

FLOOD RISK ASSESSMENT FOR VALLEY WHOLESALE CARPETS LTD.

DOCKS WAY, NEWPORT, NP20 2NS

DATE: 30 NOV 2024

OUR REF: A8311/FRA

REPORT DETAILS

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Appendix A Natural Resources Wales Flood Data

Appendix B Sewer Records

Appendix C Proposed Site Plan

Appendix D Topographic Survey



1.0 INTRODUCTION

1.1 Terms of Reference

1.1.1 This Flood Risk Assessment (FRA) has been written in line with the requirements of the Technical Advice Note 15 (TAN 15)2012, National Planning Policy Technical Guidance document dated 2012.

1.1.2 The report is referring to the planned redevelopment of the existing Docks Way, Newport consisting of industrial buildings.

1.1.3 The report is based on the following information:

- (i)** Topographic survey
- (ii)** Natural Resources Wales mapping and consultation
- (iii)** Welsh Water mapping and consultation
- (iv)** Newport Local Flood Risk Management Strategy 2024-2030
- (v)** Caldicot and Wentlooge Coastal Modelling – Inception Report, July 2015
- (vi)** Caldicot and Wentlooge Coastal Modelling – Summary Report, June 2016
- (vii)** Caldicot and Wentlooge Coastal VDM - Model User Report – Final Report, June 2016
- (viii)** British Geological Survey

Attempts were made to analyse the raw data for Product 5 and Product 6. However, due to insufficient descriptions and explanation of the model files with various extensions, it was decided to focus on the available PDF files instead.

2.0 DETAILS OF SITE

2.1 Site Location

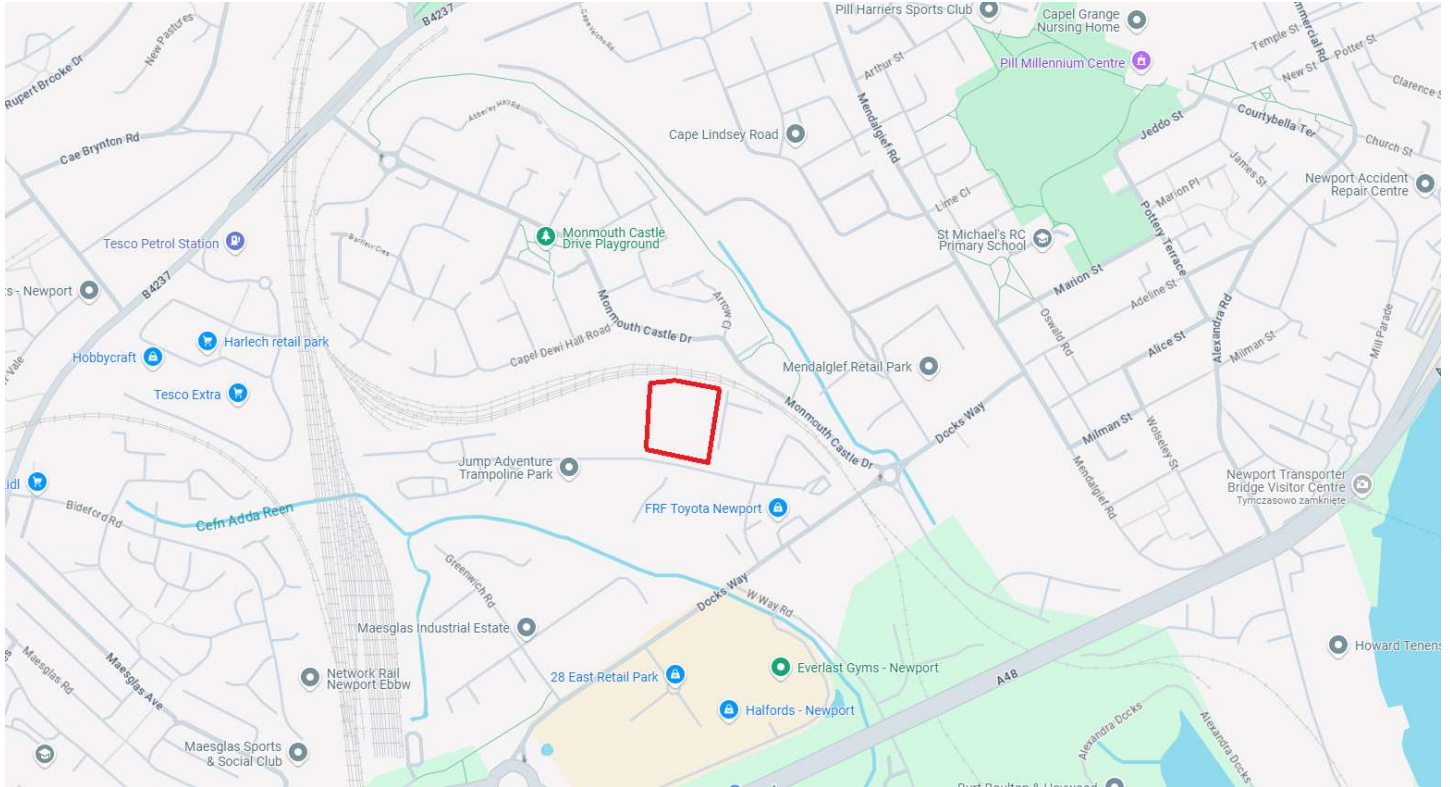
2.1.1 The proposed development site is located approximately 1.5km south-west from the Newport City Centre, circa 900m west of the River Usk, around 650m north-east from river Ebbw, 150m north-east from Cefn Adda Reen, 120m south-west from Twenty Acres Reen and about 700m north-west from Alexandra Docks.

A location plan is shown in Figure 1.

Table 1 – Site Summary

Project Name	VALLEY WHOLESALE CARPETS
Address	DOCKS WAY, NEWPORT
OS NGR	E: 330700 N: 186400
Site Area	1.04 ha
Development Type	Commercial/Industrial
NRW Development Control Area	Wales
Local Planning Authority	Newport City Council

Figure 1 – Site location plan (source maps.google.pl)



Description of Existing Site

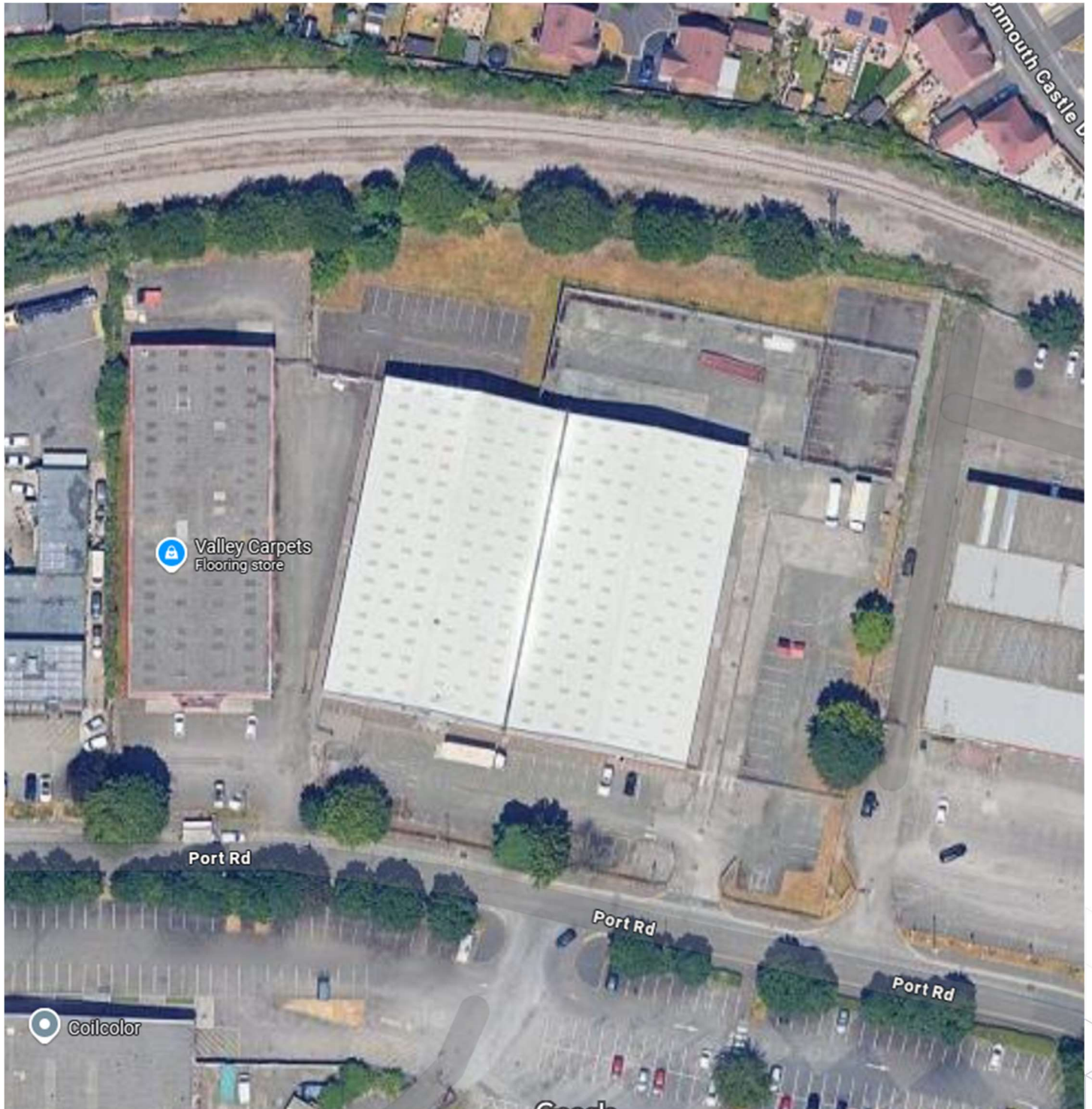
2.1.2 The majority of the site is gently sloping from west boundary towards existing building, and generally from the boundaries towards the dish channel drains surrounding the building from 3 other sides, except narrow grass strip to the east, which slopes towards eastern boundary.

Levels AOD within the site are ranging from 13.63 in the north west corner, 13.44 in the north east corner, 13.42 on west boundary, to 12.63 in the east.

Levels differences do not exceed 1.0m.

The site is lower than railway embankment to the north and adjacent site to the west, approximately level with the surrounding land on the eastern boundary and surrounding road to the south, except the gate where the site is lower than road levels. The site currently consists of impermeable hard standing and grass verges along north, south and east boundaries.

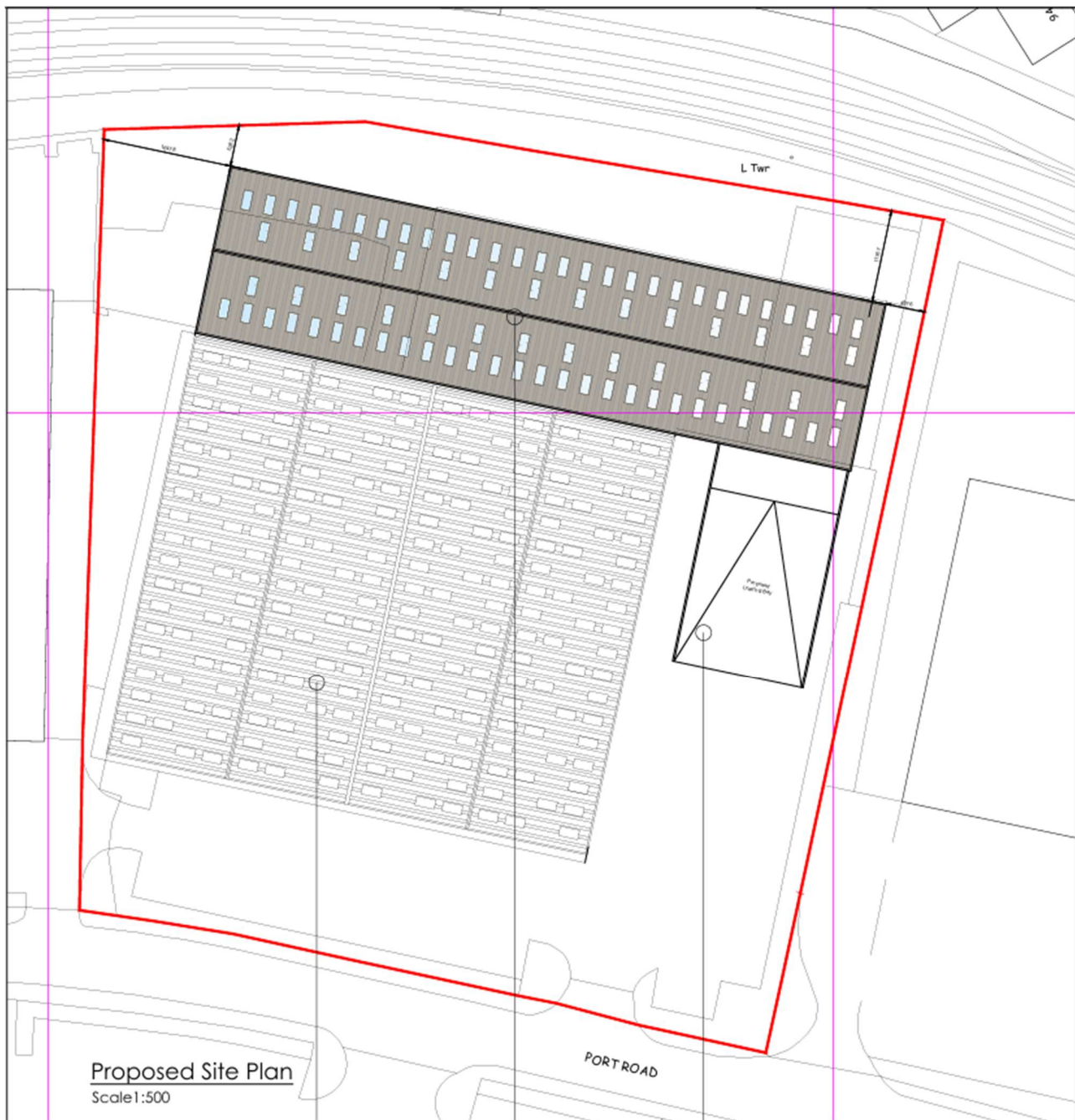
Figure 2 - Aerial Photos (source maps.google.com)



2.2 Development Proposals

2.2.1 The development proposal comprises of an office/industrial building extension to be built to existing building, a development plan is shown in figure 3.

Figure 3 – Development Proposals (source AJS ref. A8311 - 007 – P3 – Proposed and Existing Layout)



3.0 INITIAL ASSESSMENT

3.1 Flood Zone Classification and Historical Flooding

Figure 4 below indicates the approximate floodplain plan as per the Natural Resources Wales Website. The whole site is situated outside Flood Zone 2 or Flood Zone 3 .

As per the Natural Resources Wales Website definition

“Rivers & Sea – Flood Zone 2

The combined 0.1% risk of flooding from rivers and the sea including climate change.

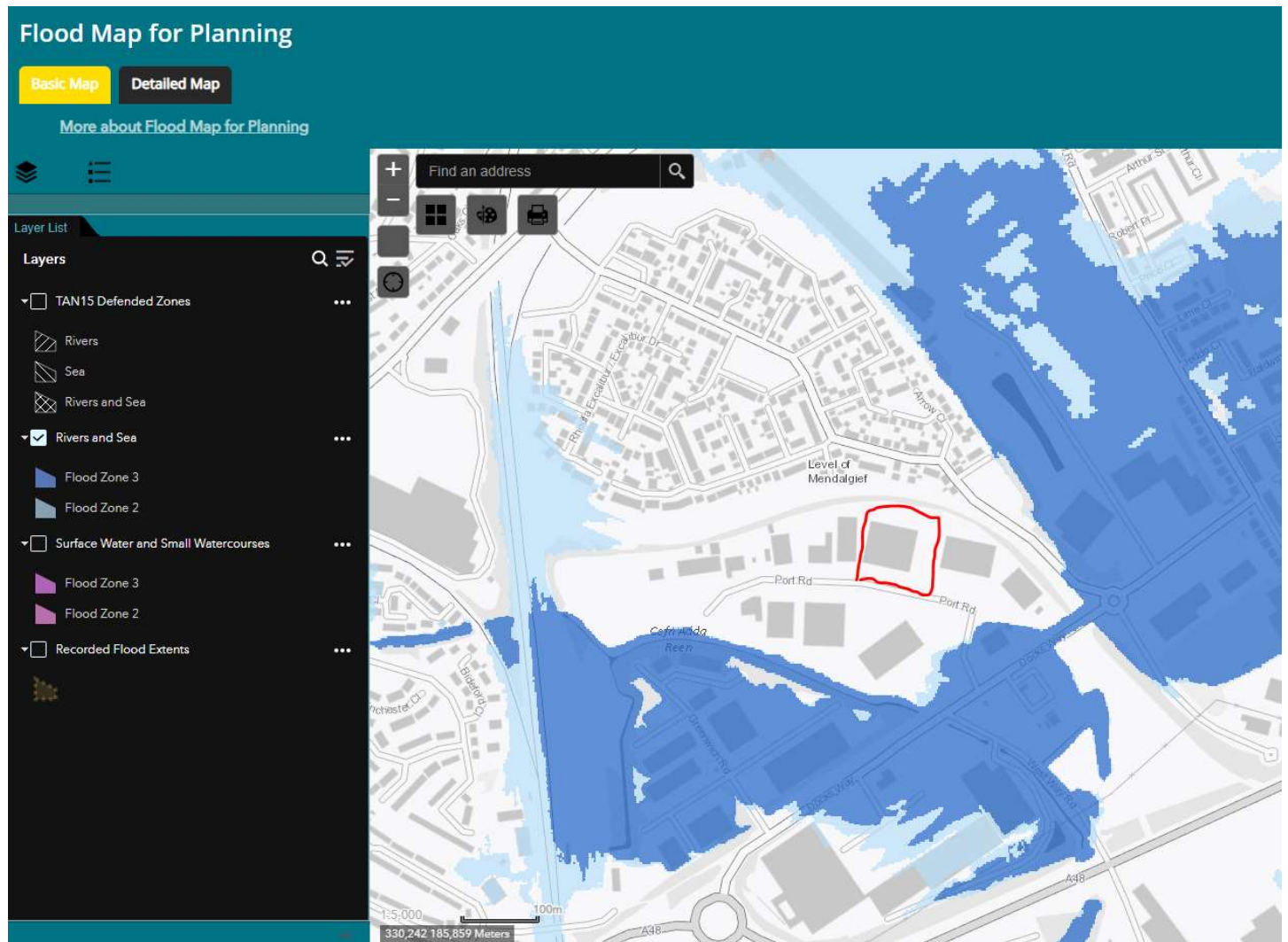
Rivers & Sea – Flood Zone 3

The combined 1% risk of flooding from rivers and the sea including climate change.”

Therefore, it is concluded the site is situated within Flood Zone 1 (Less than 1 in 1000 (0.1%) (plus climate change) chance of flooding in a given year- as per TAN15 Figure 2).

As indicated in Natural Resources Wales data - Modelled Extents Map centered on Port Road Newport — see Appendix A —the whole site is outside a 1 in 100 year Modelled Extent (with 100 year flow on River Trent), which is 1%. It is not in a functional flood plain, and remains within Flood Zone 1.

Figure 4 - Natural Resources Wales Detailed Flood Map



3.2 Possible Flood Mechanisms

The possible sources of flood risk to the site are presented below. The significance of these sources is investigated further in section 4.0 of this report where applicable.

Table 2 – Possible Flood Mechanisms

Flood Report	Presence	Description
Flooding from Rivers (Fluvial)	X	The site is situated outside Flood Zone 2 or Flood Zone 3. Therefore flood risk from Rivers is very low.
Flooding from the Sea (Tidal)	X	The site is not affected by tidal flooding being situated outside Flood Zone 2 or Flood Zone 3.
Flooding from Groundwater	X	The site is generally flat with levels differences not exceeding 1.0m. The site is lower than railway embankment to the north and adjacent site to the west, approximately level with the surrounding land on the east boundary and surrounding road to the south, except the gate where the site is lower than road levels. British Geological Survey (BGS) borehole log for adjacent site at Docks Way shows no groundwater. The water level could be verified in ground investigation. What is more, as demonstrated by google earth image (Figure 5.1), the site is not located in a bottom of a valley, therefore based on given information, it is concluded that the risk from groundwater flooding is considered low.
Flooding from Sewers	X	There are sewers within Port Road. There is a chance for sewers flooding. The site is higher than road levels, therefore low chance for flooding the site from sewers. The levels are such that water from flooded sewers naturally remains on the road and flows along it toward lower-lying areas to the east as demonstrated by google earth image (Figure 5.2). There are also some private drains on site surrounding the building. Most of manholes with lowest cover levels are located lower than the building and in the areas of car parks which are generally lower than the building. Only the private sewer to the east has manholes with cover levels higher than the building, but it is connected other part of sewer which is lower than the building, so generally risk from sewers is considered low.
Overland flow originating off site	X	The site is generally flat with levels differences not exceeding 1.0m. The site is lower than railway embankment to the north and adjacent site to the west, approximately level with the surrounding land on the east boundary and surrounding road

		to the south, except the gate where the site is lower than road levels. According to Natural Resources Surface Water Map the site is not affected or affected very marginally to the north side. Surface water flood risk is existent but low. There is some small part of the site, small area within area of proposed extension which is in Flood Zone2. However, the finish floor level (FFL) is to be as existing building, which will effectively bring the site to Flood Zone 1.
Development Drainage	✓	The development drainage will need to consider the risk of flooding both on and offsite.
Reservoirs canals and other artificial sources	X	According to NRW Website "Reservoir flooding is extremely unlikely to happen. There has been no loss of life in the UK from reservoir flooding since 1925. All large reservoirs must be inspected and supervised by reservoir panel engineers. As the enforcement authority for the Reservoirs Act 1975 in Wales, we ensure that reservoirs are inspected regularly and essential safety work is carried out." According to Nottinghamshire SFRA "it is widely acknowledged that canals may present potential flood risks. Canals are considered to be controlled water bodies so flood risk is deemed to be minimal unless overtopped in storm conditions. There is, however, a residual risk of structural failure." Is it concluded flood risk from reservoirs canals and other artificial sources is generally low.

The primary source of flood risk is from the Development Drainage.

Figure 5 British Geological Survey borehole log(source <https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/385189>)

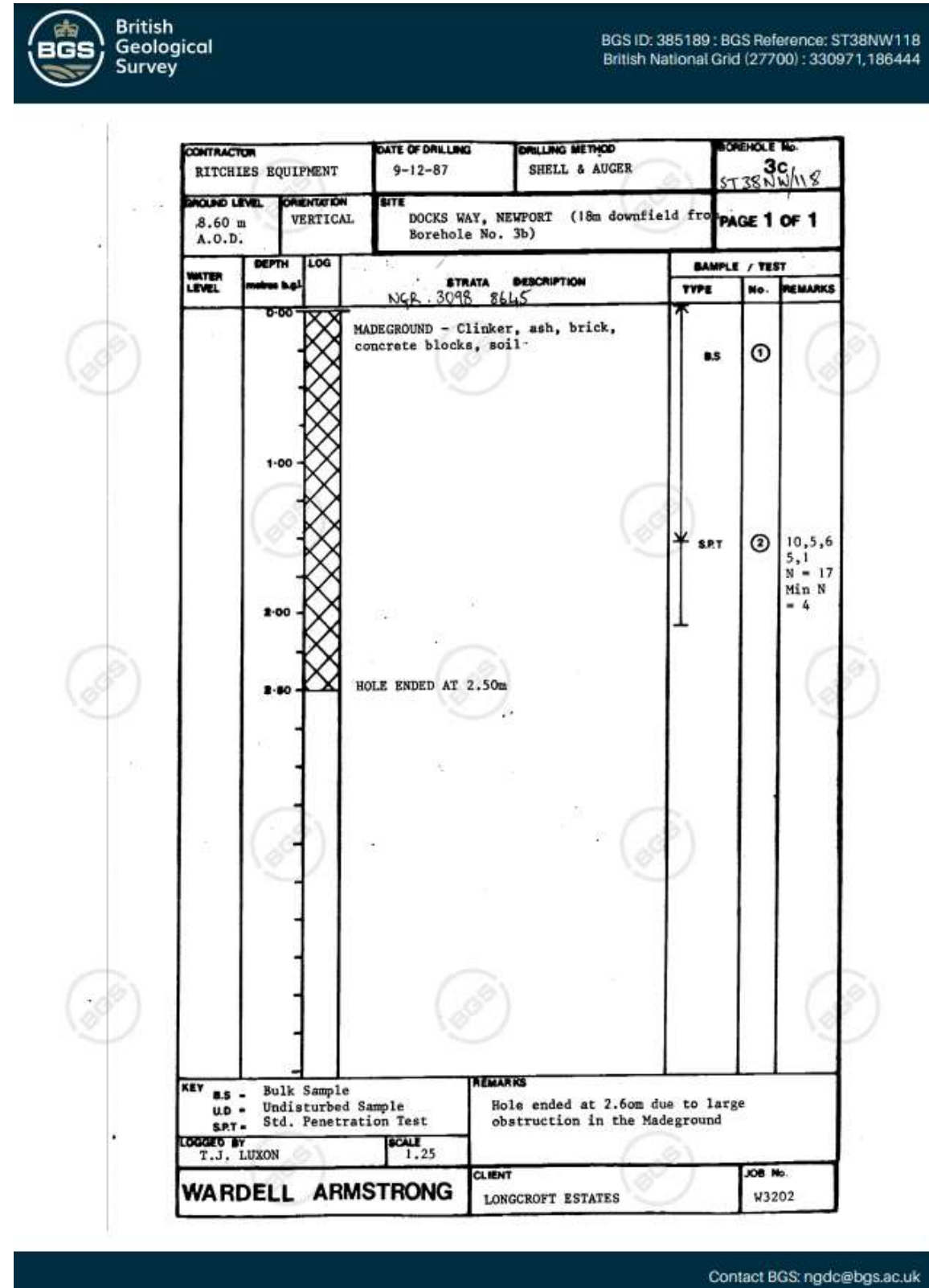


Figure 5.2 Cross-section Port Rd in front of the site (source Google Earth Pro)



4.0 FLOOD RISK ASSESSMENT

4.1 Flooding from Rivers (Fluvial) and Sea (Tidal)

The Natural Resources Wales flood map illustrates the development area is positioned within the **Flood Zone 1** which is understood to be land at a very low probability of flooding (Less than 1 in 1000 (0.1%) (plus climate change) chance of flooding in a given year- as per TAN15 Figure2).

According to Flood Map for Planning/Development Advice Map (<https://naturalresources.wales/flooding/flood-map-for-planning-development-advice-map/?lang=en>)

“The Welsh Government is due to implement a revised TAN15. This will be supported by the Flood Map for Planning, which shows how climate change will affect flood risk extents over the next century.”

“The Welsh Government has recently undertaken a consultation on proposed further amendments to the TAN15. This means the formal implementation of the TAN15 and Flood Map for Planning has been suspended. The consultation closed on 17 April 2023.”

According to development Advice Map the site is situated in Zone B. However, the site is considered to be in Flood Zone 1 as per Flood Map for Planning as according to Flood Map for Planning website.

“The Flood Map for Planning has no official status until the Welsh Government implements the revised TAN15. However, it represents the best available information we have on flood risk and Natural Resources Wales will continue to use this to inform our planning advice.”

Attempts were made to analyse the raw data for Product 5 and Product 6. However, due to insufficient descriptions and explanation of the model files with various extensions, it was decided to focus on the available PDF files instead.

Apart from flood map for planning and Natural Resources Website the following documents have been analysed

- Caldicot and Wentlooge Coastal Modelling – Inception Report, July 2015
- Caldicot and Wentlooge Coastal Modelling – Summary Report, June 2016
- Caldicot and Wentlooge Coastal VDM - Model User Report – Final Report, June 2016

The maps from all above documents are presented below and according to all them the site is not affected by the flooding – always being outside of any area affected by flooding as discussed below.

According to Newport Model Update Jennifer Wilson Rev No 1.0 the site remains outside of any flooding in the all modelled defended scenarios form 30 to 1000 years period from 2021 to 2121.

Figure 6 Natural Resources Wales Detailed Flood Map (zoomed to site)



According to Newport Model Update Jennifer Wilson Rev No 1.0, point 2.1.1 – “The August 2009 Capita Symonds study of Newport (V2.0) showed that the dominant flood risk in this area is tidal.” What is more, in point 2.3 it is said “updated survey has been added into the model in the locations as outlined below. Please note that in September 2016 the Ordnance survey changed their datum so any survey carried out after this date will have been transformed using the new OSTN/ OSGM 15 therefore is not directly comparable to the survey gathered prior to this.”

According to point 2.4 of the above report the defended and undefended scenarios have been modelled - “Table 2 below shows the list of events and scenarios that were run as part of the study (from v8 model run). The DEF scenario includes all flood defences excluding the third party defence at the former Sainsburys site. The DEF01 includes all flood defences including the third party defence. The DEF scenario was used when updating the NRW mapping products as there is no evidence of a maintenance programme in place for the Sainsburys defence, so this was not able to be added as a third party defence.”

Figure 7 – Modelled Events and Scenarios (source Newport Model Update Jennifer Wilson Rev No 1.0. Table 2: Modelled tidal events and scenarios in v8 run)

Event	Present Day (2021)			75 years time (2096)			100 years time (2121)		
	DEF	DEF01	UND	DEF	DEF01	UND	DEF	DEF01	UND
T5	✓	✓	✓						
T10	✓	✓	✓						
T30	✓	✓	✓	✓	✓	✓	✓	✓	✓
T75	✓	✓	✓						
T100	✓	✓	✓						
T200	✓	✓	✓	✓	✓	✓	✓	✓	✓
T1000	✓	✓	✓	✓	✓	✓	✓	✓	✓

Strategic Flood Risk Assessment (SFRA)

As indicated in Newport Local Flood Risk Management Strategy 2024 -2030 – “Newport City Council have recently undertaken works to clear the culvert under West Way Road and contacted the riparian landowners in the area to undertake clearance of watercourses to alleviate flooding at the rear of Mendalgief Road. During 2023/24 a CCTV survey, desilting and relining works have been carried out to the storm line at Usk Way/Dolphin Street.”

“Pillgwenlly ward is situated in the central part of Newport City Council, to the immediate south of Central Newport. It has a population of 8,1161 and an area of 6.43 km², which is approximately 3.4% of the total area of Newport. The ward is flat and contains industrial, commercial and some residential properties. The main River Ebbw flows along the boundary of the ward, to the south-west and the River Usk to the east.”

“The majority of the reported flood risk incidents in Pillgwenlly are clustered towards the north of the ward following major highways, such as Usk Way (A4042) which experienced a storm pumping station issue and

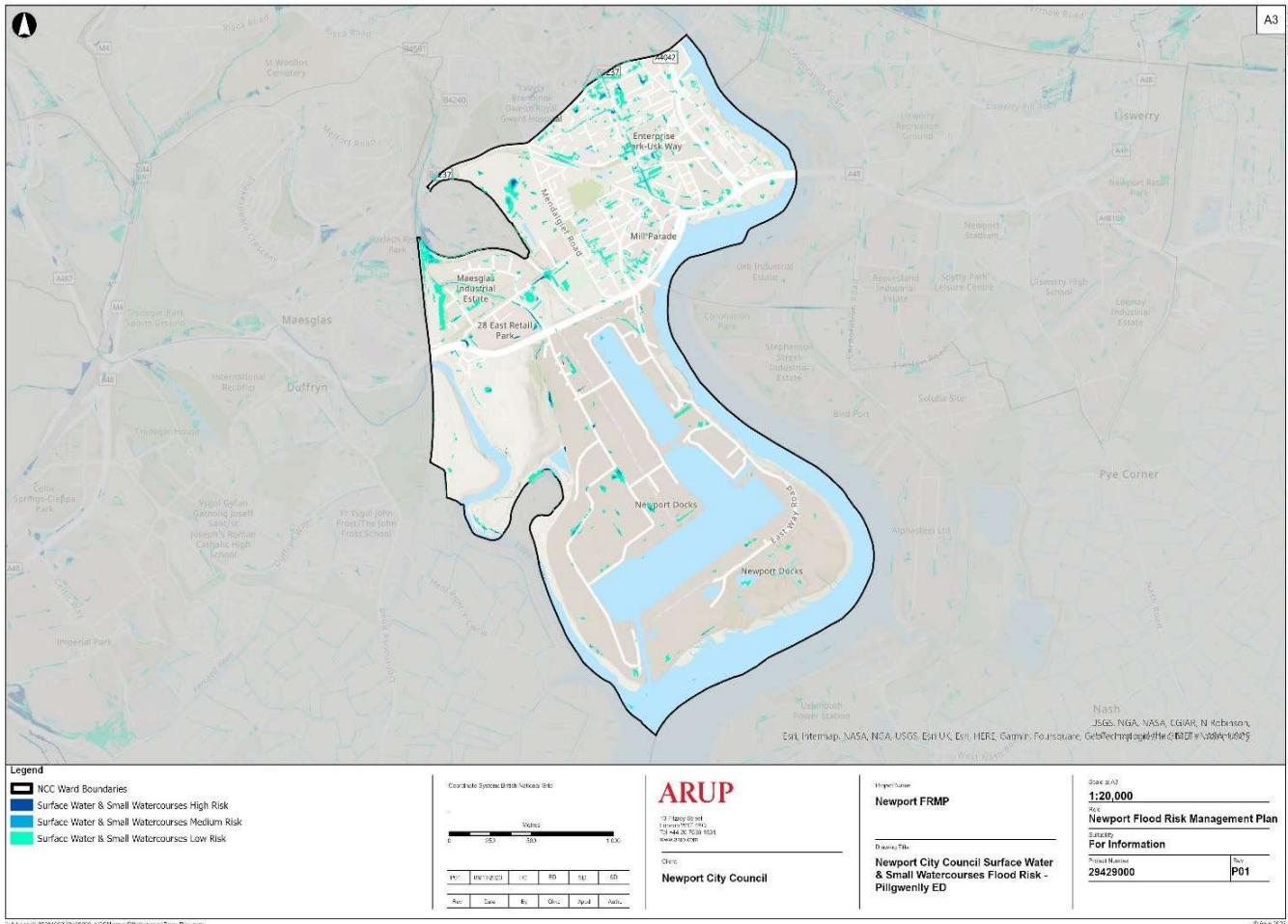
Commercial Road. However more sparsely located incidents did occur throughout the ward on more minor routes such as Temple Street, Carlisle Street and Lime Close. The surface water flood maps show isolated areas of low risk flooding with a few small areas of high-risk flooding. The main areas of properties affected is in the north of the ward in the vicinity of the Enterprise Park and is low risk only. The proposed actions by Newport City Council include investigation of highway flooding alongside replacement of

damaged pipework and review of maintenance schedules.”

As per SFRA chapter referring to Pillgwenlly (the area where the site is located), there is no information on any past flooding or flood risk that would affect the Port Road.

Finished floor levels to the Proposed Unit is to be built against northern boundary of existing building with no option to have it any different to the existing floor levels.

Figure 8 – Pillgwenlly Surface Water Flood Risk (source Newport Local Flood Risk Management Strategy 2024 -2030, Figure 21)



To conclude the site remains outside of any flooding according to Newport Local Flood Risk Management Strategy.

Flood Defences

Based on Caldicot and Wentlooge Coastal VDM - Model User Report, point 4.3 flood defences and structures “The defences which have been included into the Wentlooge TUFLOW model are the formal defences and infrastructure (Figure 4-2).”

“The coastal frontage defence consists of an earth embankment which runs from Tredegar Pill in the east to Rumney Sea Wall in the west. The elevation levels for the embankments were taken from the 2013 survey data provided by NRW. The other defences included in the TUFLOW model are the formal coastal and fluvial defences and consist of:

- a grassed earth embankment running from the A48 to the railway line in Duffryn (taken from the previous model of the area which was provided by NRW);
- the raised concrete walls at Alexandra Docks in Newport (taken from the previous model of the area which was provided by NRW);
- a grassed earth embankment running along the Ebbw River from Pont Ebbw to the A48 in Maesglas (taken from the previous model of the area which was provided by NRW);
- the series of embankments and raised concrete walls which make up the fluvial defences both in Newport and up the west bank of the River Usk from Powder House Point to Crindau Pill (taken from the previous model of the area which was provided by NRW);
- the raised earth embankments in Parc Tredelerch and at Rumney Playing Fields (taken from the Environment Agency's national defence dataset);
- a section of raised earth embankment at West Usk Lighthouse (elevation levels for the embankments were taken from the 2013 survey data provided by NRW)
- and the section of raised earth embankment at Tabbs

Figure 9 – Flood Defence Map centred on Port Road Newport, NG4 2JQ - (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx original Figure 4-2: Formal flood defences and infrastructure included in the Wentlooge TUFLOW model)

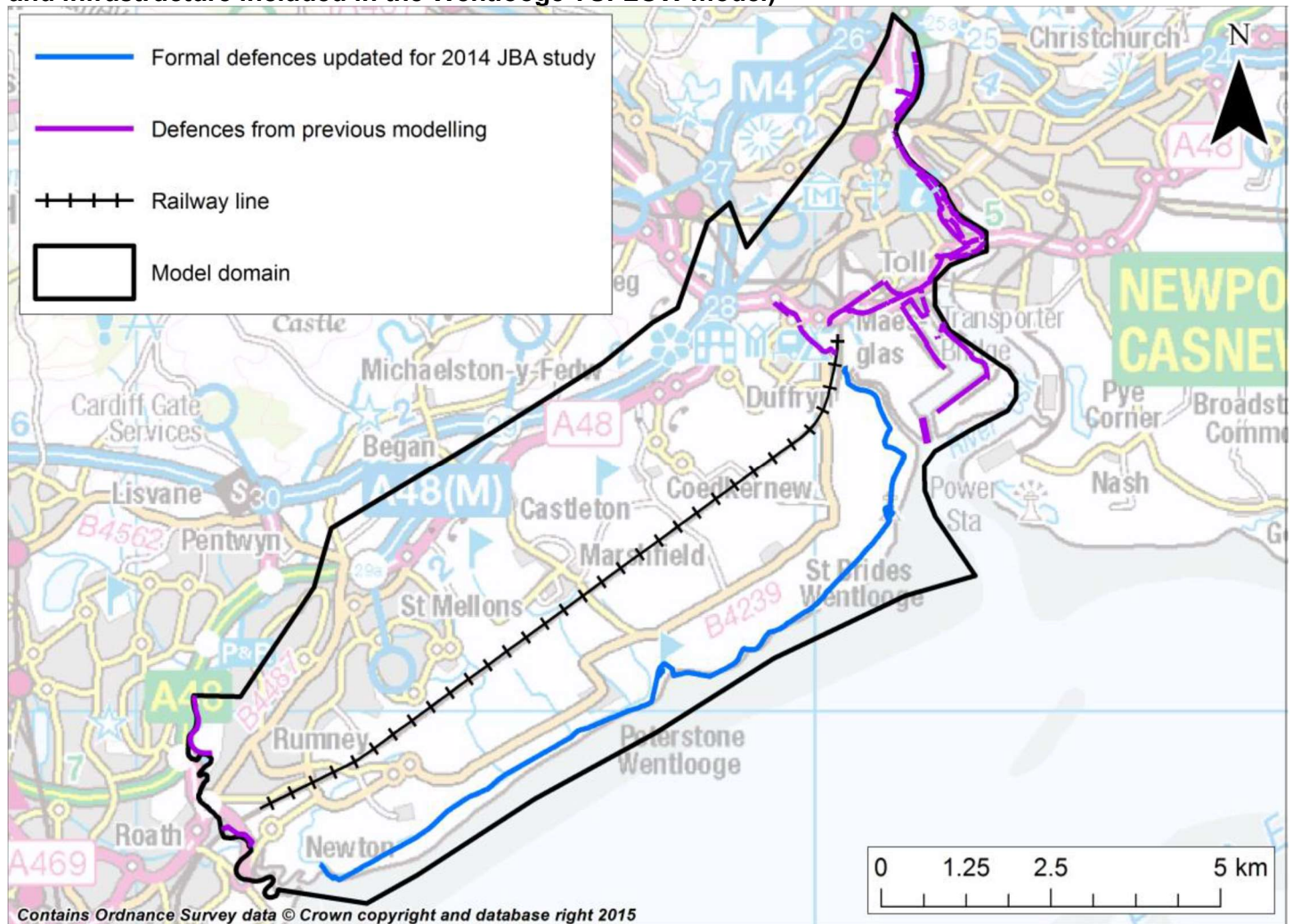


Figure 10 – Flood Defence Map centred on Port Road Newport, NG4 2JQ - (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx Figure 4-3: Formal flood defence footprints removed from the Wentlooge TUFLOW model)

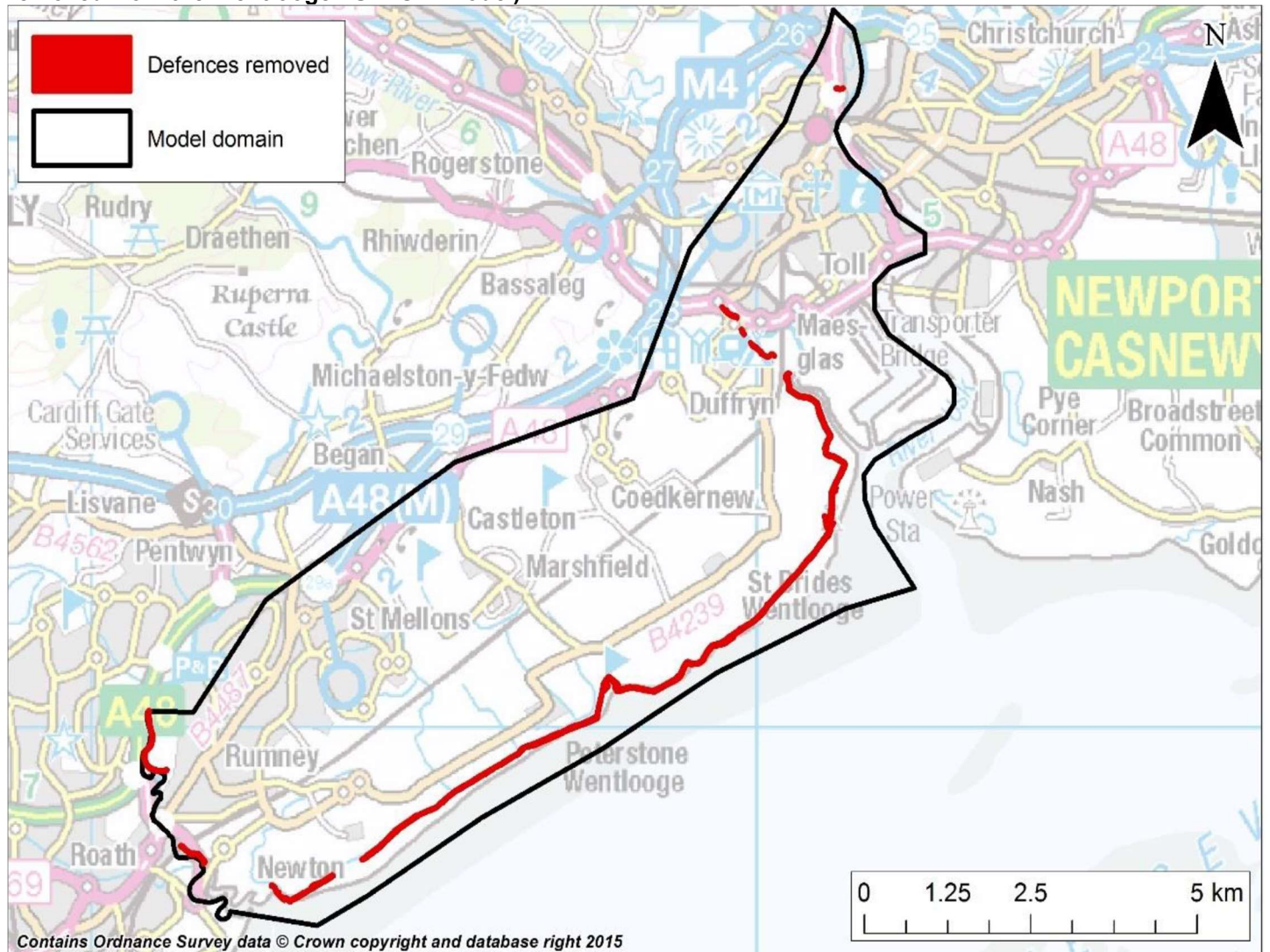


Figure 11 – Modelled Flood Extents Map Port Road Newport - - (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx - original Figure 9-5: Wentlooge model climate change flood extents)

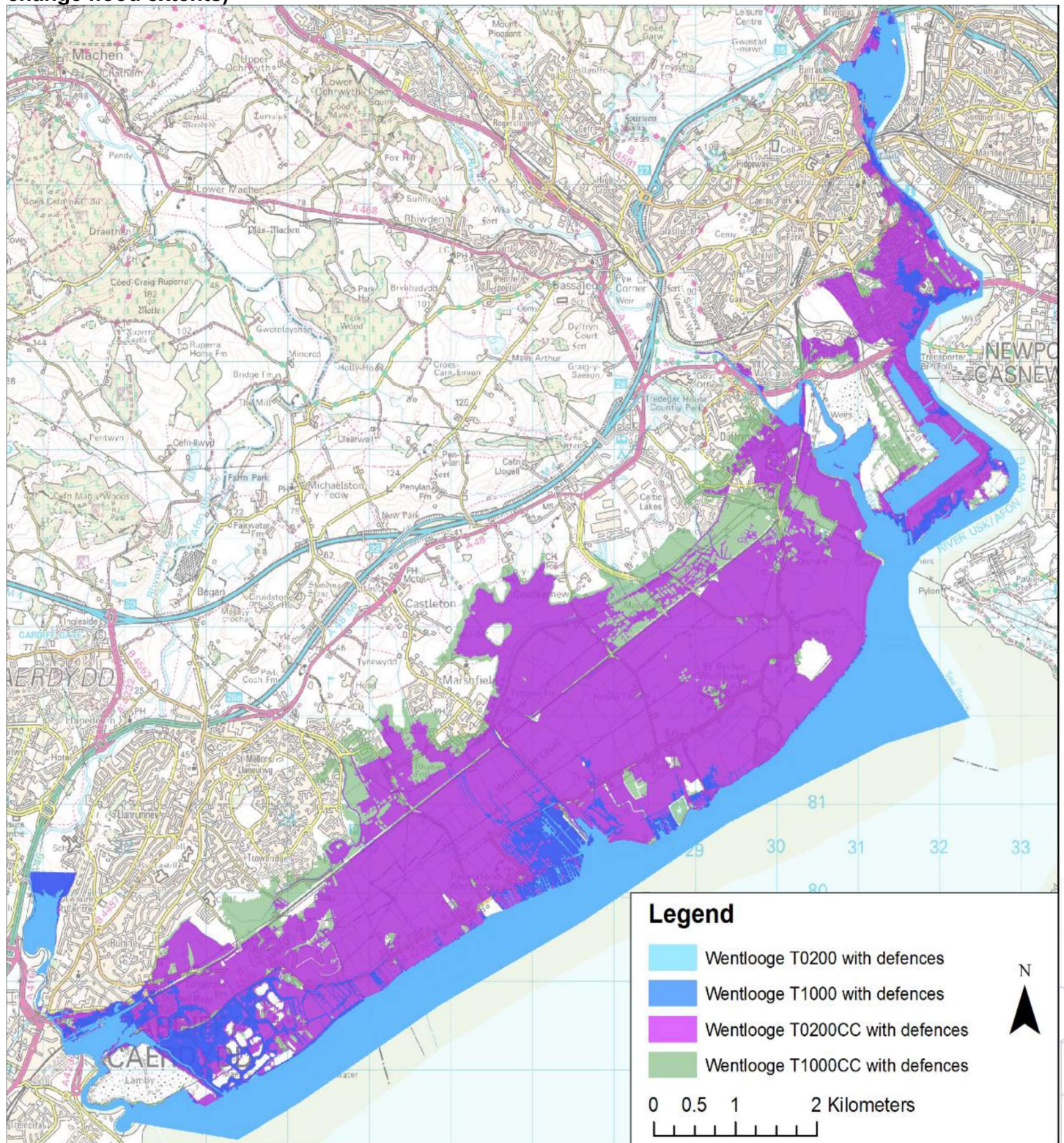


Figure 12 – Modelled Flood Extents Map Port Road Newport -- (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx - original Figure 9-6: Wentlooge model climate change flood extents with confidence intervals)

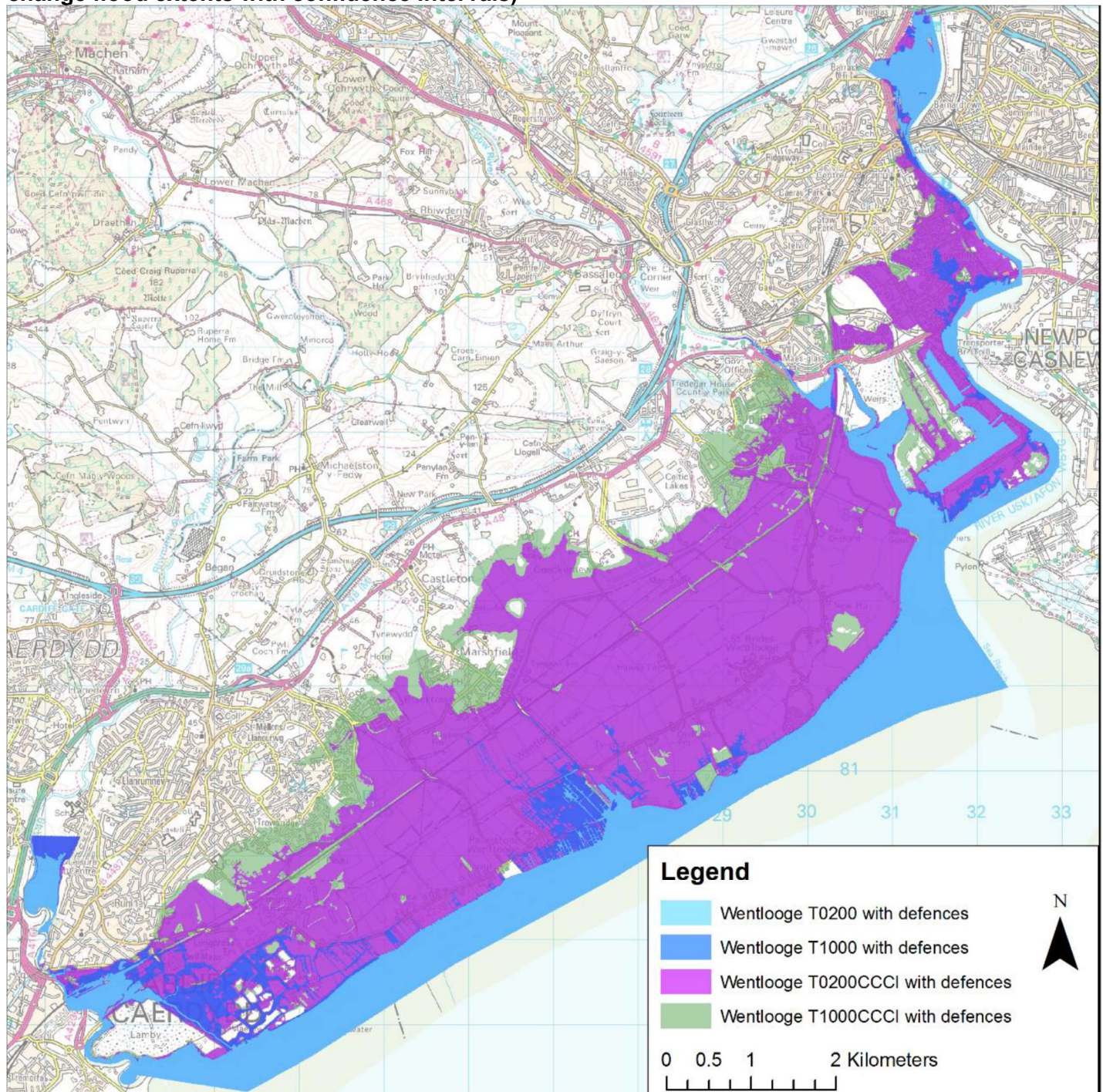
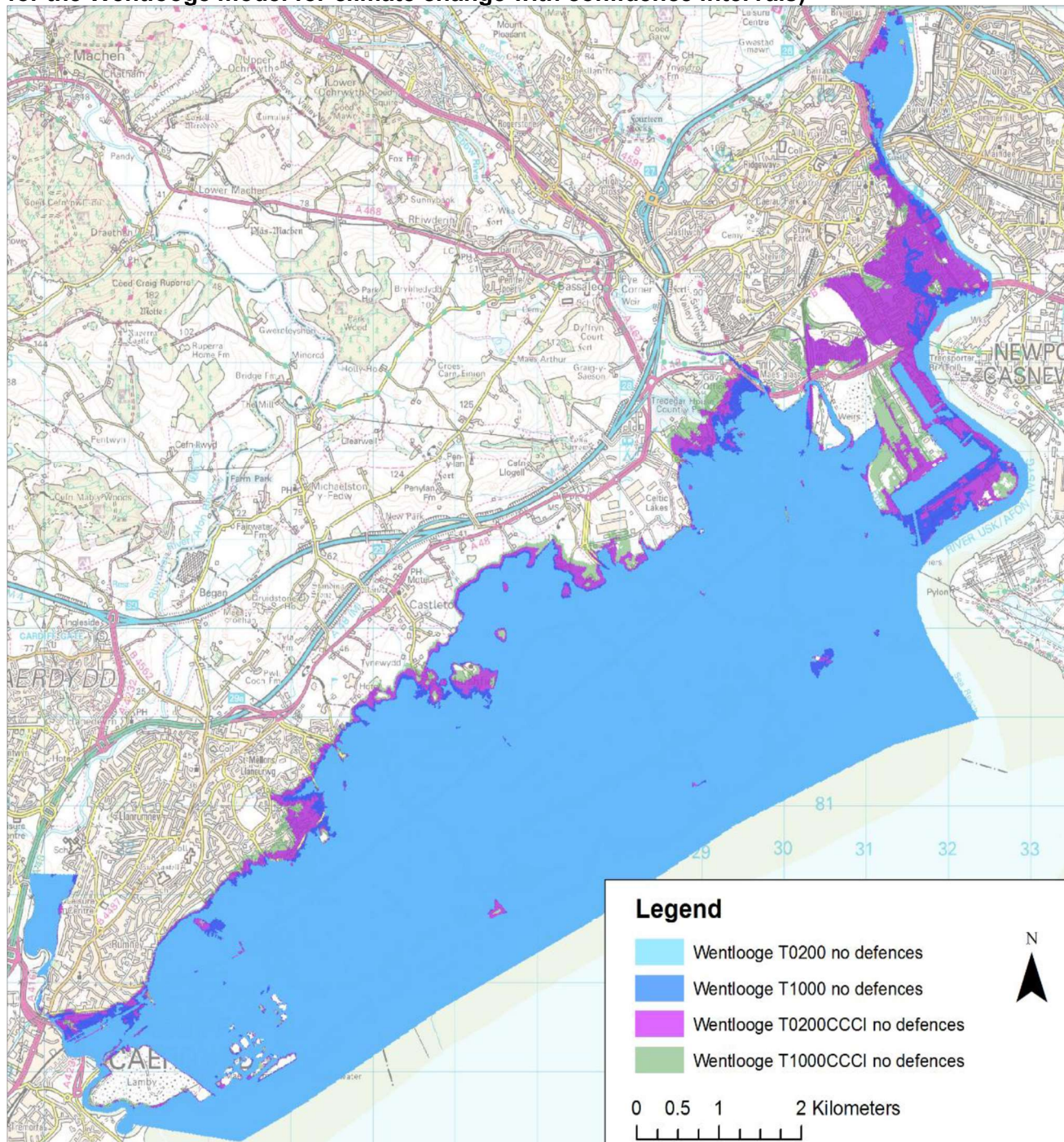


Figure 13 – Modelled Flood Extents Map Port Road Newport -- (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx - original Figure 9-7: No defence flood risk extent for the Wentlooge model for climate change with confidence intervals)



To conclude the site remains outside of any flooding in the all modelled defended and undefended scenarios and including 1000yr + climate change flood.

Breach of defences

As per 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx "The flood extent for the 1,000-year breach event for the Wentlooge TUFLOW model can be seen in 9.5.3 Tidal gate failure modelling"

Figure 14 – Breach locations for the Wentlooge -- (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx - original Figure 9-15: Breach locations for the Wentlooge TUFLOW model)

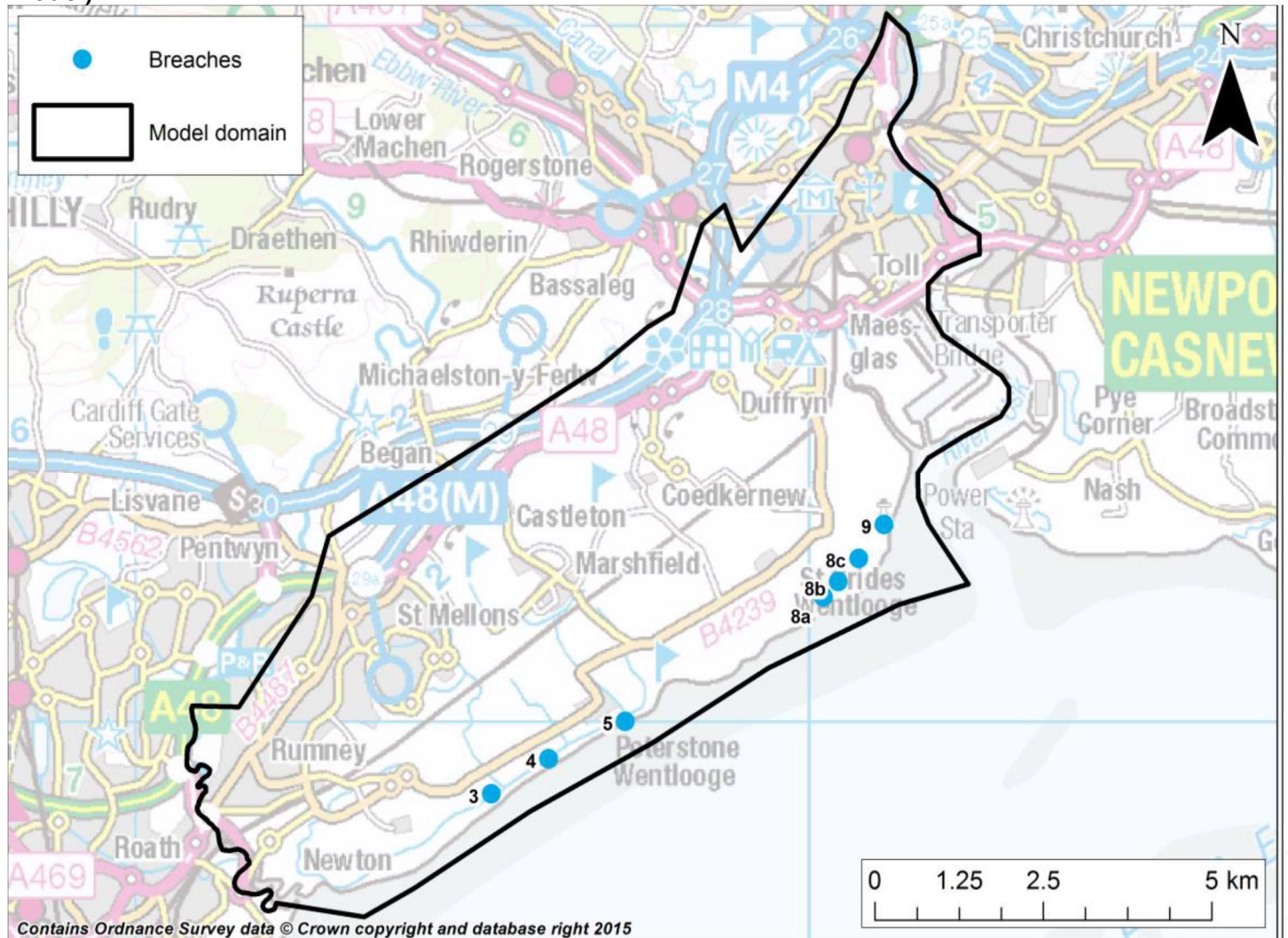
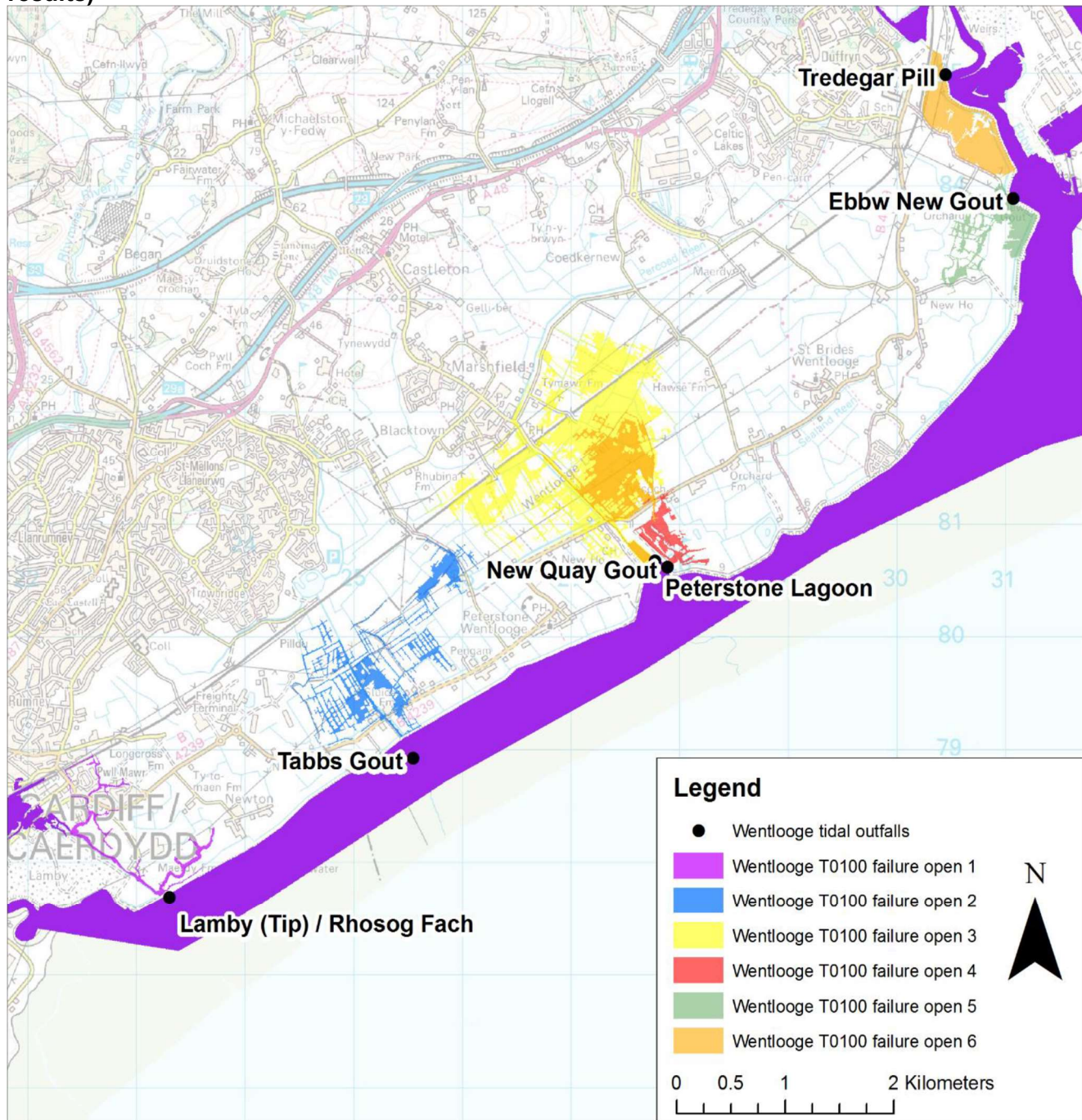


Figure 16 – Wentlooge tidal gates failure open results (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx - original Figure 9-19: Wentlooge tidal gates failure open results)



To conclude the site remains outside of any flooding in all modelled breach of defences scenarios including 1000yr + climate change flood.

Figure 17 – Comparison between the defended event outlines for current day and with 75 and 100 years of climate change from v8 of the Newport model (source 2022_Newport model summary - original Figure 6: Comparison between the defended event outlines for current day and with 75 and 100 years of climate change from v8 of the Newport model)

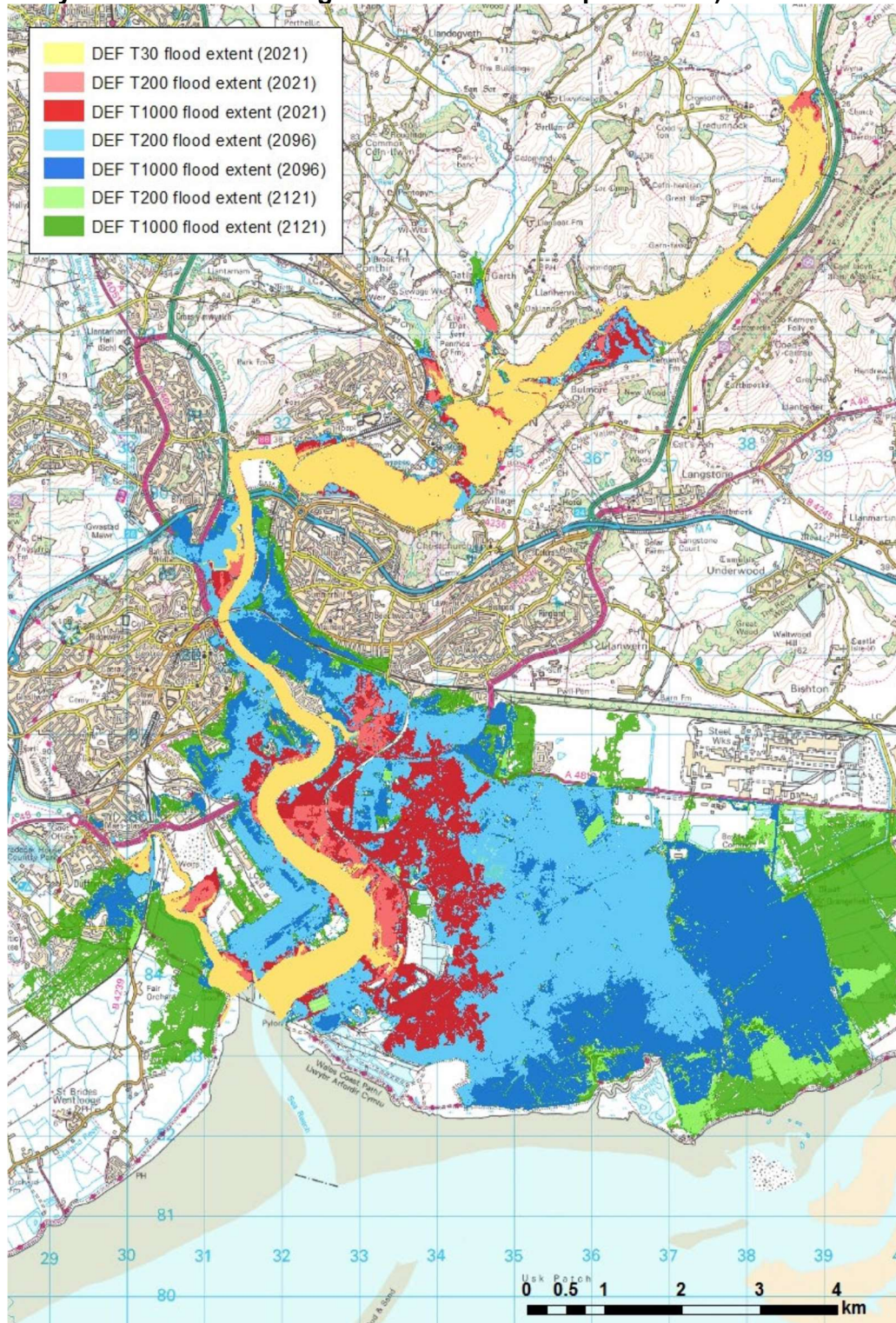
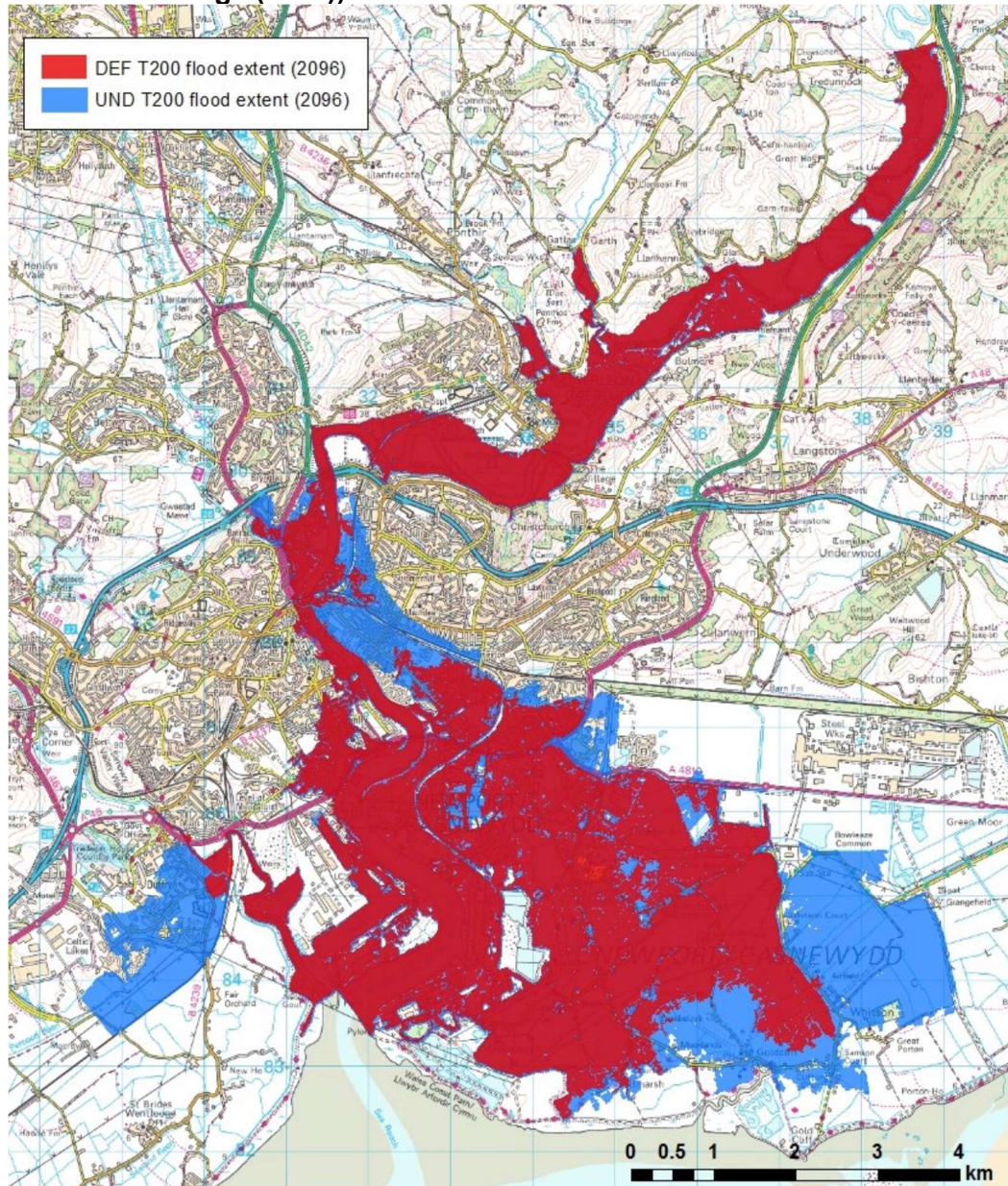
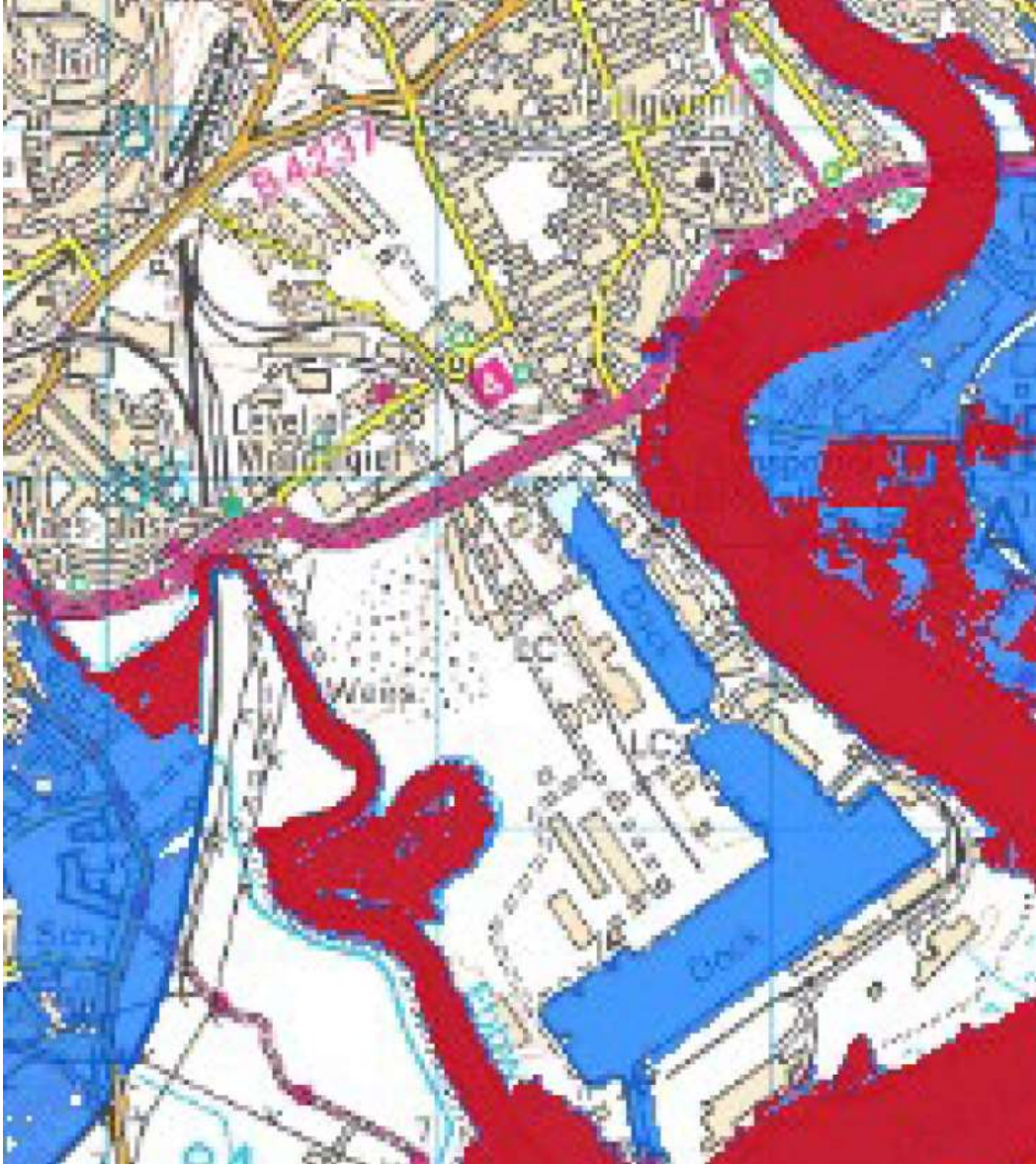


Figure 18 – Comparison between the defended (red) and undefended (blue) outlines for the 1 in 200 year tidal event from v8 of the Newport model with 75 years of climate change (2096) (source 2022_Newport model summary - original Figure 8: Comparison between the defended (red) and undefended (blue) outlines for the 1 in 200 year tidal event from v8 of the Newport model with 75 years of climate change (2096))



Based on Newport Model Update “The modelling results show that large areas of Newport are well defended up to the 1 in 200 year event. Figure 7 shows the differences between the defended and undefended outputs in Newport.”

Figure 19 – Comparison between the defended (red) and undefended (blue) outlines for the current day 1 in 200 year tidal event from v8 of the Newport model (source 2022_Newport model summary - original Figure 7: Comparison between the defended (red) and undefended (blue) outlines for the current day 1 in 200 year tidal event from v8 of the Newport model)

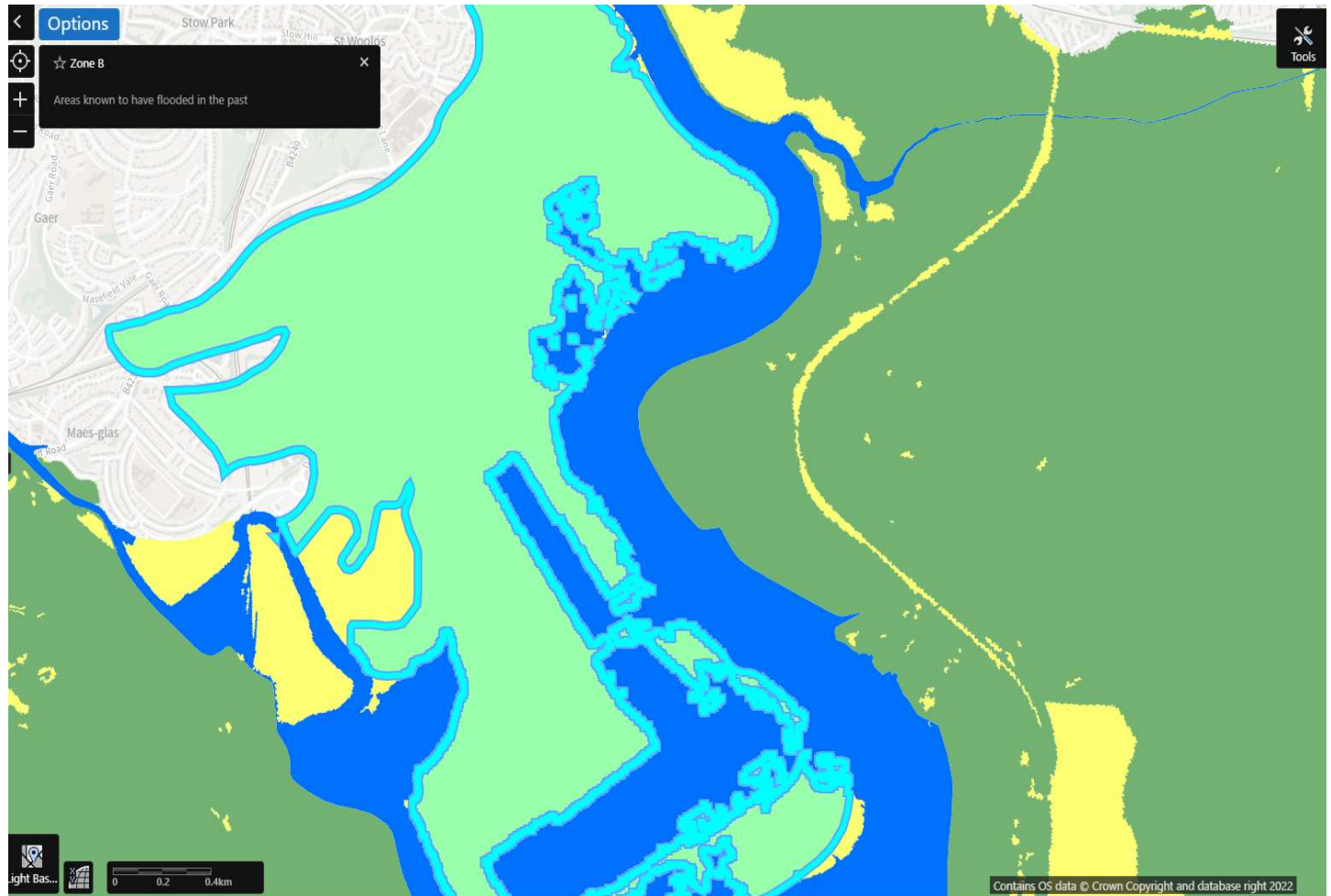


To conclude the site remains outside of any flooding in the all modelled defended and undefended scenarios and including 1000yr flood predicted in 2021.

Development Advice Map

According to Development Advice Map the site is situated in Zone B.

Figure 20 – Development Advice Map – TAN 15 (source https://gisgeoext.cyfoethnaturiolcymru.gov.uk/Geocortex/Viewers/Html5Viewer_4145/index.html?viewer=FloodRisk)



According to TAN15 “new development should be directed away from zone C and towards suitable land in zone A, otherwise to zone B, where river and coastal flooding will be less of an issue.”
“...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.”

The site is not in zone C, and zone B is the right destination considering its character. Therefore the site is compatible with the flood zone.

Additionally, according to Flood Map for Planning website – “The Flood Map for Planning has no official status until the Welsh Government implements the revised TAN15. However, it represents the best available information we have on flood risk and Natural Resources Wales will continue to use this to inform our planning advice.”

And according to NRW mapping, the site is in Flood Zone 1, this confirms its compatibility.

To conclude the analysis of fluvial and tidal flood risk it is recommended Finished Floor Level of Extension Unit to be set at 13.00 AOD or as existing adjacent unit. This level is below maximum flood level from event 1:1000 with breach scenario as provided by Natural Resources Wales Data.

It is to be noted this is a minimum level and the Developer may choose higher FFLs if required.

4.3 Flooding from Groundwater

The site is generally flat with levels differences not exceeding 1.0m.

The site is lower than railway embankment to the north and adjacent site to the west, approximately level with the surrounding land on the east boundary and surrounding road to the south, except the gate where the site is lower than road levels.

British Geological Survey (BGS) borehole log for adjacent site at Docks Way shows no groundwater.

The water level could be verified in ground investigation.

What is more, as demonstrated by google earth image (Figure 5.1), the site is not located in a bottom of a valley, therefore based on given information, it is concluded that the risk from groundwater flooding is considered low.



4.4 Flooding from Sewers

There are sewers within Port Road. There is a chance for sewers flooding. The site is higher than road levels, therefore there is low chance for flooding the site from sewers.

The levels are such that water from flooded sewers naturally remains on the road and flows along it toward lower-lying areas to the east as demonstrated by google earth image (Figure 5.2). There are also some private drains on site surrounding the building. Most of manholes with lowest cover levels are located lower than the building and in the areas of car parks which are generally lower than the building. Only the private sewer to the east has manholes with cover levels higher than the building, but it is connected other part of sewer which is lower than the building, so generally risk from sewers is considered low.

The highest cover level within Port Road located on junction, adjacent to the site shows 21.14, which is lower than FFL set at 21.20. However, Port Road has back of footway higher than the road and has crossfall towards east off the building creating effective dam with levels always circa 50mm higher than CL. Therefore, it is anticipated rare event of overtopping sewers should not affect any building on site but flood water will flow towards east.

In addition, according to NRW's Surface Water Map there is some small area of standing water on the around opposite side of Port Road opposite the site, as a result of site topography, and surface water from the road would not flow towards the site, but in opposite direction.

Therefore, similarly to surface water, sewers close to the proposed extension are deemed unlikely to flood the building on site.

All Sewers south of the site will flood towards the south road, which is lower than the site.

To conclude flood risk from sewers is considered very low.



4.5 Overland flow

The site is generally flat with levels differences not exceeding 1.0m. The site is lower than railway embankment to the north and adjacent site to the west, approximately level with the surrounding land on the east boundary and surrounding road to the south, except the gate where the site is lower than road levels.

The site is a gently sloping outside the building (to the west), but majority of area is flat with the levels AOD ranging from 21.50 in the north east side and 21.18 in the south to 20.30 in the west site boundary. Levels differences do not exceed 1.2m. The site is higher than surrounding boundary to the south and north and approximately level with north-west boundary, higher than Private Rd Number 8 levels to the south and lower than Port Road levels to the north-east, however a back of footway close to the site's boundary is higher than road levels covering the site from run off.

The site currently consists of impermeable hard standing.

There is a rail embankment around 100m away to the north side. However, risk of producing substantial runoff is considered low.

Additionally, surface water does not affect or affects very marginally the site as shown in Figure 16.



Figure 22 – Flood from Surface Water (source Natural Resources Wales)



According to Natural Resources Surface Water Map the site is not affected or affected very marginally to the north side. Surface water flood risk is existent but low. However, some small part of proposed extension is located within the Flood Zone 2 (Surfaced Water), which is described by Natural Resources Wales Website as **“Surface Water and Small Watercourses – Flood Zone 2**

Areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change.”

It is estimated that depth of flood water it this unlikely scenario would reach 100-150mm maximum.

As discussed above proposed extension is to have finish floor level as existing building which is around 13.00 AOD this would effectively bring the floor level outside Flood Zone 2.

Mitigation Measures

The site is effectively in Flood Zone 1 considering flood risk from rivers and sea which gives less chance of flooding than 1 in 1000 year. However as discussed earlier there is flood risk from surface water and small watercourse placing some small part of site in Flood Zone 2

Therefore, it is recommended that the RIBA publication 'Improving the flood performance of new buildings' (May 2007) and the ODPM publication 'Preparing for Floods' (October 2003) should be implemented as much as reasonably practicable.

This should include:

- Waterproof and flood resilient paints and renders to be used where applicable
- Solid flooring e.g. concrete or tiled floors to be used on ground floor level
- Non-return valves on all foul drains and for storm drains at points where they connect to existing sewers
- Electrical sockets and control units to be installed as high as practical
- Stainless steel and plastic fixtures and fittings to be used and wooden alternatives to be avoided
- A high-level refuge area within the proposed unit to be provided. Safe refuge should be built at a minimum of 13.3m AOD (300mm above the 0.1-1% AEP + CCA flood level) and could be provided in the form of a mezzanine unless the refuge area is provided in existing building which the extension is connected to. The safe refuge area for is a form of last resort for site users in the event where flooding occurs without prior warning.

The flood resilience measures should minimize the negative consequences of flooding to the site during extremely rare storm events. However, due to very low risk of flooding, these are only recommendations if they are practical to implement, but they are not obligatory.

Flood Warning and Evacuation

The area where the development is located is covered by Natural Resources Wales Floodline Warnings Direct Service. Floodline Warnings Direct is a free of charge service which issues flood warnings directly by telephone, mobile, email, SMS text message and fax. It is recommended that the property owners or users register for this service. Thanks to this, site users will be given warning prior to fluvial flood event.

It is recommended the property owners or managers could provide a Flood Plan, informing users of the flood risk to the site and instructing them what to do in the event of a flood. The plan should have information on a safe evacuation route. The example direction of the evacuation could be to the higher area around Monmouth Castel Drive. Seek rescue waiting there or if possible, move north west along Monmouth Castel Drive towards overpass on Monmouth Castel Drive railway bridge which goes above the railways. All places are free from flooding even for 1:1000 year (Flood Zone 1) as indicated in the Figure 12. However, getting there would require taking underpass at Docks Way which could get flooded in 1:100 year (being in Flood Zone 3) and would be around 300m long route within Flood Zone 3.

Therefore, if this area is flooded or if flooding comes without warning and evacuation proves impossible site users should take shelter within the buildings in a designated safe refuge area such as top floor of the building and wait for help. However, the details of evacuation should be discussed further in the Flood Plan if required.



Figure 23 - Natural Resources Wales Detailed Flood Map – example proposed evacuation route

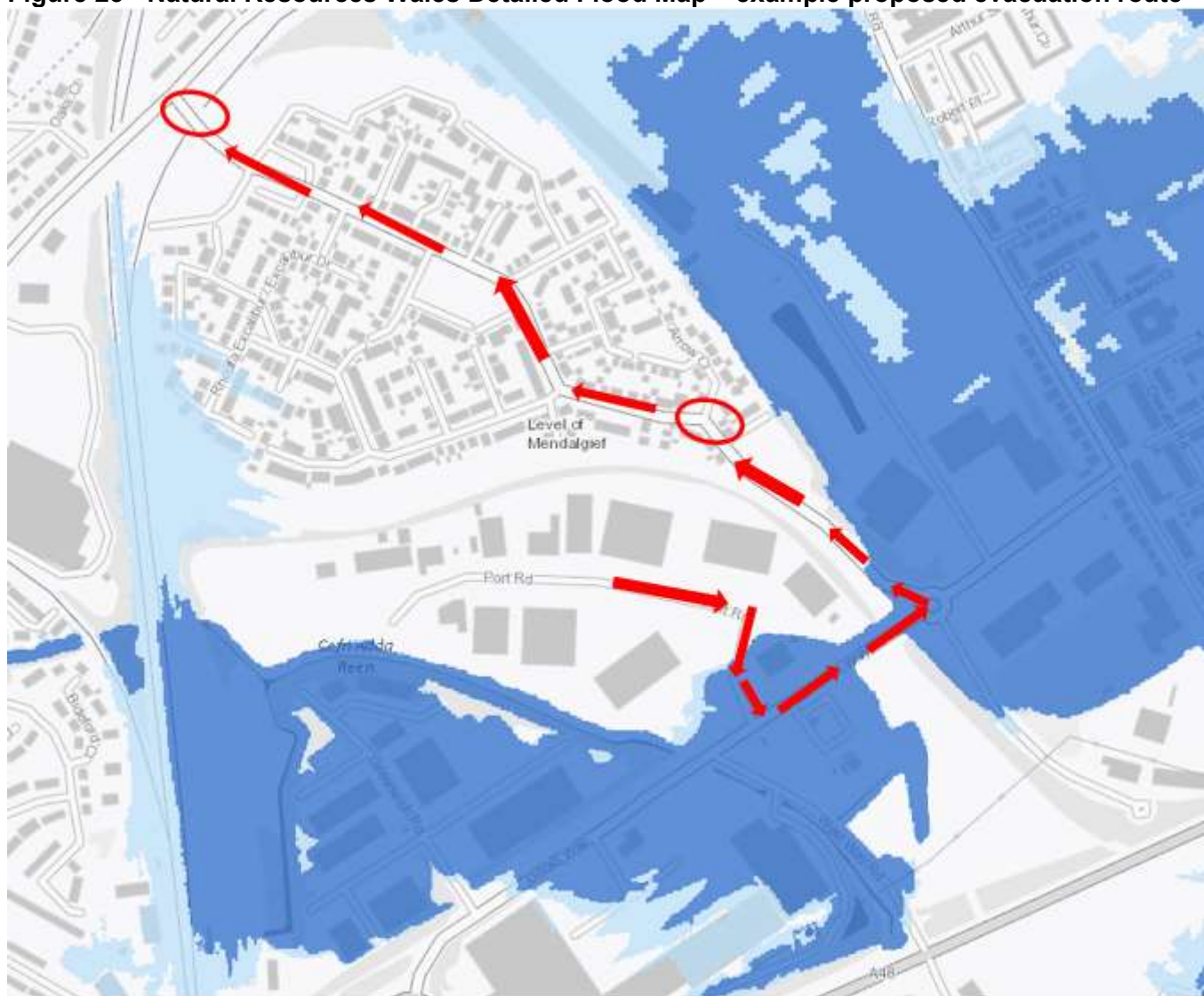
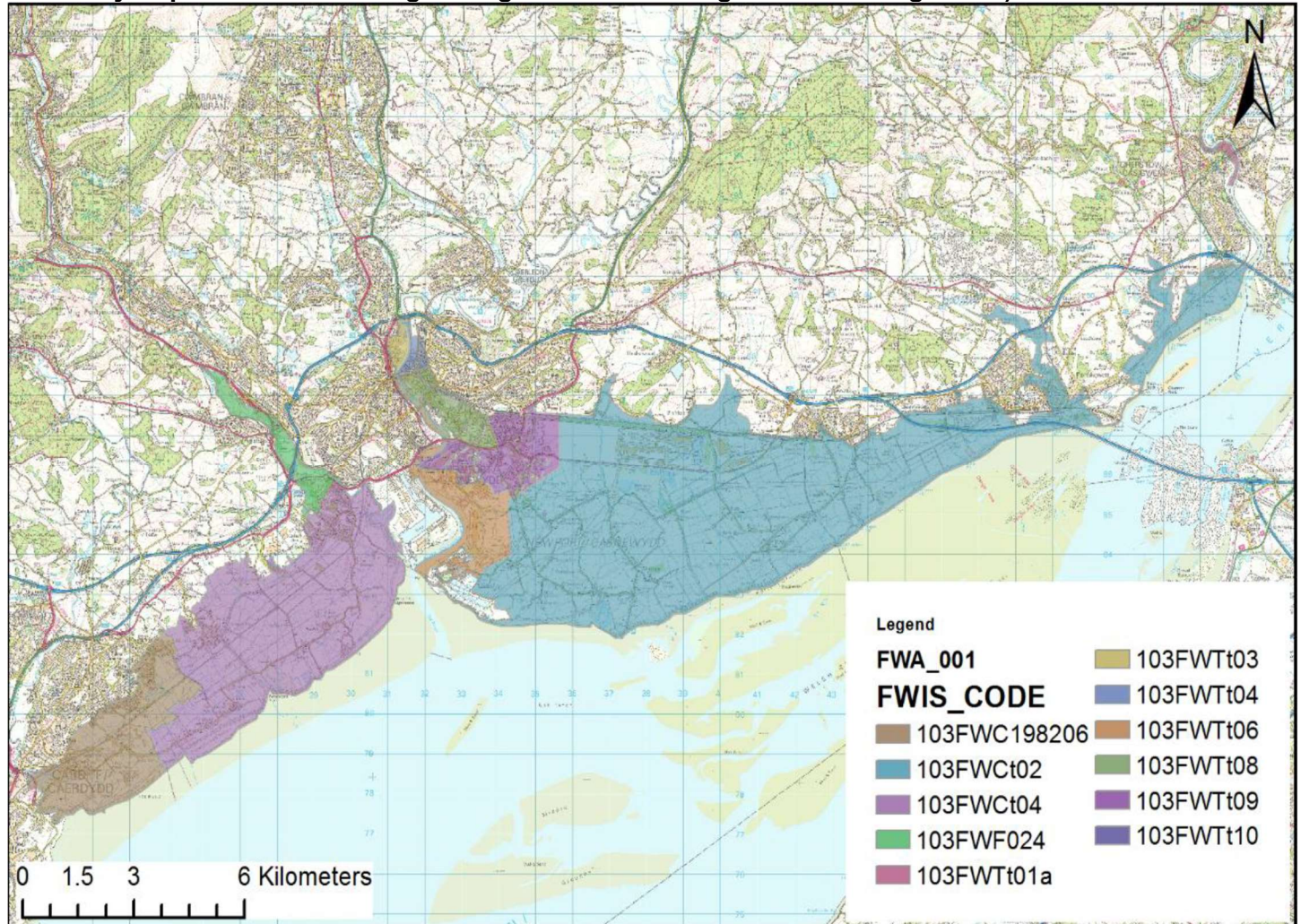


Figure 24 – Existing Flood Warning Areas (source 2014s1466_Caldicot and Wentlooge Coastal VDM Summary Report v2.1.docx - original Figure 10-1: Existing Flood Warning Areas)



4.6 Development Drainage

The development drainage will need to consider the risk of flooding both on and offsite.

The drainage proposal for the site are outside the scope of this report and may be provided in a separate drainage strategy document.

4.7 Flooding from Reservoirs, Canals and Other Artificial Sources

According to NRW Website “Reservoir flooding is extremely unlikely to happen. There has been no loss of life in the UK from reservoir flooding since 1925. All large reservoirs must be inspected and supervised by reservoir panel engineers. As the enforcement authority for the Reservoirs Act 1975 in Wales, we ensure that reservoirs are inspected regularly and essential safety work is carried out.”

Is it concluded flood risk from reservoirs canals and other artificial sources is generally very low.

Not applicable



5.0 SEQUENTIAL AND EXCEPTION TEST

- 5.1 The development proposals discuss a mix of commercial/ industrial use which is In line with the Technical Guidance accompanying the Technical Advice Note 15 (TAN 15) classification is classified as a **less vulnerable**.
- 5.2 As explained in section 4.1 the majority of development is located in flood zone 1 with “Less than 1 in 1000 (0.1%) (plus climate change) chance of flooding in a given year.” as per definition from the Technical Advice Note 15 (TAN 15).
- 5.3 With respect to the requirements of the Technical Advice Note 15 (TAN 15), the development is compatible with the sites flood zone.
- 5.4 The existing and proposed use of the site is adequate to a nature of the development area which is classed as commercial site as described in Technical Advice Note 15 (TAN 15),
“Direct new development to areas at minimal risk of flooding – areas in Zone 1”
As the site is located in compatible zone and the nature of proposed extension building makes it impossible to be placed in alternative locations - the development passes the sequential test.
- 5.5 Following stipulation of the Technical Advice Note 15 (TAN 15) Development and Flood risk an **exception test** as described in chapter 6 is **not** required.

Office/General Industry Development

Table 3: Flood Risk Vulnerability Classification (Figure 3 – Development vulnerability categories as per TAN15)

Figure 3 – Development vulnerability categories

Development category	Types
Highly vulnerable development	All residential premises (including hotels, Gypsy and Traveller sites and caravan parks and camping sites). Schools and childcare establishments, colleges and universities. Hospitals and GP surgeries. Especially vulnerable industrial development (e.g. power generating and distribution elements of power stations, transformers, chemical plants, incinerators), and waste disposal sites. Emergency services, including: ambulance stations, fire stations, police stations, command centres, emergency depots. Buildings used to provide emergency shelter in time of flood.
Less vulnerable development	General industrial, employment, commercial and retail development. Transport and utilities infrastructure. Car parks. Mineral extraction sites and associated processing facilities (excluding waste disposal sites). Public buildings including libraries, community centres and leisure centres (excluding those identified as emergency shelters). Places of worship. Cemeteries. Equipped play areas. Renewable energy generation facilities (excluding hydro generation).
Water compatible development	Boatyards, marinas and essential works required at mooring basins. Development associated with canals. Flood defences and management infrastructure. Open spaces (excluding equipped play areas). Hydro renewable energy generation.

Table 4: Flood Zone Definition (as per TAN15 Figure 2 – Definition of Flood Map for Planning flood zones)

Zone	Flooding from rivers	Flooding from the sea	Flooding from surface water and small watercourses
1	Less than 1 in 1000 (0.1%) (plus climate change) chance of flooding in a given year.		
2	Less than 1 in 100 (1%) but greater than 1 in 1000 (0.1%) chance of flooding in a given year, including climate change.	Less than 1 in 200 (0.5%) but greater than 1 in 1000 (0.1%) chance of flooding in a given year, including climate change.	Less than 1 in 100 (1%) but greater than 1 in 1000 (0.1%) chance of flooding in a given year, including climate change.
3	A greater than 1 in 100 (1%) chance of flooding in a given year, including climate change.	A greater than 1 in 200 (0.5%) chance of flooding in a given year, including climate change.	A greater than 1 in 100 (1%) chance of flooding in a given year, including climate change.
TAN 15 Defended Zones	Areas where flood risk management infrastructure provides a minimum standard of protection against flooding from rivers of 1:100 (plus climate change and freeboard ⁶).	Areas where flood risk management infrastructure provides a minimum standard of protection against flooding from the sea of 1:200 (plus climate change and freeboard).	Not applicable.

6.0 SUMMARY

- 6.1** The proposed development is compatible with the site flood zone when assessed in accordance with the Technical Advice Note 15 (TAN 15) Technical Guidance. Additionally, the Office/General Industry use and the development location corresponds with the Existing Commercial and Industrial allocation within the Local Plan – the development is considered to pass sequential test through a stage 1 assessment.
- 6.2** The site is generally in Flood Zone 1. Only considering surface water flooding there is a small part of the area of new extension being in the Flood Zone 2 As proposed finished floor level is to be lifted to 13.00AOD or as per adjacent existing building it will effectively bring the development to Flood Zone 1. Hence, the Finished Floor Levels for the proposed extension be deemed acceptable by Newport City Council and the Consultees.
- 6.3** As the site is outside Flood Zone 3 then exception test is not required



To conclude it is recommended Finished Floor Level of Extension Unit to be set at 13.00 AOD or as per adjacent existing building FFL as the minimum.

It is to be noted this is a minimum level and the developer may choose a higher FFL if required.

Signed:



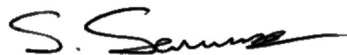
Date: 30/11/2024

Pawel Kukiela

Civil and Structural Engineer BEng(Hons)

Checked:

Date: 30/11/2024



Steve Sammans BEng (Hons) IEng AMIStructE

For and on behalf of AJS Structural Design Ltd



Appendix A Natural Resources Wales Flood Data

Pawel Kukiela

From: Data Distribution <datadistribution@cyfoethnaturiolcymru.gov.uk>
Sent: 16 October 2024 15:28
To: Pawel Kukiela
Subject: ATI-27475a - P5P6 - Flood data NRW:01632773
Attachments: ATI-27475a Licence.pdf

Good Afternoon Pawel.

Please find the links to the data below and the flood flow estimates licence attached.

Newport

P5

<https://naturalresourceswales.sharefile.eu/d-s7cecfce6e81642078d5ba913fa68c64b> - for re-use with the attached licence.

P6

<https://naturalresourceswales.sharefile.eu/d-se95776fd01e1487683b393b6eaac6fdc> - for re-use with the Open Data Licence given below. the flood model report for re-use with the attached licence and for the raw flood product data, please re-use with the licence below:

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<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

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Caldicot and Wentlooge

P5

<https://naturalresourceswales.sharefile.eu/d-s56cbb591aec24df0a321d807c806942d> - for re-use with the attached licence.

P6

<https://naturalresourceswales.sharefile.eu/d-sd090335bf4bf4bfc3729afbf01f4c11> - for re-use with the Open Data Licence given below. the flood model report for re-use with the attached licence and for the raw flood product data, please re-use with the licence below:

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<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

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Please note that the model was built for specific NRW requirements and might not meet your needs. In addition, since the time of modelling, there may have been changes that can impact the suitability of the model which means the model might no longer comply with present day standards. For example, there may have been changes to:

- The methodology for calculating hydrological flows,

- Hydraulic modelling software (e.g. improvements in the way that in channel structures such as bridges and weirs are represented in the hydraulic model),
- Tidal boundary,
- LIDAR,
- OS MasterMap®,
- Changes to the channel or within the floodplain,
- Climate change allowances.

This is not an exhaustive list, and it is the responsibility of the user to ensure the model is suitable for their use.

Many Thanks,

Marc Campbell

Swyddog Trwyddedu Data / Data Licensing Officer

Cyswilt Cyfoeth / Customer Hub

Cwsmeriaid, Cyfathrebu a Masnach / Customer, Communications and Commercial Directorate

Yn falch o arwain y ffordd at ddyfodol gwell i Gymru trwy reoli'r amgylchedd ac adnoddau naturiol yn gynaliadwy.

Proud to be leading the way to a better future for Wales by managing the environment and natural resources sustainably.

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Mae ein hymgyngoriad ar ein ffioedd a thaliadau rheoleiddiol wedi cau ac rydym yn adolygu'r ymatebion. Yn amodol ar ganlyniad yr adolygiad hwn a chymeradwyaeth gan Fwrdd CNC a Llywodraeth Cymru, ein nod yw cyflwyno taliadau newydd ar y 1af o Ebrill 2023. Gellir gweld rhagor o wybodaeth am ein cynigion yma [Ymgynghoriad ar ein ffioedd a thaliadau rheoleiddio ar gyfer 2023/2024](#)

Our consultation on our regulatory fees and charges has now closed and we are now reviewing the responses. Subject to the outcome of this review and approval by the NRW Board and the Welsh Government, we aim to introduce new charges on 1st April 2023. More information on our proposals can still be viewed here [Consultation on our regulatory fees and charges for 2023/2024](#)



----- Original Message -----

From: Pawel Kukiela <pawel@ajs-structural.com>;

Received: Mon Sep 09 2024 09:47:48 GMT+0100 (British Summer Time)

To: Enquiries Queue <enquiries@cyfoethnaturiolcymru.gov.uk>;

Subject: FW: Flood data

You don't often get email from pawel@ajs-structural.com. [Learn why this is important](#)

Rhybudd: Deilliodd yr e-bost hwn o'r tu allan i'r sefydliad. Peidiwch â chlicio dolenni, atodiadau agored nac sganio codau QR oni bai eich bod yn cydnabod yr anfonwr ac yn gwybod bod y cynnwys yn ddiogel.

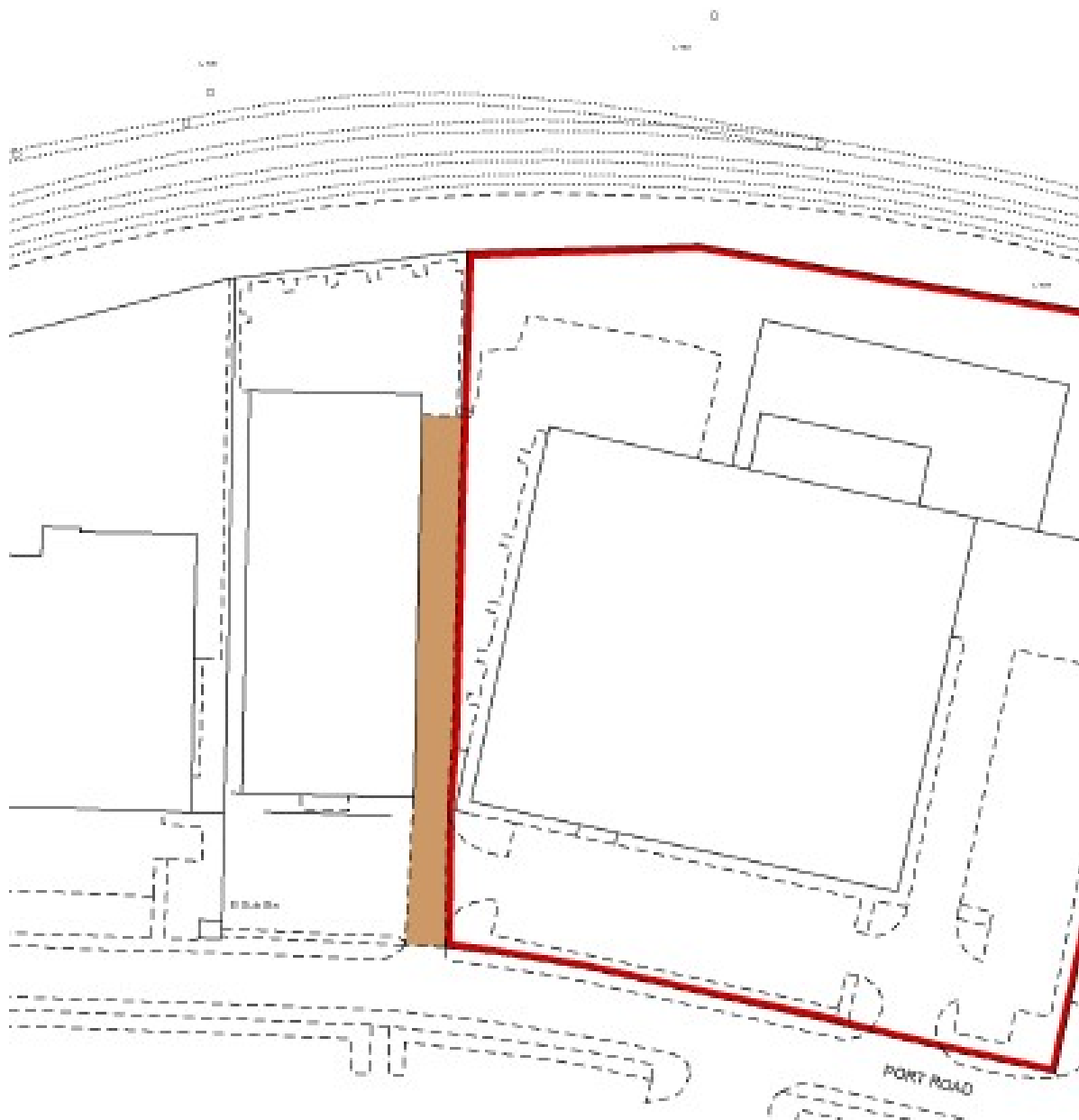
Caution: This email originated from outside of the organisation. Do not click links, open attachments or scan QR Codes unless you recognise the sender and know the content is safe.

Dear Team

Could you please send me product 4 and 8 for the site:

Docks Way
Newport
NP20 2NS

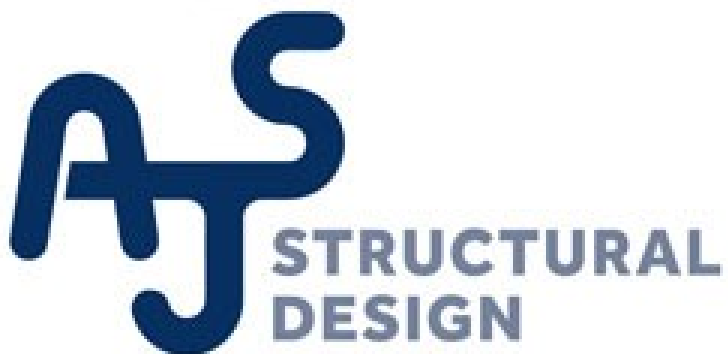
E 330700
N 186400





Kind Regards

Pawel Kukiela
Civil/Structural Engineer



 Derby 01
 Uttoxete

Derby Office: Durham House, Stanier Way, Waverham

Please note the change to Uttoxeter office address.

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16/10/2024	015/10/2025

Ref. Number	Summary Table
1	Flood Flows Estimate Data, (WinFap).

Further details, restrictions and special licensing conditions are listed for the dataset(s) in the table(s) below:

1	Ref. Number	1
2	Dataset Name	Flood Flows Estimate Data, (WinFap).
3	NRW Dataset Number	NRW_DS123530.
4	Metadata link ¹ if available OR Description & geographical extent	Peak flood flow and/or flood hydrograph estimates for one or more locations for one or more design events, usually calculated using gauged data, Flood Estimation Handbook Statistical and/or Rainfall Runoff methods. https://libcat.naturalresources.wales/folio/?oid=123530
5	Format Supplied	Formats include text, tables and/or charts in excel, word, pdf or email.
6	Information Warnings	This data is not raw, factual or measured. It comprises of estimated or modelled results showing expected outcomes based on the data available to us.
7	Third Party Rights	Wallingford Hydrosolutions Ltd. UKCEH and NERC, (UKRI).
8	Attribution Statement	Contains Natural Resources Wales information © Natural Resources Body for Wales and database right. All rights reserved. Flood flow estimates are based upon FEH methodology and data, © and database right UKCEH 2015*, using WinFap FEH and/or the Revitalised Flood Hydrograph Modelling Tool ©

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9	Third Party Special Conditions	The flood flow estimates data are licenced for internal business or personal use only. The raw data may not be re-supplied to any third party or re-communicated to the public on commercial terms or for financial gain or be published. You may publish pdf outputs in a research paper on non-commercial terms, using above attribution statement
10	NRW Special Conditions	As above.

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AJS STRUCTURAL DESIGN LIMITED (07477732), whose registered/principal office is at **14a Market Place, Uttoxeter, Staffordshire, ST14 8HP** (the “**Licensee**”) (2)

Contact details	LICENSOR	LICENSEE
Name:	Marc Campbell	Pawel Kukiela
Title:	Data Licensing Officer	Civil/Structural Engineer
Phone:	07769 244006	01332 913011
Email:	datadistribution@cyfoethnaturiolcymru.gov.uk	pawel@ajs-structural.com
Address:	Customer Hub Team, King Edward VII Ave, Cardiff CF10 3NQ	Durham House, Stranier Way, Wyvern Business Park, Derby, DE21 6BF
Signature: Signed by authorised signatory		
Name & Post title of signatory: (if different from above)		
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means use within a business or organisation.

‘NRW’

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Flood Map for Planning - Basic
Rivers and Sea Flood

Legend

TAN15 Defended Zones

 Rivers

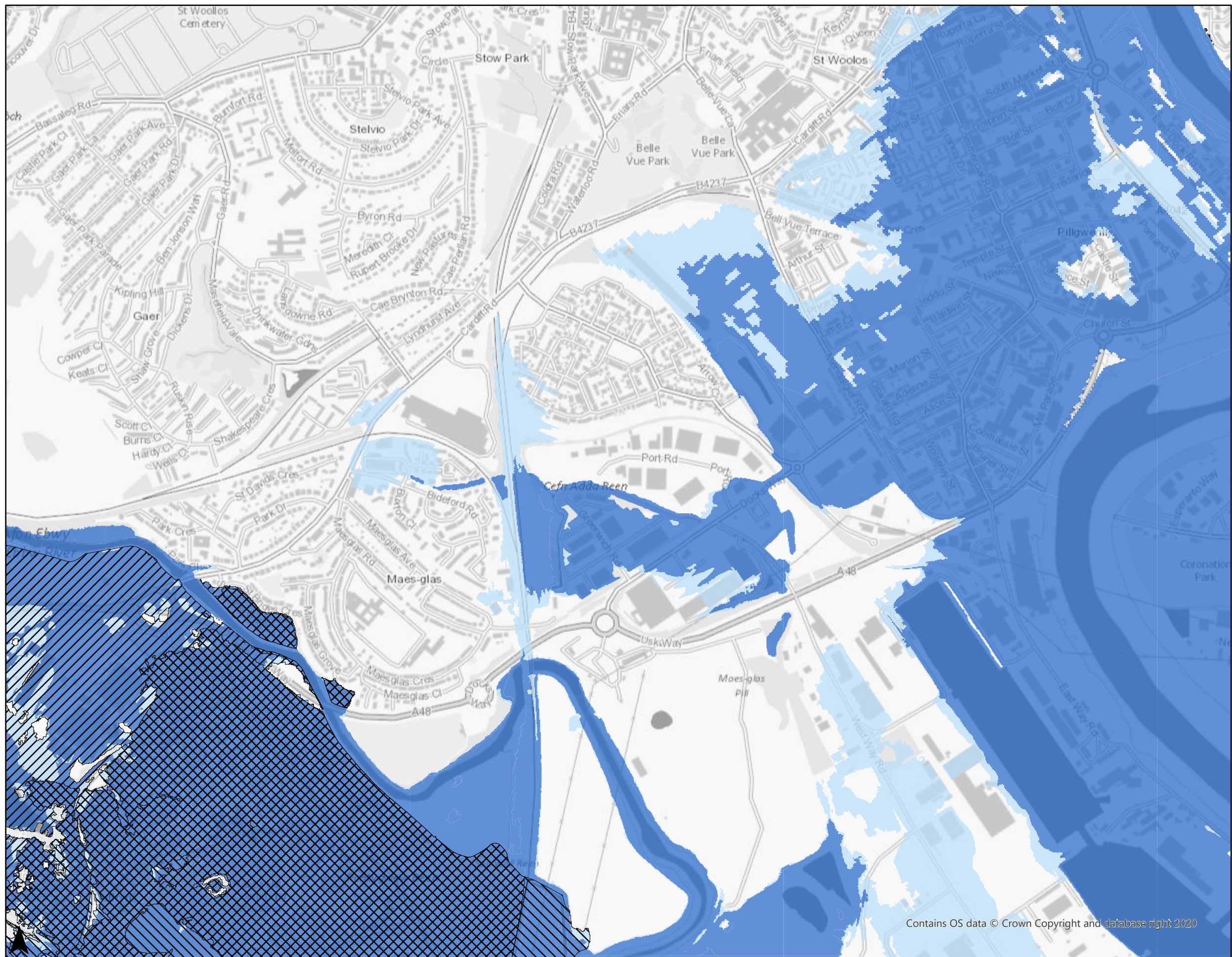
 Sea

 Rivers and Sea

Rivers and Sea

 Flood Zone 3

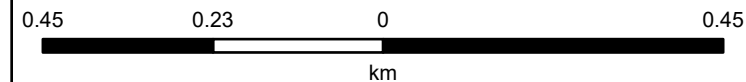
 Flood Zone 2



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Flood Map for Planning - Detail
All defences and flood risks

Legend

--- Flood Defence Locations

TAN15 Defended Zones

▨ Rivers

▨ Sea

▨ Rivers and Sea

Rivers

■ Flood Zone 3

■ Flood Zone 2

Sea

■ Flood Zone 3

■ Flood Zone 2

Surface Water and Small Watercourses

■ Flood Zone 3

■ Flood Zone 2

▨ Recorded Flood Extents

— Shoreline Management Plan policies

Coastal Erosion Risk with Shoreline
Management Plan policies implemented
scenario

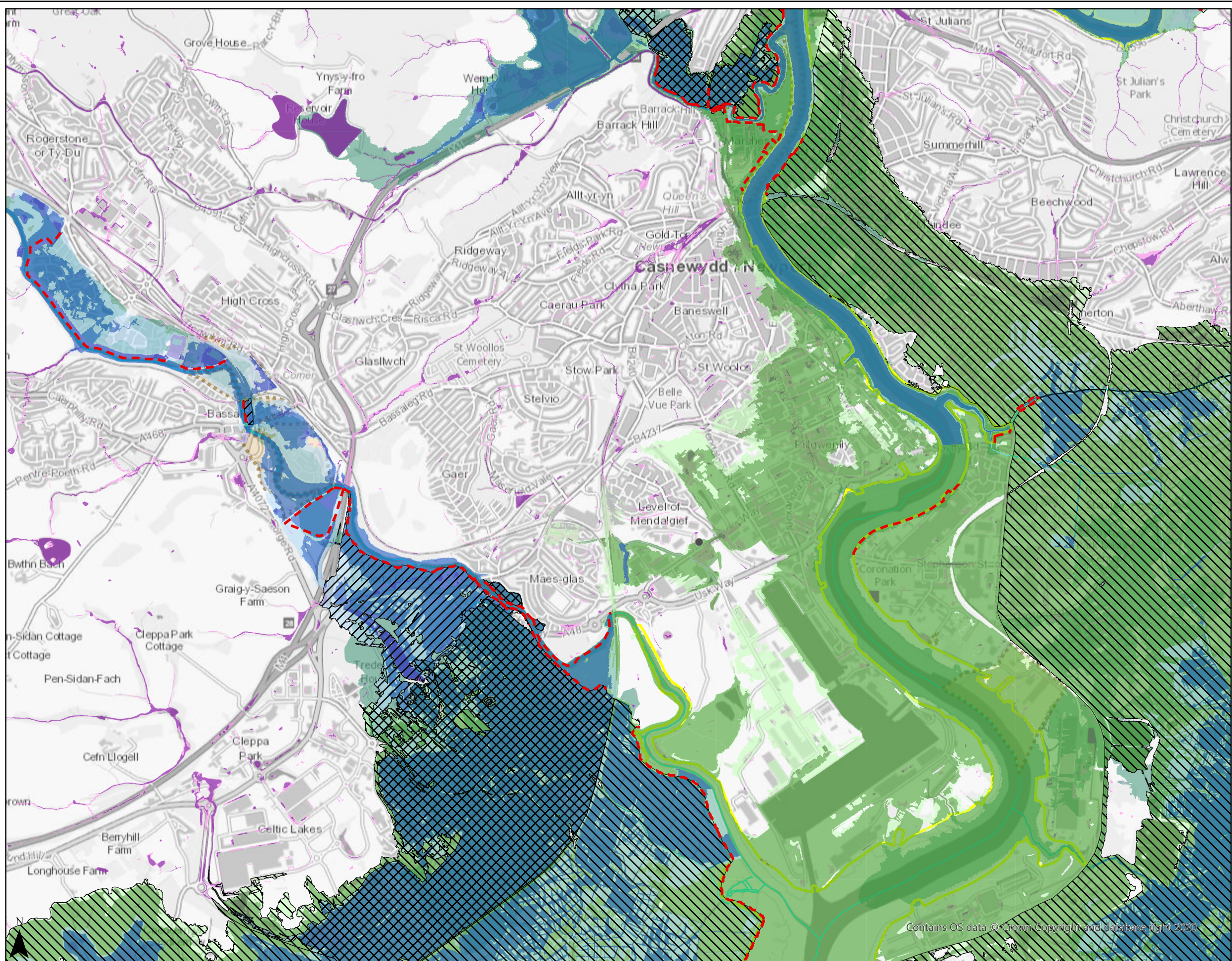
■ Short-term (2005-2025)

■ Medium-term (2005-2055)

■ Long-term (2005-2105)

■ Flood Risk from Reservoirs

— Main Rivers



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British National Grid

Flood Map for Planning - Detail
All defences and flood risks Zoomed

Legend

- Flood Defence Locations
- TAN15 Defended Zones
- Rivers
- Sea
- Rivers and Sea
- Rivers
 - Flood Zone 3
 - Flood Zone 2
- Sea
 - Flood Zone 3
 - Flood Zone 2
- Surface Water and Small Watercourses
 - Flood Zone 3
 - Flood Zone 2
- Recorded Flood Extents
- Shoreline Management Plan policies
- Coastal Erosion Risk with Shoreline Management Plan policies implemented scenario
 - Short-term (2005-2025)
 - Medium-term (2005-2055)
 - Long-term (2005-2105)
- Flood Risk from Reservoirs
- Main Rivers

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0.2 0.1 0 0.2
km
British National Grid

Flood Map for Planning - Basic
Enter title (max 35 characters)

Legend

TAN15 Defended Zones

Rivers

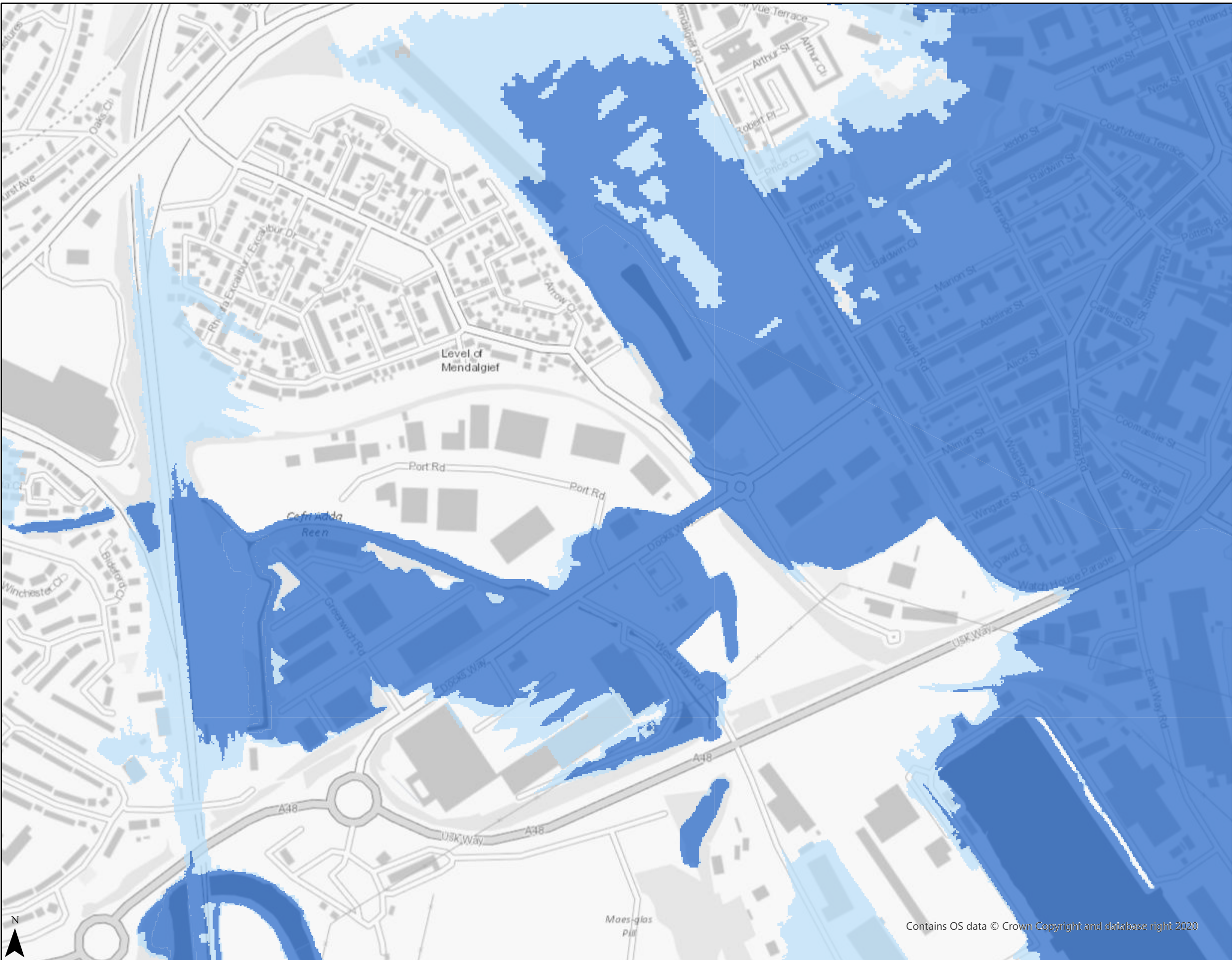
Sea

Rivers and Sea

Rivers and Sea

Flood Zone 3

Flood Zone 2



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Scale at A3: 1:5,000

Date: 11/11/2024

Disclaimer

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

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0.2 0.1 0 0.2
km

British National Grid

Flood Map for Planning - Basic
Enter title (max 35 characters)

Legend

TAN15 Defended Zones

Rivers

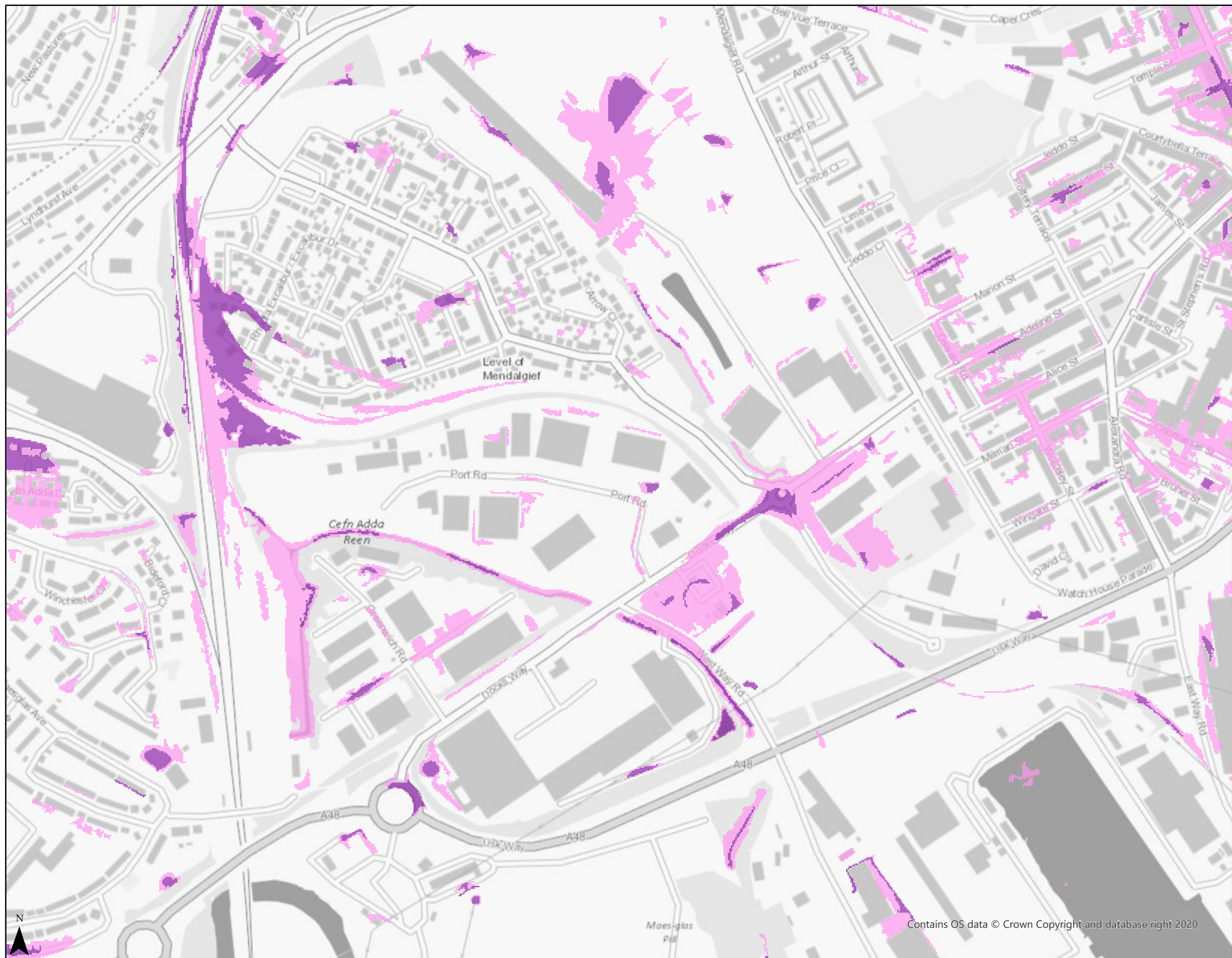
Sea

Rivers and Sea

Surface Water and Small Watercourses

Flood Zone 3

Flood Zone 2



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Scale at A3: 1:5,000

Date: 11/11/2024

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km

British National Grid



Legend

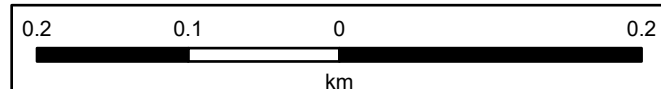
TAN15 Defended Zones

 Recorded Flood Extents

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Scale at A3: 1:5,000

Date: 11/11/2024



British National Grid

Disclaimer

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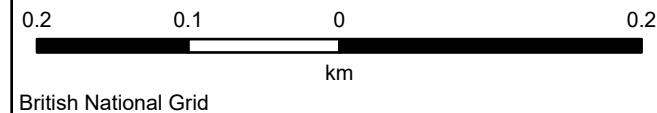
**Flood Map for Planning - Basic
Surface Water Flood**

- Legend**
- TAN15 Defended Zones
-  Rivers
 -  Sea
 -  Rivers and Sea
- Surface Water and Small Watercourses
-  Flood Zone 3
 -  Flood Zone 2

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Scale at A3: 1:5,000

Date: 11/11/2024



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Appendix B Sewers Records

Valley Wholesale, Docks Way, Newport NP20 2NS



LEGEND(Representative of most common features)

- | | | |
|---|---|--|
|  Waste network: |  Surface water chamber |  Outfall |
|  Combined chamber |  Storm Overflow |  Rising main |
|  Combined sewer overflow |  Gravity sewer |  Private sewer |
|  Special purpose chamber |  Private sewer subject to Sect. 104 adoption agreement |  Private Sewer Transfer |
|  Treatment works |  Lateral Drain |  Inspection Chamber |
|  Pumping station | | |
- NB: Sewer symbol colour indicates the type.
 RED - Combined
 GREEN - Surface Water
 BROWN - Foul
 Purple - Former S24 sewers (for indicative purposes only)

Notes:

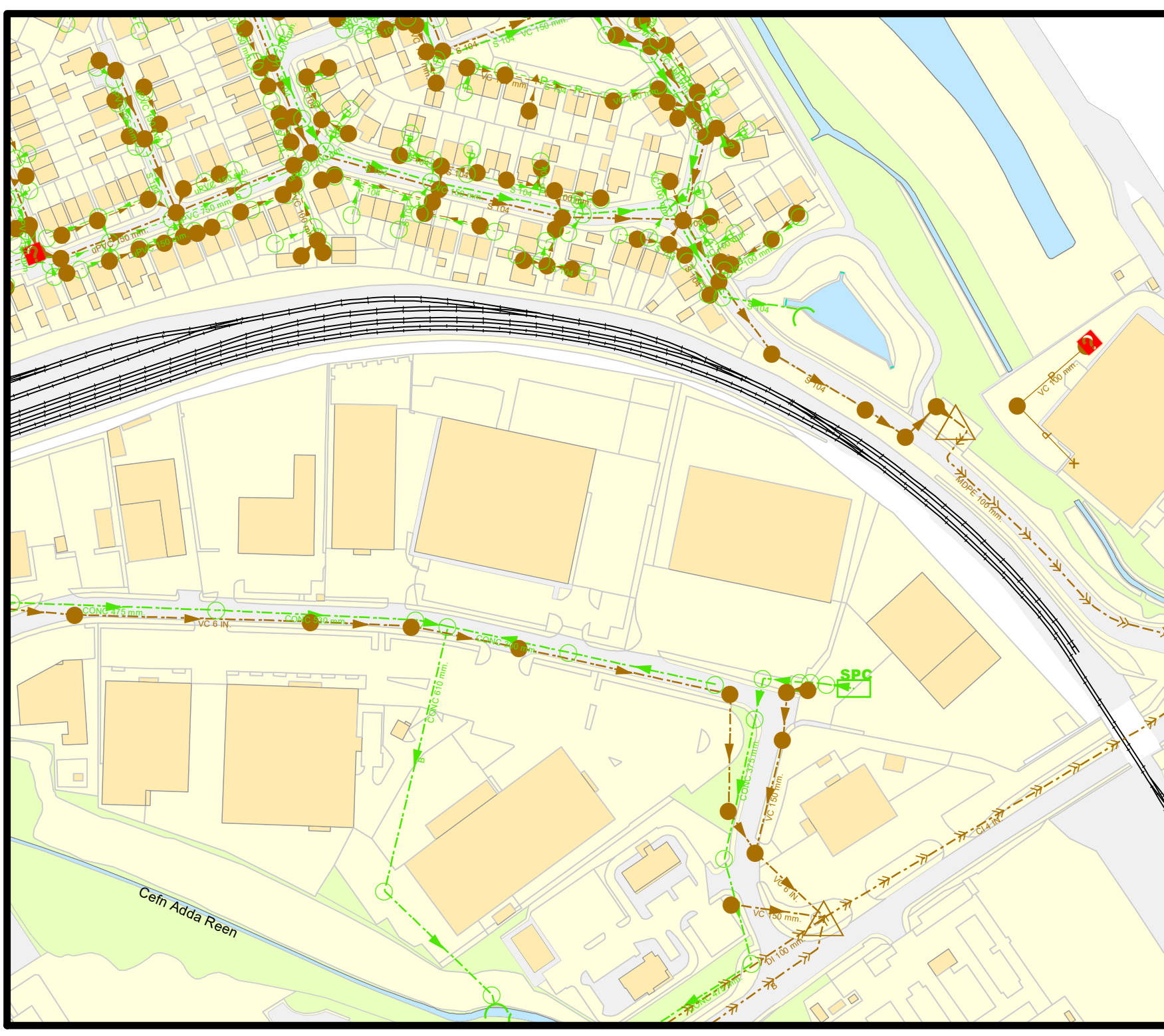
Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation.

Dŵr Cymru Cymyngedig (the Company) gives this information as to the position of its underground apparatus by way of general guidance only and on the understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the Company's apparatus. The user of this information does so at their own risk and any excavations made without the Company's agreement are done so in accordance with statutory requirements of sections 105 and 109 of the Water Industry Act 1991 which in no way opens the liability of the Company or its officers, directors, employees or agents for any loss or damage caused by the use of this information. It is also noted that the records that are available to the Company may not disclose the existence of a water main, service pipe, lateral drain or discharge pipe and any associated apparatus and before 1 September 1989, or if they do, the information thereof including the position, depth and depth may not be accurate. It is also noted that the furnishing of this information is solely without prejudice to the provisions of the New Roads and Street Works Act 1991 and the Company's right to be compensated for any damage to its apparatus. Service pipes are not generally shown but their presence should be anticipated.

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

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Map Ref: 330777,186371
 Map scale: 1:2000
 Printed by: Emily Marsden
 Printed on: 14 Nov 2024

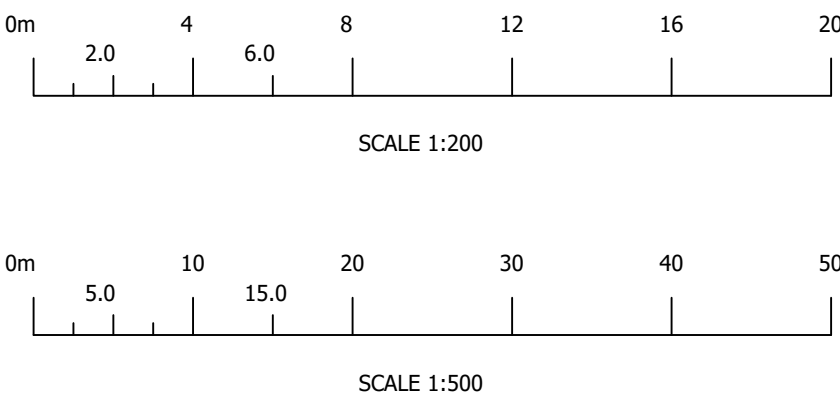


Appendix C Proposed Site Plan

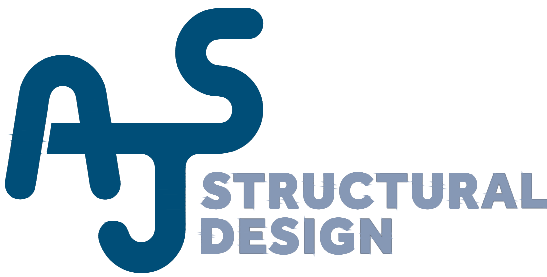
PLANNING
PURPOSES ONLY.

Notes:

- 1) The contractor to confirm details of the existing structure are correct prior to commencement of any works. if there are any discrepancies please contact us.
- 2) Soakaways are to be a minimum of 5.0m away from any building and 10.0m away from any water course.
- 3) All drainage details are indicative and should there be any discrepancies, please contact us to review or agree with the building control officer.
- 4) Contractor to locate the position of any existing services prior to excavation.
- 5) In any project in which a Party Wall Agreement is required, it is the contractor/ client responsibility.



Rev.	Revision Description	Drm	Date
P0	Initial Issue	JT	08-08-24
P1	Alteration to red line boundary additional dims added on site plan	JT	16-08-24
P2	Foot print reduced by 1 bay	JT	23-08-24
P3	Revised Scheme	JT	30-08-24



Uttoxeter Office: 2 Church Street, Uttoxeter, Staffs, ST14 8AG
Derby Office: Durham House, Stanier Way, Wyvern Business Park DE21 6BF
Uttoxeter Tel: 01889 723003 Derby Tel: 01332 913011

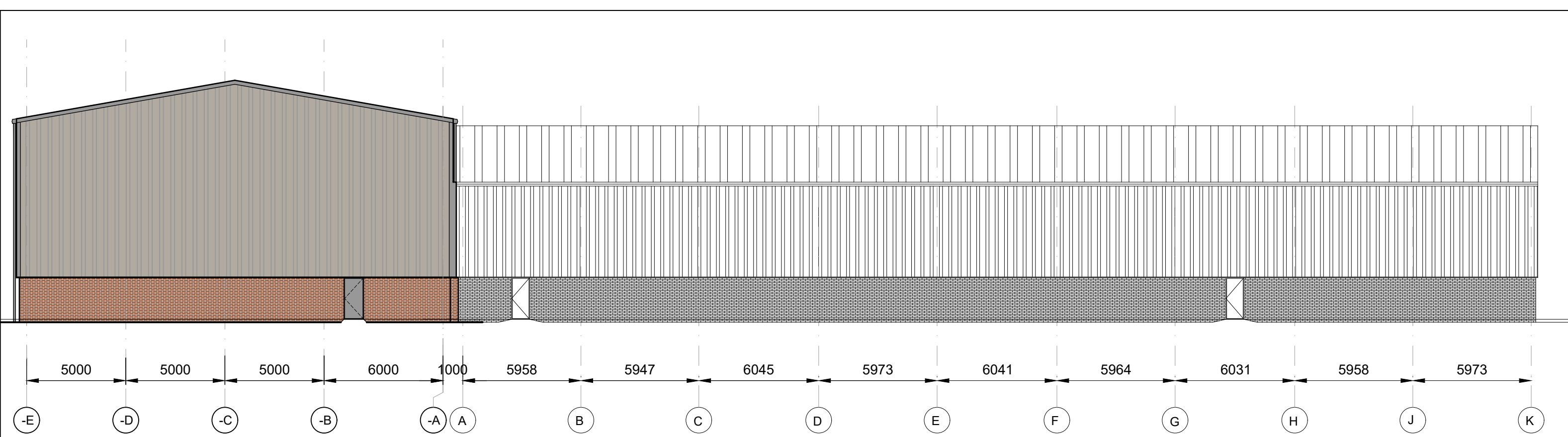
Contract Title:
**Valley Wholesale Carpets
Phase 1 Side Extension and Loading Dock**

Drawing Contents:
**Existing Plans, Elevations
and Site Plan**

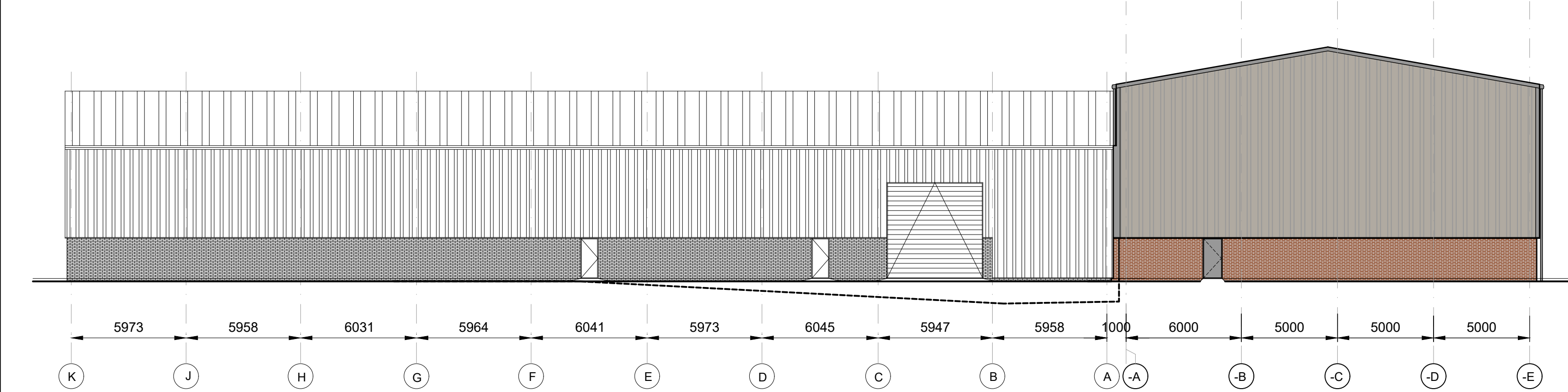
Drawing Status:
PRELIMINARY

Drawn by: JT	Date: August 2024	Scale: as shown @ A1
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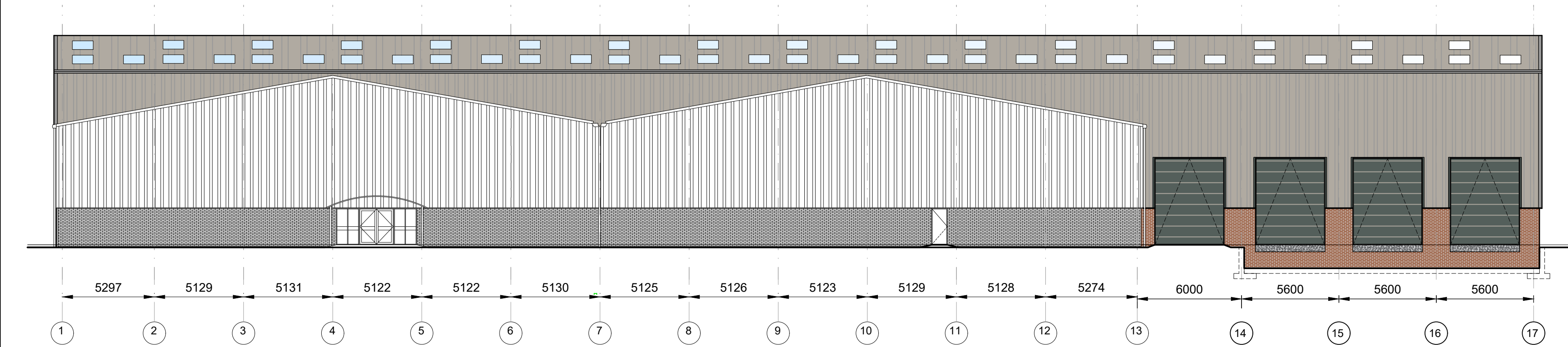
Drawing No: A8311 - 007	P3
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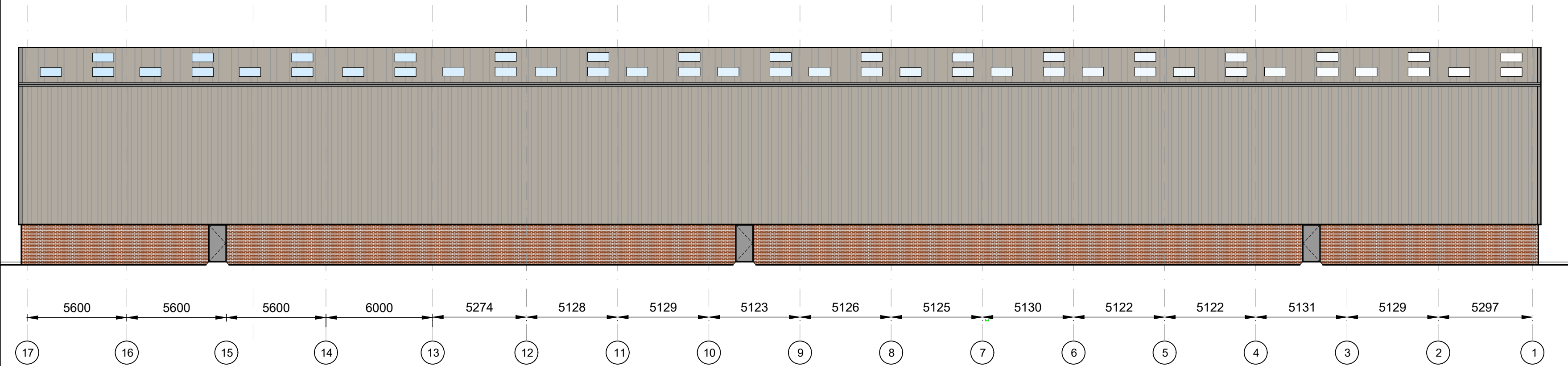
Proposed West Elevation
Scale 1 : 200



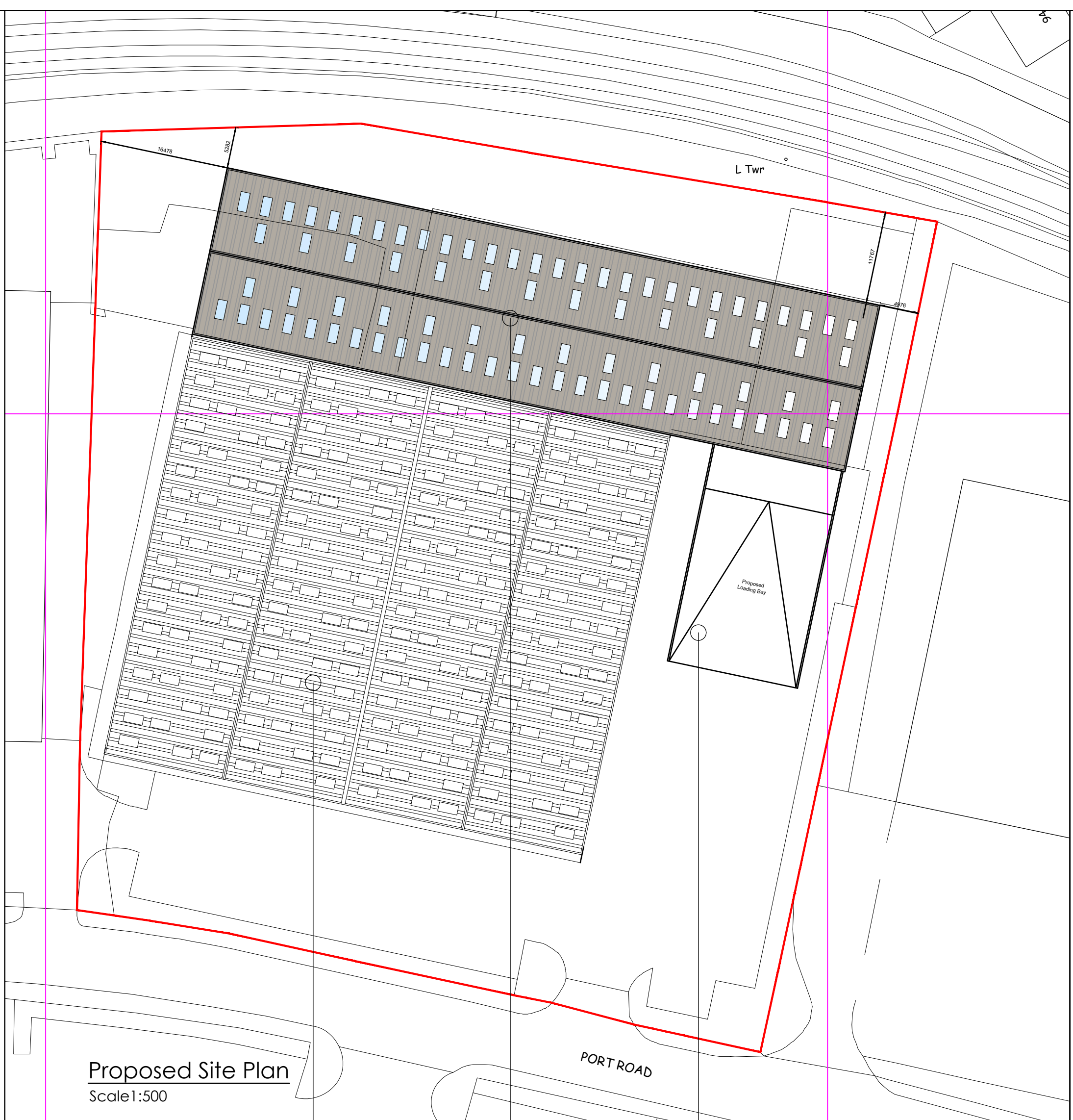
Proposed East Elevation
Scale 1 : 200



Proposed South Elevation
Scale 1 : 200



Proposed North Elevation
Scale 1 : 200



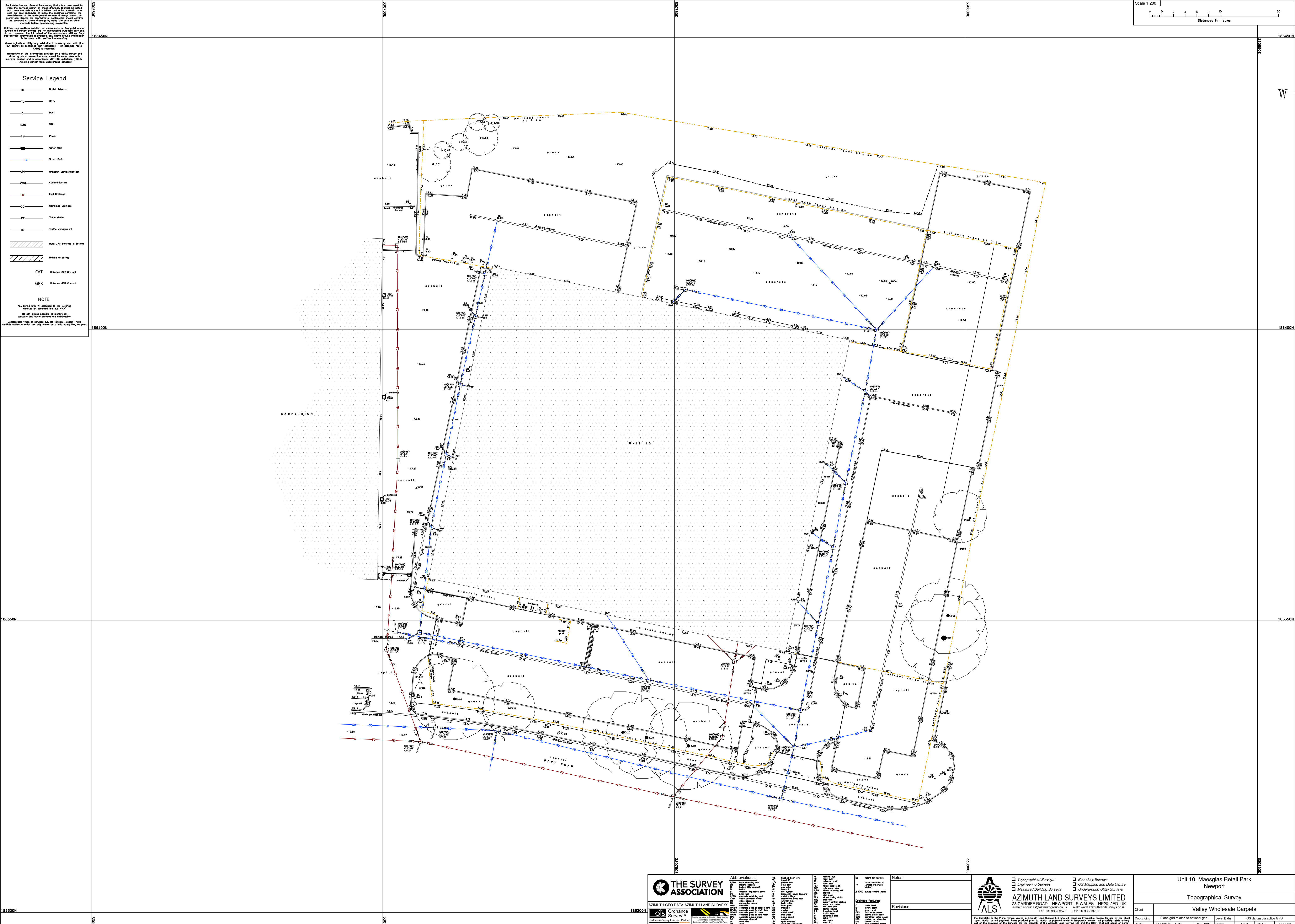
Proposed Site Plan
Scale 1:500

Proposed Loading Dock

Proposed Extension

Existing Building

Appendix D Topographic Survey



Radio Detection and Ground Penetrating Radar has been used to detect the location of underground services. It must be noted that these methods are not 100% reliable and whilst Azimuth have used the best available technology to detect the location of underground services, the completeness of the information is not guaranteed. Customers should consider the possibility of any services being located by other methods before commencing excavation.

Utilities may continue outside the survey extent. Any point outside the survey extent is for information purposes only and is not intended to be used for any other purpose. Only the information provided in this report is to be used for any other purpose.

Where necessary, a utility may need to be shown ground indication but cannot be confirmed with technology - an assumed route (UAS) is shown.

Regardless of the information provided by a utility survey and necessary plans, excavation work should be undertaken with extreme caution and in accordance with HSE guidelines (UG54) - Avoiding danger from underground services.

Service Legend

- BT - British Telecom
- TV - CCTV
- D - Duct
- GAS - Gas
- PW - Power
- Water Main
- SD - Storm Drain
- UK - Unknown Service/Contact
- COM - Communication
- FD - Foul Drainage
- CD - Combined Drainage
- TW - Trade Waste
- TM - Traffic Management
- Multi U/G Services & Extents
- Unable to survey
- CAT - Unknown CAT Contact
- GPR - Unknown GPR Contact

NOTE

Any string with 'X' attached to the following details an assumed line, not a U/G.

It is not always possible to identify all contacts and some services are untraceable.

Considerable types of services e.g. BT (British Telecom) have multiple cables - which are only shown as a single string line on plan.

THE SURVEY ASSOCIATION
AZIMUTH GEO DATA AZIMUTH LAND SURVEYS
Ordnance Survey
www.azimuthgeodata.co.uk

Abbreviations:

- 2.5m - 2.5m
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