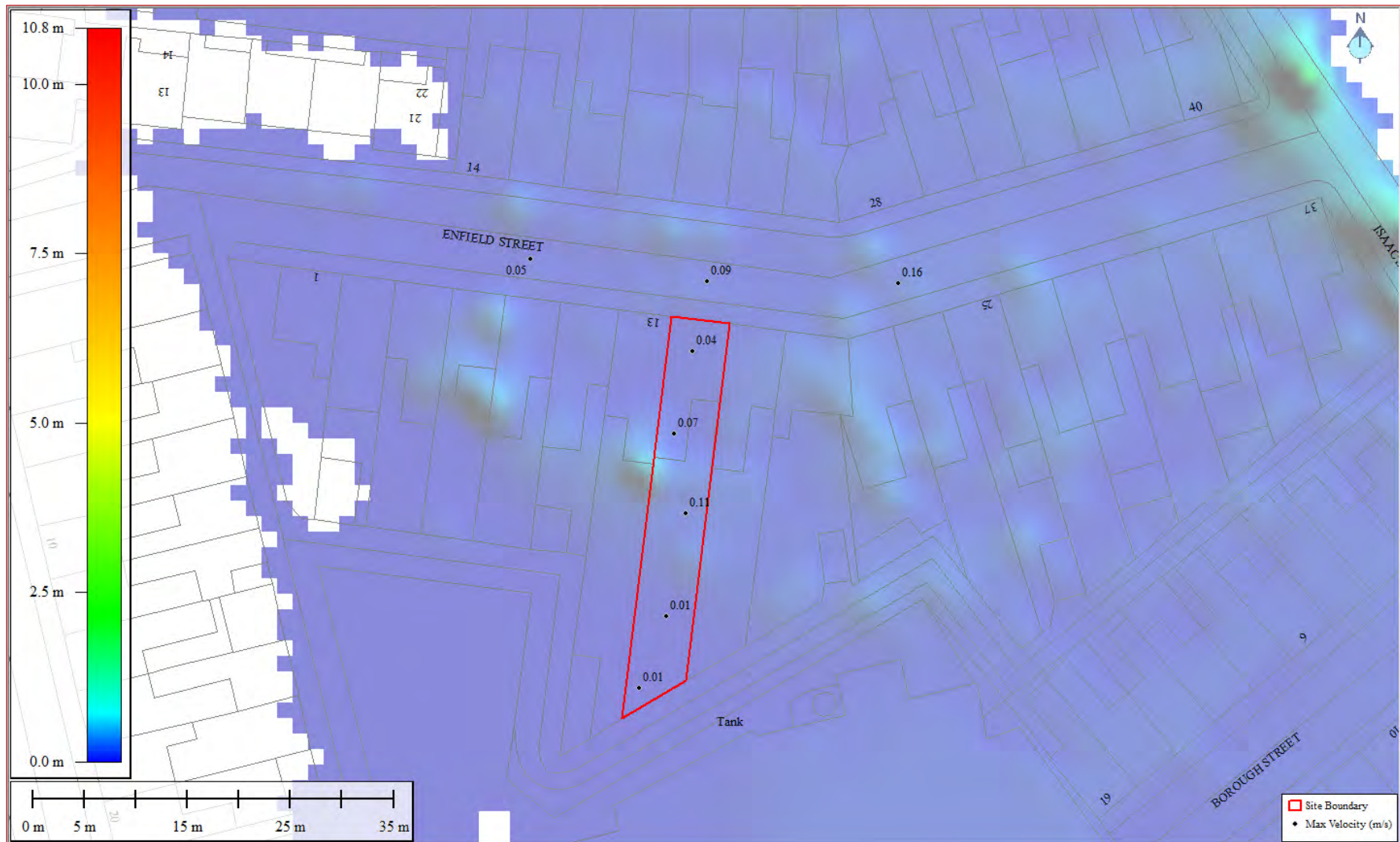
Q100 Defended Fluvial Event + 30% Climate Change Allowance

18721 – 15 Enfield St, Port Talbot



Maximum Estimated Flood Extent and Depths (m) during the Q1000 Defended Fluvial Event

18721 – 15 Enfield St, Port Talbot



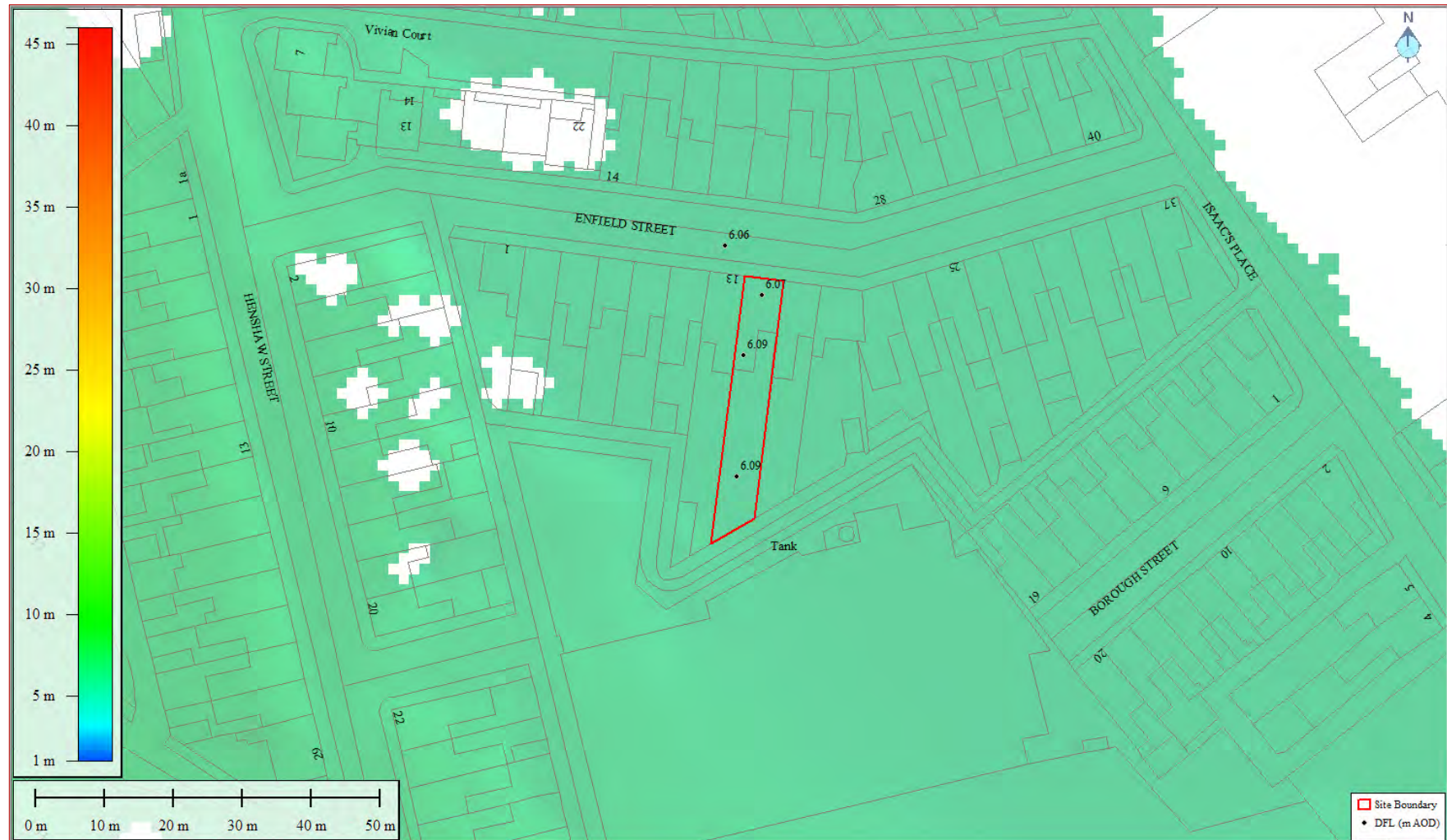
Maximum Estimated Flood Extent and Velocity (m/s) during the Q1000 Defended Fluvial Event

18721 – 15 Enfield St, Port Talbot



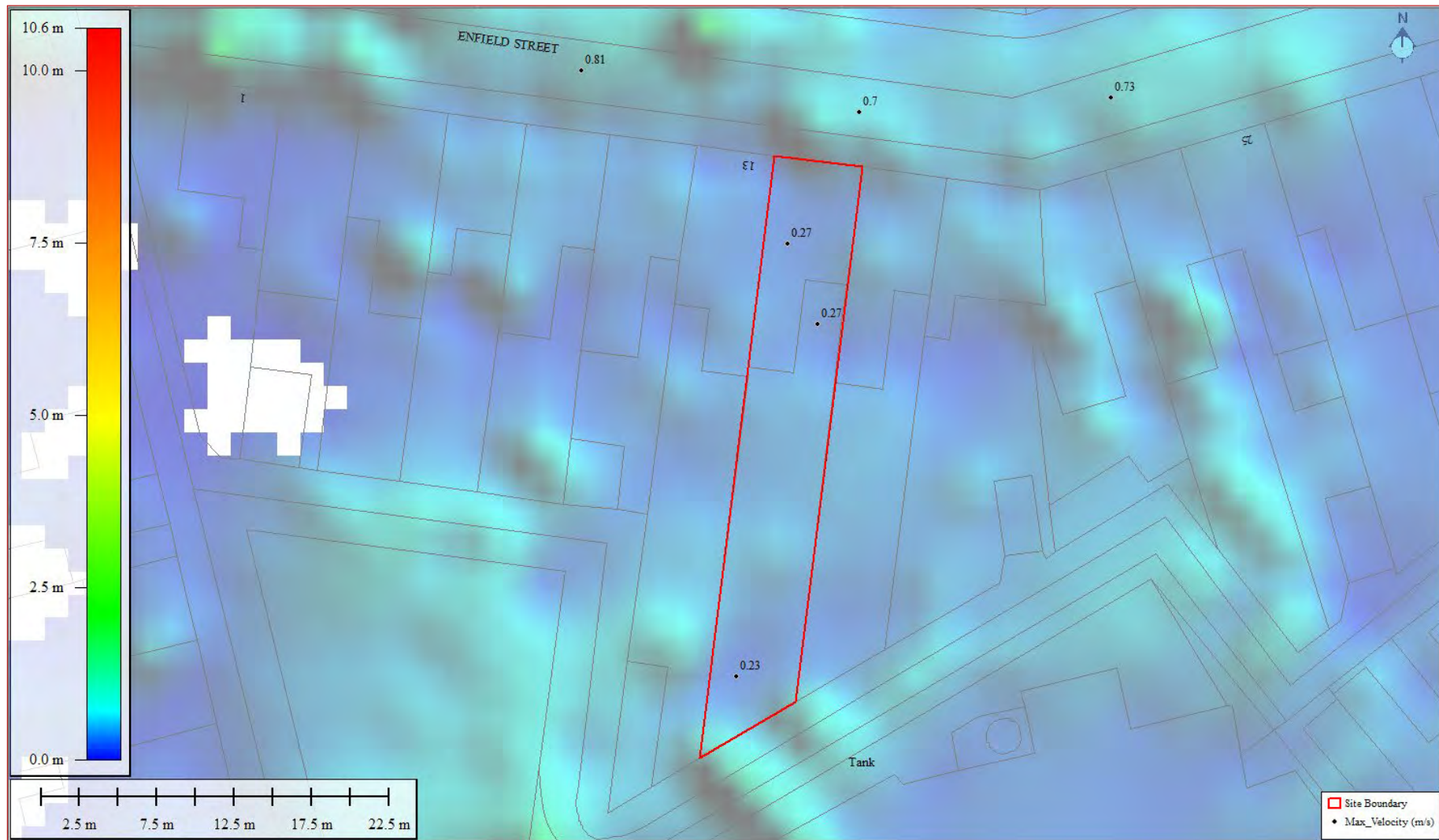
Maximum Estimated Flood Extent and Depth (m) during the T200 Defended Tidal Event + Climate Change (2091)

18721 – 15 Enfield St, Port Talbot



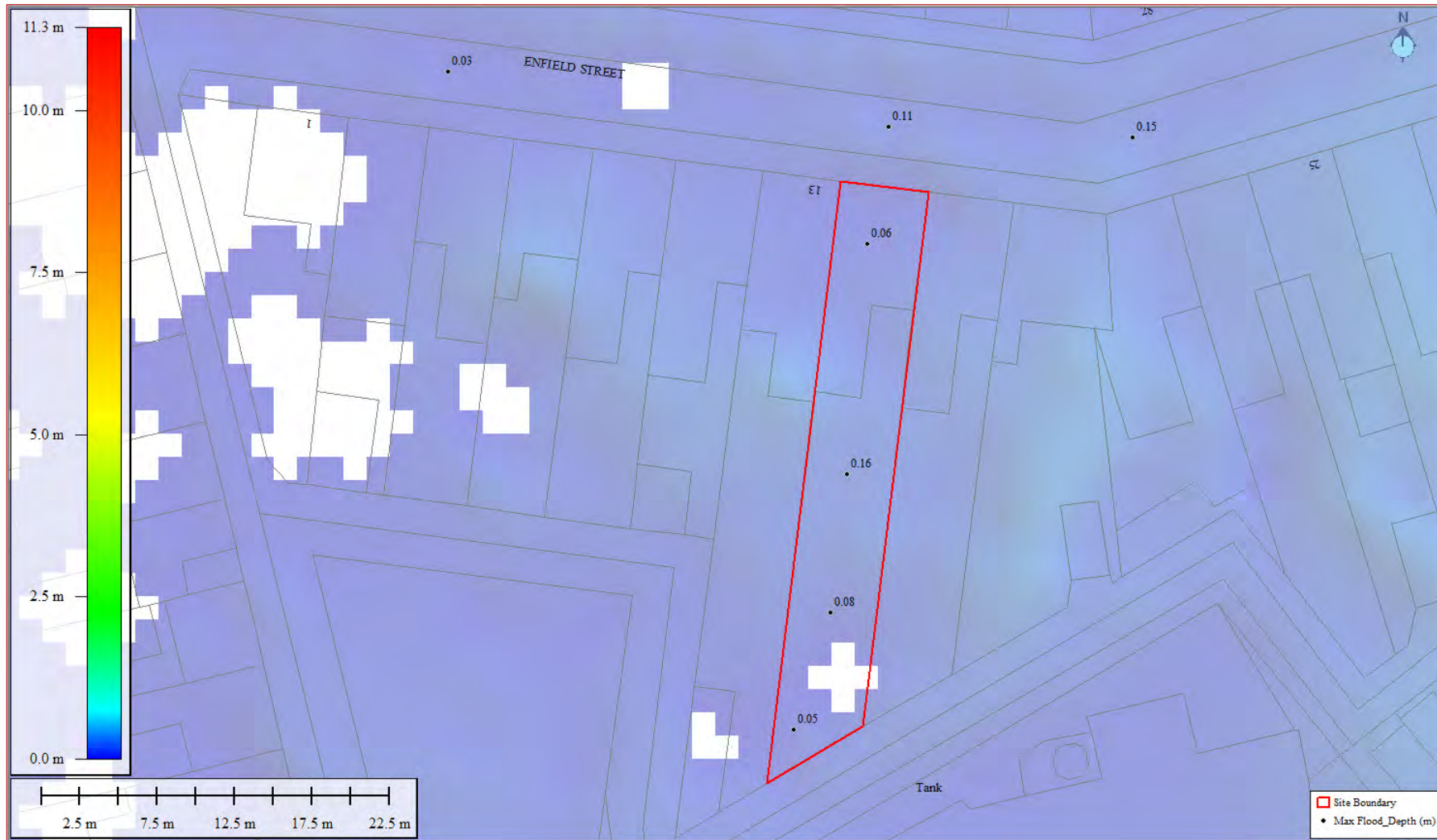
Maximum Estimated Flood Extent and Design Flood Levels (DFLs) during the T200 Defended Tidal Event + Climate Change (2116)

18721 – 15 Enfield St, Port Talbot



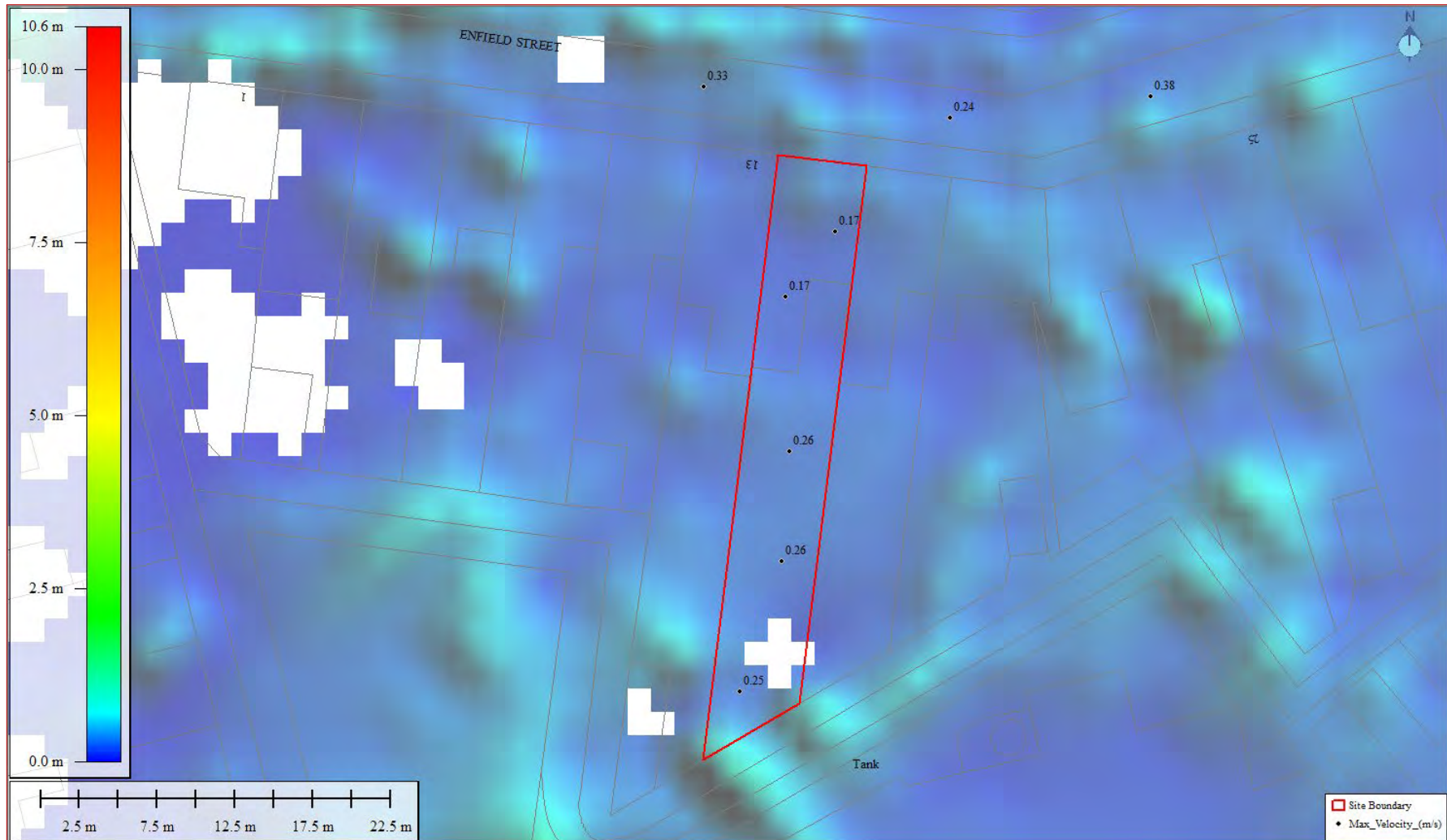
Maximum Estimated Flood Extent and Velocity (m/s) during the T200 Defended Tidal Event + Climate Change (2116)

18721 – 15 Enfield St, Port Talbot



Maximum Estimated Flood Extent and Depth (m) during the T1000 Defended Tidal Event + Climate Change (2091)

18721 – 15 Enfield St, Port Talbot



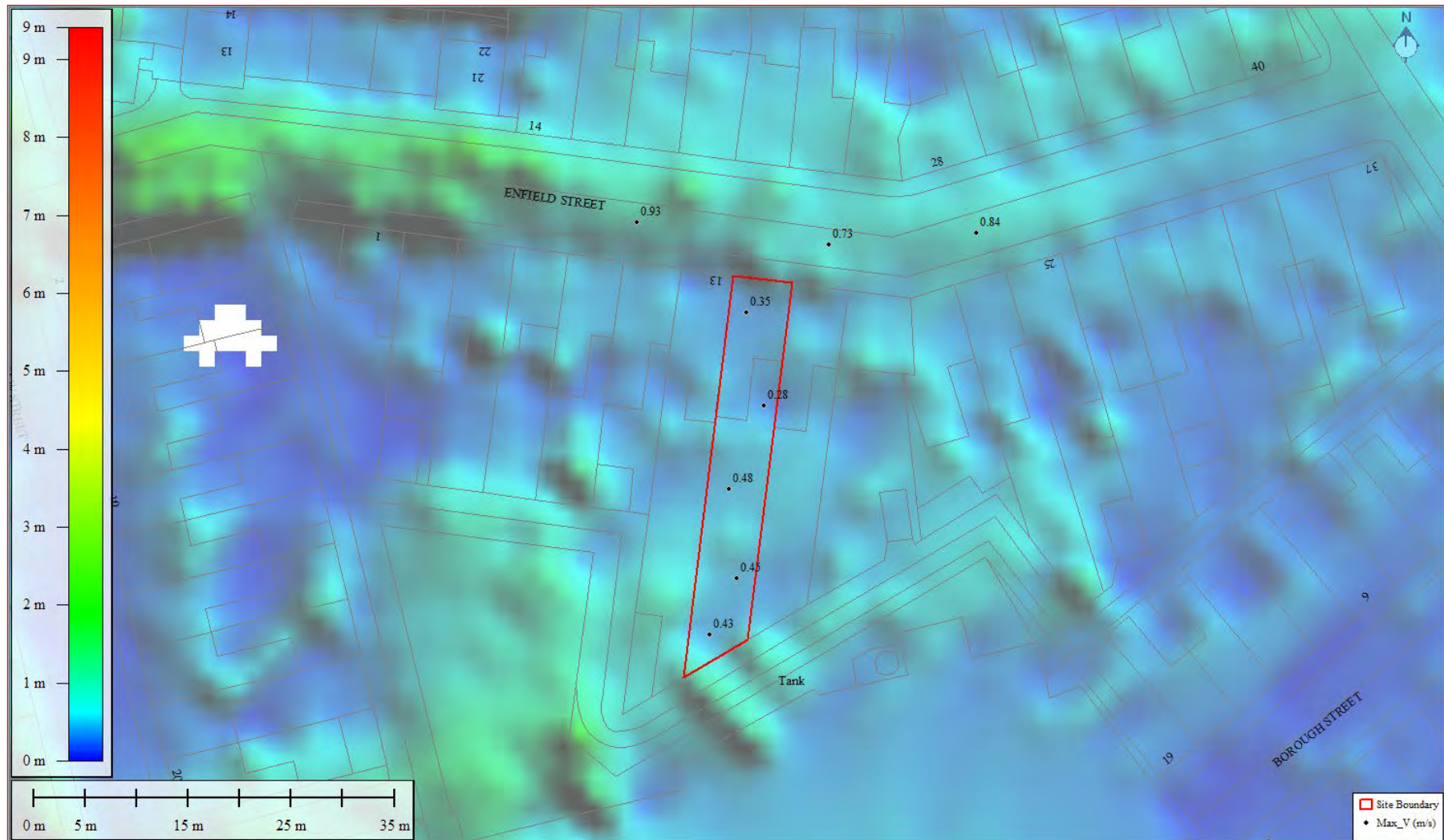
Maximum Estimated Flood Extent and Velocity (m/s) during the T1000 Defended Tidal Event + Climate Change (2091)

18721 – 15 Enfield St, Port Talbot



Maximum Estimated Flood Extent and Depth (m) during the T1000 Defended Tidal Event + Climate Change (2116)

18721 – 15 Enfield St, Port Talbot



Maximum Estimated Flood Extent and Velocity (m/s) during the T1000 Defended Tidal Event + Climate Change (2116)