

Flood Consequences Assessment

Revision A July 2025

Revision B September 2025

Change of use of the Change of use of the former Options Cards & Gifts Merthyr Tydfil to flats on the first and second floor



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1 Introduction

1.1 Background

This Flood Consequences Assessment has been produced to support a Planning Application for a development at: 28 Victoria Street, Merthyr Tydfil

The Planning Application is to support the change of use application.

The Flood Consequences Assessment has been based on guidance within Technical Advice Note (TAN) should be read in conjunction with Planning Policy Wales (PPW) and the Welsh National Marine Plan

Flood Consequences Assessment

2.1 Proposed Development

The Planning Application is for the refurbishment of an existing café area. Into flats which are situated on the first floor and second floor

Current use: was a café but closed many years ago, with residential on the front part of the first floor and the second floor.

Proposed use: Offices on the ground floor and Residential on the first and second floor.

2.2 TAN 15 Zonation

The Welsh Assembly Government provides Flood Zone advice in Technical advice note (TAN) 15: development, flooding and coastal erosion

2.3 Development Advice Map

The Welsh Assembly Government Produces Development Advice Maps (FMfP) to accompany TAN15. These maps show the degree of flood risk which is to be applied to development sites for the planning process and thus establish the suitability of the site for development. Examination of the TAN 15 Development Advice Maps (FMfP) indicates that the office proposal are in the flood zone 2, while all of the residential development site is above the flood risk area. We note that the proposed change of use at first floor level and above and likely to be above any potential flood depths should a flood event occur at this location. (Appendix B).

2.4 Development within FMfP zone FZ2

TAN15 indicates that only less vulnerable development should be considered in zone FZ2 subject to the application of the justification test, including acceptability of consequences.

2.5 Development Category

TAN15 indicates that less vulnerable developments are defined as:

General Industrial, Employment, Commercial and Retail development, Transport and Utilities Infrastructure, Car Parks, Mineral extraction site and associated processing facilities (excluding waste disposal sites). Whilst the FMfP indicates that the office proposal are in the flood zone 2, it should be noted that all of the residential development site is above the flood risk area. We note that the proposed change of use at first floor level and above and likely to be above any potential flood depths should a flood event occur at this location..

3. Flood Risk

3.1 Natural Resources Wales Flood Data

A data request was submitted to Natural Resources Wales asking for details of their most recent modelled flood levels for the site.

Unfortunately they do not have any detailed Flood Modelling in this area, the following information regarding flood risk was provided:

The proposed application site lies entirely within Zone 2 as defined by the Development Advice Map (FMfP) referred to under Technical Advice Note 15: Development and Flood Risk (TAN15). Our Flood Map information, which is updated on a quarterly basis, confirms the site to be within the 1% (1 in 100 year) and 0.1% (1 in 1000 year) annual probability fluvial flood outlines of the River Taff, a designated main river.

3.2 Flood Event

1 in 100 Year/1 in 200 year event

TAN15 (A1.14) requires that industrial developments remain flood free for the following flood events,

The 1% AEP/1 in 100 year event (Fluvial Flood)

The 0.5% AEP/1 in 200 year event (Tidal/Costal Flood)

Examination of the data obtained from the FMfP and Natural Resources Wales indicates that the site is located in FZ2 on FMfP. Therefore, during a 1% (1 in 100 year) plus climate change allowance flood event the property is predicted to be flood free.

In Zone 2 allocations may be made for new development and redevelopment of any vulnerability that is necessary to implement the strategy of an LDP, a strategy to regenerate or revitalise existing settlements or to achieve key economic or environmental objectives, provided that a Strategic Flood Consequences Assessment has identified an acceptable level of risk. Flood resilient design is more important in Zone 2 than Zone 1 and authorities should make it a requirement through the inclusion of appropriate LDP policies and use of planning conditions.

The Owners/Developers are aware of the possibility and consequences of flooding in the extreme event and will ensure mitigation measures are in place to deal with any flooding issues, as discussed in section 4

3.3 Surface Water Run-Off

The development proposal will be refurbished space for units. The stormwater from the buildings will be via existing drainage and/or via other sustainable systems.

3.4 Adverse Effects of Development

The proposed development will not have an increased area on the site, however it should be noted that it is outside the area of flooding, and that the drainage will be controlled and dispersed into an existing combined Welsh Water system. The development will have no adverse effect as regards flooding on the neighbouring properties or the surrounding area.

3.5 Site Topography

A topographic survey was completed in 2011 as part of the River Taff Central Link (Gyratory) FCA which included the River Taff and the Nant Morlais. Survey of the proposed development area was carried out in 2011. The site of the proposed bus station is reasonably flat, sloping downwards towards the River Taff in the western half of the site. The maximum elevation difference from the east to the west of the site is 2m. LiDAR, flown in 2011, was provided for the study with a resolution of 2 m. The ground levels fall from approximately 170 mAOD at the Nant Morlais to 165.5 m AOD at the northern end of the site. The ground level falls further downstream; there is a 4m elevation difference from the Bus Station site, for which we are basing our conclusion on to the A4102 Bridge 250 m downstream. Topographic survey was collected in September 2014 following the demolition of the Health Centre and in May 2015 following the demolition of the Police Station. This survey, as well as the 3D ground model of the proposed Bus Station was used to amend levels in the hydraulic model. See appendix B (second image)

We use this data above to give us an understanding of the level of the River Taff and not compare the scheme with the new bus station.

Google earth pin drop confirms that there is at least 4m difference between the River Taff and unit that Vale Consultancy converted. An extract (below) of an approved FCA from Vale set the finished floor level at 168.5m.

The property entrance is from High Street, the finished floor level of the building is 168.5m AOD. Level threshold, the gradient of High Street slopes up John Street to the north (Ref OS BM 175.10mAOD at Church Street) The site is currently located within and is served by significant and long-established infrastructure, the existing building is a three two storey building and the impermeable area is a mix of building roof with concrete hard standing to the rear of the property. The site area is approximately 0.087 ha and the principle access to the property is via a level threshold step directly off the pedestrian footway frontage on High Street 168.5 m AOD. *Appendix A*

We under took a level survey taking points on the FFL of the Café, the Retail unit and the above café where the first flat would be, using this datum as a starting point. The following was recorded

Starting point, being 28 Victoria Street ground floor – 172.000

First floor accommodation – 174.500

The site is located in FZ2 on FMfP. Therefore, during a 1% (1 in 100 year) plus climate change allowance flood event the property is predicted to be flood free. This is compliant with Figure 5 of TAN15.

Figure 6 – Tolerable conditions in an extreme flood event

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Types of new development	Maximum depth of flooding (mm)	Maximum velocity of flood waters (metres/sec)
Highly vulnerable development	600	0.15
Less vulnerable development Infrastructure associated with highly vulnerable development e.g. car parks, access, paths and roads Water compatible development (limited to those built elements of development that may be occupied by people)	600	0.3

The above figures are tolerances below which new development may be acceptable. Each site, however, must be considered individually, and a judgement taken in the context of the circumstances which could prevail at that site. When deciding if the consequences of an extreme flood event can be acceptably managed, planning authorities should refer to relevant policies and actions identified in their Development Plan and by Risk Management Authorities in local contingency plans.

Flooding causes danger when either the water is deep or it is moving quickly. However, NRW have confirmed that the unit is in The site is located in FZ2 on FMfP. Therefore, during a 1% (1 in 100 year) plus climate change allowance flood event the property is predicted to be flood free. This is compliant with Figure 5 of TAN15. The planning authority should consider all potential and likely users of any proposed development when assessing whether the development can be considered to provide a safe environment during an extreme flood event.

It should be noted that the finished floor level of the final escape is 8m above the level of the River Taf and have been confirmed that the property is predicted to be flood free. In summary, NRW does not have an objection to the application as submitted. We note that the proposed change of use at first floor level and above and likely to be above any potential flood depths should a flood event occur at this location.

4 Justification Test

4.1 Justifying the location of the development TAN15 (sec 6)

TAN15 states that new developments should be directed away from zone 2 and towards suitable land in less valuable zones. Developments within zones 2 will only be permitted if determined by the Planning Authority to be justified in that location.

Development will only be justified if it can demonstrate that:

Its location in zone 2 is necessary to assist, or be part of, a local authority regeneration initiative or a local authority strategy to sustain an existing settlement; or its location in zone 2 is necessary to contribute to key employment objectives supported by the local authority and other key partners, to sustain an existing development or region.

and, it concurs with the aims of PPW and meets the definition of previously developed land and,

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

Proposed Development

The proposed development is located on an existing high street within a primary growth area as defined in the adopted LDP.

The development is for the change of use of an existing building. The change of use will help to sustain an existing development.

The development meets the definition of previously developed land

The potential sources of flooding have been considered and found to be acceptable

4.2 Assessing Flooding Consequences TAN15 (sec 7)

If a development proposal located in zone 2 is defined as being of low vulnerability the Justification will be in the knowledge that the development will flood and will be planned accordingly. The development should be planned to ensure that is as safe as possible and there is:

Minimal risk to life

Minimal disruption to people living and working in the area

Minimal potential damage to property

Minimal impact on flood risk general

Minimal disruption to natural heritage

The development is contained within an existing retail unit and will have no adverse consequences on flood risk for the surrounding area.

4.3 Mitigation Measures

Having regard to the information within NRW response it is recommended that the developers undertake the following measures to mitigate the consequences of flooding.

Where practical consideration should be given to the incorporation of flood resistance/resilience measures within the fabric of the building.

- a) The Owner/Developer should ensure that a safe and accessible evacuation route is designed and maintained from the unit to a point which is higher than the 1 in 1000 flood level as indicated in the Development Advice Map. The Owner/Developer is to produce an evacuation route from the building to the nearest point which is higher than the predicted 1 in 1000 flood level. A copy of this Evacuation Route is to be displayed at the development. A copy of the evacuation route leading to land higher than the 1 in 1000 flood level event.

Escape would be via the front door, and/or the rear balcony areas, for which escape is outside the flood zone. See appendix B

- b) Sign up to the NRW flood warning service (0345 988 1188) <http://naturalresourceswales.gov.uk/flooding-and-water/floodline-warnings>

Further advice and information on protection from flooding is available in the ODPM publication 'Preparing for Floods: Interim Guidance for Improving the Flood Resistance of Domestic and Small Business Properties', which is available from the Planning Portal website: www.planningportal.gov.uk

The proposal is for a change of use and will not result in an increase in flooding elsewhere

Wet-Proofing and Recovery:

Water-resilient materials: Using flood-proof materials for floors, walls, and fittings, such as marine-grade plywood and water-resistant timber, and laying tiles instead of carpets.

Moving services: Relocating electrical sockets higher up the walls.

Making interiors wet-proof/recoverable: Designing interiors to withstand inundation and be easily cleaned and dried after a flood.

Protection Products:

Flood doors and barriers: Installing purpose-built products to block floodwater.

Self-closing air bricks: Preventing water from entering through wall openings.

Non-return valves: Installing these in drains to stop floodwater from backing up into the property.

5. Summary

This flood Consequences Assessment is provided as support for the planning application for the construction of ten new industrial units. Having regard to all available data the FCA demonstrates that:

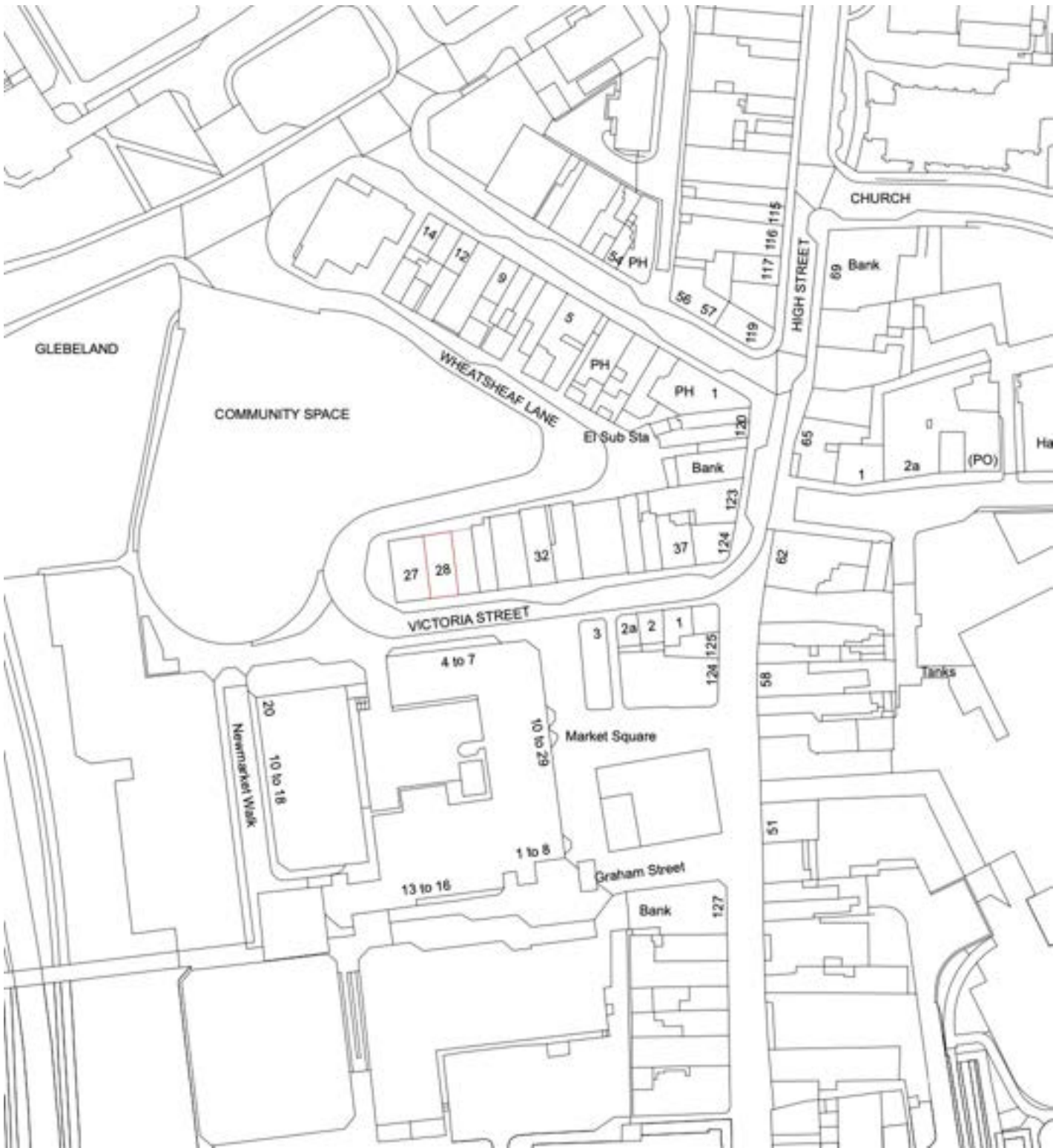
There is no increase in the surface water run-off from the development site due to the compact nature of the existing site.

The development will have no adverse effects on the neighbouring properties, surrounding area or natural heritage

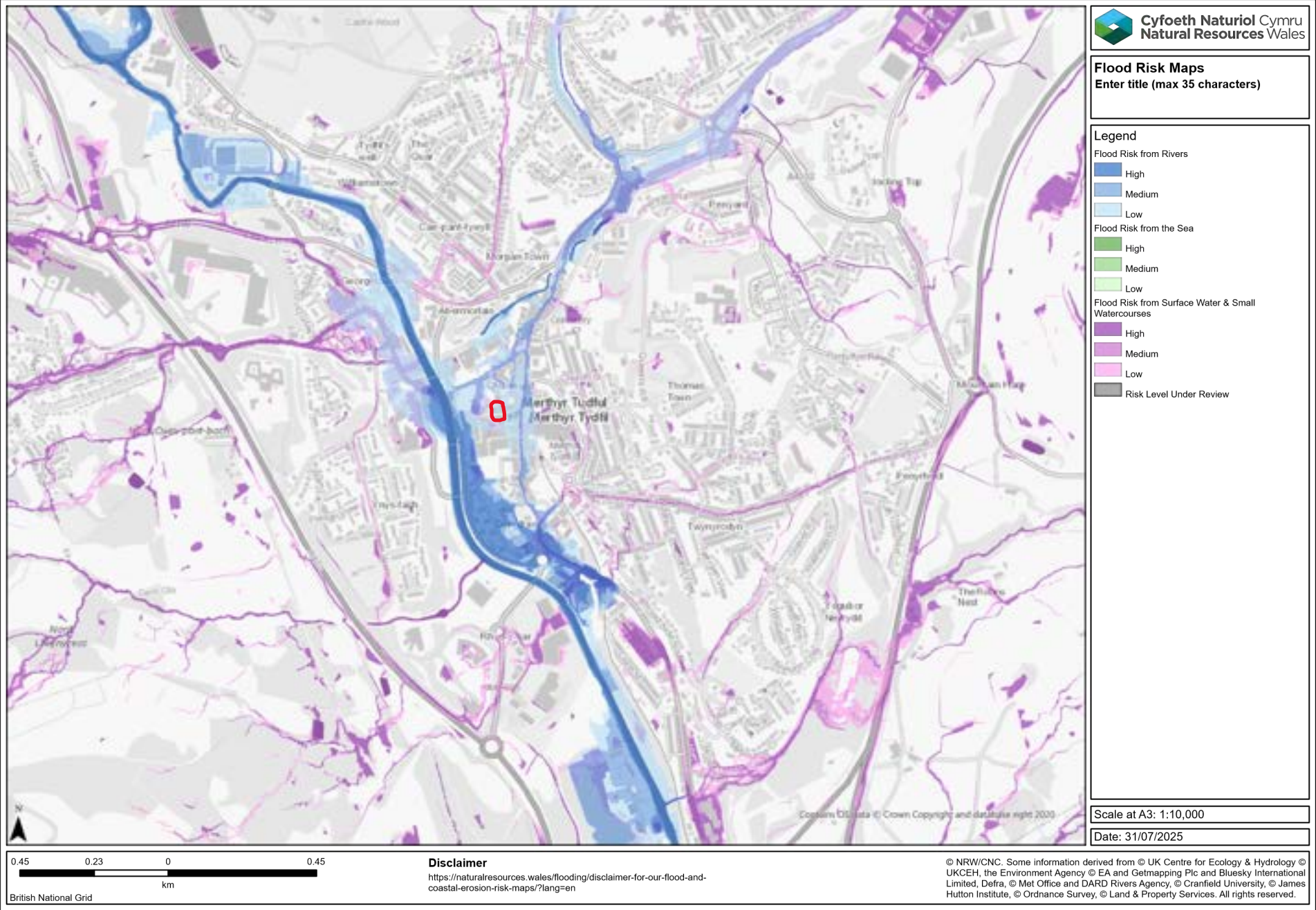
The proposed development meets the requirements of the TAN15 Justification test

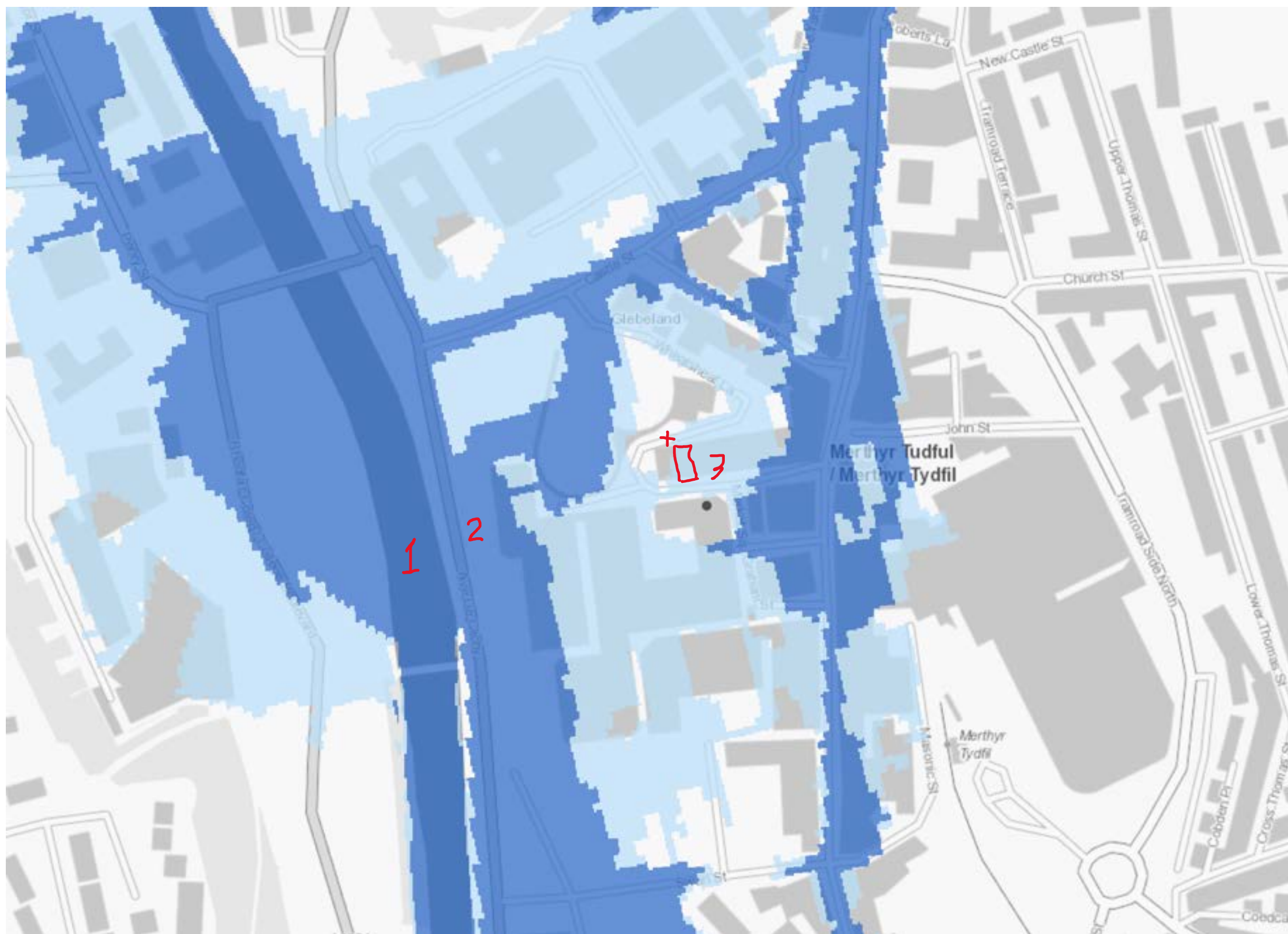
The Developer is aware of the consequences of flooding at the development site and the development will be planned accordingly Confirmation
that the finish floor level of the flats are above the 1 in 100yrs flood level.

Appendix A location plan



Appendix B – Flood Map for Planning





Point 1 – River Taff 165.5

Point 2 – 170m on Ave DeClichy

Point 3 – ground floor level of the unit 172.000

+ CROSS indicates rear escape access via

Appendix C

River Taff

