

MERIDIAN

CIVIL ENGINEERING CONSULTANCY

LAND ADJACENT TO 9 ADDISON ROAD
SANDFIELDS, PORT TALBOT
SA12 6HJ

FLOOD CONSEQUENCES ASSESSMENT

MAY 2025

CONTENTS

1.0	INTRODUCTION	3
2.0	POLICY COMPLIANCE	5
3.0	SITE LOCATION	5
4.0	GEOLOGY AND INFILTRATION POTENTIAL	5
5.0	SEQUENTIAL TEST/EXCEPTION TEST	6
6.0	CLIMATE CHANGE ALLOWANCES	6
7.0	SOURCES OF FLOODING	7
8.0	RESIDUAL RISKS	15
9.0	OFFSITE IMPACTS	15
10.0	FLOOD RISK MANAGEMENT MEASURES	15
11.0	CONCLUSION	17
12.0	LIMITATIONS AND UNCERTANTIES	17

APPENDICES

APPENDIX I	Architects plans
APPENDIX II	EA Data

Client : Piku Das

Rev	Date	Prepared by	Checked by	Approved by
P0	05/12/2024	IW	MN	MN
P1	17/02/2025	IW	MN	MN
P2	07/03/2025	IW	MN	MN
P3	24/04/2025	IW	MN	MN
P4	16/05/2025	IW	MN	MN

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Report revision P1

Following the P0 revision of this FCA, MCEC received the following comments from NRW concerning the report:

As the application site is currently open and free from any buildings, where the FCA identifies the risk in the 0.1% it does not quantify it, any new buildings within the floodplain have the potential to cause an increased flood risk elsewhere. On this basis A1.12 of TAN15 has not been satisfied and the proposed mitigation of raising finished floor levels (FFL's) 300mm above existing ground levels does not address this.

In summary the proposal looks to bring new highly vulnerable development into an area of considered flood risk with an unknown impact to 3rd parties, thus is not considered to demonstrate compliance with TAN15.

In response, MCEC have requested and obtained Product 5 and 6 data from NRW which addresses the concerns raised.

We have amended Sections 1.0, 7.0 and 11.0 from the previous revision of this FCA report. Sections 1.6, 1.8, 7.1.4, 7.2.3, 11.6 and 11.8 are new additions. This includes the 0.1% mapping provided as part of the Product 5&6 data.

Relevant mapping received for the site addressed is included in Appendix II.

Report revision P2

Following the P1 revision of this FCA, MCEC received the following comments from NRW concerning the report:

the data submitted on figure 9 (page 9) of the FCA by Meridian is not considered to be suitable for use of informing an FCA. At present the latest information held by NRW showing the flood risk to the site is Flood Map for Planning which is shown on page 8 (Figure 7) of the FCA where the site is considered to be at flood risk in the 0.1%AEP.

Therefore, our previous concerns relating to increased flood risk elsewhere as result of the proposed development still remain and we are unable to confirm that A1.12 of TAN15 can be satisfied.

In response, MCEC have added Section 7.3 to this FCA report which addresses the concerns of floodplain displacement which were not considered suitable in the previous revision.

Sections 1.9, 1.10, 10.4, 11.9 and 11.10 have also been added to reflect the addition of Section 7.3.

Report revision P3

Following the P2 revision of this FCA, MCEC have included alternate flood mitigation measures in place of floodable void mitigation.

We have amended Sections 1.9, 1.10, 1.14, 7.3.4, 7.3.5, 7.3.6, 10.3.

Sections 1.17 and 11.17 have also been added to reflect these changes.

Report revision P4

Following the P3 revision of this FCA, MCEC have made additions to clarify existing site ground levels and the depth of floodable void to be created to mitigate potential flood plain displacement.

1.0 INTRODUCTION

- 1.1 Meridian Civil Engineering Consultancy LTD (MCEC) has been instructed by Piku Das to prepare a site-specific Flood Consequence Assessment (FCA) for the development being carried out at the Land adjacent to 9 Addison Road, Sandfields, Port Talbot, SA12 6HJ.
- 1.2 The site is an existing vacant plot that has previously been granted planning permission for residential but this has now lapsed and as such a new application has been made. A review of LiDAR site level data shows the existing site ground levels range from 7.38mAOD at the southern corner of the site to 7.5mAOD central on the site.
- 1.3 It is understood that the proposed development is for the construction of a new residential property, along with new off-street parking and associated relandscaping. Sleeping accommodation is shown at first floor only.
- 1.4 The British Geological Survey (BGS) Geology of Britain Viewer indicates that the bedrock underlying the site consists of South Wales Middle Coal Measures Formation – Mudstone, Siltstone and Sandstone (Source: BGS). Superficial deposits underlay the site consist of Blown Sand – Sand.
- 1.5 In accordance with the TAN15 Development Vulnerability Categories, this development is classed as 'Highly Vulnerable' as it is a residential development.
- 1.6 According to the Natural Resources Wales (NRW) Flood Map for Planning the site is located within Flood Zone 2 for sea flood zones and an area benefitting from tidal flood defences. The Flood Risk Assessment Wales map indicates the development location to be within an area at Very Low risk of flooding from the sea. Very Low means that each year, this area has a chance of flooding less than 0.1% (1in1000yr). This takes into account the effect of any flood defences that may be in this area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.
- 1.7 Product 6 data provided by NRW shows the site to be located outside of the region of flooding in a 0.1%AEP Tidal Event (CC2116). This means that in the 1 in 1000 year +CC tidal event, the site is modelled to experience no flood inundation.
- 1.8 According to the Natural Resources Wales (NRW) Flood Map for Planning the site is located within Flood Zone 2 for river flood zones. The Flood Risk Assessment Wales map indicates the development location to be at very low risk of flooding from rivers. Very low risk means that each year, this area has a chance of flooding less than 0.1% (1in1000yr).
- 1.9 The Product 6 data provided by NRW shows the site to be located outside of the region of flooding in the 0.1%AEP Fluvial event. This means that in the 1 in 1000 year fluvial event, the site is modelled to experience no flood inundation. NRW have confirmed this data is not suitable for use in the FCA and that the latest current data is shown as the FZ2 extent in the flood map for planning.
- 1.10 External ground levels should also be designed to ensure no displacement of flood water would occur (ie ground levels to be no higher than existing). Proposed car parking is to be of permeable construction to encourage infiltration and minimise impermeable surfacing where possible across the site.
- 1.11 According to mapping published by the NRW the site is shown to be within an area at very low risk of surface water flooding. Very low risk means that each year this area has a chance of flooding of less than 0.1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.
- 1.12 According to the Neath Port Talbot County Council SFCA, the risk of flooding from groundwater is possible within the Council. There is limited data on which areas within the council are at risk

- of ground water flooding but as there is no below ground development proposed in the plans the risk of groundwater flooding can be considered to be low.
- 1.13 It is recommended the client integrates sustainable drainage into the scheme, in line with current best practice and sustainable guidance, to reduce risks to others as a result of development. Given the presence of sands, shown by the BGS records, on site it is assumed infiltration of surface runoff may be viable. A full surface water SUDS strategy is outside the scope of this report but the use of permeable surfacing is proposed on the architectural plans.
- 1.14 As the maximum projected flood level for the site is shown to be 7.5mAOD (to be conservative) and the lowest existing ground level onsite is 7.38mAOD, the maximum onsite flood depth is therefore 0.12m, or 120mm.
- 1.15 It is recommended that additional measures are introduced to the proposal which mitigate potential flood risk.
- Floodable void provided under property to mitigate flood plain displacement.
 - All bedrooms and Bathroom to be positioned on First Floor Level
 - All electric Sockets to be positioned a minimum of 450mm above Finished Floor Level
 - Stormguard Flood Barriers to be fitted to all Ground Floor Entrance Doors
 - Stormguard Flood Barrier to be added to External Perimeter Pedestrian Entrance to slow water ingress to the site
 - Stormguard Driveway Flood Barrier to be added to External Perimeter Vehicle Access Entrance to slow water ingress to the site.
 - 150mm Ecodrain to run full perimeter of the property
 - 150mm Ecodrain to be added at both pedestrian and vehicle access points to the site
 - All Ecodrains to be connected to Sustainable Drainage (SuDs) Soakaway Crate Pits to be positioned under both the Vehicle Parking Spaces
- 1.16 To account for potential flood risk, and to reduce potential flood plain displacement, it is recommended that the underside of GF finished floor construction should be no lower than 7.6mAOD (100mm above the predicted flood water top level). This allows a floodable void to be created under the dwelling so water can still be accommodated on site and, should a flood event occur, displacement of flood water would not be generated that could cause increased risk to others. The base level of the void should be 7.38mAOD in line with the lowest GL at the southernmost corner of the site.
- 1.17 Site levels should be such that water can drain into and out of the void. Air bricks can be sited at a number of locations around the property at the 7.38mAOD level, and with the top of the airbrick at underside of FFL, to ensure a ventilated void is provided and allow water to flood into the void should an extreme flood event occur (and drain out as water recedes).
- 1.18 As the underside of the finished floor construction is a fixed minimum level to allow for a floodable void the final FFL of the proposed development may vary depending on final proposed floor construction, insulation, finishes etc but should be no lower a minimum if 7.8mAOD (300mm above the predicted flood level of 7.5mAOD).
- 1.19 External ground levels should also be designed to ensure no additional displacement of flood water could occur. Proposed car parking is to be of permeable construction to encourage infiltration and minimise impermeable surfacing where possible across the site.
- 1.20 The property owner and/or any tenant should sign up to the relevant NRW flood warning and alert services if living at the property. Should an alert or warning be raised this will give the opportunity for the residents to protect the dwelling or evacuate as necessary.
- 1.21 This report has been produced broadly in accordance with the Technical Advice Note 15 (TAN 15): Development and Flood Risk, and Neath Port Talbot County Borough Council SCFA and local guidance.

2.0 POLICY COMPLIANCE

2.1 The purpose of this assessment is to demonstrate that the development proposal outlined above can be satisfactorily accommodated without worsening flood risk for the area and without placing the development itself at risk of flooding, as per the:

- Technical Advice Note (TAN 15): Development and Flood Risk
- Neath Port Talbot County Borough Council SFCA and local guidance

3.0 SITE LOCATION

3.1 The proposed development is being carried out at the land adjacent to 9 Addison Road, Sandfields, Port Talbot, SA12 6HJ.

3.2 The site is an existing vacant plot that has previously been granted planning permission for residential but this has now lapsed and as such a new application has been made. A review of LiDAR site level data shows the existing site ground levels range from 7.38mAOD at the southern corner of the site to 7.5mAOD central on the site.

3.3 It is understood that the proposed development is for the construction of a new residential property, along with new off-street parking and associated relandscaping. Architectural plans are included in Appendix I.



Figure 1 - Site location plan

4.0 GEOLOGY AND INFILTRATION POTENTIAL

4.1 The British Geological Survey (BGS) Geology of Britain Viewer indicates that the bedrock underlying the site consists of South Wales Middle Coal Measures Formation – Mudstone, Siltstone and Sandstone (Source: BGS). Superficial deposits underlay the site consist of Blown Sand - Sand.

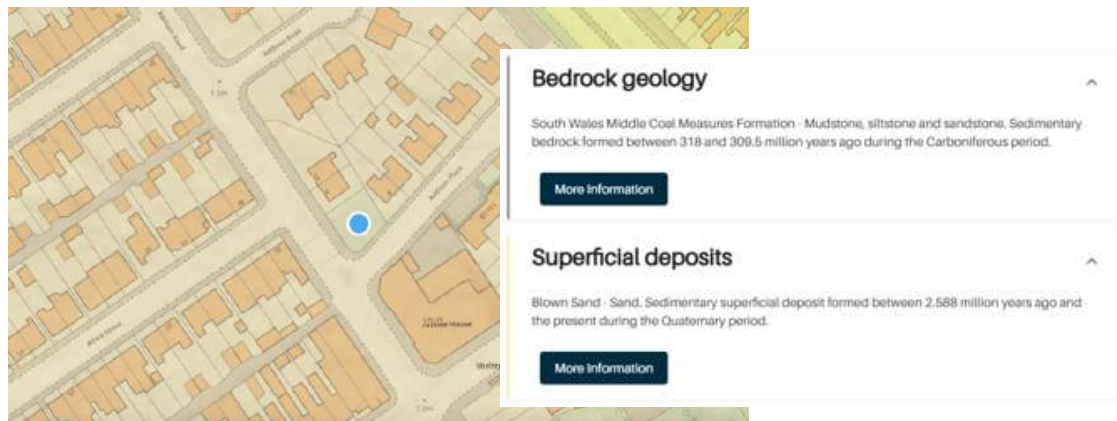


Figure 2: BGS geology map extract

5.0 SEQUENTIAL TEST/EXCEPTION TEST

- 5.1 According to the NRW Flood Map for Planning the site is located within Flood Zone 2 and an area benefitting from tidal flood defences.
- 5.2 In accordance with the TAN15 Development Vulnerability Categories, this development is classed as 'Highly Vulnerable' as it is a residential development.
- 5.3 The consequences of flooding on this development are likely to be limited to impact upon lives through the limitation on accessibility and ground floor damage caused by onsite inundation. This will be limited to events beyond the design flood (1in200yr for tidal, 1in100yr for pluvial) as the site is protected by coastal flood defences and is located in an area considered to be at low risk of sea flooding shown on mapping published by NRW.

6.0 CLIMATE CHANGE ALLOWANCES

- 6.1 Making an allowance for climate change in the design of surface water drainage systems will help to minimise vulnerability and provide resilience to flooding and coastal change in the future. Climate Change allowances vary across the UK subject to catchment conditions and are based on climate change projections and different scenarios of carbon dioxide (CO₂) emissions to the atmosphere.
- 6.2 As the development has a lifespan of 100 years, the upper climate change allowance for the site to be applied to peak rainfall intensity, in accordance with TAN15, should be 40%.
- 6.3 For the peak river flow allowances for the site, in accordance with TAN15 guidance, the central allowance of 30% should be applied to river flow events as the climate change allowance within the West Wales River Basin District.

7.0 SOURCES OF FLOODING

7.1 Tidal

- 7.1.1 According to the Natural Resources Wales (NRW) Flood Map for Planning the site is located within Flood Zone 2 for sea flood zones (figure 3) and an area benefitting from tidal flood defences (figure 4).
- 7.1.2 The Flood Risk Assessment Wales map indicates the development location to be within an area at Very Low risk of flooding from the sea (figure 5). Very Low means that each year, this area has a chance of flooding less than 0.1% (1in1000yr). This takes into account the effect of any flood defences that may be in this area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.
- 7.1.3 Based on the Spot Heights neighbouring the proposed site, projected flood levels for the flood zone 2 extent equate to approximately 7.5mAOD to be conservative as can be seen in Figure 10.
- 7.1.4 As the underside of the finished floor construction is a fixed minimum level to allow for a floodable void the final FFL of the proposed development may vary depending on final proposed floor construction, insulation, finishes etc but should be no lower a minimum if 7.8mAOD (300mm above the predicted flood level of 7.5mAOD).



Figure 3 – NRW Sea Flood Zone map extract

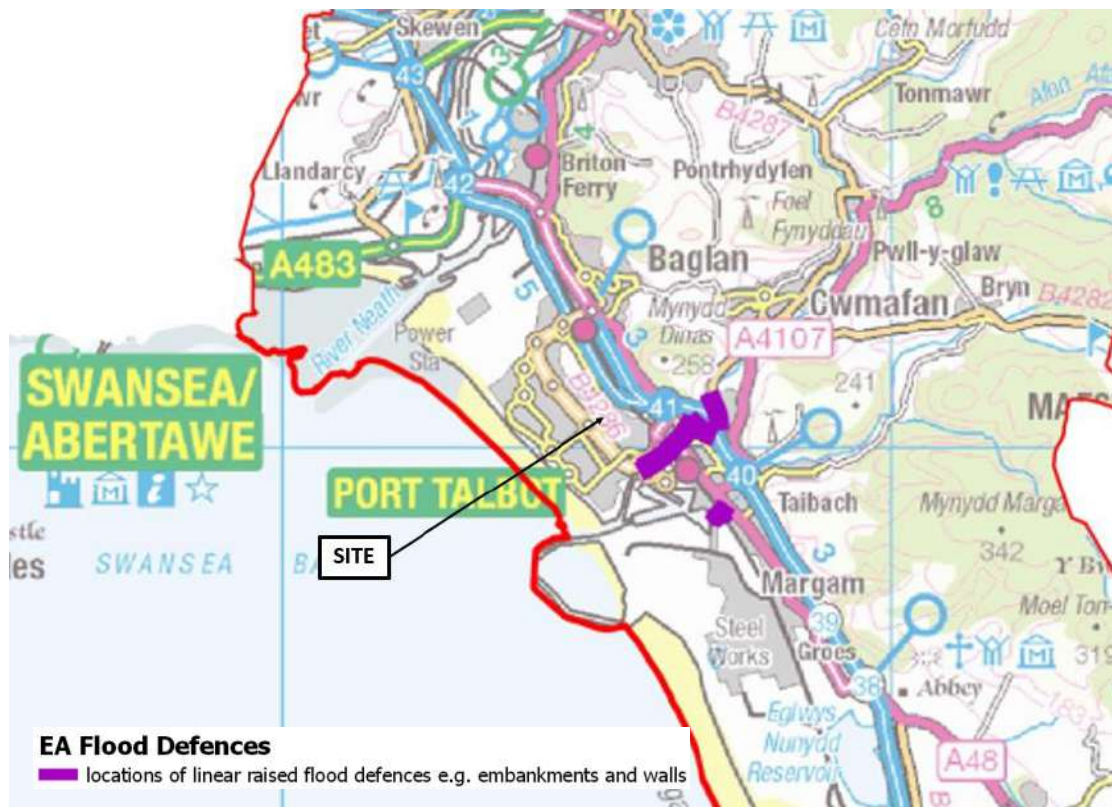


Figure 4 – Location of Flood Defences map extract

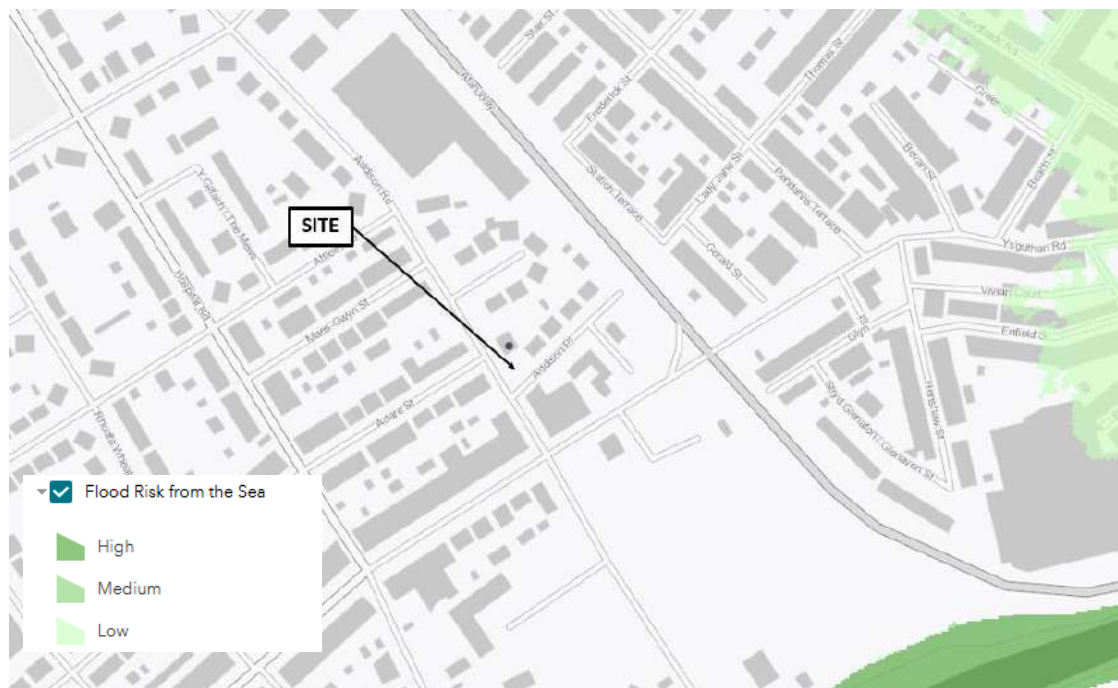


Figure 5 – NRW Flood Risk from the Sea map extract

7.1.5 Product 6 data provided by NRW shows the site to be located outside of the region of flooding in a 0.1%AEP Tidal Event (CC2116). This means that in the 1 in 1000 year +CC tidal event, the site is modelled to experience no flood inundation.



Figure 6 – NRW Product 6 – 0.1% AEP Tidal Event (2116) Depth map extract

7.2 Fluvial

7.2.1 According to the Natural Resources Wales (NRW) Flood Map for Planning the site is located within Flood Zone 2 for river flood zones (figure 7).



Figure 7 – NRW River Flood Zone map extract

7.2.2 The Flood Risk Assessment Wales map indicates the development location to be at very low risk of flooding from rivers (figure 8). Very low risk means that each year, this area has a chance of flooding less than 0.1% (1in1000yr).

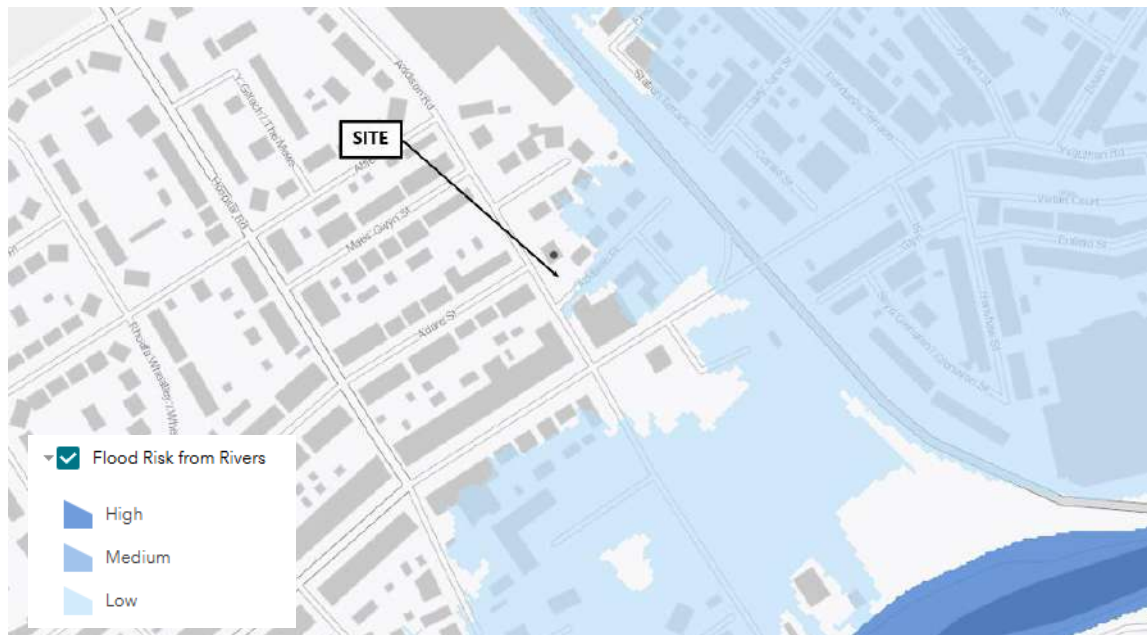


Figure 8 – NRW Flood Risk from Rivers map extract

7.2.3 Product 6 data provided by NRW shows the site to be located outside of the region of flooding in the 0.1% AEP Fluvial event. This means that in the 1 in 1000 year fluvial event, the site is modelled to experience no flood inundation.

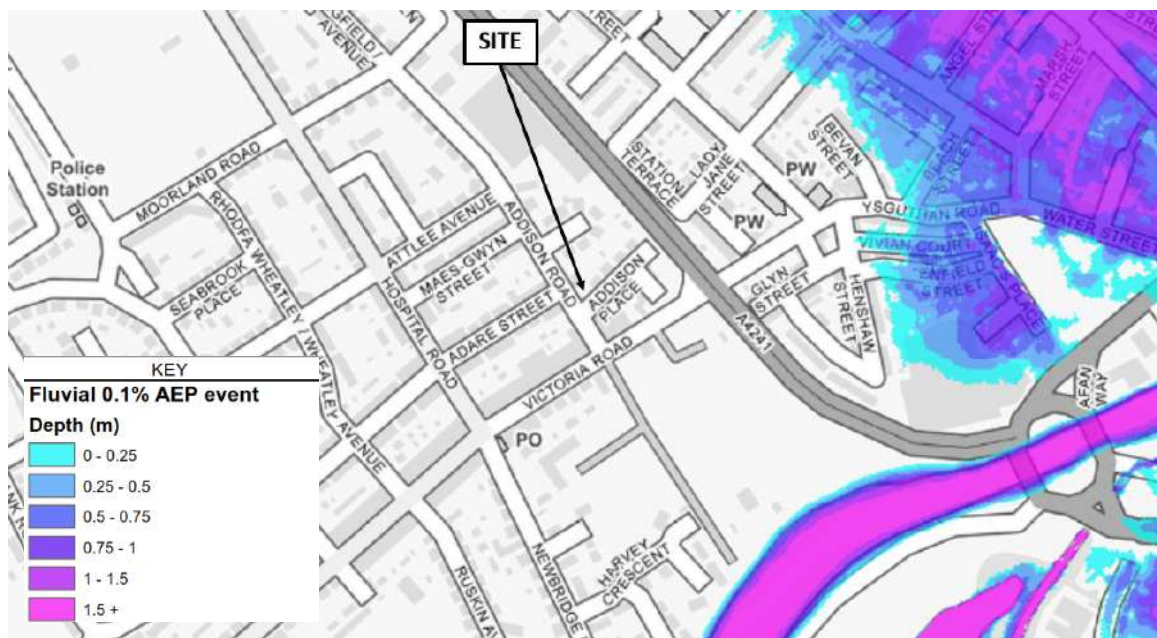


Figure 9 – NRW Product 6 – 0.1% AEP Fluvial event - map extract

7.2.4 Based on the Spot Heights neighbouring the proposed site, projected flood levels for the flood zone 2 extent equate to approximately 7.5mAOD to be conservative as can be seen in Figure 10.

7.3 Floodplain Displacement

7.3.1 Comments made by NRW on 03/03/2025 state that the proposal is required to consider the impacts of floodplain displacement of the proposed development. As such MCEC have considered the FZ2 flood extent (as the most up to date data as confirmed by NRW) and local LiDAR levels.

7.3.2 The proposed site plan has been overlaid with Lidar data below to show existing site levels.



Figure 10 – Proposed Site Plan overlaid with Lidar data

7.3.3 Review of Lidar data shows that the lowest ground level onsite is at Site Level 3, which is located at the southernmost corner. Land here has a level of 7.38mAOD, as can be seen in Figure 10.

7.3.4 In order to extrapolate projected flood depths onsite, Meridian have placed five Spot heights along the Flood Zone 2 extent. As the proposed site is located in Flood Zone 2, there is a 0.1% chance of flooding each year.

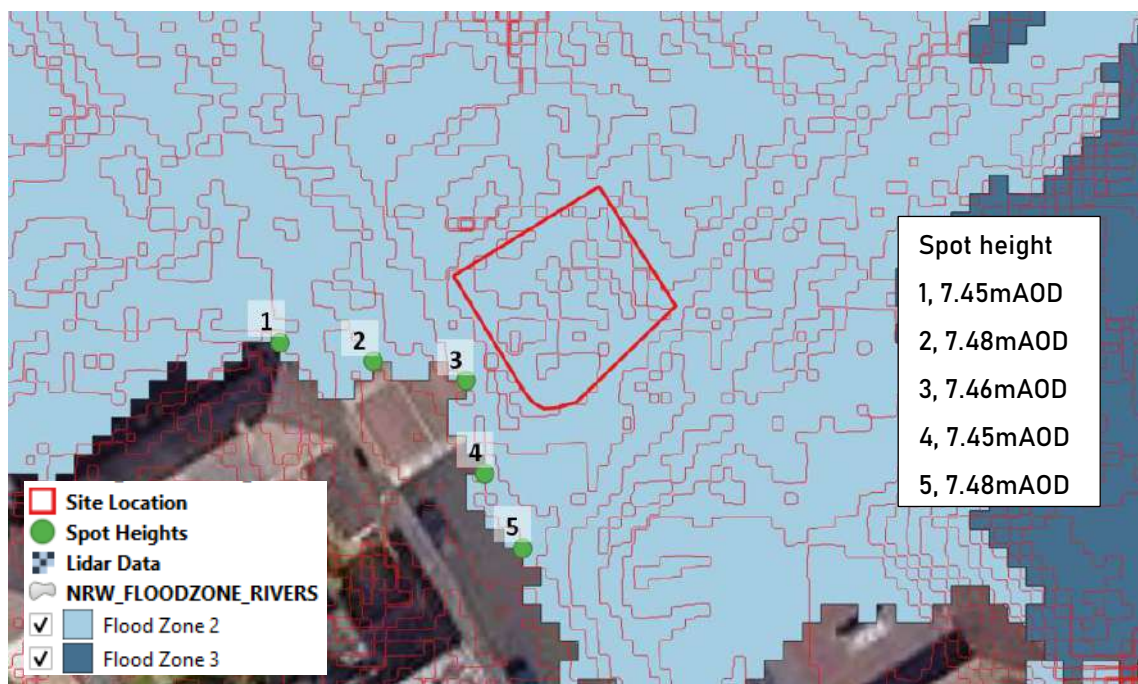


Figure 11 – NRW River Floodzones overlaid with Lidar data

- 7.3.5 Based on the Spot Heights neighbouring the proposed site, projected flood levels for the flood zone 2 extent equate to approximately 7.5mAOD to be conservative as can be seen in Figure 10.
- 7.3.6 As the maximum projected flood level for the site is shown to be 7.5mAOD (to be conservative) and the lowest existing ground level onsite is 7.38mAOD, the maximum onsite flood depth is therefore 0.12m, or 120mm.
- 7.3.7 To account for potential flood risk, and to reduce potential flood plain displacement, it is recommended that the underside of GF finished floor construction should be no lower than 7.6mAOD (100mm above the predicted flood water top level). This allows a floodable void to be created under the dwelling so water can still be accommodated on site and, should a flood event occur, displacement of flood water would not be generated that could cause increased risk to others. The base level of the void should be 7.38mAOD.
- 7.3.8 Site levels should be such that water can drain into and out of the void. Air bricks can be sited at a number of locations around the property at the 7.38mAOD level, and with the top of the airbrick at underside of FFL, to ensure a ventilated void is provided and allow water to flood into the void should an extreme flood event occur (and drain out as water recedes).
- 7.3.9 As the underside of the finished floor construction is a fixed minimum level to allow for a floodable void the final FFL of the proposed development may vary depending on final proposed floor construction, insulation, finishes etc but should be no lower a minimum if 7.8mAOD (300mm above the predicted flood level of 7.5mAOD).
- 7.3.10 External ground levels should also be designed to ensure no additional displacement of flood water could occur. Proposed car parking is to be of permeable construction to encourage infiltration and minimise impermeable surfacing where possible across the site.

7.4 Surface Water

- 7.4.1 According to mapping published by the NRW the site is shown to be within an area at very low risk of surface water flooding. Very low risk means that each year this area has a chance of flooding of less than 0.1%. Flooding from surface water is difficult to predict as rainfall location

Flood Risk from Surface Water & Small Watercourses

- High
- Medium
- Low

7.5 Groundwater

7.6 Historic Flood

May 2025

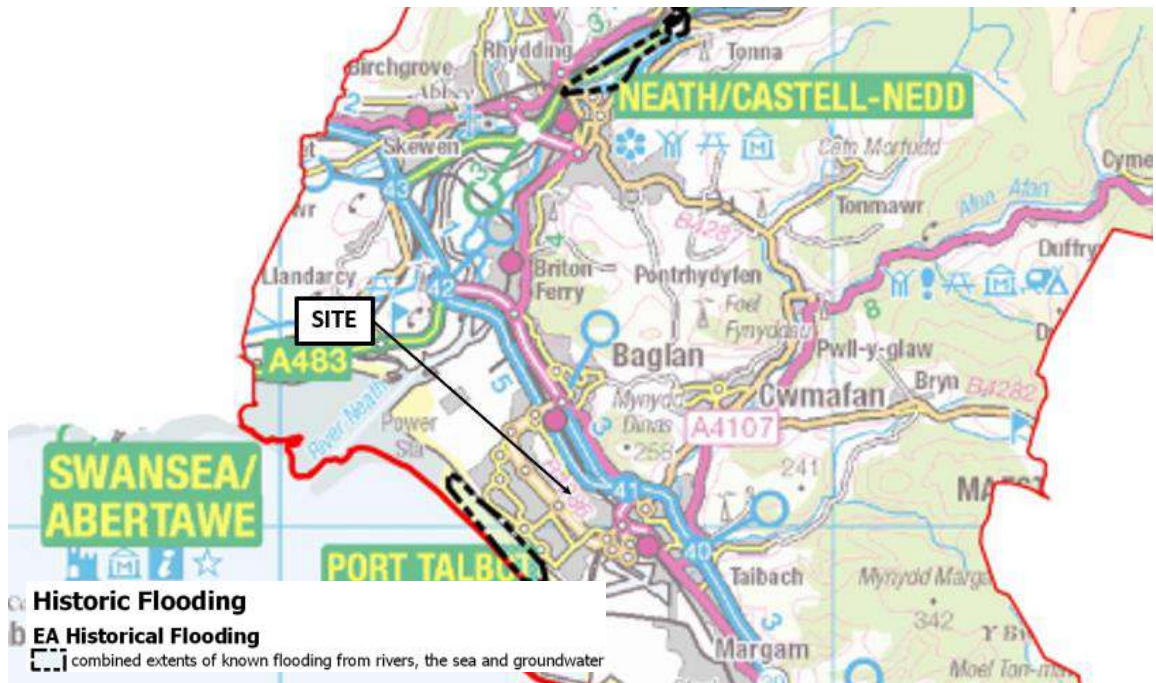


Figure 13 – Neath Port Talbot County Borough Council SFCA – Historic Flooding map extract

7.7 Reservoir

7.7.1 Mapping provided by the NRW shows that the site is located in an area not at risk of flooding from reservoirs.

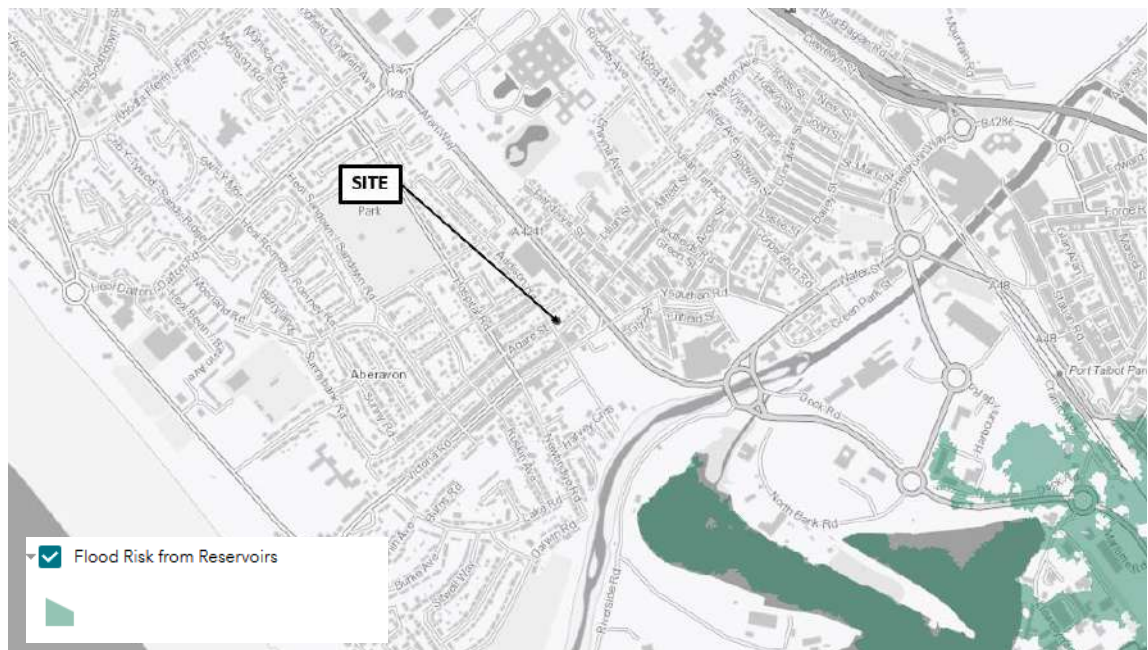


Figure 14 – NRW Flood Risk from Reservoirs map extract

7.7.2 In the unlikely event that a reservoir dam fails, a large volume of water would escape at once, with little or no warning. According to the EA, 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 detailed by the enforcement authority for the Reservoirs Act 1975

in England. The EA are responsible to ensure that reservoirs are inspected regularly, and essential safety work carried out.

7.7.3 As such flooding from this source could be seen as being low.

8.0 RESIDUAL RISKS

- 8.1 Due to the limited flood risk to the site, residual risks are limited to potential defence breach, overland flow from an exceedance event, blockage and potential surface water risk.
- 8.2 The site is shown in low-risk areas of flooding from tidal sources so risk from breach may be low. However, it is recommended that the finished floor levels of the new buildings are raised a minimum of 300mm above existing external ground levels to mitigate risks from breach, overland flow and from exceedance or blockage events.

9.0 OFFSITE IMPACTS

- 9.1 The development site is currently greenfield, and so the proposed development will contribute to an increase in the overall discharge managed by surface water sewage systems.
- 9.2 It is recommended the client considers the use of sustainable drainage to reduce offsite flow from the site where feasible.
- 9.3 Given the presence of sands, shown by the BGS records, on site it is assumed infiltration of surface runoff may be viable. A full surface water SUDS strategy, or SAB application, is outside the scope of this report but the use of permeable surfacing is proposed on the architectural plans.

10.0 FLOOD RISK MANAGEMENT MEASURES

- 10.1 Given the proposed development site is situated in an area at a low risk of flooding flood management measures are limited.
- 10.2 It is recommended the client integrates sustainable drainage into the scheme, in line with current best practice and sustainable guidance, to reduce risks to others as a result of development. Given the presence of sands, shown by the BGS records, on site it is assumed infiltration of surface runoff may be viable. A full surface water SUDS strategy is outside the scope of this report but the use of permeable surfacing is proposed on the architectural plans.
- 10.3 It is recommended that additional measures are introduced to the proposal which mitigate potential flood risk.
- Finished Floor Level to be 300mm raised above Ground Level
 - All bedrooms and Bathroom to be positioned on First Floor Level
 - All electric Sockets to be positioned a minimum of 450mm above Finished Floor Level
 - Stormguard Flood Barriers to be fitted to all Ground Floor Entrance Doors
 - Stormguard Flood Barrier to be added to External Perimeter Pedestrian Entrance to slow water ingress to the site
 - Stormguard Driveway Flood Barrier to be added to External Perimeter Vehicle Access Entrance to slow water ingress to the site.
 - 150mm Ecodrain to run full perimeter of the property
 - 150mm Ecodrain to be added at both pedestrian and vehicle access points to the site
 - All Ecodrains to be connected to Sustainable Drainage (SuDs) Soakaway Crate Pits to be positioned under both the Vehicle Parking Spaces

Plans showing possible locations for the Soakaway Crate Pits are included in Appendix I.

- 10.4 Based on the Spot Heights neighbouring the proposed site, projected flood levels for the flood zone 2 extent equate to approximately 7.5mAOD to be conservative as can be seen in Figure 10.
- 10.5 As the maximum projected flood level for the site is shown to be 7.5mAOD (to be conservative) and the lowest existing ground level onsite is 7.38mAOD, the maximum onsite flood depth is therefore 0.12m, or 120mm.
- 10.6 To account for potential flood risk, and to reduce potential flood plain displacement, it is recommended that the underside of GF finished floor construction should be no lower than 7.6mAOD (100mm above the predicted flood water top level). This allows a floodable void to be created under the dwelling so water can still be accommodated on site and, should a flood event occur, displacement of flood water would not be generated that could cause increased risk to others. The base level of the void should be 7.38mAOD.
- 10.7 Site levels should be such that water can drain into and out of the void. Air bricks can be sited at a number of locations around the property at the 7.38mAOD level, and with the top of the airbrick at underside of FFL, to ensure a ventilated void is provided and allow water to flood into the void should an extreme flood event occur (and drain out as water recedes).
- 10.8 As the underside of the finished floor construction is a fixed minimum level to allow for a floodable void the final FFL of the proposed development may vary depending on final proposed floor construction, insulation, finishes etc but should be no lower a minimum if 7.8mAOD (300mm above the predicted flood level of 7.5mAOD).
- 10.9 External ground levels should also be designed to ensure no additional displacement of flood water could occur. Proposed car parking is to be of permeable construction to encourage infiltration and minimise impermeable surfacing where possible across the site.
- 10.10 The property owner and/or any tenant should sign up to the relevant NRW flood warning and alert services if living at the property. Should an alert or warning be raised this will give the opportunity for the residents to protect the dwelling or evacuate as necessary.

11.0 CONCLUSION

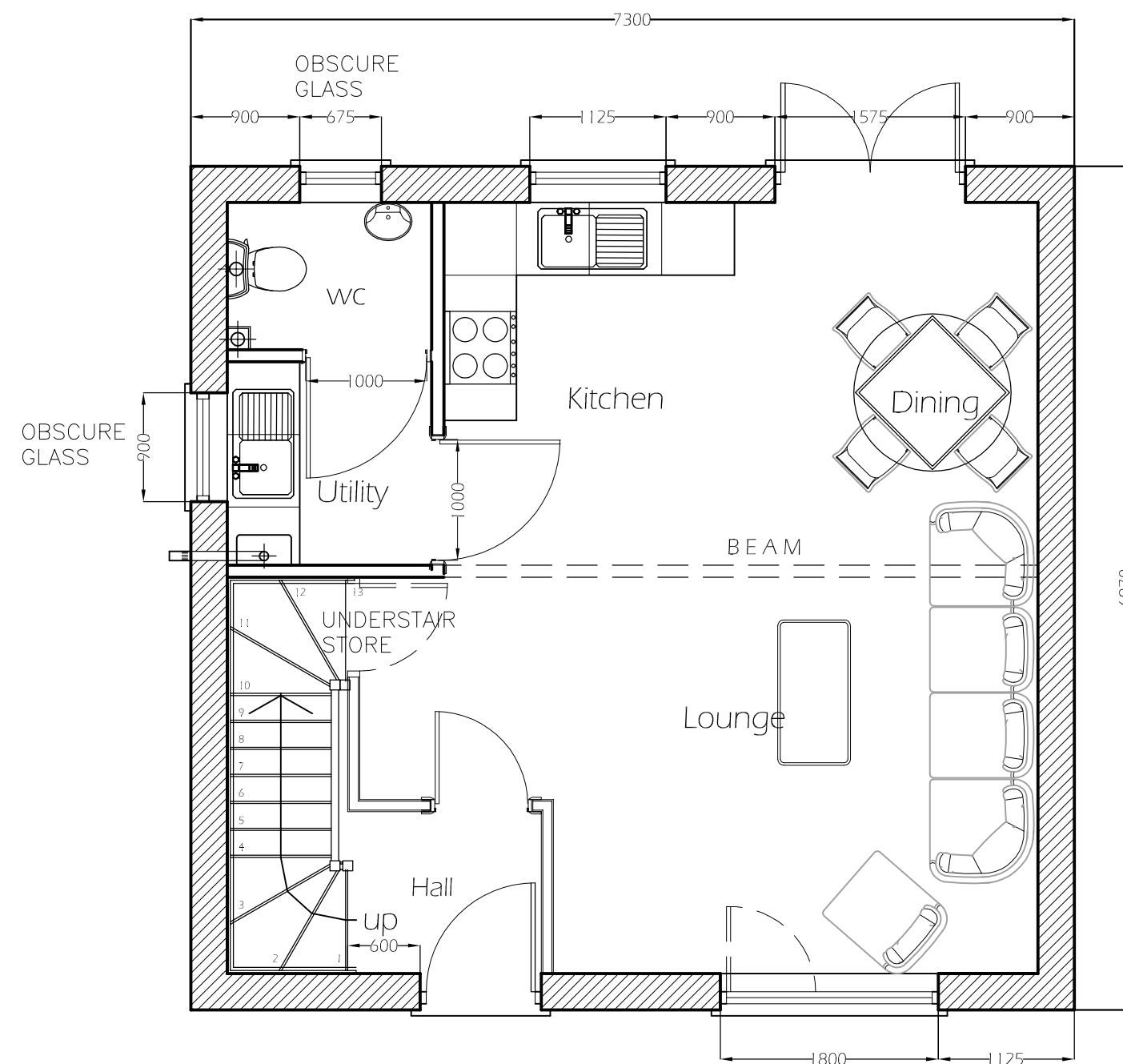
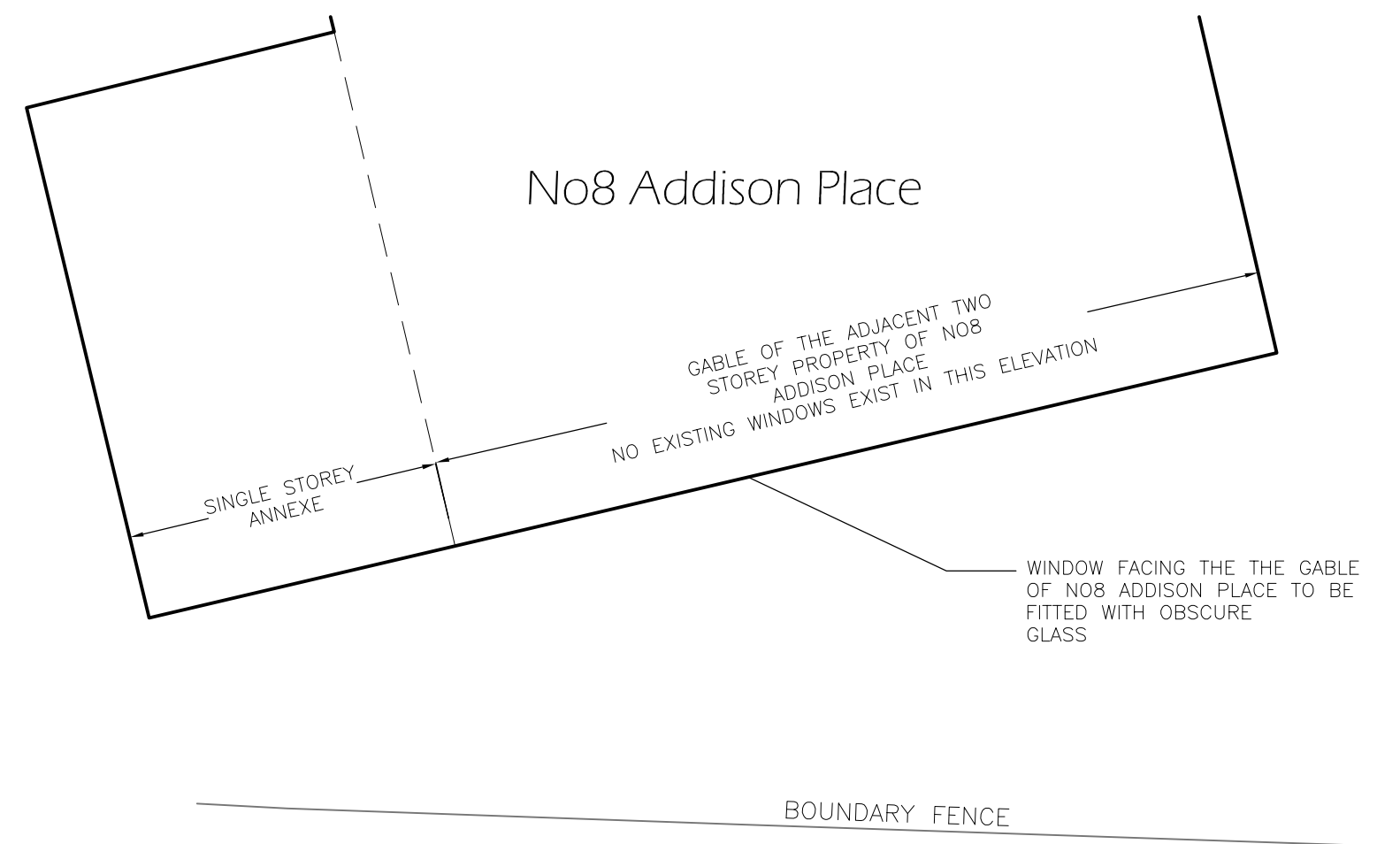
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- 11.2 The site is an existing vacant plot that has previously been granted planning permission for residential but this has now lapsed and as such a new application has been made. A review of LiDAR site level data shows the existing site ground levels range from 7.38mAOD at the southern corner of the site to 7.5mAOD central on the site.
- 11.3 It is understood that the proposed development is for the construction of a new residential property, along with new off-street parking and associated relandscaping. Sleeping accommodation is shown at first floor only.
- 11.4 The British Geological Survey (BGS) Geology of Britain Viewer indicates that the bedrock underlying the site consists of South Wales Middle Coal Measures Formation – Mudstone, Siltstone and Sandstone (Source: BGS). Superficial deposits underlay the site consist of Blown Sand – Sand.
- 11.5 In accordance with the TAN15 Development Vulnerability Categories, this development is classed as 'Highly Vulnerable' as it is a residential development.
- 11.6 According to the Natural Resources Wales (NRW) Flood Map for Planning the site is located within Flood Zone 2 for sea flood zones and an area benefitting from tidal flood defences. The Flood Risk Assessment Wales map indicates the development location to be within an area at Very Low risk of flooding from the sea. Very Low means that each year, this area has a chance of flooding less than 0.1% (1in1000yr). This takes into account the effect of any flood defences that may be in this area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.
- 11.7 Product 6 data provided by NRW shows the site to be located outside of the region of flooding in a 0.1%AEP Tidal Event (CC2116). This means that in the 1 in 1000 year +CC tidal event, the site is modelled to experience no flood inundation.
- 11.8 According to the Natural Resources Wales (NRW) Flood Map for Planning the site is located within Flood Zone 2 for river flood zones. The Flood Risk Assessment Wales map indicates the development location to be at very low risk of flooding from rivers. Very low risk means that each year, this area has a chance of flooding less than 0.1% (1in1000yr).
- 11.9 The Product 6 data provided by NRW shows the site to be located outside of the region of flooding in the 0.1%AEP Fluvial event. This means that in the 1 in 1000 year fluvial event, the site is modelled to experience no flood inundation. NRW have confirmed this data is not suitable for use in the FCA and that the latest current data is shown as the FZ2 extent in the flood map for planning.
- 11.10 External ground levels should also be designed to ensure no displacement of flood water would occur (ie ground levels to be no higher than existing). Proposed car parking is to be of permeable construction to encourage infiltration and minimise impermeable surfacing where possible across the site.
- 11.11 According to mapping published by the NRW the site is shown to be within an area at very low risk of surface water flooding. Very low risk means that each year this area has a chance of flooding of less than 0.1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.
- 11.12 According to the Neath Port Talbot County Council SFCA, the risk of flooding from groundwater is possible within the Council. There is limited data on which areas within the council are at risk

- of ground water flooding but as there is no below ground development proposed in the plans the risk of groundwater flooding can be considered to be low.
- 11.13 It is recommended the client integrates sustainable drainage into the scheme, in line with current best practice and sustainable guidance, to reduce risks to others as a result of development. Given the presence of sands, shown by the BGS records, on site it is assumed infiltration of surface runoff may be viable. A full surface water SUDS strategy is outside the scope of this report but the use of permeable surfacing is proposed on the architectural plans.
- 11.14 As the maximum projected flood level for the site is shown to be 7.5mAOD (to be conservative) and the lowest existing ground level onsite is 7.38mAOD, the maximum onsite flood depth is therefore 0.12m, or 120mm.
- 11.15 It is recommended that additional measures are introduced to the proposal which mitigate potential flood risk.
- Floodable void provided under property to mitigate flood plain displacement.
 - All bedrooms and Bathroom to be positioned on First Floor Level
 - All electric Sockets to be positioned a minimum of 450mm above Finished Floor Level
 - Stormguard Flood Barriers to be fitted to all Ground Floor Entrance Doors
 - Stormguard Flood Barrier to be added to External Perimeter Pedestrian Entrance to slow water ingress to the site
 - Stormguard Driveway Flood Barrier to be added to External Perimeter Vehicle Access Entrance to slow water ingress to the site.
 - 150mm Ecodrain to run full perimeter of the property
 - 150mm Ecodrain to be added at both pedestrian and vehicle access points to the site
 - All Ecodrains to be connected to Sustainable Drainage (SuDs) Soakaway Crate Pits to be positioned under both the Vehicle Parking Spaces
- 11.16 To account for potential flood risk, and to reduce potential flood plain displacement, it is recommended that the underside of GF finished floor construction should be no lower than 7.6mAOD (100mm above the predicted flood water top level). This allows a floodable void to be created under the dwelling so water can still be accommodated on site and, should a flood event occur, displacement of flood water would not be generated that could cause increased risk to others. The base level of the void should be 7.38mAOD in line with the lowest GL at the southernmost corner of the site.
- 11.17 Site levels should be such that water can drain into and out of the void. Air bricks can be sited at a number of locations around the property at the 7.38mAOD level, and with the top of the airbrick at underside of FFL, to ensure a ventilated void is provided and allow water to flood into the void should an extreme flood event occur (and drain out as water recedes).
- 11.18 As the underside of the finished floor construction is a fixed minimum level to allow for a floodable void the final FFL of the proposed development may vary depending on final proposed floor construction, insulation, finishes etc but should be no lower a minimum if 7.8mAOD (300mm above the predicted flood level of 7.5mAOD).
- 11.19 External ground levels should also be designed to ensure no additional displacement of flood water could occur. Proposed car parking is to be of permeable construction to encourage infiltration and minimise impermeable surfacing where possible across the site.
- 11.20 The property owner and/or any tenant should sign up to the relevant NRW flood warning and alert services if living at the property. Should an alert or warning be raised this will give the opportunity for the residents to protect the dwelling or evacuate as necessary.
- 11.21 This report has been produced broadly in accordance with the Technical Advice Note 15 (TAN 15): Development and Flood Risk, and Neath Port Talbot County Borough Council SCFA and local guidance.

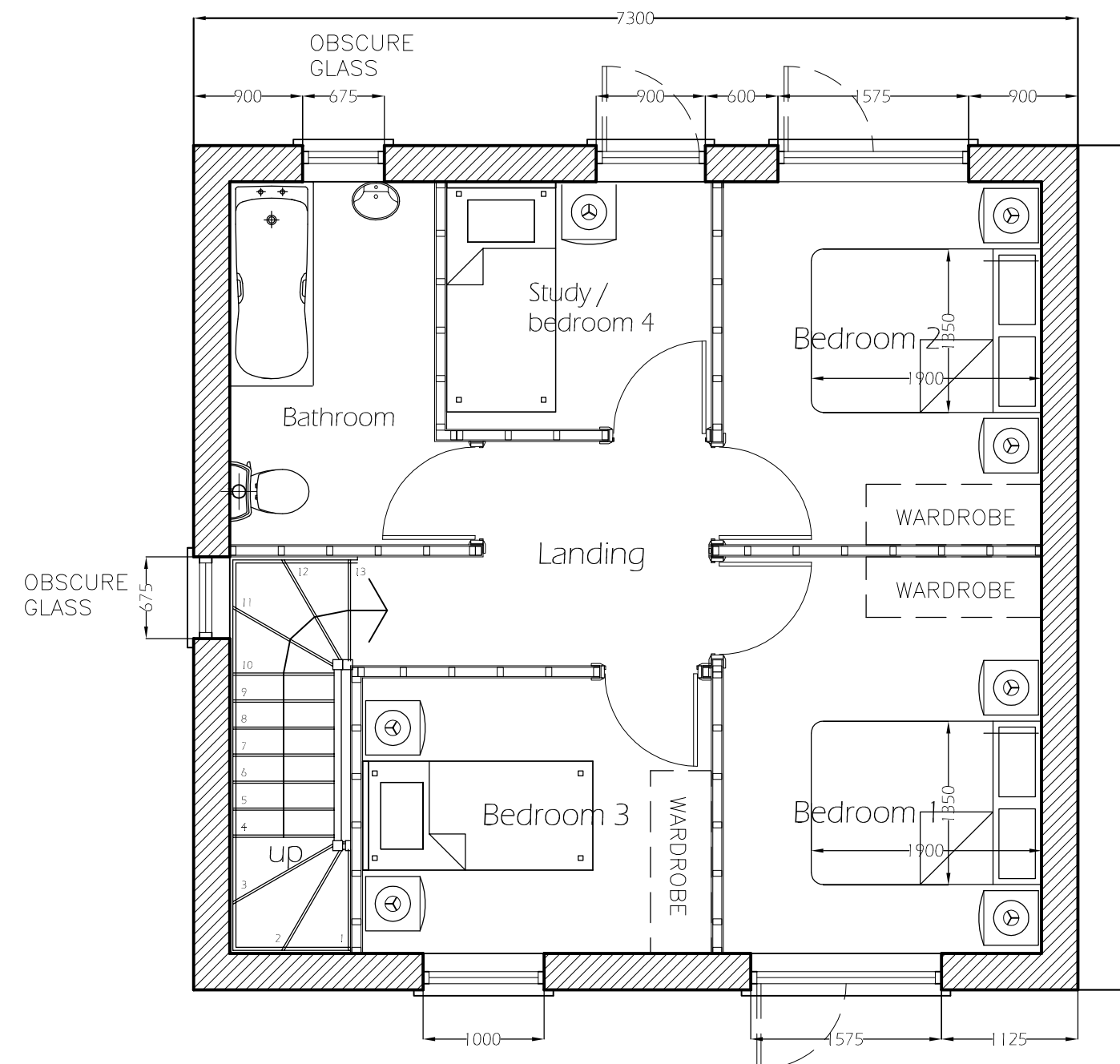
12.0 LIMITATIONS AND UNCERTANTIES

- MCEC have prepared this report with all reasonable skill, care and diligence. The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources.
- The opinions given in this report have been dictated by the data available in the public domain/ environmental agency for which the report was commissioned.
- Information reviewed should not be considered exhaustive and has accepted in good faith as providing true and representative data with respect to site conditions. Should additional information become available which may influence the opinion expressed in this report, MCEC reserves the right to review such information and, if warranted, to alter the opinions accordingly.
- It should be noted that any risks identified in this report are perceived risks based on the information provided to us.
- The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted industry practices at this time and as such are not a guarantee that the study site is free of hazardous conditions.
- This report has been prepared solely for the use of the named client and may not be relied upon by other parties without written consent from MCEC. MCEC disclaim any responsibility to the client and others in respect of any matters outside the agreed scope of the work.
- MCEC take no responsibility for conditions which have not been revealed by the data provided to any guidance solution we provide due to the unpredictability or weather events. Whilst every effort has been made to interpret the conditions accurately, such information is only indicative, and liability cannot be accepted for its accuracy.
- The information contained in this report is intended for the use of the named client. Should a third party rely on any part of this report, that party does so wholly at its own risk and MCEC disclaim any liability to such parties. Should the purposes for which the report is used, or the proposed use of the site change, this report may no longer be valid and further use of reliance upon the report in those circumstances shall be at the client's sole and own risk. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. MCEC should in all such altered circumstances be commissioned to review and update this report accordingly.
- Save as otherwise expressly provided in these Conditions, MCEC shall not be liable for any economic loss (including, but not limited to, loss of profits, business, contracts, revenue, goodwill, data and anticipated savings) or any indirect or consequential loss of whatsoever nature or kind and howsoever sustained or occasioned in the provision of the Services or any indirect or consequential loss of nature whatsoever for any physical damage to or loss the Client's tangible property, any other direct loss, damage, cost or expense of any kind of any indirect or consequential loss, damage, cost or expense of any kind, whether any of the above arise under contract, tort (including negligence, indemnity or by contribution or otherwise).
- MCEC shall not be liable in way for any loss or damage of any description (financial or otherwise) that may be sustained arising directly or indirectly from the presence of asbestos or toxic mould or unexploded ordnance on or in the vicinity of the Property/Site whether the same may have been apparent or reasonably discoverable by MCEC in the course of the Services.
- No physical inspection of the Property/Site reported has been carried out as part of any Services offered by the company (unless it shall be expressly agreed in writing between us) and as such the Company does not warrant that all or any land uses or features whether past or current will be identified in the Services and the Services do not include any information relating to the actual state or condition of any Property/Site nor should they be used or taken to indicate or exclude actual fitness of unfitness of a Property/Site for any particular purposes nor the saleability or otherwise of the Property/Site.

APPENDIX I Architects Plans



Proposed ground floor plan @ 1:50



Proposed first floor plan @ 1:50

Access Statement:

The main road link serving the site and the Sand fields estate is the A4241 which 200m away. This road has excellent links to the adjacent main arterial road that runs across South Wales - the M4

The nearest bus stop is 75m away on Victoria Road

Sandfields Primary School is 500m away to the north with Sandfields comprehensive school being 2.25km to the North West.

The nearest convenience store is just 15m away across Addison Place.

The nearest train station is Port Talbot is 1.75km away to the North east of the site, again this is main transport link connecting the site to Swansea to the north west and bridgend and Cardiff to the south east.

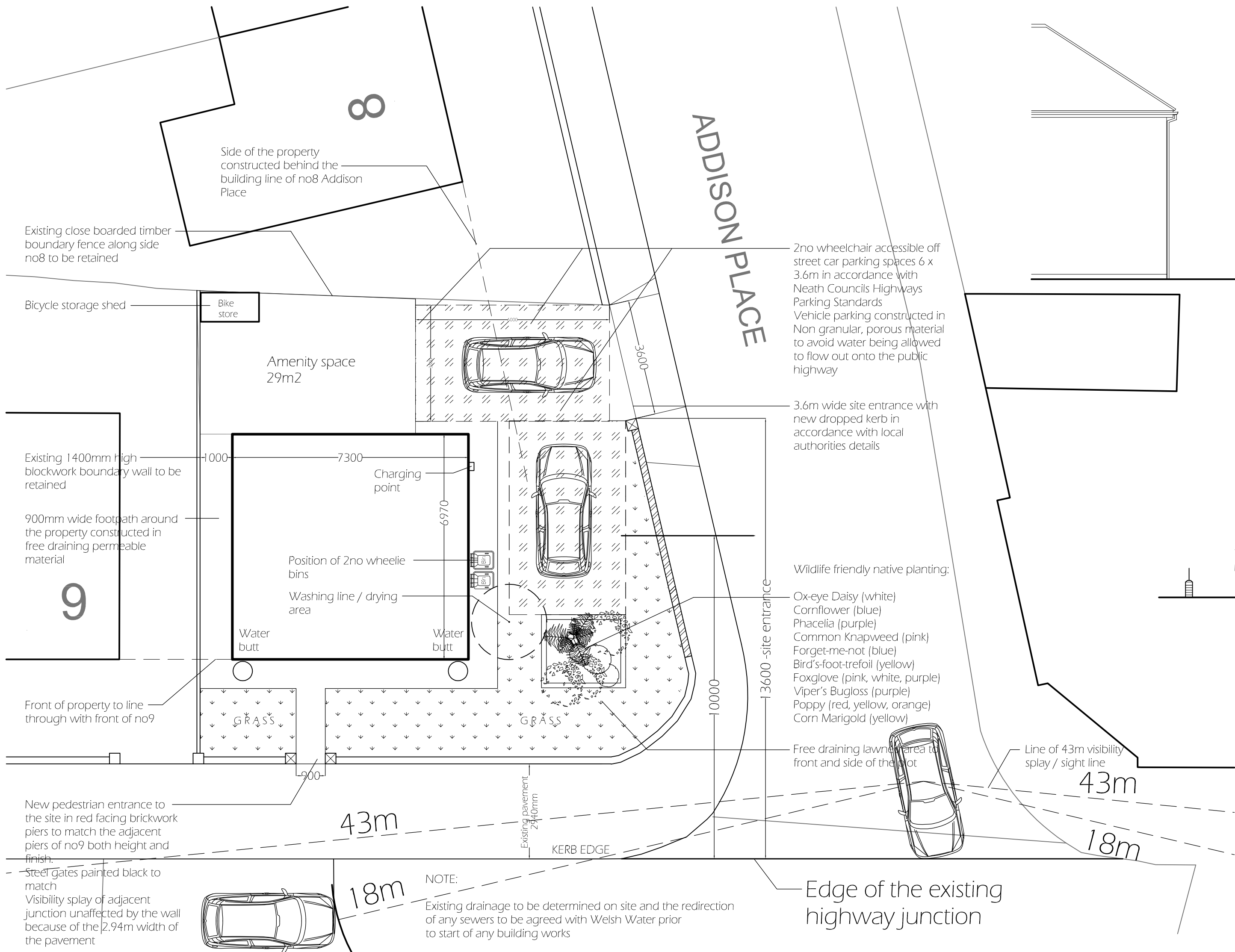
We have shown bicycle storage on the proposed site plan at the rear of the rear of the property.

The proposed footprint of the dwelling will either to sit along or behind the building lines of the adjacent streets of both Addison Road and Addison Place.

The 2no off street parking spaces identified on the site plan will both be wheelchair accessible in accordance with the NPTCBC's Parking Standards SPG.

The proposals identify a electric vehicle charging point on the side elevation.

Client		Date:	September 2024.
Mr and Mrs P. Das.		Scale:	1:50 - A2
Project		Job No:	3235
Dwelling on land adjacent to 9 Addison Road, Sandfields, Port Talbot, SA12 6HJ		Drawing No:	018
Revision	Date:	Comment:	
A	30/10/2024	Revised as highways comments in email dated 10th Oct.	
B	08/11/2024	Scheme reduced in size closer to original scheme.	



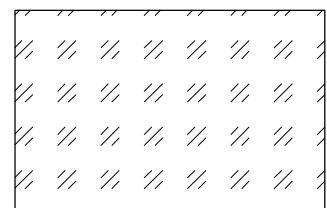
ADDISON ROAD

Proposed site plan @ 1:100

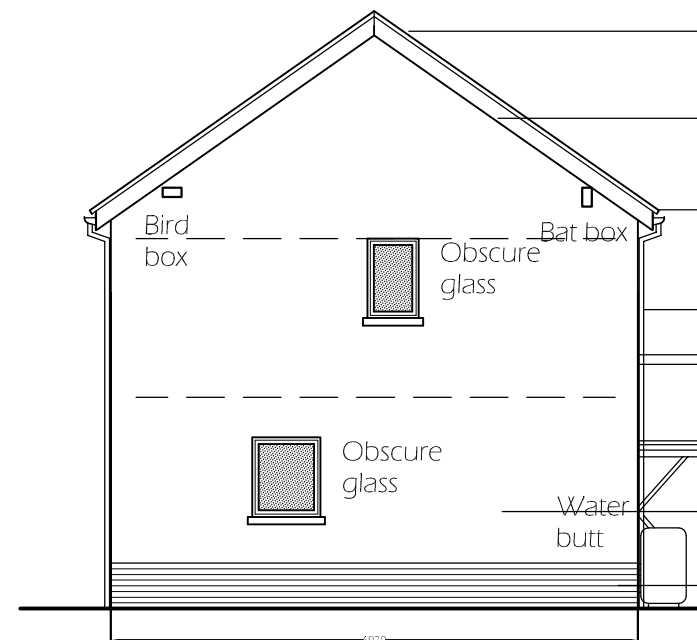


KEY:

Area of free draining grass (lawn)



Area of free draining vehicle parking - final details to be agreed as part of the future SuDS application

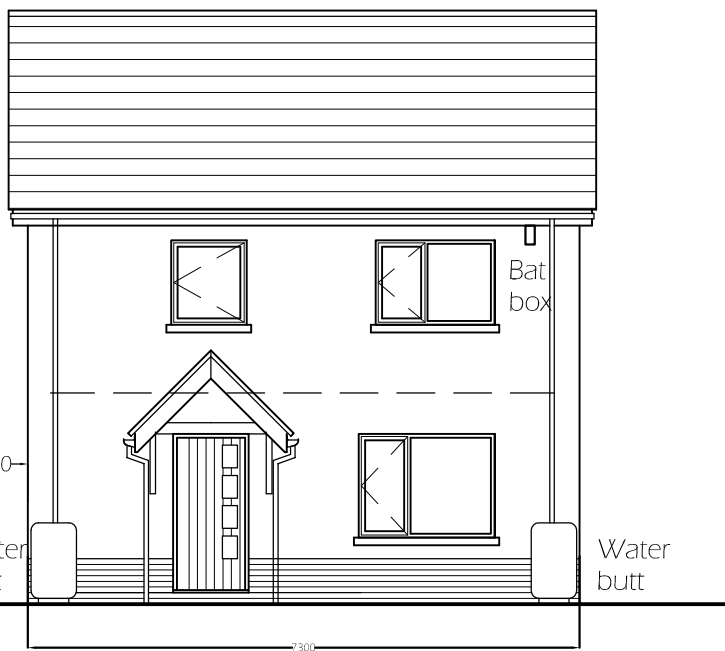


Proposed side elevation at 1:100

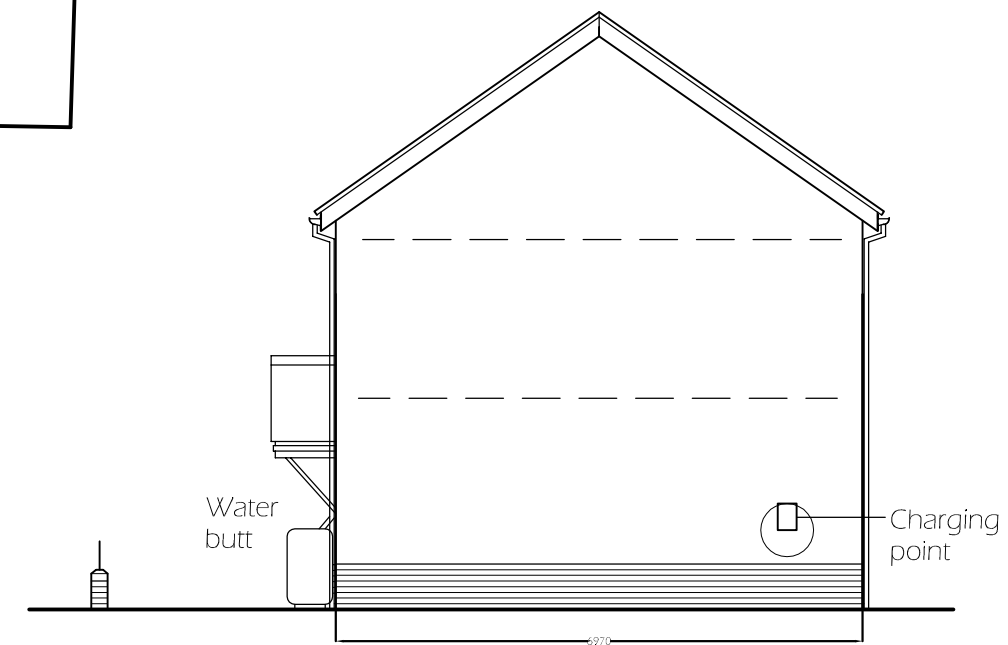
- Red ridge tiles
- Synthetic slate roof covering
- White upvc fascias and soffits
- Black upvc round line rainwater goods
- Anthracite coloured upvc double glazed window and door units
- Fined down polymer render
- Red facing brickwork plinth 450mm high from DPC



Proposed rear elevation at 1:100



Proposed front elevation at 1:100



Proposed side elevation at 1:100

Ecological Enhancement Measures:

Please note that the bird and bat boxes identified on the elevations to be implemented prior to first occupation of the completed works

BIRD BOX:
Surface mounted House Sparrow Terrace bird box - Schwegler 1SP to be provided on the south elevation under the eaves
Min of 2m above the adjacent ground level

BIRD BOX:
Surface mounted Schwegler Swift bird box ref No17B to be provided on the north elevation under the fascia board
Min of 2m above the adjacent ground level

BAT BOX (2no):
Schwegler IFQ surface mounted a Min. of 3m above adjacent ground

All measurements & levels shown are subject to checking on site by the contractor, figured dimensions to take precedence over scaled.

All working dimensions must be taken from, checked & / or verified by the main contractor on site prior to the manufacture of all items & the placing at all work in hand.

Working dimensions must not be scaled from this drawing. In all cases of doubt or discrepancy please refer to the architect, surveyor, supervising officer, consultants & / or specialist drawings are read in conjunction with this drawing.

Please note that we do not project manager or act as the lead on this project. All site activities are the responsibility of the applicant and appointed contactor

Serve all notices to the authorities concerned. All work is to comply with the current editions of the British Standards institution codes of practice.

All materials & components to comply with the current editions of the British Standards Institution specifications.

Prior to commencing work, the contractor is required to communicate with the relevant authorities, bring them to site & locate the positions and lines of all services (e.g. water, gas, electricity, telephone, telecommunication, sewage etc.) on, over, under & around the site which could in any way effect the positioning of the buildings. Copies of the correspondence & a full report of the findings must be forwarded to the architect, surveyor, supervising officer or consultant before building works commence

All details in addition to those indicated to conform in all respects with the building regulations & allied legislation. Builder to check all details / dimensions prior to commencement of building works.

This drawing is copyright

Client

Mr and Mrs P. Das.

Project

Dwelling on land adjacent to 9 Addison Road, Sandfields, Port Talbot, SA12 6HU

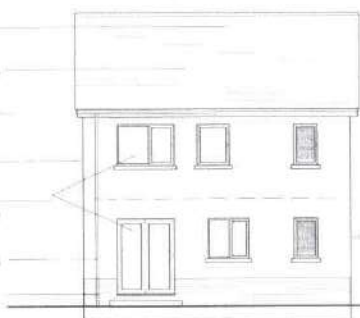
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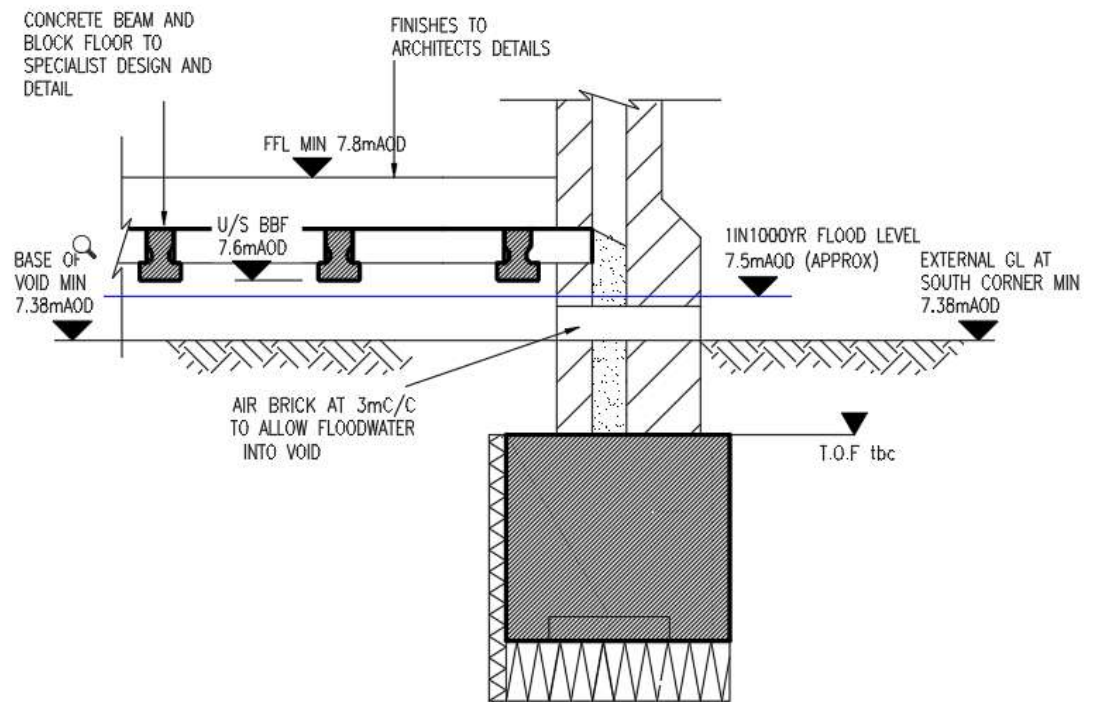
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Job No: 3235

Drawing No: 02B

Revision	Date:	Comment
A	30/10/2024	Revised as highways comments in email dated 10th Oct
*	08/11/2024	Scheme reduced in size closer to original scheme

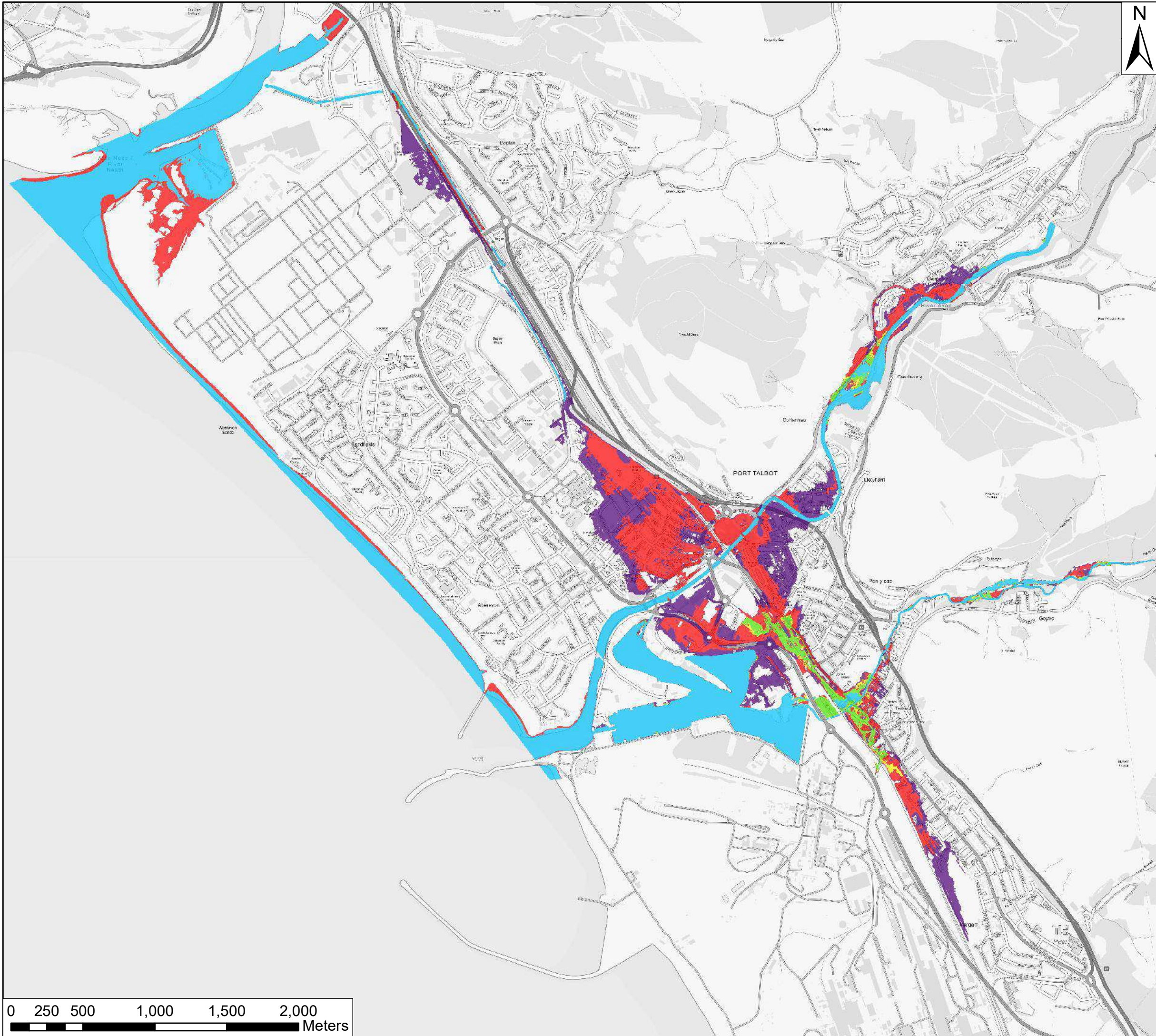




TYPICAL FLOODABLE VOID DETAIL.

(1:20)

APPENDIX II EA Data



KEY

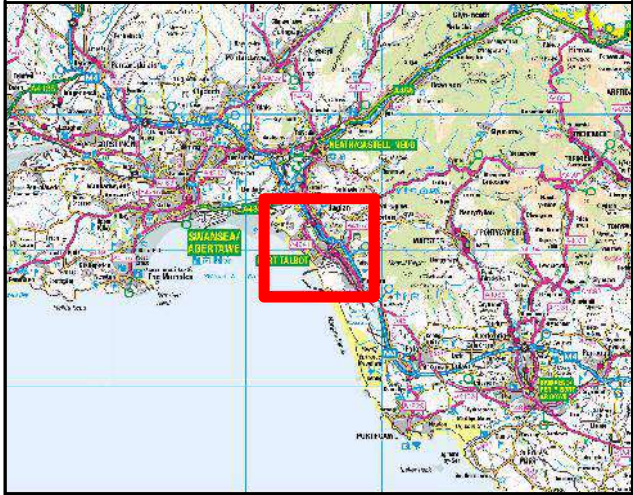
5% AEP flood outline

1.33% AEP flood outline

1% AEP flood outline

1% AEP + climate change outline

0.1% AEP flood outline

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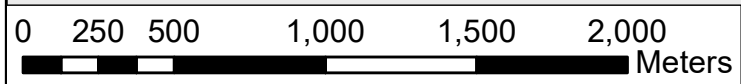
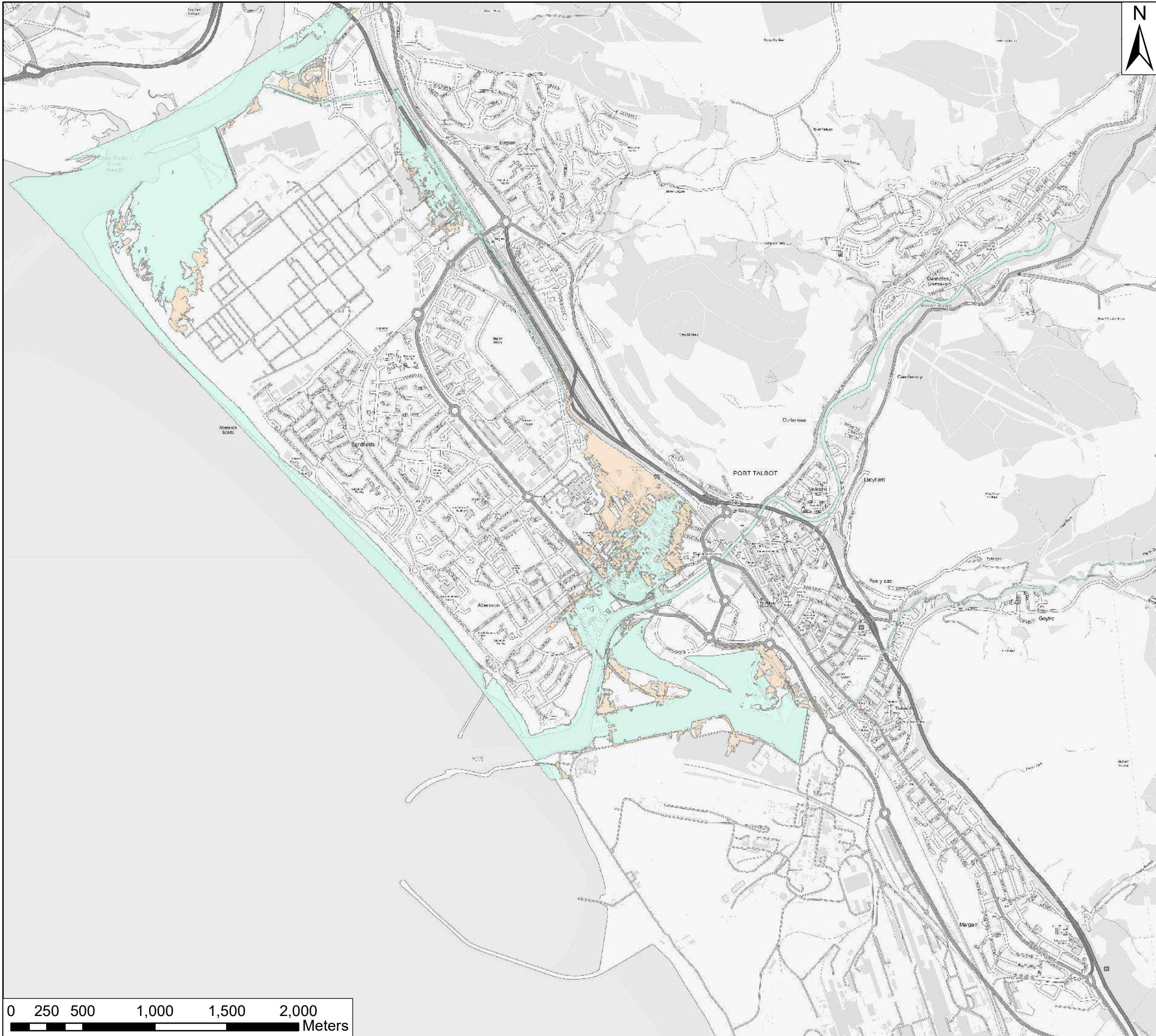
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for

Neath Port Talbot County Borough Council

Port Talbot Harbourside PAR
Fluvial Flood Outlines

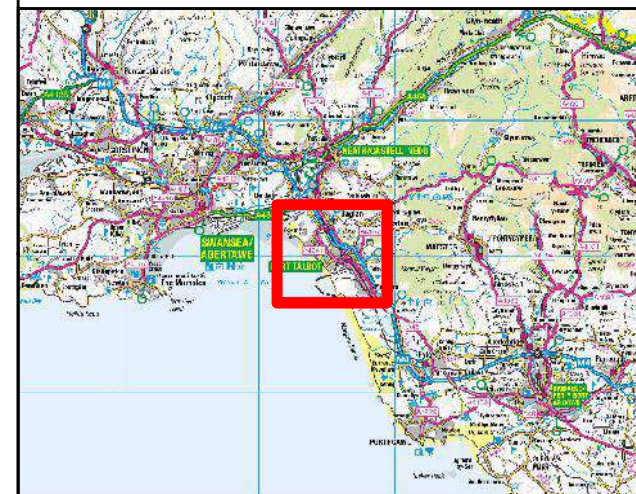
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Digital File Name: 2016s4827_PT_001.MXD			
Drawing 2016s4827_PT_001		Sheet No.: 1 of 16	Rev.: A



KEY

-  0.5% AEP tidal flood outline (2116)
-  0.1% AEP tidal flood outline (2116)

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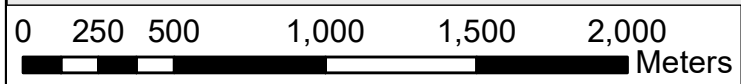
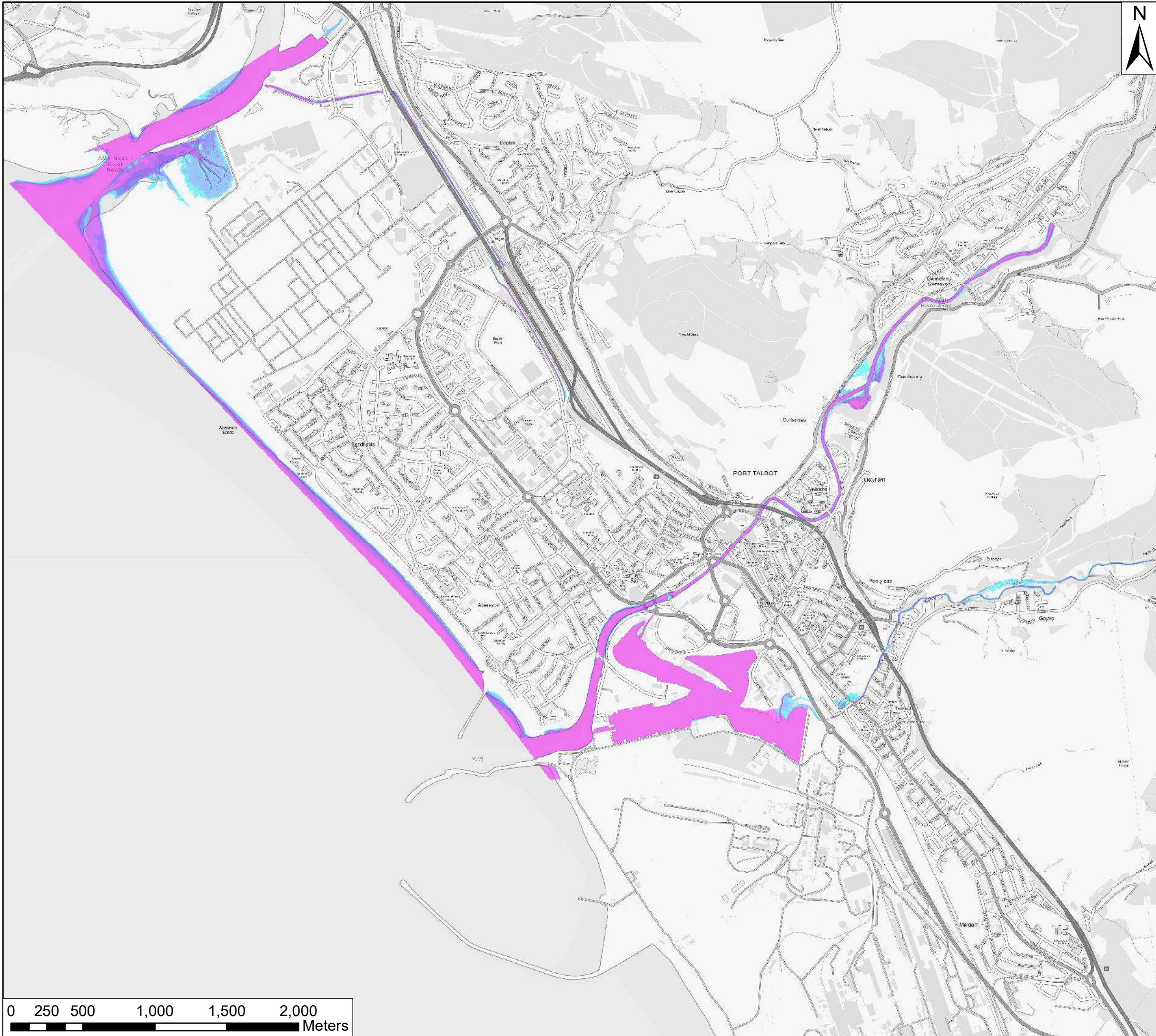
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Port Talbot Harbourside PAR
Tidal Flood Outlines

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Digital File Name: 2016s4827_PT_002.MXD			
Drawing 2016s4827_PT_002		Sheet No.: 2 of 16	Rev.: A



KEY

Fluvial 5% AEP event

Depth (m)

0 - 0.25

0.25 - 0.5

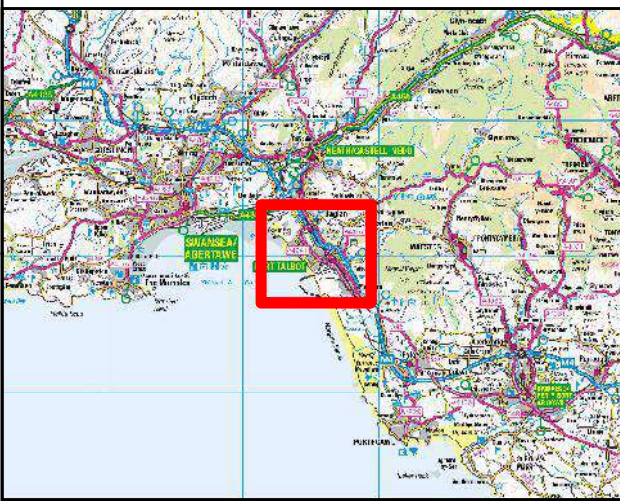
0.5 - 0.75

0.75 - 1

1 - 1.5

1.5 +

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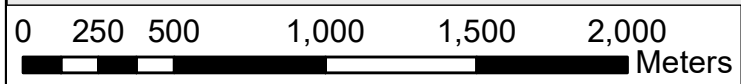
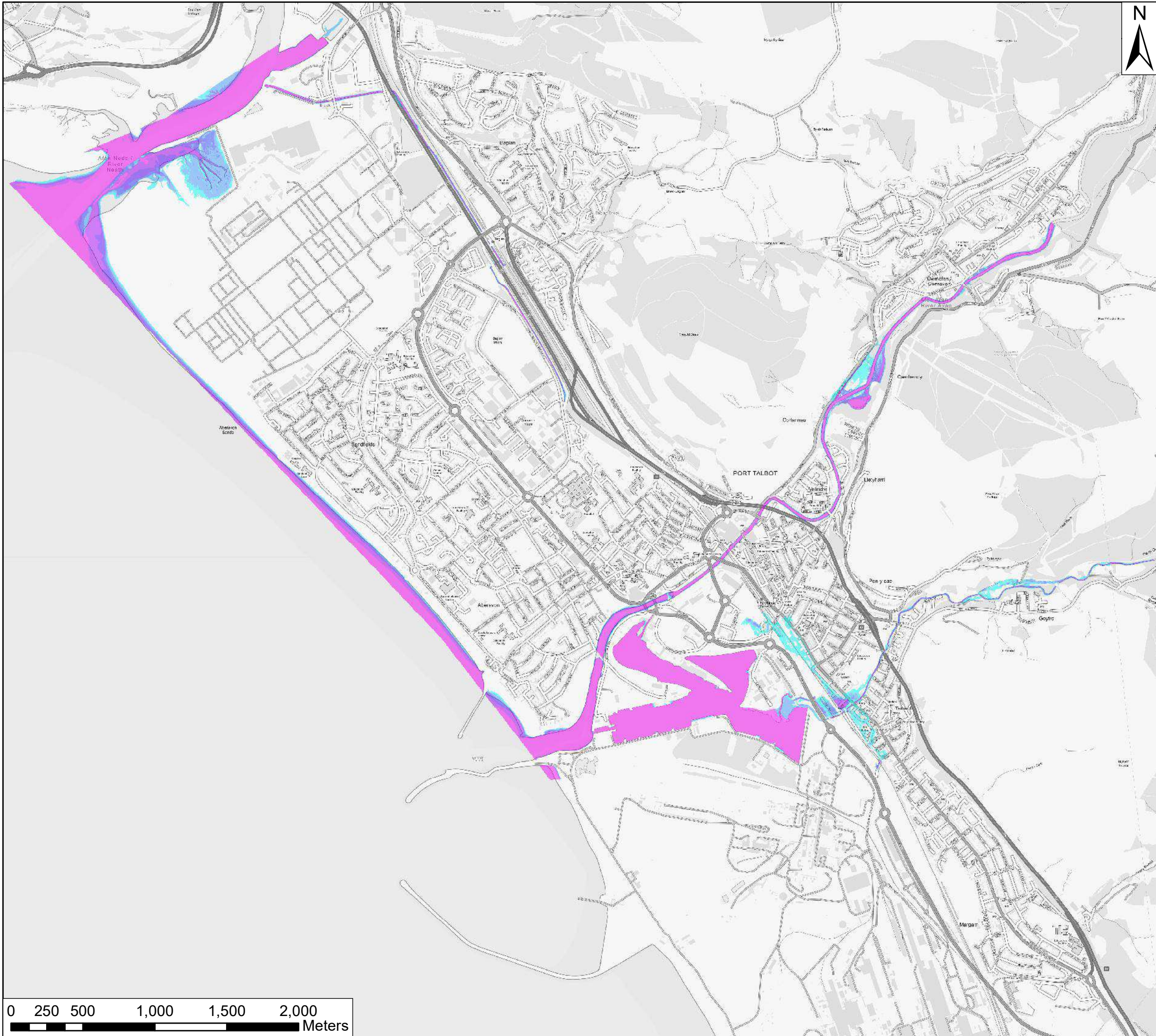
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Neath Port Talbot County Borough Council

Port Talbot Harbourside PAR
Fluvial Depth Grid - 5% AEP

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	Approved	GB	04/05/2017
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Drawing 2016s4827_PT_003		Sheet No.: 3 of 16	Rev.: A



KEY

Fluvial 1.33% AEP event

Depth (m)

0 - 0.25

0.25 - 0.5

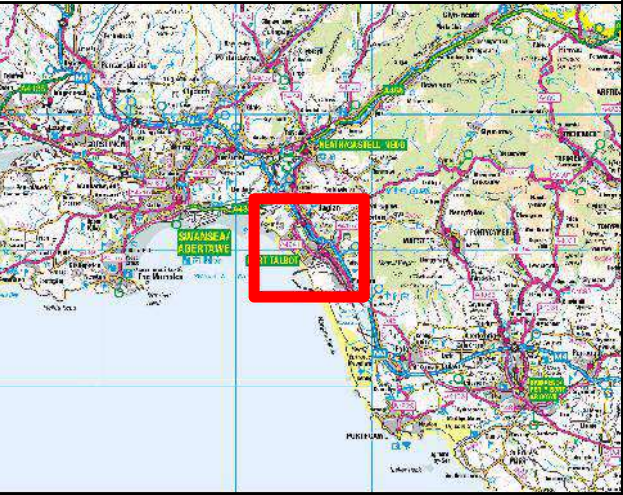
0.5 - 0.75

0.75 - 1

1 - 1.5

1.5 +

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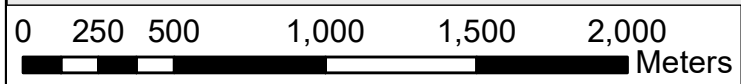
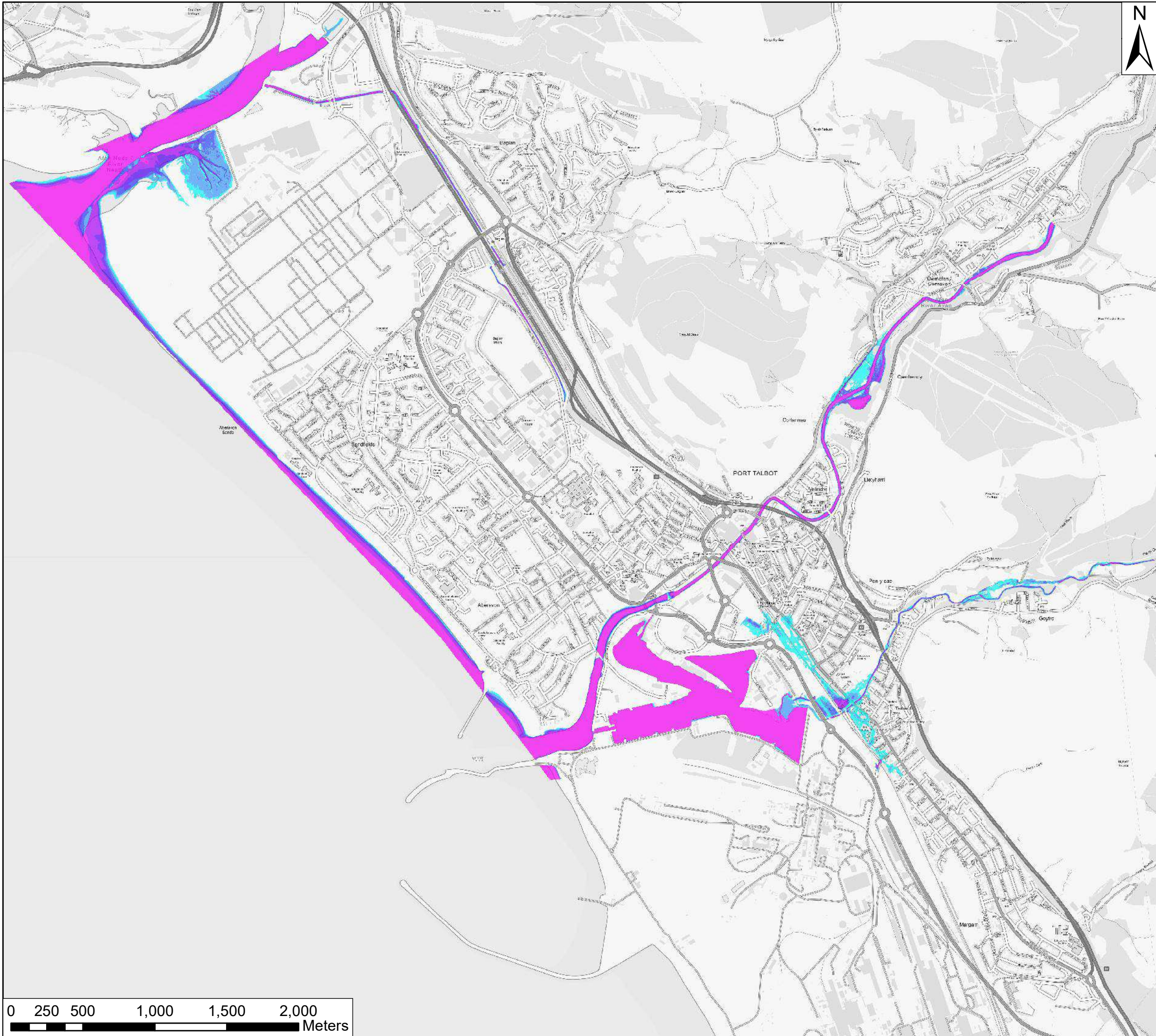
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Port Talbot Harbourside PAR
Fluvial Depth Grid - 1.33% AEP

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	Checked	GB	04/05/2017
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Drawing 2016s4827_PT_004		Sheet No.: 4 of 16	Rev.: A



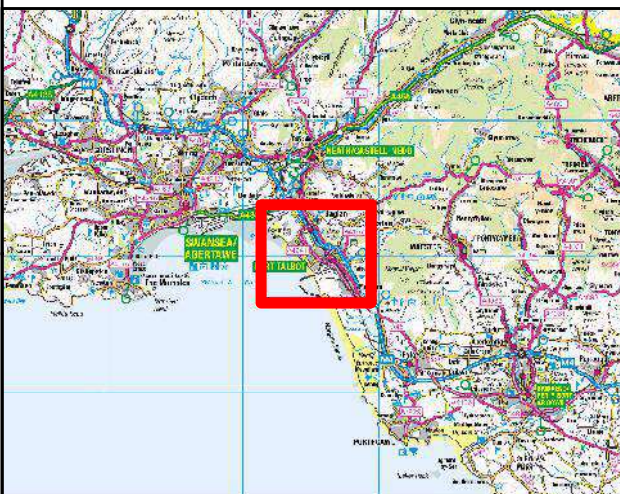
KEY

Fluvial 1% AEP event

Depth (m)

- 0 - 0.25
- 0.25 - 0.5
- 0.5 - 0.75
- 0.75 - 1
- 1 - 1.5
- 1.5 +

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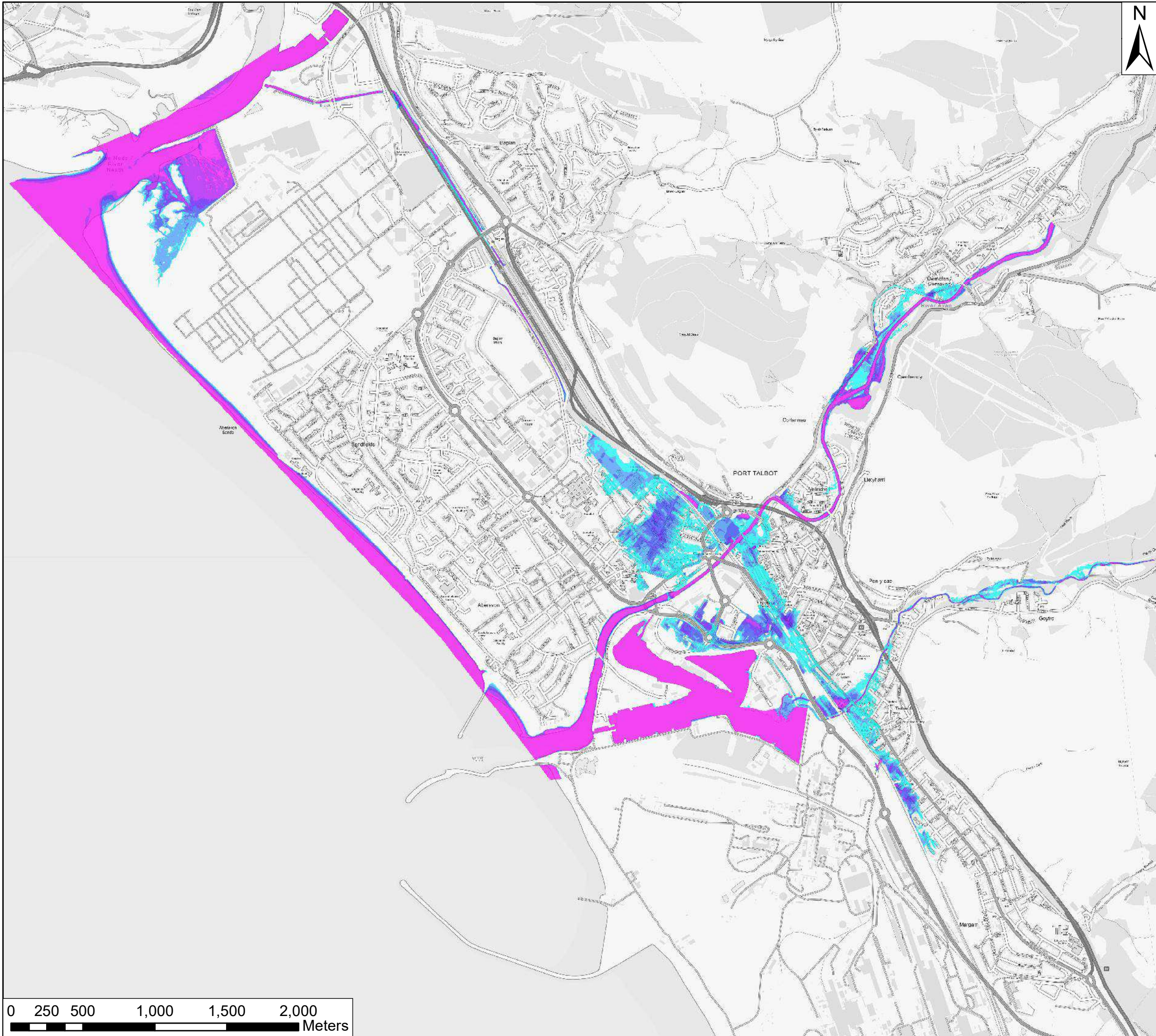
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for
Neath Port Talbot County Borough Council
Port Talbot Harbourside PAR
Fluvial Depth Grid - 1% AEP

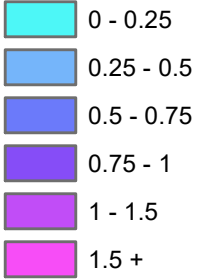
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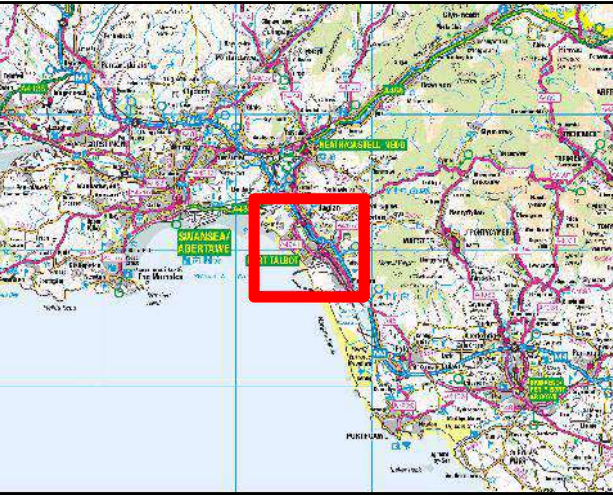
KEY

Fluvial 1% AEP event + climate change

Depth (m)



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**Neath Port Talbot County
Borough Council**
Port Talbot Harbourside PAR
Fluvial Depth Grid - 1% AEP
plus Climate Change

Scale: 1:25,000

Original @ A3

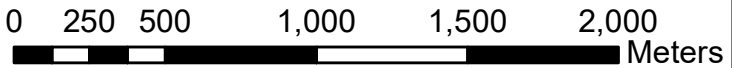
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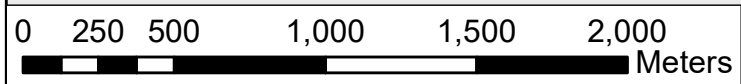
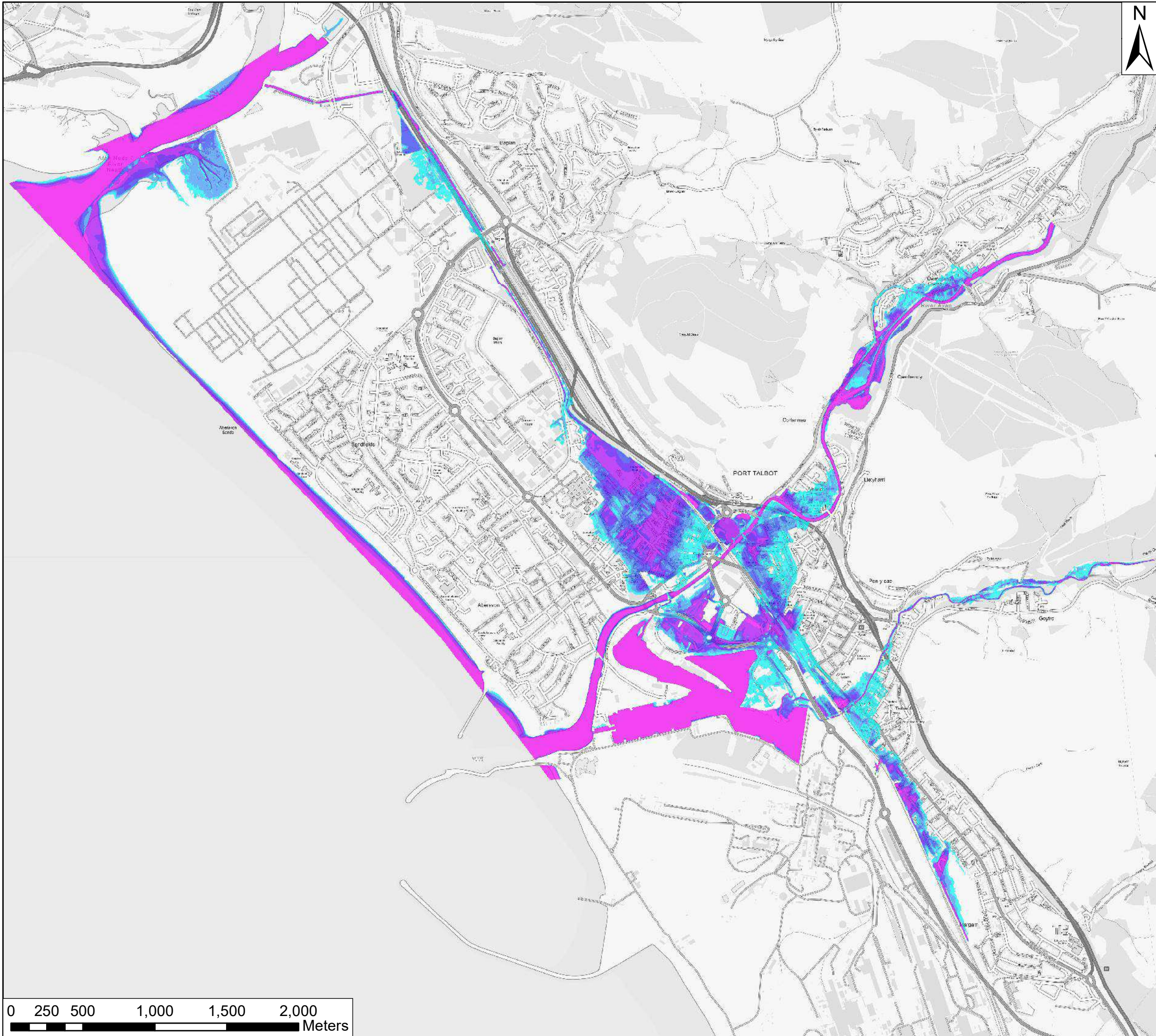
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Drawing
2016s4827_PT_006

Sheet No.:
6 of 16

Rev.: A





KEY

Fluvial 0.1% AEP event

Depth (m)

0 - 0.25

0.25 - 0.5

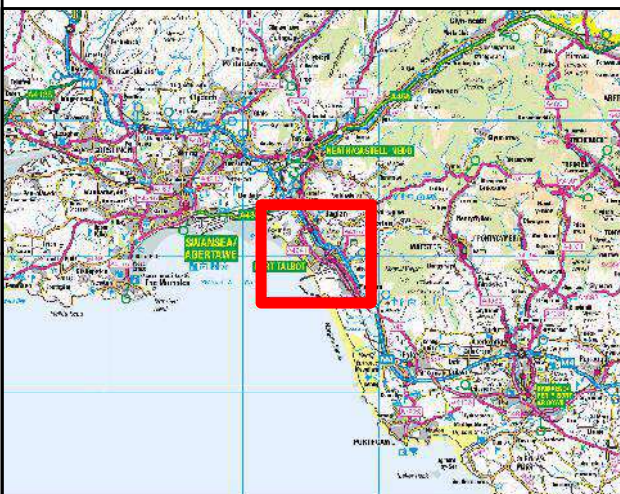
0.5 - 0.75

0.75 - 1

1 - 1.5

1.5 +

KEYPLAN



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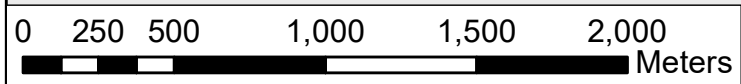
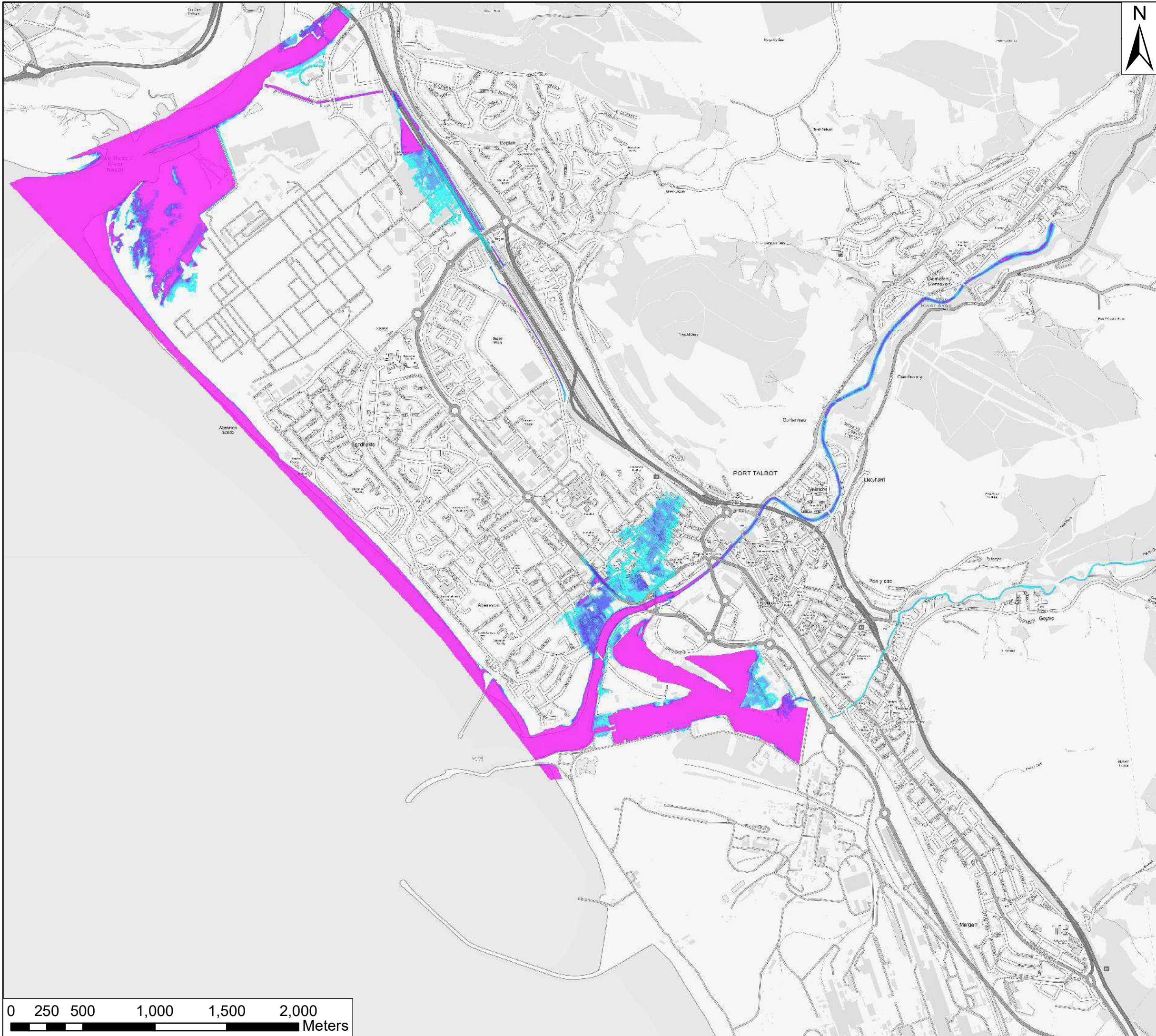
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Neath Port Talbot County Borough Council

Port Talbot Harbourside PAR
Fluvial Depth Grid - 0.1% AEP

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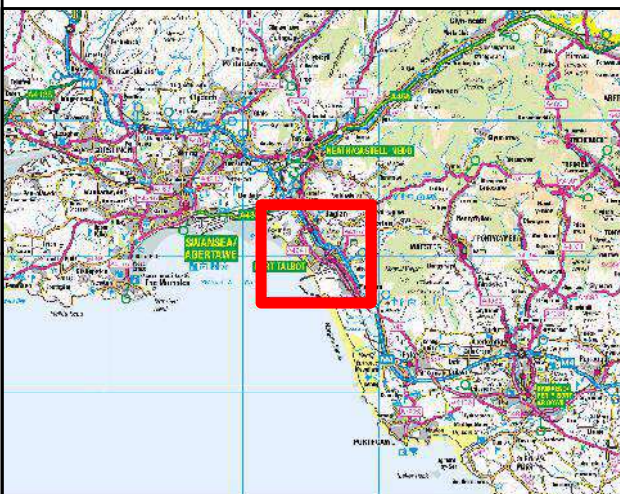
KEY

Tidal 0.5% AEP event (2116)

Depth (m)

	0 - 0.25
	0.25 - 0.5
	0.5 - 0.75
	0.75 - 1
	1 - 1.5
	1.5 +

KEYPLAN



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Kings Chambers
7 - 8 High Street
Newport
South Wales
NP20 1QU

+44 (0)1633 413 514
+44 (0)8458 627 772

info@jbaconsulting.co.uk



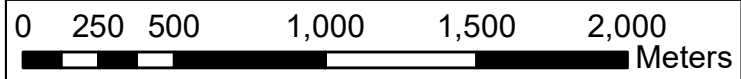
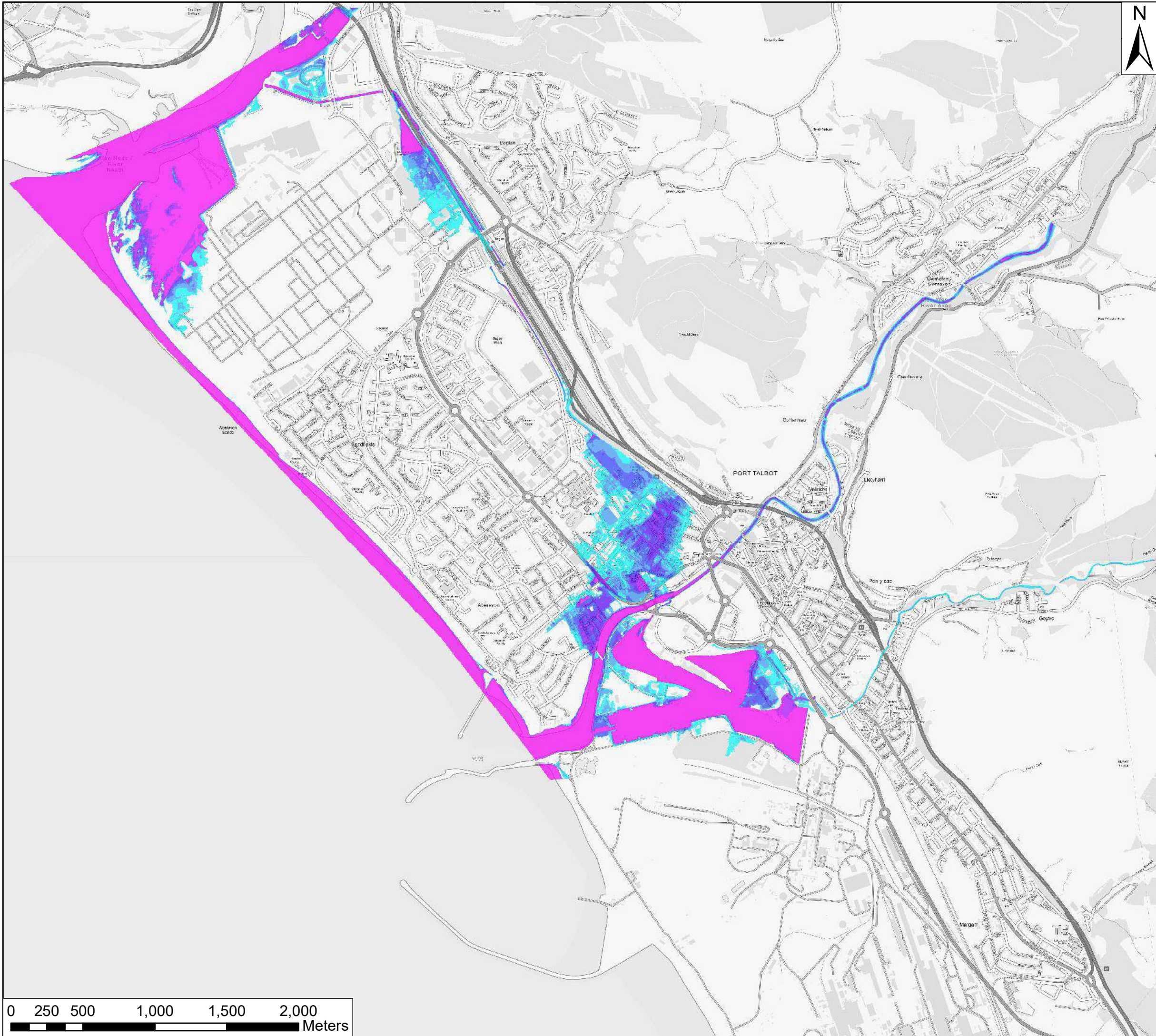
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for

Neath Port Talbot County Borough Council

Port Talbot Harbourside PAR
Tidal Depth Grid - 0.5% AEP

Scale: 1:25,000 Original @ A3	Drawn	MOF	04/05/2017
	Checked	GB	04/05/2017
	Approved	GB	04/05/2017
Digital File Name: 2016s4827_PT_008.MXD			
Drawing 2016s4827_PT_008		Sheet No.: 8 of 16	Rev.: A



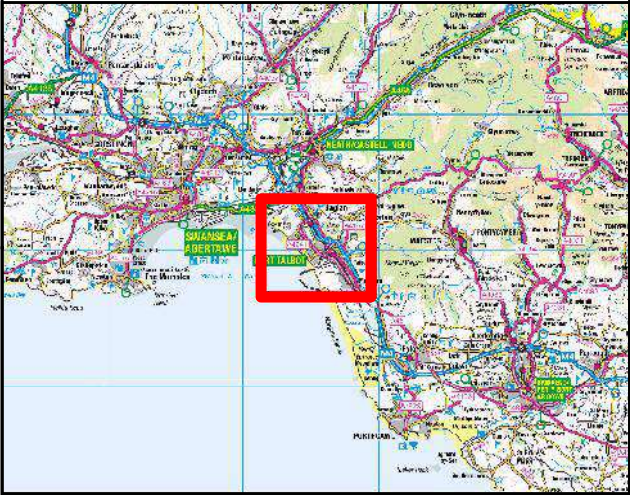
KEY

Tidal 0.1% AEP event (2116)

Depth (m)

- 0 - 0.25
- 0.25 - 0.5
- 0.5 - 0.75
- 0.75 - 1
- 1 - 1.5
- 1.5 +

KEYPLAN



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Newport
South Wales
NP20 1QU

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+44 (0)8458 627 772

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for
Neath Port Talbot County Borough Council

Port Talbot Harbourside PAR
Tidal Depth Grid - 0.1% AEP

Scale: 1:25,000 Original @ A3	Drawn	MOF	04/05/2017
	Checked	GB	04/05/2017
	Approved	GB	04/05/2017
Digital File Name: 2016s4827_PT_009.MXD			
Drawing 2016s4827_PT_009		Sheet No.: 9 of 16	Rev.: A