Carmarthenshire County Council
Flood Risk Management Plan

Part 2 - Policy Unit Level Summaries

Title of document	CCC Flood Risk Management Plan
Document date	May 2019
Author(s)	RRW
Service(s) responsible	Flood Defence and Coastal Protection, Waste and Environmental Services
Department	Environment
Review	
Approval	
Date for Review	
Published	

Document History

Revision	Purpose description	Originated	Checked	Reviewed	Approved	Date
P1.1	Initial draft	RRW	BK			January 2018
P1.2	External review of draft Part 2	RRW	Atkins			October 2018
	Review	RRW	BK			January 2019
P1.3	External final review	RRW	Atkins			May 2019
P2	Working Draft	RRW	BK	CMT		18 June 2019
P2.1				PEB		1 July 2019

Contents

Glossary & Abbreviations

CCC	Carmarthenshire County Council
EA	Environment Agency
LLFA	Lead Local Flood Authority
NRW	Natural Resources Wales
LFRMP or FRMP	(Local) Flood Risk Management Plan
LFRMS	Local Flood Risk Management Strategy
PFRA	Preliminary Flood Risk Assessment
RMA	Risk Management Authorities
WFD	Water Framework Directive
RBMP	River Basin Management Plan
DCWW	Dwr Cymru Welsh Water
OWC	Ordinary water course
FRP	Flood response plan
mAOD	Metres Above Ordnance Datum
PPW	Planning Policy Wales
TAN	Technical Advice Note
LDP	Local Development Plan
LPA	Local Planning Authority
uFMfSW	NRW updated Flood Map for Surface Water

Synopsis

Flood Risk Management Plans (FRMPs) highlight the hazards and risks of flooding from rivers, the sea, surface water, groundwater and reservoirs, and set out how Risk Management Authorities (RMAs) work together with communities to manage flood risk.

As a Lead Local Flood Authority (LLFA) under the Flood and Water Management Act 2010, Carmarthenshire County Council (CCC) has a duty to coordinate and lead the management of flood risk arising from local sources within Carmarthenshire. This plan has been developed to address that duty by utilising the available information to identify areas at risk of flooding the approaches where further actions could be prioritised to reduce flood risk within the county.

1 Introduction – FRMP Part 2

Flooding resulting from extreme events has become an increasing global concern in recent years. The risk to life, and the built and the natural environment from flooding is further exacerbated by climate change. Approximately 6 million properties in the United Kingdom are at risk of flooding[1]. Here in Wales one in six properties are at risk of flooding[2] and approximately 23% of the 1,500km long Welsh coastline is eroding[3].

The potential increase in intensity and frequency of rainfall, and the rise in sea levels, is likely to increase the risk of flooding and coastal erosion. Consequently, the risk to life, economy and the environment is also expected to rise. The extreme floods experienced in the UK during the summer of 2007 and across Europe during the summer of 2005 highlight these risks.

Flooding and coastal erosion are natural phenomena and therefore it is not possible to prevent them from occurring. However, the risks associated with these phenomena and the resulting consequences are reasonably well understood. Therefore, steps can be taken to manage these risks and minimise their impact.

1.1 What are Flood Risk Management Plans?

Flooding remains a key threat to communities across Wales and managing this risk through careful planning is important to minimise the risk to communities. Flood risk management planning allows Risk Management Authorities (RMAs) to develop a better understanding of risk from all sources of flooding and agree priorities to manage that risk.

This Flood Risk Management Plan (FRMP) has been developed with this in mind and sets out how Carmarthenshire County Council will manage flooding in those communities most at risk. In doing so, this FRMP takes forward the objectives and actions set out in our Flood Risk Management Strategy:

http://www.carmarthenshire.gov.wales/home/residents/your-community/flooding/flood-risk-strategy/#.WG5tIE0SFpg

This FRMP also aims to achieve some of the objectives set out in the Welsh Government's National Flood and Coastal Erosion Risk Management Strategy[4] which provides the national framework for flood and coastal erosion risk management in Wales through four overarching objectives:

- Reducing the consequences for individuals, communities, businesses and the environment from flooding and coastal erosion.
- Raising awareness of and engaging people in the response to flood and coastal erosion risk.
- Providing an effective and sustained response to flood and coastal erosion events.
- Prioritising investment in the most at-risk communities

Part 2 of the Carmarthenshire County Council FRMP is aimed at delivering prioritised investment in those communities at greatest risk. We have identified 49 communities across Carmarthenshire as areas which are at the greatest risk of surface water and ordinary watercourse flooding. These communities have been entitled 'Policy Units' and have been evaluated in more detail in this part of the FRMP.

2 Technical Assessment

Within this section we have set out the approach and the data sources we have used to review the understanding of flood risk across Carmarthenshire.

2.1 Data sources

The following section details the risk counts that have been generated to assist in identifying people and economic activity in areas at risk from surface water flooding.

The methodology used has been derived from the three datasets below:

1. **Updated Flood Map for Surface Water – uFMfSW Property Point dataset (The Environment Agency, July 2013)**

This is a dataset intended primarily for use with GIS (Geographic Information System) and contains information on property points for return periods of 1 in 30, 1 in 100 and 1 in 1000.

2. **Updated Flood Map for Surface Water uFMfSW (The Environment Agency, July 2013)**

This is a map of surface water produced by a computer simulation of rainfall applied to a digital terrain model. Further details of uFMfSW are available on the following link:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297432/LIT_8988_0bf634.pdf

3. **Communities at Risk Register (CaRR)**

The Environment Agency developed a tool to identify and score communities at risk of flooding from rivers and the sea. In 2016 the Communities at Risk Register Information was updated to include surface water flooding and the resulting information was released to Local Authorities

[1] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf
[2] http://gov.wales/docs/desh/publications/111114floodingstrategyen.pdf
[3] http://gov.wales/docs/desh/publications/120329climateannualreporten.pdf
[4] http://wales.gov.uk/topics/environmentcountryside/epq/flooding/nationalstrategy/strategy/?lang=en

in early 2017. This is a national scale tool intended to provide consistent information across Wales and can be used to prioritise areas most at risk of flooding from all sources.

Unless otherwise stated, CaRR_pluvial property numbers are specified in the flood risk table for each PU. CaRR fluvial and tidal numbers are included where these are relevant to the PU.

CaRR Methodology

Wales is divided into 2210 communities. These communities are given a 'Danger Measure' that is derived from:

- Number of people at risk of flooding
- Speed of onset of flooding
- Hazard based on depth and velocity of flooding
- Vulnerability of community

Differences between figures used for Carmarthenshire FRMP and the CaRR Dataset

The number of people at risk is supplied to local authorities as a GIS dataset. The properties at risk of flooding have been identified using LiDAR/JFLOW to model the flood risk. The 2D Surface water flow model utilises the footprint of the building with a stub height of 300mm.

This is a different approach to that used to derive the number of properties at risk using the uFMfSW and the property point gazetteer. This information is presented as a series of depths for various return periods and the wetted perimeter of the property is given. For the purposes of the FRMP a flood depth of 150mm and a wetted perimeter of 20% or greater was selected.

The difference in these approaches can in some instances lead to large variations in the number of properties indicated to be at risk of flooding. For example, in the Newcastle Emlyn PU, using the uFMfSW and property point gazetteer, 67 properties are indicated to be at risk of flooding in a 100 year event (150mm flood depth and a wetted perimeter of 20% or greater). In comparison, when utilising the CaRR information 2 properties are at risk.

2.2 Analysing the Data and Property Counts

2.2.1 Risk to properties

The primary dataset used to collate property point data for flood risk areas was the 'uFMfSW Property Point dataset'.

In order to identify those properties that are likely to suffer from internal flooding, a depth of flooding criteria of =>150mm with a wetted boundary of 20% or greater has been used to filter the dataset .i.e. those properties with flood depths <150mm are not included in the counts.

In general, most properties have a threshold (inside building level) of 150mm or greater above the surrounding ground. Properties with less than 20% of the perimeter within the flood outline are less likely to suffer from internal flooding since this generally indicates only a corner is affected. The criteria of selecting properties where greater than 20% of the perimeter is flooded captures properties such as terraced properties where flooding in only present at the front or rear.

2.2.2 Calculation methodology

The scenarios used to predict the risk of flooding to properties in each community are expressed in terms of a combination of:

- The probability (chance) of the flooding in any given year
- The resulting threshold (minimum) depth of flooding to each property affected
- The threshold (minimum) area of each property affected by flooding.

The following counts have been quoted in expressing the risk of flooding to each Community Ward and Policy Unit within a Ward (note that some Policy Units span across Ward boundaries):

- Number of properties within a Ward
- Count of the total number of property points at risk of flooding for the following rainfall events at a 150mm flood depth and wetted perimeter of 20% or greater, all properties are included:
    - 1 in 30 (High Risk of Flooding),
    - 1 in 100 (Medium Risk of Flooding), and
    - 1 in 1000 (Low Risk of Flooding)
- Count of the total number of dwellings at risk of flooding for the following rainfall events at a 150mm flood depth and wetted perimeter of 20% or greater, only dwellings are included:
    - 1 in 30 (High Risk of Flooding),
    - 1 in 100 (Medium Risk of Flooding), and
    - 1 in 1000 (Low Risk of Flooding)
- The total property points in the dataset have been broken down with counts for all Ordnance Survey class used in the dataset for the 30yr, 100yr and 1000yr 150mm deep 20% or greater wetted boundary

To avoid double counting of properties that are at-risk of flooding, properties that are within Flood Zone 2 & 3, and thus at-risk from main river flooding have been excluded from the property counts.

3 Policy Unit Selection Criteria

At a general scale Ward areas do not offer suitable size units to identify measures that can be applied appropriately across the entire Ward. For instance, Laugharne Ward contains the

towns and villages of Laugharne, Pendine and Llanddowror. The sources of flood risk to these areas are different, requiring different measures to address the risks and it would not be appropriate to group the areas together.

Therefore, Policy Units within the Wards have been selected. Through visual analysis of the surface water flood maps[5] at a Ward level, areas that have a common flooding source and affect have been identified. Numbers of people or areas with economic or environmental impact where it would be appropriate for specific measures to be assigned to the selected area.

Analysis of the data, as described in Section 2, has resulted in the identification of 49 areas at risk of surface water flooding, termed Policy Units for the purpose of this report.

The Policy Units range in size from areas with several hundred properties identified at risk of flooding to small areas only covering a few properties. It is recognised that at the smaller scale this is a subjective choice and it is not meant to be entirely comprehensive.

It is intended to keep identification of Policy Units under review and to add to the list of Policy Units as required, such as in the event of new information becoming available.

It is not intended that works would only be carried out in identified Policy Units where there is an identified positive benefit-cost of investment to manage flood risk (protecting 2 properties at a cost of £5k would be more cost-effective than a scheme to defend 20 properties at a cost of £60k), although Policy Units will be used to prioritise major works.

3.1 Policy Units by Ward

The 49 Policy Units are described in turn in this Part 2 of the FRMP, ordered alphabetically by Ward.

The main features of each Policy Unit area are summarised, including the numbers of properties identified to be at risk together with the proposed actions to address the risks identified.

[5] uFMfSW surface water flood maps, Natural Resources Wales 2013

4 Abergwili Ward, Whitemill Policy Unit

4.1 Area Description

The Whitemill Policy Unit is located approximately 5km east of Carmarthen at the bottom of a steep valley and large catchment of rural agricultural fields and woodland. The catchment begins at Brechfa Forest with numerous ditches taking runoff from the area. The Afon Annell, which runs the length of the catchment, collects all run-off from the steep valley and passes through the main settlements including Llanfihangel-Uwch-Gwili and Whitemill before discharging into the Afon Tywi. It is classed as Main River from Llanfihangel-Uwch-Gwili.

4.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The topography of the area is the root cause of many of the issues observed in Whitemill. The steep catchment with large areas of rural agricultural fields captures rainfall and channels it towards Whitemill. Whitemill is a pinch point within the catchment.

The C2050 highway running through Whitemill is higher than the surrounding land and local properties. There are numerous low spots that pond surface water. This is the main cause of flooding to the north of the carriageway, especially if the river level is high and the highway cannot drain freely.

The observed incidents of flooding (noted below) were caused as a result of the local surface water being unable to discharge to the watercourse when the watercourse is in flood. Surface water then simply pools and causes local flooding.

4.3 Flooding Events

CCC have several recorded incidents of flooding in Whitemill:

- In 2008 the old school flooded internally
- In 2015 the old school and 3 residential dwelling flooded internally
- In 2016 Whitemill Inn flooded internally
- In 2018, as a result of Storm Callum, 5 residential and 1 commercial properties were flooded internally.

4.4 Flood Defence Capital Works undertaken by CCC

None

4.5 Flood Defence Assets

None

4.6 Routine Works and Maintenance

None

4.7 Proposed Future Works

CCC will continue to investigate incidents of flooding and liaise with NRW with regard to the main river flooding.
At this time no improvement to the highway's infrastructure is planned.

4.8 Flood Risk

4.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

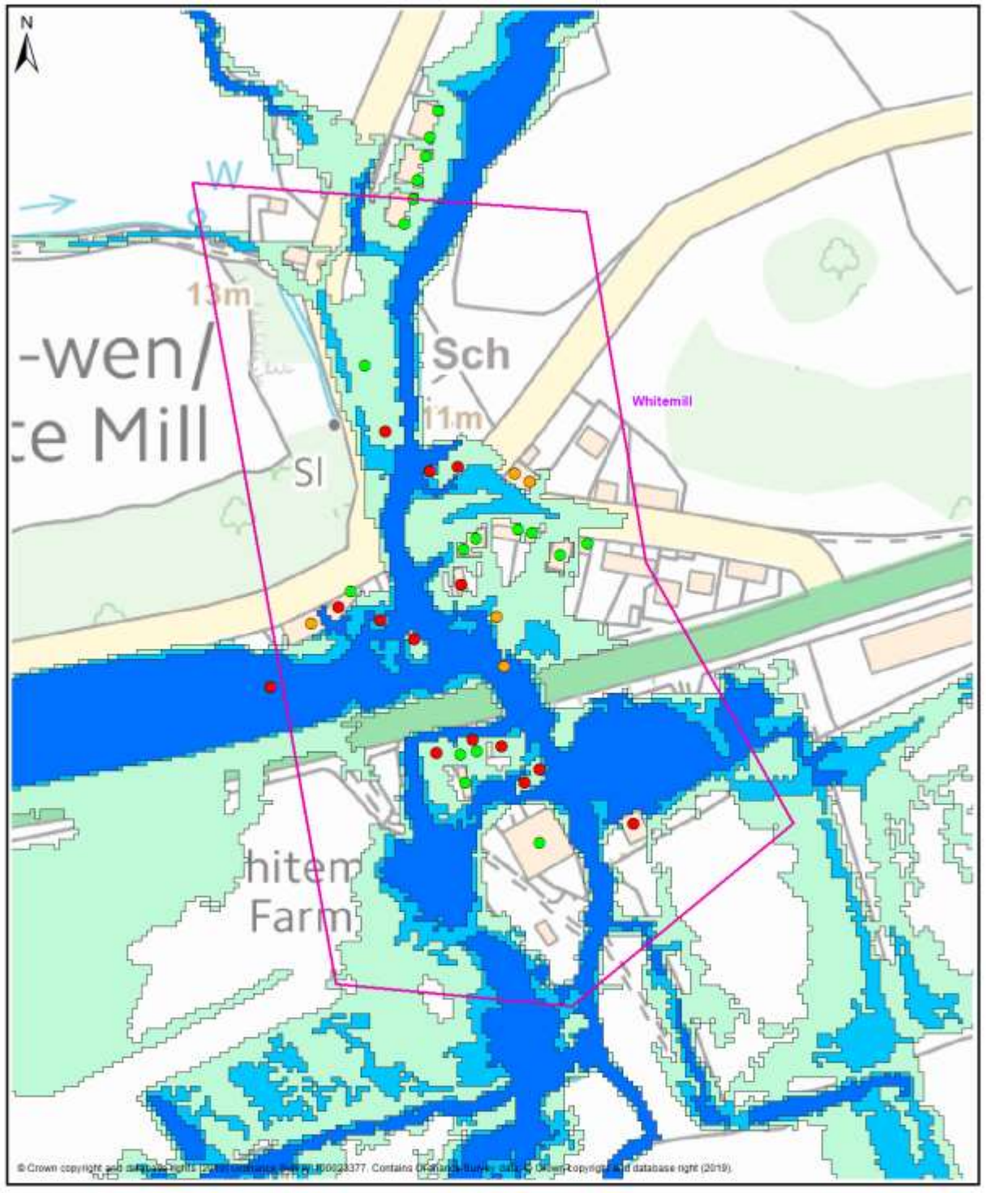
4.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

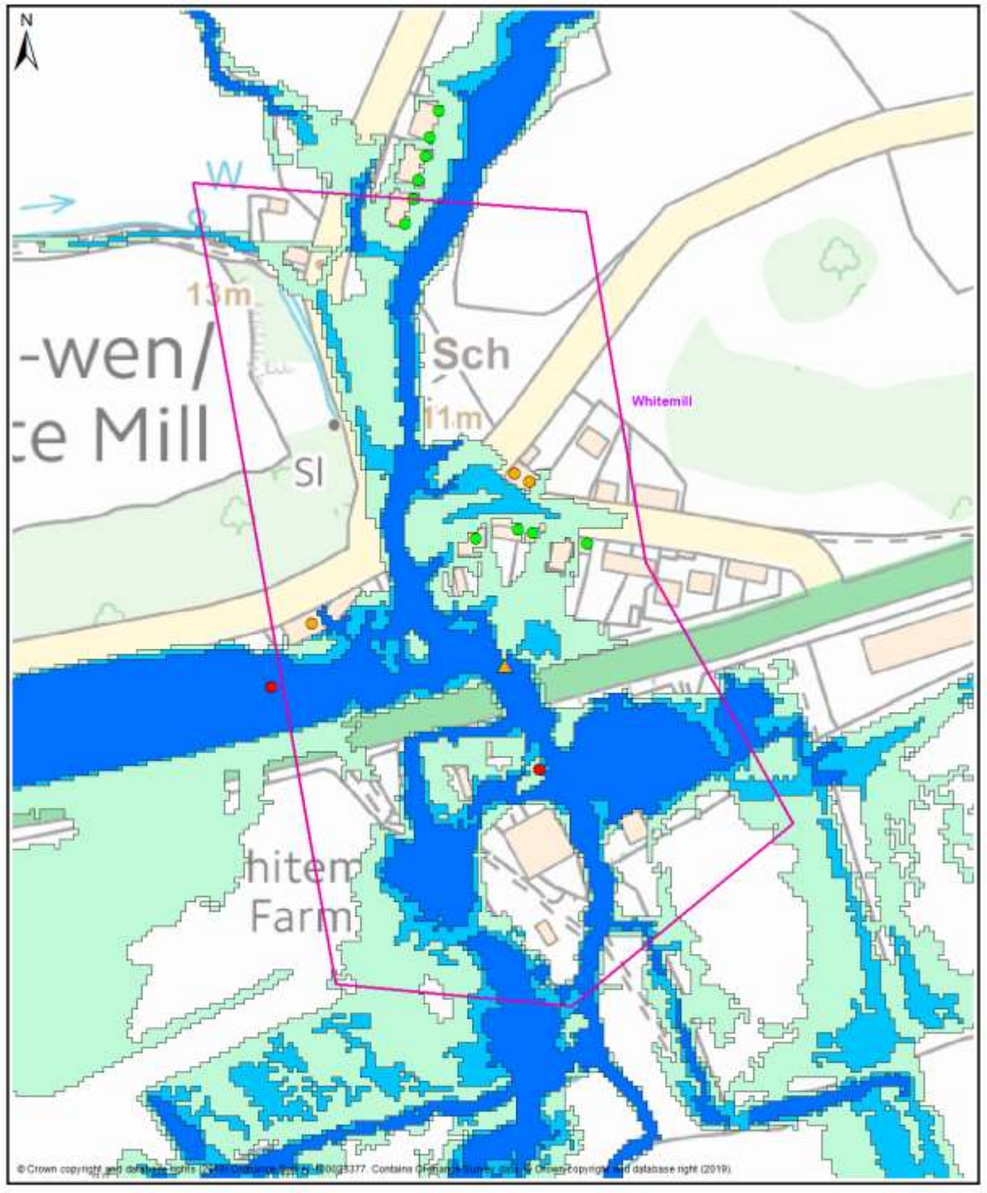
4.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	13	18	32
Map 2 Dwellings and Services	1	5	11
Map 3 CaRR	n/a	3	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

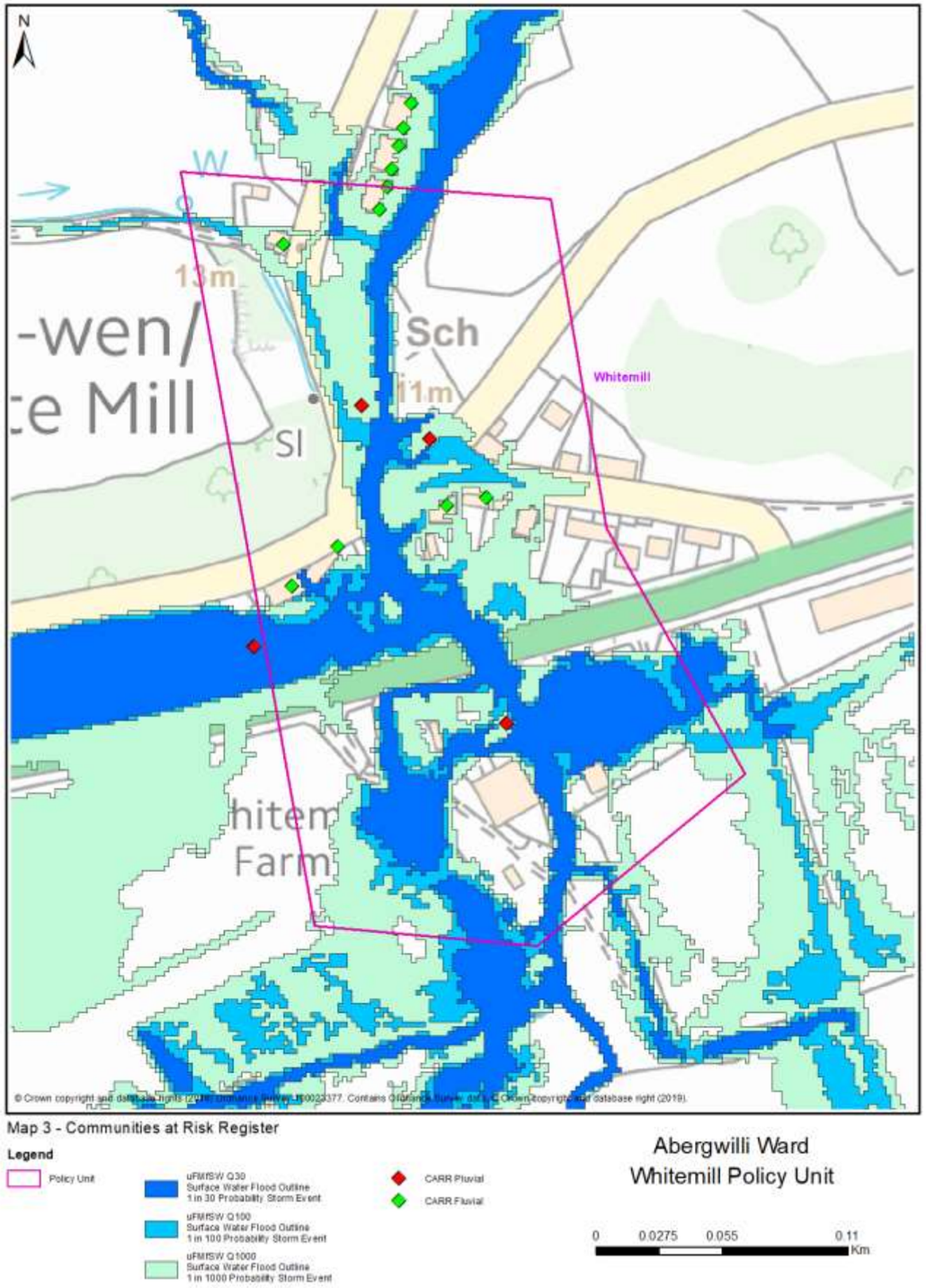
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Abergwilli Ward
Whitemill Policy Unit

0 0.0275 0.055 0.11 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater


N
W
13m
-wen/
te Mill
Sch
11m
Whitemill
Sl
hitem
Farm
© Crown copyright and database rights (2019) OS 100023377. Contains Ordnance Survey data © Crown copyright and database right (2019).
Map 3 - Communities at Risk Register
Legend
Policy Unit
uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event
uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event
uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event
CARR Fluvial
CARR Fluvial
Abergwilli Ward
Whitemill Policy Unit
0
0.0275
0.055
0.11
Km

5 Ammanford Ward, Carregamman Policy Unit

5.1 Area Description

The Carregamman Policy Unit is an area immediately south-west of Ammanford's shopping centre. It comprises of local authority housing, private housing and the Parc Amanwy Industrial Estate. There are no watercourses within this Policy Unit and the surface water drainage is partly private and part owned by DCWW.

5.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of pluvial (surface water) flooding.

It is apparent that the topography of this area is slightly 'dish shaped'. As such, rain water falling in this area will not flow away naturally and will need to be captured by the local drainage.

The local surface water drainage in Carregamman appears to be connected to the DCWW combined system. The drainage in Ffynnon Las and Parc Amanwy does not appear on the DCWW's drainage maps and could therefore be private, namely the responsibility of those who derive benefit from it.

5.3 Flooding Events

CCC have no record of any flooding in this area.

5.4 Flood Defence Capital Works undertaken by CCC

None

5.5 Flood Defence Assets

None

5.6 Routine Works and Maintenance

None

5.7 Proposed Future Works

Ascertain the path, ownership and responsibility of the surface water system in the Policy Unit.
This will be achieved by undertaking CCTV surveys and Land Registry checks.

5.8 Flood Risk

5.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

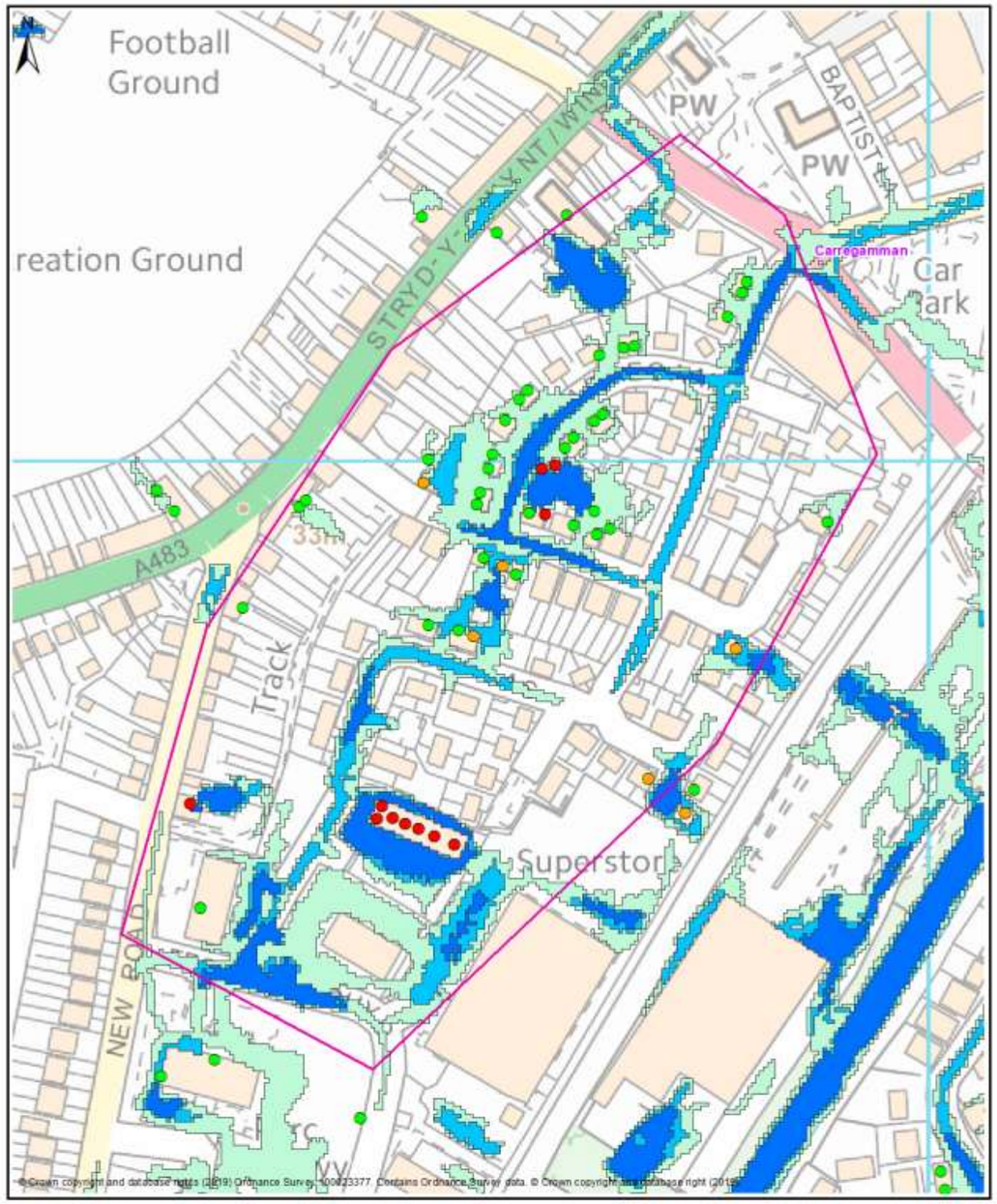
5.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

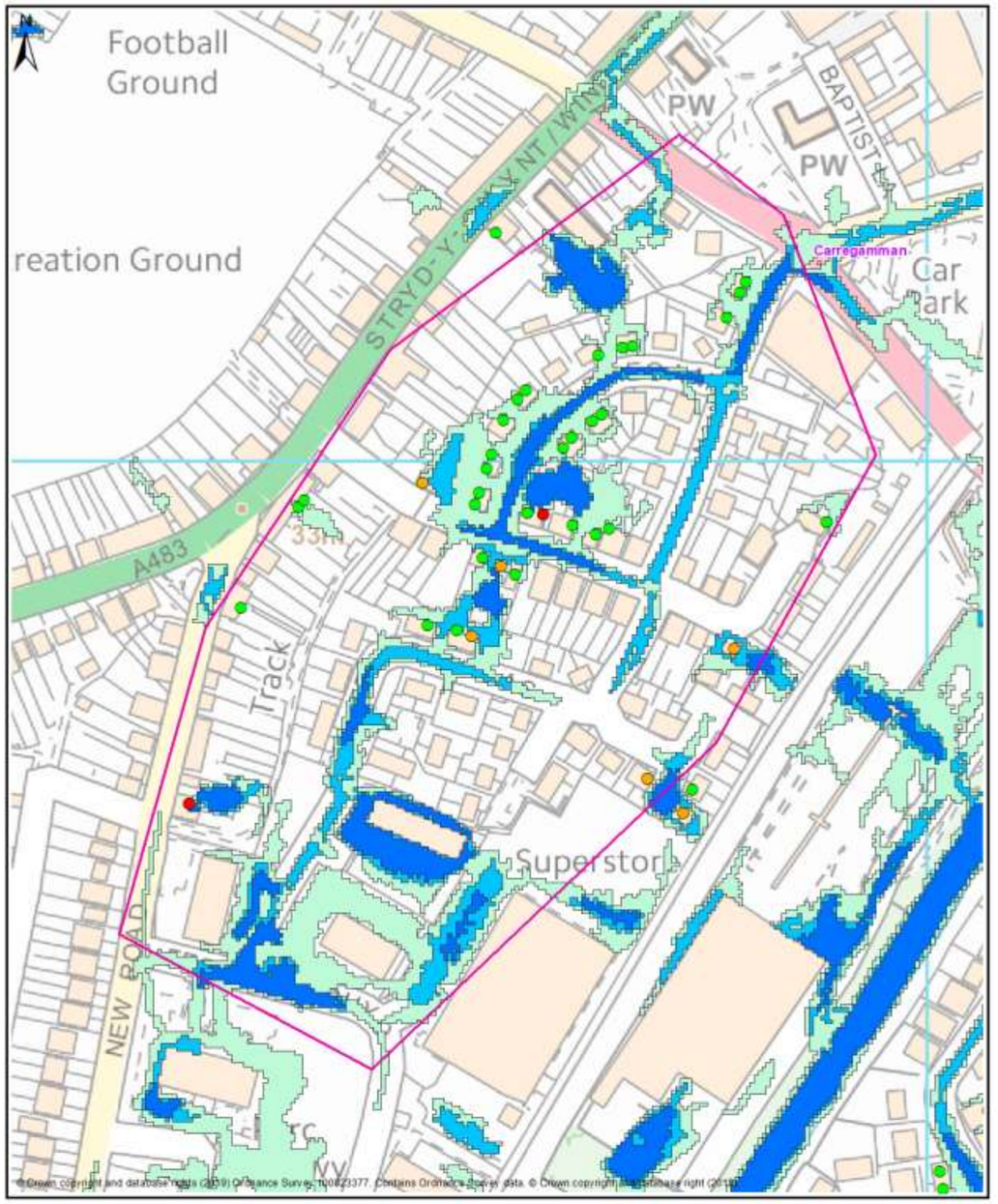
5.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	11	17	53
Map 2 Dwellings and Services	2	8	39
Map 3 CaRR	n/a	7	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

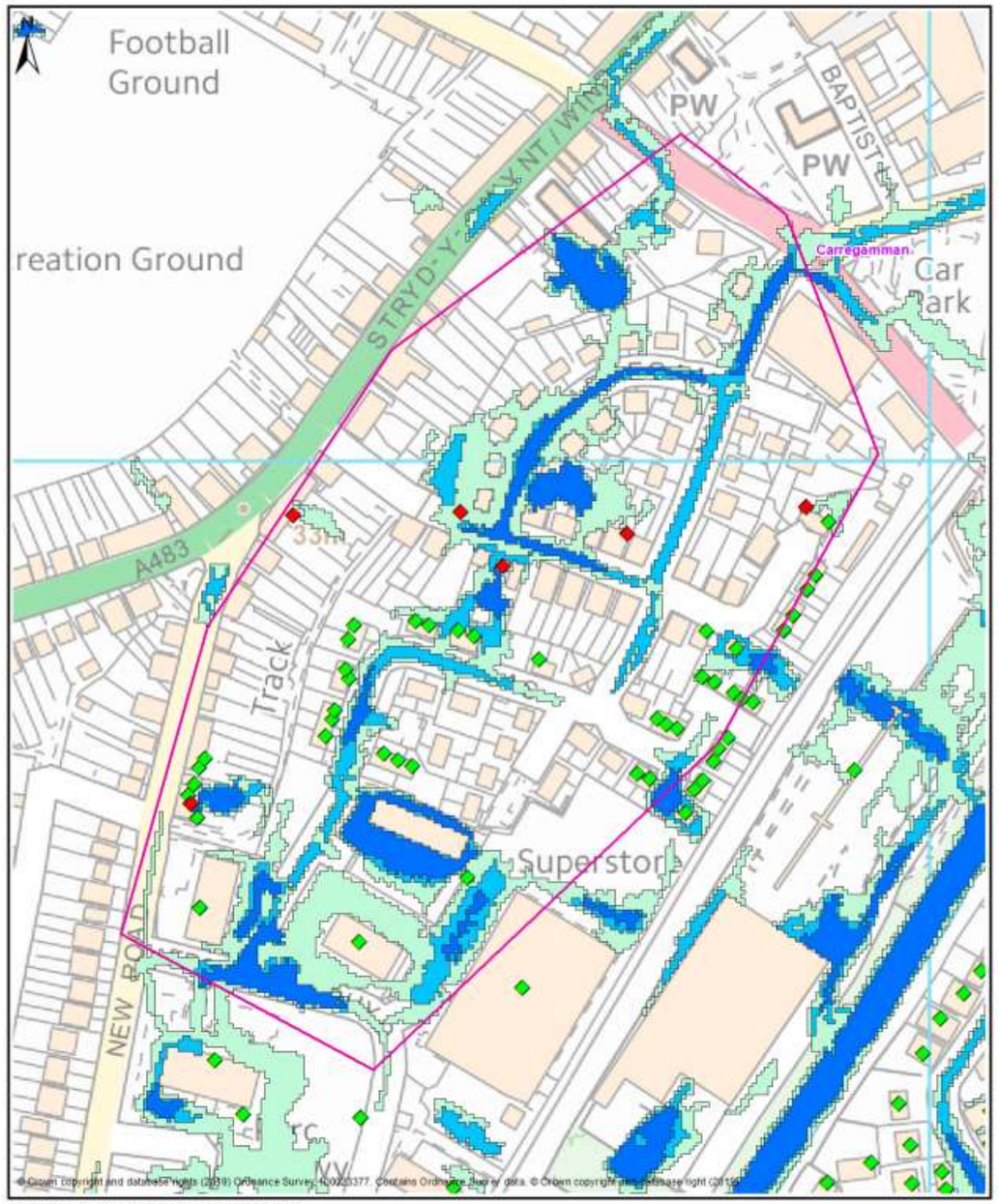
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Ammanford Ward
Carregamman Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



6 Ammanford Ward, Iscennen Road & Margaret Street Policy Unit

6.1 Area Description

The Iscennen Road and Margaret Street Policy Unit comprises two catchments associated with unnamed ordinary watercourses.

The primary watercourse originates north of Dyffryn Amman Comprehensive School. It flows initially in an open channel before being culverted beneath the school's entrance. There is a small open channel section before it is again culverted at the rear of the Catholic Church on Margaret Street. It is culverted beneath properties on Margaret Street, College Street and Iscennen Road. There is another short open channel section to the rear of No.21 Iscennen Road before the final culverted section under Lon Tir-Y-Dail and west of the River Loughor.

The second watercourse originates west near Wern Ddu. It flows in an open channel before being culverted at the rear of Margaret Street Primary School. From there it is culverted along the northern boundary of the school to Margret Street, south to Walters Road and into the rear garden of No.29 Margret Street where it discharges into an open watercourse. The open watercourse flows through multiple gardens along Walters Road, beneath High Street and south before discharging into the River Aman.

6.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses. The flooding that has been recorded/ witnessed correlates closely with the surface water flood model. There is a potential for significant blockages to the local assets due to a large amount of stone and shale that is conveyed by the watercourses during severe weather.

It has been observed that surface water can run down access roads to the rear of residential properties and cause minor flooding to rear gardens. There has been no record of internal flooding at these locations. The flood map indicates that the potential extent of flooding increases as you approach the western end of Iscennen Road; reflecting the flat topography of this area relative to the surrounding land.

6.3 Flooding Events

There have been several incidents of flooding in this area. Current information suggests that these were predominately highway flooding incidents, although there is some anecdotal evidence of external property flooding.

According to local residents, flooding occurred at the Amman Valley Comprehensive trash screen due to a blockage.

In 2005 there was another recorded incident of flooding at the eastern most side of Margaret Street due to a blocked culvert.

6.4 Flood Defence Capital Works undertaken by CCC

In 2013 the Ammanford Comprehensive school trash screen was upgraded.

6.5 Flood Defence Assets

Ammanford Comp Trash Screen	**Ammanford Comp Culvert**	**Ammanford Comp Outfall**
Walters Road Trash Screen	**Walters Road Culvert**	**Walters Road Outfall**
Catholic Church Trash Screen	**Margaret Street / Iscennen Road Culvert**	**Iscennen Road Outfall**
Lon Tir-Y-Dail Culvert	**Lon Tir-Y-Dail Outfall**	

6.6 Routine Works and Maintenance

Area	Works Undertaken	When
All Trash Screens	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Ammanford Comp Culvert	CCTV camera survey	2018
Ammanford Comp Outfall	Formal T98 Inspection	Annually
Walters Road Culvert	CCTV camera survey	2018
Walters Road Outfall	Formal T98 Inspection	Annually
Margaret Street / Iscennen Road Culvert	CCTV camera survey	2018
Iscennen Road Outfall	Formal T98 Inspection	Annually
Lon Tir-Y-Dail Culvert	CCTV camera survey	2018
Lon Tir-Y-Dail Outfall	Formal T98 Inspection	Annually

6.7 Proposed Future Works

Undertake CCTV camera surveys and address faults on a risk-based basis.

An outline business case (OBC) is currently being prepared (2019) to evaluate flood management options. A bid for capital funding will be submitted to WG in 2020 if the OBC identifies any viable options.

6.8 Flood Risk

6.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

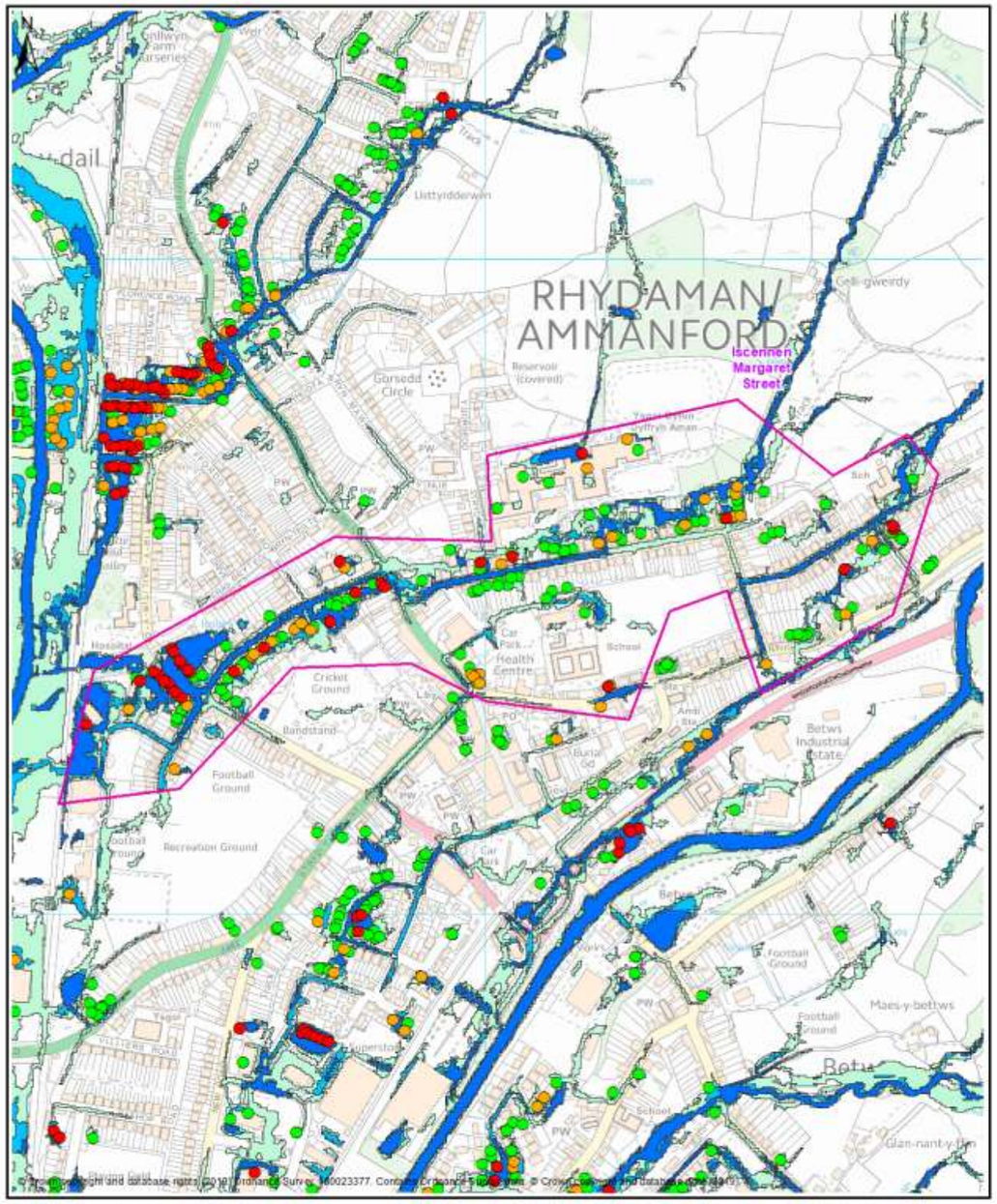
6.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

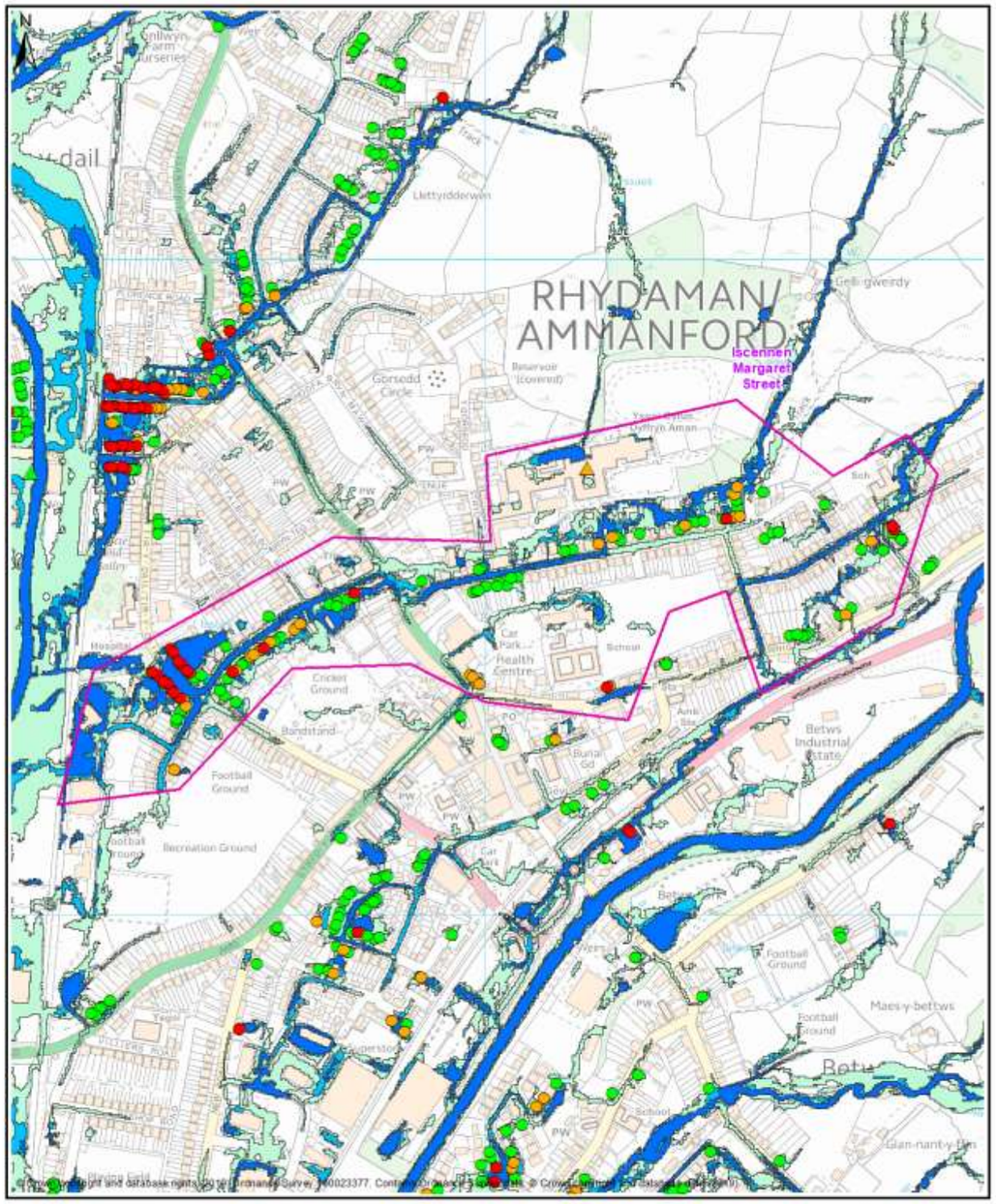
6.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	30	71	156
Map 2 Dwellings and Services	20	48	112
Map 3 CaRR	n/a	17	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

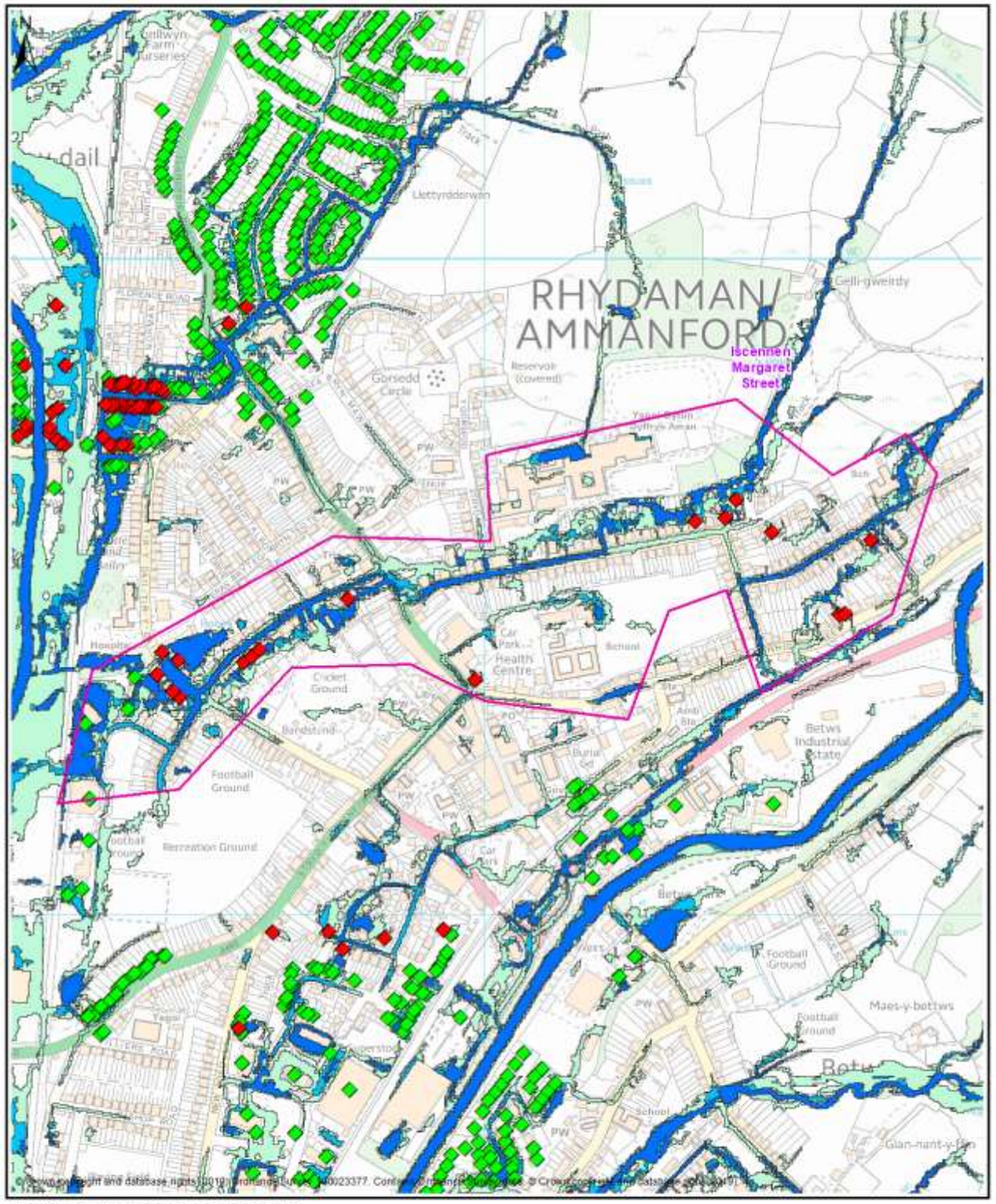
Ammanford Ward

Iscennen Margaret Street Policy Unit

0 0.1 0.2 0.4 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Ammanford Ward
Iscennen Margaret Street Policy Unit

0 0.1 0.2 0.4 Km

7 Bigyn Ward, Trostre Road and Gorsedd Policy Unit

7.1 Area Description

The Trostre Road and Gorsedd Policy Unit is located east of Llanelli town centre in an area dominated by retail (Trostre Retail Park), but also with a residential element at Gorsedd. This area was developed in the mid-1980s from farm and industrial land to the current large commercial and business area.

7.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The surface water in this area drains to the Afon Dafen (main river). The conveyance in the Afon Dafen is restricted by the limited capacity of the culvert under the railway line. As a result, water north of the railway 'backs-up' which in turn affects the local surface water system.

In addition to the above issue the surface water systems in this area have very little fall. As such they are vulnerable to siltation and require periodic desilting with high pressure jetting.

7.3 Flooding Events

Flooding at Trostre Road, Gorsedd and Trostre Business Park occurs annually due to a combination of conveyance and capacity issues.

In 2018 there were 2 incidents of internal property flooding recorded and 2 recorded incidents of commercial premises and highway flooding.

7.4 Flood Defence Capital Works undertaken by CCC

CCC are currently investigating solutions with its partners namely NRW and Network Rail.

7.5 Flood Defence Capital Works undertaken by Partnership Organisations

Natural Resources Wales are working with Network Rail to develop a scheme to resolve the restriction on flow caused by the existing culverts. This is currently a medium-term project over 5-10-years.

7.6 Flood Defence Assets

Afon Dafen (Main River) Trash Screen	

7.7 Routine Works and Maintenance

Area	Works Undertaken	When
Afon Dafen Trash Screen	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer

7.8 Proposed Future Works

Liaise with NRW and Network rail regarding the future of the Afon Dafen trash screen.

Work with the Highway's Authority to manage the Trostre Road culvert.

7.9 Flood Risk

7.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

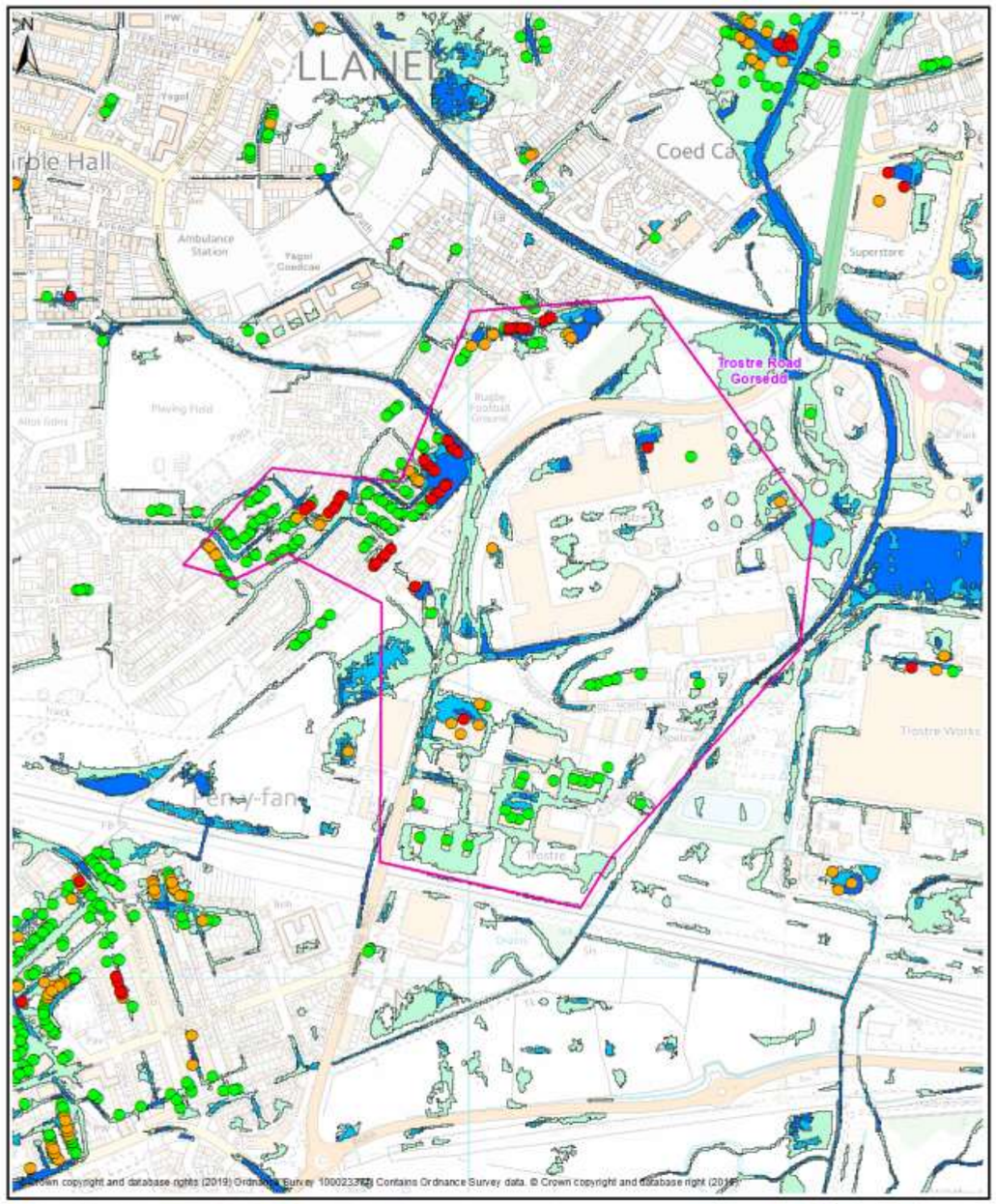
7.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

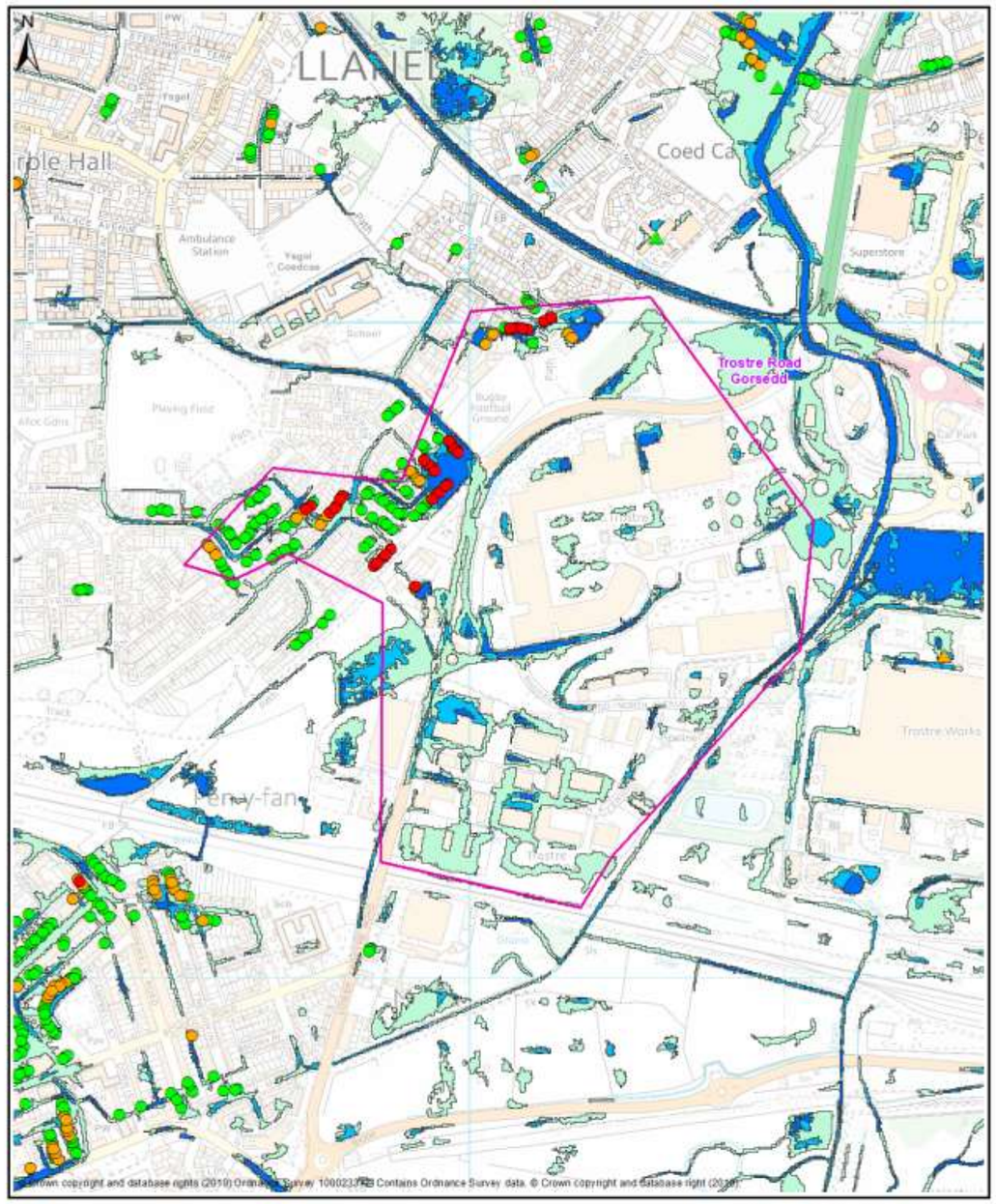
7.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	37	60	153
Map 2 Dwellings and Services	35	50	111
Map 3 CaRR	n/a	34	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

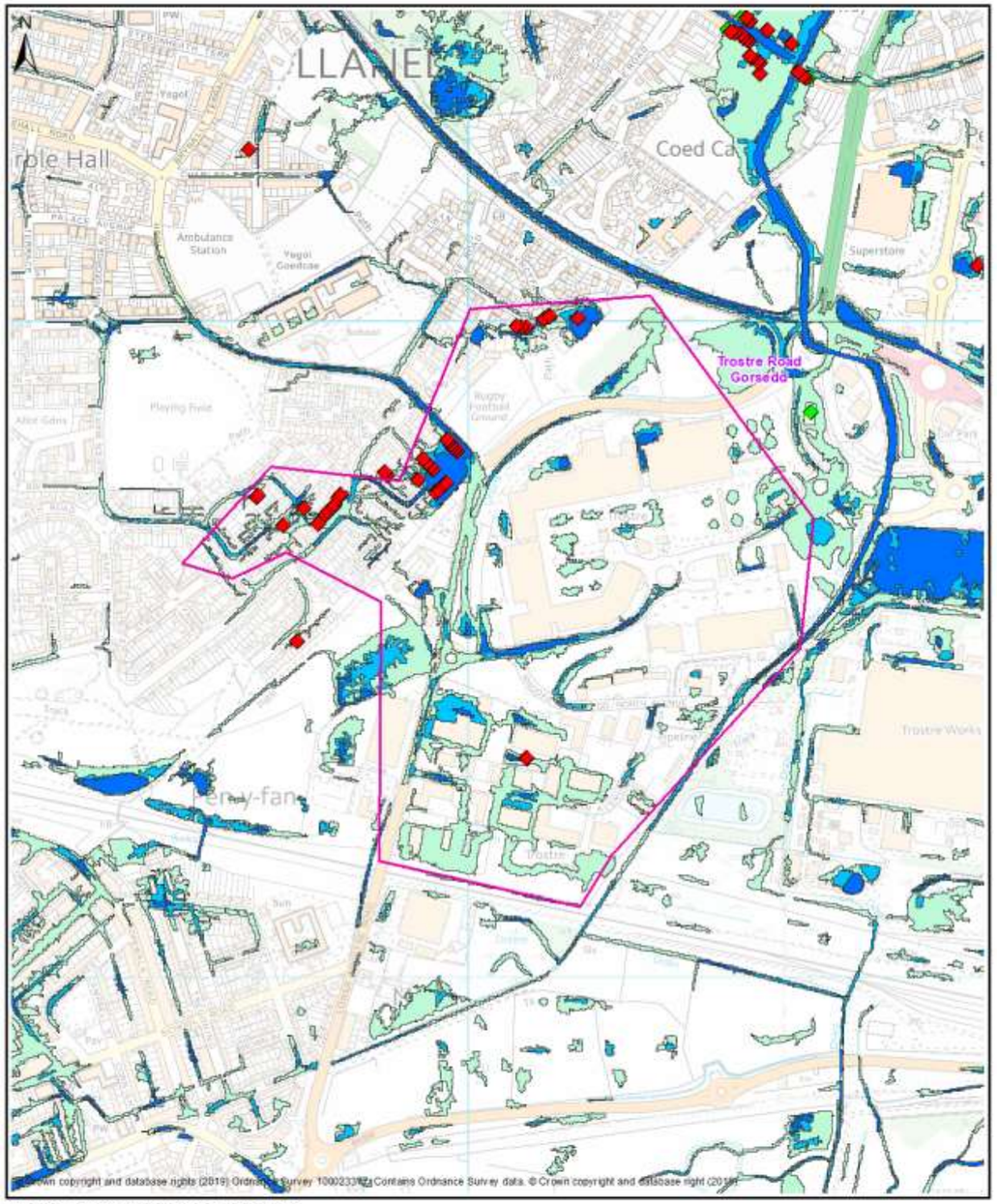
Bigyn Ward

Trostre Road Gorsedd Policy Unit

0 0.1 0.2 0.4 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

8 Burry Port Ward, Gors Road Policy Unit

8.1 Area Description

The Gors Road Policy Unit comprises the large urbanised area adjacent to the railway line in the town centre. There are no watercourses near the Policy Unit, so the area is drained by a combination of DCWW Sewerage Systems and Highway Drainage Systems. The drainage goes under the railway line via a DCWW surface water culvert.

8.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of surface water flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

8.3 Flooding Events

CCC have no record of any flooding in this area.

8.4 Flood Defence Capital Works undertaken by CCC

DCWW have undertaken works in the area as part of their ongoing Rainscape Project. A major new surface water culvert was installed under the railway line to provide increased capacity to the existing system.

8.5 Flood Defence Assets

None

A survey undertaken in 2018 confirmed that the drainage system is under the ownership and maintenance of DCWW.

8.6 Routine Works and Maintenance

None

8.7 Proposed Future Works

CCC will continue to monitor the area and investigate incidents of flooding.

CCC will also liaise and support DCWW with their Rainscape Project.

8.8 Flood Risk

8.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

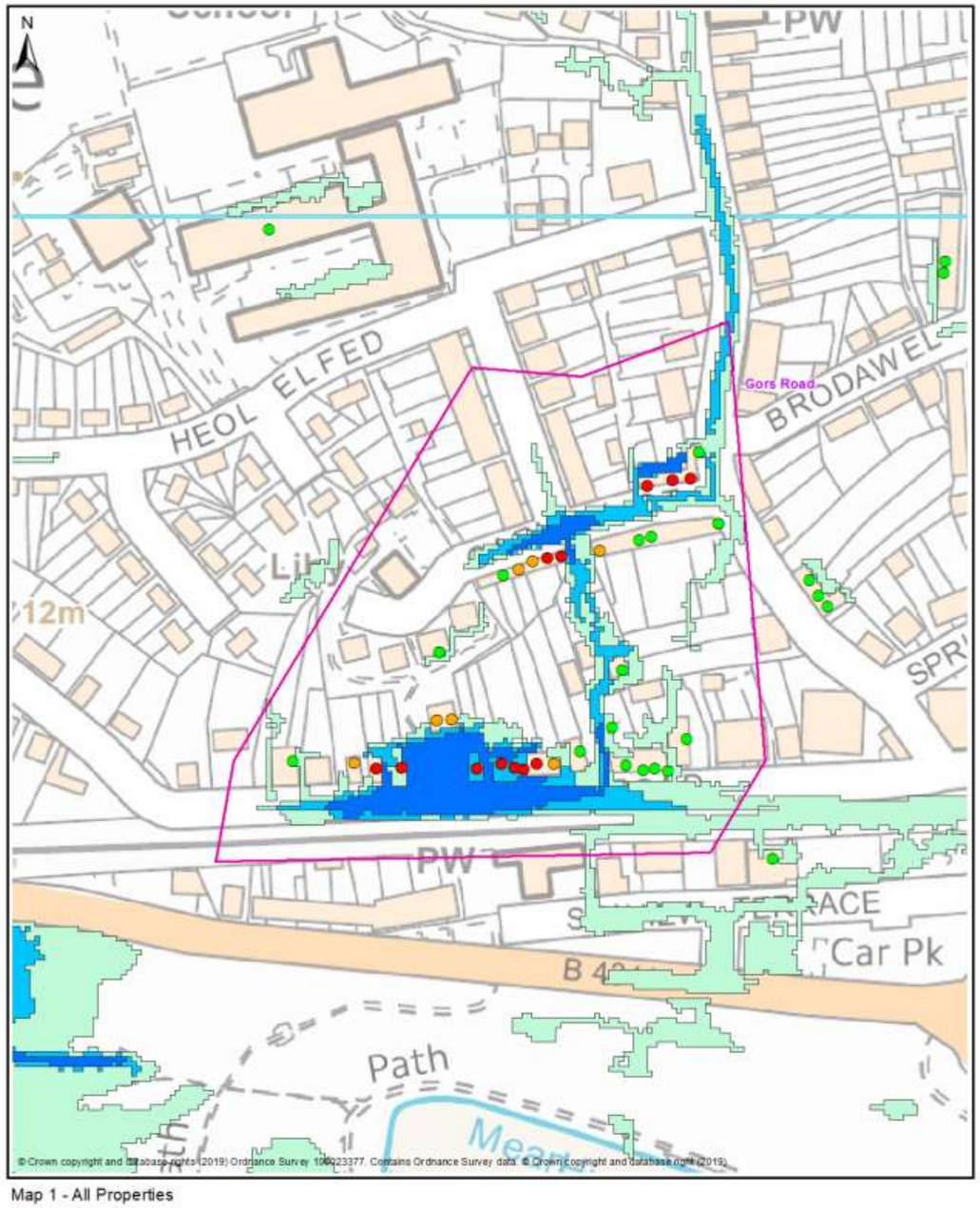
8.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

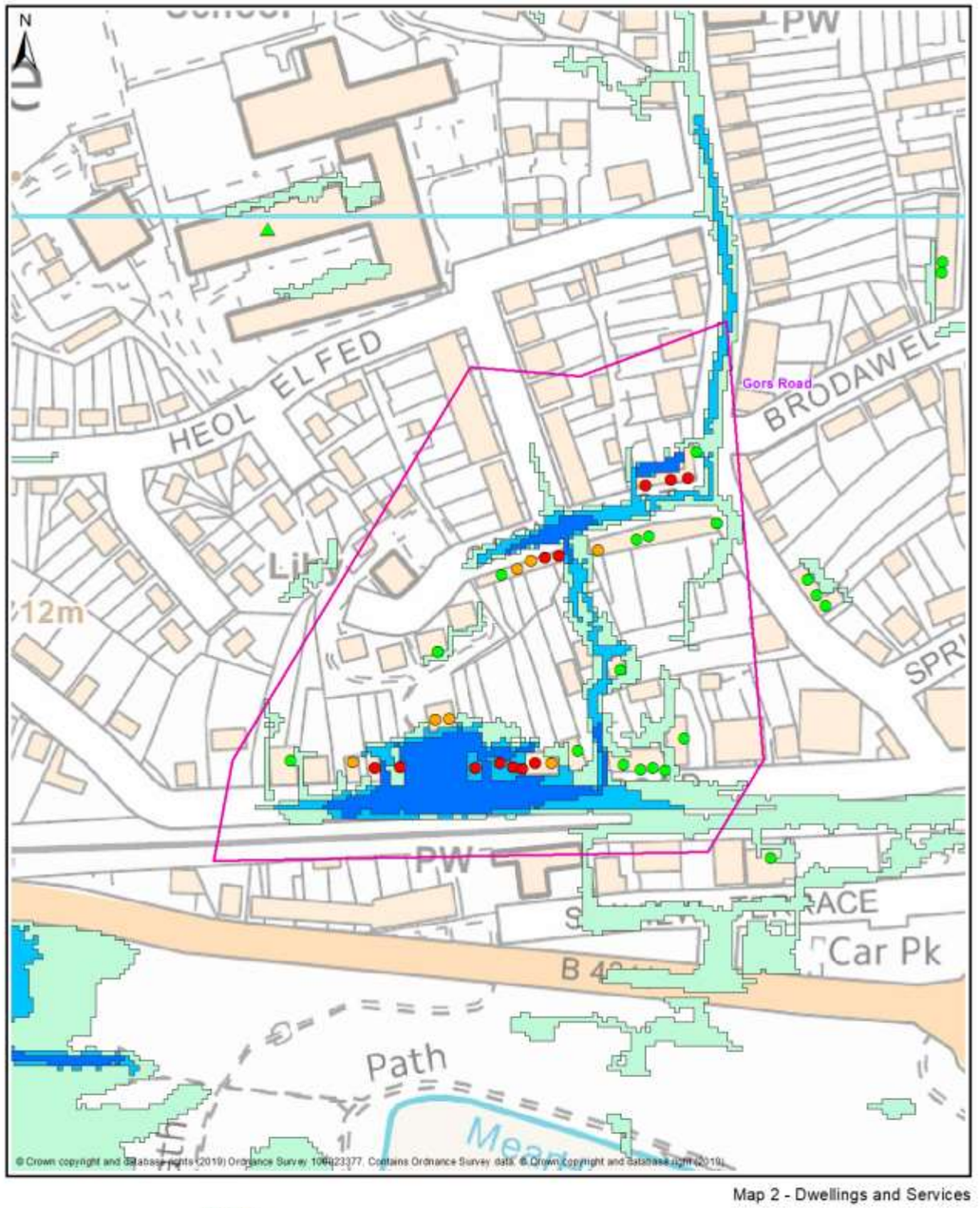
8.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	12	21	40
Map 2 Dwellings and Services	12	21	39
Map 3 CaRR	n/a	5	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

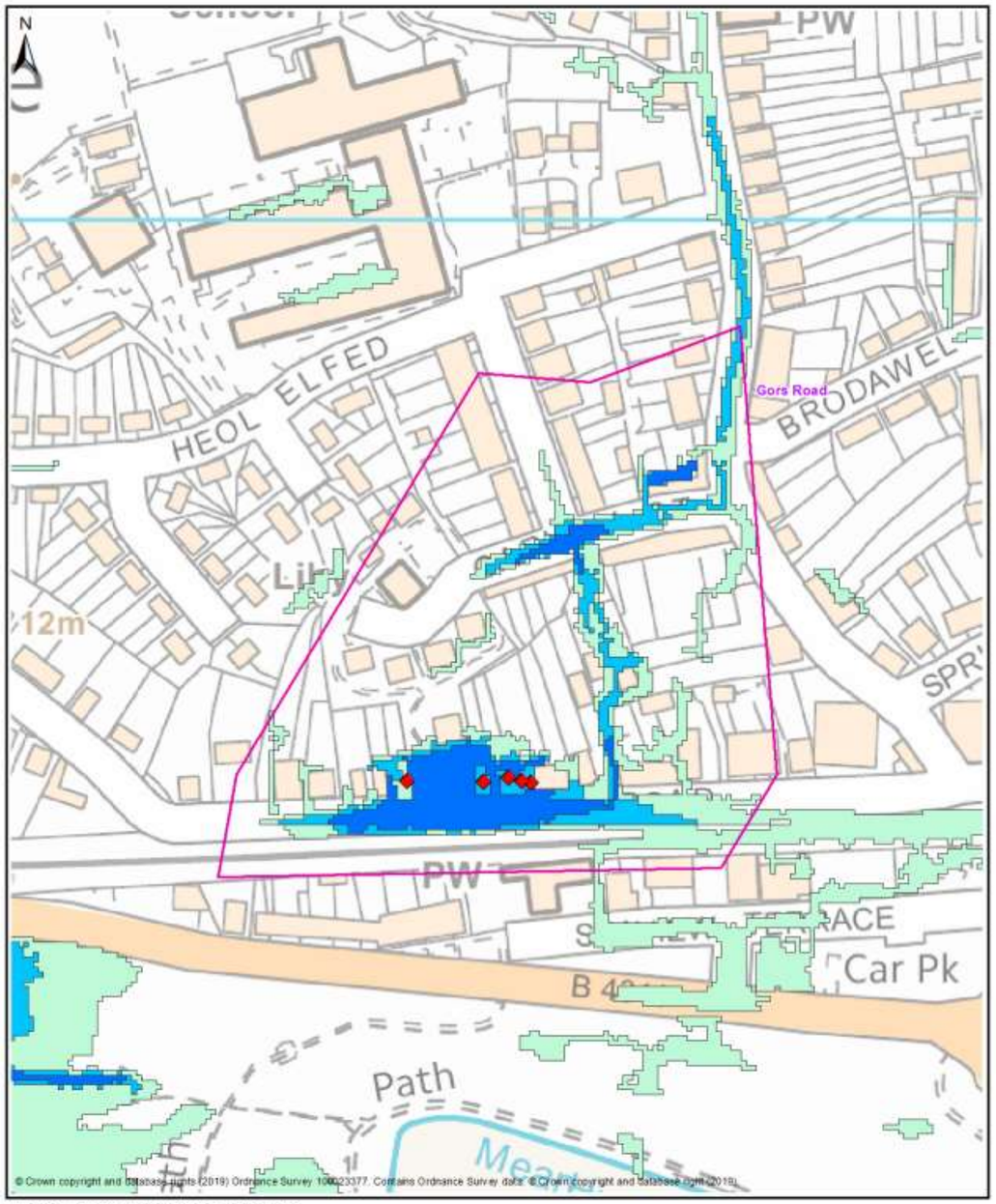
Burry Port Ward

Gors Road Policy Unit

0 0.0275 0.055 0.11 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Burry Port Ward
Gors Road Policy Unit

0 0.0275 0.055 0.11 Km

9 Burry Port Ward, New Street Policy Unit

9.1 Area Description

The New Street Policy Unit comprises the catchment associated with the Nant Dyfatty ordinary watercourse. This watercourse originates north of Burry Port on Mynydd Pen-bre. It flows initially in a natural open watercourse until reaching the Pemberton Arms. At the Pemberton Arms trash screen the watercourse splits into a natural watercourse and a flood relief channel. Low level flows will continue along the natural watercourse to a second trash screen (the Dolau Sluice) at Memorial Park while excess water is diverted to a 1500mm diameter relief culvert via low level weir which follows the footpath to the park. At Memorial Park the culvert increases in diameter to 1800mm and continues south along the old tramway to Bridge Street. From here it passes under Station Road until it joins with the relief culvert and discharges into Burry Port Harbour. At Memorial Park there is a chamber on the relief culvert that will discharge extremely high flows under the park eastwards. There is also another extreme event overflow culvert that takes water through Burry Port.

9.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The predominant risk in this Policy Unit is a blockage of the trash screens or culverts causing flooding. Previous incidents have highlighted that flood flows will follow the topography and flood Memorial Park and overflow towards New Street. There is also a very minor effect of the Marina outfall becoming surcharged due to a high tide, but this is negligible.

The surface water flood maps also show water being conveyed by the local highway network which could also compound the flooding if the highway drainage became blocked or was over capacity.

9.3 Flooding Events

- 1983: residential properties flooded but the details of the event have been lost.
- 1995: The New Street area of Burry Port was badly affected as a result of a blockage of the inlet trash screen at Pemberton Arms.

9.4 Flood Defence Capital Works undertaken by CCC

- 1997: Pemberton Arms trash screen upgraded.
- 1998: Dolau Sluice trash screen upgraded.
- 1999: Earth bunds were constructed around Memorial Park to contain any flood water that escapes from the culverts.

9.5 Flood Defence Assets

Pemberton Arms Trash Screen	**Dolau Sluice Trash Screen**	**Nant Dyfatty Watercourse (Riverside – Dolau Sluice)**
Dolau Sluice Penstock	**Dolau Sluice Overflow Chamber**	**Dolau Sluice 1200 Intermediate Culvert**
Dolau Sluice Penstock Box Culvert	**Dolau Sluice Overflow Chamber**	**Dyffaty Terrace Outfall**
Memorial Park Flood Embankment		

9.6 Routine Works and Maintenance

Area	Works Undertaken	When
Nant Dyfatty	Watercourse trashing and grass cutting	Annually
Dolau Sluice & Pemberton Arms Trash Screens	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
All Culverts	CCTV camera survey	2018
Dolau Sluice Penstock	Formal Inspection	5 years
Dyfatty Terrace Outfall	Formal T98 Inspection	Annually
Memorial Park Flood Embankment	Formal T98 Inspection	Annually
	Vegetation management	Annually

9.7 Proposed Future Works

Desilt the culvert beneath Memorial Park.

Evaluate options for invasive species management along the Nant Dyfatty.

9.8 Flood Risk

9.8.1 Map 1: Total properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

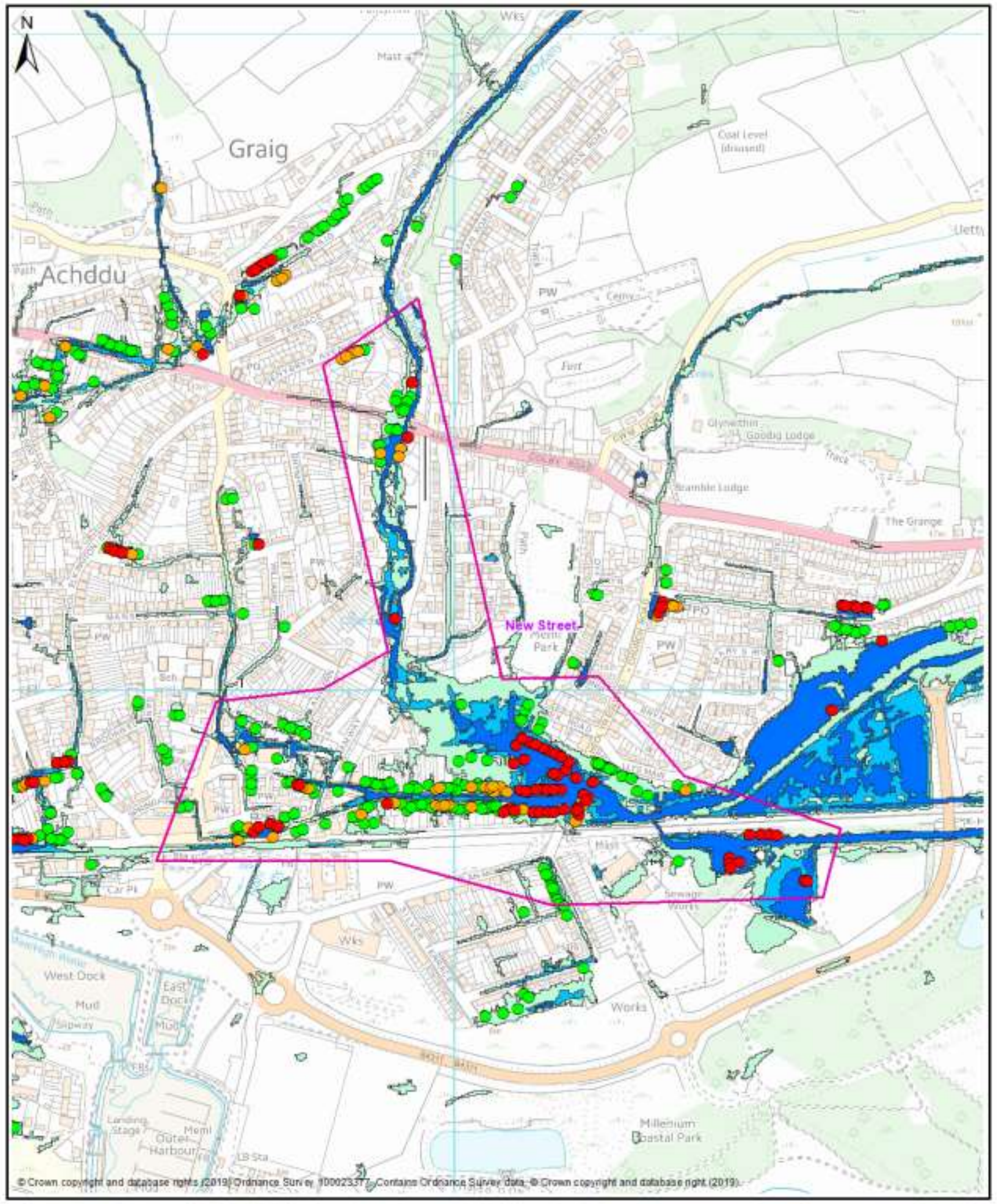
9.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

9.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	77	115	255
Map 2 Dwellings and Services	60	90	206
Map 3 CaRR	n/a	61	n/a



Map 1 - All Properties

Legend

Policy Unit

uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event

uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event

uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event

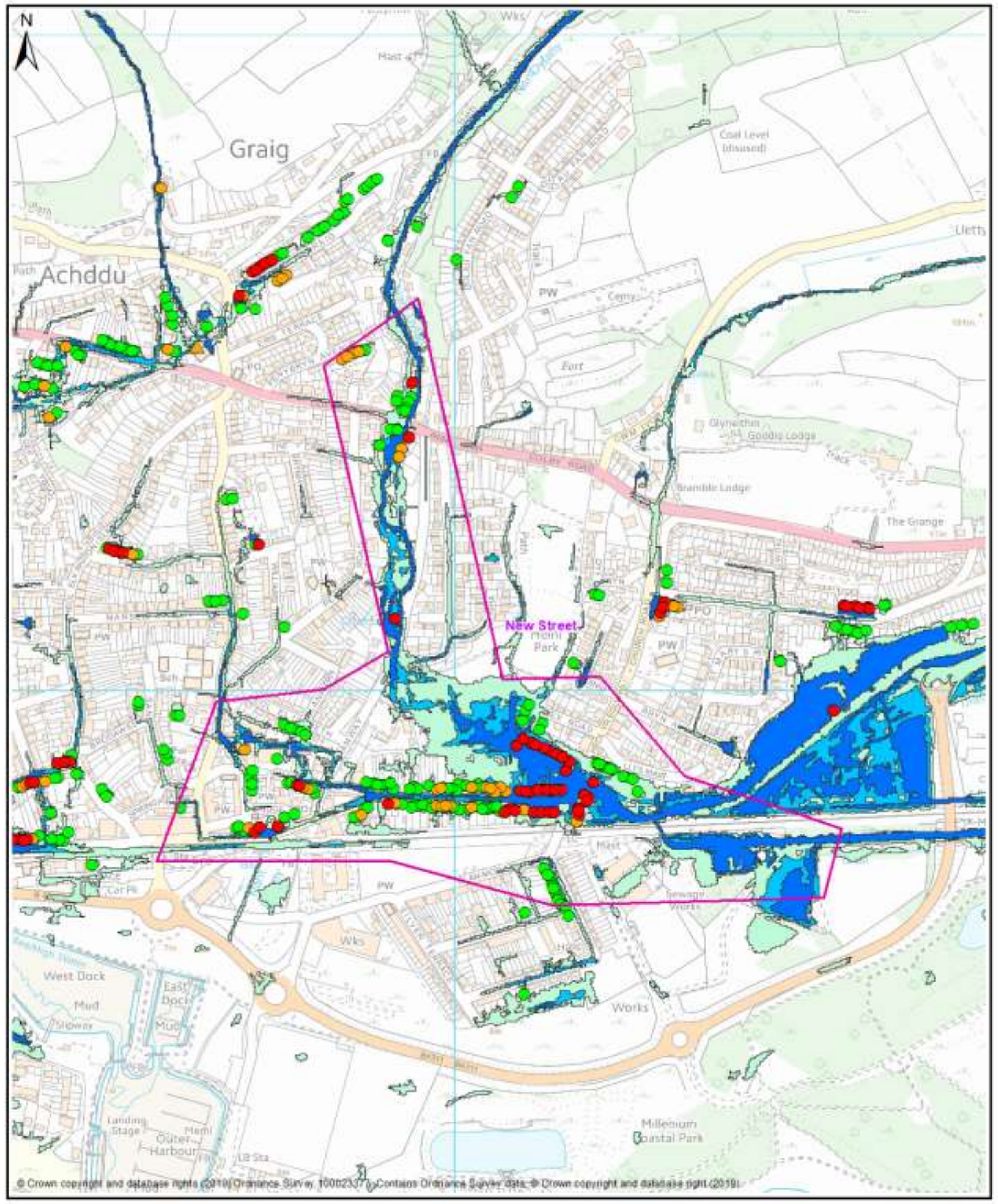
Q30 All Property Classes
Flood Depth 150mm or Greater

Q100 All Property Classes
Flood Depth 150mm or Greater

Q1000 All Property Classes
Flood Depth 150mm or Greater

Burry Port Ward
New Street Policy Unit

0 0.1 0.2 0.4 Km



Map 2 - Dwellings and Services

Legend

Policy Unit

uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event

uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event

uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event

Q30- Dwellings
Flood Depth 150mm or Greater

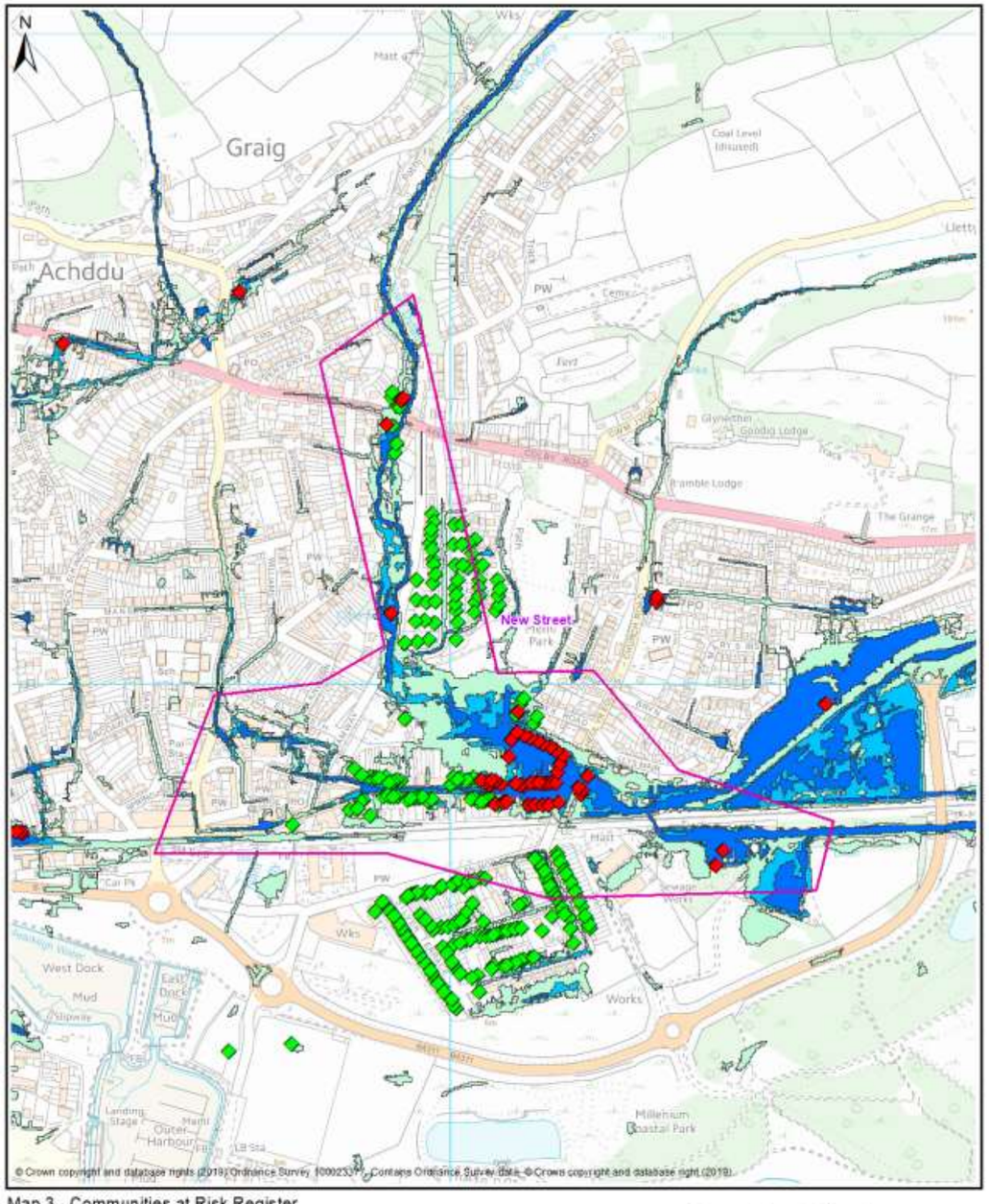
Q100- Dwellings
Flood Depth 150mm or Greater

Q1000- Dwellings
Flood Depth 150mm or Greater

Q30- Services
Flood Depth 150mm or Greater

Q100- Services
Flood Depth 150mm or Greater

Q1000- Services
Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

10 Bynea Ward, Berwick Road Policy Unit

10.1 Area Description

The Berwick Road Policy Unit comprises the developed area adjacent to the Llanelli to Shrewsbury Railway line in Bynea, east of Llanelli.

10.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Flood maps indicate a flood route along the railway line that may cause flooding of properties. It would appear that this flood water is taken away by the DCWW surface water pipe.

10.3 Flooding Events

No recorded incidents of surface water flooding.

10.4 Flood Defence Capital Works undertaken by CCC

None

10.5 Flood Defence Assets

None

10.6 Routine Works and Maintenance

None

10.7 Proposed Future Works

Liaise with DCWW regarding maintenance and adequacy of the surface water sewer.

10.8 Flood Risk

10.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

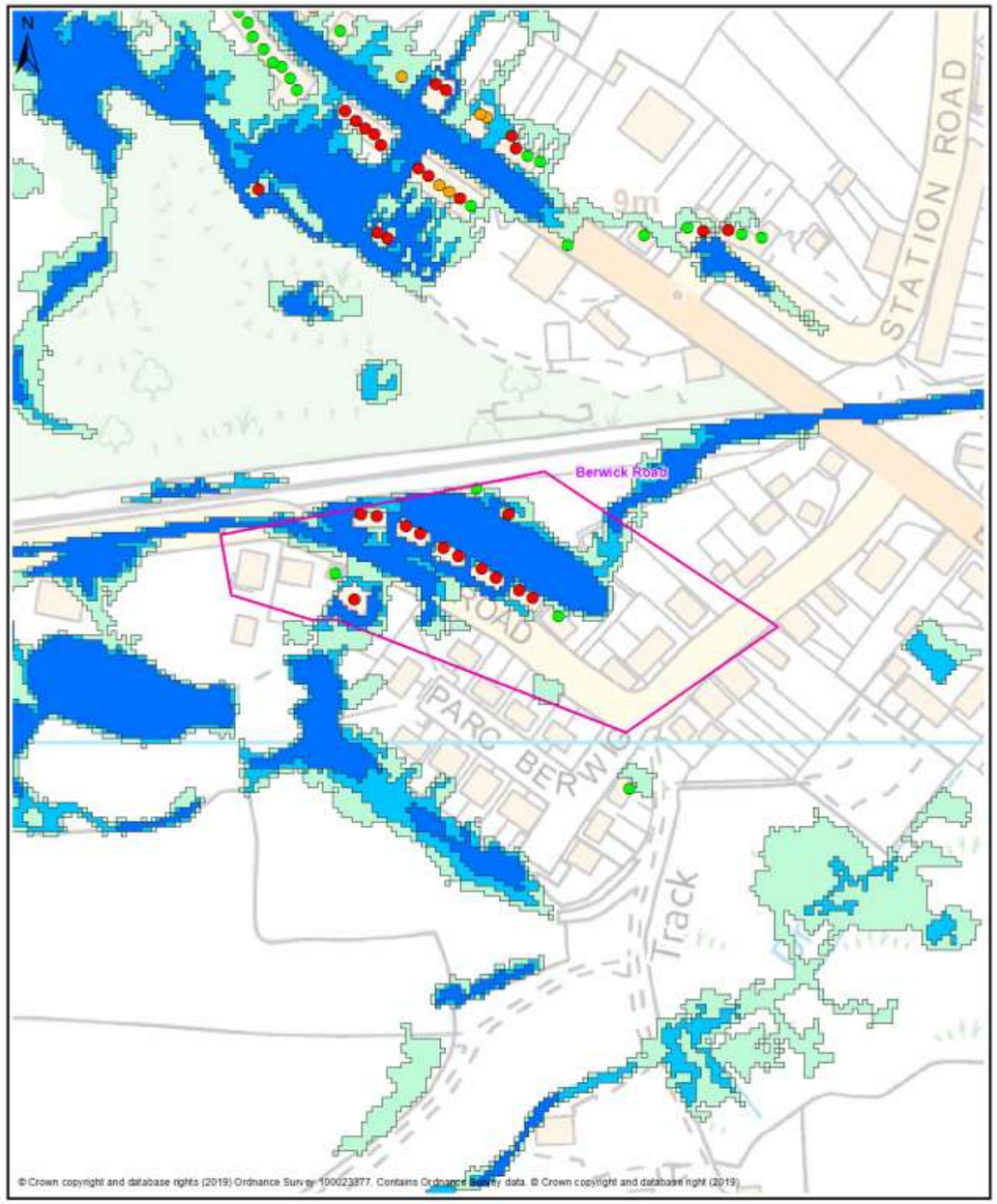
10.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

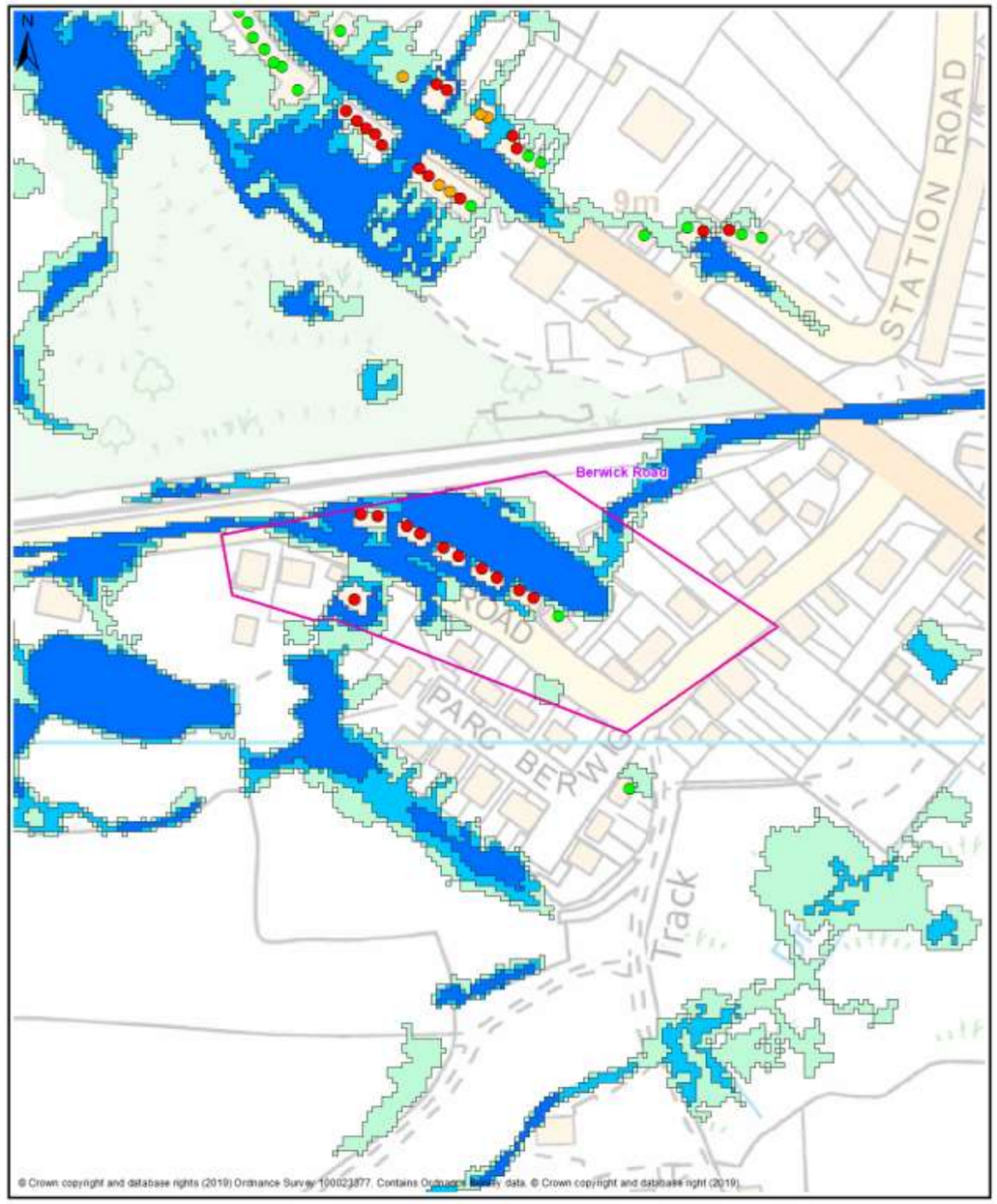
10.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	12	12	15
Map 2 Dwellings and Services	11	11	12
Map 3 CaRR	n/a	0	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

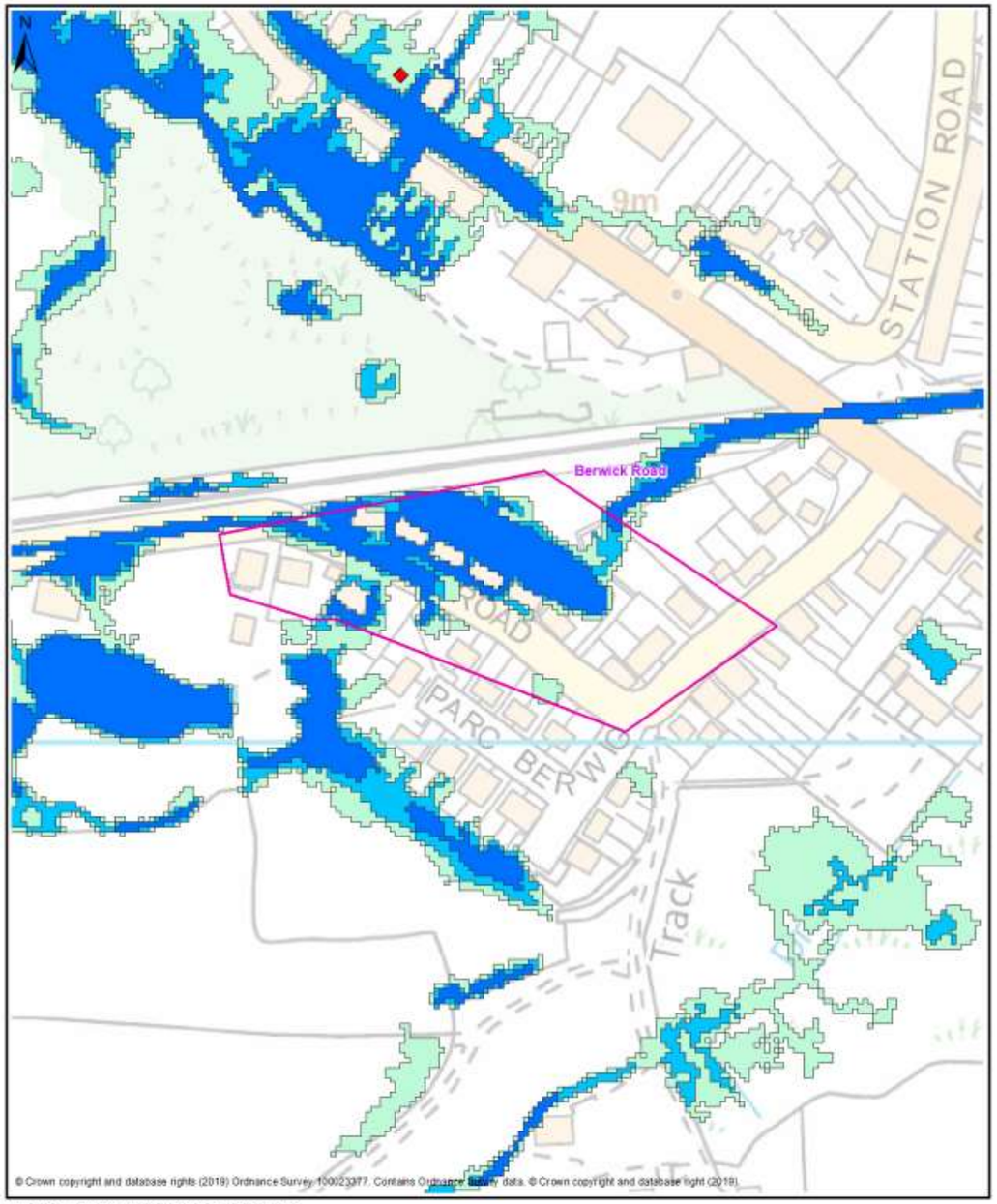
Bynea Ward

Berwick Road Policy Unit

0 0.0275 0.055 0.11 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Bynea Ward
Berwick Road Policy Unit

0 0.0275 0.055 0.11 Km

11 Bynea Ward, Cwmfelin Road Policy Unit

11.1 Area Description

The Cwmfelin Road Policy Unit comprises the catchments of 2 unnamed ordinary watercourses. These watercourses originate north and south of Cwmfelin Road. Watercourse 1 to the north flows initially in an open channel before being culverted to the west of Bynea Primary School where it enters a culvert via a trash screen system. Watercourse 2 to the south of Cwmfelin Road flows in an open channel beneath a bridge adjacent to the scrap yard. From this bridge the watercourse is designated as a main river.

11.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses and general surface water flooding.

Senior Engineers at Carmarthenshire County Council recall incidents of surface water flooding.

The culverted sections of watercourse are considered to be at risk of blockage by CCC Engineers.

11.3 Flooding Events

There has been a history of flooding in this Policy Unit:

- 2010 Berwick Road, this was due to DCWW assets not working
- 2010 Bynea Primary School trash screen was blocked with tyres

11.4 Flood Defence Capital Works undertaken by CCC

- 2010 Bynea Primary School screen upgraded.
- 2011 Watercourse dredged rear of Cwmfelin Road
- 2012 Culvert Relined underneath 35 Cwmfelin Road

11.5 Flood Defence Assets

Bynea School Trash Screen	Bynea School Culvert
	

11.6 Routine Works and Maintenance

Area	Works Undertaken	When
Bynea School Trash Screen	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Bynea School Culvert	CCTV camera survey	2018, 2020
Watercourse rear of Cwmfelin Road	Dredging	5 Year Cycle

11.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

11.8 Flood Risk

11.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

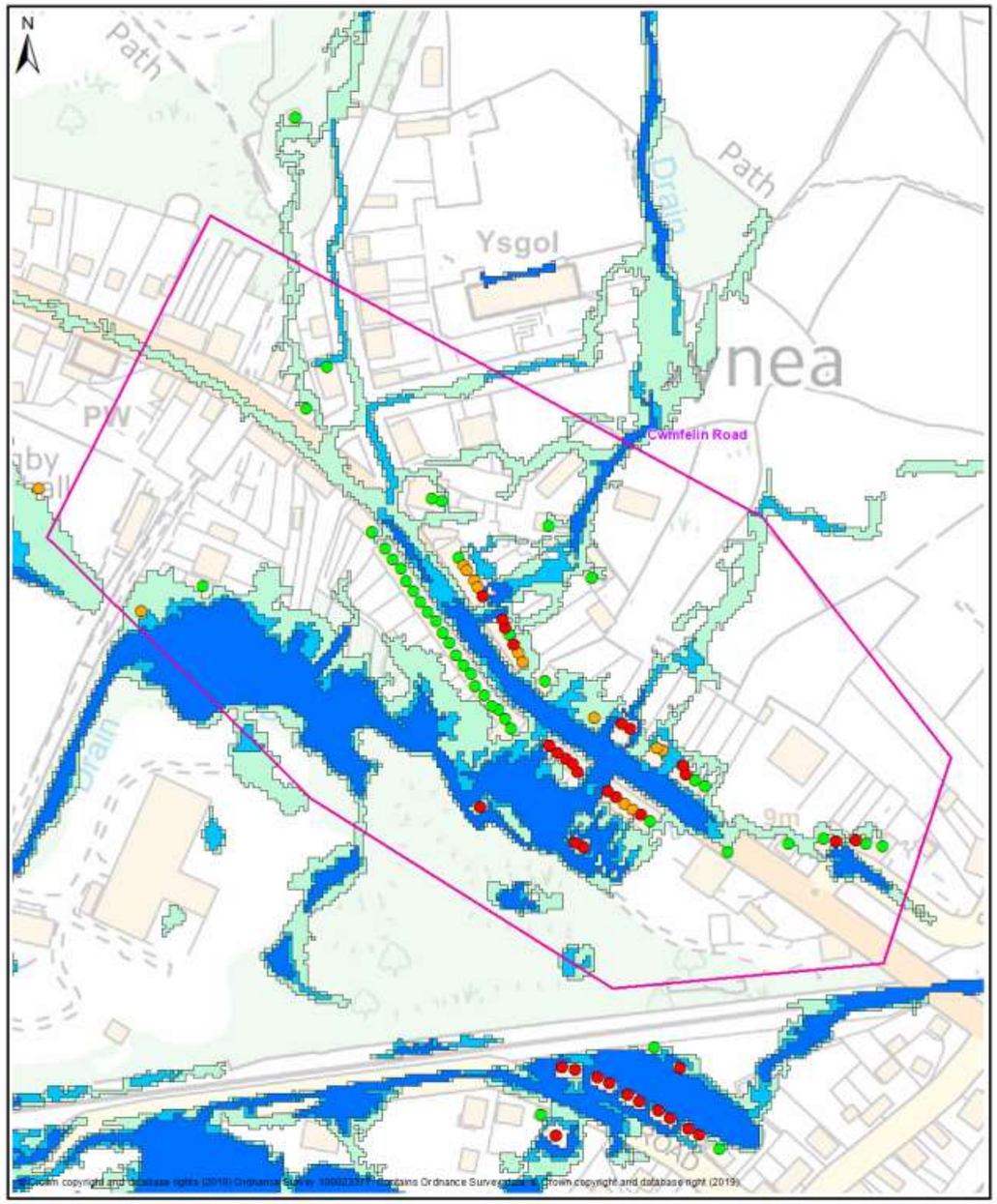
11.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

11.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	21	33	71
Map 2 Dwellings and Services	18	29	63
Map 3 CaRR	n/a	1	n/a



Map 1 - All Properties

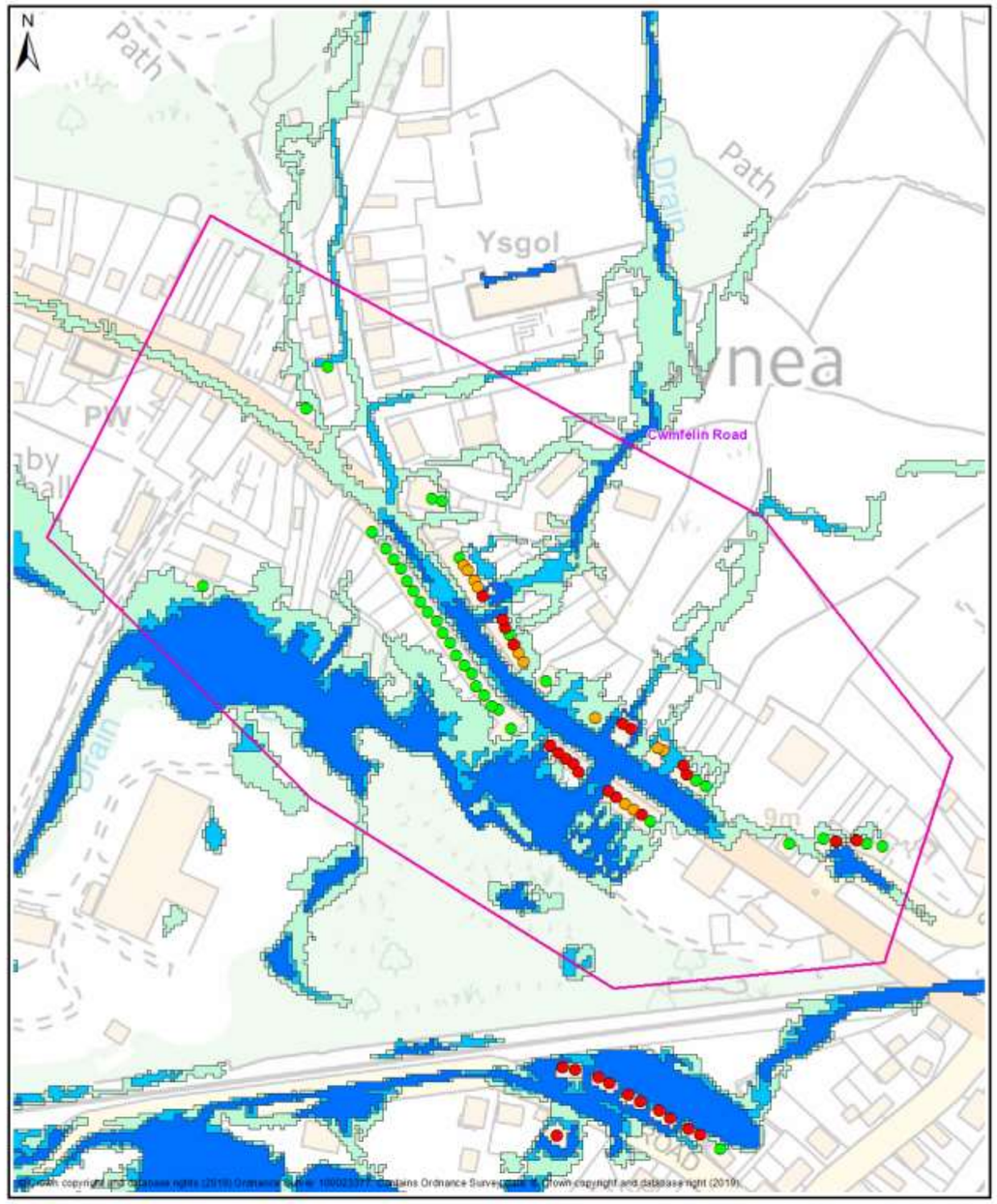
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Bynea Ward

Cwmfelin Road Policy Unit

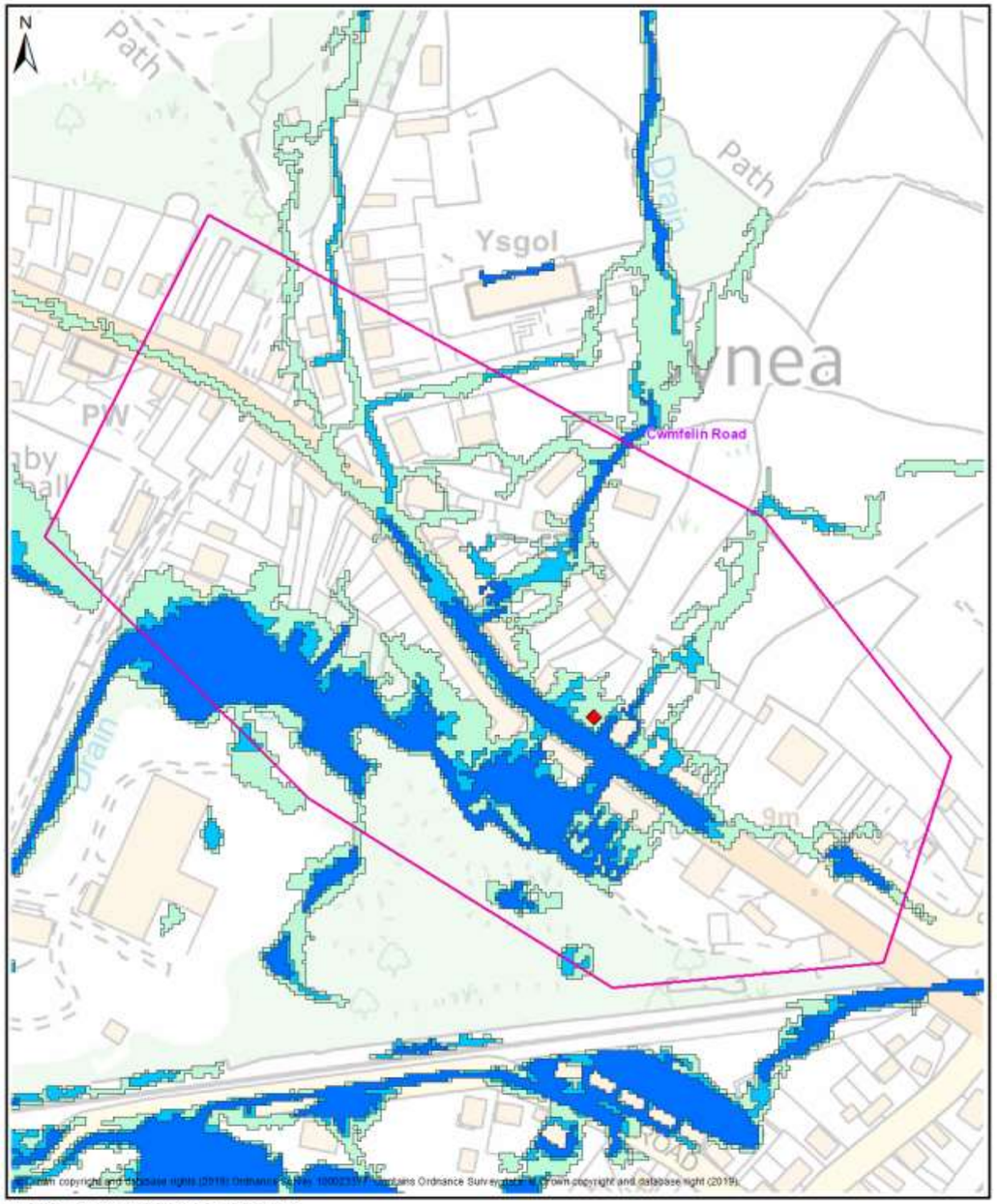
0 0.0325 0.065 0.13 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater


N
Path
Path
Drain
Ysgol
Cwmfelin Road
Drain
Map 3 - Communities at Risk Register
Legend
Policy Unit
uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event
uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event
uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event
CARR Pluvial
CARR Pluvial
Bynea Ward
Cwmfelin Road Policy Unit
0 0.0325 0.065 0.13
Km

12 Carmarthen Town North Ward, Glangwili Hospital Policy Unit

12.1 Area Description

The Glangwili Hospital Policy Unit is not associated with any watercourse. The affected area has been identified as surface water flooding.

12.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from surface water.

The area identified is slightly lower that the surrounding area so will lend itself to pooling at the lowest point.

12.3 Flooding Events

None, this was confirmed with NHS estates manager.

12.4 Flood Defence Capital Works undertaken by CCC

None

12.5 Flood Defence Assets

None

12.6 Routine Works and Maintenance

None

12.7 Proposed Future Works

Contact hospital and inform them of the identified risk.

12.8 Flood Risk

12.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

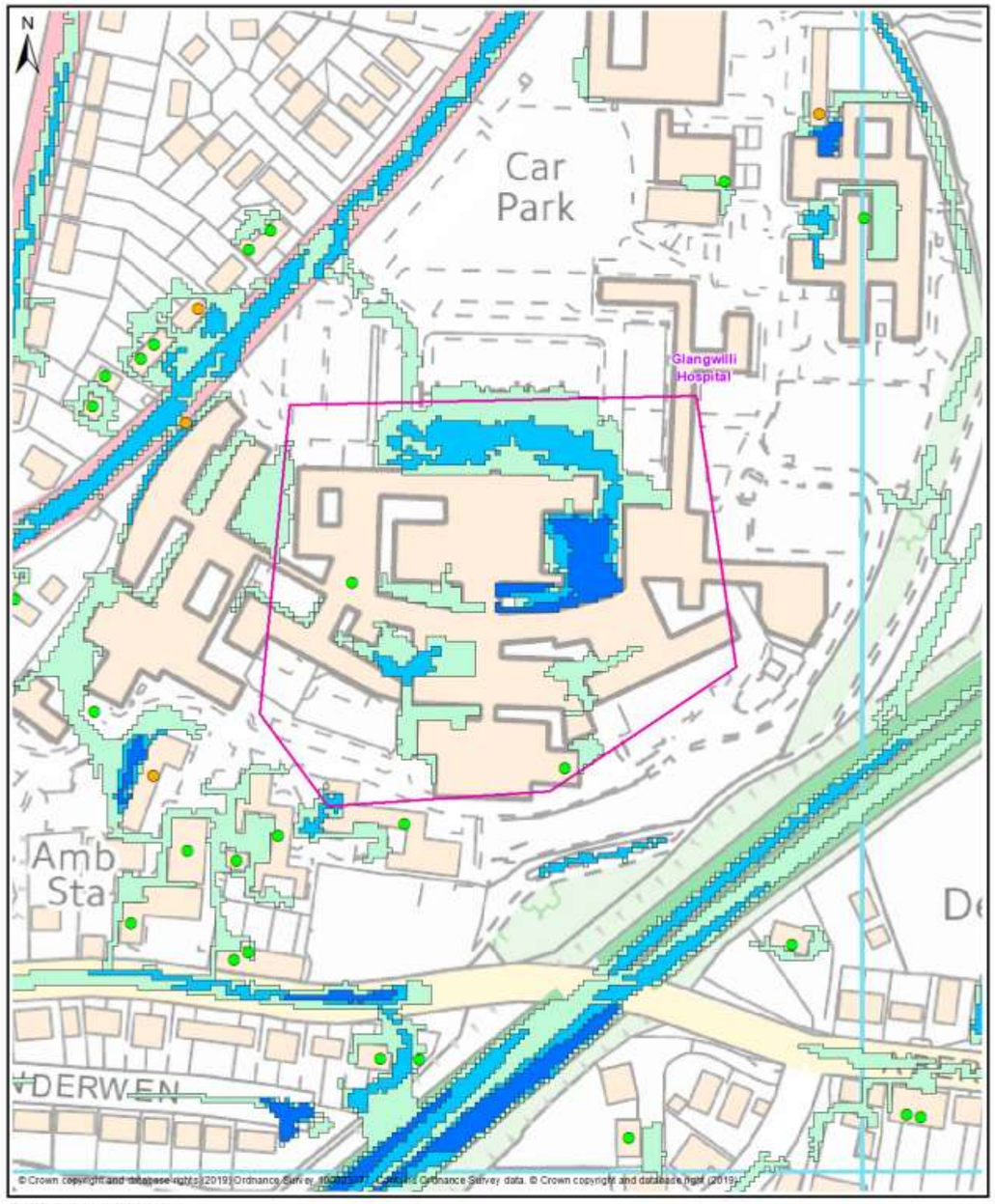
12.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

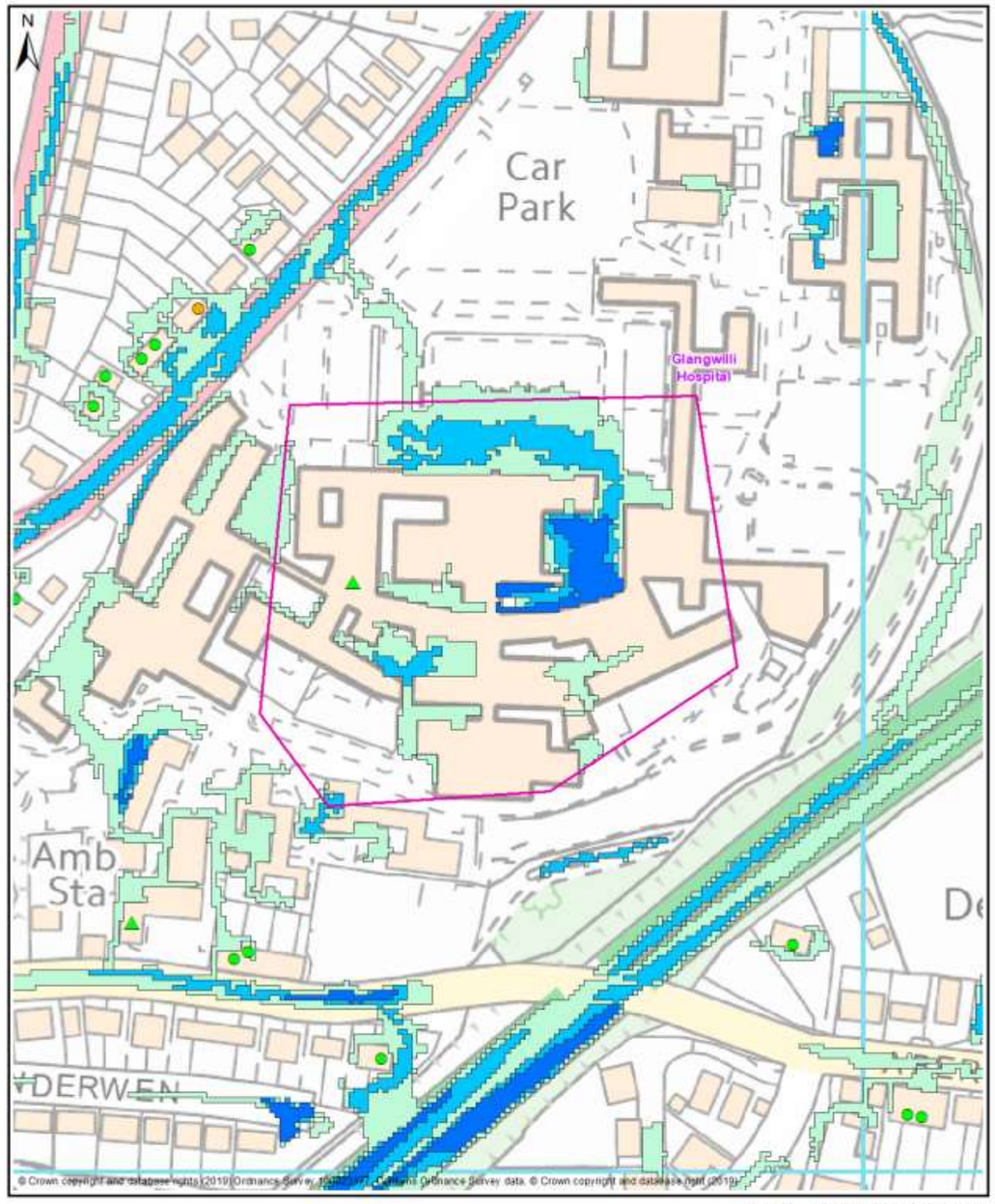
12.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	0	0	2
Map 2 Dwellings and Services	0	0	1
Map 3 CaRR	n/a	0	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

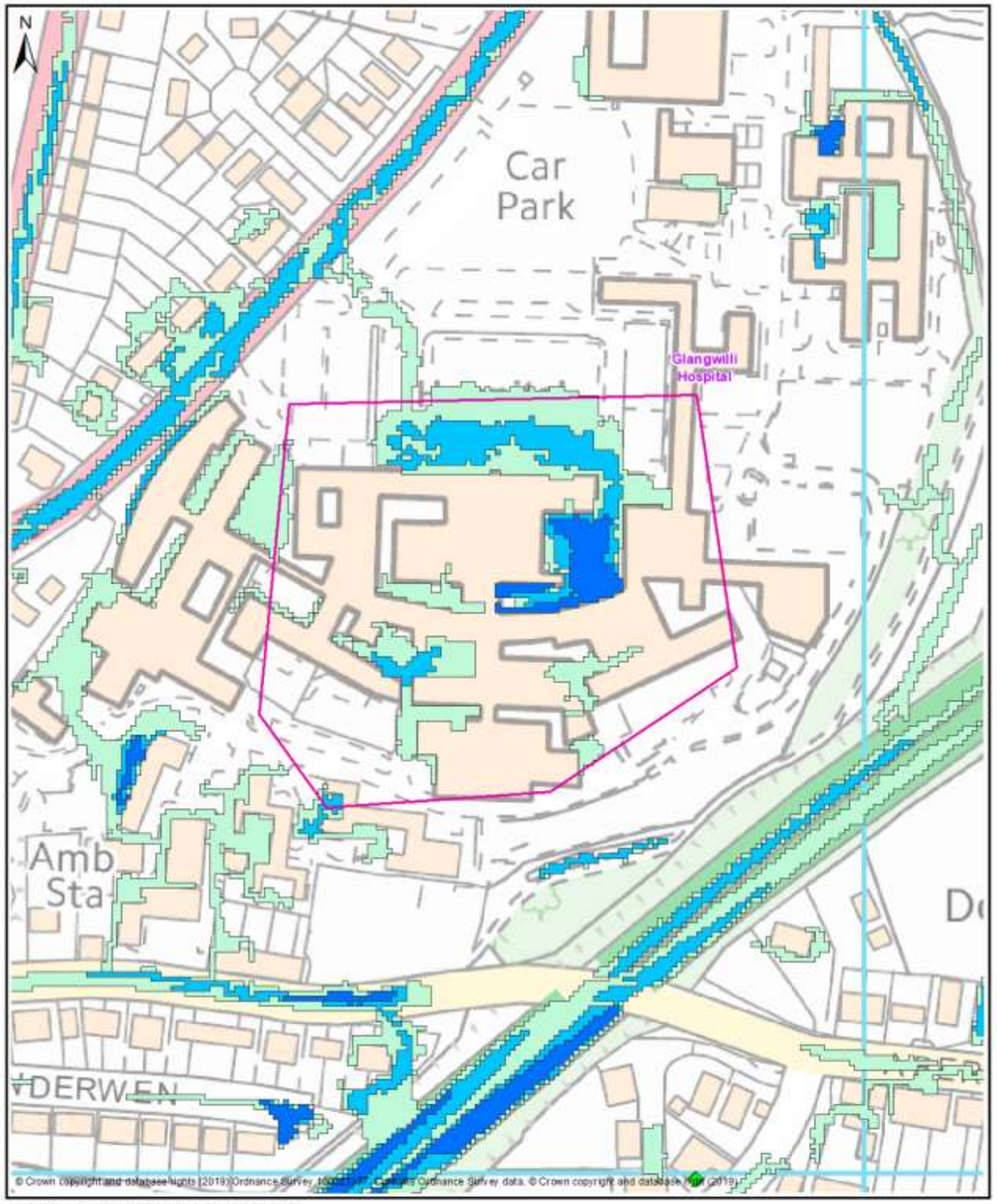
Carmarthen North Ward

Glangwilli Hospital Policy Unit

0 0.0275 0.055 0.11 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Carmarthen North Ward
Glangwilli Hospital Policy Unit

0 0.0275 0.055 0.11 Km

13 Carmarthen Town South Ward, Llanstephan Road Policy Unit

13.1 Area Description

The Llanstephan Road Policy Unit comprises the catchment associated with the predominately urbanised area in North West Carmarthen, principally Trinity St David's University and Sycamore Way.

DCWW maps indicate that this area is served by a public surface water system.

The Main River Tawelan is to the south of this area and a flood bank protects this area from main river flooding.

13.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

13.3 Flooding Events

2018 significant flooding as a result of Storm Callum. In this area, 8 residential properties were flooded internally.

13.4 Flood Defence Capital Works undertaken by CCC

None

13.5 CCC Flood Defence Assets

None

13.6 Routine Works and Maintenance

None

13.7 Proposed Future Works

Co-ordinating the actions arising from the Storm Callum flood report in the Johnstown area as a whole. In Llanstephan Road we will continue to support the Highways Authority and DCWW operate and manage the drainage. NRW are responsible for the management and operation on the defences along the Tawelan Brook.

13.8 Flood Risk

13.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

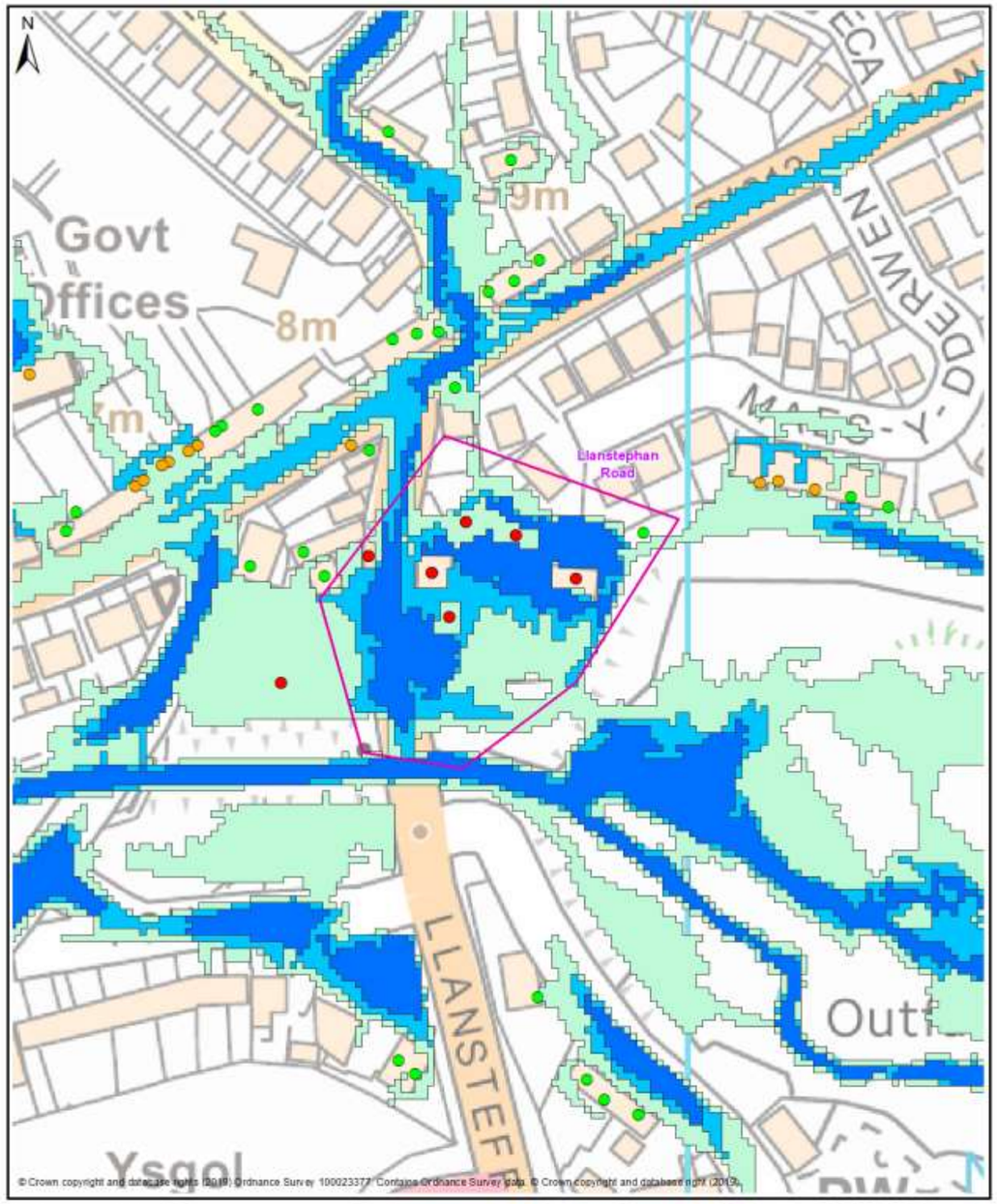
13.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

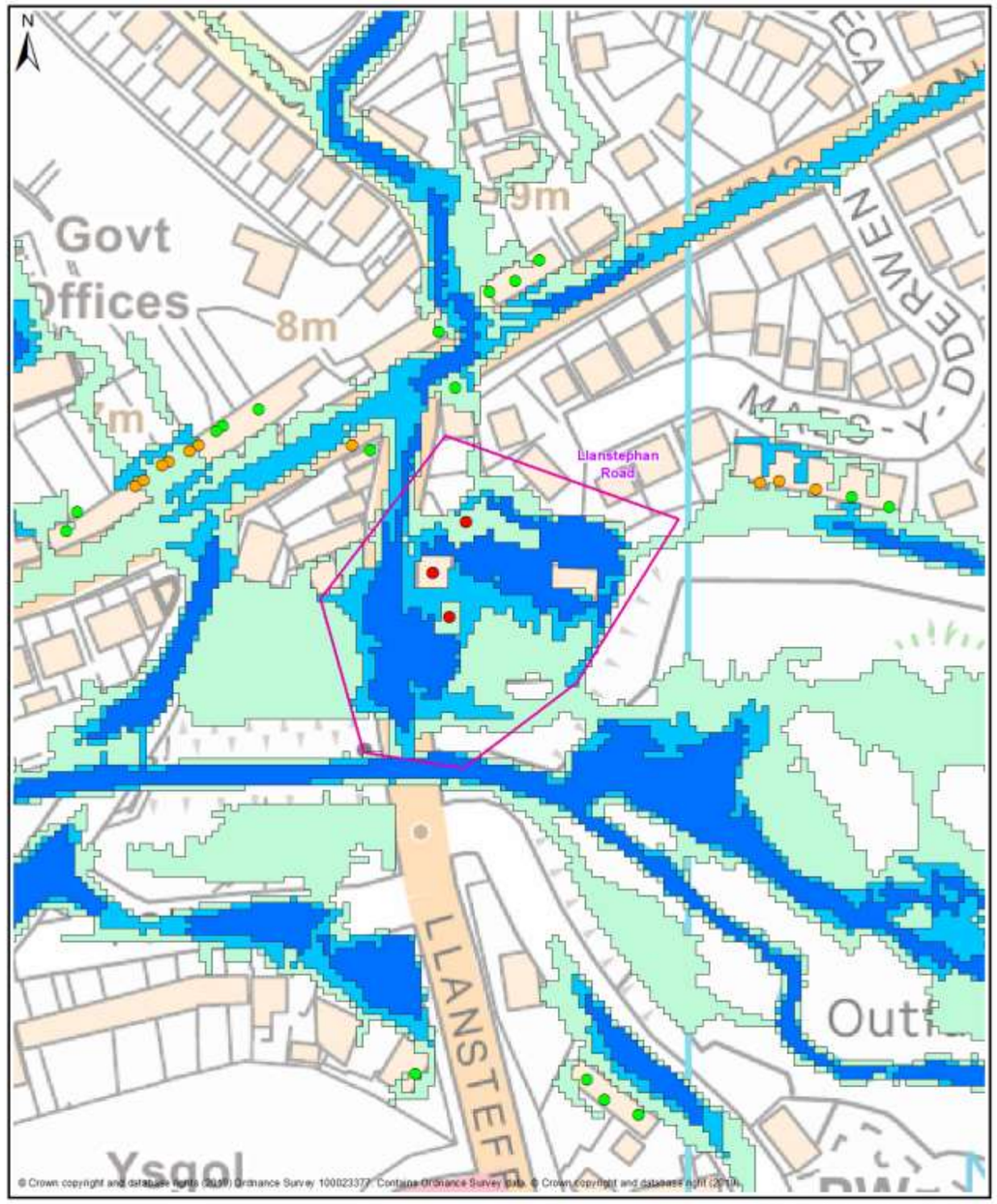
13.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	8	8	9
Map 2 Dwellings and Services	5	5	5
Map 3 CaRR	n/a	2 Fluvial	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

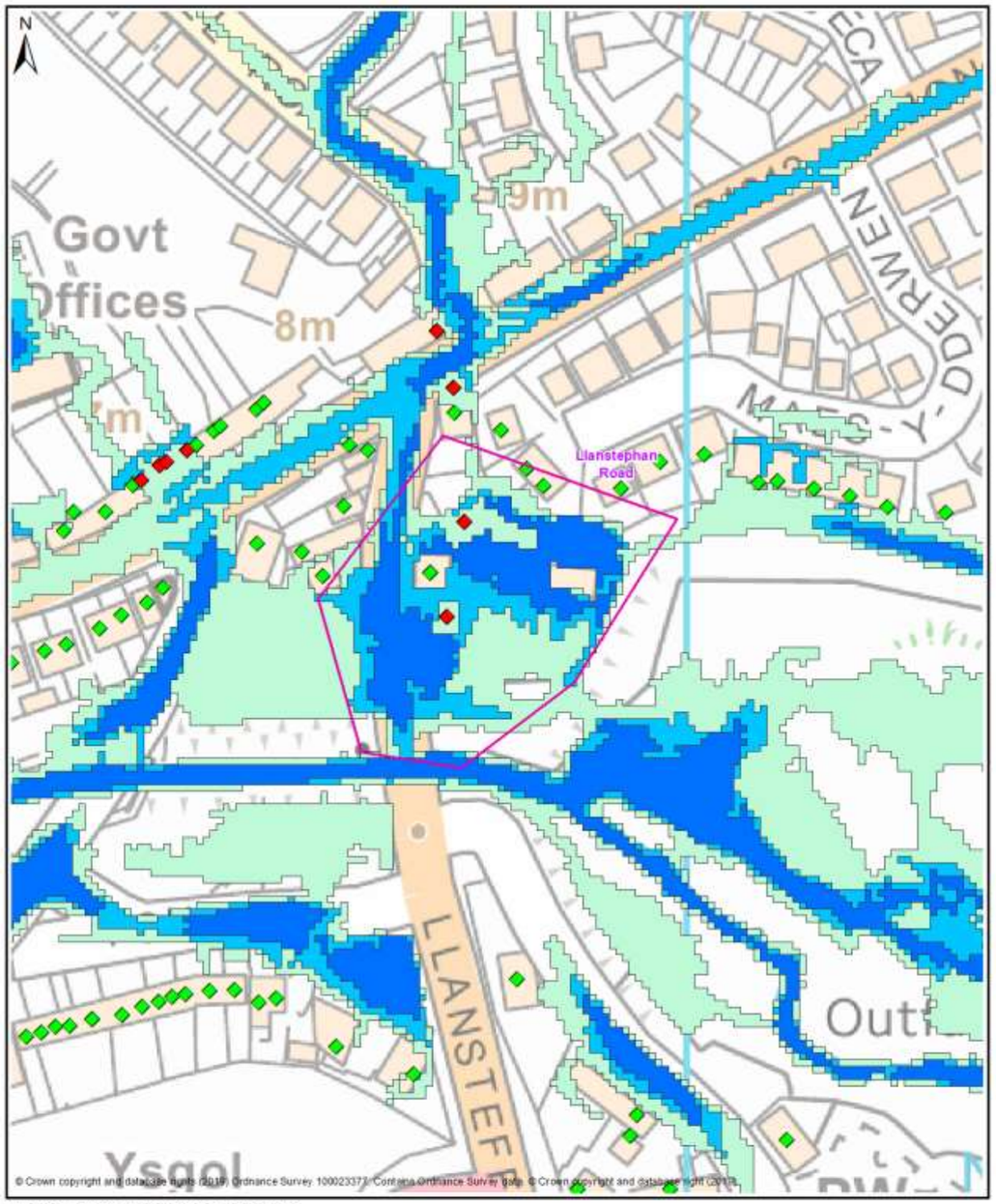
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Carmarthen South Ward
Llanstephan Road Policy Unit

0 0.02 0.04 0.08 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Carmarthen South Ward
Llanstephan Road Policy Unit

0 0.02 0.04 0.08 Km

14 Cenarth Ward, Newcastle Emlyn Policy Unit

14.1 Area Description

The Newcastle Emlyn Policy Unit comprises the catchment associated with an unnamed ordinary watercourse, originating south of Quarry Ffinant. It flows initially in an open channel before being culverted at Quarry Ffinant where the culvert runs to the rear of the properties. It then crosses the A484 at Ebenezer Street where the culvert continues northwards through a narrow alley to an outfall near the River Tyfi.

14.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Any blockage in the culvert system, or if the capacity is exceeded, will force water from the channel and onto the highway. From here it will flow into the town centre. Blockages are common due to the erosion of soft shales and gravel that are eroded and deposited from the catchment.

14.3 Flooding Events

There has been a history of flooding in Newcastle Emlyn from the streams around Quarry Ffinant and School Road but there is no information on these flooding incidents.

In 2018, as a result of Storm Callum, significant volume of surface water flowed along the highway and into Newcastle Emlyn flooding property and businesses.

14.4 Flood Defence Capital Works undertaken by CCC

The culvert from Quarry Ffinant to the River Teifi was constructed by Carmarthenshire District Council in the 1980's.

The current inlet trash screen at Quarry Ffinant was constructed in 2005.

14.5 Flood Defence Assets

Quarry Ffinant Trash Screen	Quarry Ffinant Culvert Inlet
	 Plate 3 *General view of the upstream entrance located at Ffinant Quarry with a restriction due to a buildup of mobile bed material*

14.6 Routine Works and Maintenance

Area	Works Undertaken	When
Quarry Ffinant Trash Screen	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Quarry Ffinant Culvert	CCTV camera survey	2018

14.7 Proposed Future Works

An outline business case (OBC) is currently being prepared (2019) to evaluate flood management options. A bid for capital funding will be submitted to WG in 2020 if the OBC identifies any viable options..

14.8 Flood Risk

14.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

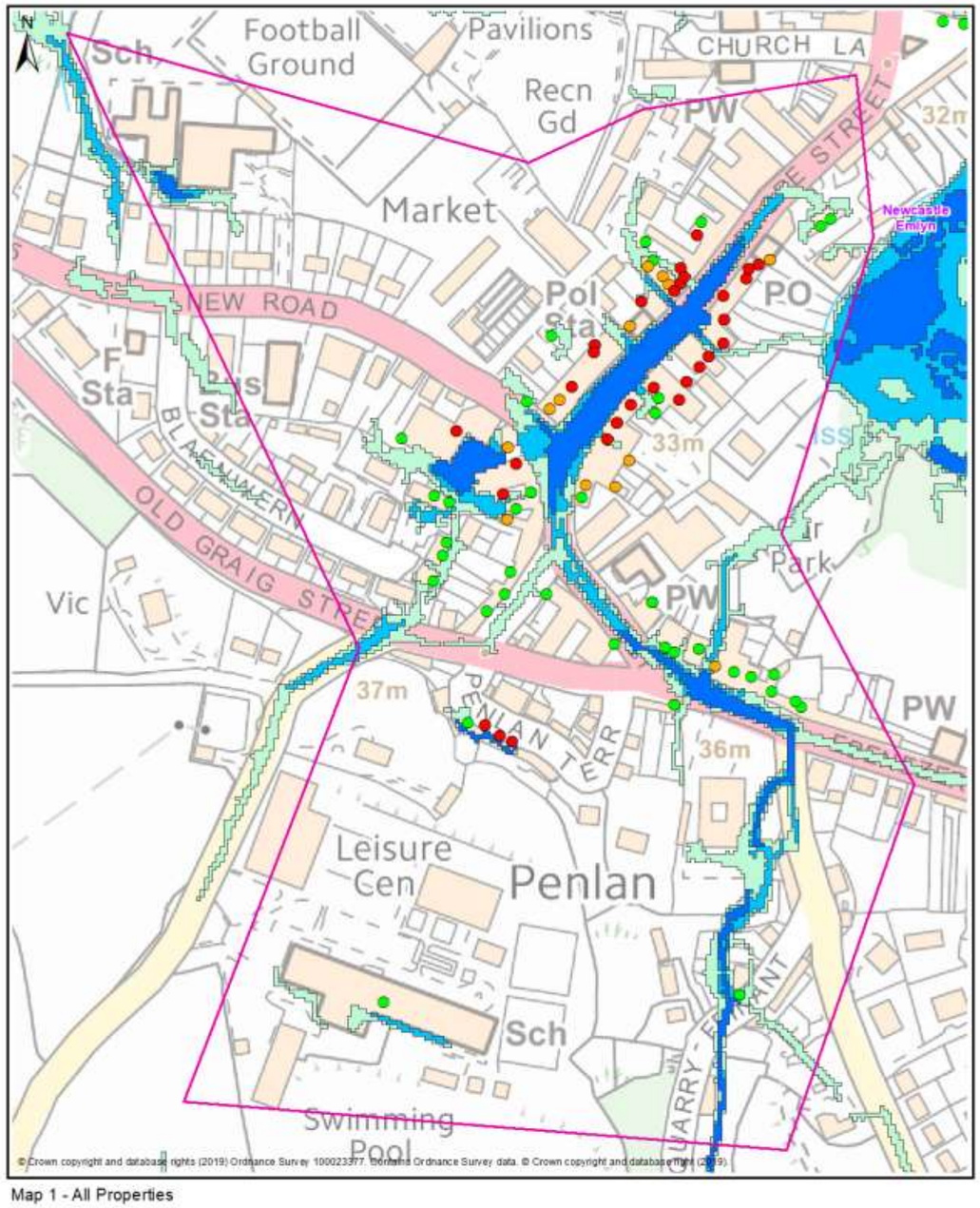
14.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

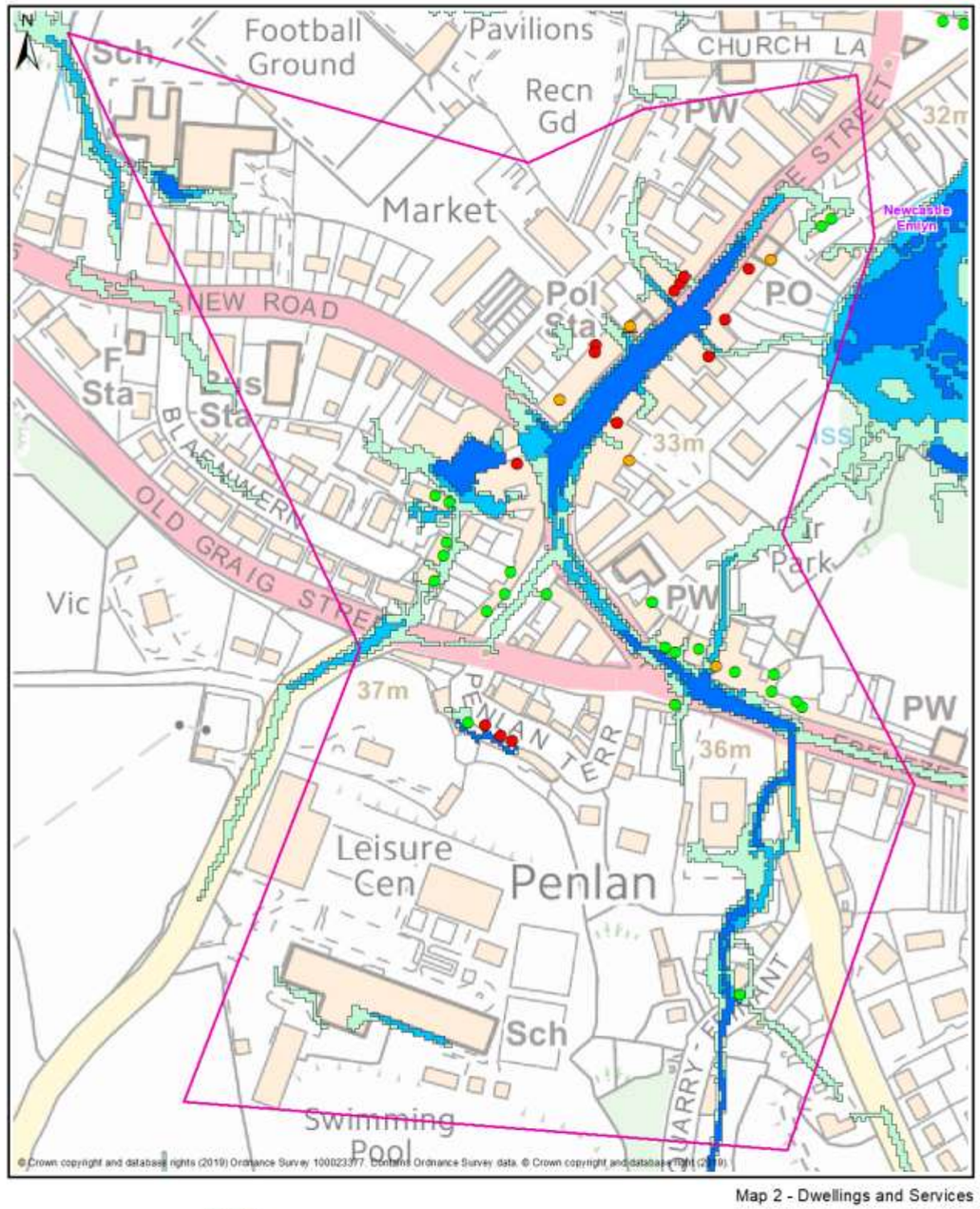
14.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	50	67	110
Map 2 Dwellings and Services	25	32	57
Map 3 CaRR	n/a	2	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

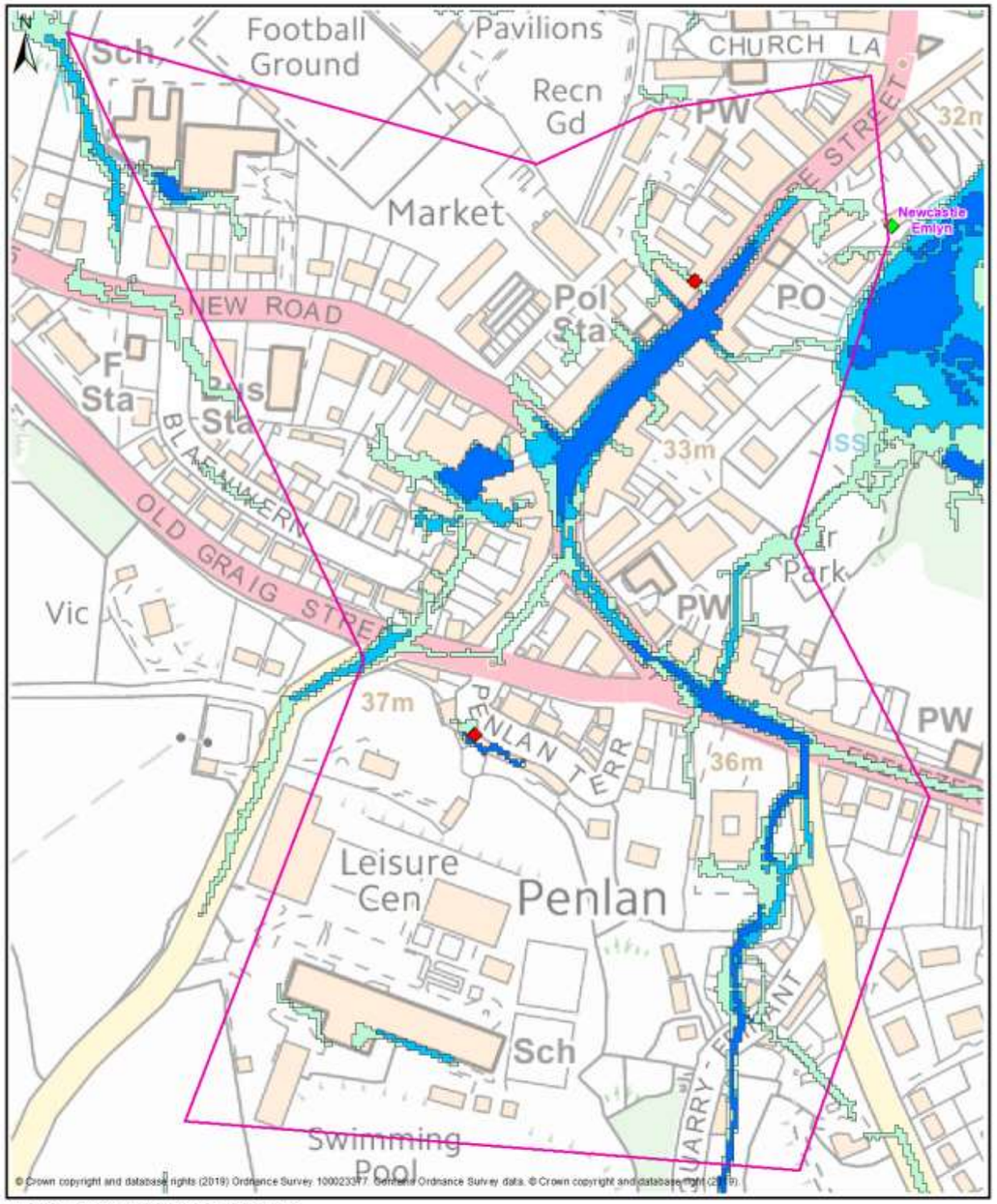
Cenarth Ward

Newcastle Emlyn Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Cenarth Ward
Newcastle Emlyn Policy Unit

0 0.0325 0.065 0.13 Km

15 Dafen Ward, Bryngwyn Road Policy Unit

15.1 Area Description

The Bryngwyn Road Policy Unit comprises the area of Bryngwyn Road adjacent to the entrance of Dafen Park. The Main River Dafen runs adjacent to this site and an unnamed watercourse runs from the recreation ground to the north.

15.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

15.3 Flooding Events

On 9th November 2008, severe flooding of 17 properties occurred when water flowed from the park area to the north. The exact mechanism of the flooding was not identified as there were no eye witnesses as to the route of the water but is likely that it came from the small watercourse near Prince Phillip Hospital. This happened at the same time as the severe flooding in a neighbouring street, Exchange Row, but both incidents are unconnected apart from the rainfall intensity.

15.4 Flood Defence Capital Works undertaken by CCC

2010 Construction of Flood Defence Bund at rear of properties at Bryngwyn Road.

15.5 Flood Defence Assets

Dafen park flood bund.

15.6 Routine works and Maintenance

Area	Works Undertaken	When
Dafen Park Flood Bank	Formal T98 Inspection	Annually

15.7 Proposed Future Works

Continue to maintain the flood bund around the park.

15.8 Flood Risk

15.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

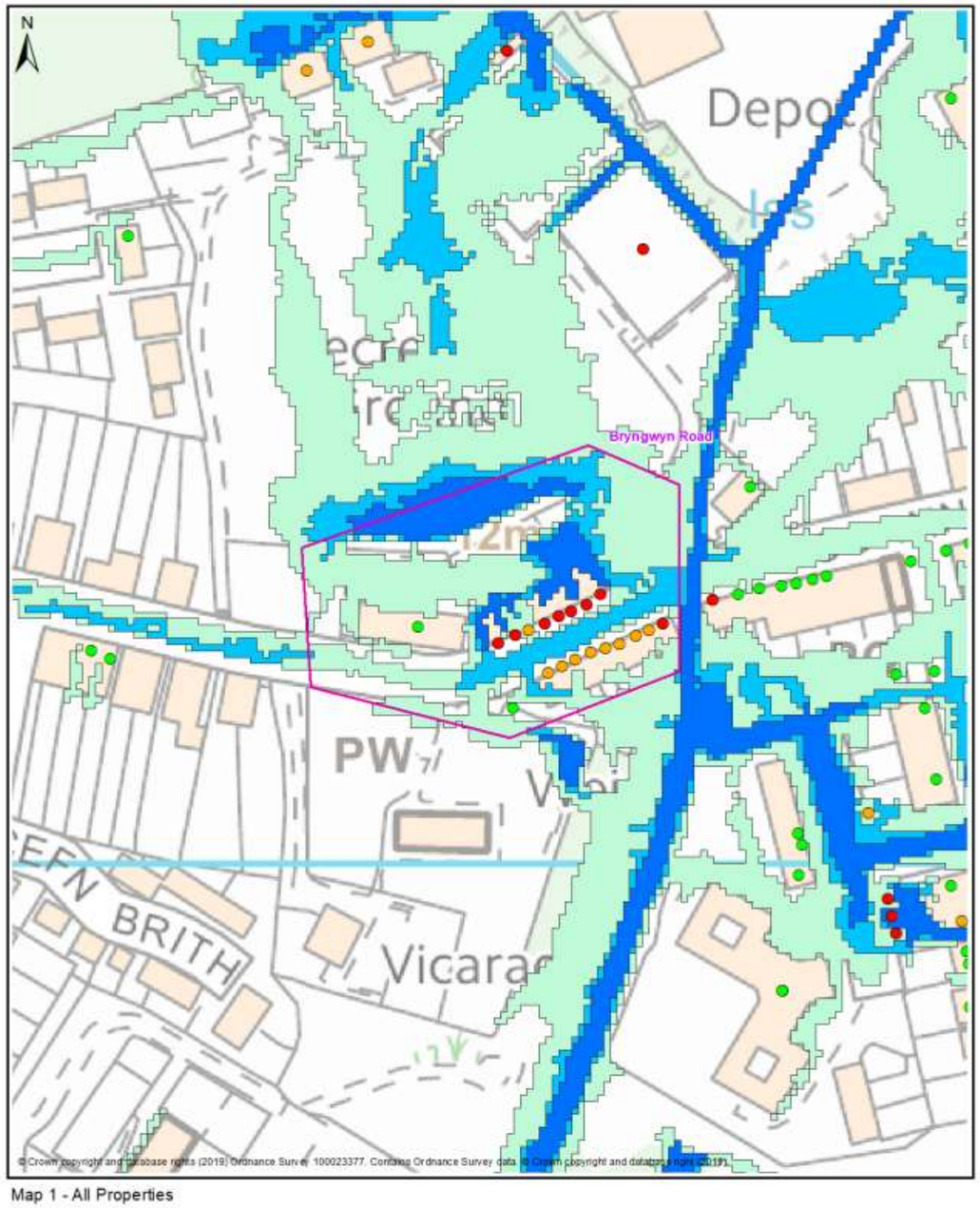
15.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

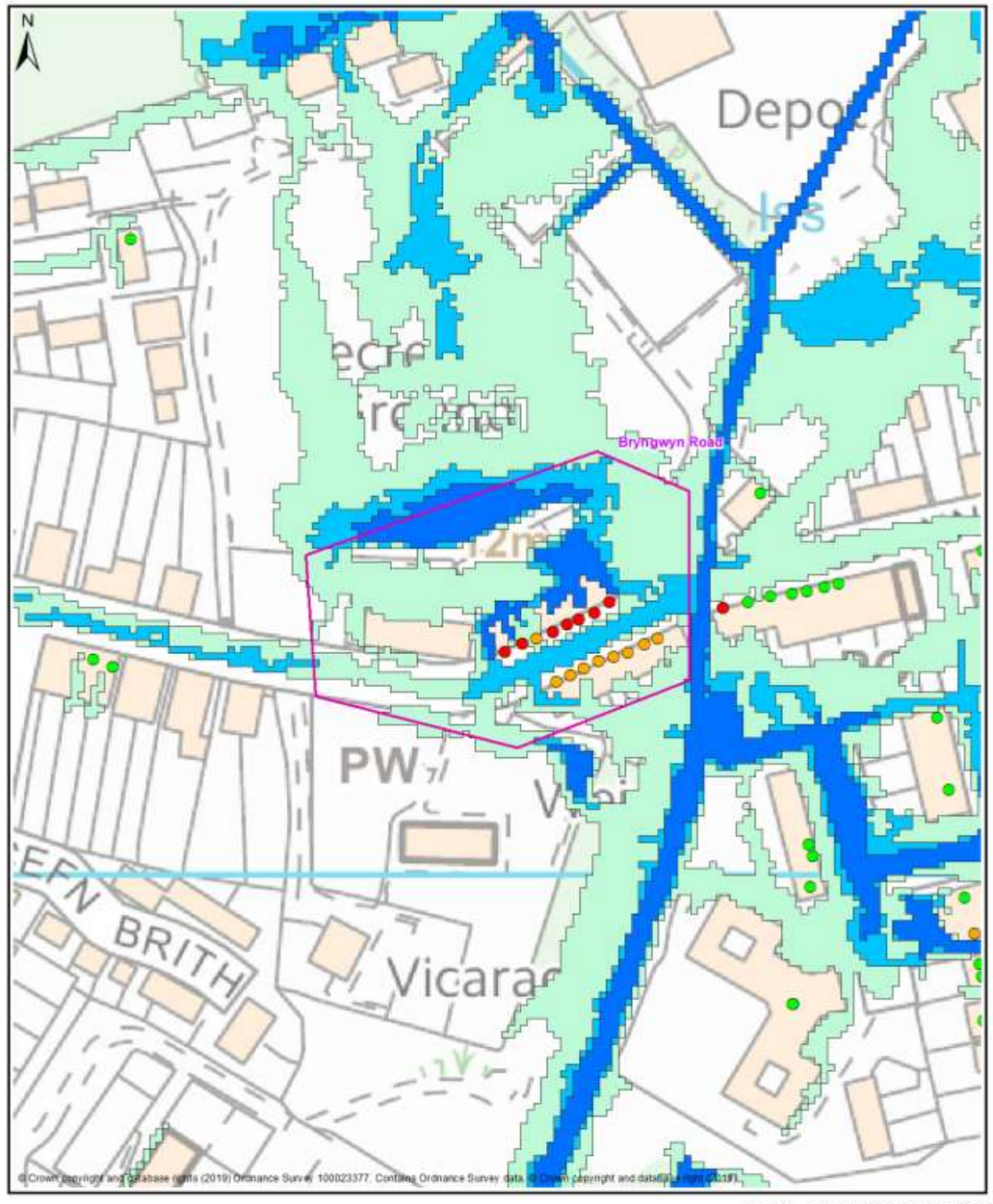
15.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	8	17	19
Map 2 Dwellings and Services	7	16	16
Map 3 CaRR	n/a	1	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

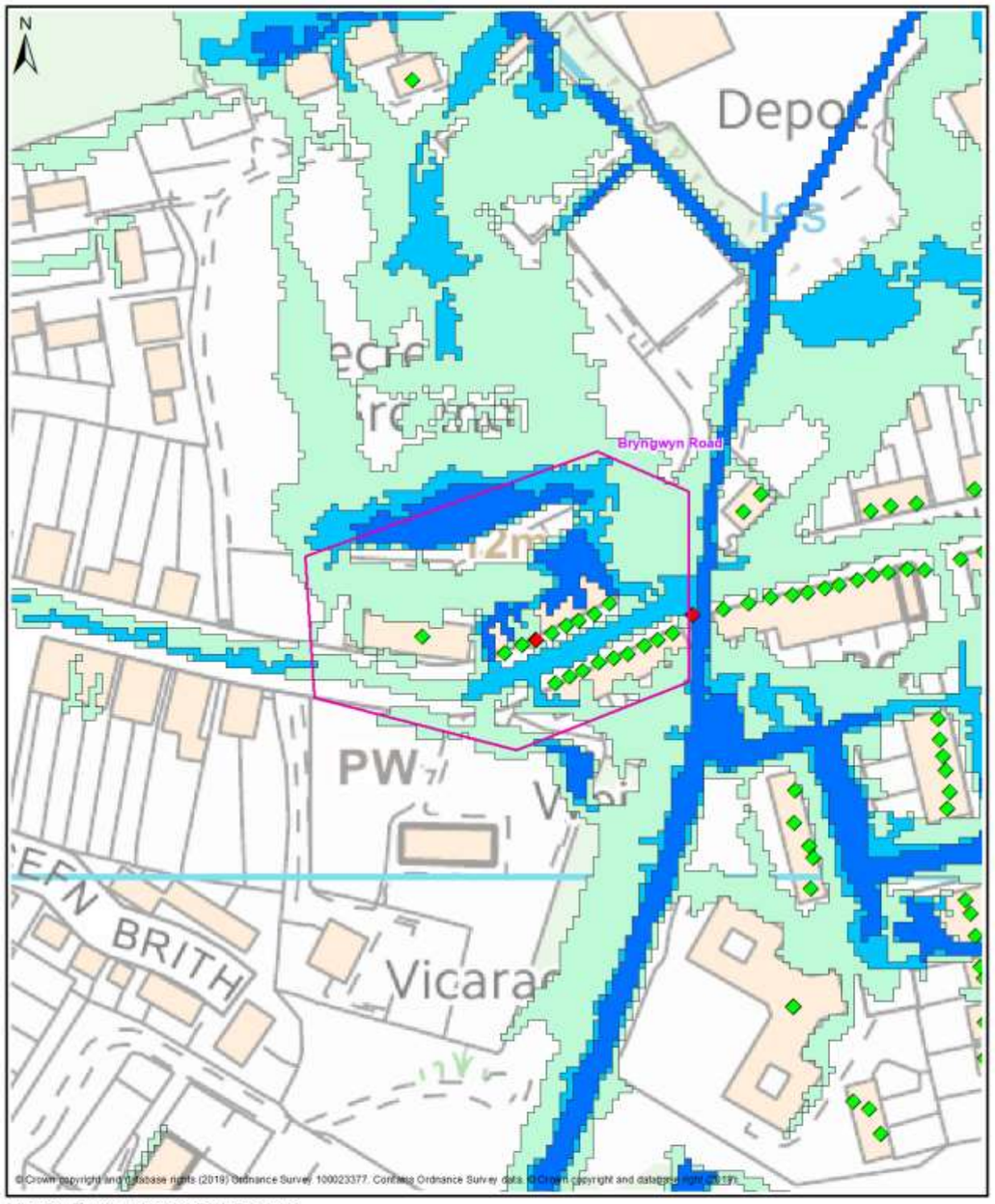
Dafen Ward

Bryngwyn Road Policy Unit

0 0.02 0.04 0.08 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Dafen Ward
Bryngwyn Road Policy Unit

0 0.02 0.04 0.08 Km

16 Dafen Ward, Exchange Row Policy Unit

16.1 Area Description

The Exchange Row Policy Unit is a single residential street adjacent to the A4138 and B4303 roundabout in the village of Dafen, north of Llanelli. This area is at risk of flooding from the small unnamed watercourse that drains the neighbouring agricultural land and the urban Penceiliog/ Cefenceau estates.

The watercourse and drainage arrangements were modified during the reconstruction of the A4138 in the 1980s. The A4138 profile has resulted in properties in Exchange Row being in a shallow bowl. Flooding at this location occurs because water cannot escape through the drainage system.

16.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The Communities at Risk Register indicates that 138 properties are at risk of flooding from pluvial and fluvial sources.

16.3 Flooding Events

- 2000: Flooding of several properties caused by blockage of the trash screen
- 2005: Flooding due to a blockage of the trash screen
- 2008: Extensive flooding of 20 properties as a result of trash screen blockage

16.4 Flood Defence Capital Works undertaken by CCC

- 2009: A large trash screen was constructed upstream of the Dafen roundabout
- 2010: A new tandem trash screen was constructed north east of the former Avon Inflatables Factory
- 2003: The height of the walls alongside the right bank of the watercourse and B4138 upstream of the trash screen were increased
- 2005: A flood bund was constructed along the right bank of the watercourse upstream of the above mentioned wall

16.5 Flood Defence Assets

Dafen Trash Screen Upper (at entrance to former Avon Inflatables)	**River wall alongside B4148**	**Dafen Roundabout Trash Screen**
		
River Dafen Earth Bund	**River Dafen Left Bank Kerb Wall**	**River Dafen Right Bank Kerb Wall**
Exchange Row Culvert		

16.6 Routine Works and Maintenance

Area	**Works Undertaken**	**When**
Watercourse	Watercourse trashing and grass cutting	Annually
All Trash Screens	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Exchange Row Culvert	CCTV camera survey	2020
River Dafen Earth Bund	Formal T98 Inspection	Annually
River Dafen Kerb Walls	Formal T98 Inspection	Annually

16.7 Proposed Future Works

Undertake routine repairs and maintenance of Exchange Row culvert as identified in 2018 CCTV survey.

16.8 Flood Risk

16.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

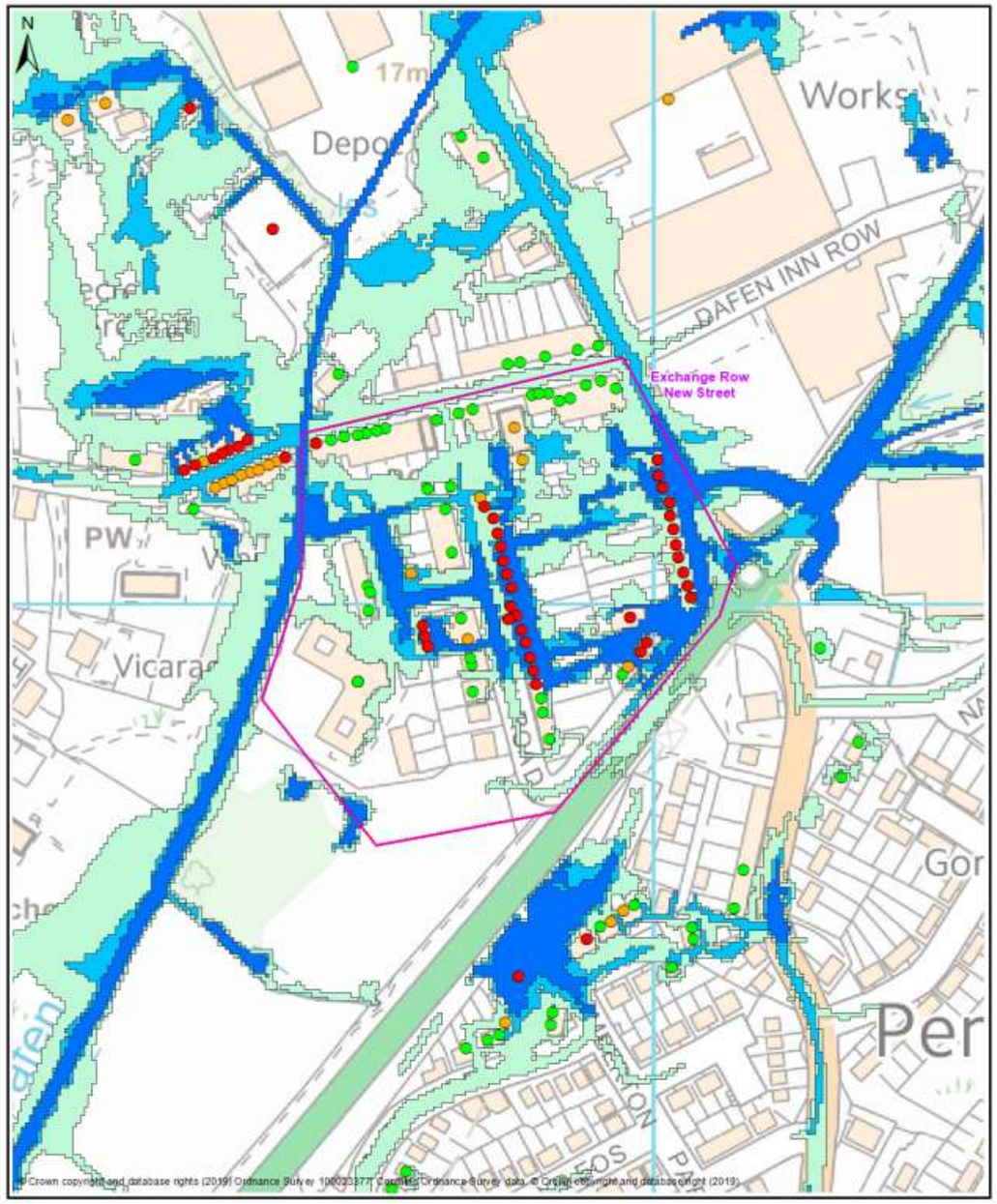
16.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

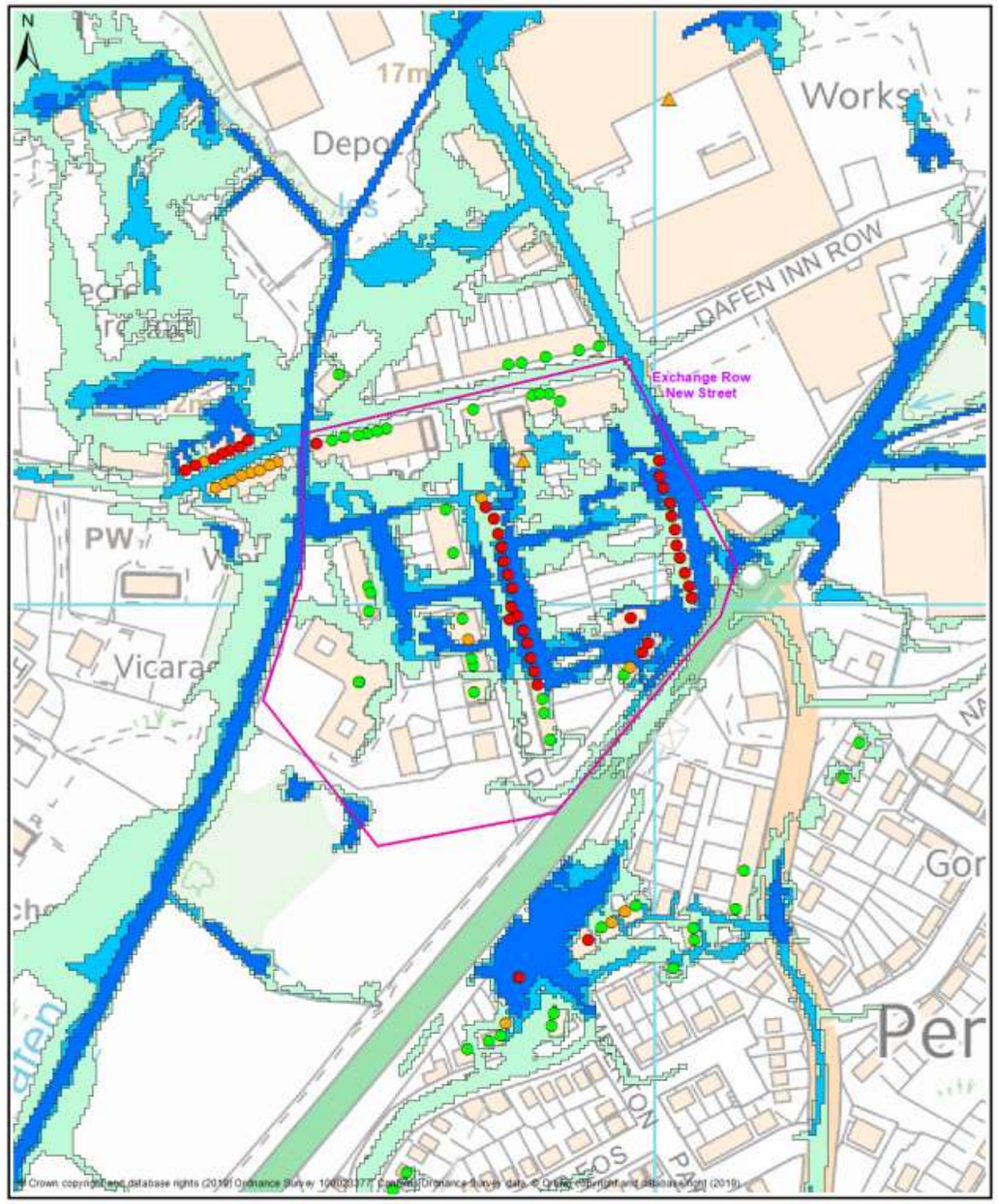
16.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	34	40	101
Map 2 Dwellings and Services	31	35	88
Map 3 CaRR	n/a	26 Pluvial 112 Fluvial	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

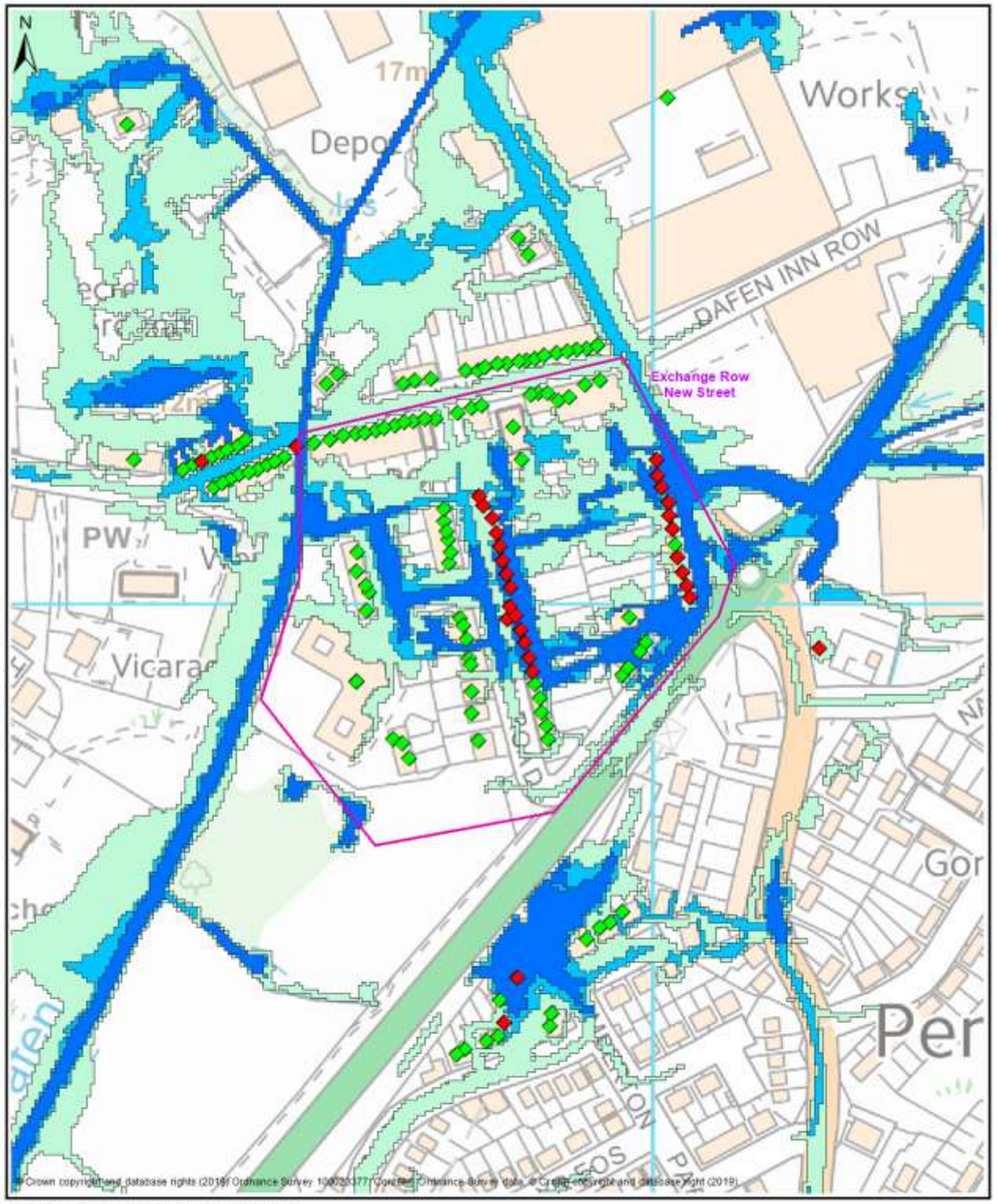
Dafen Ward

Exchange Row New Street Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

17 Dafen Ward, Glyncoed Terrace Policy Unit

17.1 Area Description

The Glyncoed Terrace Policy Unit is located between Llanelli and the A4138 carriageway. While Glyncoed Terrace is located within an urbanised area it is surrounded by open greenfield land and the Afon Dafen Main River. The Afon Dafen originates in the hills above Llanelli on agricultural fields and areas of forestry just south of Llannon. The Afon Dafen, as it passes Glyncoed Terrace, has large concrete flood defence walls running parallel to contain the river whilst in flood.

17.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Glyncoed Terrace lies within a low spot and is below the level of the adjacent river bank. The NRW concrete flood defence walls prevent fluvial flooding and overtopping but during times of flood, the surface water system cannot discharge into the river because the non-return valves are sealed.

CCC has investigated potential solutions in the past but the only feasible option would be to install a pump and remove the flood water into the main river. This option would likely meet resistance as adding additional water to the river during flood conditions would likely worsen the flooding downstream.

17.3 Flooding Events

- 2010: Details unknown
- 2016: Two dwellings flooded in Glyncoed Terrace

CCC understands that there is a far greater history of flooding from a combination of Main River and surface water at the above location, but we have no records of these events.

17.4 Flood Defence Capital Works undertaken by CCC

None

17.5 Flood Defence Assets

None

17.6 Routine Works and Maintenance

None

17.7 Proposed Future Works

CCC will continue to work with DCWW and NRW with regard to managing the issue.

17.8 Flood Risk

17.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

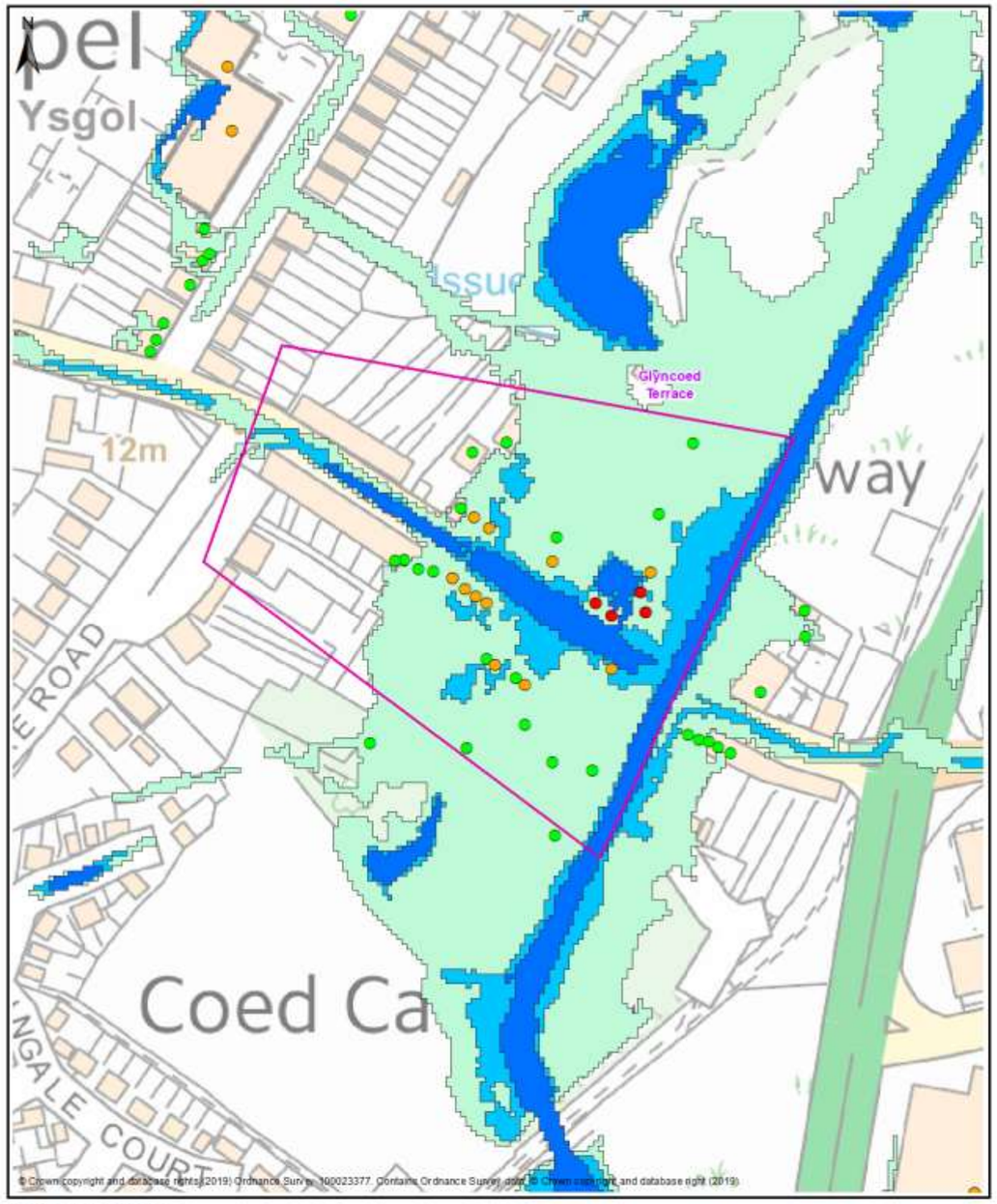
17.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

17.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	4	17	33
Map 2 Dwellings and Services	0	10	20
Map 3 CaRR	n/a	17 Pluvial 19 Fluvial	n/a



Map 1 - All Properties

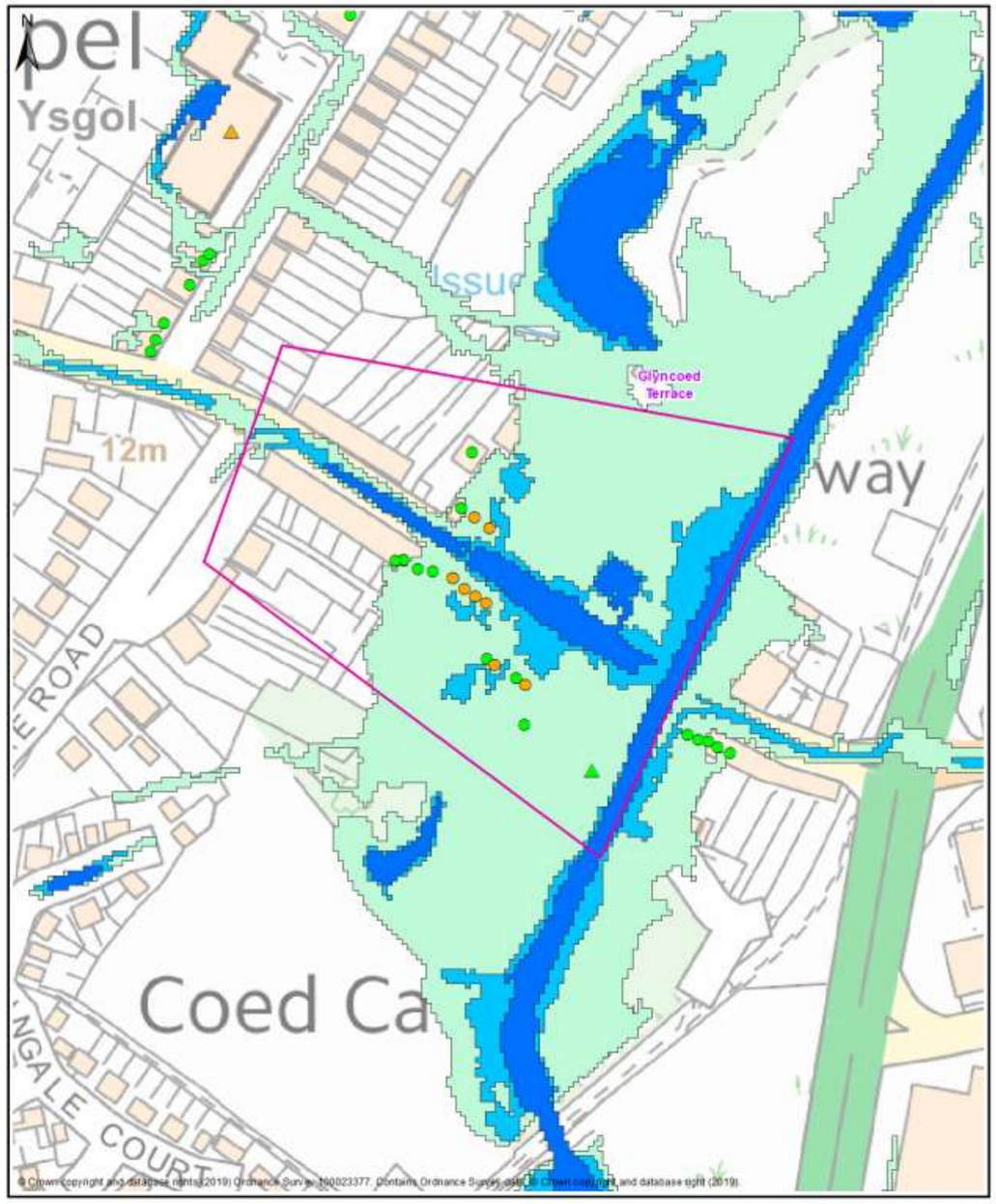
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Dafen Ward

Glyncoed Terrace Policy Unit

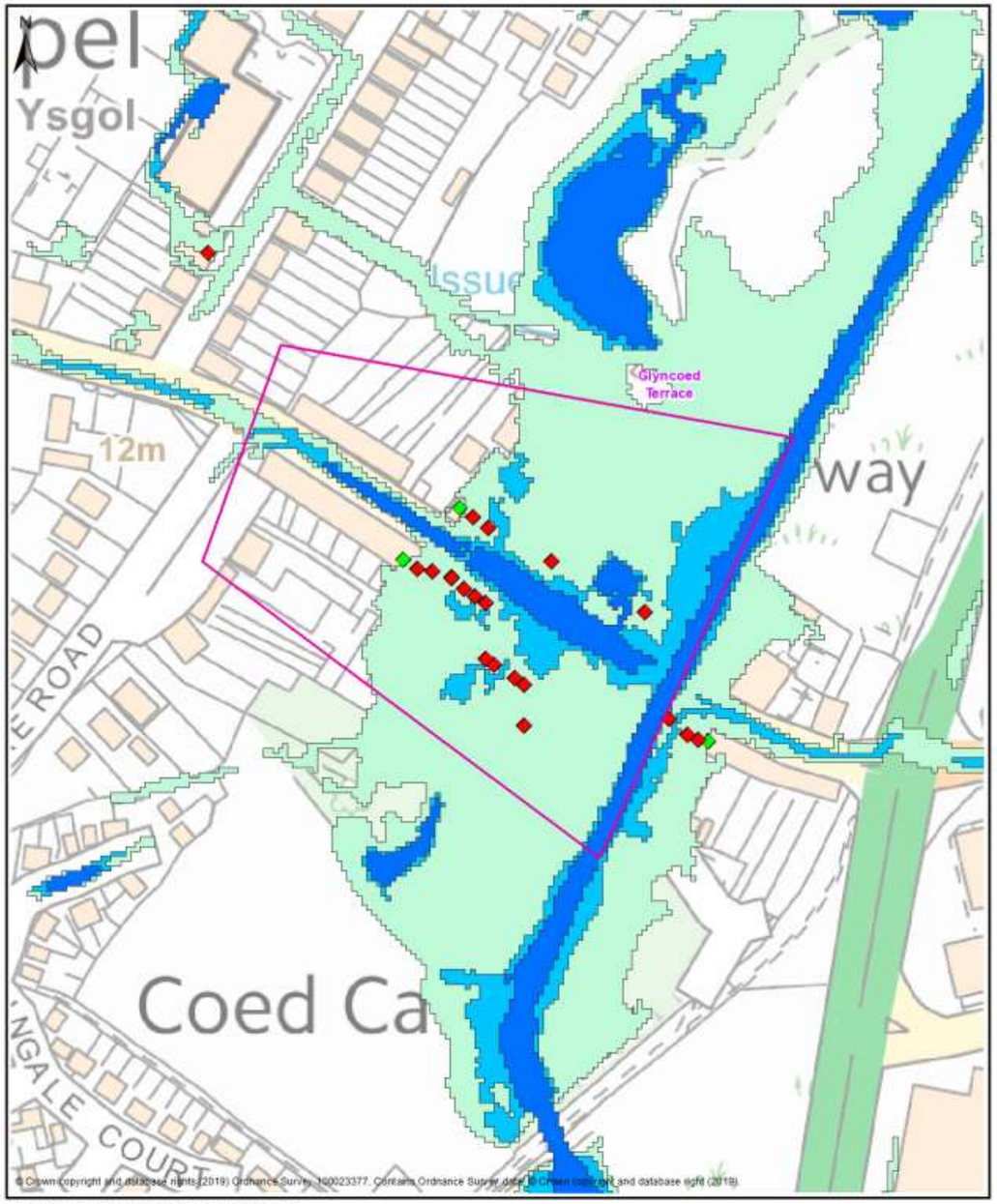
0 0.0275 0.055 0.11 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Dafen Ward
Glyncoed Terrace Policy Unit

0 0.0275 0.055 0.11 Km

18 Dafen Ward, Prince Philip Hospital Policy Unit

18.1 Area Description

The Prince Philip Hospital Policy Unit is not associated with any watercourse. The affected area has been identified as surface water flooding.

18.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from surface water.

The area identified areas are slightly lower that the surrounding area so will lend itself to pooling at the lowest point.

18.3 Flooding Events

None

18.4 Flood Defence Capital Works undertaken by CCC

None

18.5 Flood Defence Assets

None

18.6 Routine Works and Maintenance

None

18.7 Proposed Future Works

Contact hospital management and inform them of the risk identified.

18.8 Flood Risk

18.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

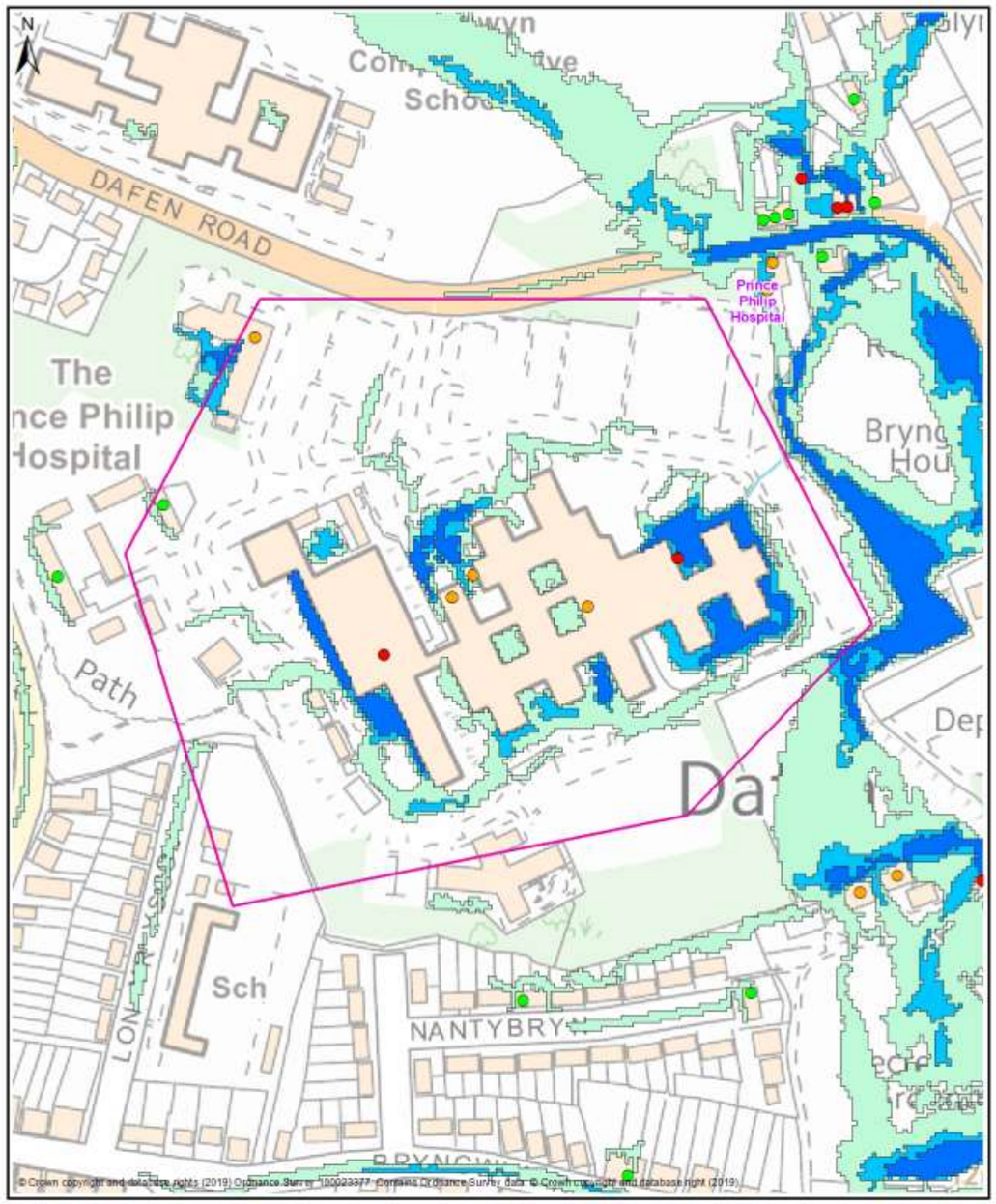
18.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

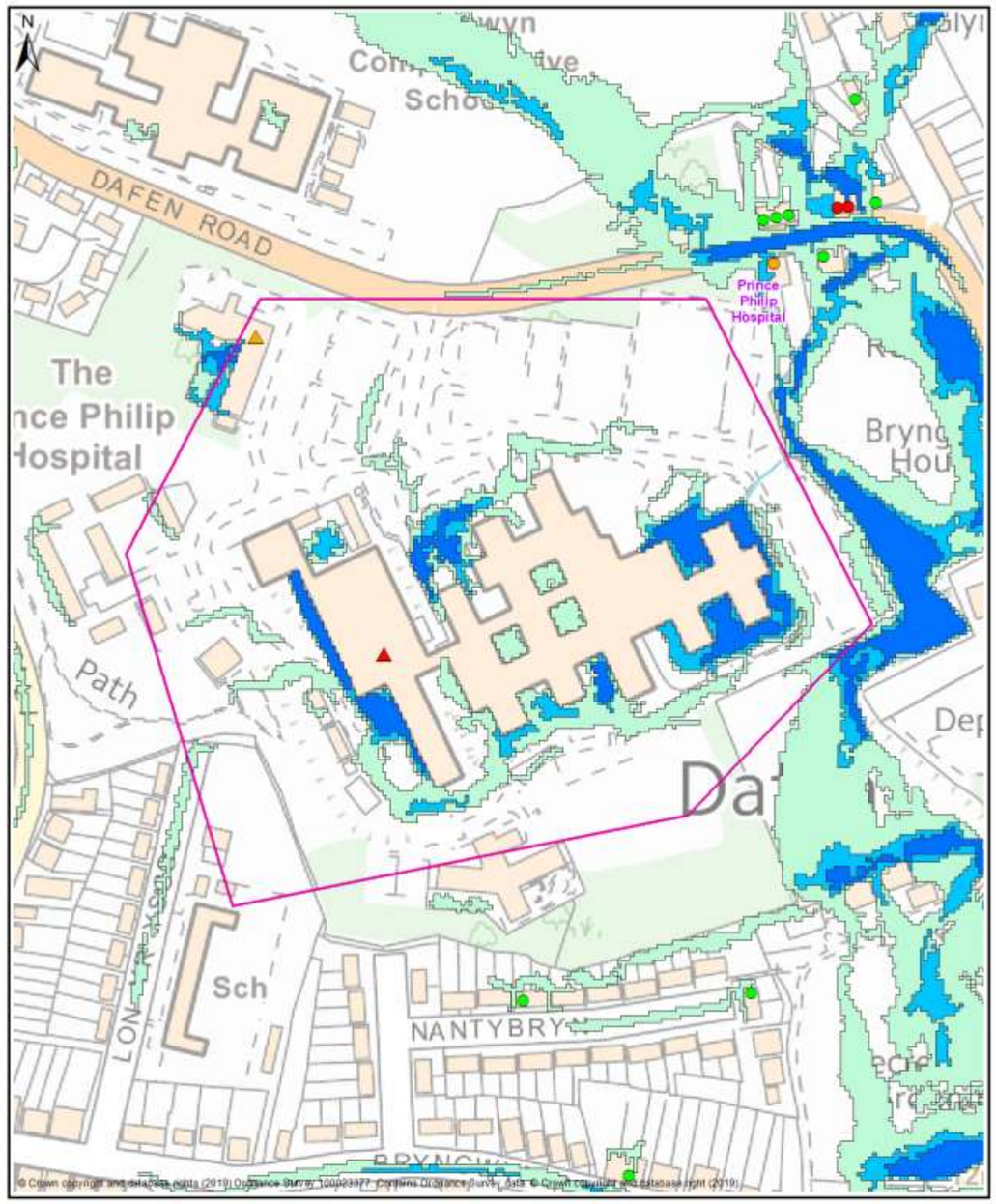
18.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	2	6	7
Map 2 Dwellings and Services	1	2	2
Map 3 CaRR	n/a	0	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

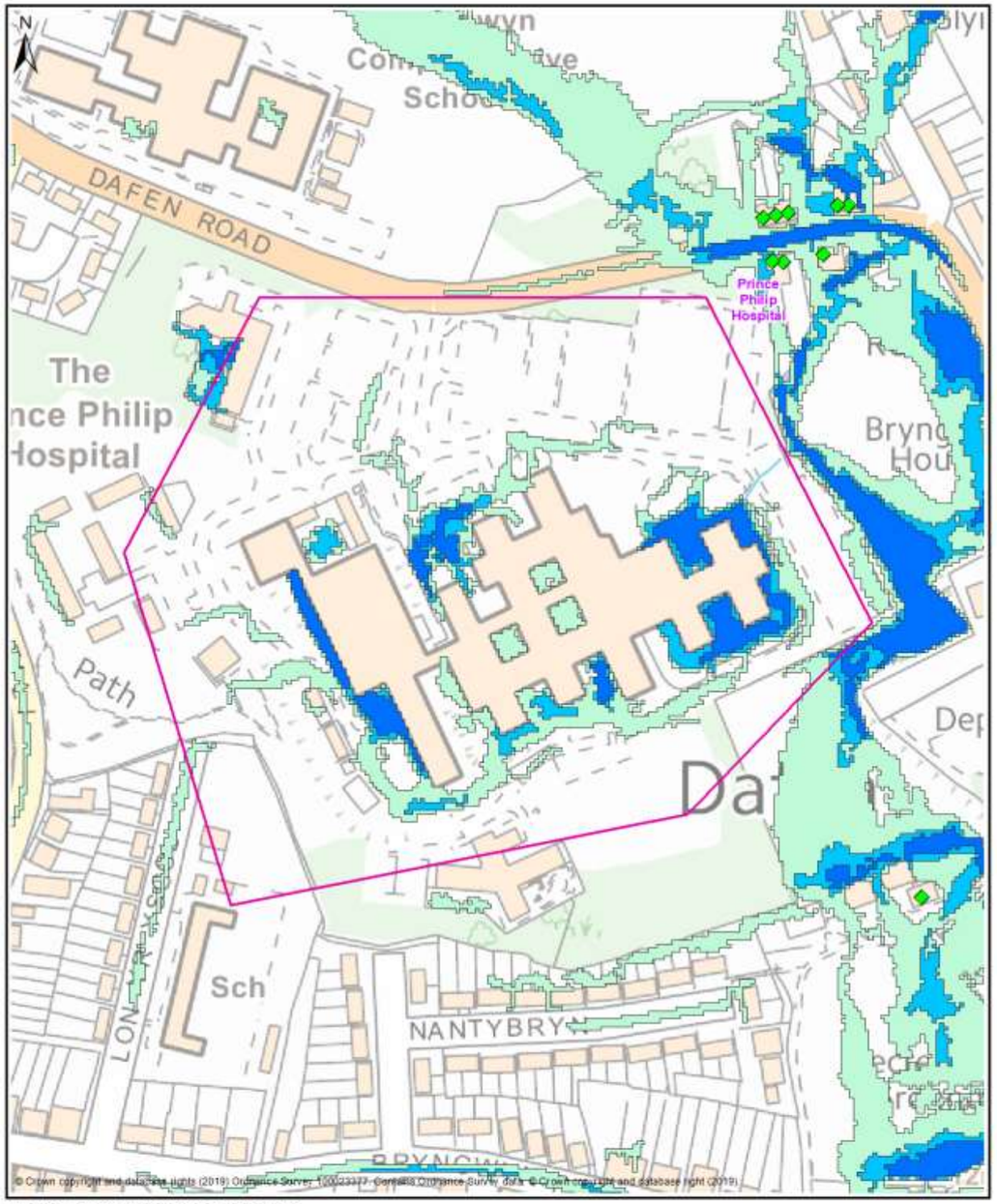
Dafen Ward

Prince Philip Hospital Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

19 Elli Ward, Greenway Street Policy Unit

19.1 Area Description

The Greenway Street Policy Unit comprises a large urbanised area in Llanelli which is drained by a combination of DCWW sewerage system, highway drainage and private culverts to an outfall at Sandy Water Park. There are no watercourses present in the Policy Unit which contributes to the flooding.

19.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

19.3 Flooding Events

There has been a history of surface water flooding in the area that was resolved when the Environment Agency repaired damages to the surface water drainage system in the area.

19.4 Flood Defence Capital Works undertaken by CCC

No works have been undertaken by CCC.

DCWW are currently in the process of upgrading the surface water infrastructure as a part of their Rainscape Project. The private surface water system in this area will be adopted by DCWW.

19.5 Flood Defence Assets

None

19.6 Routine Works and Maintenance

None

19.7 Proposed Future Works

CCC will continue to monitor the area, respond to incidents of flooding and liaise with DCWW in regard to the Rainscape Project.

19.8 Flood Risk

19.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

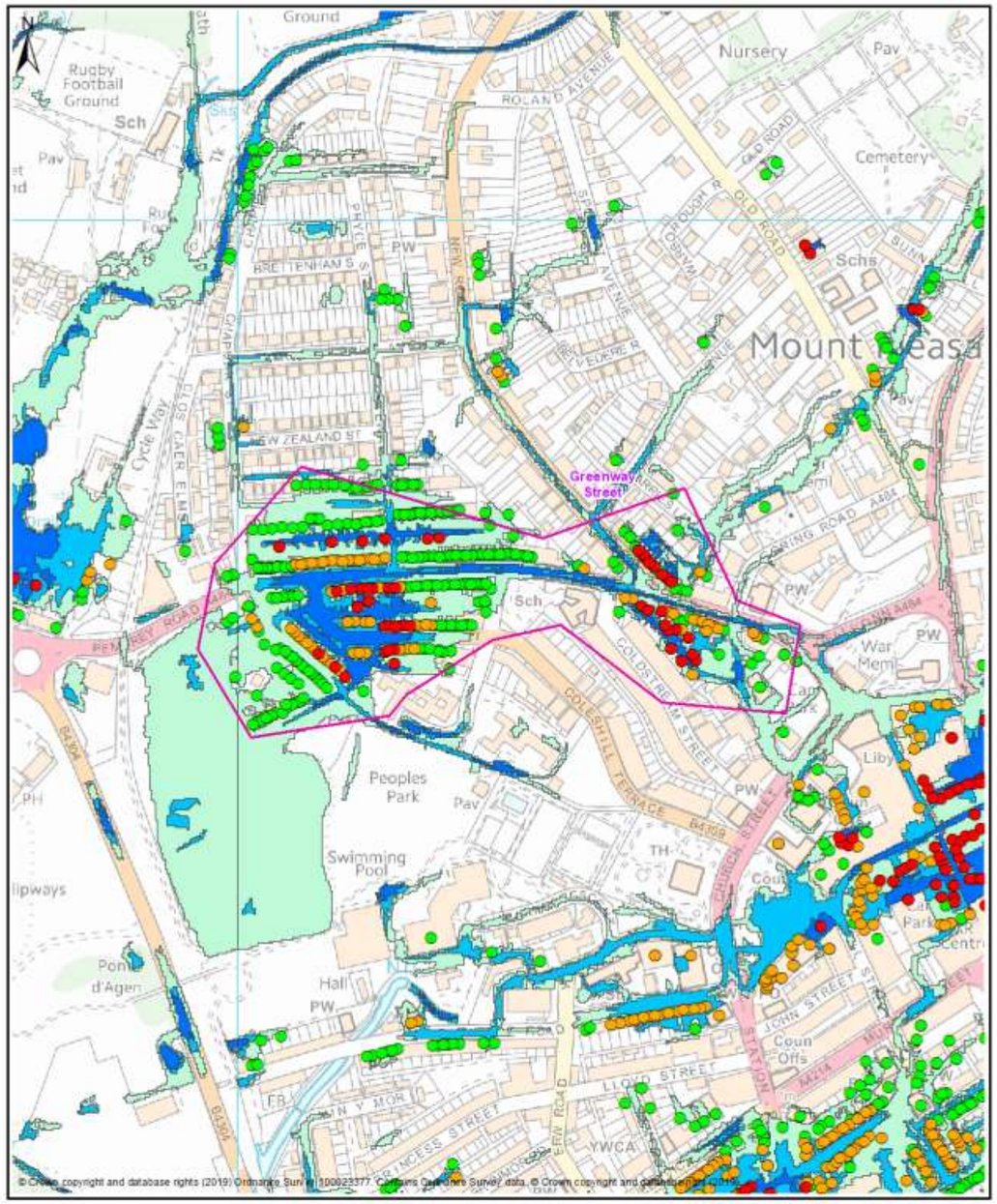
19.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

19.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	47	121	311
Map 2 Dwellings and Services	26	84	246
Map 3 CaRR	n/a	139 Pluvial 36 Fluvial 227 Tidal	n/a



Map 1 - All Properties

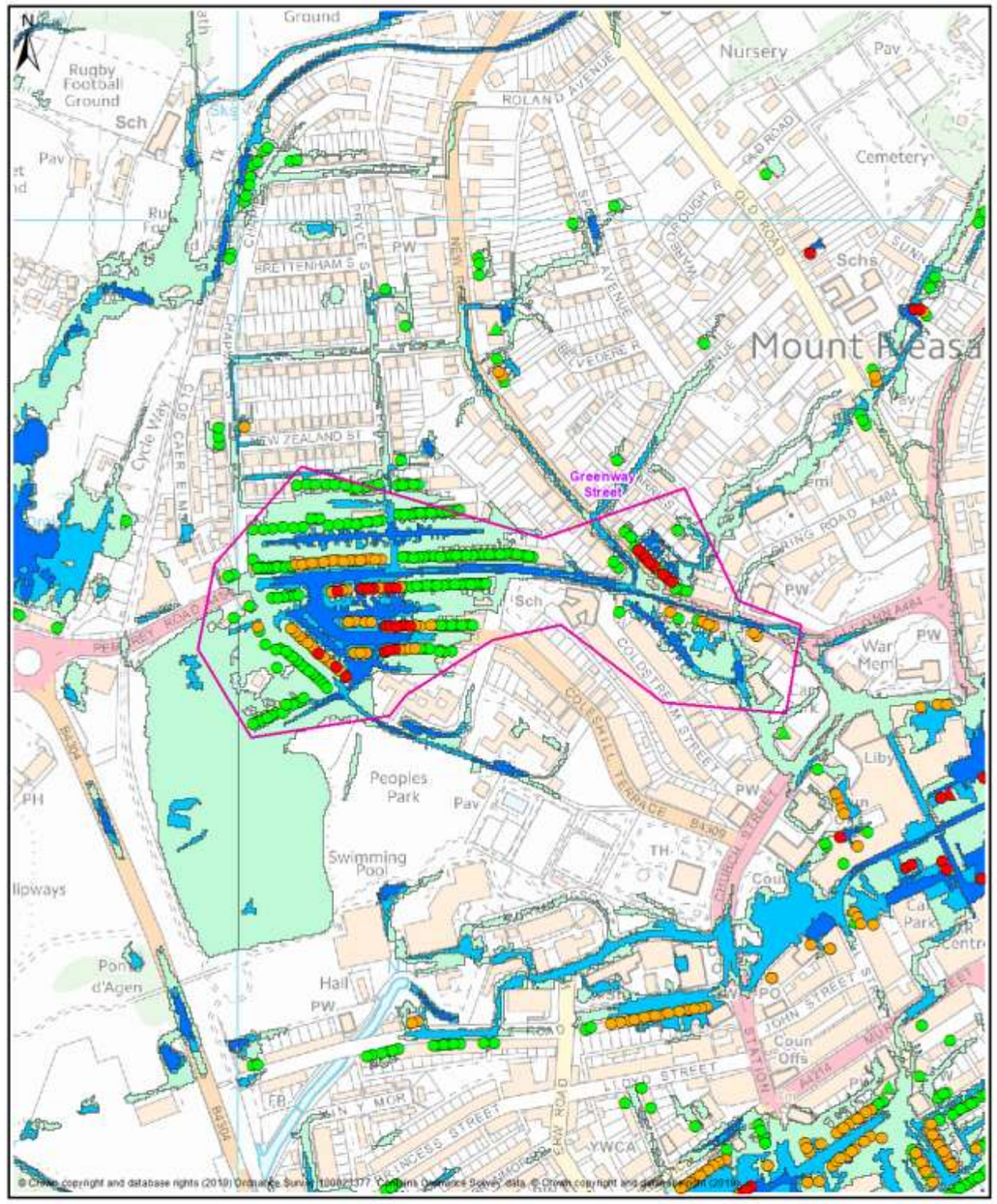
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Elli Ward

Greenway Street Policy Unit

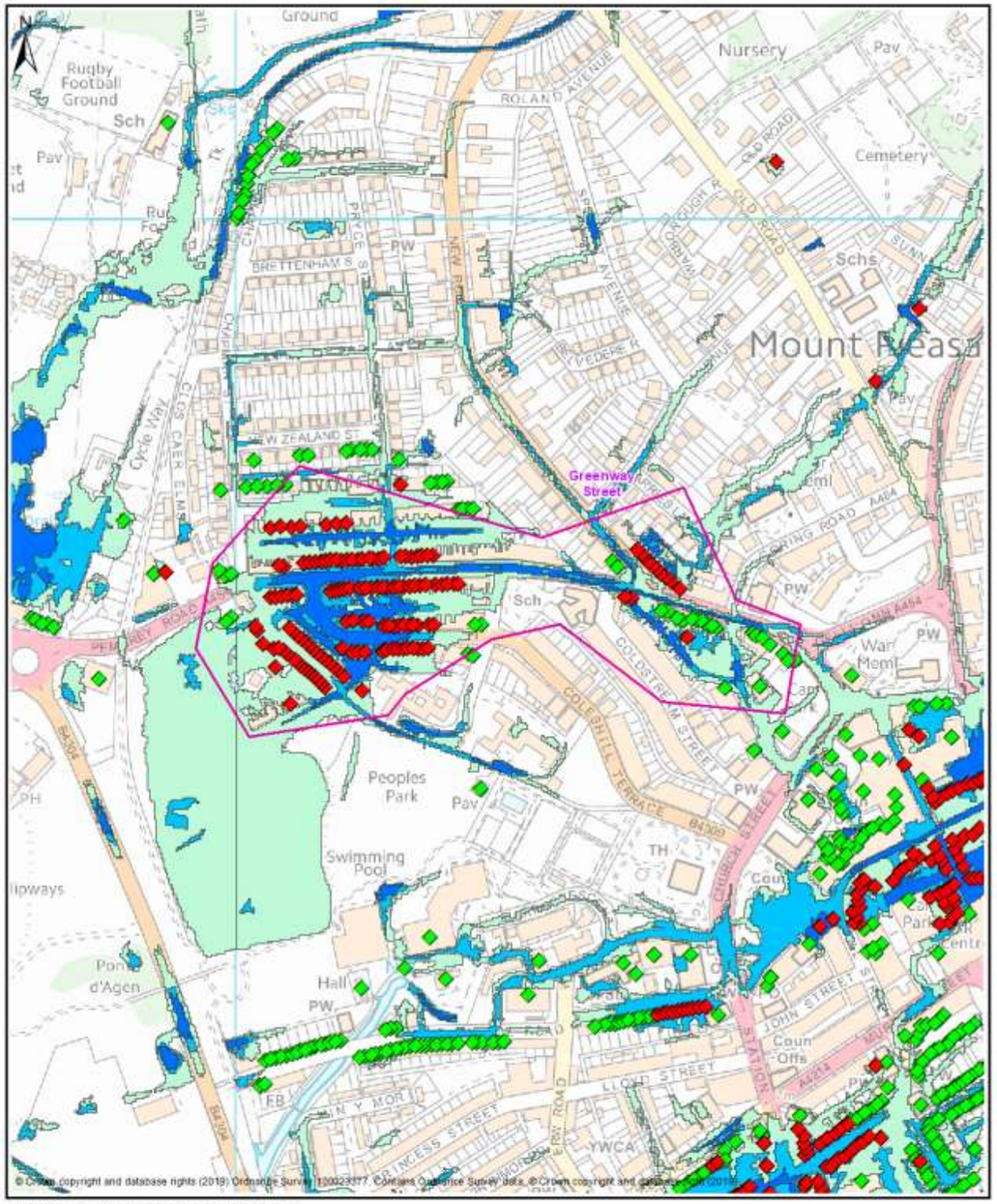
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



20 Elli Ward, Llanelli Town Centre Policy Unit

20.1 Area Description

The Llanelli Town Centre Policy Unit is predominately mixed retail. Main characteristics from a flood perspective is the Main River Lleidi that is culverted through the town centre for a distance of approximately 700m.

The presence of the Swiss Valley Reservoirs are a significant feature of this catchment and will attenuate flood flows reducing the risk of flooding from the River Lleidi.

In the town centre DCWW have a 1200mm combined sewer and they are currently in the process of constructing a tunnel along the route Station Road to cater for surface water from parts of this area.

20.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

High numbers of properties are indicated to be at risk of flooding, but the drainage infrastructure is primarily managed by NRW (Main River Lleidi Culvert) and DCWW via the surface and combined sewer network.

20.3 Flooding Events

None Recorded by CCC

20.4 Flood Defence Capital Works undertaken by CCC

No works have been undertaken by CCC

20.5 Flood Defence Capital Works undertaken by Partner Organisations

At the time of writing DCWW are in the process of constructing the Station Road Surface Water scheme.

20.6 Flood Defence Assets

- Lleidi Culvert – Main River NRW lead
- Combined Sewer System DCWW

Station Road tunnel works	
	

20.7 Routine Works and Maintenance

None

20.8 Proposed Future Works

Continue to liaise and co-operate with DCWW to deliver the Rainscape Project.

20.9 Flood Risk

20.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

20.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

20.9.3 Map 3: Community at Risk Register (CaRR)

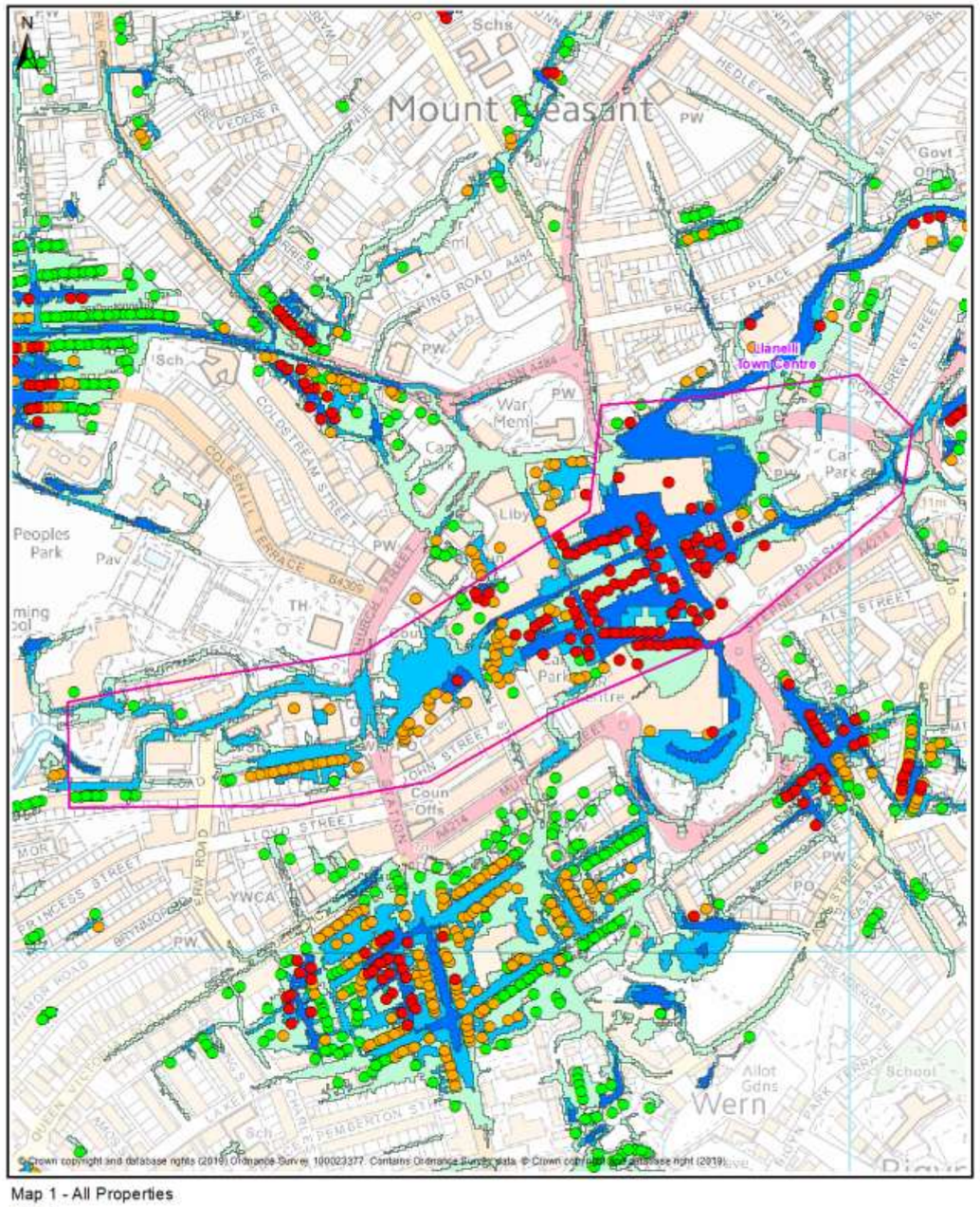
This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	148	257	296
Map 2 Dwellings and Services	53	122	137
Map 3 CaRR	n/a	151 Pluvial 241 Fluvial	n/a

20.10 Environmental Considerations

20.11 Biodiversity

Dredging has been discounted on environmental grounds as well as being an unsustainable flood defence measure.



Map 1 - All Properties

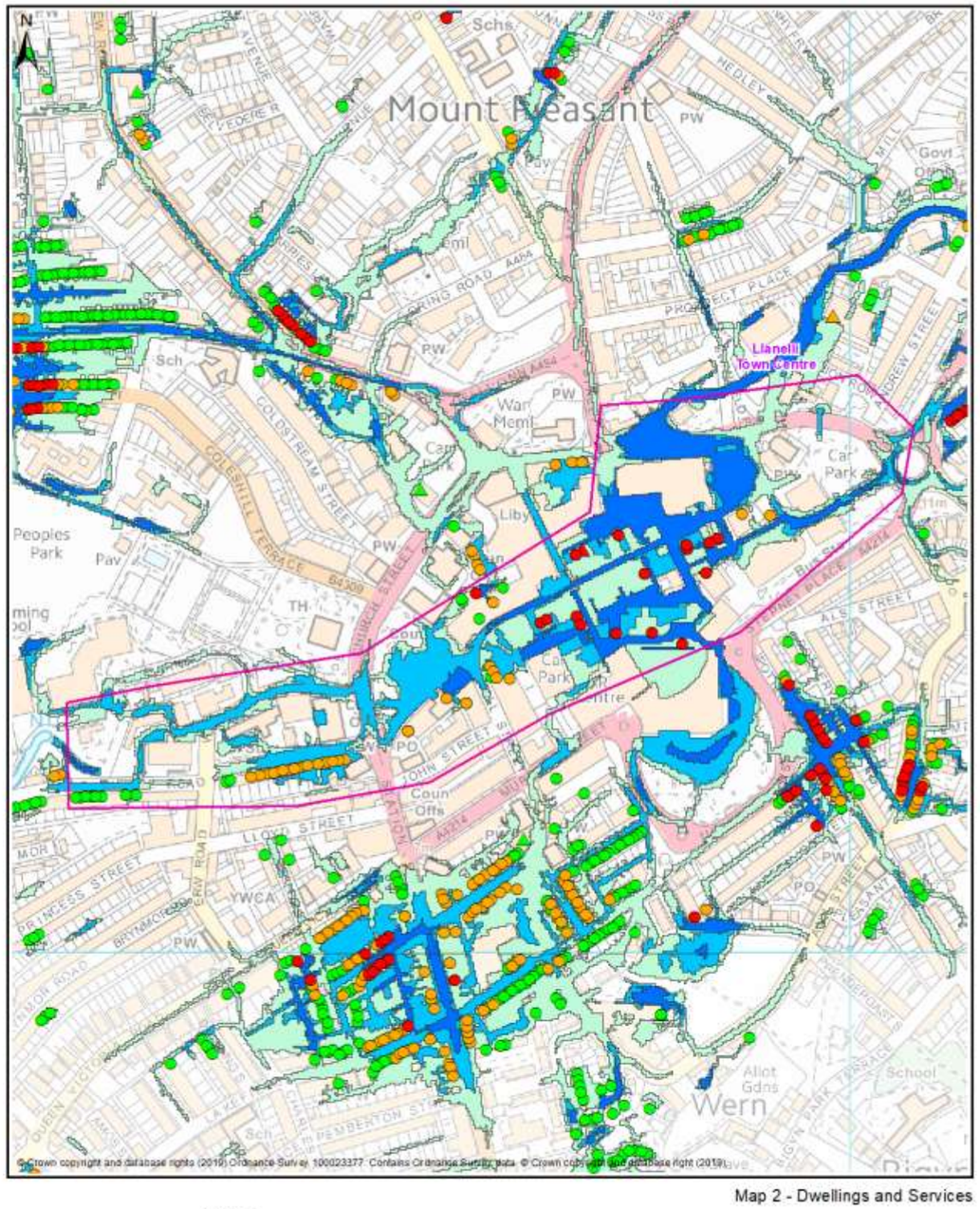
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Elli Ward

Llanelli Town Centre Policy Unit

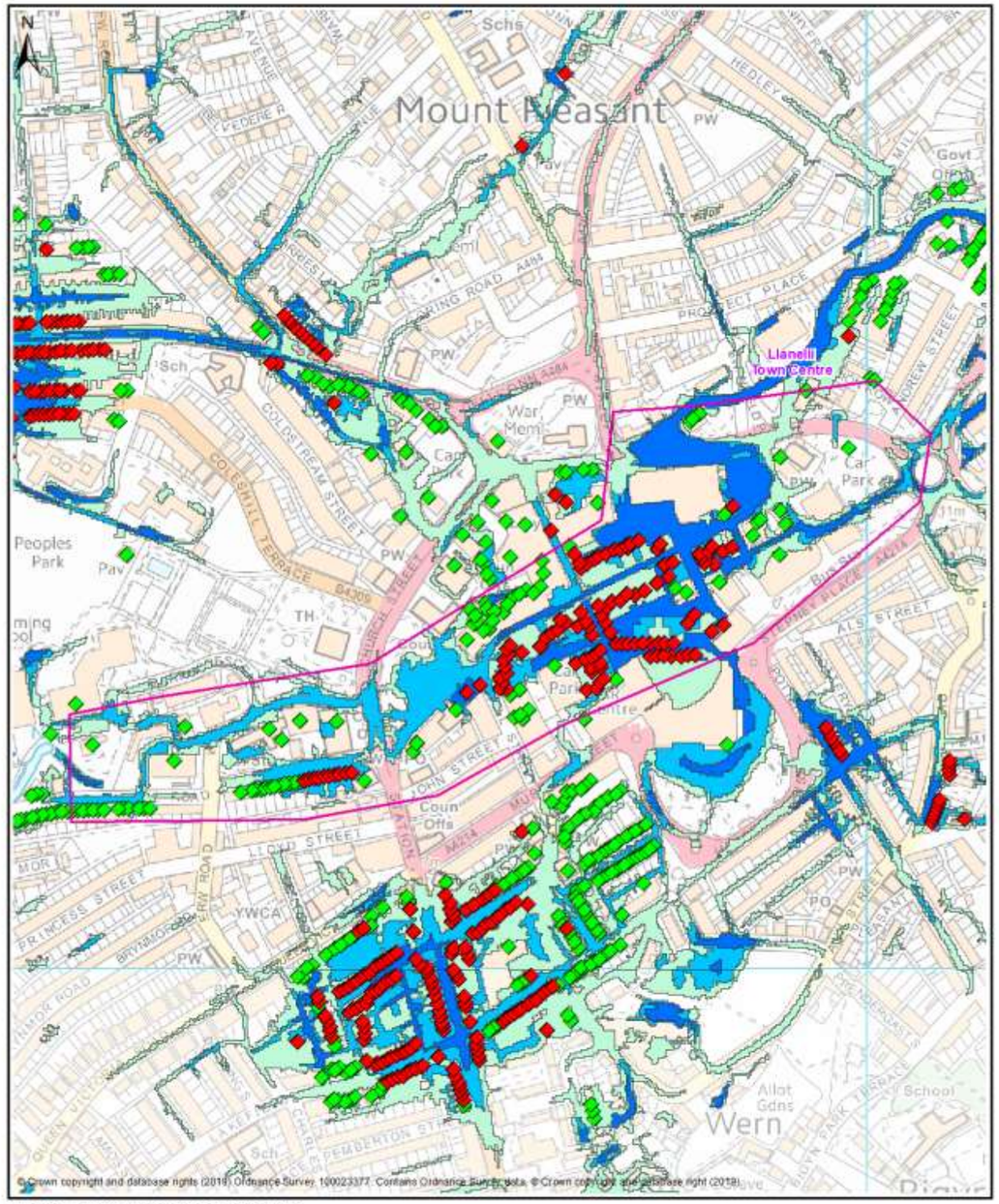
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Elli Ward

Llanelli Town Centre Policy Unit

0 0.05 0.1 0.2 Km

21 Felinfoel Ward, Felinfoel Policy Unit

21.1 Area Description

The Felinfoel Policy Unit comprises the catchment associated with the Afon Lliedi watercourse, which is a Main River. This watercourse originates north of Felinfoel and flows in an open channel. The area is low laying.

21.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk.

At Felinfoel the risk is from surface water flowing along the highway network and pooling and flooding the highway and properties in the lower lying areas.

In addition to this there is a fluvial risk of flooding from the Afon Lliedi although the flows are attenuated from the nearby reservoir.

21.3 Flooding Events

2001: Flooding of the basement at 8 Panteg, Felinfoel.

21.4 Flood Defence Capital Works undertaken by CCC

2002: Relining short length of culvert nearby 8 Panteg, Felinfoel.

21.5 Flood Defence Assets

None

21.6 Routine Works and Maintenance

None

21.7 Proposed Future Works

Ascertain the path, ownership and responsibility of the surface water system in the Policy Unit. This will be achieved by undertaking CCTV surveys and Land Registry checks.

.

21.8 Flood Risk

21.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

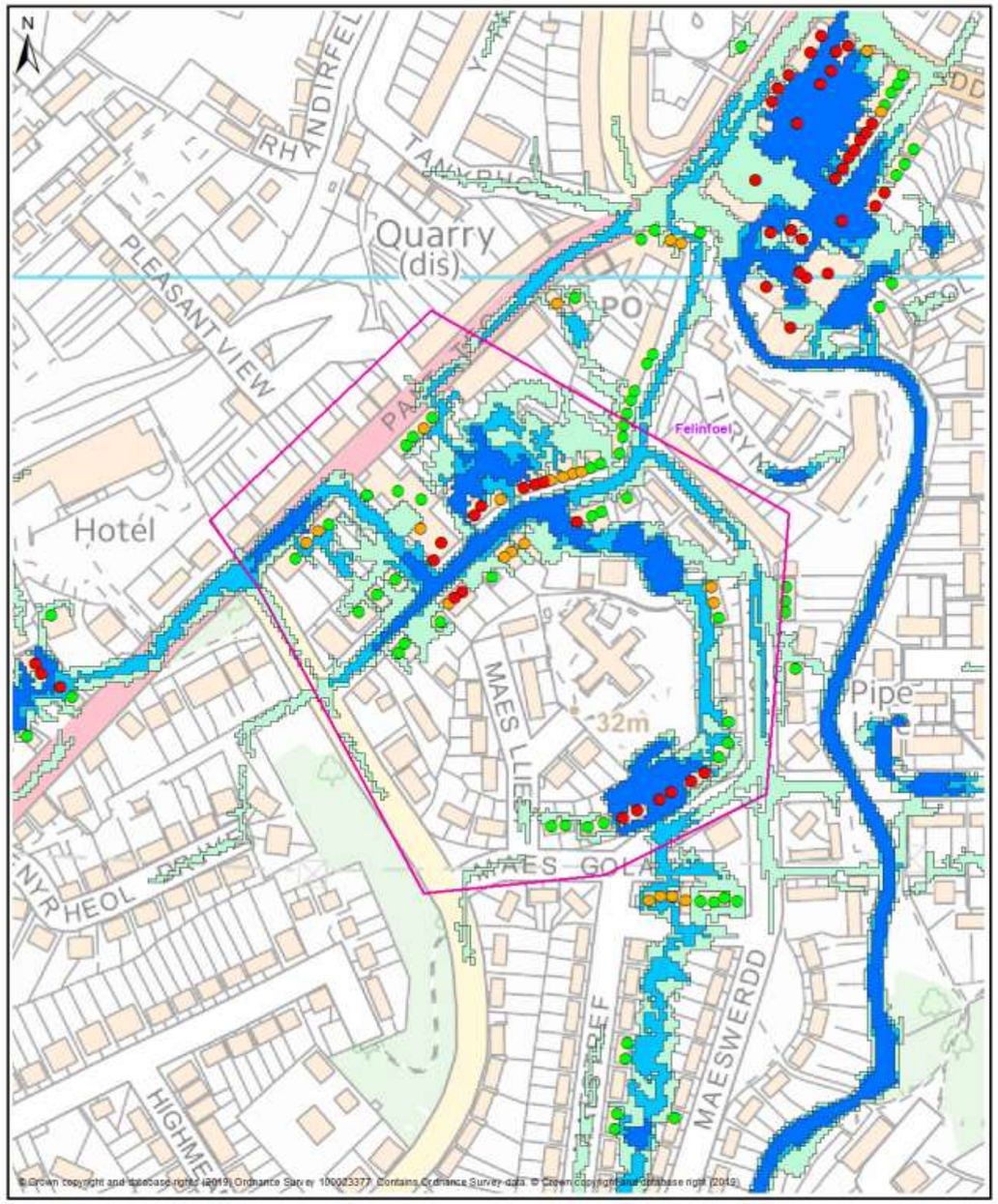
21.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

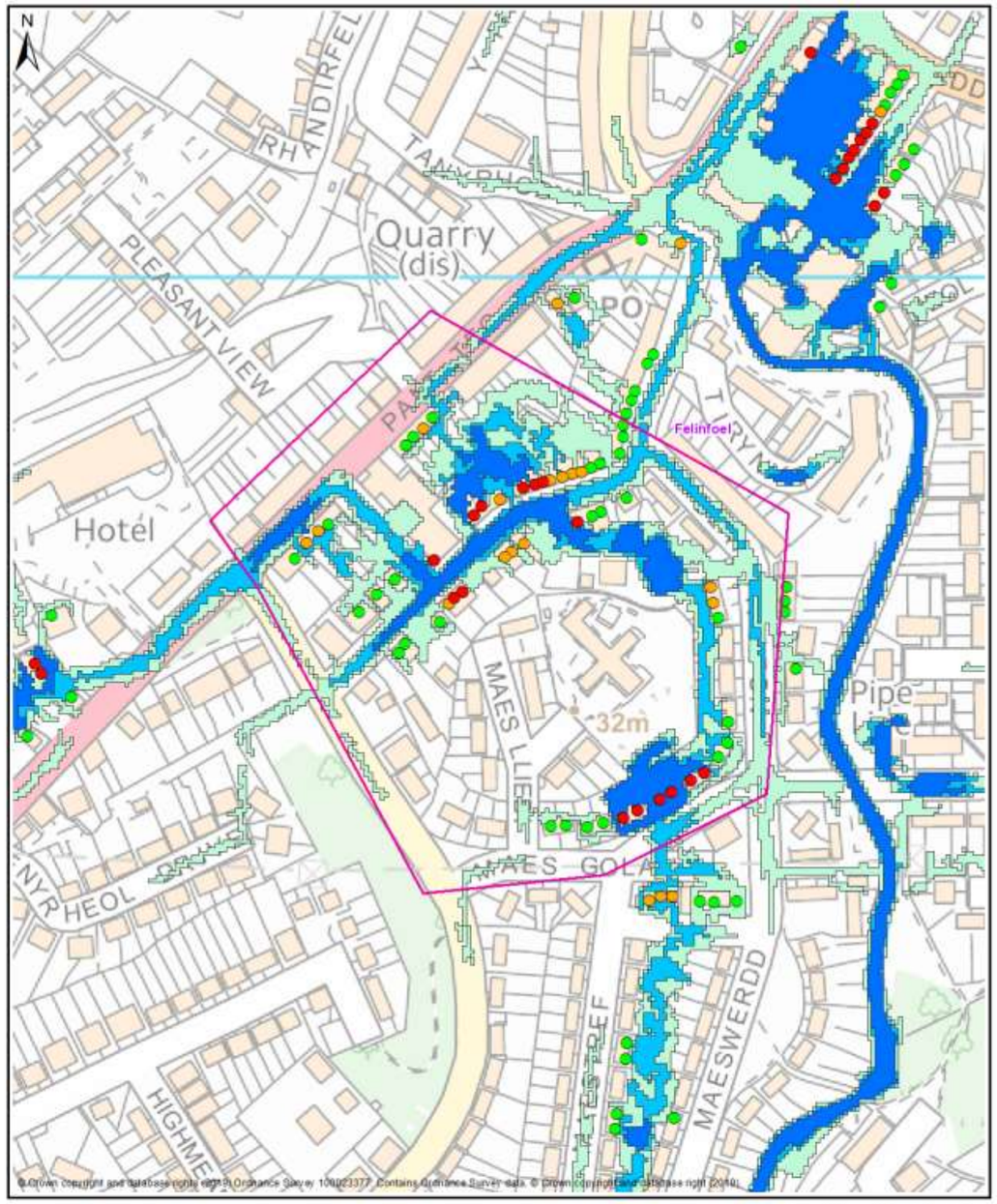
21.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	17	32	65
Map 2 Dwellings and Services	16	30	57
Map 3 CaRR	n/a	2	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

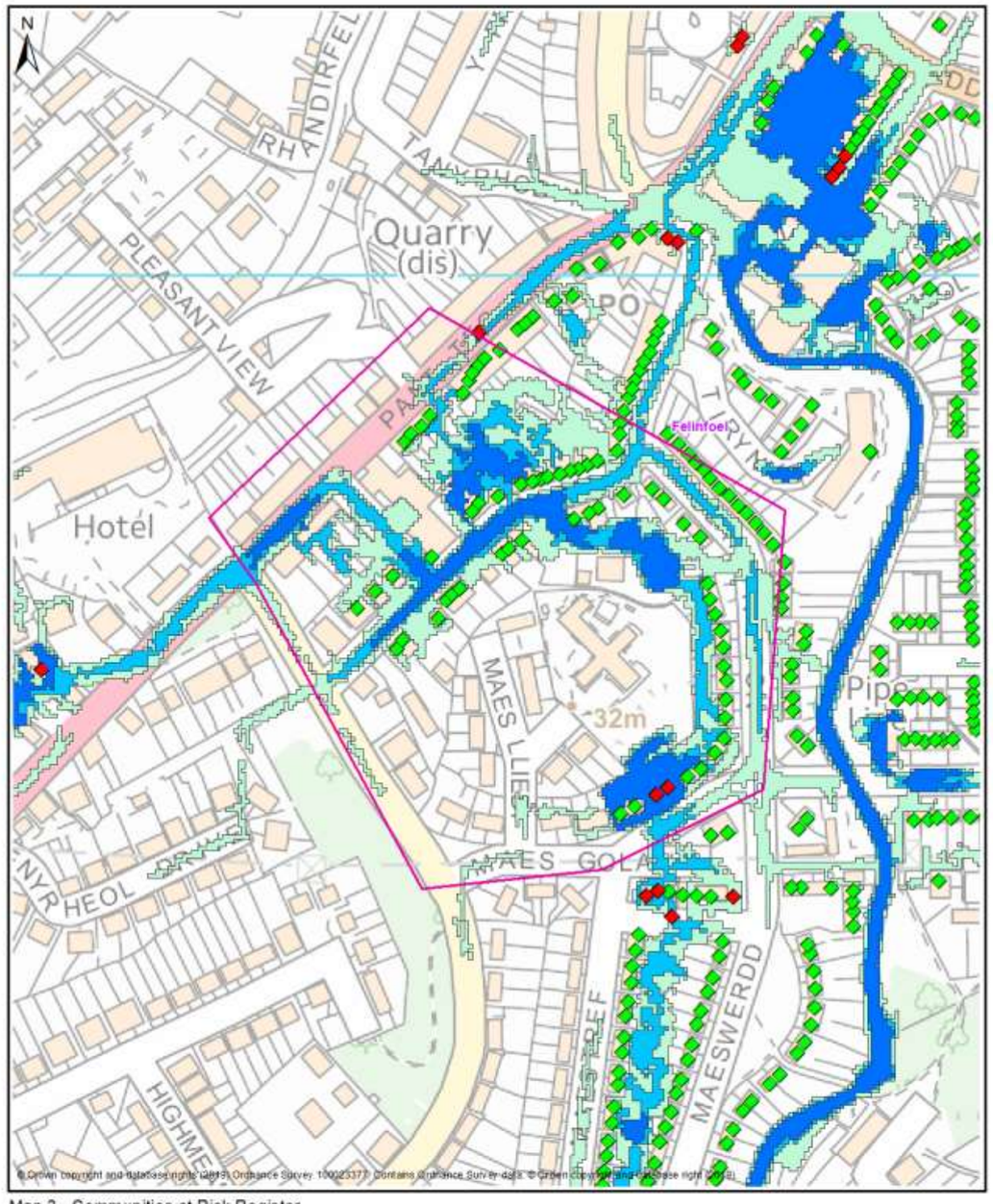
Felinfoel Ward

Felinfoel Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Felinfoel Ward
Felinfoel Policy Unit

0 0.0325 0.065 0.13
Km

22 Garnant Ward, Arcade Terrace Policy Unit

22.1 Area Description

The Arcade Terrace Policy Unit comprises the catchment associated with the Nant Main ordinary watercourse. This watercourse originates on the Garnant Golf Course. It flows initially in an open channel before being culverted at New School Road. It is culverted beneath the A474 Cwmamman Road before discharging back into an open watercourse on private land at Arcade Terrace.

22.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

This indicates that properties at Cwmmamman Road and Arcade Terrace are at risk of flooding.

22.3 Flooding Events

CCC have no record of any flooding in this area.

22.4 Flood Defence Capital Works undertaken by CCC

None

22.5 Flood Defence Assets

- New School Road Trash Screen
- Arcade Terrace Culvert

22.6 Routine Works and Maintenance

Area	Works Undertaken	When
New School Road Trash Screen	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
New School Road Culvert	CCTV camera survey	2018,
Arcade Terrace Outfall	Formal T98 Inspection	Annually

22.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

The CCC Flood Defence and Coastal Protection Team are currently designing (2019) a new trash screen to manage blockages and facilitate safe and efficient debris management. Construction planned in 2020.

22.8 Flood Risk

22.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

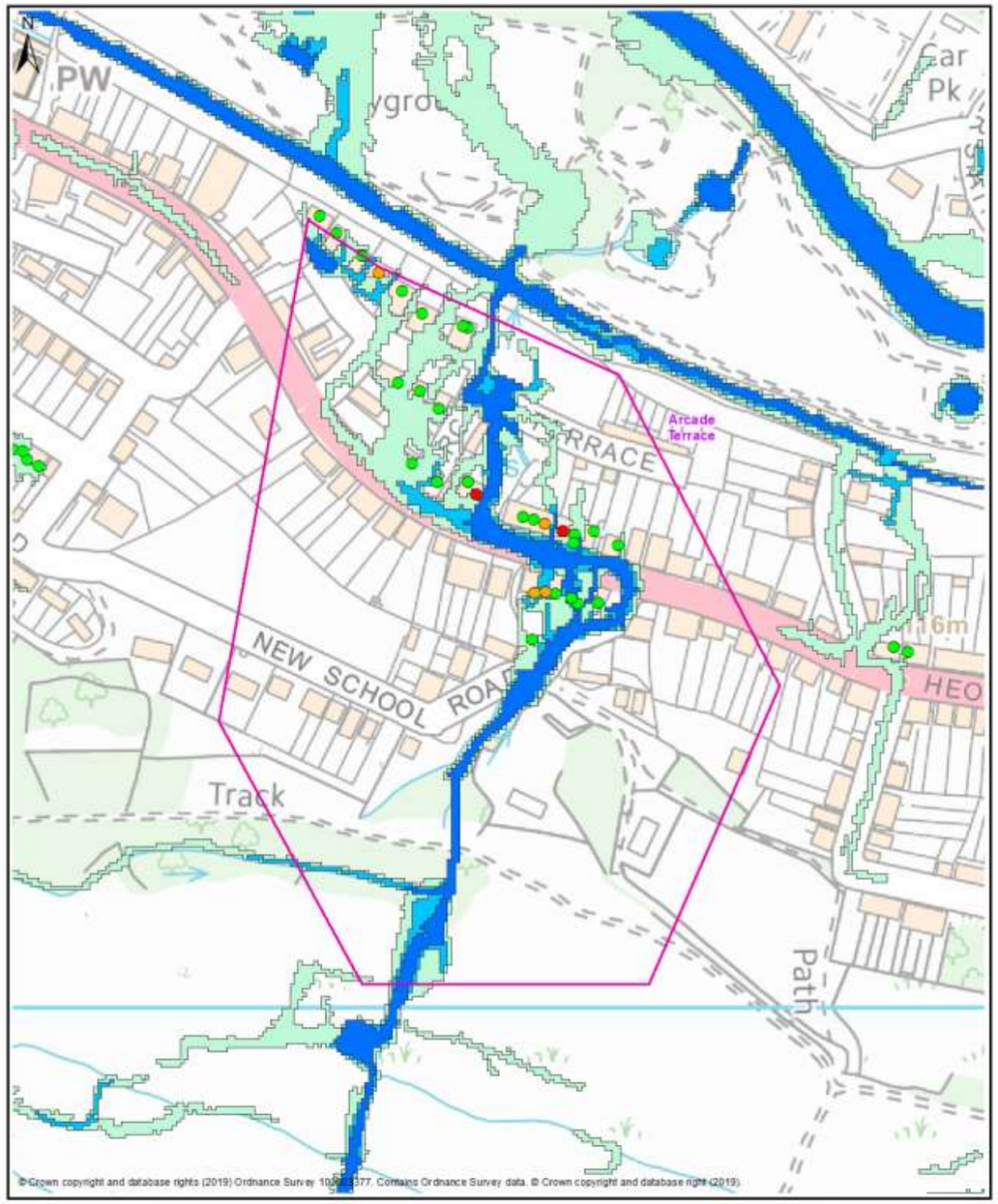
22.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

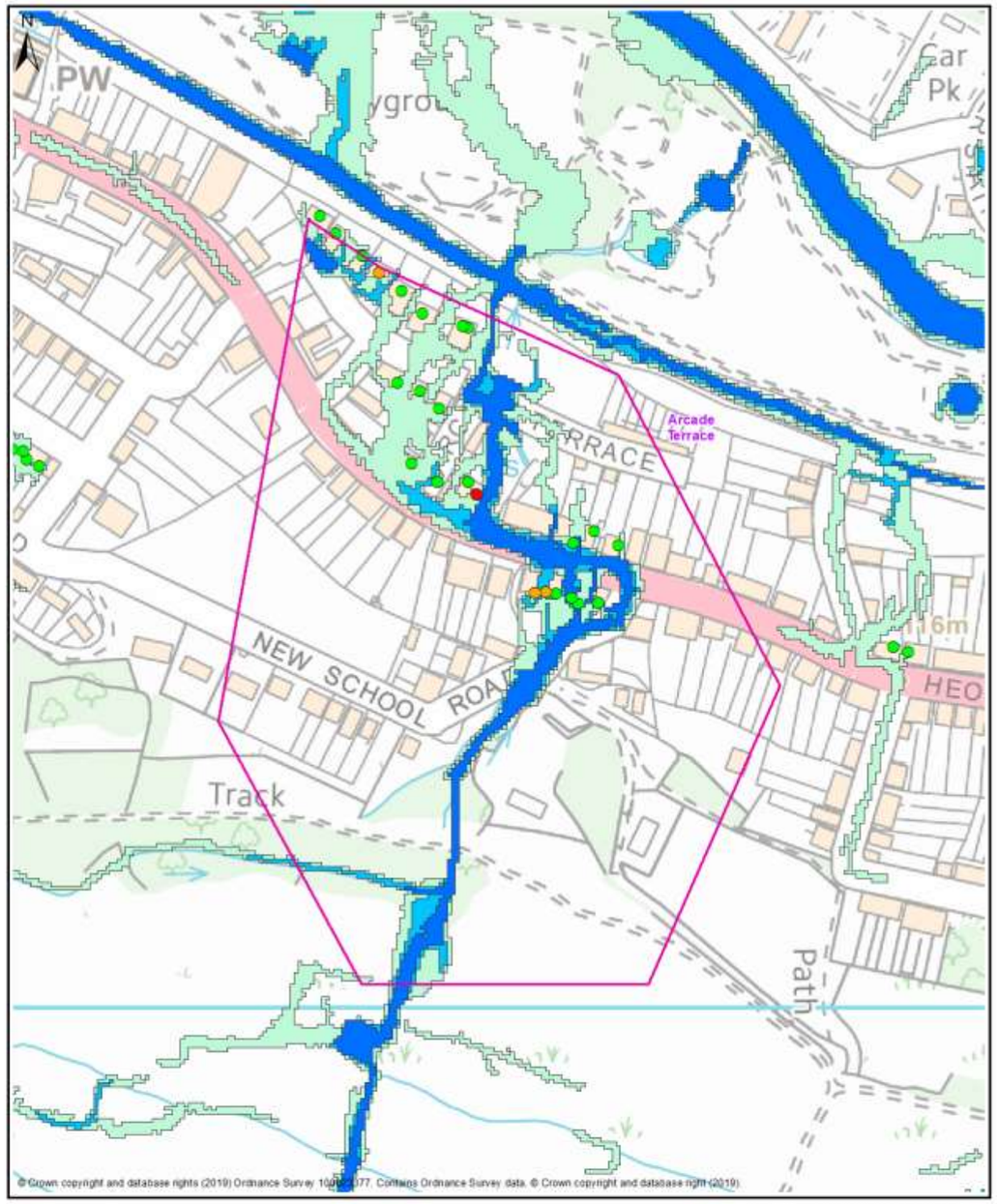
22.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	2	6	31
Map 2 Dwellings and Services	1	4	25
Map 3 CaRR	n/a	14	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

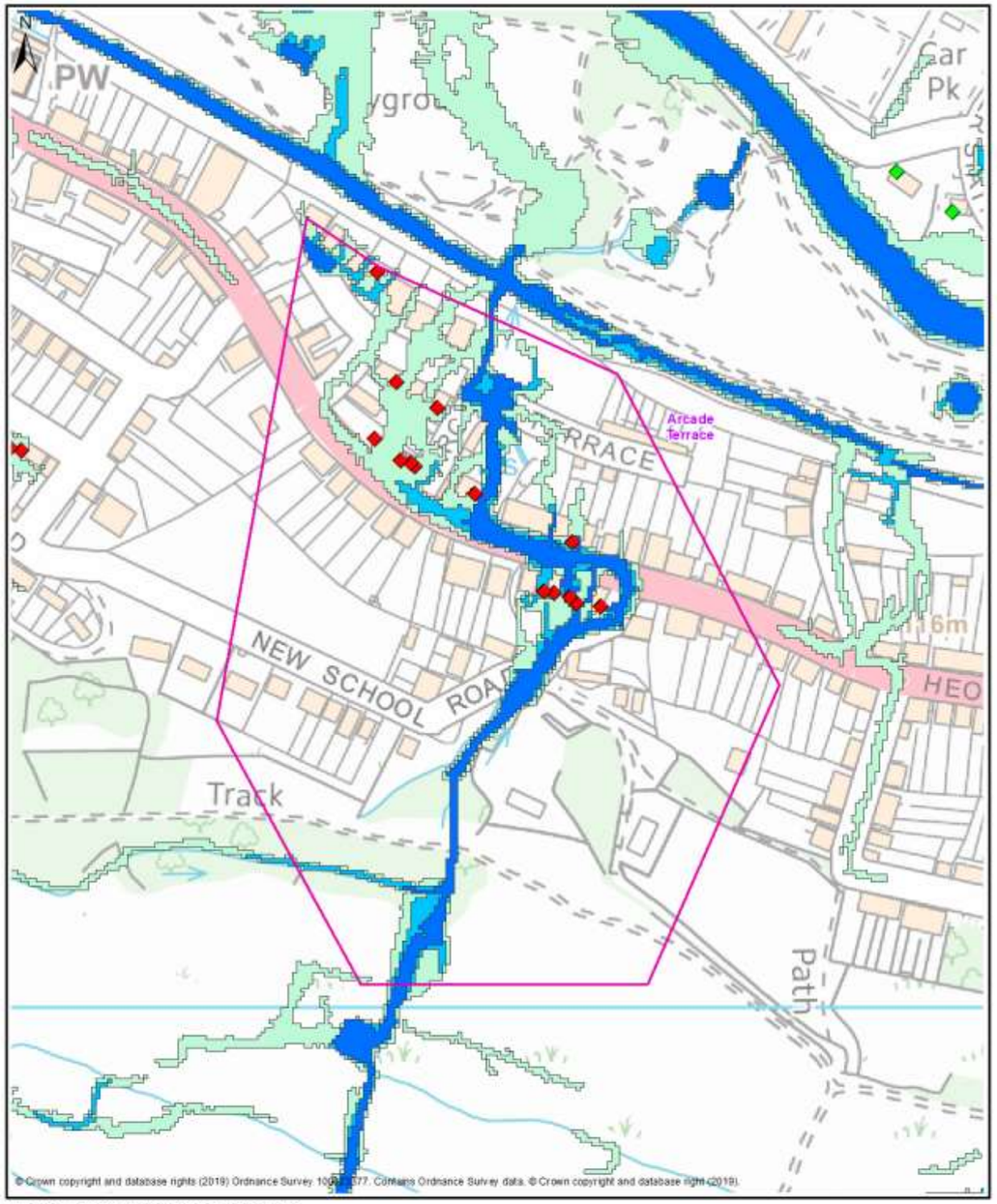
Garnant Ward

Arcade Terrace Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Pluvial

Garnant Ward
Arcade Terrace Policy Unit

0 0.0325 0.065 0.13
Km

23 Glannaman Ward, Station Road Policy Unit

The Station Road Policy Unit comprises of the Station Road area of Glanamman. This is located between the A474 Cwmamman Road and the Railway Line.

There is a small watercourse to the east of the Policy Unit area that will drain this area. This watercourse is culverted under the railway line.

23.1 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

23.2 Flooding Events

CCC have no record of any flooding in this area.

23.3 Flood Defence Capital Works undertaken by CCC

None

23.4 Flood Defence Assets

None

23.5 Routine Works and Maintenance

None

23.6 Proposed Future Works

Liaise with Network Rail regarding the maintenance of the culverted watercourse.

23.7 Flood Risk

23.7.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

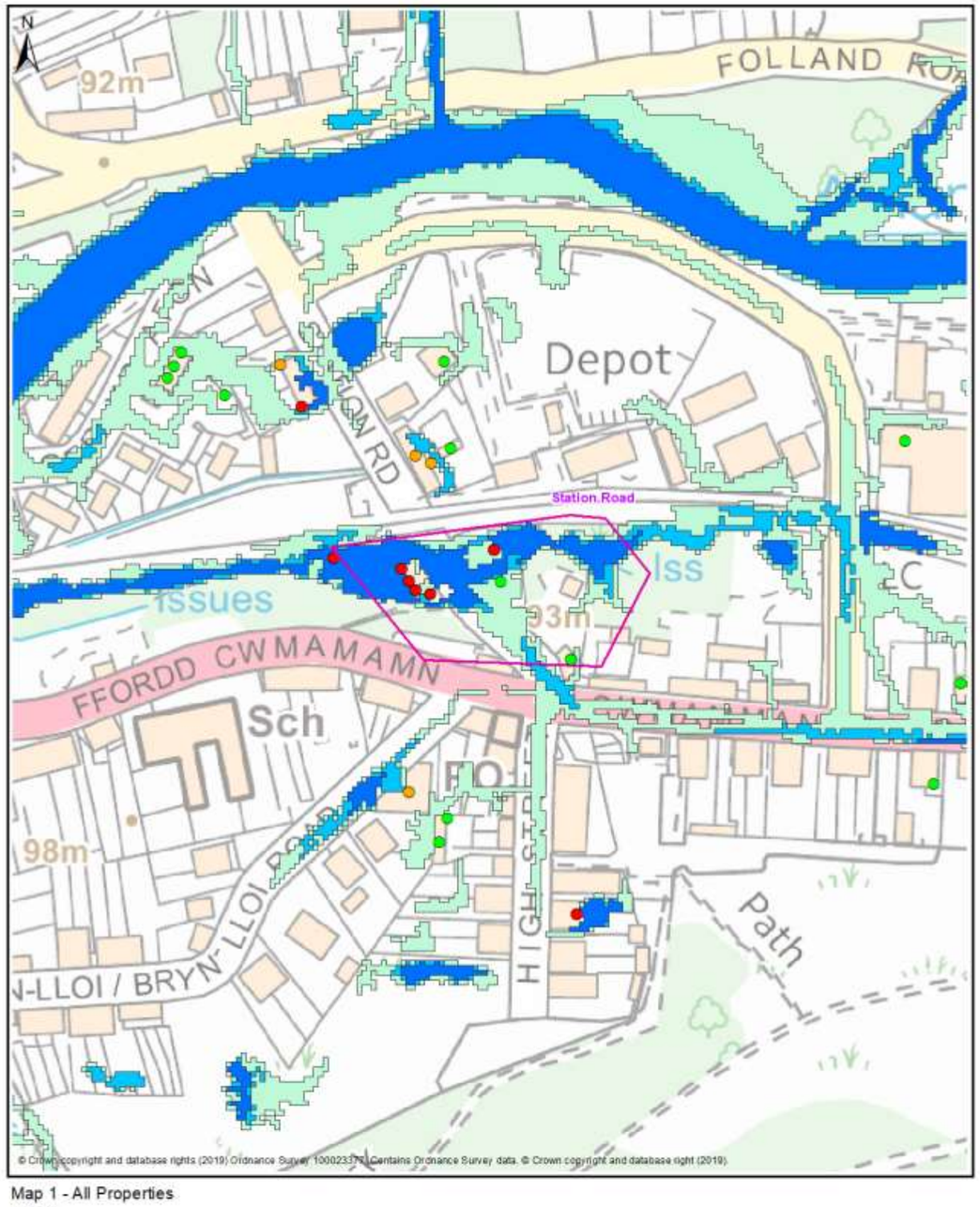
23.7.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

23.7.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	7	7	11
Map 2 Dwellings and Services	7	7	10
Map 3 CaRR	n/a	7	n/a



Map 1 - All Properties

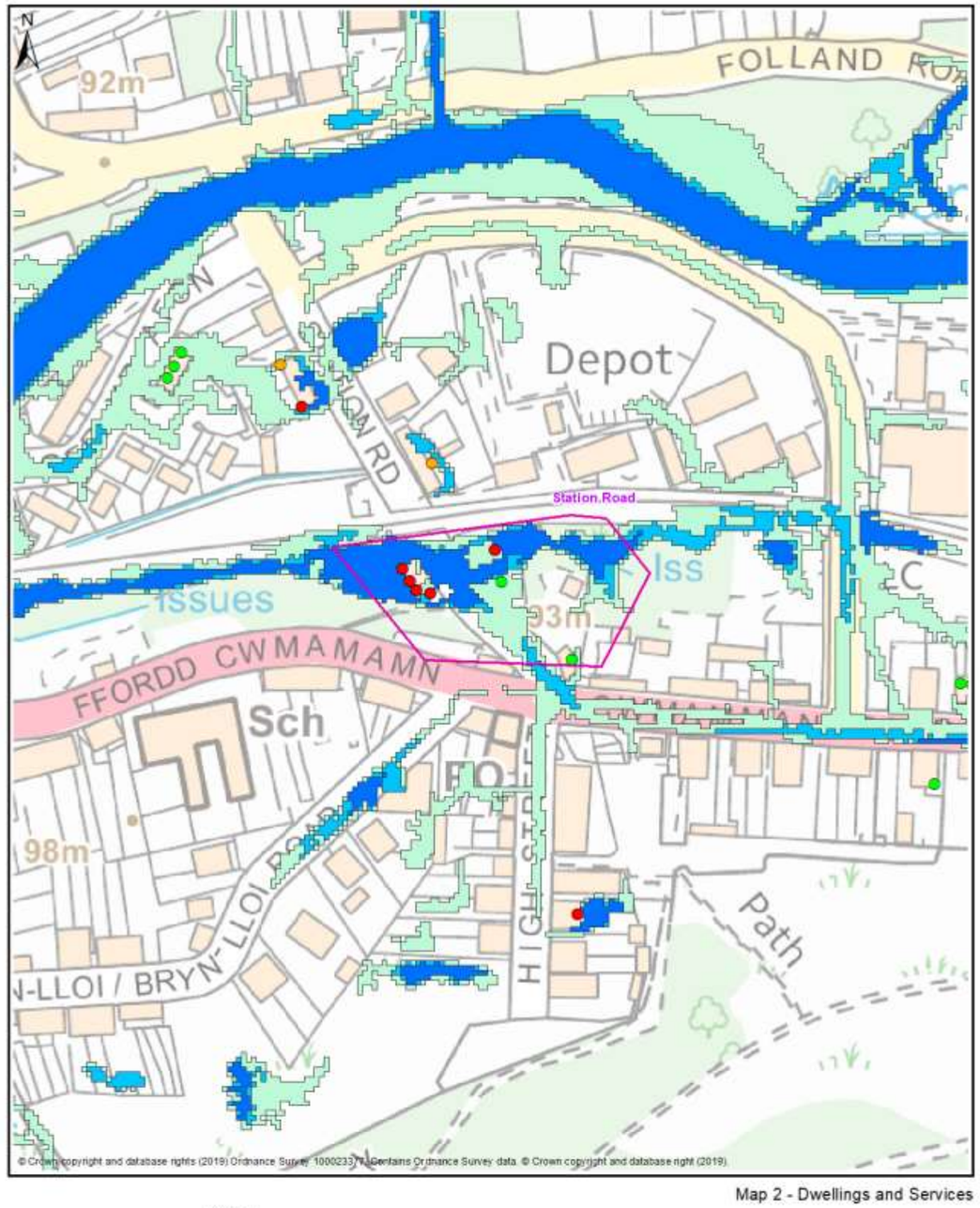
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Glanamman Ward

Station Road Policy Unit

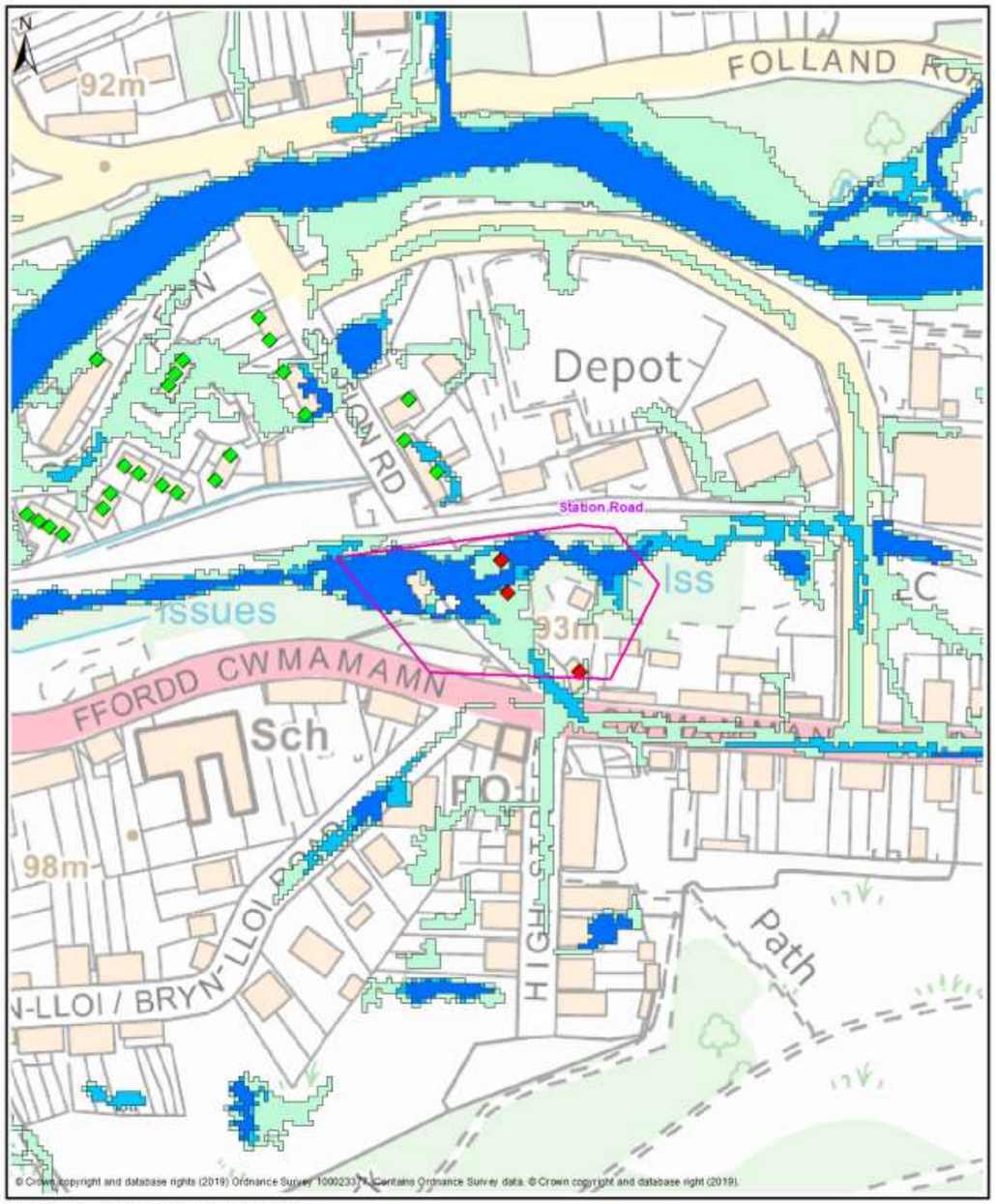
0 0.0275 0.055 0.11 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Pluvial

Glanamman Ward
Station Road Policy Unit

0 0.0275 0.055 0.11 Km

24 Glanymor Ward, Morfa Policy Unit

24.1 Area Description

The Morfa Policy Unit is a low lying highly developed, residential area in South Llanelli. The area is drained by the DCWW sewerage network and a branch of the Main River Dafen that is culverted through its southern area and discharges into Delta Lakes to the west.

24.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The Communities at Risk Register indicates that only 3 properties are at risk of pluvial flooding whereas 1167 are indicated to be at risk of tidal flooding. uFMfSW and property point information indicate significant numbers of properties at risk of flooding in higher return periods. These figures are sensitive to the drainage rate used in the modelling and it is likely that the actual figures are lower. The main flood risk to this area will continue to be tidal flooding.

24.3 Flooding Events

DCWW have recorded flooding incidents at Dolau Fawr and Haverlock Street. These appear to be isolated incidents and do not appear to part of a regular flooding problem.

24.4 Flood Defence Capital Works undertaken by CCC

None

24.5 Flood Defence Capital Works undertaken by Partner Organisations

DCWW are constructing the Station Road Surface Water Sewer. This will to cater for surface water from this area and north of the Railway.

This is being constructed to enable DCWW to reroute surface water from its combined sewer network and will provide additional foul and surface water capacity.

24.6 Flood Defence Assets

None

24.7 Routine Works and Maintenance

None

24.8 Proposed Future Works

Work with our partners to manage the current flood risk and the future risk associated with climate change.

24.9 Flood Risk

24.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

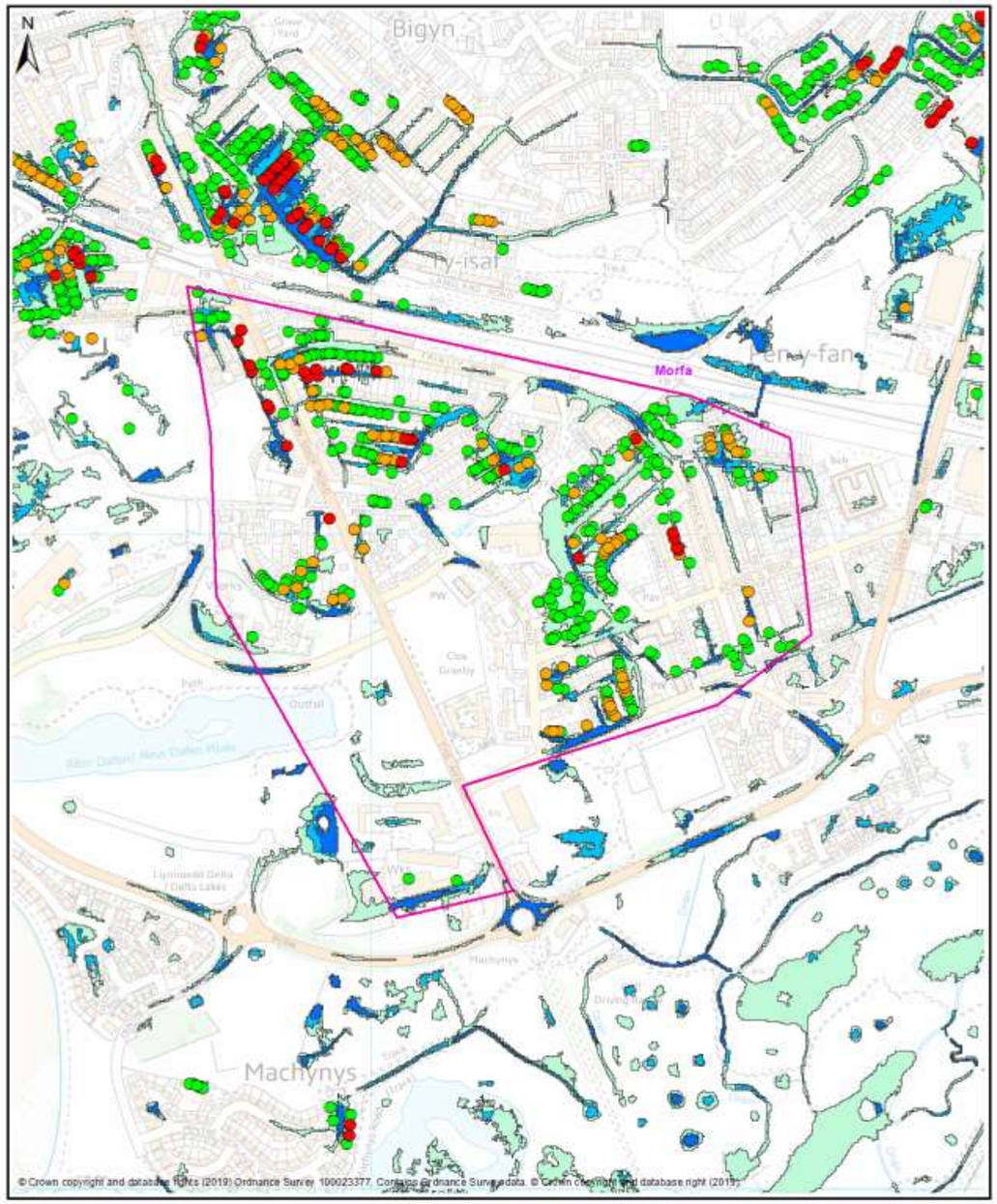
24.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

24.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	34	124	424
Map 2 Dwellings and Services	16	92	348
Map 3 CaRR	n/a	3	n/a



Map 1 - All Properties

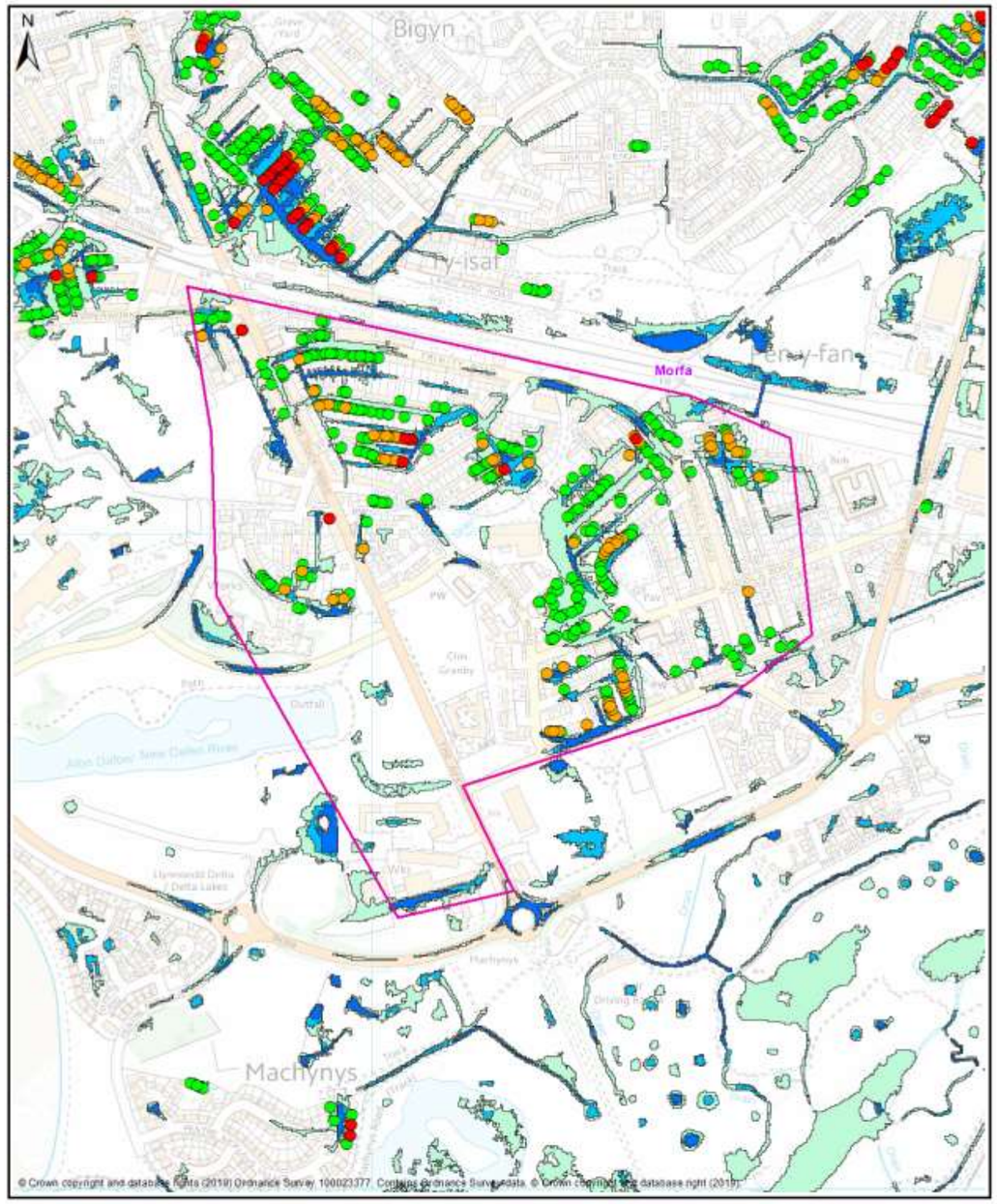
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Glanymor Ward

Morfa Policy Unit

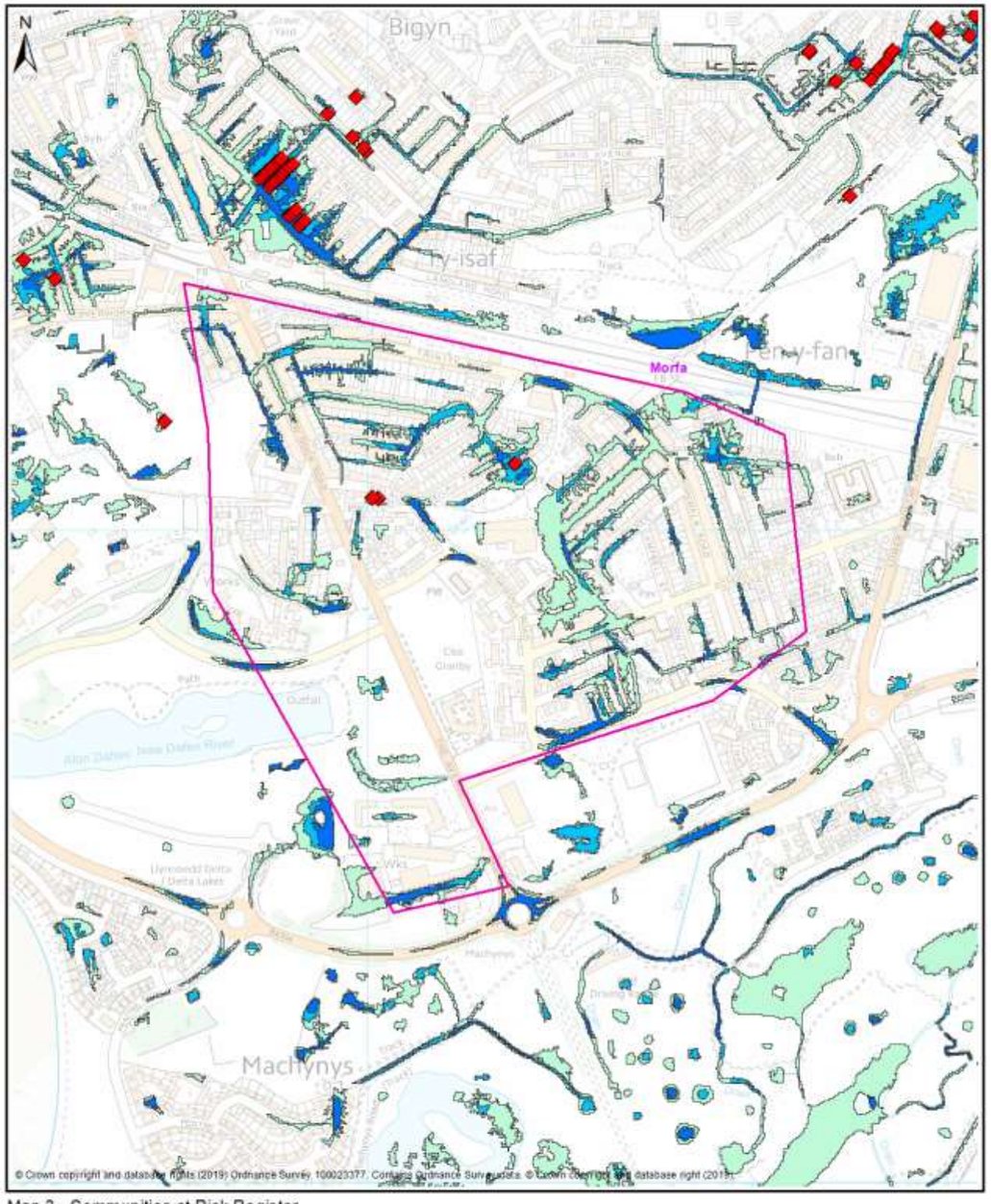
0 0.1 0.2 0.4 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Glanymor Ward
Morfa Policy Unit

0 0.1 0.2 0.4 Km

25 Glanymor Ward, Seaside Policy Unit

25.1 Area Description

The Seaside Policy Unit comprises the urban area in South Llanelli. The surface water drainage is made up of highway drains that primarily discharge into the DCWW sewer network.

25.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this Policy Unit area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from pluvial flooding.

25.3 Flooding Events

CCC have no record of any flooding in this area.

25.4 Flood Defence Capital Works undertaken by CCC

CCC has not undertaken any flood defence works in this area.

DCWW have carried out works in this area as part of their Rainscape Project to manage surface water in Llanelli and reduce the number of spills from its combined sewer network.

25.5 Flood Defence Assets

None

25.6 Routine Works and Maintenance

None

25.7 Proposed Future Works

Continue to liaise and cooperate with DCWW in implementing their Rainscape Project.

25.8 Flood Risk

25.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

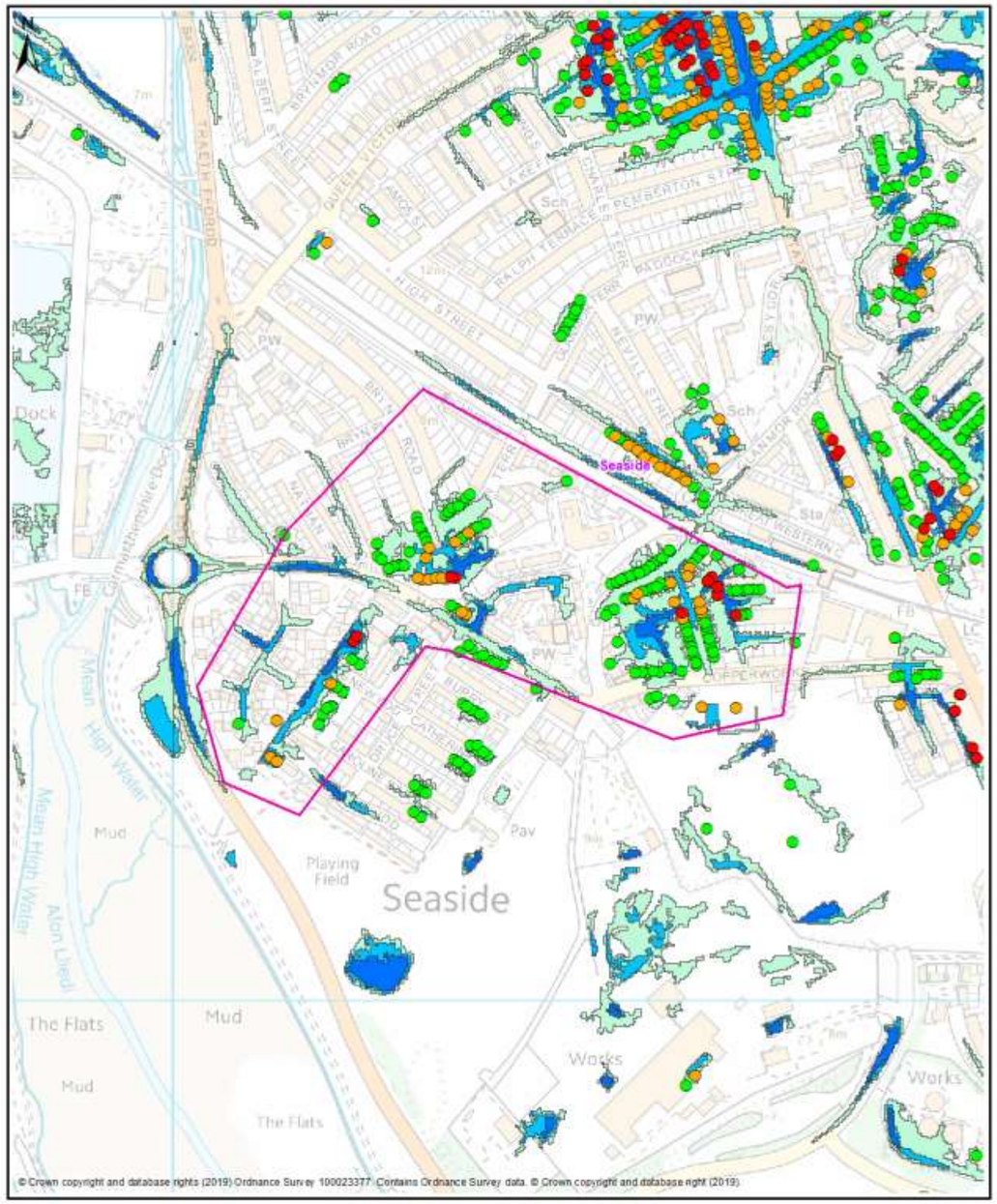
25.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

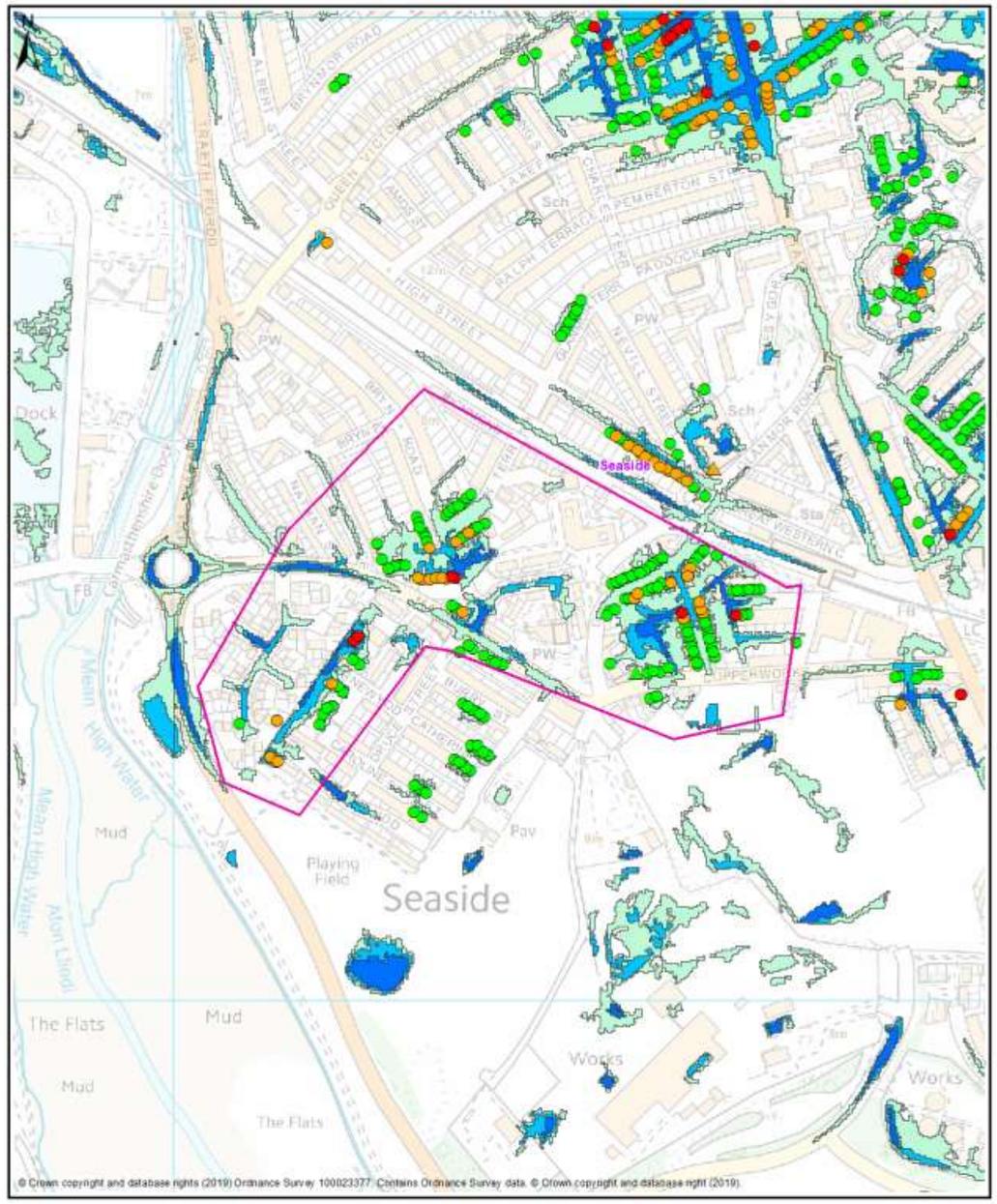
25.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	10	41	164
Map 2 Dwellings and Services	6	32	141
Map 3 CaRR	n/a	4	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

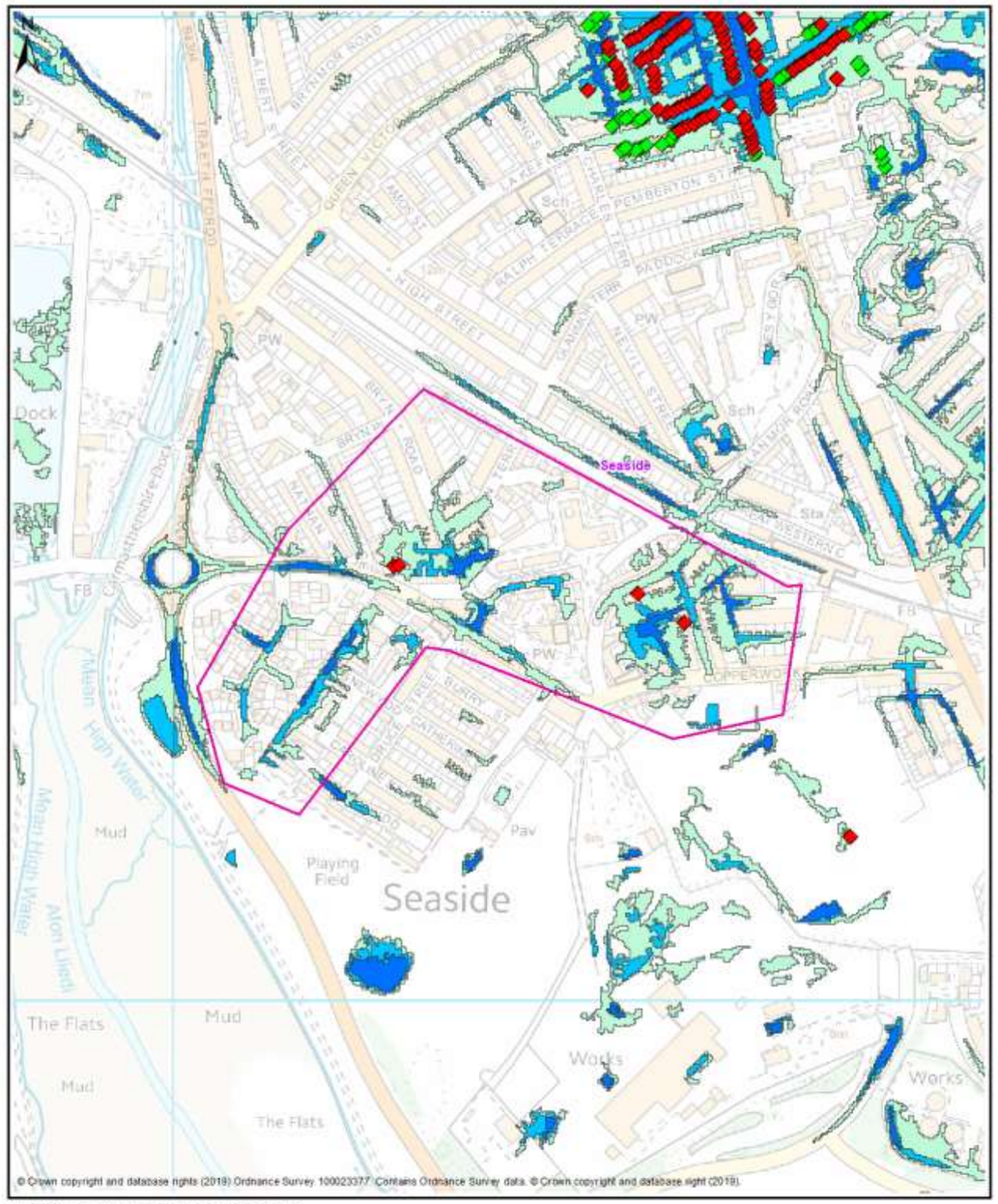
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Glanymor Ward
Seaside Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Glanymor Ward
Seaside Policy Unit

0 0.05 0.1 0.2 Km

26 Gorslas Ward, Drefach Policy Unit

26.1 Area Description

The Drefach Policy Unit comprises the catchment associated with an unnamed ordinary watercourse to the north of the area and agricultural land to the east. This watercourse north of Brynglas flows in an open watercourse before being culverted underneath a path and through a trash screen The agricultural land to the east is at a higher level than the bungalows at Brynglas.

26.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

At No.65 to No.35 Brynglas, the highway and dwellings are below the level of the neighbouring drainage ditch serving the agricultural land. As such there is a risk that any water overtopping the bank will impact on the highway and neighbouring properties. In addition to this, the culverted section of watercourse west of No.42 Brynglas is at risk of blockage at the trash screen.

26.3 Flooding Events

- 2017: Ditch in field blocked resulting in surface water flooding - 1 domestic property flooded internally
- 2017: Flooding from Nant Y Dderwen - 1 property affected, external issues only
- 2018: Blockage of Bryn Glas Trash Screen - no internal flooding reported

26.4 Flood Defence Capital Works undertaken by CCC

- 1990s: Bryn Glas trash screen constructed on unnamed watercourse
- 2017: A damaged section of culvert was renewed and a new bund and headwall was constructed to the east of No.35 Brynglas

26.5 Flood Defence Assets

- Retaining Bund
- Bryn Glas Trash Screen

26.6 Routine Works and Maintenance

Area	Works Undertaken	When
Bryn Glas Trash Screen	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Retaining Bund	Formal T98 Inspection	Annually

26.7 Proposed Future Works

Continue to work with the Housing Division to manage the flood risk to the Bryn Glas Estate.

26.8 Flood Risk

26.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

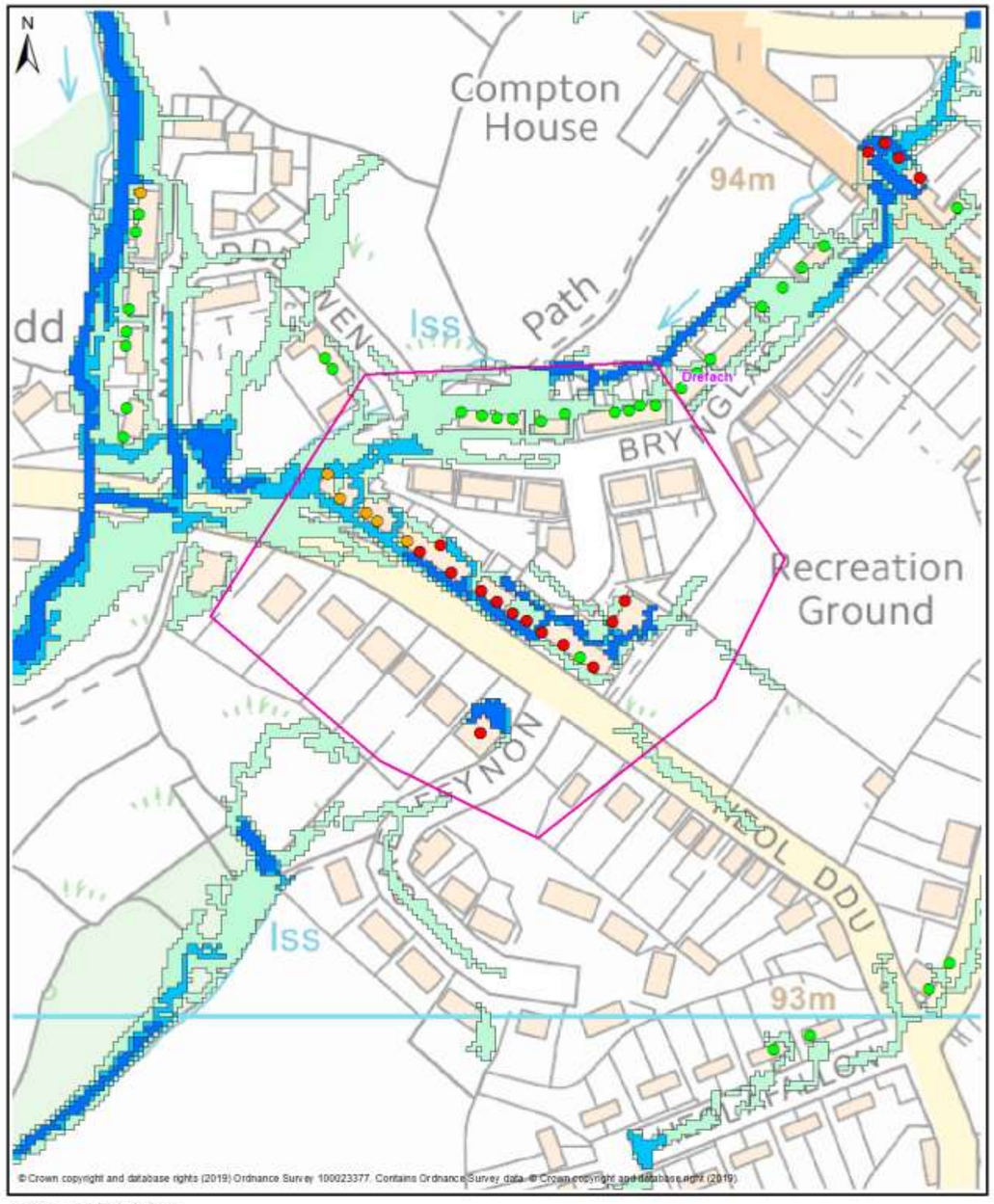
26.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

26.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	14	19	30
Map 2 Dwellings and Services	14	19	30
Map 3 CaRR	n/a	4	n/a



Map 1 - All Properties

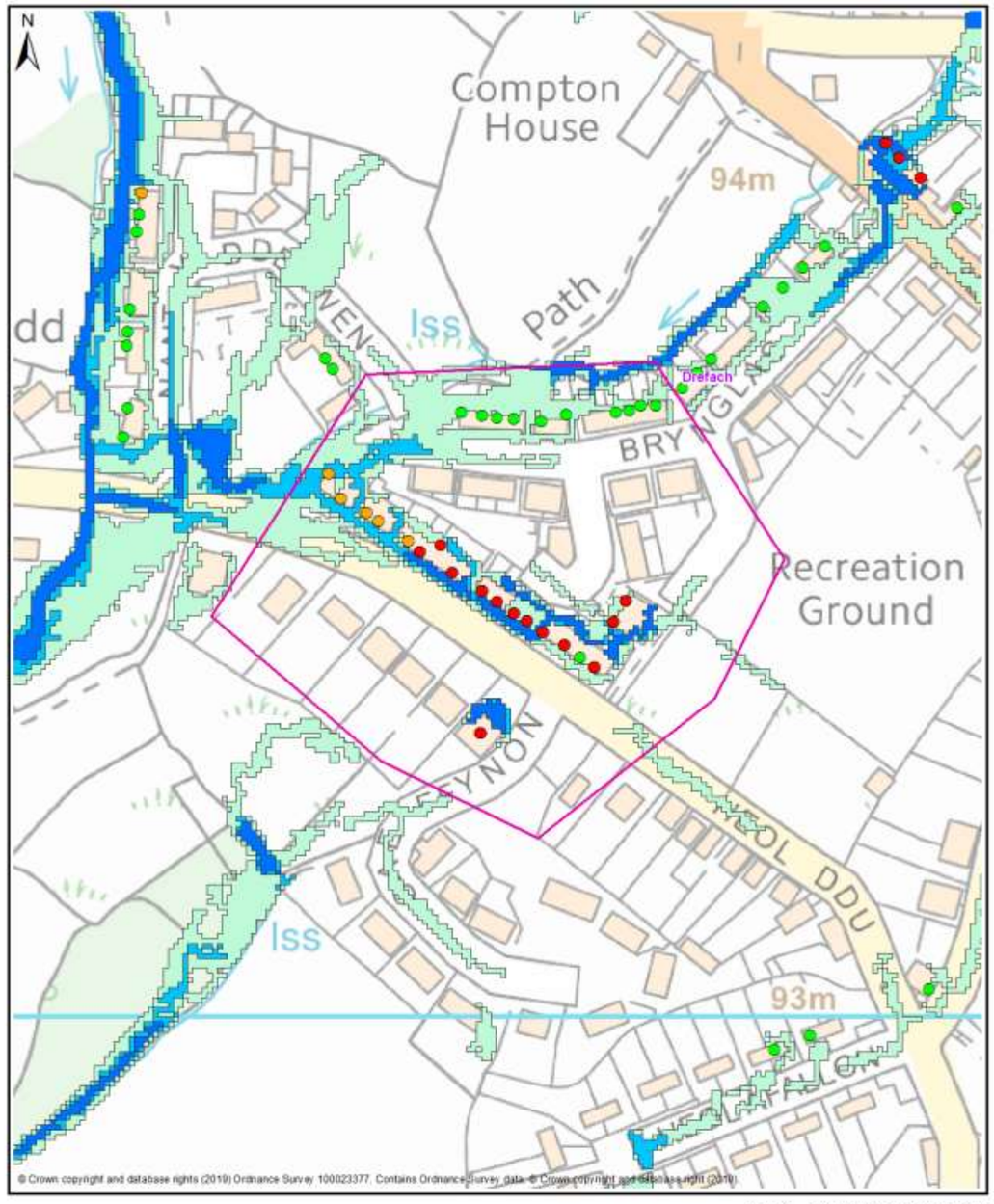
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Gorslas Ward

Drefach Policy Unit

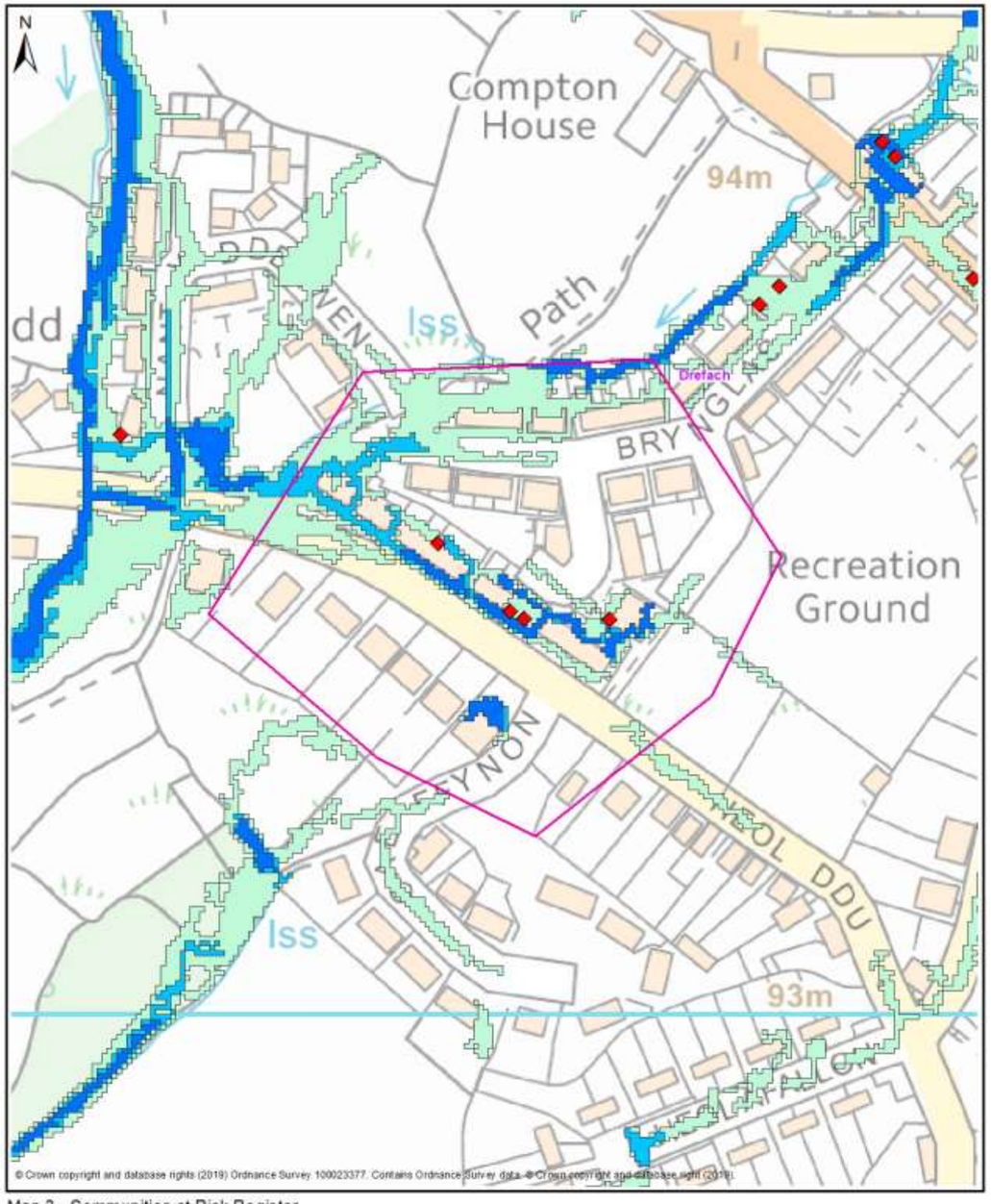
0 0.0275 0.055 0.11 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Gorslas Ward
Drefach Policy Unit

0 0.0275 0.055 0.11 Km

27 Gorslas Ward, Gorslas Square Policy Unit

27.1 Area Description

The Gorslas Square Policy Unit is located in the upper reaches of the Gwendraeth Fawr catchment with large rural areas upstream comprising of very boggy terrain and forestry. The Llyn Lech Owen Reservoir is located above the Policy Unit and the fields between both have numerous drainage ditches which collect surface water and drain it towards the square. Gorslas has a mixture of high and low density residential homes and several businesses.

27.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The local area is notably boggy, and the natural run-off rate of the surrounding fields is likely to be much higher than average. In addition to this the geology of the area is very clayey. Local developments in the area have also found high water tables and have had difficulty in controlling surface water.

While no reports of flooding have been received by CCC, continued development of the area may change this and potentially cause issues if careful planning is not implemented.

27.3 Flooding Events

CCC have no record of any flooding in this area.

27.4 Flood Defence Capital Works undertaken by CCC

None

27.5 Flood Defence Assets

None

27.6 Routine Works and Maintenance

Area	Works Undertaken	When
Gorlas Square Culvert	CCTV camera survey	2018

27.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

27.8 Flood Risk

27.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

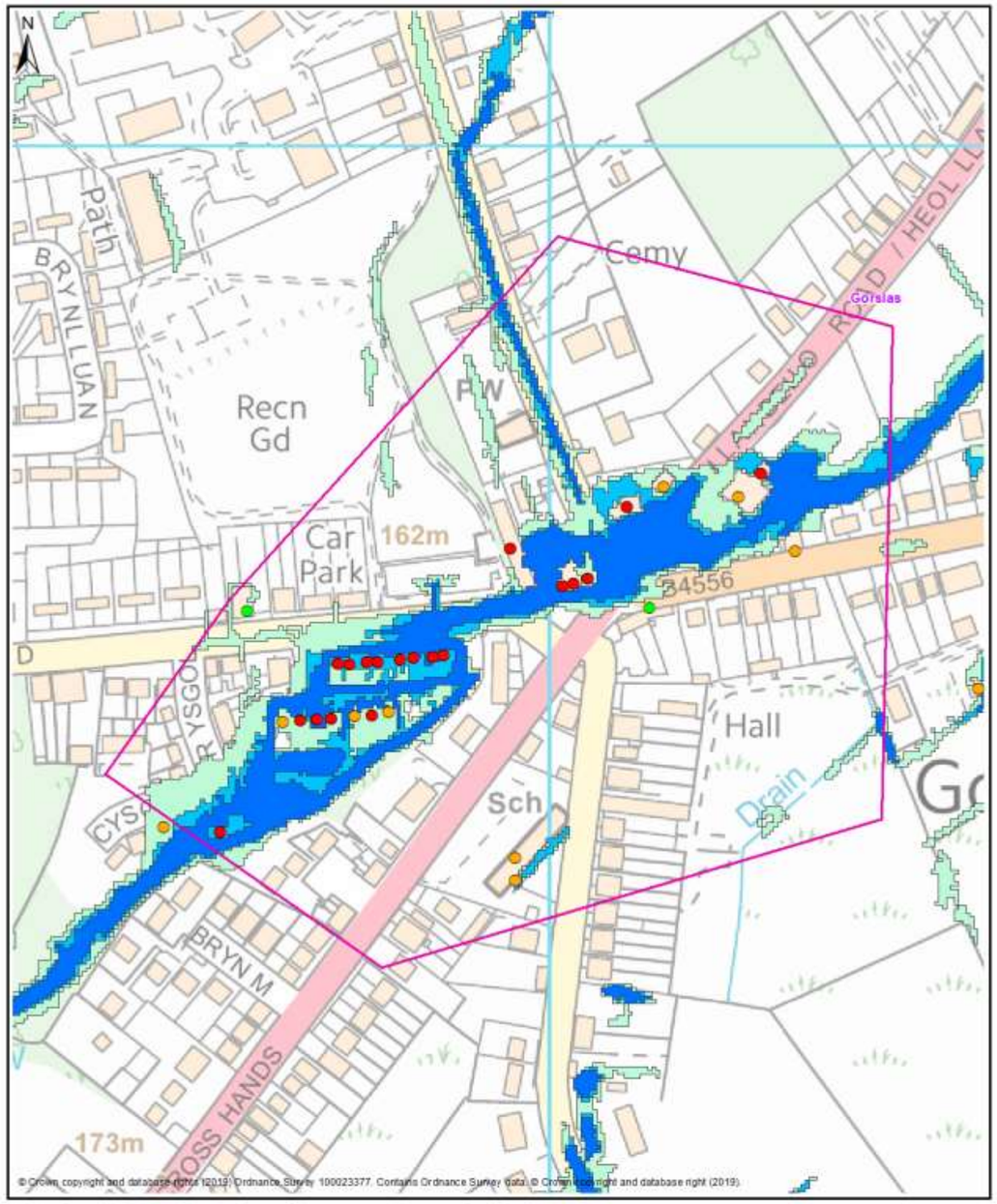
27.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

27.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	19	27	29
Map 2 Dwellings and Services	14	20	22
Map 3 CaRR	n/a	16	n/a



Map 1 - All Properties

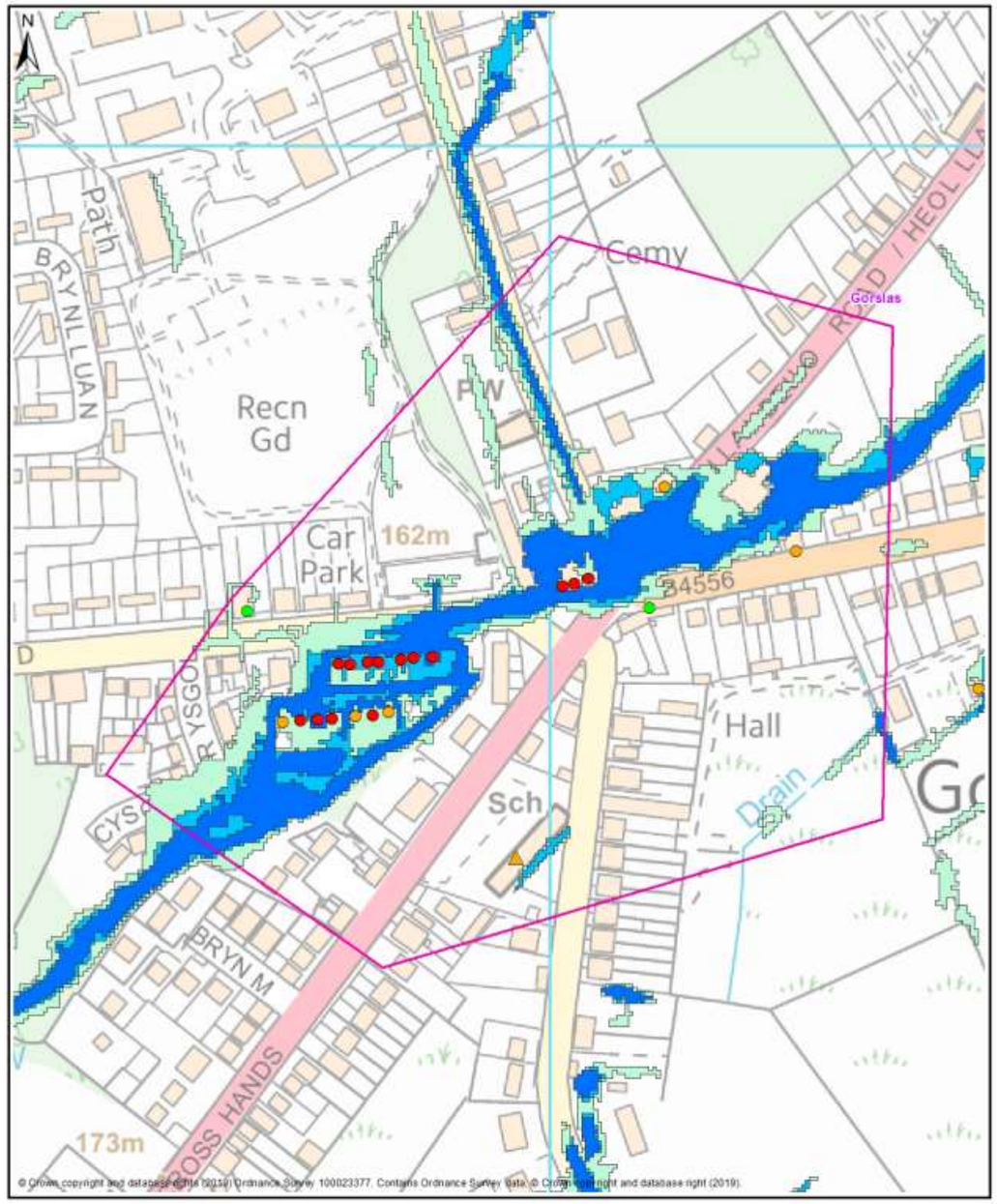
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Gorslas Ward

Gorslas Policy Unit

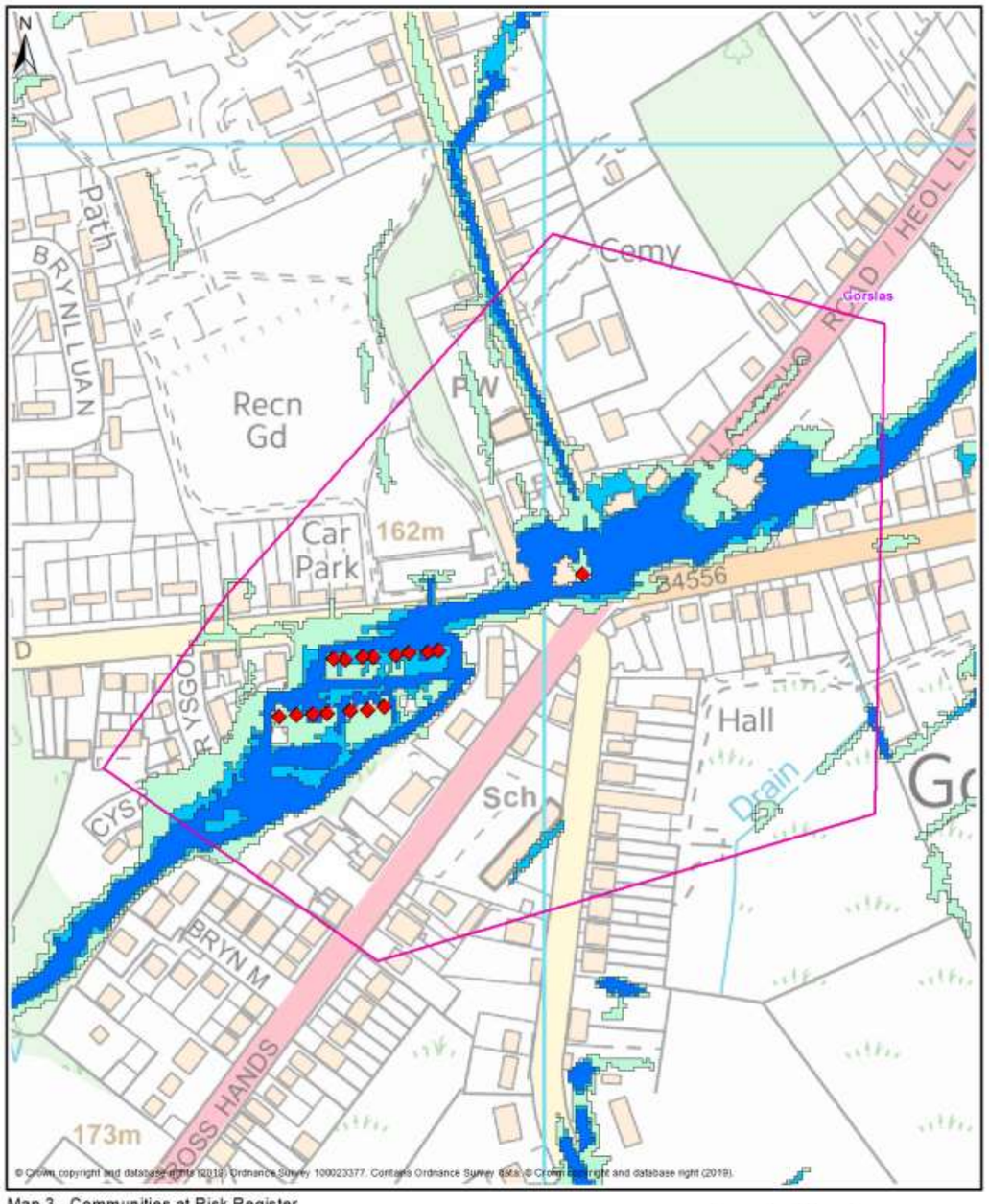
0 0.0325 0.065 0.13 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

28 Hengoed Ward, Iscoed & Sandy Road Policy Unit

Area Description

The Iscoed & Sandy Road Policy Unit comprises a large urbanised area in Llanelli which has several ordinary watercourses. These watercourses originate from Stradey Wood and the northern most reaches of Hengoed Ward. The River Cille was previously classed as Main River but has recently been re-classified as an ordinary watercourse and returned to an open channel. The Cille bypass culvert has now been classed as Main River and is maintained by NRW. All flows eventually discharge into Sandy Water Park.

28.1 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The catchment above the Policy Unit can be described as steep and comprises mainly open farmland but also has wooded area that can convey a large volume of surface water quickly to the urbanised area below.

In addition to this, culverted sections of watercourse are at risk of blockage and blockages can result in flooding.

28.2 Flooding Events

Iscoed has experienced extensive flooding historically but changes in the drainage system to facilitate the development of the new Furnace School and the Taylor Wimpey Homes have removed this 'pinch point'.

- 2013: Groundwater flooding of gardens in Denham Avenue
- 2015: Groundwater flooding of gardens in Denham Avenue
- 2016: Groundwater flooding of gardens in Denham Avenue
- 2016: Flooding in Penywern as a result of a blocked private surface water sewer.

There have been multiple complaints of gardens flooding in Denham Avenue and meetings have been held with MP Nia Griffiths and local residents. This flooding has been attributed to local groundwater.

28.3 Flood Defence Capital Works undertaken by CCC

- 2010: The trash screen at Penywern was upgraded
- 2017: Repair works were undertaken to a section of the Penywern Culvert post a collapse

28.4 Flood Defence Assets

Penywern Trash Screen	**Penywern Culvert**	**Denham Avenue Culvert**
K P Tyres Trash Screen	**K P Tyres Culvert**	

28.5 Routine Works and Maintenance

Area	Works Undertaken	When
Trash Screens	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Culverts	CCTV camera survey	2018

28.6 Proposed Future Works

Continue to work with local resident and elected members pertaining to surface water issues in Denham Avenue

The CCC Flood Defence and Coastal Protection Team are currently (2019) scoping options to replace the upper most section of a culvert watercourse at Penywern.

28.7 Flood Risk

28.7.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

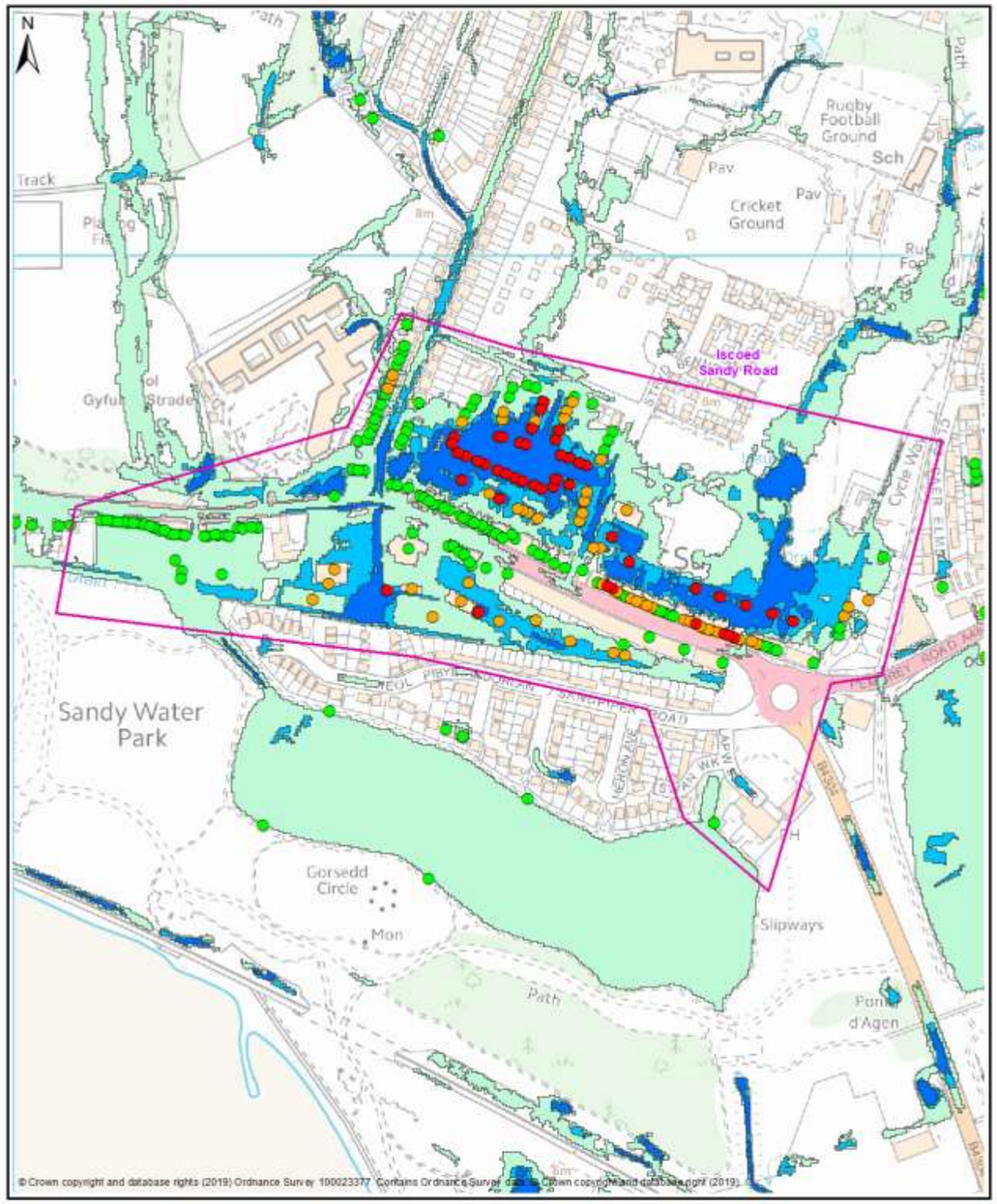
28.7.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

28.7.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	46	106	230
Map 2 Dwellings and Services	36	72	185
Map 3 CaRR	n/a	66 Pluvial 186 Fluvial	n/a



Map 1 - All Properties

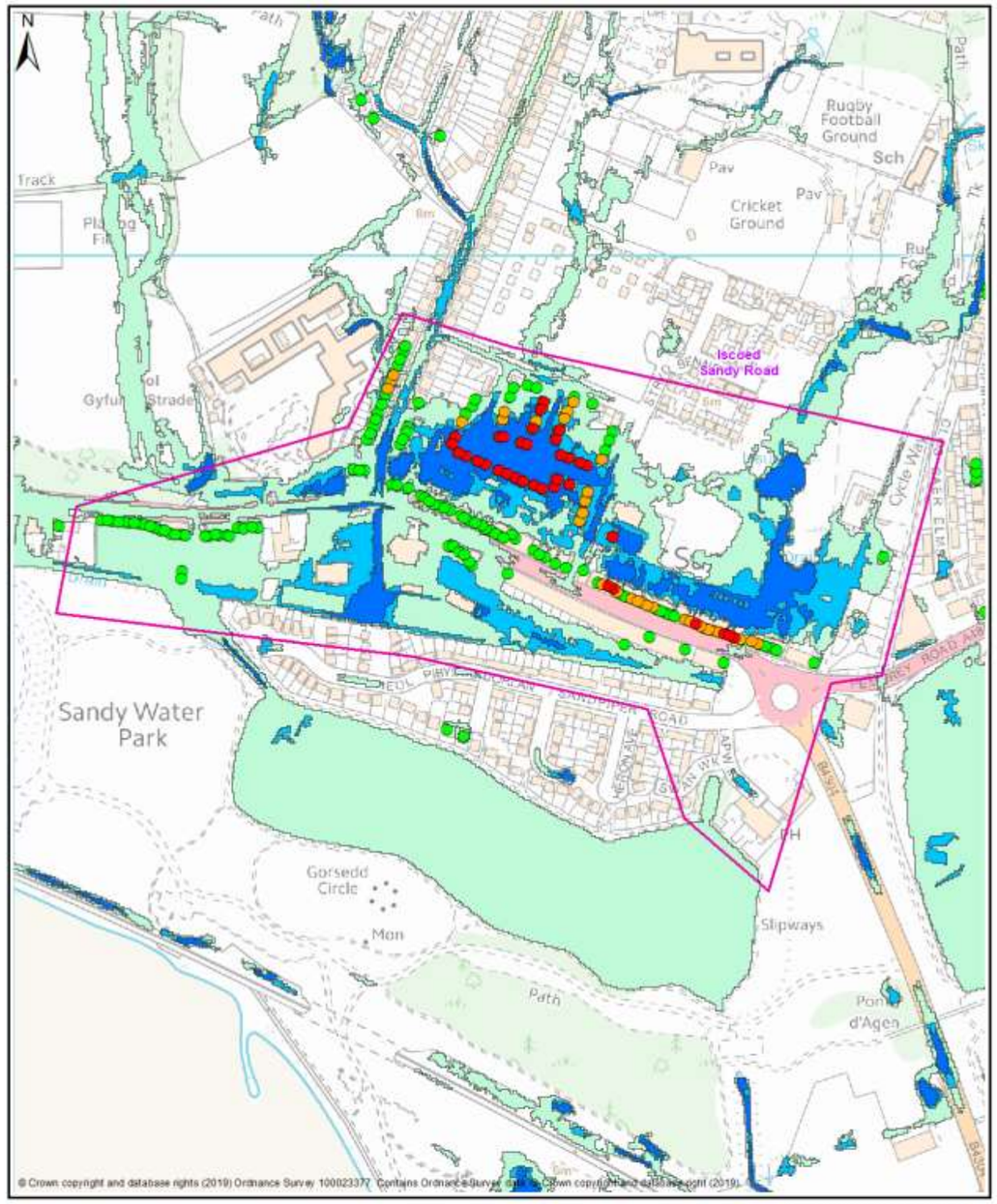
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Hengoed Ward

Iscoed Sandy Road Policy Unit

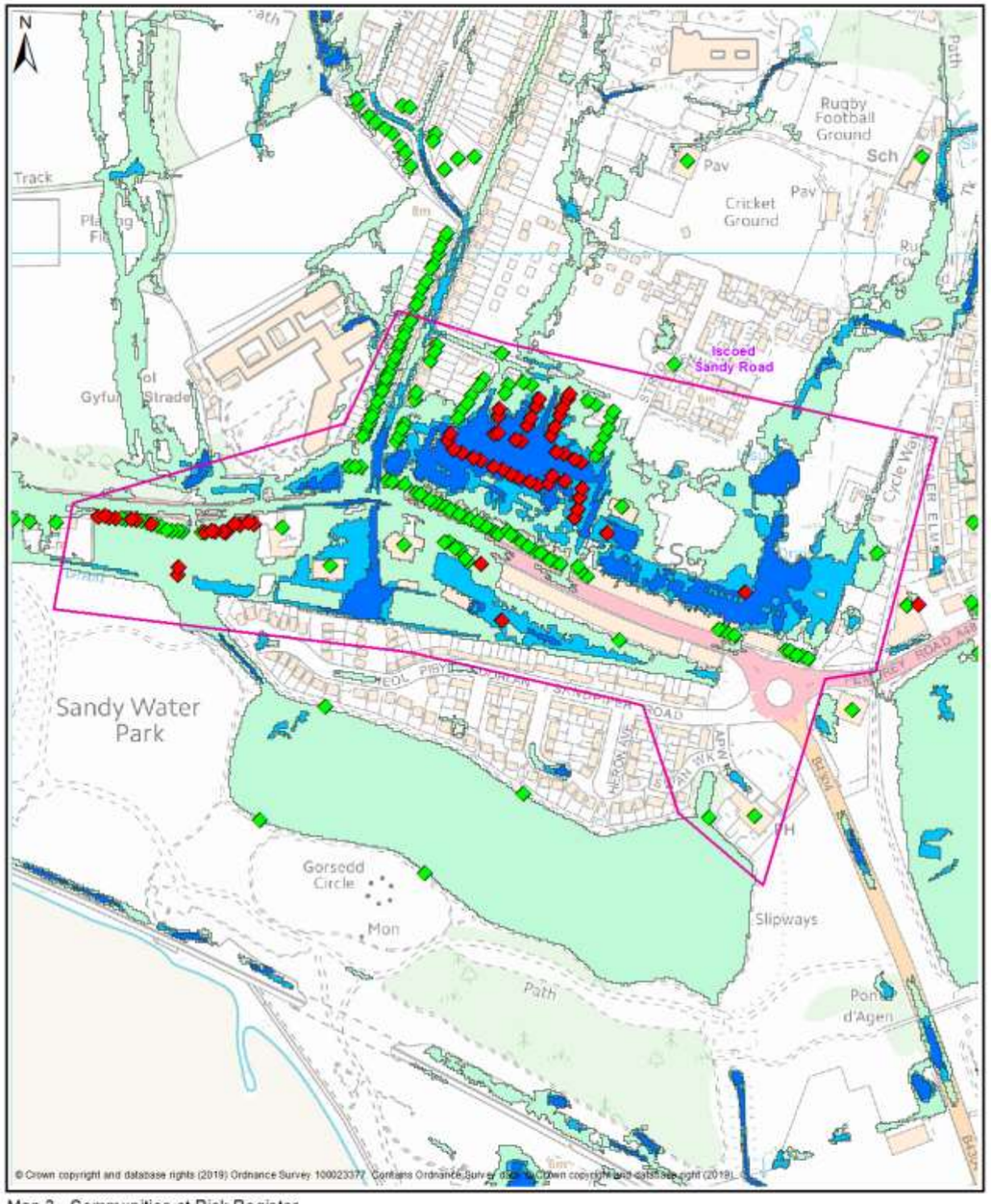
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

29 Hengoed Ward, Pwll Policy Unit

29.1 Area Description

The Pwll Policy Unit comprises the catchment associated with Afon Dulais. The catchment is predominately wooded running through the Stradey Estate from north to south. Prior to its discharge into the Loughor Estuary it passes through the residential area of Pwll and the Millennium Coastal Park (MCP).

29.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from watercourses.

The topography of the area can be detrimental to flooding; from a steep hill to flat land leading to estuary.

The area can become tide locked at high tides.

29.3 Flooding Events

- 2002: River flooding effecting Stepney Road properties.
- 2008: River flooding effecting Stepney Road properties.
- 2016: NRW bypass channel on River Cille overtopped, flooding properties in Bassett's Terrace and Sandy Road.

29.4 Flood Defence Capital Works undertaken by CCC

None

29.5 Flood Defence Capital Works undertaken by Partner Organisations

2014: NRW flood relief scheme on River Dulais in Stradey Woods and to rear of Bassets Terrace and Sandy Road.

29.6 Routine Works and Maintenance

None

29.7 Proposed Future Works

Support NRW, when required, to manage the flood risk.

29.8 Flood Risk

29.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

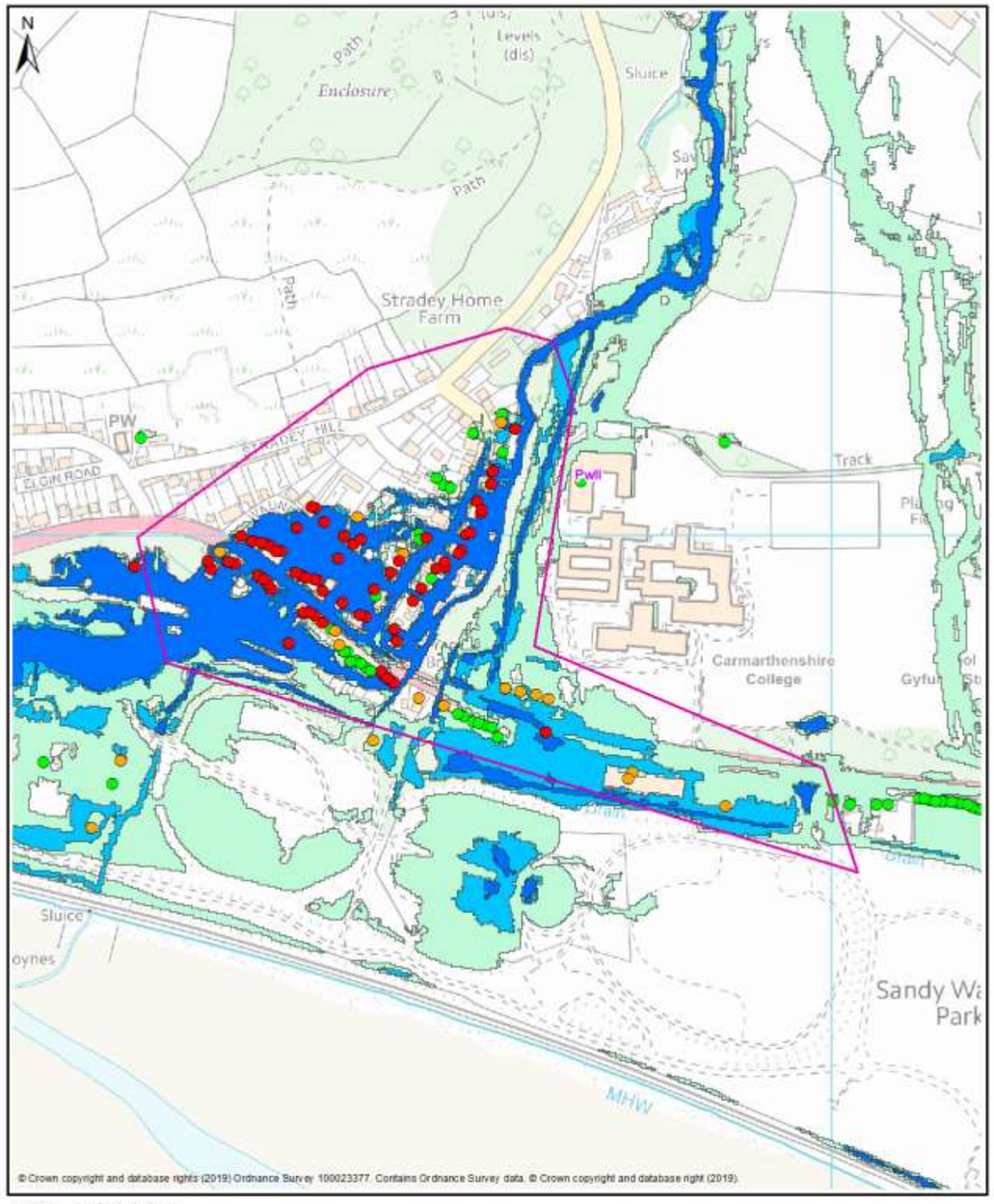
29.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

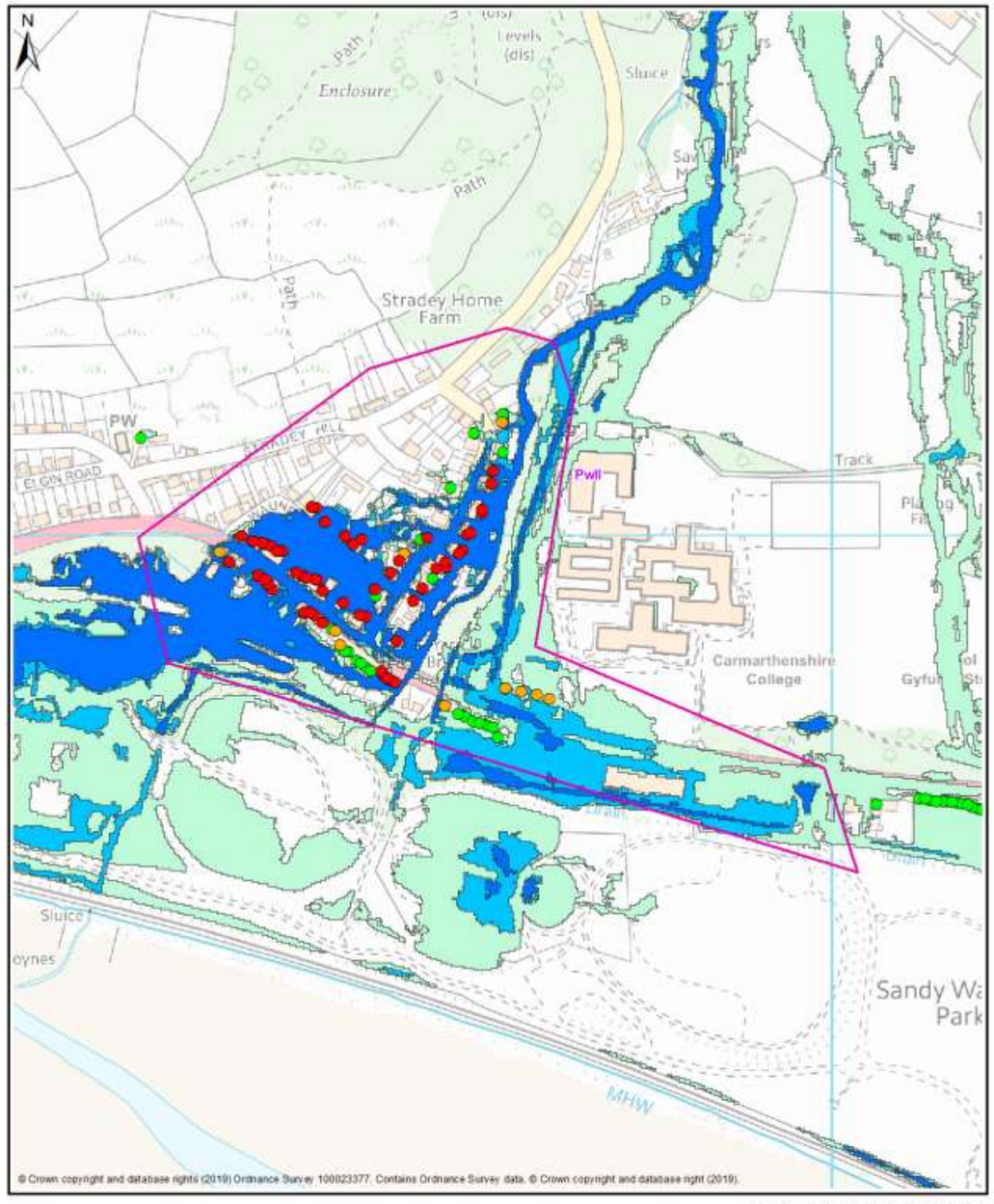
29.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	70	87	114
Map 2 Dwellings and Services	58	70	92
Map 3 CaRR	n/a	11 Pluvial 39 Fluvial 73 Tidal	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

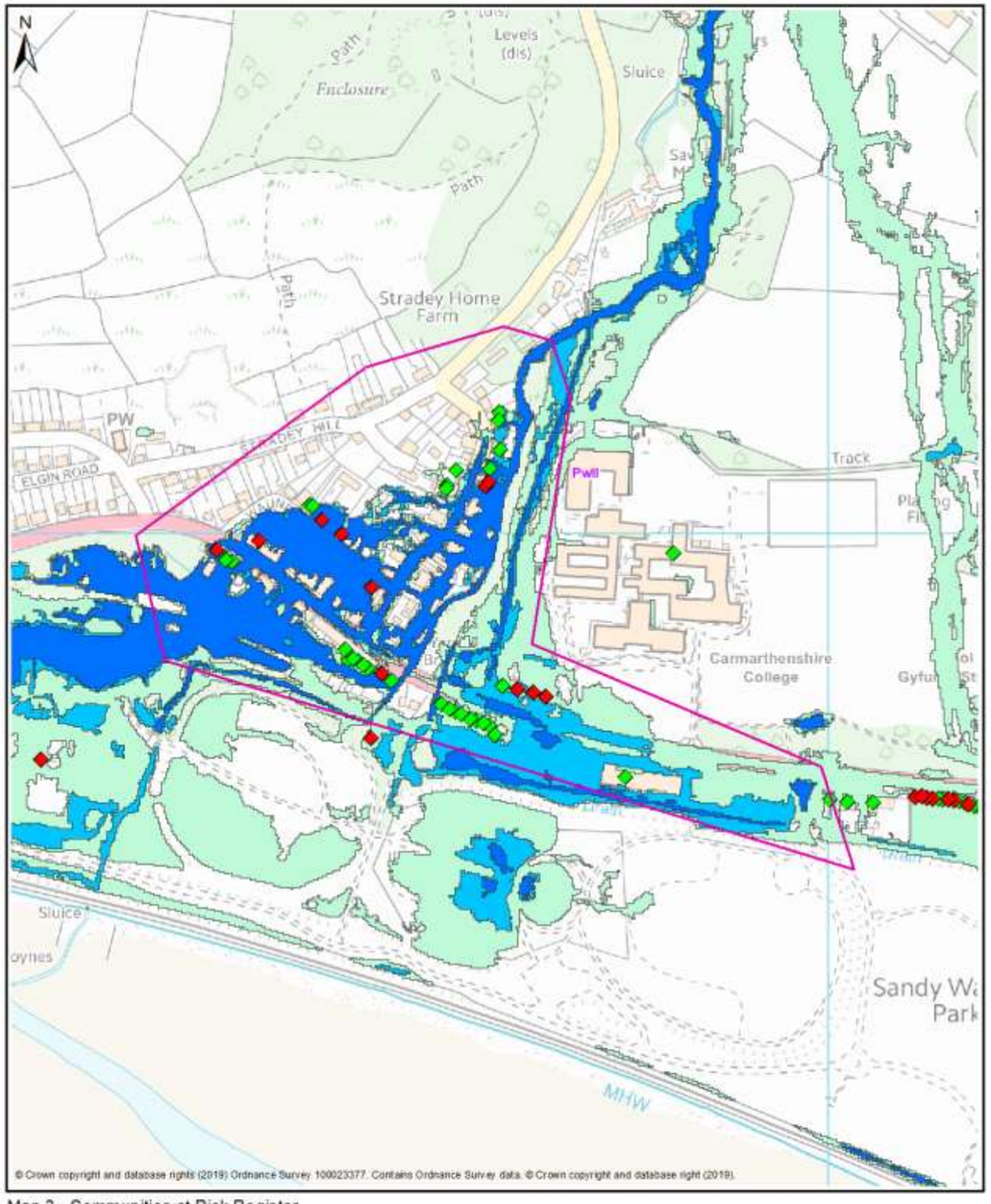
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Hengoed Ward
Pwll Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Pluvial

Hengoed Ward
Pwll Policy Unit

0 0.05 0.1 0.2 Km

30 Kidwelly Ward, Clos yr Helyg Policy Unit

30.1 Area Description

The Clos yr Helyg Policy Unit covers the area between Monksford Street to Banc Pen Dre.

This area is a valley with an ordinary watercourse culverted through it. The culvert starts opposite the Co-op on Monksford Street and is culverted to its discharge to an open watercourse near the DCWW pumping station.

30.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The UFMfSW indicates that properties at Clos yr Helyg are at risk of flooding.

30.3 Flooding Events

September 2008: 3 Properties flooded in Clos yr Helyg, believed to be caused by an obstruction.

30.4 Flood Defence Capital Works undertaken by CCC

None

30.5 Flood Defence Capital Works undertaken by Partner Organisations

None

30.6 Flood Defence Assets

Parc Pendre Culvert

30.7 Routine Works and Maintenance

Area	Works Undertaken	When
Clos Yr Helyg Culvert	CCTV inspection	2018

30.8 Proposed Future Works

The Flood Defence and Coastal Protection Team will continue to work with the Local Planning Authority to ensure that any development does not have an adverse effect on flood risk in the area.

30.9 Flood Risk

30.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

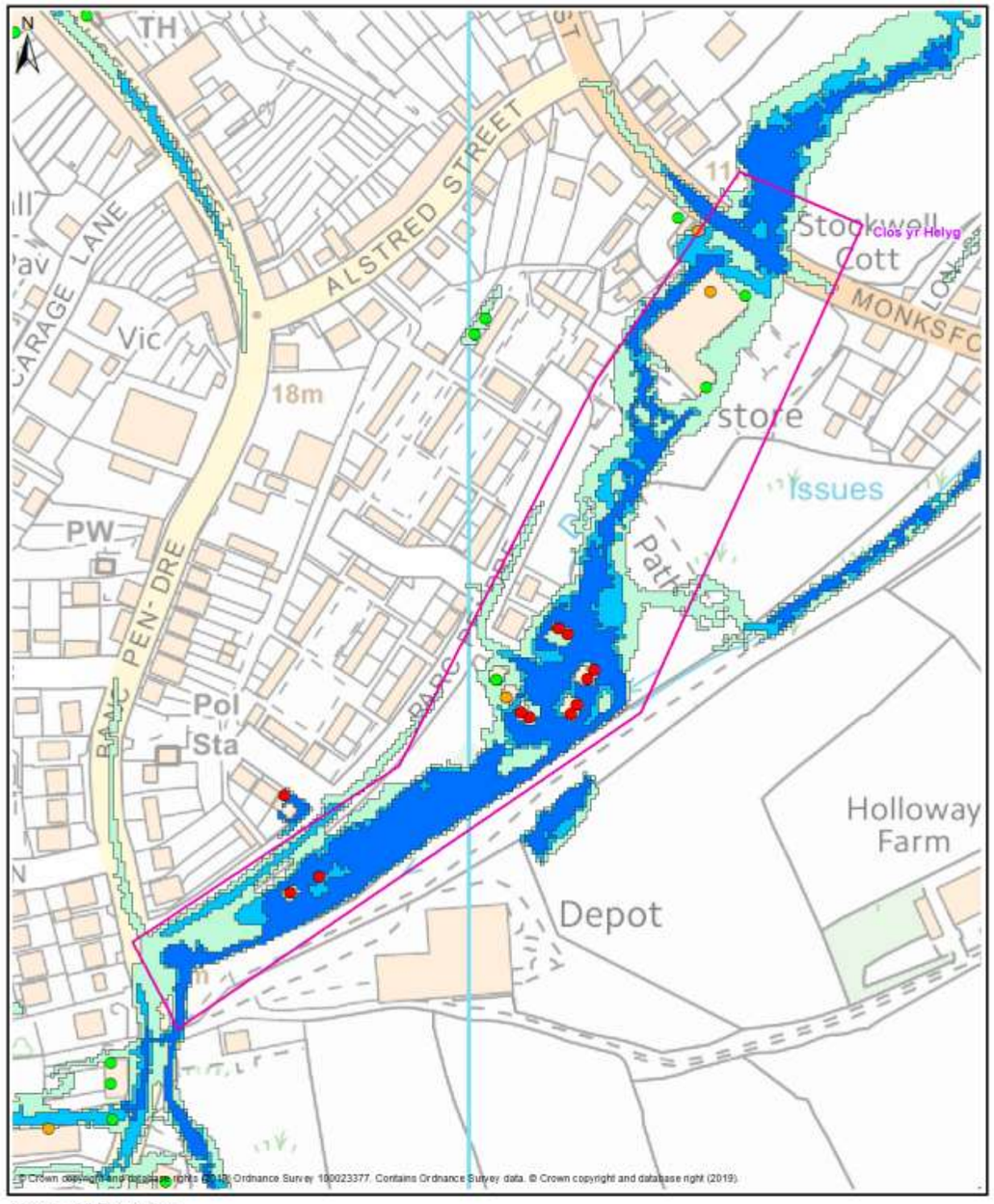
30.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

30.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	10	14	18
Map 2 Dwellings and Services	**9**	12	14
Map 3 CaRR	n/a	3	n/a



Map 1 - All Properties

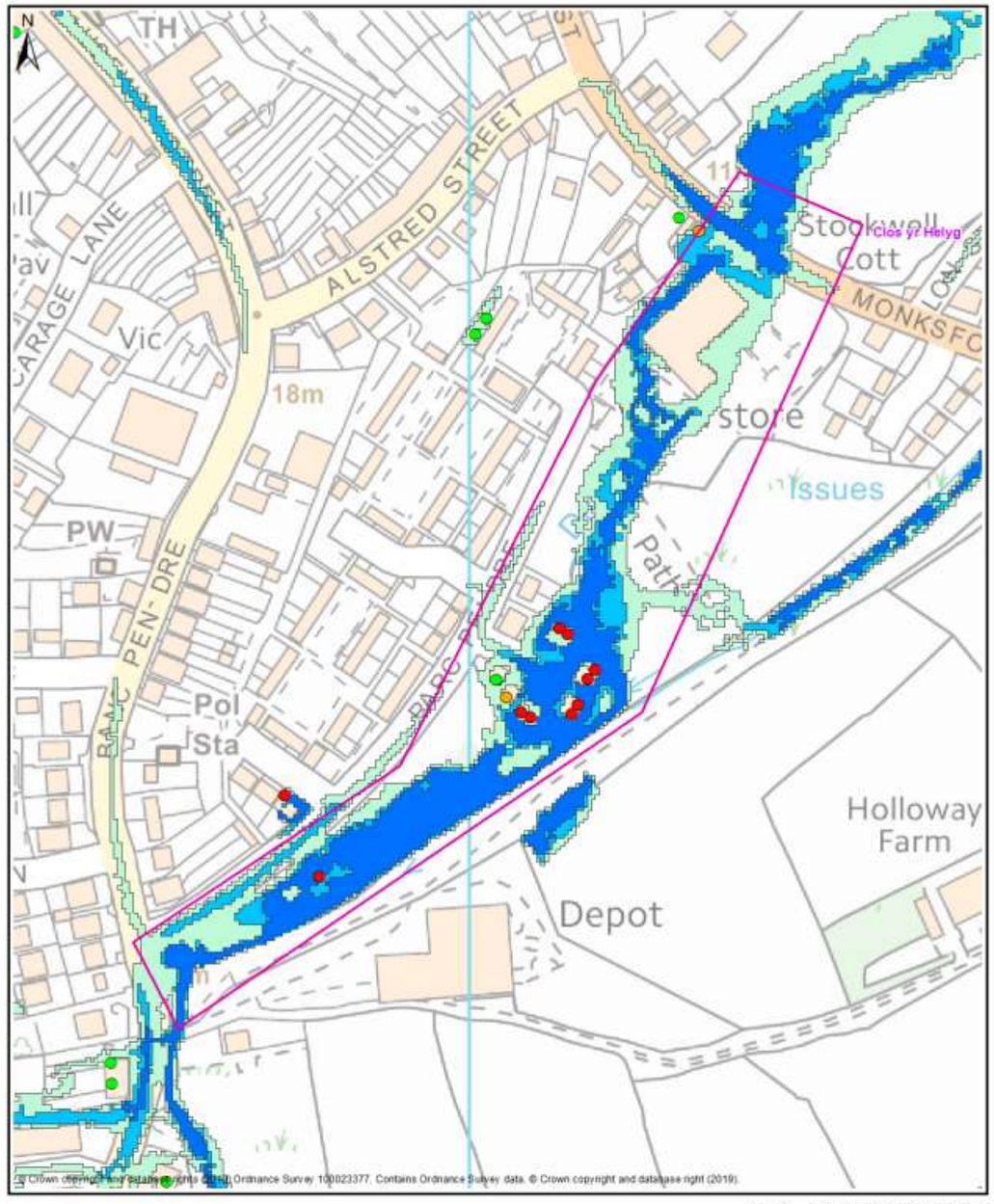
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Kidwelly Ward

Clos yr Helyg Policy Unit

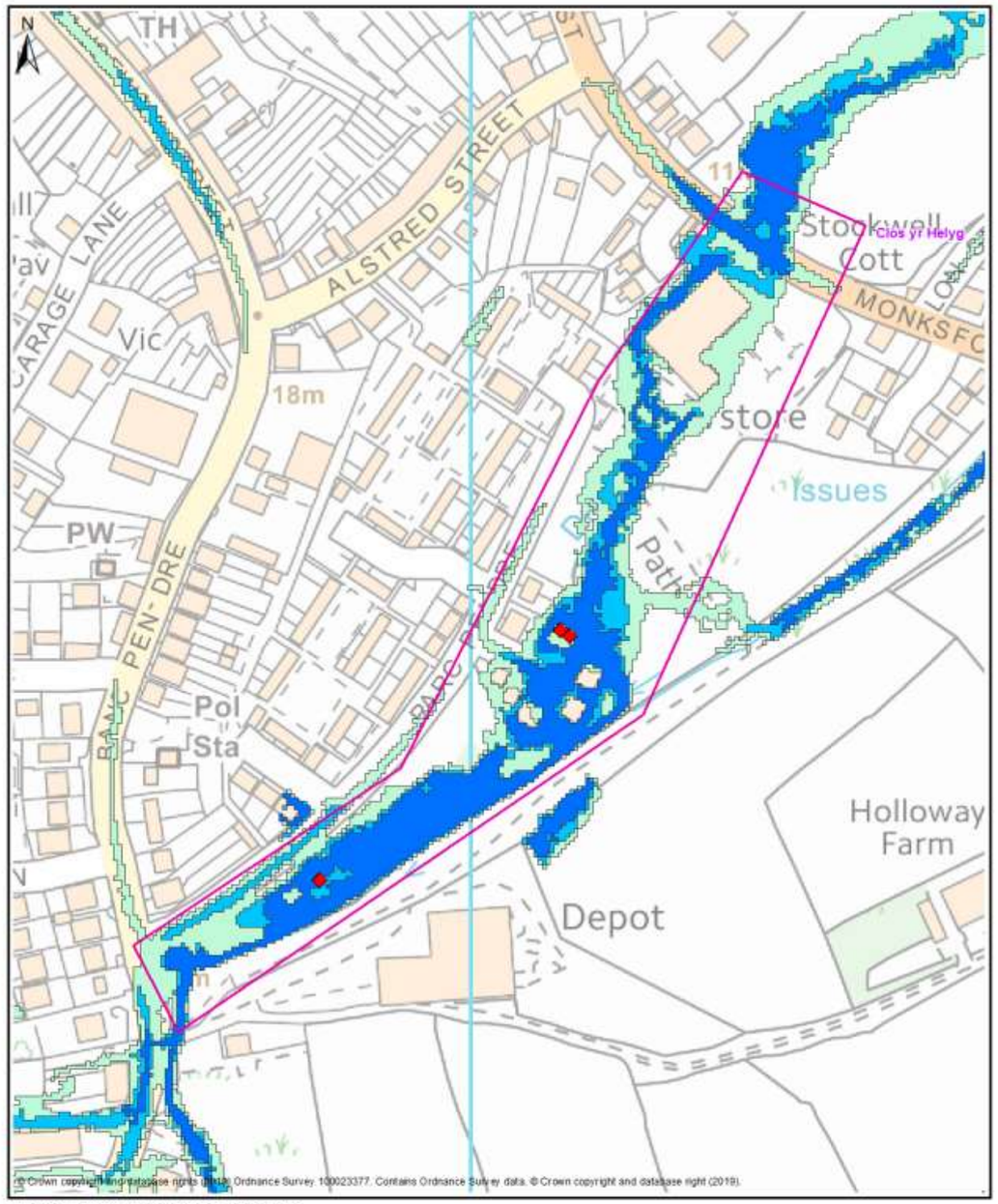
0 0.0325 0.065 0.13 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Kidwelly Ward
Clos yr Helyg Policy Unit

0 0.0325 0.065 0.13 Km

31 Kidwelly Ward, Ferry Road & New Road Policy Unit

31.1 Area Description

The Ferry Road & New Road Policy Unit comprises the catchment associated with an unnamed ordinary watercourse and agricultural land above Ferry Road and Water Street.

31.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

There have also been a series of flood events in this area.

31.3 Flooding Events

2001: Flooding at Cae Ffynon – No internal flooding recorded but knocked over a wall damaging a caravan. Large amounts of stone washed down watercourse to the trash screen.

Jan 2013: Flooding in New Street as a result of heavy rainfall and snowmelt causing the stream at Cae Ffynon to block with stone upstream of the trash screen.

A feature of the stream is its gradient; the stream falls approximately 80m over a length of 700m giving an average gradient of more than 1 in 10. This results in high energy flows that cause erosion and the transportation of large amounts of stone.

Flooding of Ferry Road and New Street has occurred as a result of direct run off from agricultural land above this area.

2013: Large amounts of soil were washed off the land above Ferry Road. The was transported along Ferry Road and subsequently deposited along Ferry Road, Water Street and New Street as shown in photo to the right.

31.4 Flood Defence Capital Works undertaken by CCC

- 2005: Improvements to the trash screen.
- Surface water drainage system in the Cul de Sac of No's 40-54 Ferry Road.
- 2015: A further extension and improvement to cater for the large amounts of stone at Cae Ffynnon trash screen. This included improved access road for maintenance.
- 2016: Improvements to surface water drainage gullies at land between No's 45-49 Ferry Road.

31.5 Flood Defence Assets

Cae Ffynon Trash Screen	Cae-Ffynnon Culvert

31.6 Routine Works and Maintenance

Area	Works Undertaken	When
Cae Ffynon Trash Screen	Debris Management	Monthly in the summer Weekly in the winter
	T98 Inspection	Annually
Cae Ffynon Culvert	CCTV survey	2019

31.7 Proposed Future Works

Assist the Highways Authority and manage existing flood risk assets.

31.8 Flood Risk

31.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

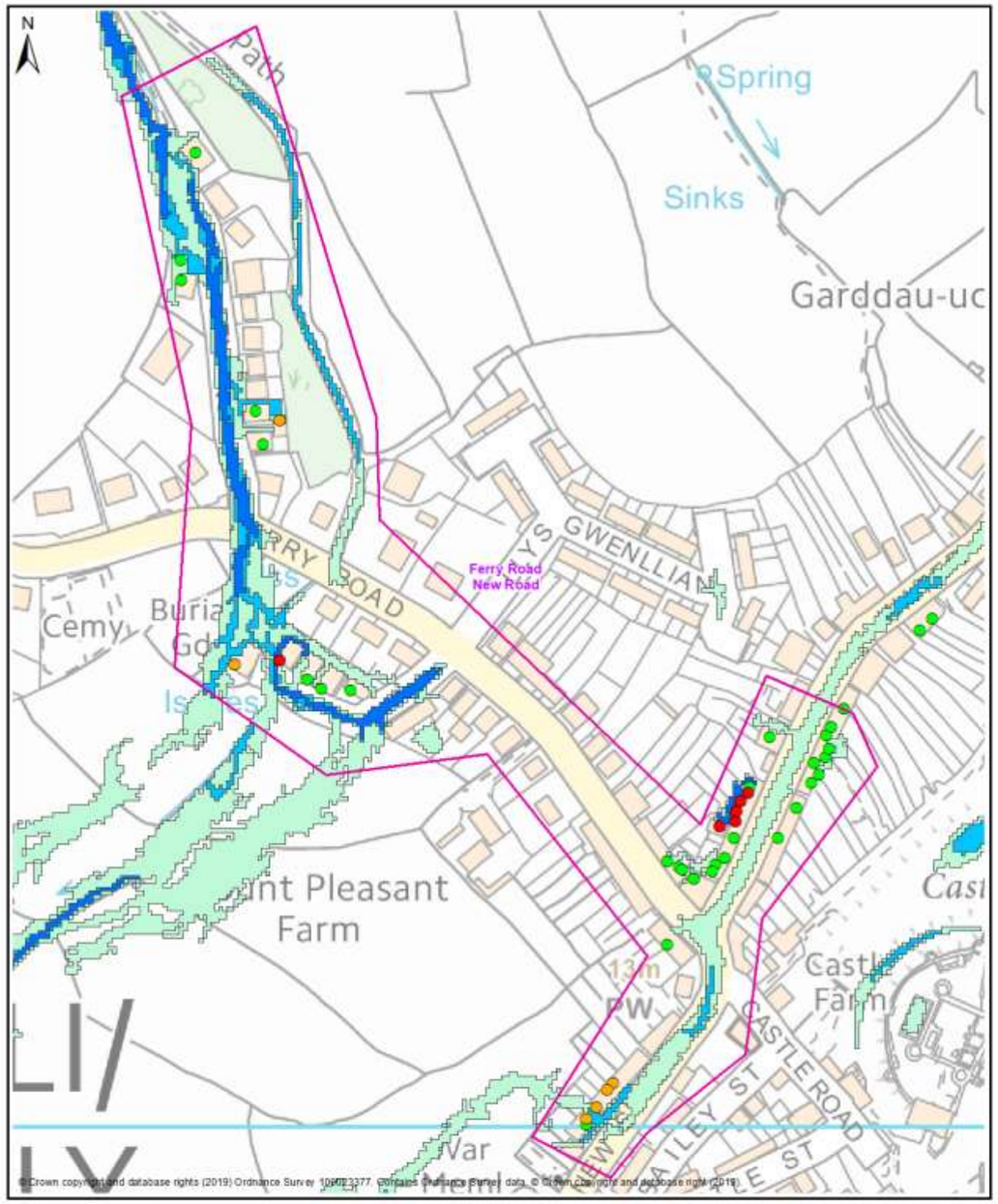
31.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

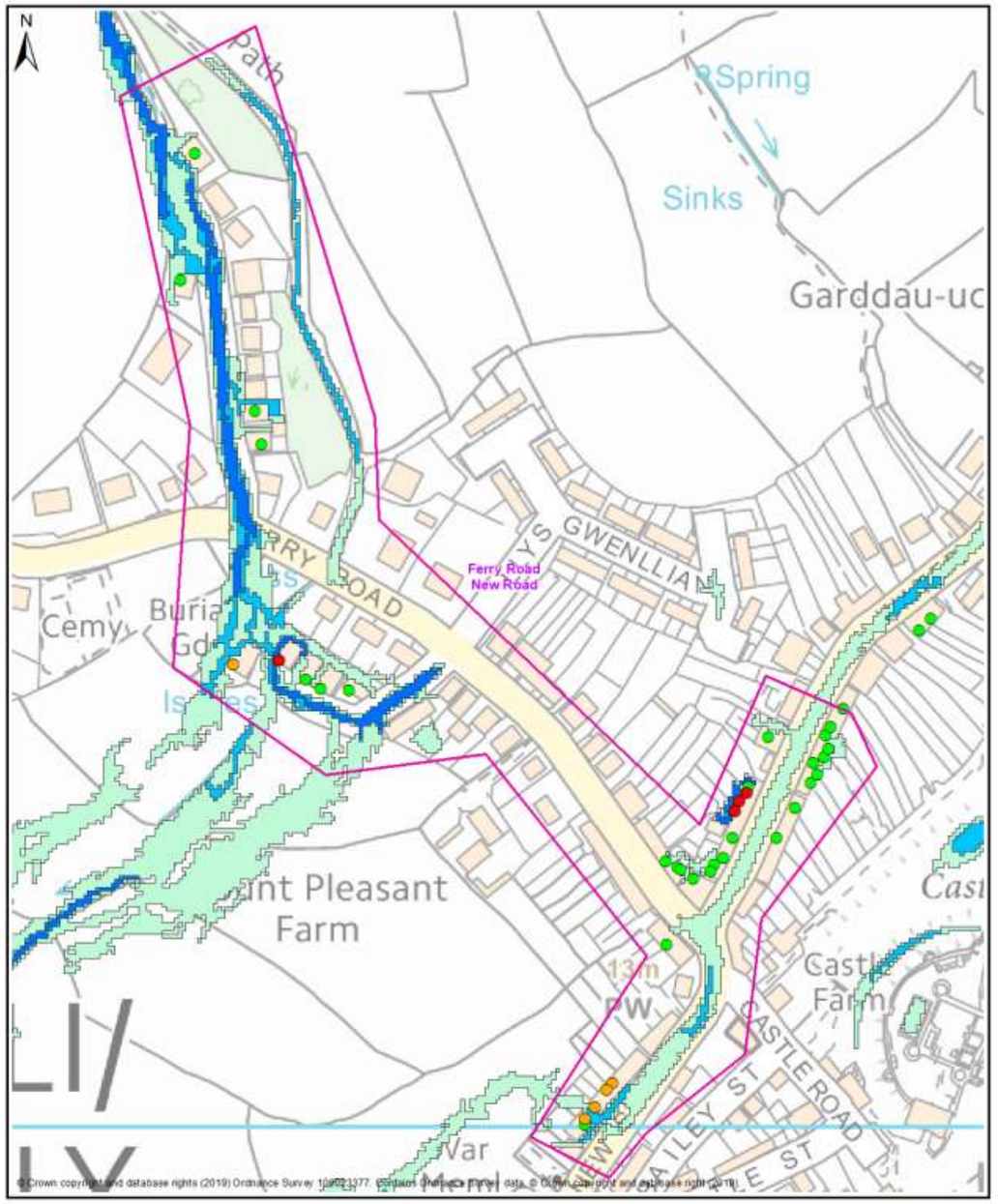
31.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	6	12	42
Map 2 Dwellings and Services	4	9	37
Map 3 CaRR	n/a	0	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

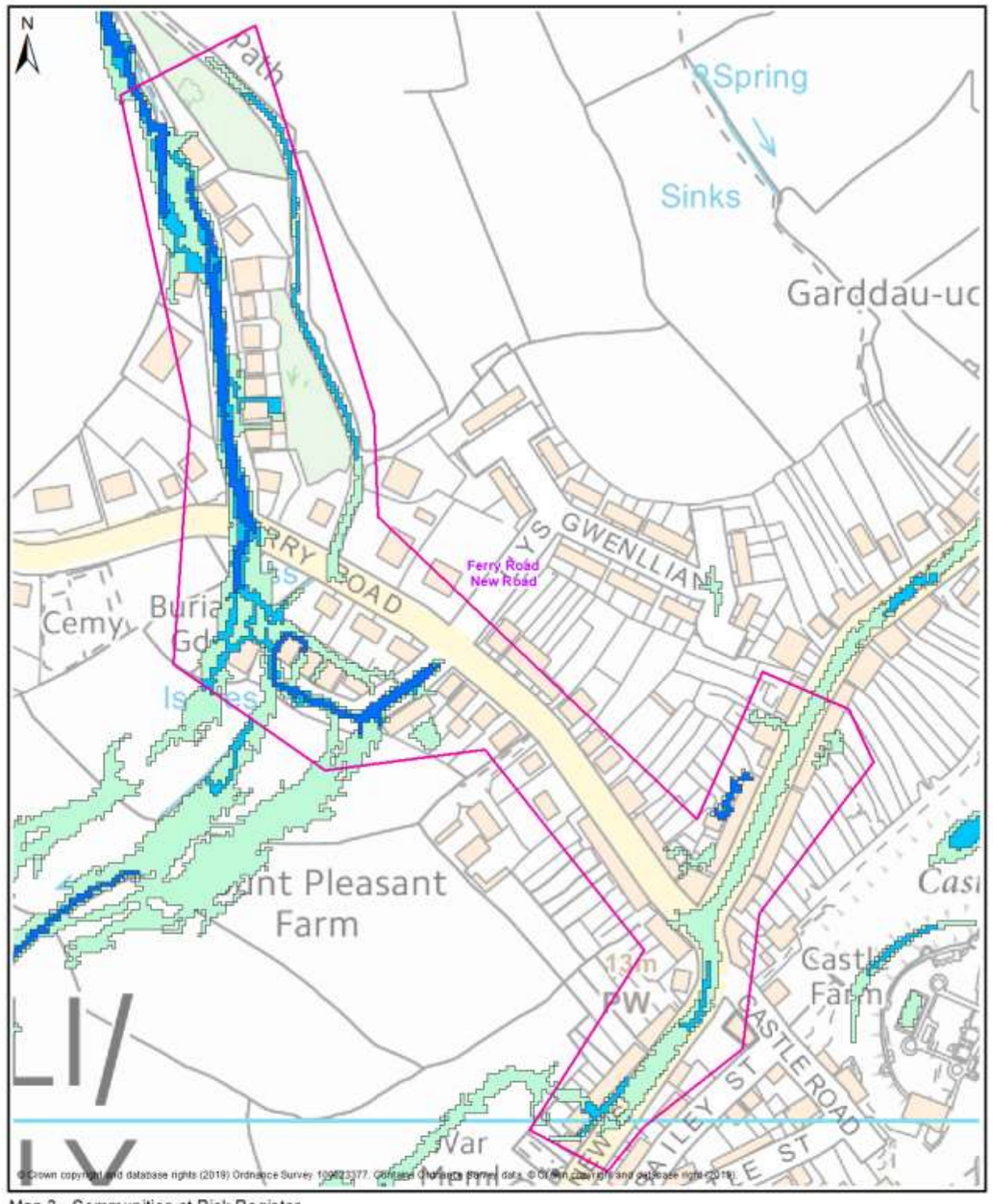
Kidwelly Ward

Ferry Road New Road Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

32 Laugharne Ward, Laques Laugharne Policy Unit

32.1 Area Description

The Laques Laugharne Policy Unit comprises the catchment of the Laques ordinary watercourse, approximately 2.4 km^2, which flows along Water Street to the Grist.

The Corran Main River also discharges to the Estuary here and the flood outline of the Corran overlaps onto the Laques watercourse.

32.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

32.3 Flooding Events

None recorded although the Grist area is regularly subjected to tidal flooding.

32.4 Flood Defence Capital Works undertaken by CCC

- 2003: New inlet works and trash screen at the Laques
- 2003: Relining of culvert from inlet to the Grist
- 2004: Relayed culvert across the Grist

32.5 Flood Defence Capital Works undertaken by Partner Organisations

NRW have provided individual property protection to premises and businesses in the area.

32.6 Flood Defence Assets

Laques Trash Screen	Laques Culvert

32.7 Routine Works and Maintenance

Area	Works Undertaken	When
Laques Trash Screen	Debris Removal	Monthly in the summer Weekly in the winter
	T98 Inspection	Annually
Laques Culvert	CCTV survey	2019

32.8 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

32.9 Flood Risk

32.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

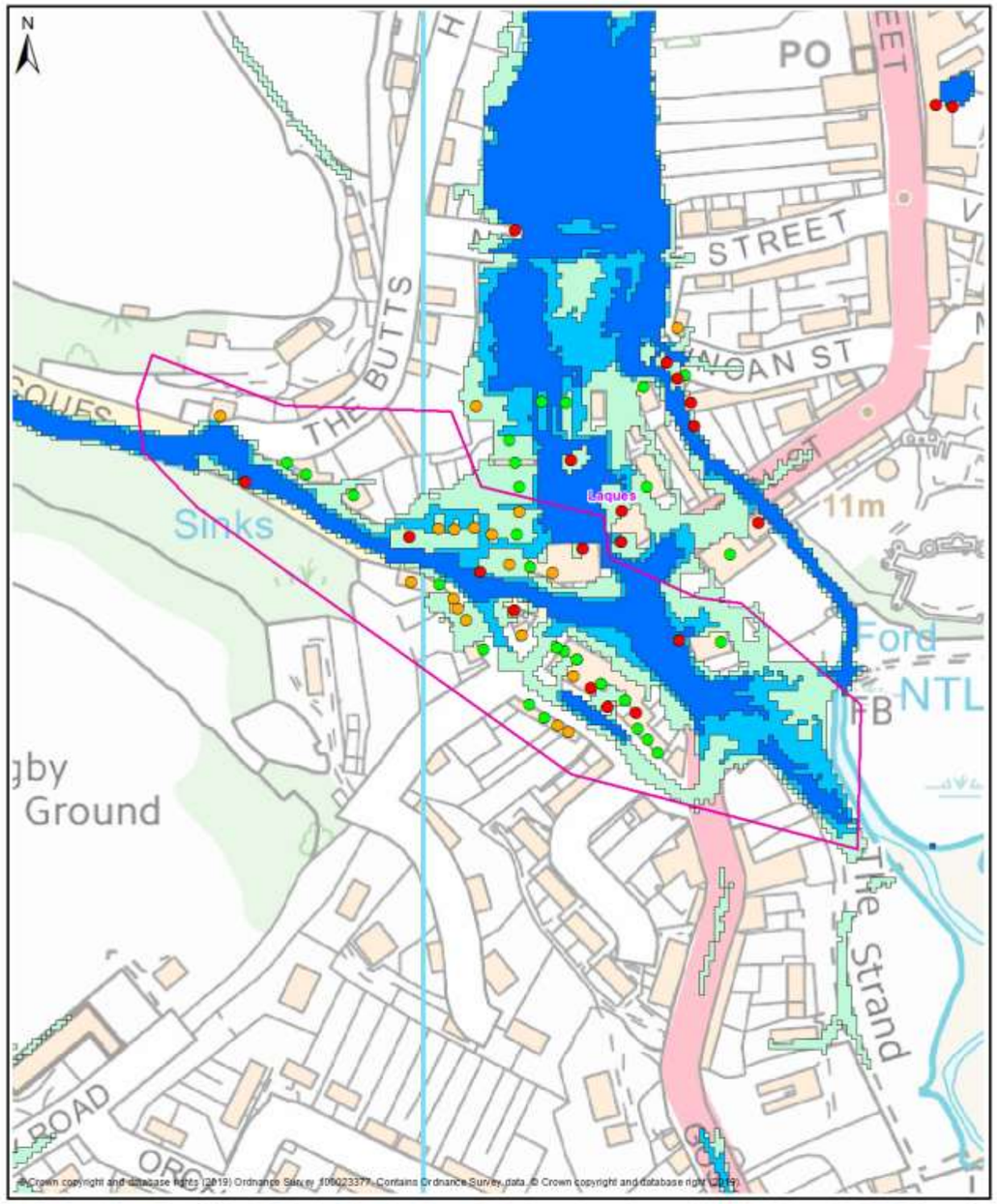
32.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

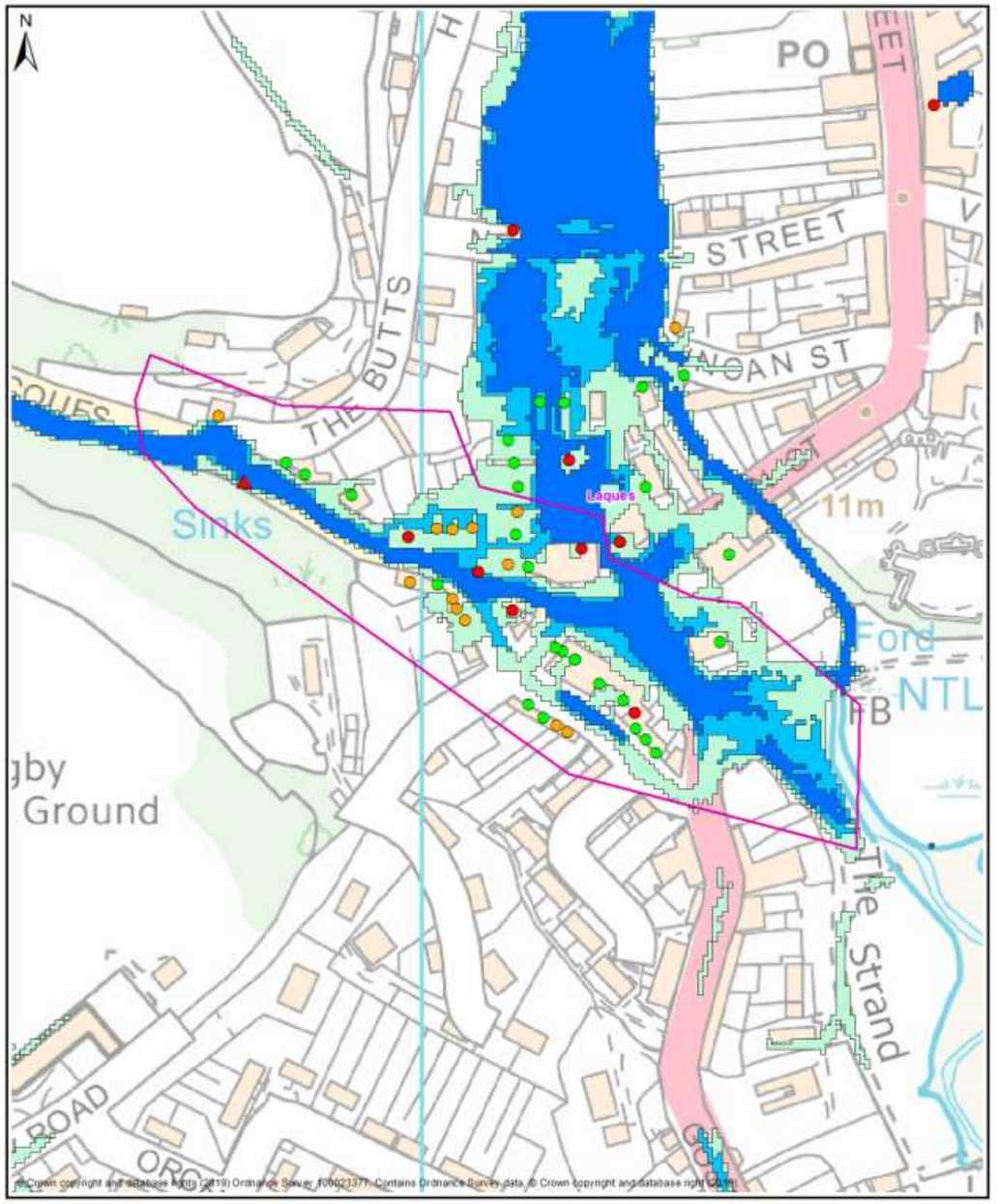
32.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	10	26	49
Map 2 Dwellings and Services	6	18	37
Map 3 CaRR	n/a	9	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

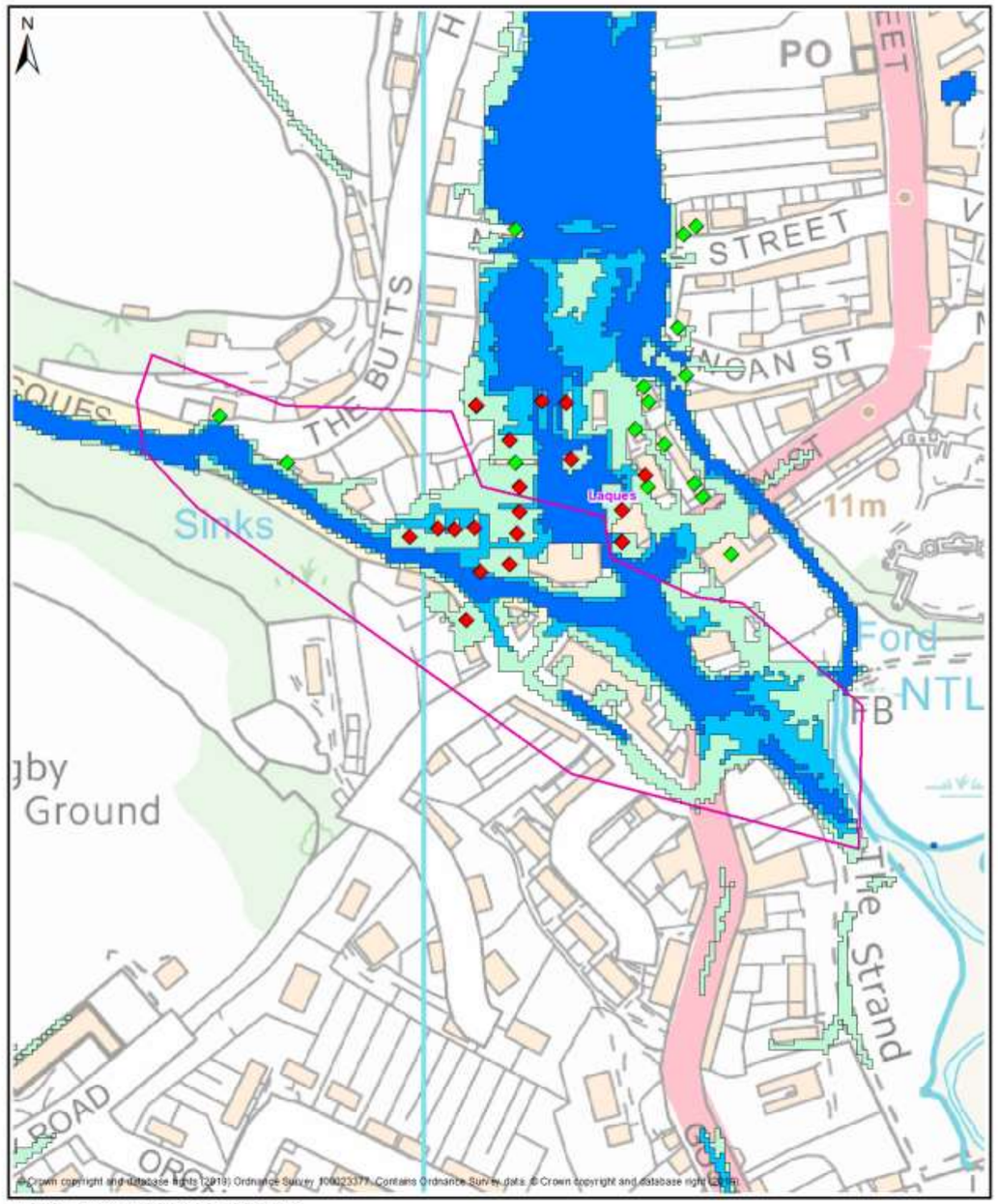
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Laugharne Ward
Laques Policy Unit

0 0.0275 0.055 0.11 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

33 Laugharne Ward, Llanddowror Policy Unit

33.1 Area Description

The Llanddowror Policy Unit comprises the catchment associated with Nant Hyddfron ordinary watercourse. This has a large catchment of over 20km^2 composing of agricultural pasture land and woodland.

33.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The river valley is narrow through the village of Llanddowror and 34 properties are believed to be at some risk of flooding. In flood events the Nant Hyddfron spills onto the carriageway, due to the camber and steady gradient. Further modelling indicated that the uFMfSW underestimated the risk in Llanddowror.

33.3 Flooding Events

- Oct 2008: Flooding of Old Lion Cottage, Swn y Dwr and external flooding of properties adjacent to the trunk road
- Aug 2010: External Flooding along trunk road and Craig y Deilo Road
- Nov 2010: External Flooding along trunk road and Craig y Deilo Road
- Jan 2013: Extensive serious internal flooding through the village, 22 properties flooded internally (Heavy rain fall combined with snowmelt resulted in this event)

33.4 Flood Defence Capital Works undertaken by CCC

- 2012: Raising of foot bridge at Craig y Deilo Road
- 2014: River bank retaining structure at Craig y Deilo
- 2015: Re-Profiling of the trunk road upstream of Llanddowror prior to de-trunking

33.5 Flood Defence Capital Works undertaken by Partner Organisations

NRW river and rainfall monitoring to provide flood warning service

NRW provision of individual property protection

33.6 Flood Defence Assets

None

33.7 Routine Works and Maintenance

Area	Works Undertaken	When
Tree Management		As required

33.8 Proposed Future Works

Work with community and provide advice to residents on flood risk.

33.9 Flood Risk

33.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

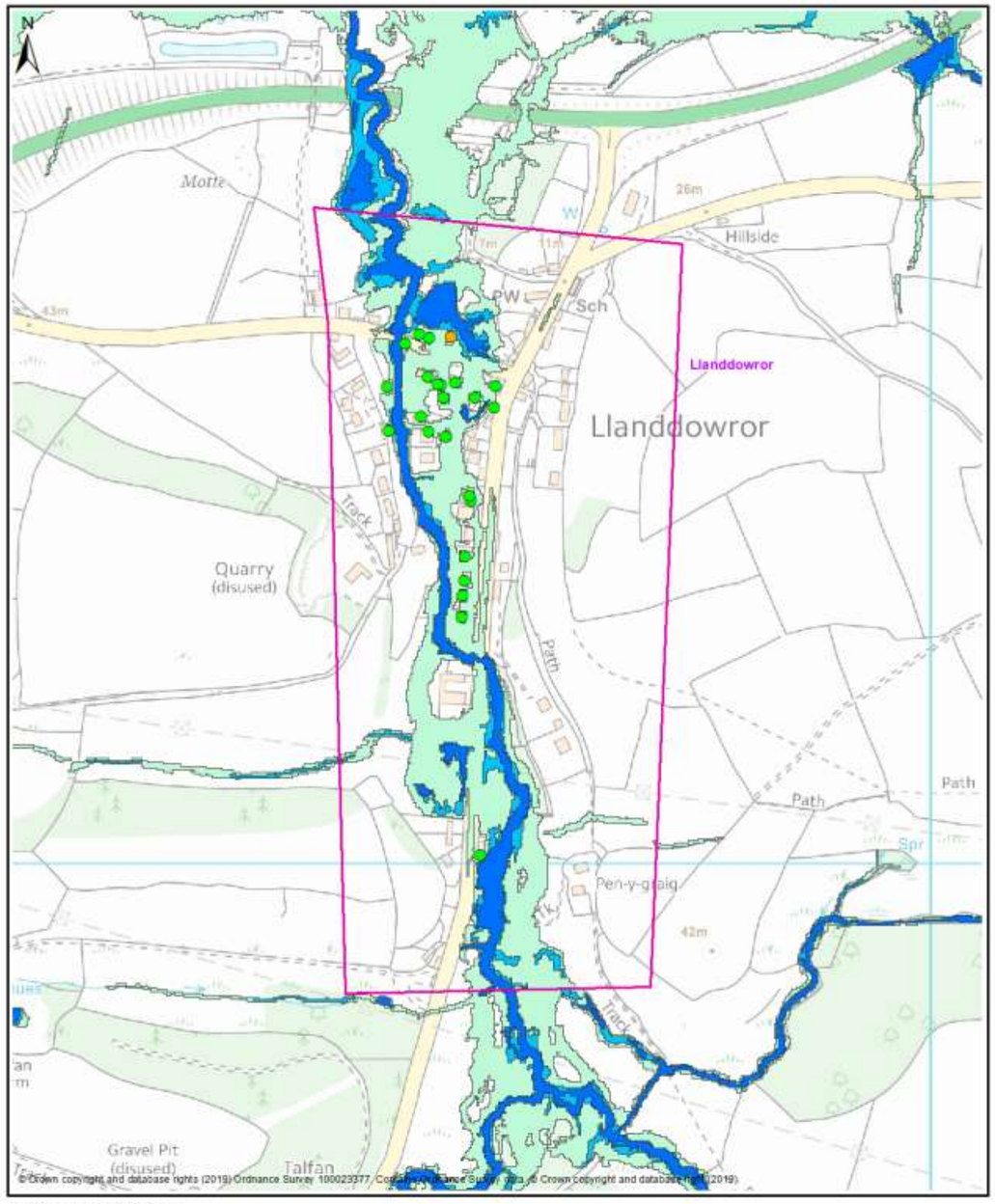
33.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

33.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	0	1	25
Map 2 Dwellings and Services	0	1	18
Map 3 CaRR	n/a	0 Pluvial 34 Fluvial	n/a



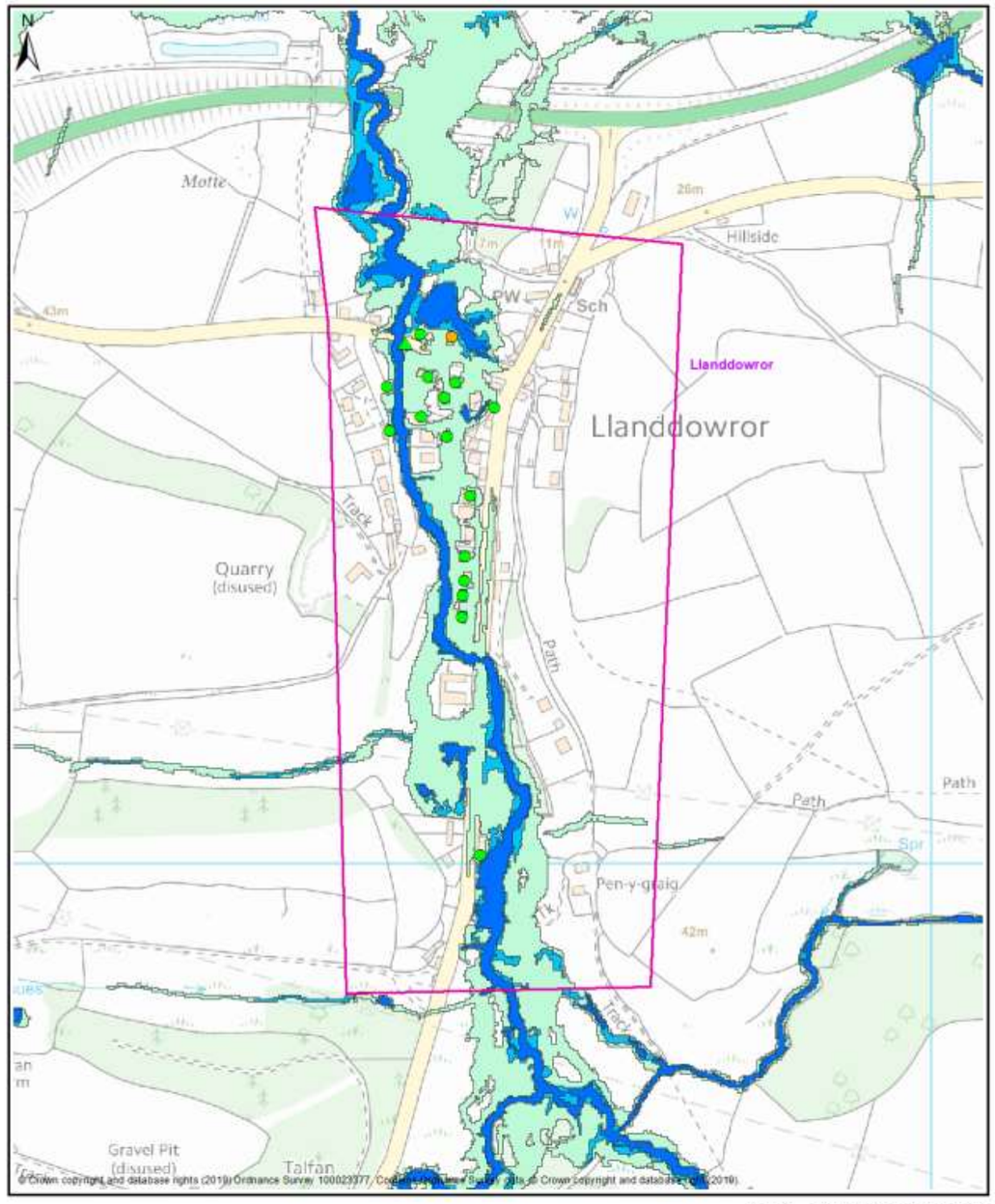
Map 1 - All Properties

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Laugharne Ward
Llanddowror Policy Unit

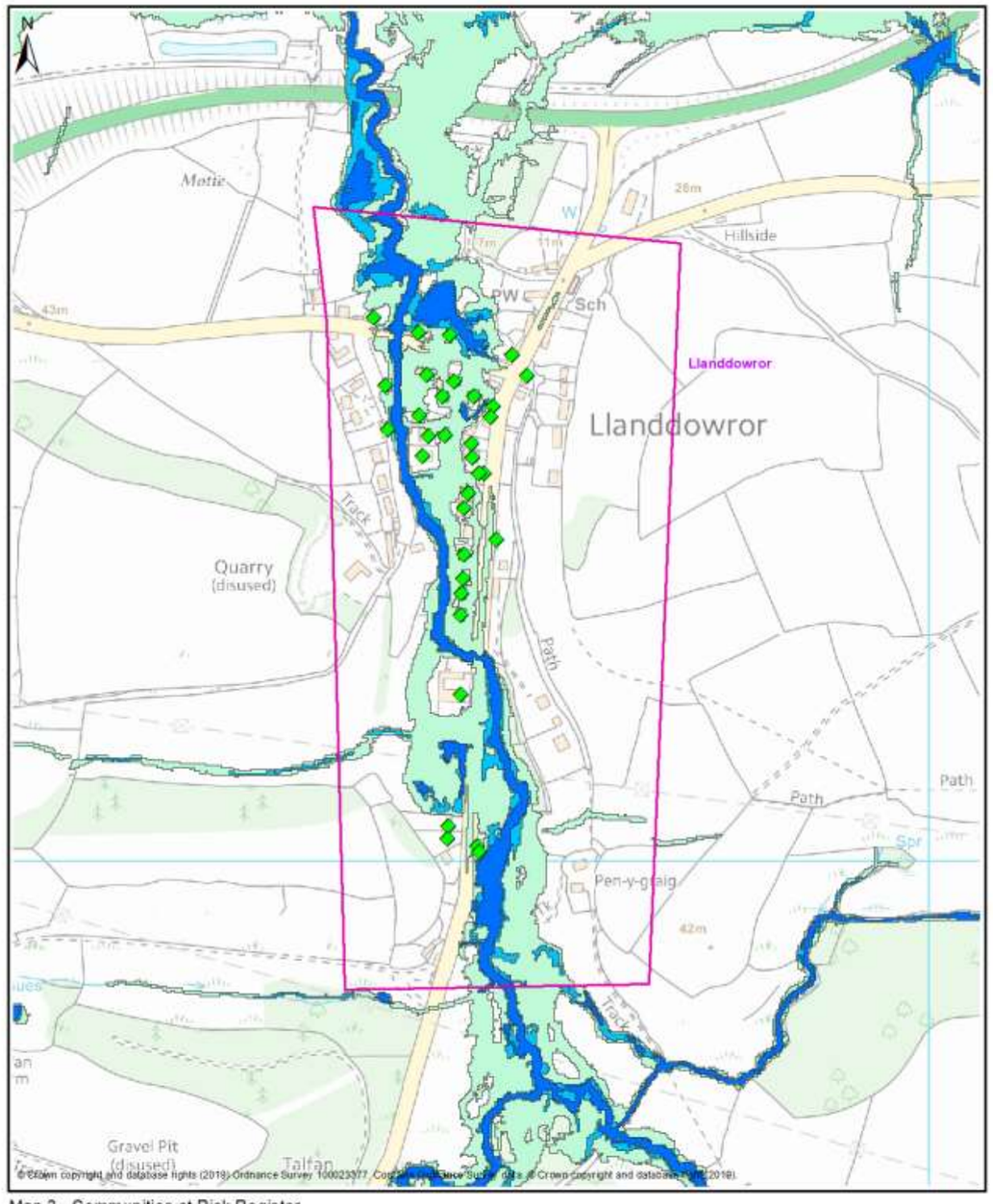
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

34 Llandovery Ward, Nant Bawddwr Policy Unit

34.1 Area Description

The Nant Bawddwr Policy Unit comprises the catchment of the Nant Bawddwr, south of the railway embankment. This section of the watercourse is an Ordinary Watercourse that flows through the town of Llandovery.

Llandovery is situated in rural Carmarthenshire approximately 50km to the north-east of the county town of Carmarthen. It is a market town which has developed on the flood plains of four rivers - the Tywi, Brân, Gwydderig and Bawddwr. The A40 and A483 trunk roads, as well as the A4069, all cross these rivers at this location.

34.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

A significant part of the fluvial flow comes from the Main River Bawddwr to the north of Llandovery. The flow control structure at this point is in a state of disrepair.

The Nant Bawddwr is culverted though the majority of Llandovery and culverts have a high risk of blockage. The culvert passes through private ownership and therefore there are varying states of repair, construction and size. Our inspections of the culvert have highlighted poor condition with large build ups of silts, general rubbish and utility apparatus impeding flows.

34.3 Flooding Events

- 1979: Major flooding from the River Bran
- 1987: Major flooding from the River Bran
- 1998: Major flooding from the River Bran
- 2003: Flooding of properties at Broad Street
- 2013: Flooding of properties due to blockage in the culvert

CCC are aware that there have been numerous flooding events attributed to issues on the Nant Bawddwr but have no records of these flooding events.

34.4 Flood Defence Capital Works undertaken by CCC

- 2010: Modifications were undertaken to the bridge at Pont Aur, Cillywm Road
- 2013: Diving sub-contractors entered culvert to remove debris at the A483, Llanfair Road
- 2013: Culvert repairs and debris removal were undertaken at Victoria Crescent and Stone Street

34.5 Flood Defence Capital Works undertaken by Partner Organisations

2003: Llandovery Flood Alleviation Scheme was completed by National River Authority. This included re-alignment of the river channel upstream of main road bridge, bank protection and the construction of flood embankments and flood walls.

34.6 Flood Defence Assets

Llys Llanfair Trash Screen		

34.7 Routine Works and Maintenance

Area	Works Undertaken	When
Llys Llanfair trash screen	T98 inspection	Annually
	Debris Management	Monthly (summer) Weekly (winter)

34.8 Proposed Future Works

Studies have shown that the diversion of flows above Llandovery can considerably reduce flood risk at Cillycwm Road and in Llandovery from flooding from the Nant Bawddwr. The CCC Flood Defence and Coastal Protection Team will look for opportunities to implement this or similar diversion options.

34.9 Flood Risk

34.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

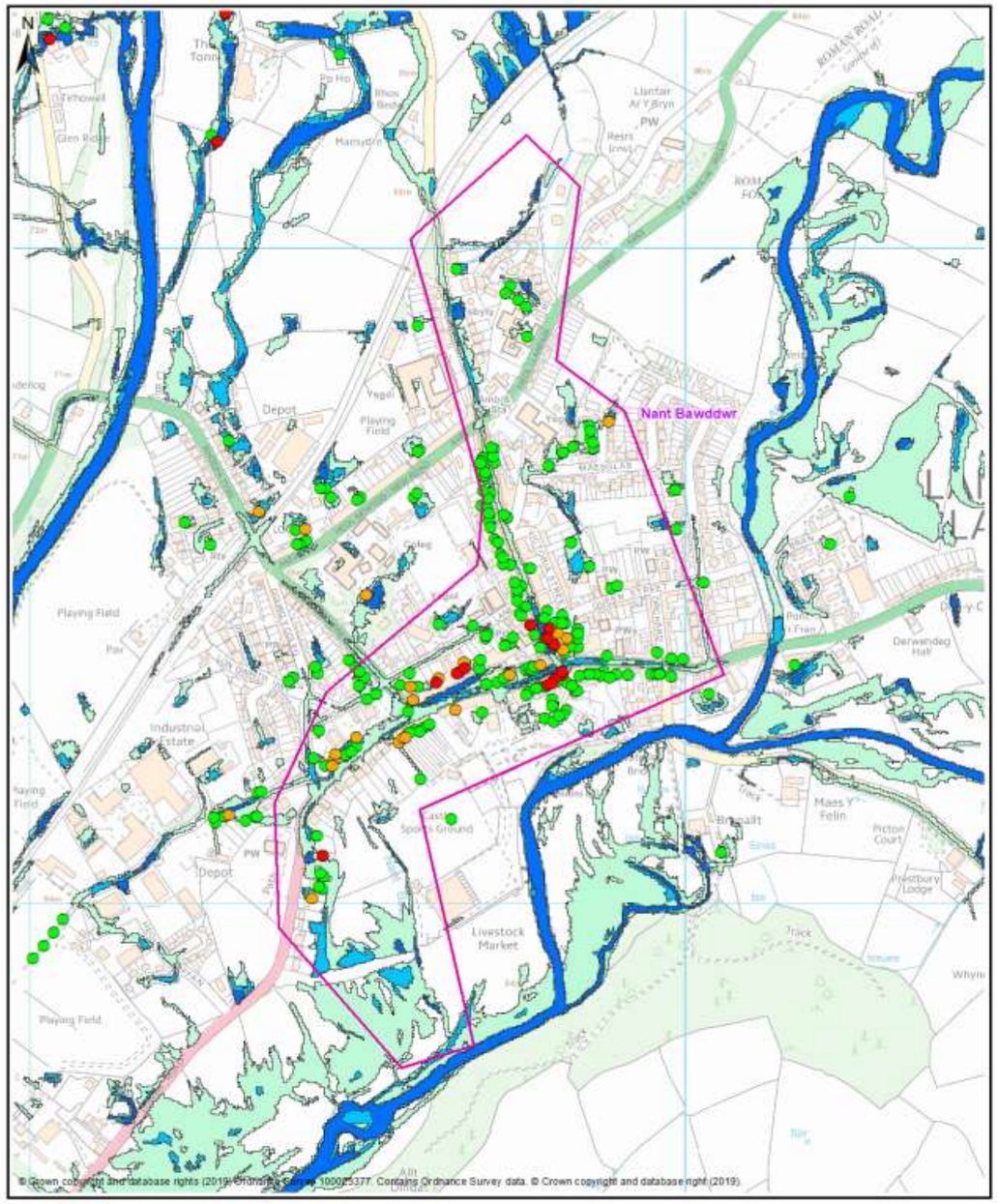
34.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

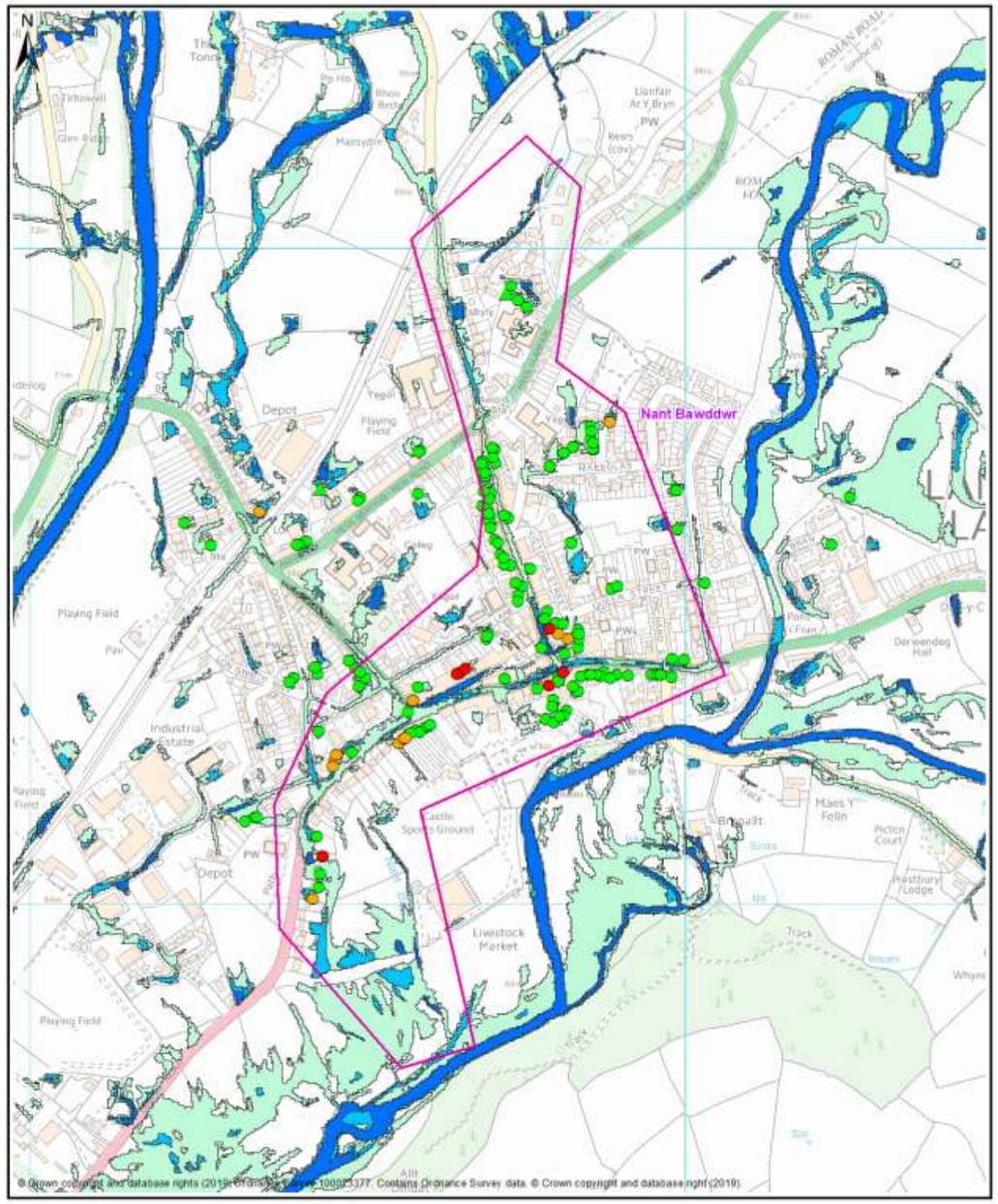
34.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	15	41	212
Map 2 Dwellings and Services	7	22	141
Map 3 CaRR	n/a	5	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

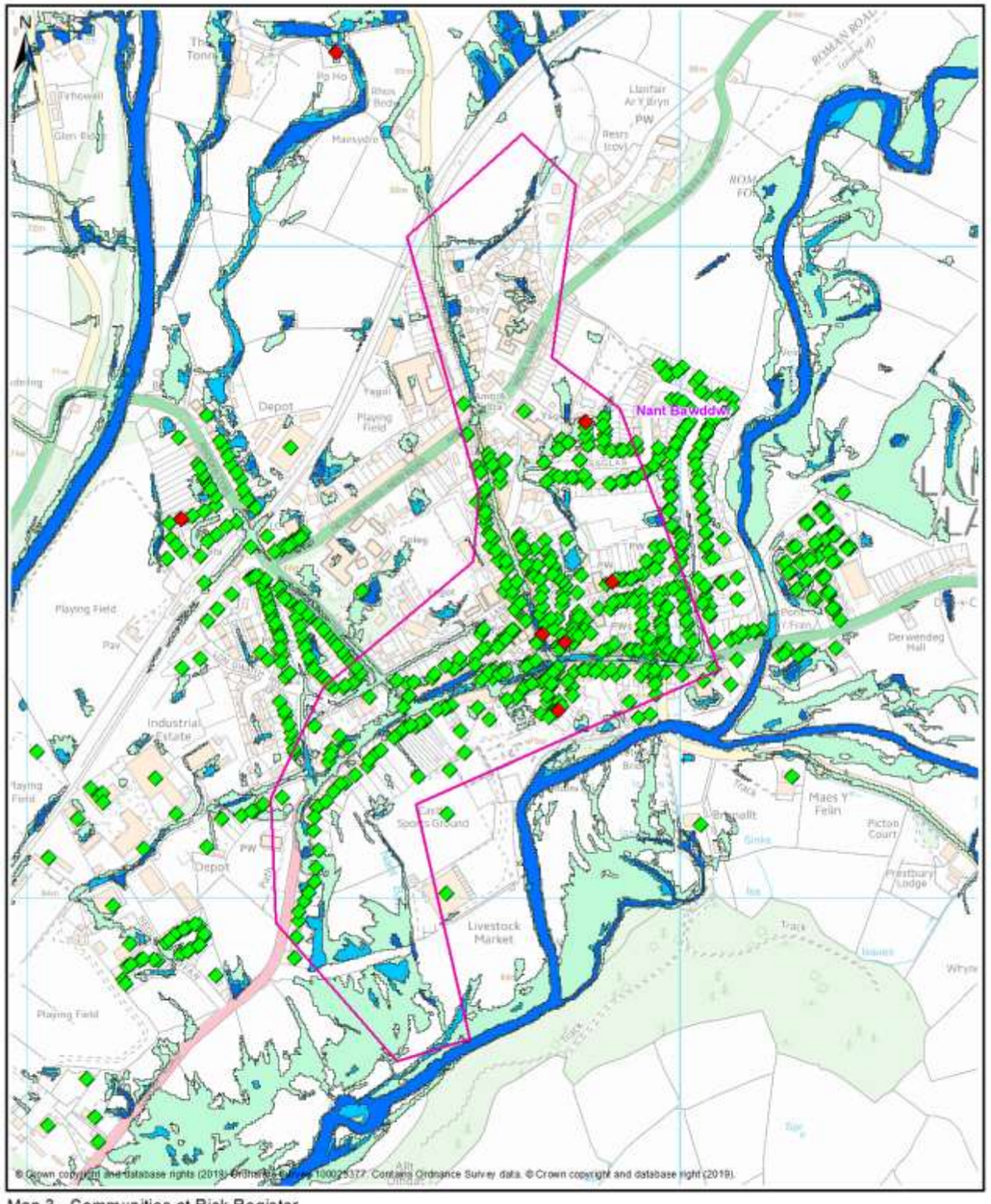
Llandovery Ward

Nant Bawddwr Policy Unit

0 0.1 0.2 0.4 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Llandovery Ward
Nant Bawddwr Policy Unit

0 0.1 0.2 0.4 Km

35 Llangeler Ward, Pontyweli Policy Unit

35.1 Area Description

The Pontyweli Policy Unit lies on the confluence of the Teifi and the Tyweli, both of which are Main Rivers.

35.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from watercourse and pluvial sources.

Although CaRR maps indicate 30 properties are at risk of pluvial flooding it is difficult to differentiate these from those affected by the Main River.

35.3 Flooding Events

In 2018, as a result of Storm Callum, there was significant flooding in the area during which 30 residential properties and 22 commercial properties were flooded internally. NRW have calculated this flood event as a 1 in 450 annual event probability.

35.4 Flood Defence Capital Works undertaken by CCC

None

35.5 Flood Defence Assets

None

35.6 Routine Works and Maintenance

None

35.7 Proposed Future Works

Work with partners to greater understand and manage the flood risk.

35.8 Flood Risk

35.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

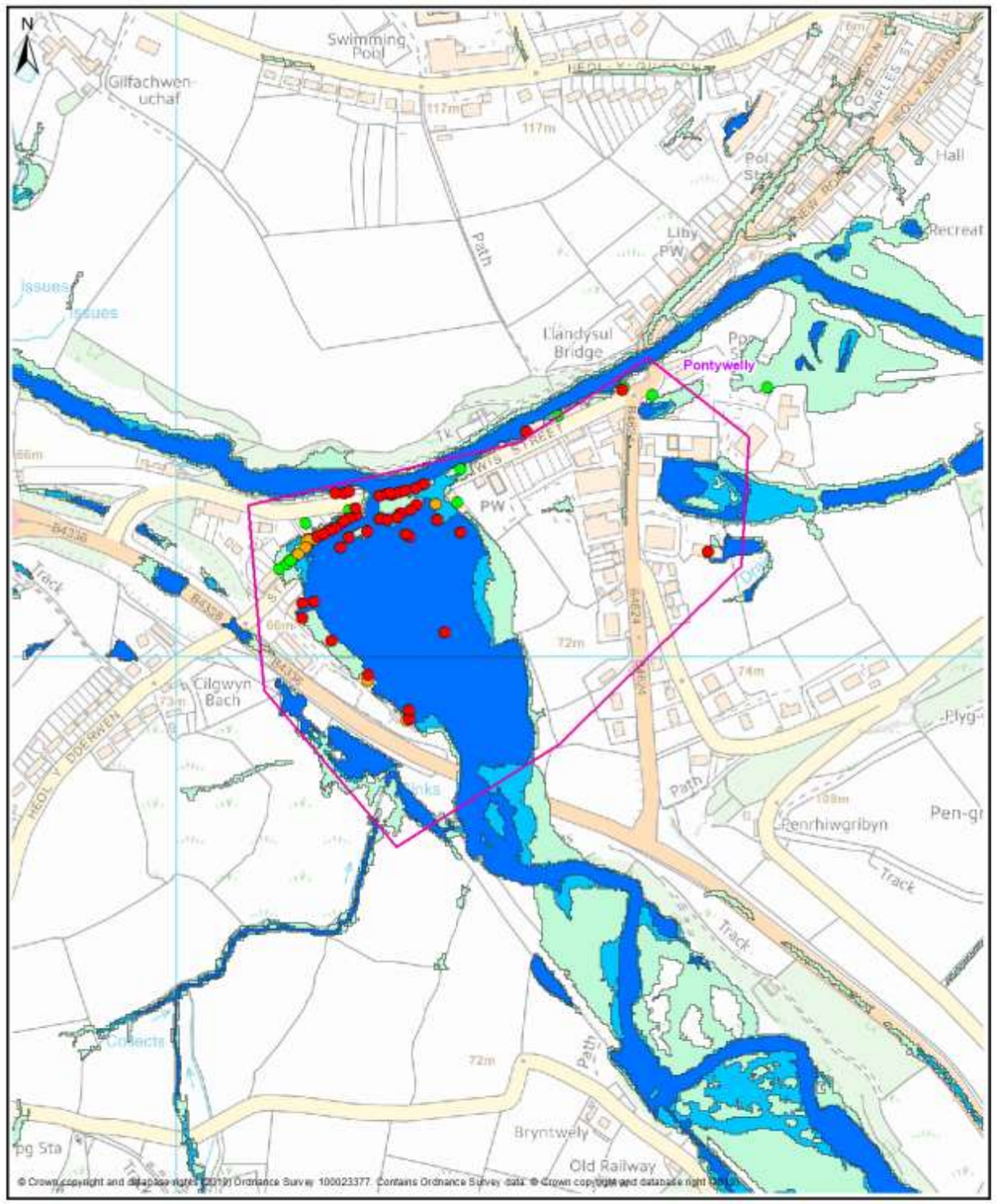
35.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

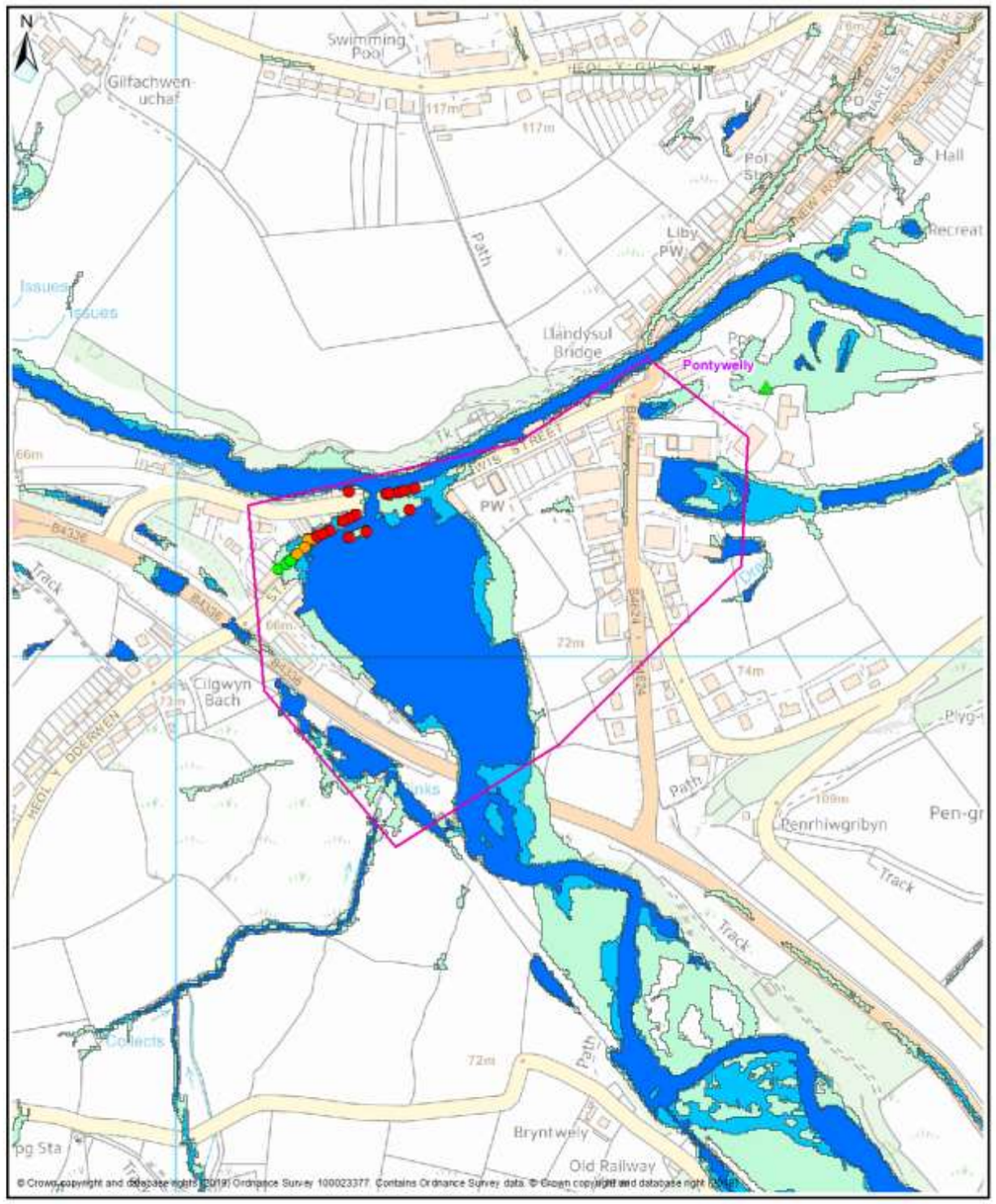
35.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	44	60	71
Map 2 Dwellings and Services	16	25	29
Map 3 CaRR	n/a	30 Pluvial 19 Fluvial	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

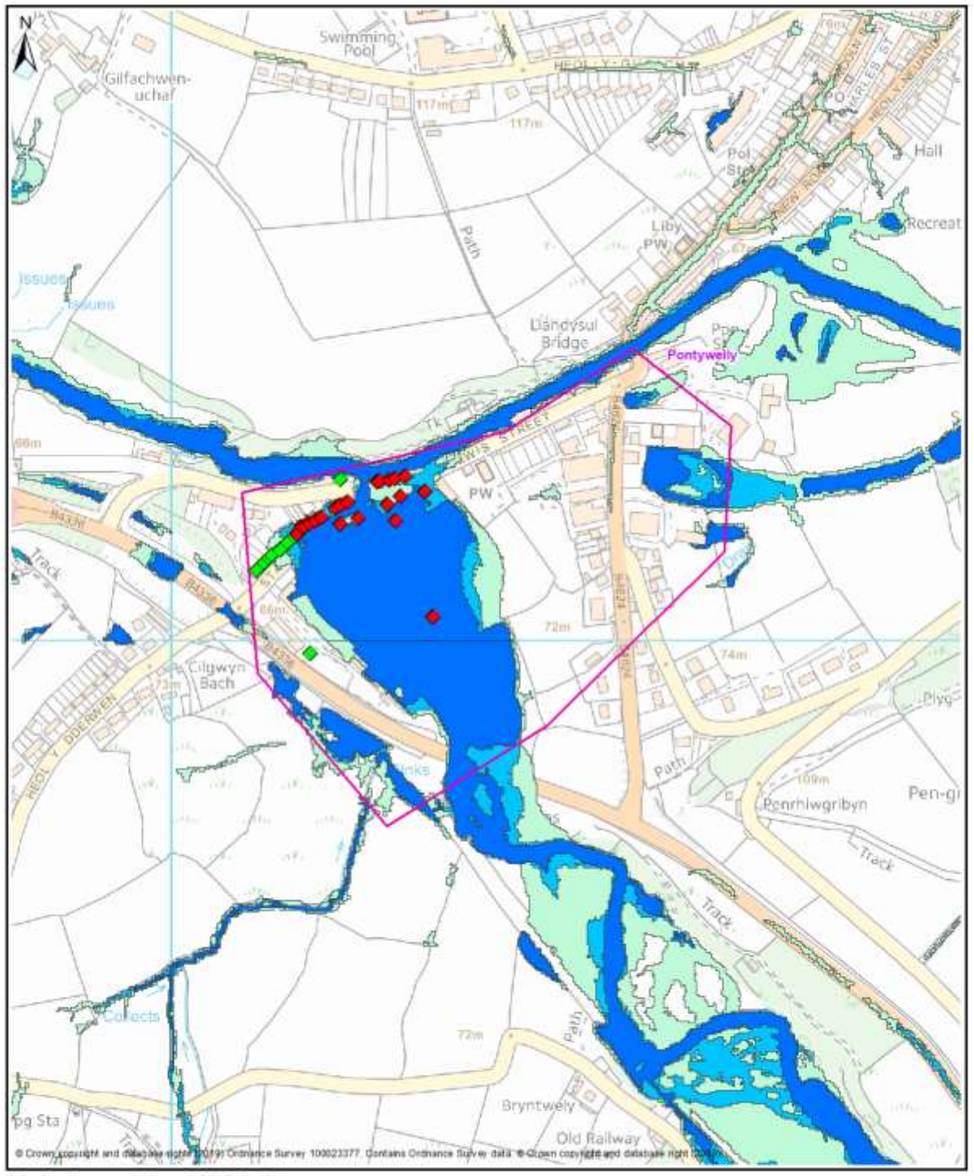
Llangeler Ward

Pontywelly Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Flvatal

Llangeler Ward
Pontywelly Policy Unit

0 0.05 0.1 0.2 Km

36 Llangennech Ward, Llangennech Policy Unit

36.1 Area Description

The Llangennech Policy Unit comprises of the catchment associated with the Nant Mwrwg Ordinary Watercourse. This watercourse originates north west of Llangennech in an agricultural catchment. It flows predominately in an open channel but upon reaching the town of Llangennech the channel becomes heavily modified. Upstream of Llangennech at Mwrwg Road there is a bifurcation structure which controls the volume of water in the Mwrwg and flowing through Llangennech. Excess storm flows are channelled west along a CCC flood relief culvert before being discharged into the River Morlais.

36.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Flood mapping indicates a significant number of properties are at risk of flooding in this area.

36.3 Flooding Events

- 2011: Flooding at Station Road and Heol Y Parc as a result of blockage in the railway culvert
- 2014: Tidal flooding of property at Heol Y Parc

36.4 Flood Defence Capital Works undertaken by CCC

- 1985: Construction of Mrwrg Road flood relief culvert
- 2000: The trash screen at Heol Mwrwg was upgraded
- 2005: Construction of additional culvert at Heol Y Parc to improve conveyance and capacity of ordinary watercourse
- 2015: Installation of a flood bund at Heol Y Parc
- 2015: Construction of a wall and associated non-return flap at Heol Y Parc
- 2018: The highway culvert beneath the B4297 adjacent to the Bridge Inn was upgraded

36.5 Flood Defence Assets

Mwrwg Road Trash Screen	Mwrwg Road Bypass Culvert	Mals wall and non-return flap
		
Heol Y Parc Culvert	**Heol Y Parc bypass channel**	**Heol Y Parc Embankment**

36.6 Routine Works and Maintenance

Area	Works Undertaken	When
Nant Mwrwg	Watercourse trashing and grass cutting	Annually
Mwrwg Road	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Railway Culvert and Flap Valve	Visual Inspections	Before spring tides
Mwrwg Road Bypass Culvert	CCTV	2018
Heol Y Parc Embankment	Formal T98 Inspection	Annually
Heol Y Parc Culvert	Formal T98 Inspection	Annually
Mals Wall and non-return flap	Formal T98 Inspection	Annually

36.7 Proposed Future Works

2019: The Mwrwg Road bypass culvert will be CCTV surveyed and maintenance and repairs actioned accordingly.

CCC will continue to work with NRW and Network Rail to make improvements to the River Mwrwg Railway culvert and outfall to the estuary.

36.8 Flood Risk

36.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

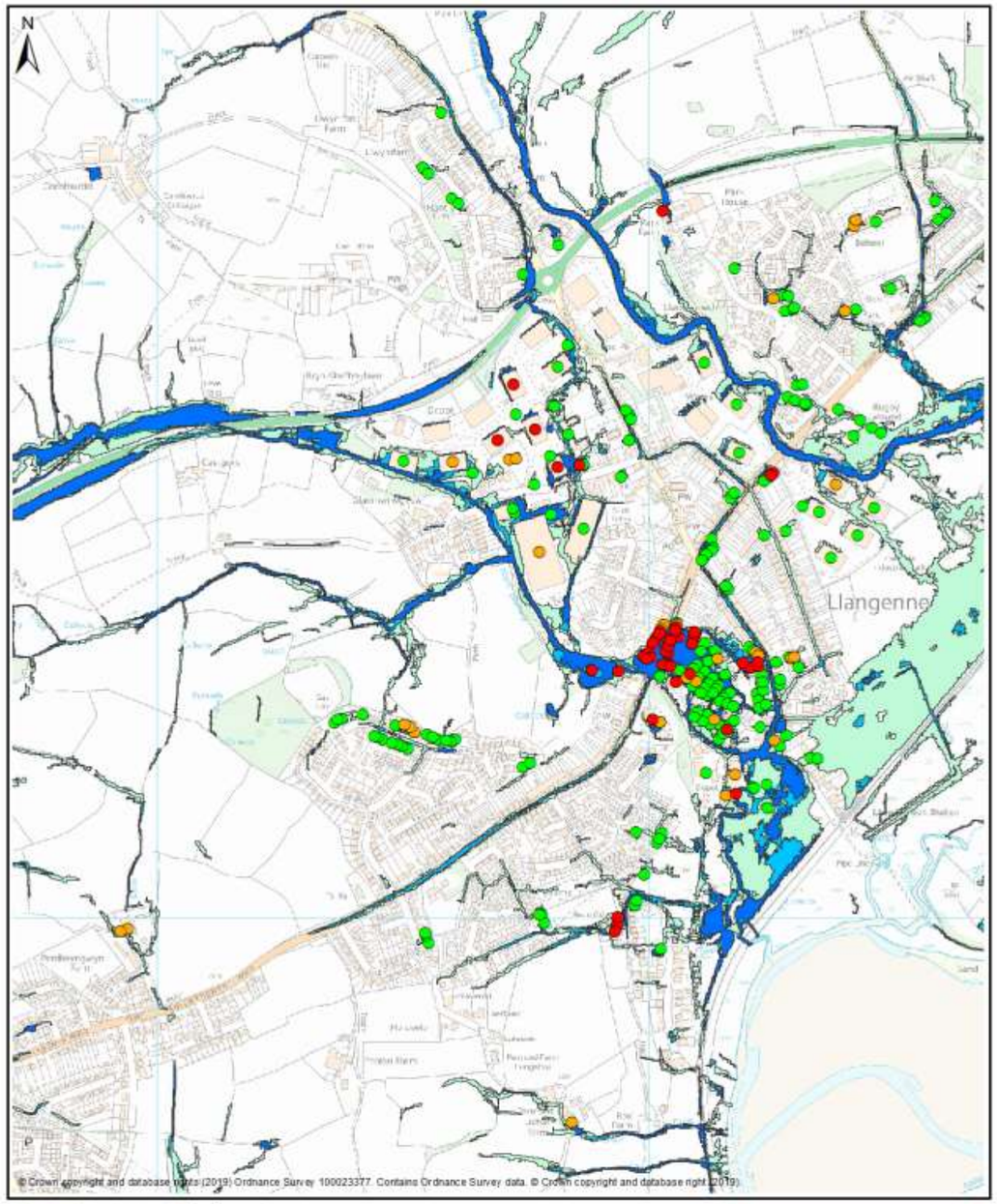
36.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

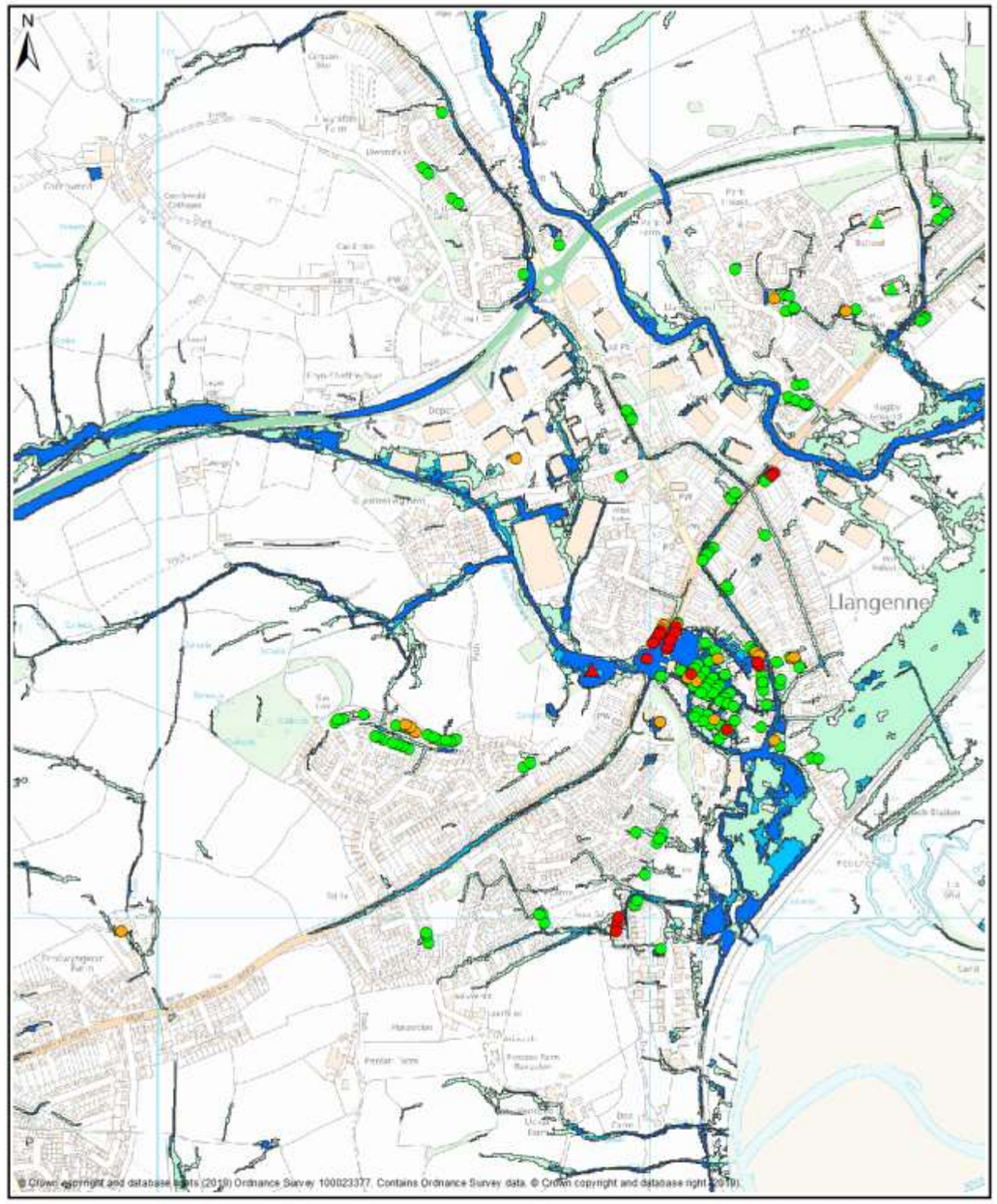
36.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	48	100	201
Map 2 Dwellings and Services	23	70	142
Map 3 CaRR	n/a	23 Pluvial 183 Fluvial 60 Tidal	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

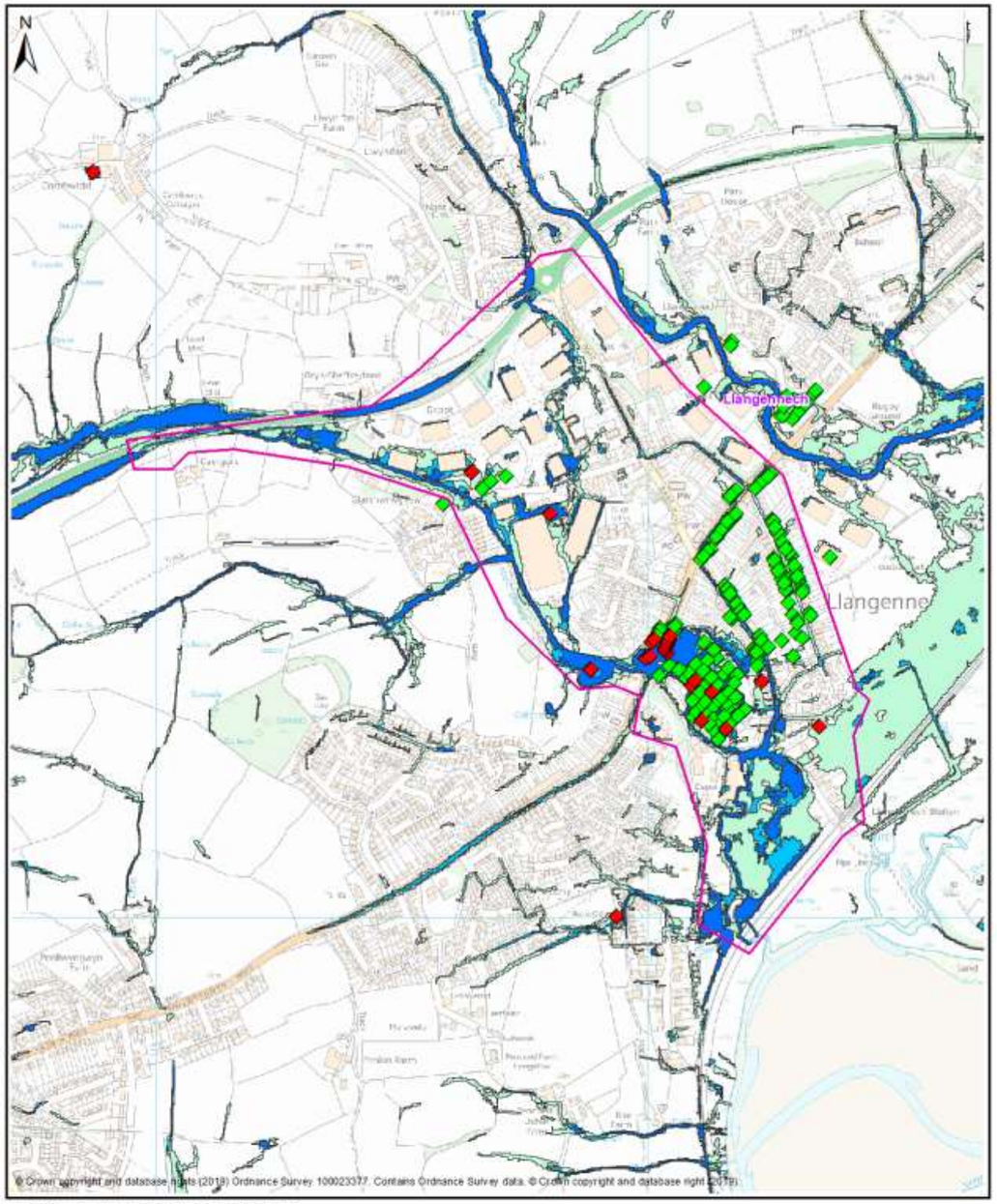
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Llangennech Ward
Llangennech Policy Unit

0 0.125 0.25 0.5 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

37 Llangunor Ward, Pensarn Policy Unit

37.1 Area Description

The Pensarn Policy Unit is situated on the South Bank River Tywi at Carmarthen and comprises mainly retail units. The area is made up of floodplain and defended by flood defence wall.

Problems have occurred when the river is in flood and surface water is unable to flow to the Tywi. The River Tywi can remain at a raised level for several days preventing surface water from discharging, requiring pumping to prevent flooding.

37.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses. The surface water flood maps will underestimate the flooding in this area because it does not account for the interaction between the Main River and the Surface Water flows.

37.3 Flooding Events

This area has been subject to flooding on a regular basis but only occurs when the Main River Tywi is in flood. The most extensive was in 1987 when the Tywi overtopped the flood defence and the area was flooded to a depth approaching 2m.

In 2018 extensive flooding occurred in Pensarn with a section of the wall being overtopped, no dwellings were flooded (excluding cellar flooding) but several businesses were affected.

In the 2004 flood it was identified that water had been able to enter a culvert on the river side of the flood defence and flow through this under the flood defence wall, this has been rectified but there are likely to be other sources of flow from the river.

There is a permanent pump installed adjacent to Carmarthen Bridge but in October 2018 this was insufficient to prevent flooding.

Flooding on Pensarn Road 2004

River Tywi in flood with Flood Pump in action in background

1987 Floods (Main River)

37.4 Flood Defence Capital Works undertaken by CCC

In Collaboration with EA, installation of a flood pump adjacent to Carmarthen Bridge.

37.5 Flood Defence Assets

Flood Defence Wall NRW.

Pensarn Pumping Station- Installed by Environment Agency and passed to Carmarthenshire County Council.

37.6 Routine Works and Maintenance

Area	Works Undertaken	When
Pensarn	Service Pump	Annually

37.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

An outline business case (OBC) is currently being prepared (2019) to evaluate flood management options. A bid for capital funding will be submitted to WG in 2020 if the OBC identifies any viable options.

37.8 Flood Risk

37.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

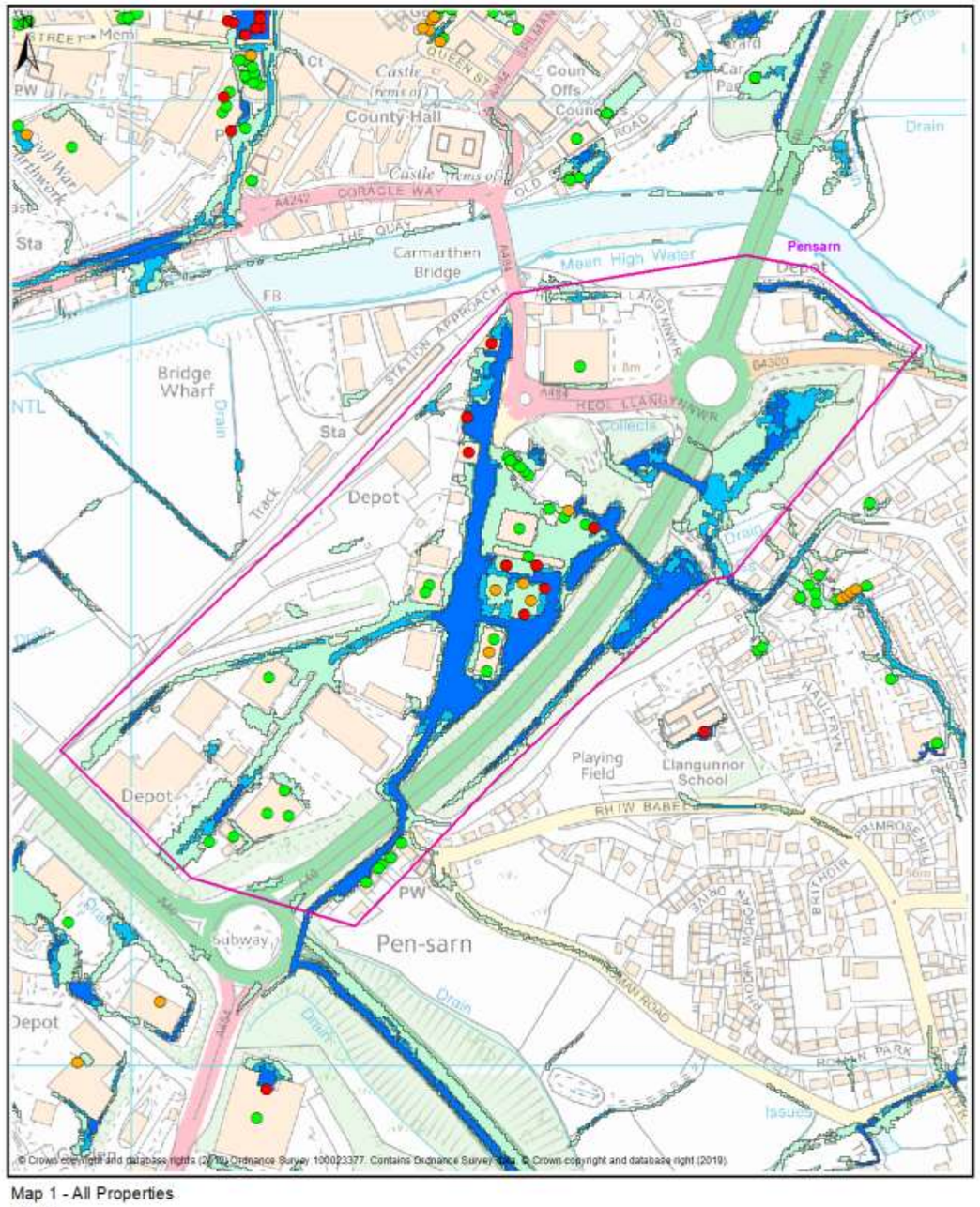
37.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

37.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	10	15	42
Map 2 Dwellings and Services	0	0	12
Map 3 CaRR	n/a	8 Pluvial 2 Fluvial	n/a



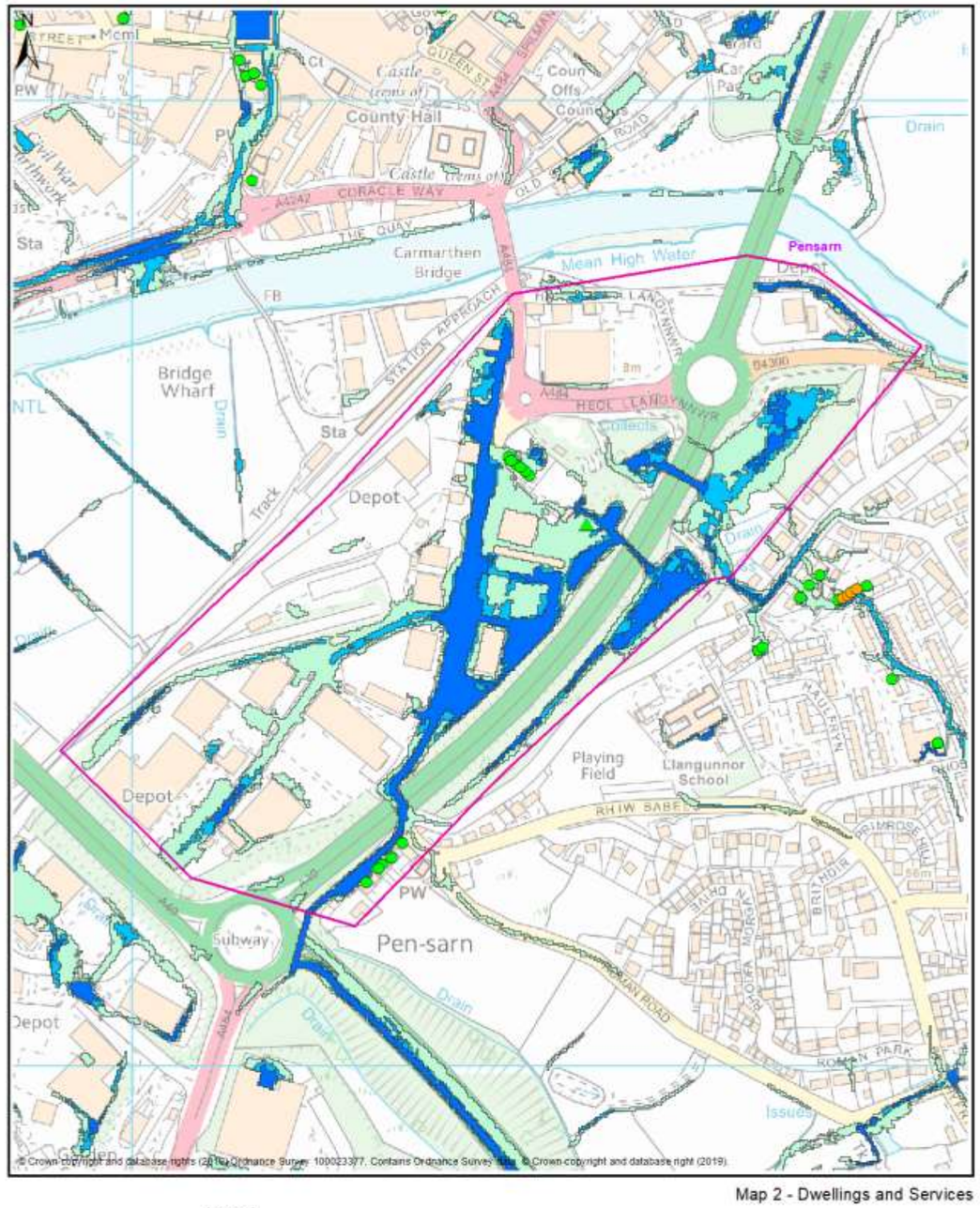
Map 1 - All Properties

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Llangunor Ward
Pensarn Policy Unit

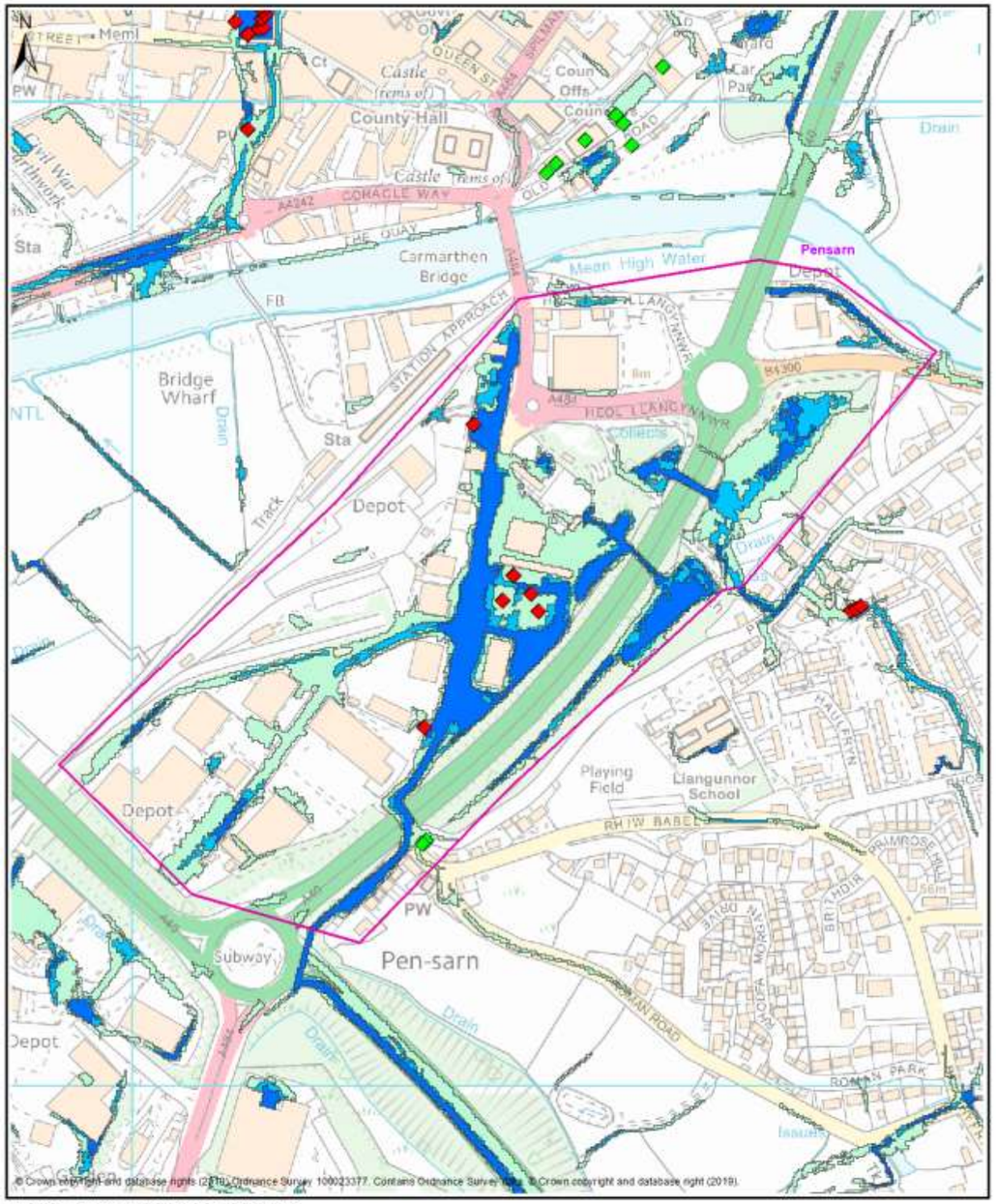
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Llangunor Ward
Pensarn Policy Unit

0 0.05 0.1 0.2 Km

38 Llanstephan Ward, The Green Policy Unit

38.1 Area Description

The Llastephan Green Policy Unit is comprised lower part of Llanstephan. This is a small coastal community and the area referred to as the Green is the street nearest the estuary.

To the rear is the playing fields and to the front a grassed area “the Green” with a raised embankment that acts as a coastal defence. There is a sand dunes system between this and the beach.

To the north is the main river and to the east is a minor watercourse “Nant Jack”, both of which have potential to cause flooding of the Green.

These give rise to flood risk from multiple sources i.e. from Surface Water, Ordinary Watercourse Main River and Tidal.

38.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The area of the Green is in a shallow depression and water that flows here cannot escape other than infiltration or via the drainage system. The surface water drainage system outfalls to the beach and this has caused problems. The sand on the beach is mobile and levels in the vicinity have varied by something in the region of 2m in recent years. In 2014 the outfall became buried and needed to be excavated on a regular basis. Over pumping was also required to prevent extensive flooding.

In 2015 a scheme was implemented to manage the drainage of the Green and involved the construction of a 2-chamber sump and different level outfalls. The chamber incorporates a non-return valve to prevent tidal backflow through the drainage system. The sump chamber has been designed so that it can be converted to a pumping station if required.

38.3 Flooding Events

Flooding of highways and gardens occurred at Glan y Mor in 2002, 2003, 2008 and 2010. Since the installation of the new inlet structure and upgrade works to the culvert we have not recorded any flooding at this location.

Flooding in December 2013 and Jan 2014 at Stratford Cottages. Wider flooding was only prevented by over pumping and regular excavation of the outfall on the beach.

38.4 Flood Defence Capital Works undertaken by CCC

- New Trash Screen and Inlet at rear of Glan y Mor
- New Culvert and outfall from Glan y Mor to stream
- New Outfall system at the Green comprising long outfall to the river and a shorter outfall to middle of the beach.

The Chamber on the Green incorporates a non-return valve. The chamber has been designed to accommodate a pump should the beach levels rise to similar levels experienced in 2014 compromising the drainage systems capacity to discharge by gravity.

38.5 Flood Defence Assets

Trash Screen at Glan y Mor	Culvert from Trash Screen at Glan y Mor To Outfall	Chamber and outfall system at the Green

38.6 Routine Works and Maintenance

Area	Works Undertaken	When
Glan y Mor Culvert	CCTV	2019
Glan y Mor Trash Screen	Debris Management	Monthly
	T98 Inspection	Annually
Chamber at Green	T98 inspection	Annually

38.7 Proposed Future Works

Installation of pumps to chamber on the Green (dependant on beach levels).

38.8 Flood Risk

38.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

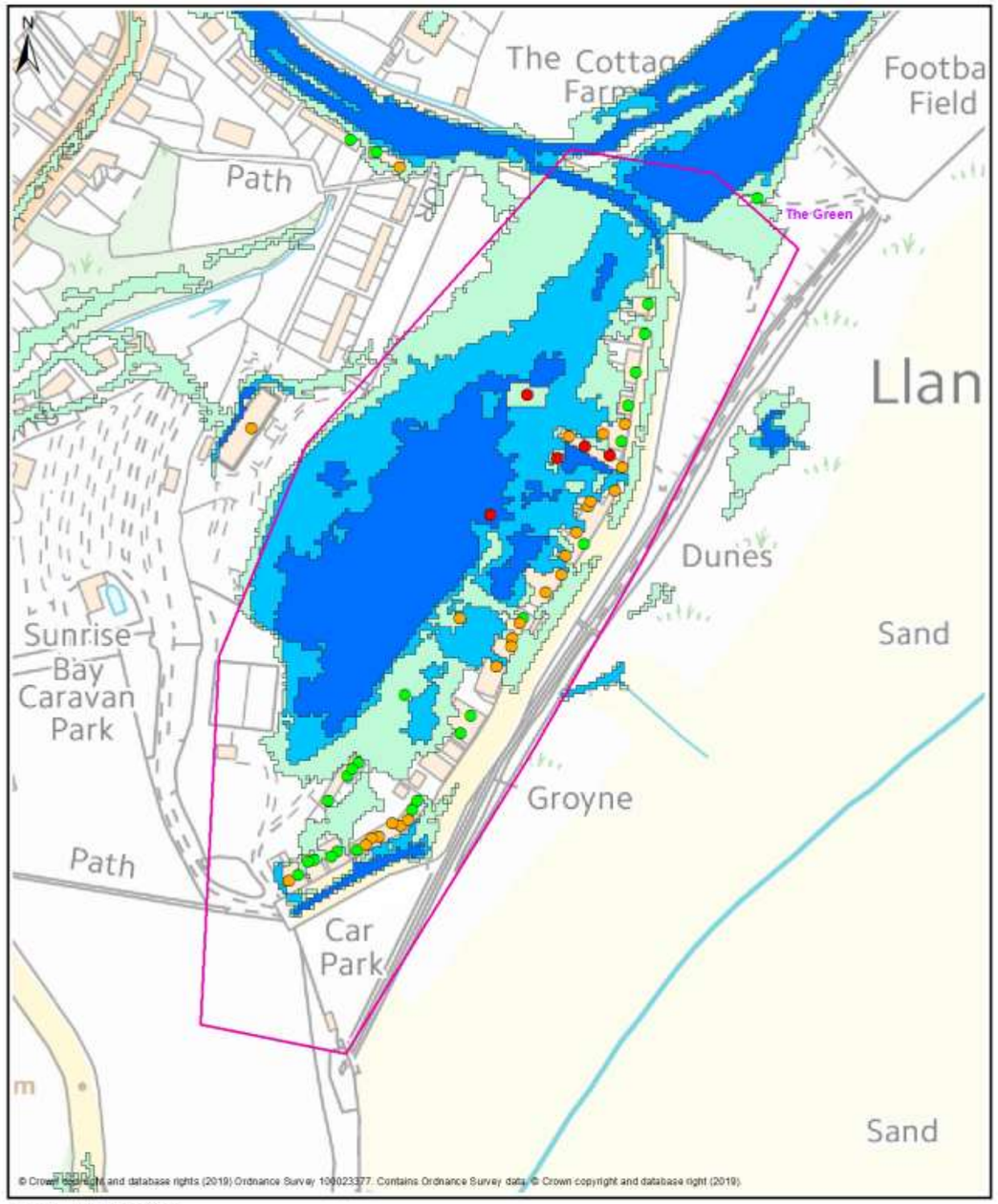
38.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

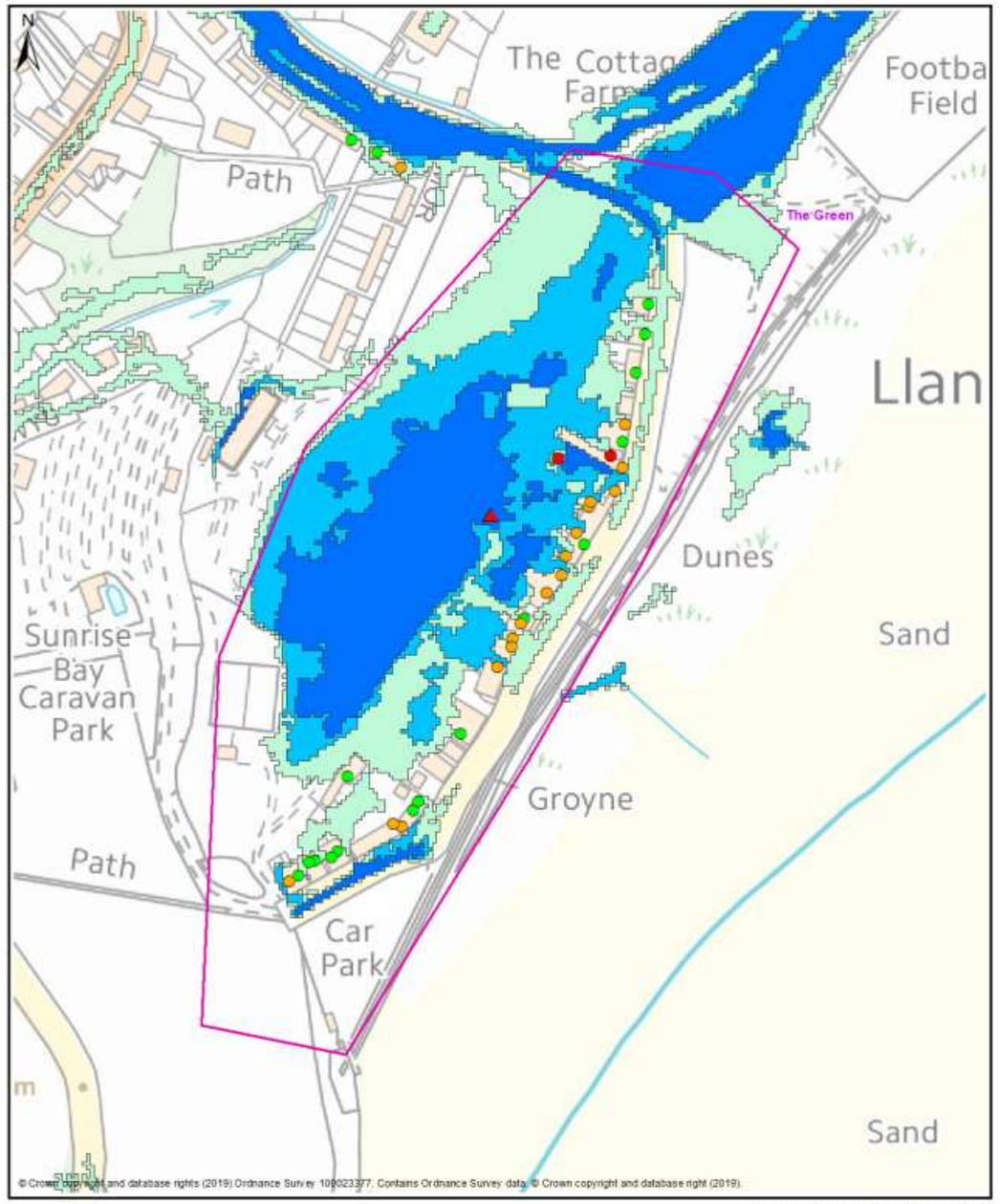
38.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	5	28	50
Map 2 Dwellings and Services	3	19	34
Map 3 CaRR	n/a	2 Pluvial 2 Fluvial 35 Tidal	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

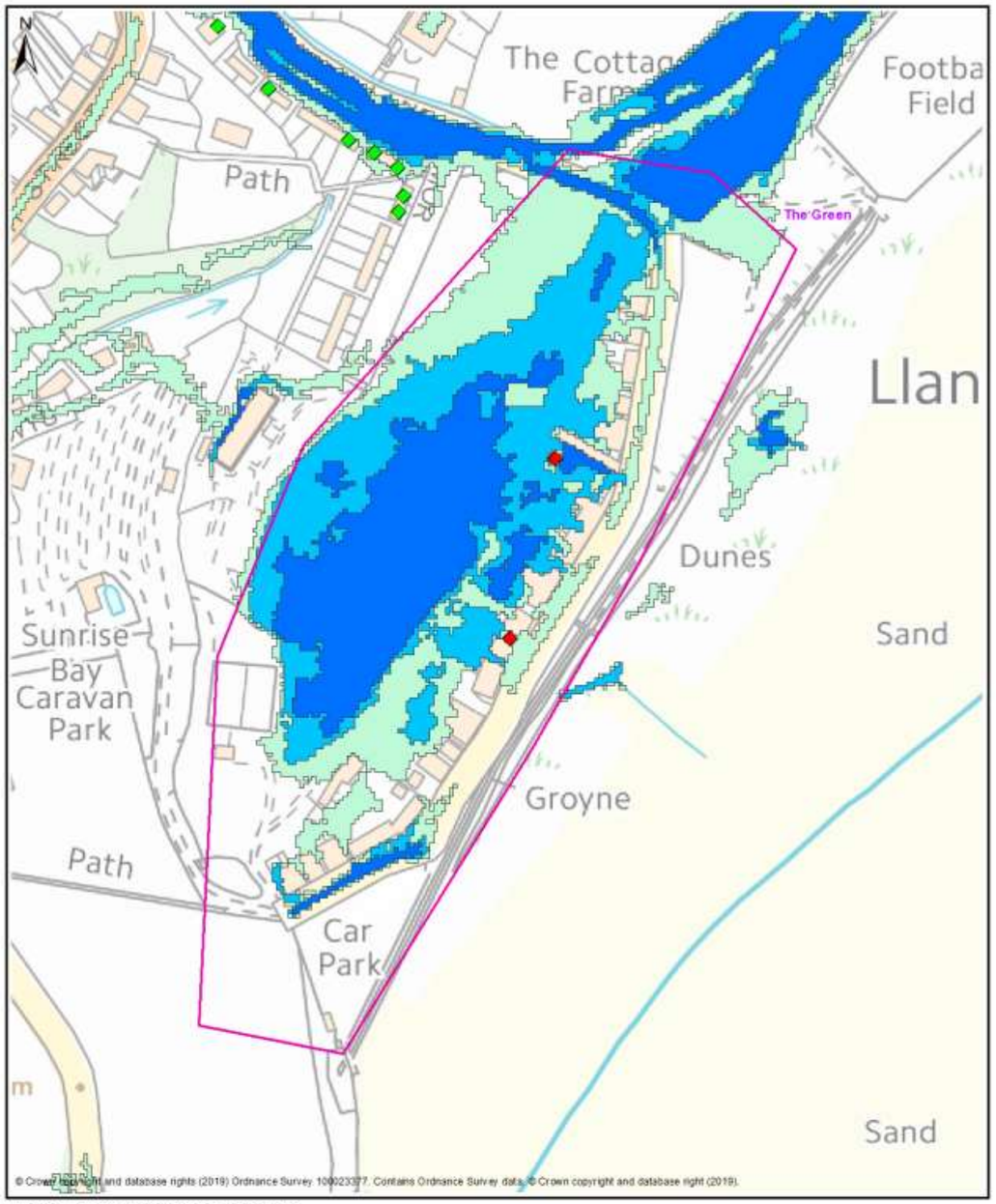
Llanstephan Ward

The Green Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Llanstephan Ward
The Green Policy Unit

0 0.0325 0.065 0.13
Km

39 Llanybydder Ward, Station Terrace Policy Unit

39.1 Area Description

Llanybydder is a market town and community that straddles the River Teifi and this forms the boundary with Ceredigion County Council. The Station Road area comprises a terrace of residential houses upstream of the Teifi River Bridge and backs onto the floodplain.

39.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The area of Station Road is low lying and near to the River Teifi.

Although Surface Water flood maps indicate that this area could flood as a result of surface water at higher return periods, flooding from the main river will occur prior to this.

The bridge and highway embankment forming Highmead Terrace reduce the floodplain capacity immediately downstream of Station Road.

It is worth noting that in the October 2018 floods properties downstream of the bridge were not affected but are shown on the uFMfSW to be at higher risk than Station Road itself.

39.3 Flooding Events

In October 2018 this area suffered serious flooding due to the River Teifi bursting its banks; 32 residential properties were affected. Prior to this Carmarthenshire had no record of flooding at this location.

39.4 Flood Defence Capital Works undertaken by CCC

None

39.5 Flood Defence Capital Works undertaken by Partner Organisations

None

39.6 Flood Defence Assets

Carmarthenshire has none in this location.

39.7 Routine Works and Maintenance

None

39.8 Proposed Future Works

Co-ordinating the actions arising from the Storm Callum flood report in the Llanybydder area as a whole not just the Policy Unit area. In Station Terrace we will continue to support the Highways Authority and DCWW operate and manage the drainage.

CCC, in collaboration with Ceredigion County Council have asked NRW to undertake fluvial flood modelling to evaluate the flood risk and potential mitigation measures post Storm Callum.

39.9 Flood Risk

39.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

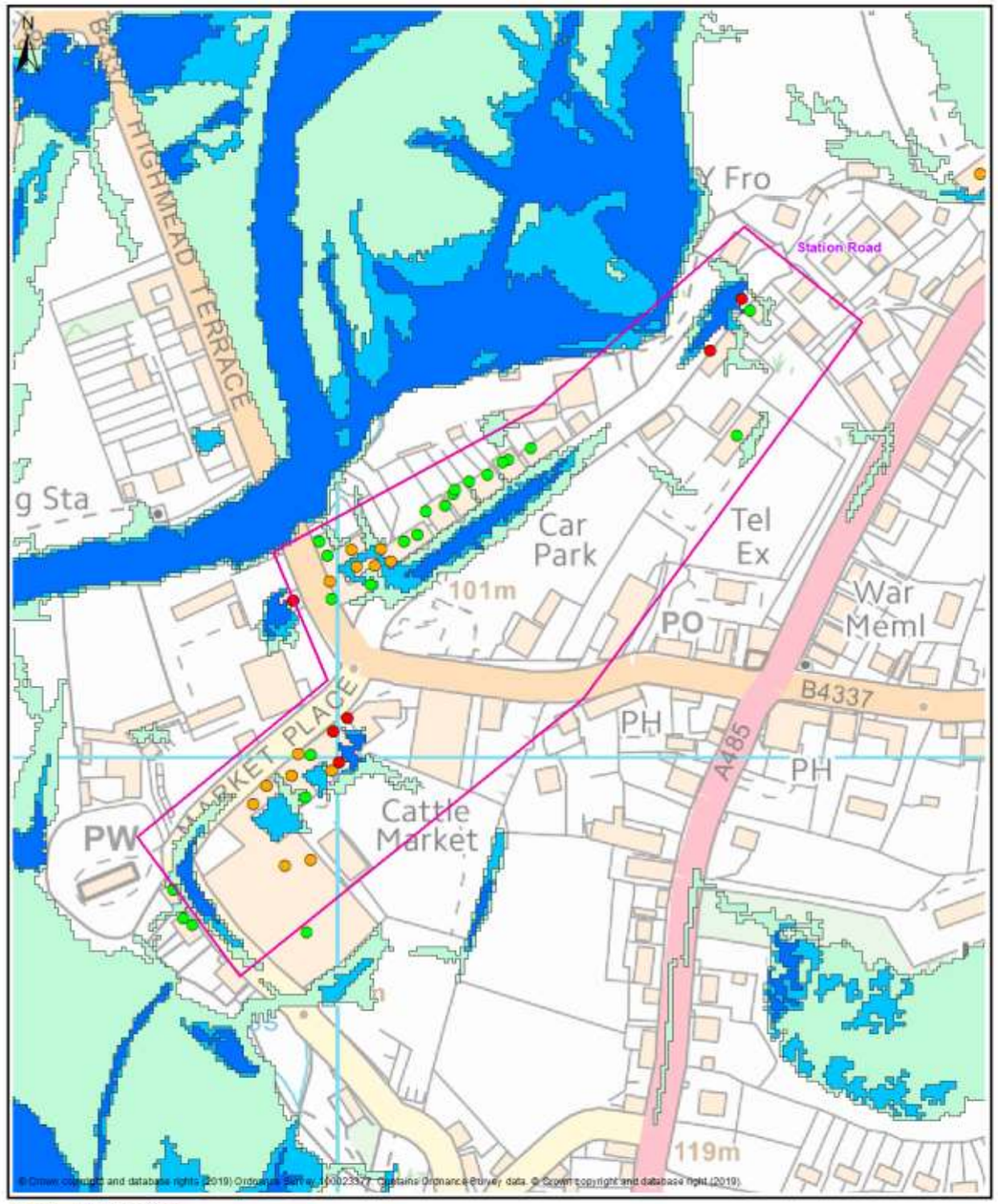
39.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

39.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	5	23	47
Map 2 Dwellings and Services	1	12	32
Map 3 CaRR	n/a	1 Pluvial 51 Fluvial	n/a



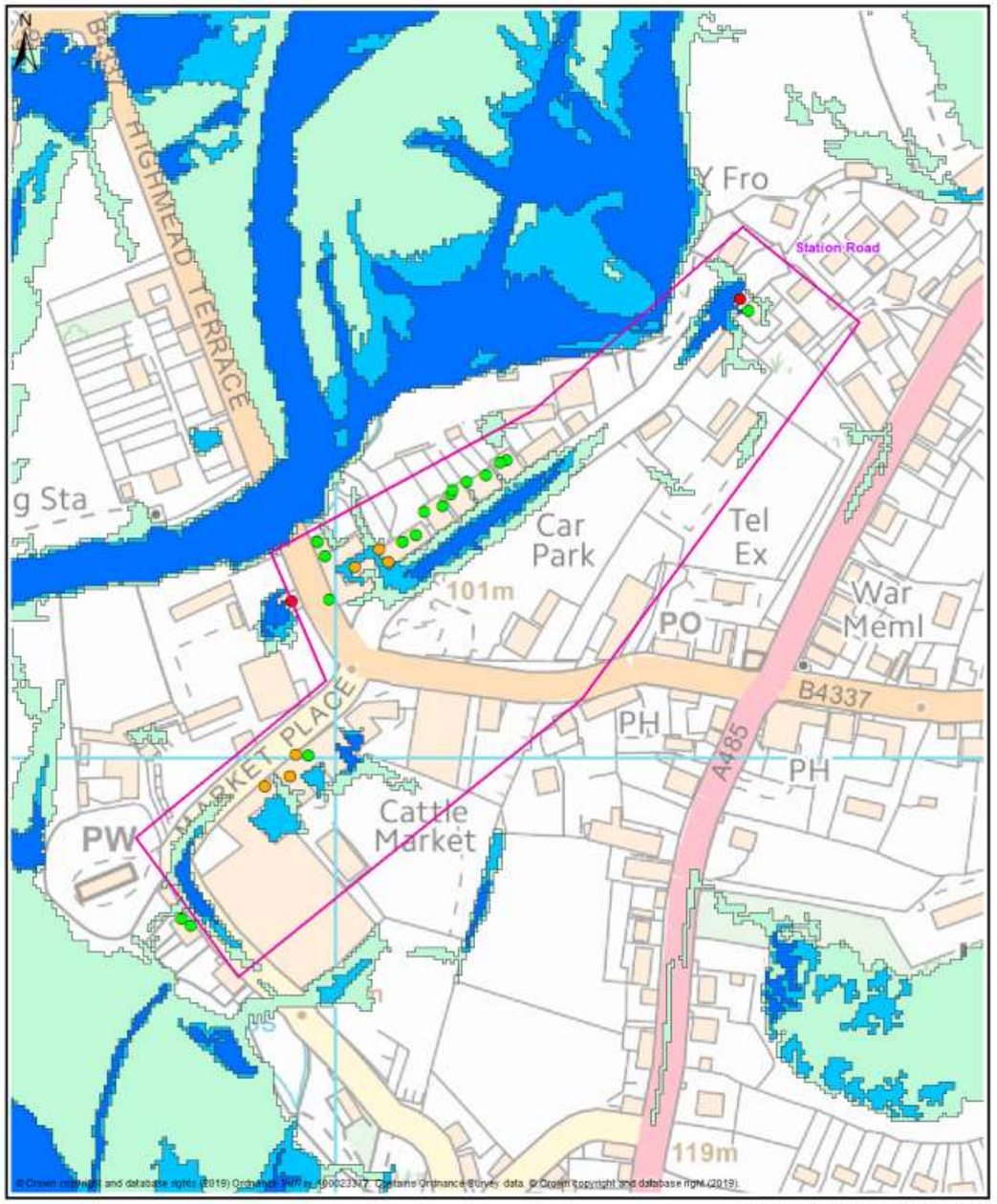
Map 1 - All Properties

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Llanybydde Ward
Station Road Policy Unit

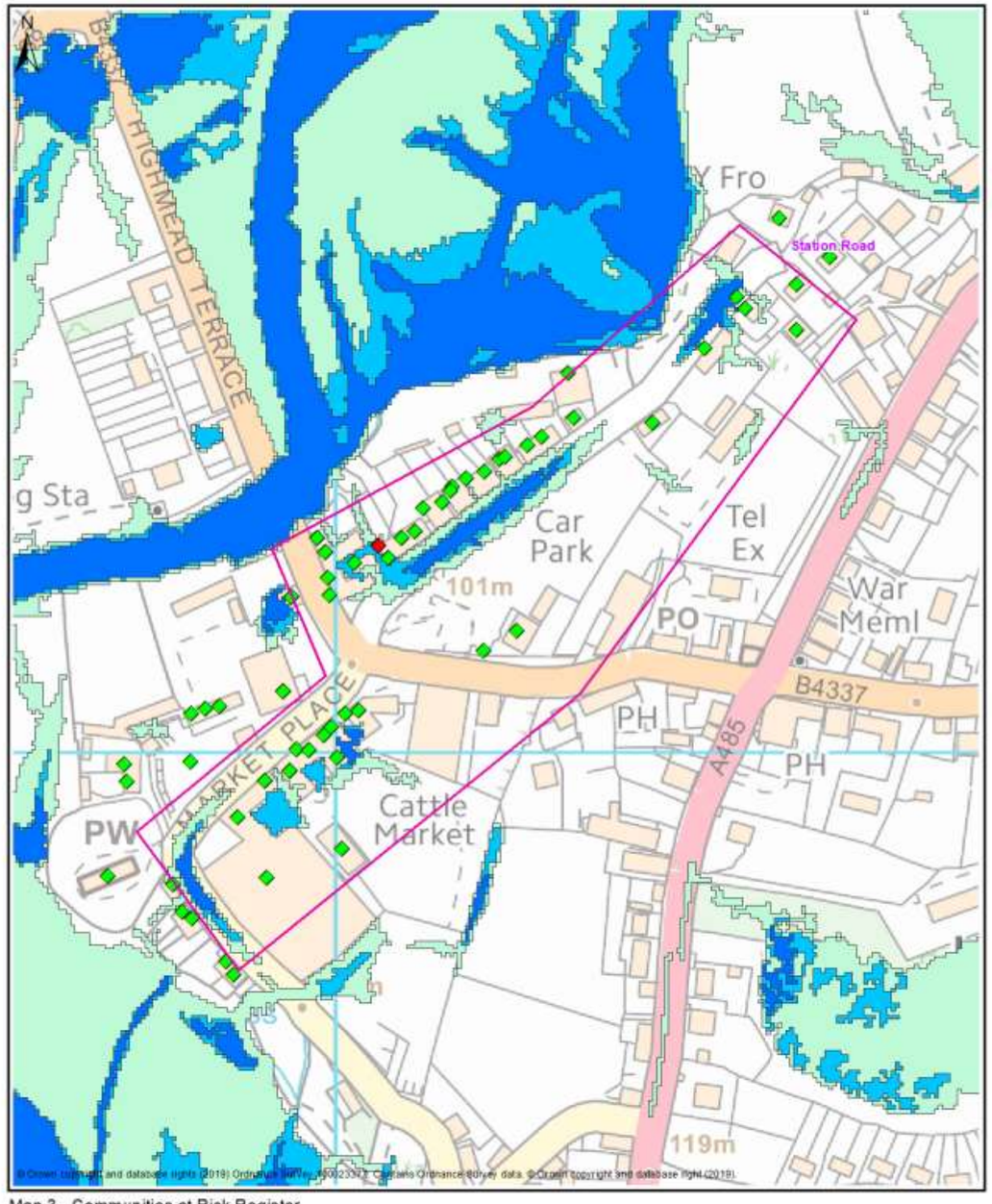
0 0.0325 0.065 0.13 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Llanybydde Ward
Station Road Policy Unit

0 0.0325 0.065 0.13 Km

40 Llanybydder Ward, Treherbert Street Policy Unit

40.1 Area Description

This Policy Unit comprises the area of Treherbert Street in Cwmann.

There is a stone culvert that runs beneath the properties of Treherbert Street and its sustainability given its age and location are of concern.

40.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Blockage or collapse of the culvert would cause severe disruption since it would be difficult to rectify without a long culvert diversion.

40.3 Flooding Events

None recorded

40.4 Flood Defence Capital Works undertaken by CCC

None

40.5 Flood Defence Capital Works undertaken by Partner Organisations

None

40.6 Flood Defence Assets

Treherbert Street Culvert – Private ownership

Teherbert Street Culvert		
		

40.7 Routine Works and Maintenance

Area	Works Undertaken	When
Treherbert Street Culvert	CCTV Inspection	2019, 2021

40.8 Proposed Future Works

A capital scheme is being developed to upgrade the culvert watercourse in the area. In 2019 WG funding was refused on the grounds of insufficient flood risk. CCC Flood Defence and Coastal Protection Engineers are currently evaluating options and cost benefit (2019).

40.9 Flood Risk

40.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

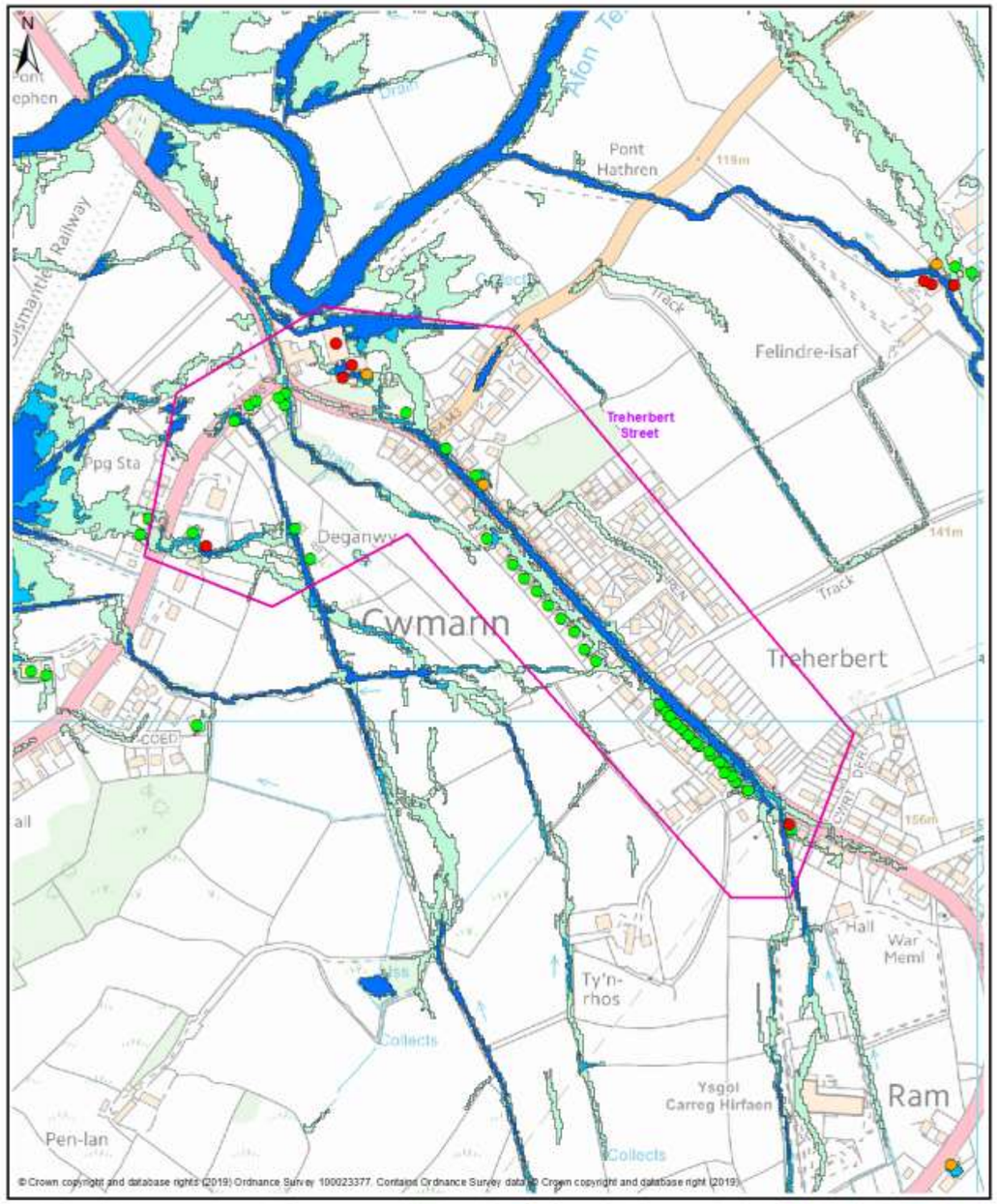
40.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

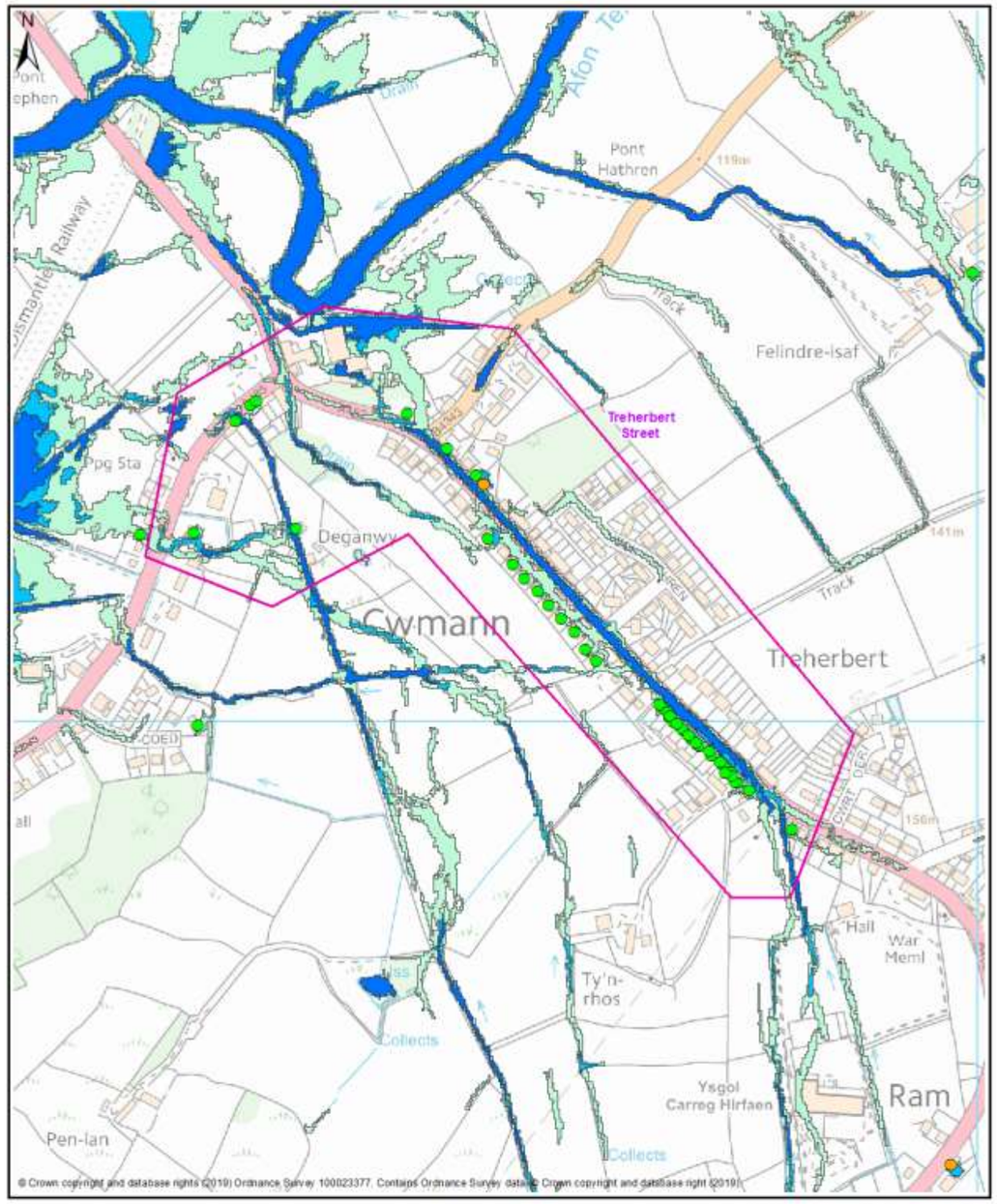
40.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	5	7	51
Map 2 Dwellings and Services	0	1	41
Map 3 CaRR	n/a	0 Pluvial 15 Fluvial	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

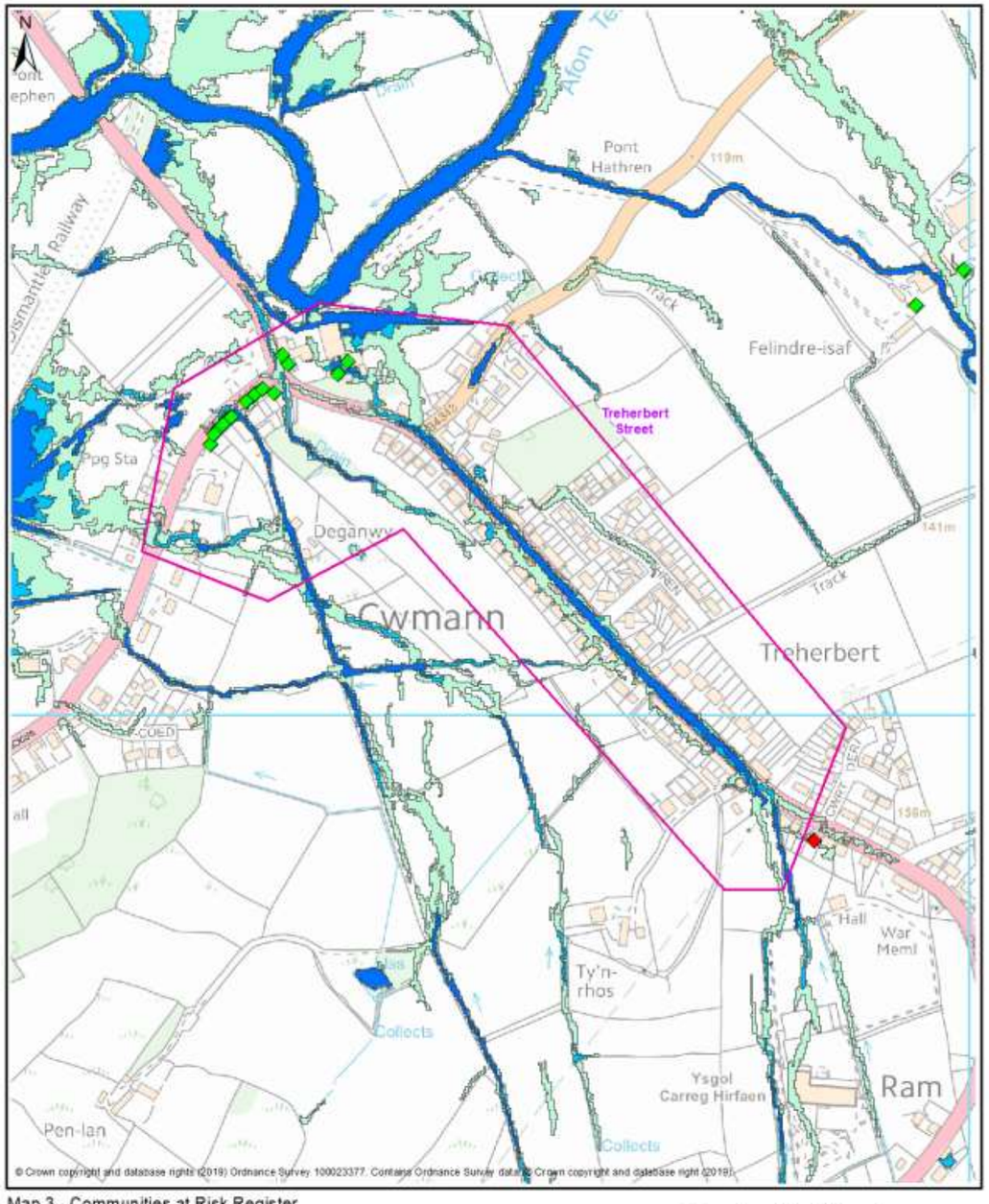
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Llanybydder Ward
Treherbert Street Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Llanybydder Ward
Treherbert Street Policy Unit

0 0.05 0.1 0.2 Km

41 Lleidi Ward, Heol Buckley Policy Unit

41.1 Area Description

The Heol Buckley Policy Unit comprises the residential development in Felinfoel Llanelli. It is drained by highway drainage and DCWW surface water sewers.

41.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding.

This area is vulnerable to flooding because the road at the southern side of the estate is at a much higher level than the site itself.

41.3 Flooding Events

CCC have no record of any flooding in this area.

41.4 Flood Defence Capital Works undertaken by CCC

None

41.5 Flood Defence Assets

None

41.6 Routine Works and Maintenance

None

41.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

41.8 Flood Risk

41.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

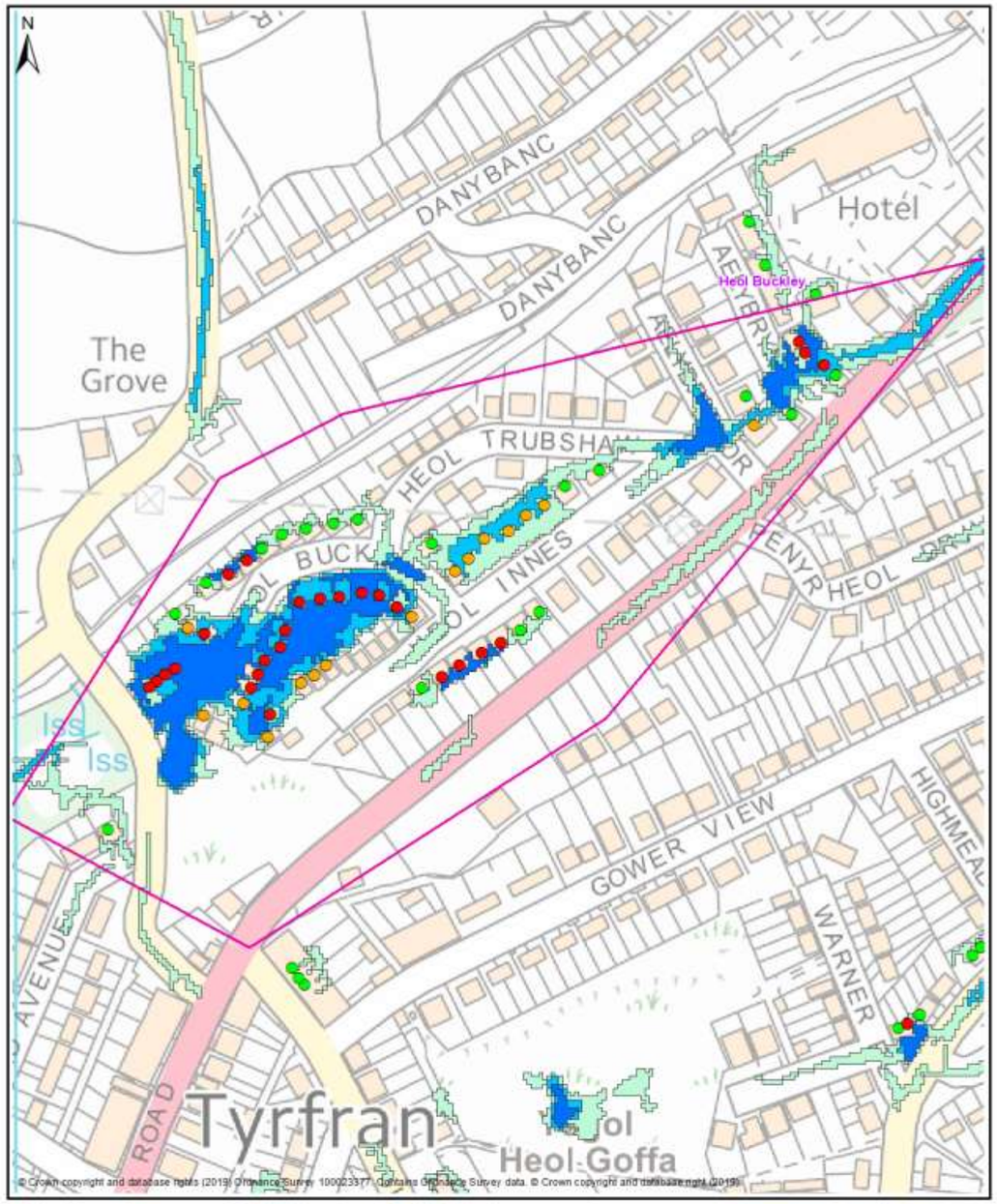
41.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

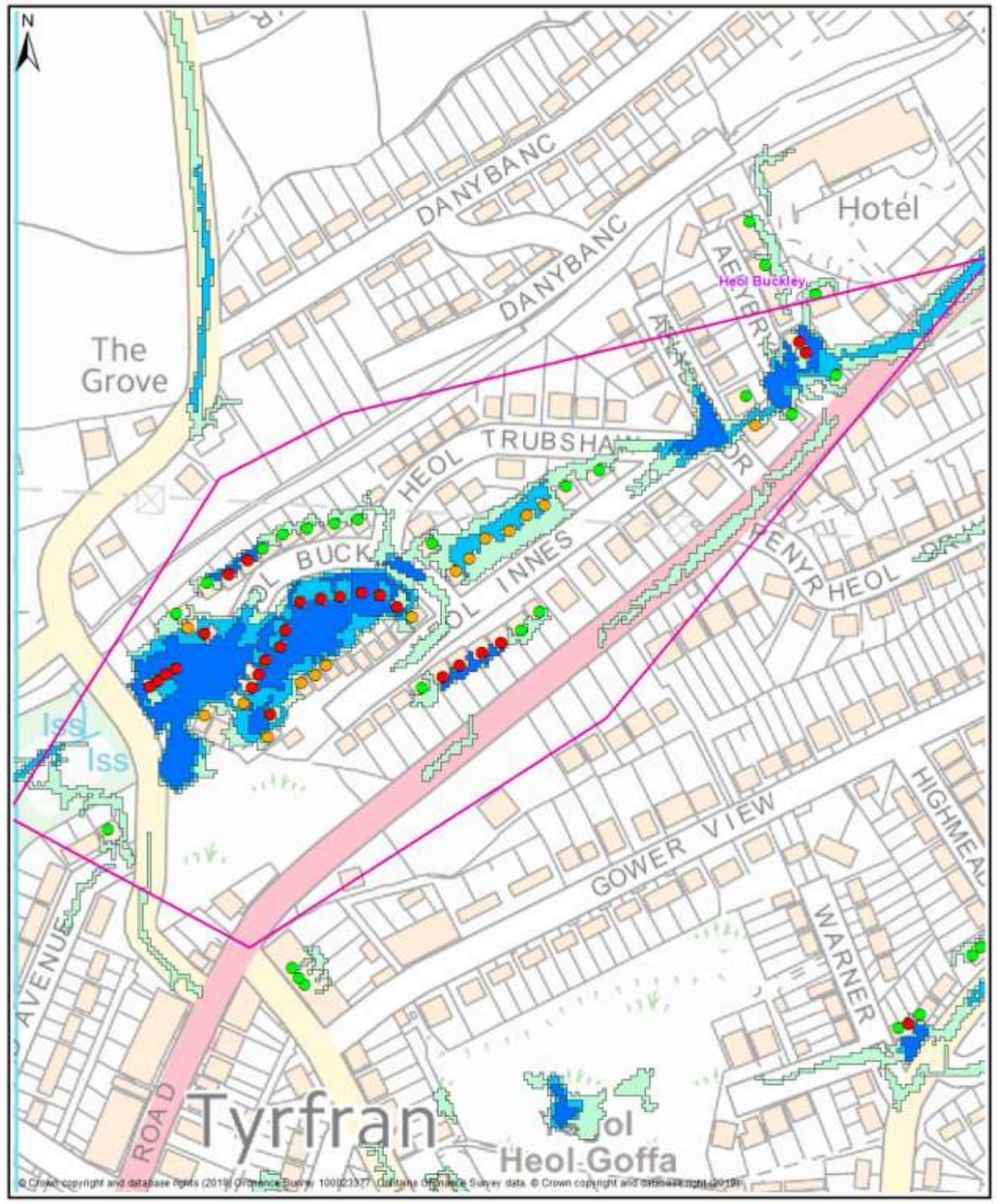
41.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	26	41	58
Map 2 Dwellings and Services	25	40	57
Map 3 CaRR	n/a	21	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

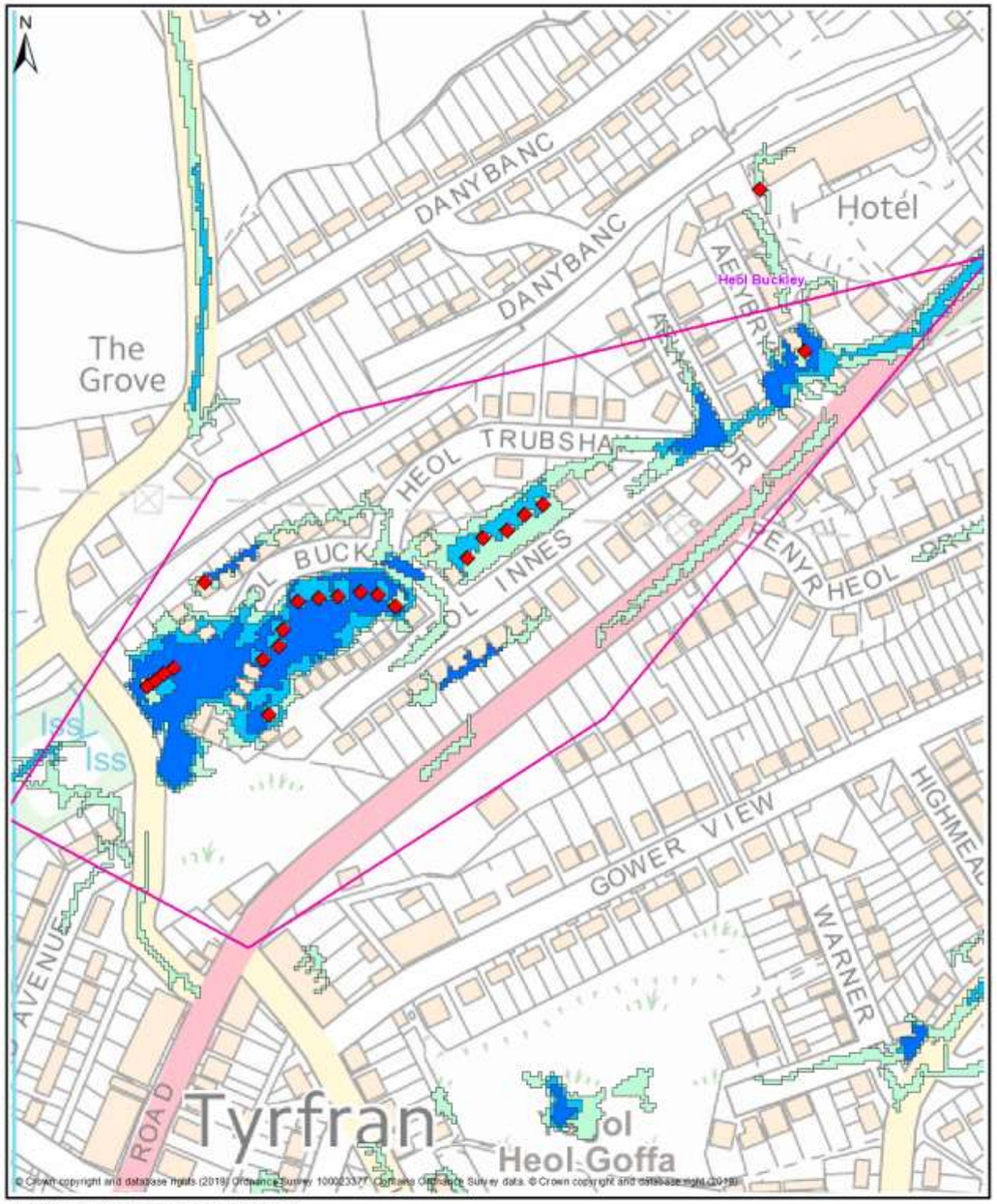
Lleidi Ward

Heol Buckley Policy Unit

0 0.0325 0.065 0.13 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Lleidi Ward

Heol Buckley Policy Unit

0 0.0325 0.065 0.13 Km

42 Lleidi Ward, Lakeview Terrace Policy Unit

42.1 Area Description

The Lakeview Terrace Policy Unit is located in a valley bottom below Pentrepoeth Road through to where the watercourse joins with the Cille Stream (Main River).

With a semi urbanised catchment, the area above Lakeview Terrace is a large grassed area that slopes towards Lakeview Terrace and Brickyard Cottages (previously utilised as a municipal tip).

The stream is culverted under the grassed area to where it discharges to the Cille Stream behind the Strady Arms Public House, a distance of approximately 620m.

The culverted section below Lakeview Terrace is in poor condition with many changes in construction.

The main concern is the section of culvert under the Colliers Arms Public House. Flooding in the cellar has been reported but attempts to jet through or camera this section have failed.

42.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding.

As well as being at risk of flooding from the ordinary watercourse and grassed area it is also at risk from the Cille Stream (Main River).

CaRR maps indicate 2 properties at risk of pluvial flooding and this corresponds with the observed flood history.

42.3 Flooding Events

- CCC have recorded flooding incidents at Brickyard Cottages
- Reports of flooding of the cellar of the Colliers Arms at Luton Terrace

42.4 Flood Defence Capital Works undertaken by CCC

Construction of a flood defence bund at the top of the grassed area. This appears to have been effective at reducing flows at Lakeview Terrace/ Brickyard Cottages and no flooding has been recorded since this was constructed in March 2016 despite heavy rainfall events in the area.

42.5 Flood Defence Capital Works undertaken by Partner Organisations

At the time of writing DCWW are in the process of constructing the Station Road surface water sewer.

42.6 Flood Defence Assets

- Pentrepoeth Bund
- Pentrepoeth Culvert

42.7 Routine Works and Maintenance

Area	Works Undertaken	When
Pentrepoeth Inlet	T98 Inspections	Annually
Pentrepoeth Bund	T98 Inspections	Annually
Pentrepoeth Bund	Grass Cutting	Annually

42.8 Proposed Future Works

An outline business case (OBC) is currently being prepared (2019) to evaluate flood management options. A bid for capital funding will be submitted to WG in 2020 if the OBC identifies any viable options.

42.9 Flood Risk

42.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

42.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

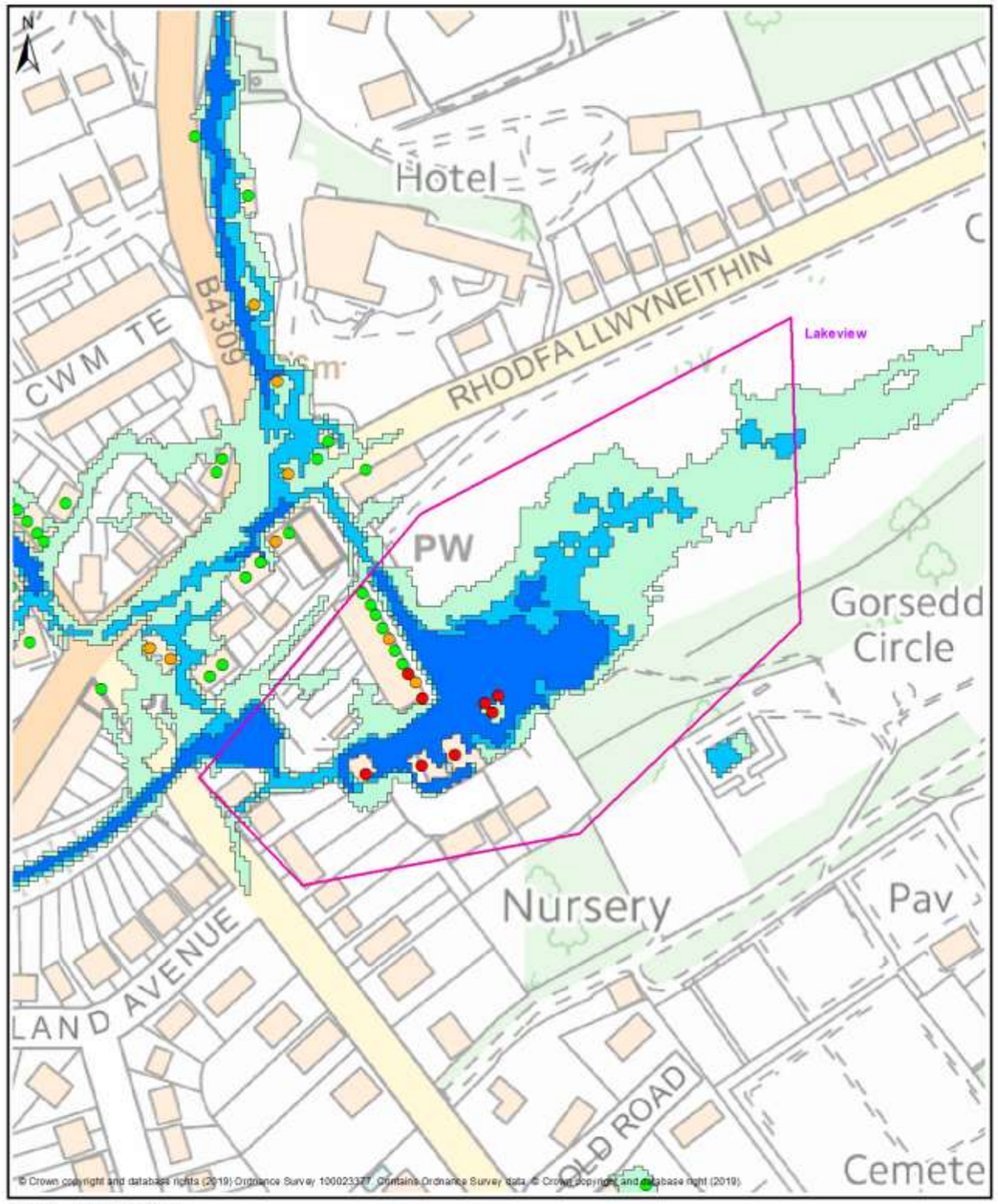
42.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	8	10	16
Map 2 Dwellings and Services	7	9	15
Map 3 CaRR	n/a	2 Pluvial 16 Fluvial	n/a

42.10 Environmental Considerations

Grassed area in front of Lakeview Terrace has been used as a landfill tip in the past.



Map 1 - All Properties

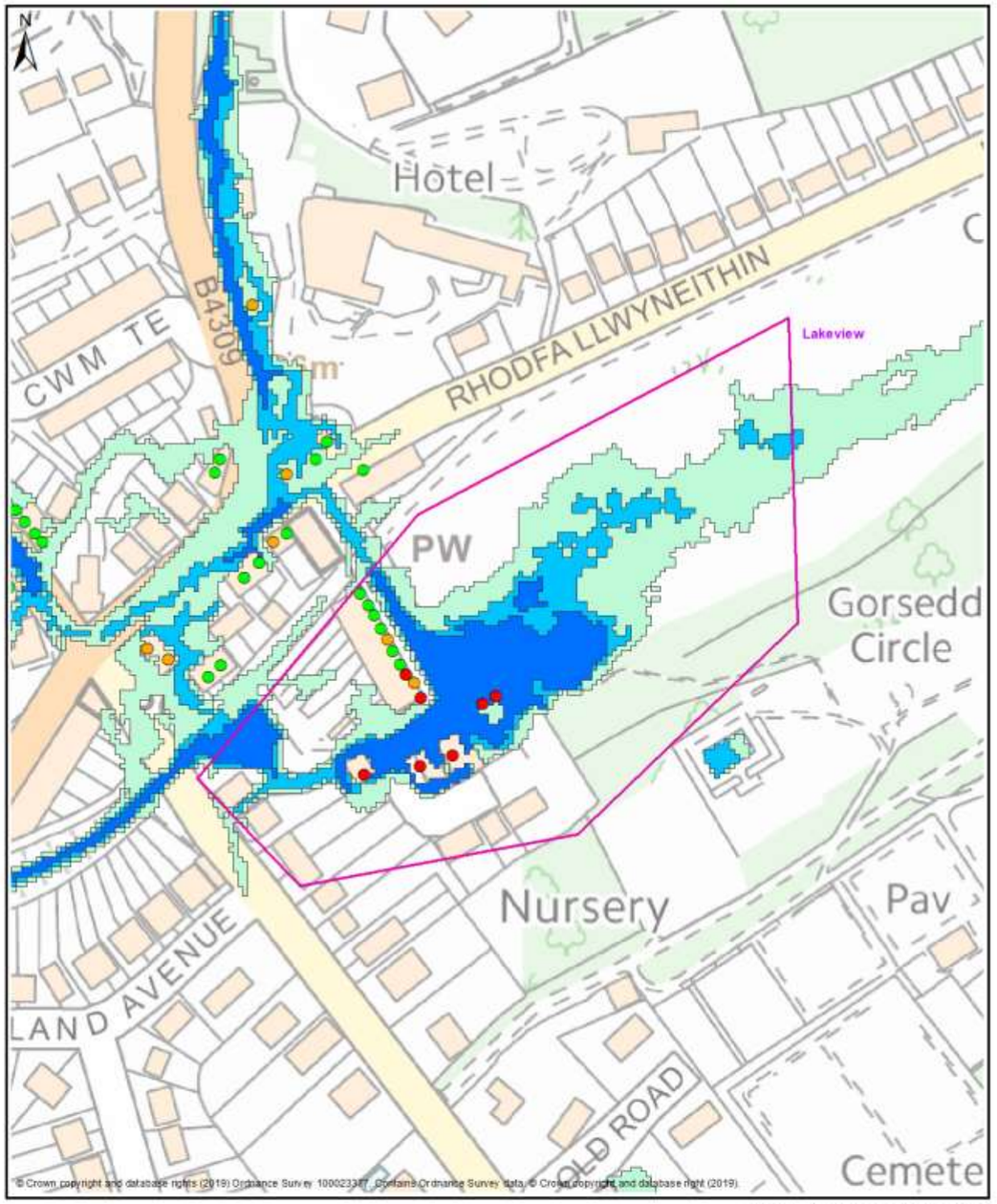
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Lleidi Ward

Lakeview Policy Unit

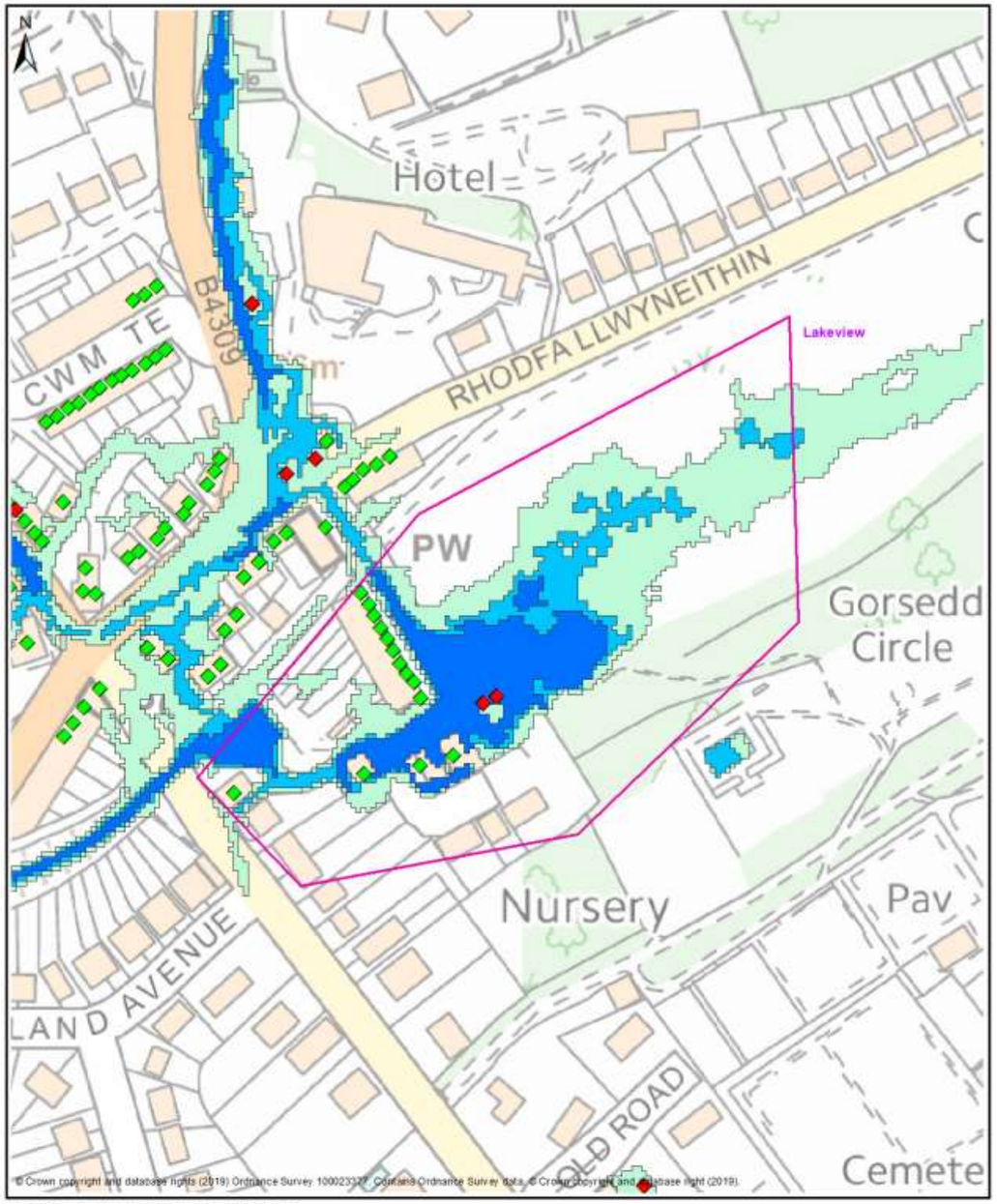
0 0.0275 0.055 0.11 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Lleidi Ward
Lakeview Policy Unit

0 0.0275 0.055 0.11 Km

43 Lleidi Ward, Llanelli Town Centre Policy Unit

43.1 Area Description

Llanelli Town Centre Policy Unit is predominately mixed retail. Main characteristics from a flood perspective is the main river Lleidi that is culverted through the town centre for a distance of approximately 700m.

The presence of the Swiss Valley reservoirs are a significant feature of this catchment and will attenuate flood flows reducing the risk of flooding from the Lleidi.

In the town centre DCWW have a 1200mm combined sewer and they are currently in the process of constructing a tunnel along the route Station Road to cater for surface water from parts of this area.

43.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

High numbers of properties are indicated to be at risk of flooding but the drainage infrastructure is primarily managed by Natural Resources Wales (Main River Lleidi Culvert) and DCWW via the surface and combined sewer network.

43.3 Flooding Events

None recorded by CCC.

43.4 Flood Defence Capital Works undertaken by CCC

No works have been undertaken by CCC.

43.5 Flood Defence Capital Works undertaken by Partner Organisations

At the time of Writing DCWW are in the process of constructing the Station Road Surface Water.

43.6 Flood Defence Assets

Lleidi Culvert, Main River NRW lead

Combined Sewer System, DCWW

Station Road tunnel works		
		

43.7 Routine Works and Maintenance

None

43.8 Proposed Future Works

Continue to liaise and co-operate with DCWW to deliver the Rainscape Project.

43.9 Flood Risk

43.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

43.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

43.9.3 Map 3: Community at Risk Register (CaRR)

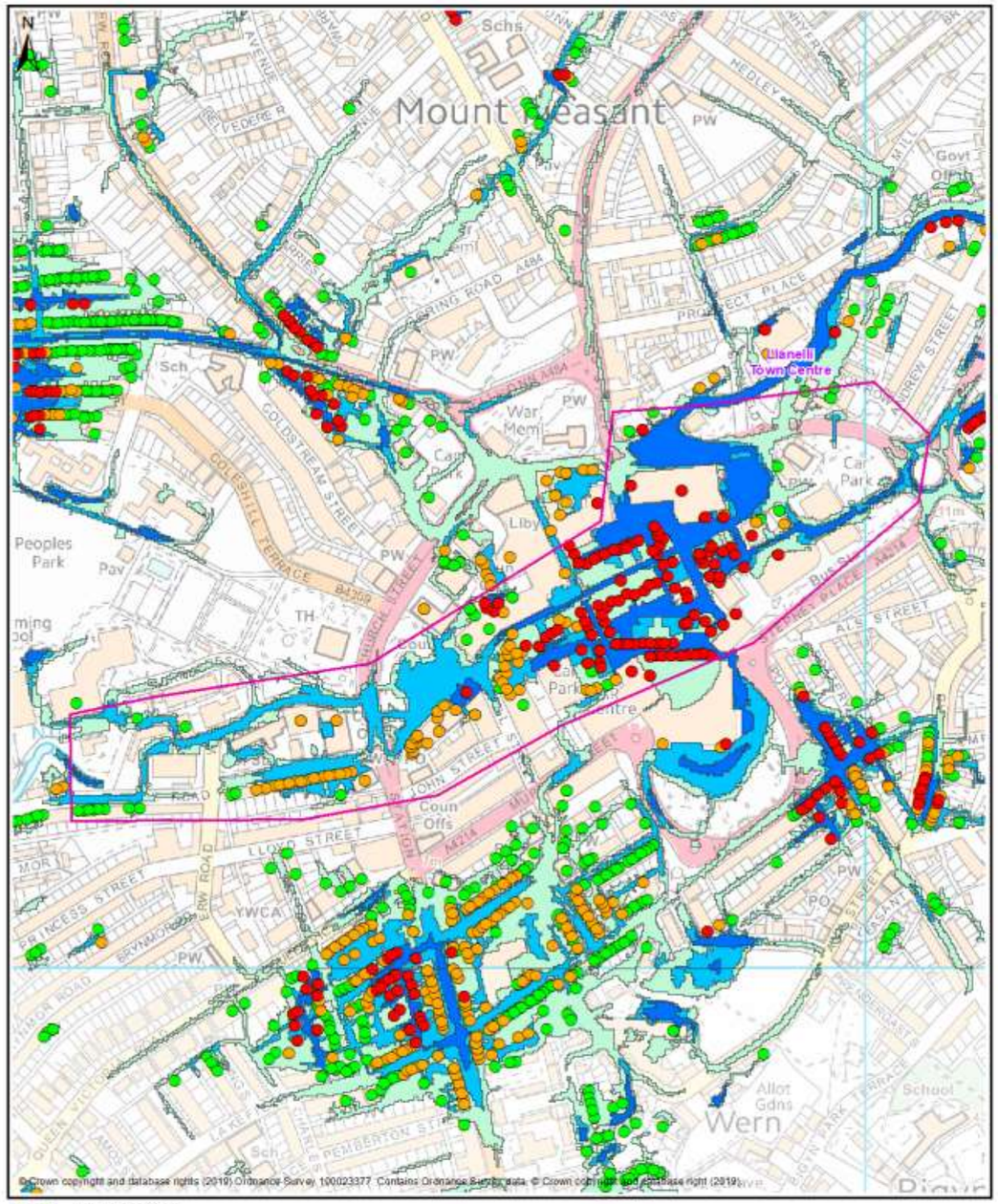
This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	148	257	296
Map 2 Dwellings and Services	53	122	137
Map 3 CaRR	n/a	151 Pluvial 241 Fluvial	n/a

43.10 Environmental Considerations

43.11 Biodiversity

Dredging has been discounted on environmental grounds as well as being an unsustainable flood defence measure.



Map 1 - All Properties

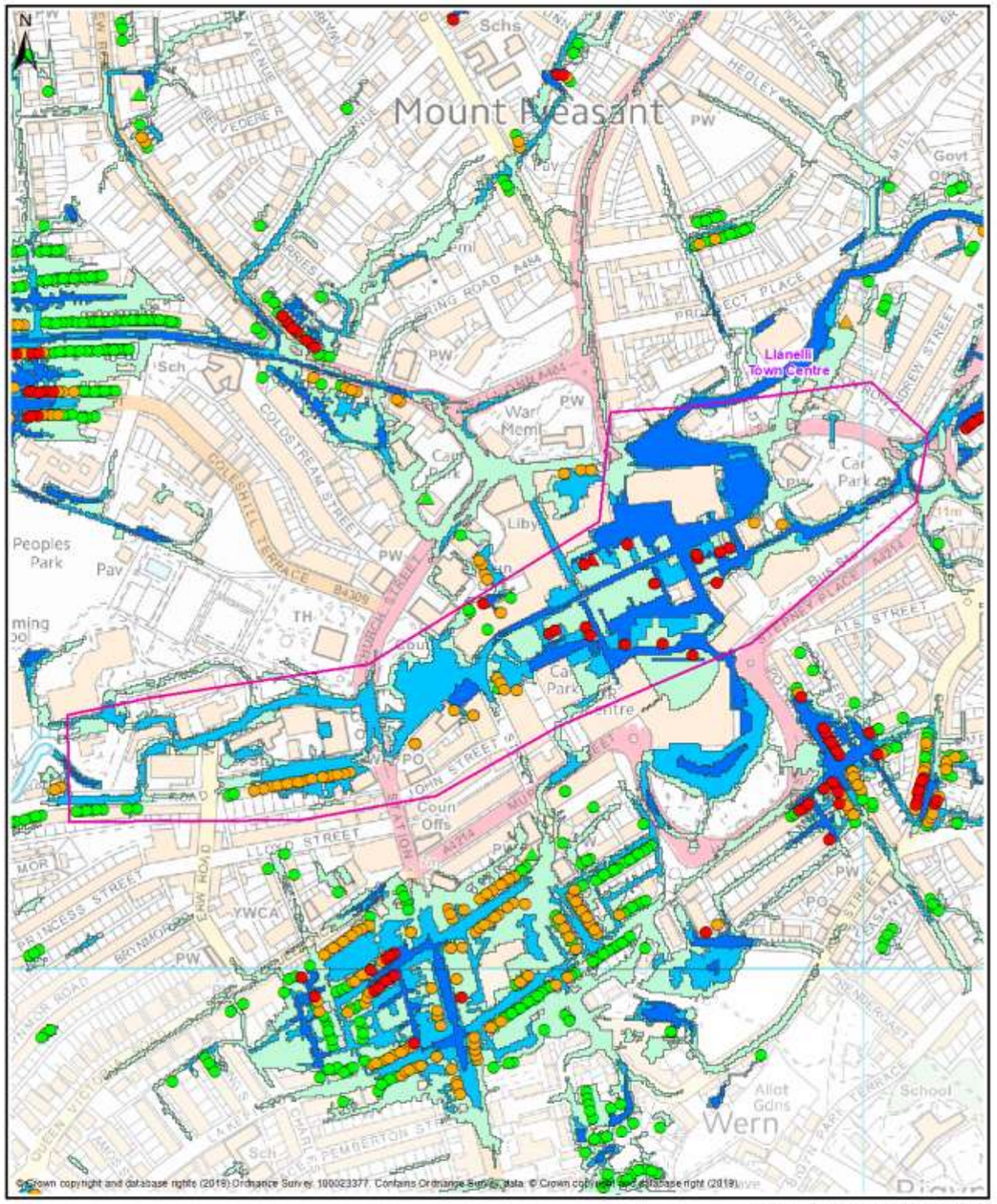
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Lleidi Ward

Llanelli Town Centre Policy Unit

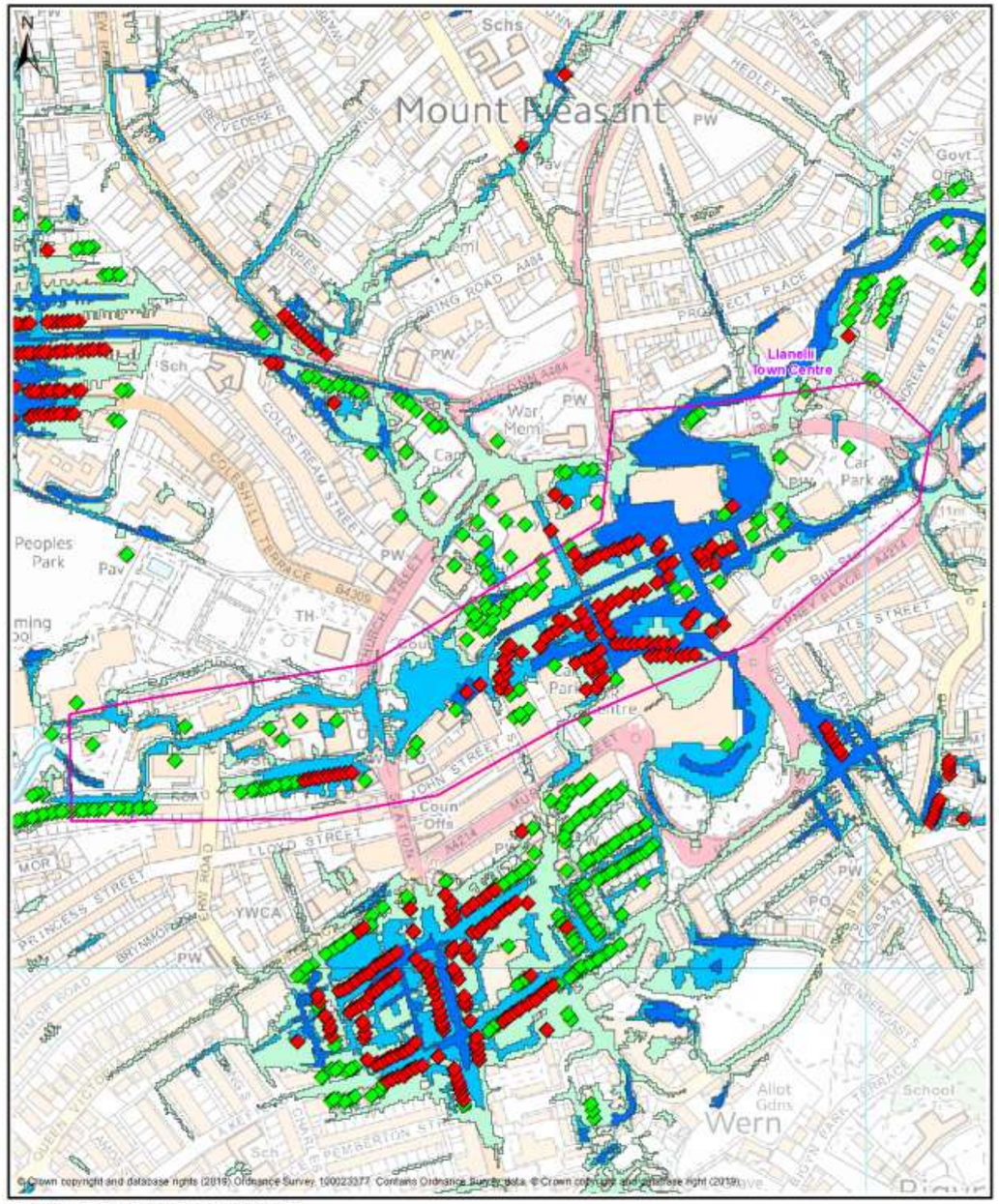
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Fluvial
- CARR Fluvial

Lleidi Ward
Llanelli Town Centre Policy Unit

0 0.05 0.1 0.2 Km

44 Llwynhendy Ward, Bryn Rhos Policy Unit

44.1 Area Description

The Bryn Rhos Policy Unit comprises the area to the east of Bryn Rhos, it is at a higher elevation than Bryn Rhos so there is potential for flooding as the area to the west is at the same level as Bryn Rhos. Therefore, creating a bowl for the water to pool.

44.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting flood risk.

44.3 Flooding Events

2011: Highway flooding due to intense rain. No properties flooded.

44.4 Flood Defence Capital Works undertaken by CCC

None

44.5 Flood Defence Assets

None

44.6 Routine Works and Maintenance

None

44.7 Proposed Future Works

Continue to work with DCWW and the Highways Authority to manage flood risk.

44.8 Flood Risk

44.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

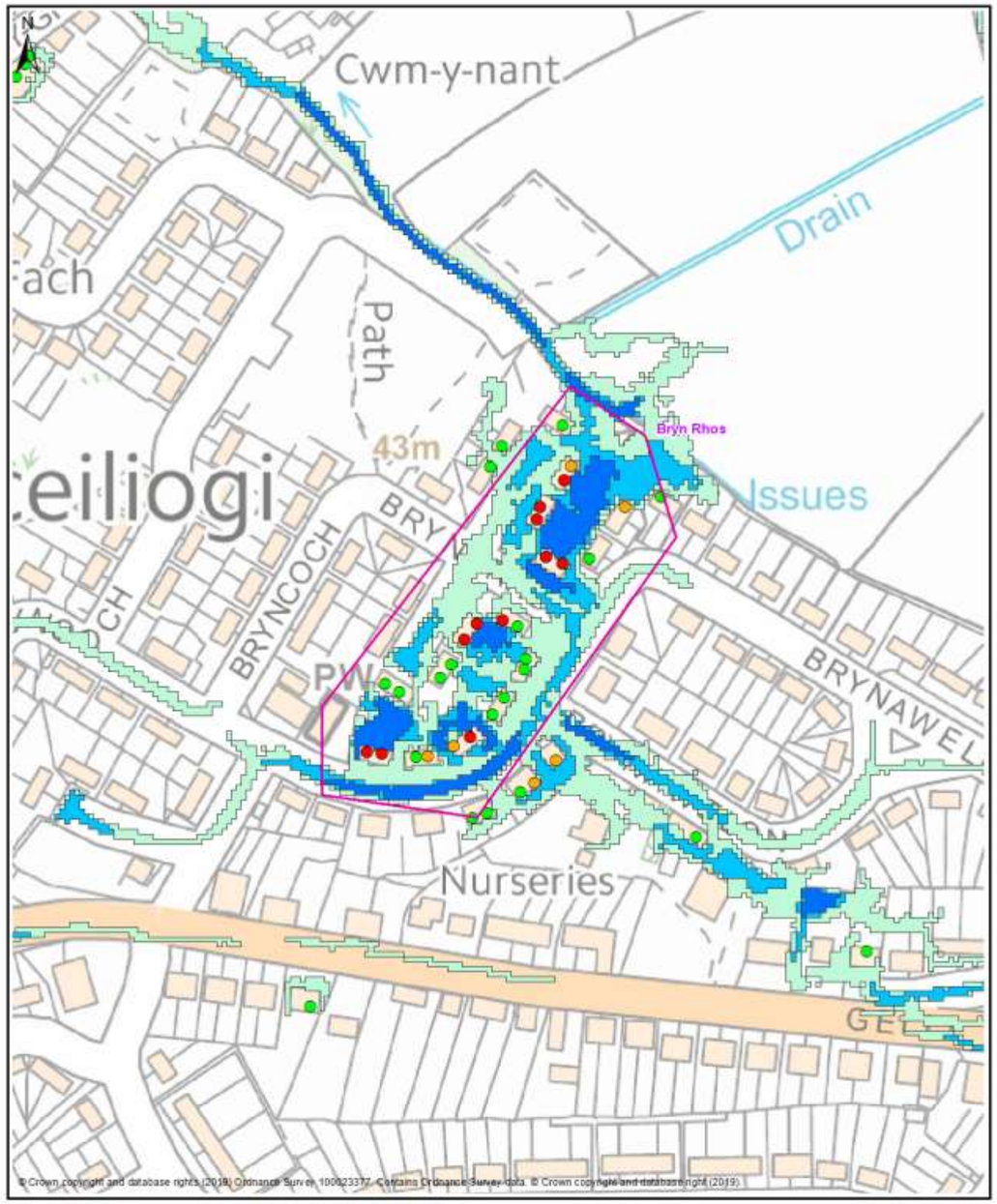
44.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

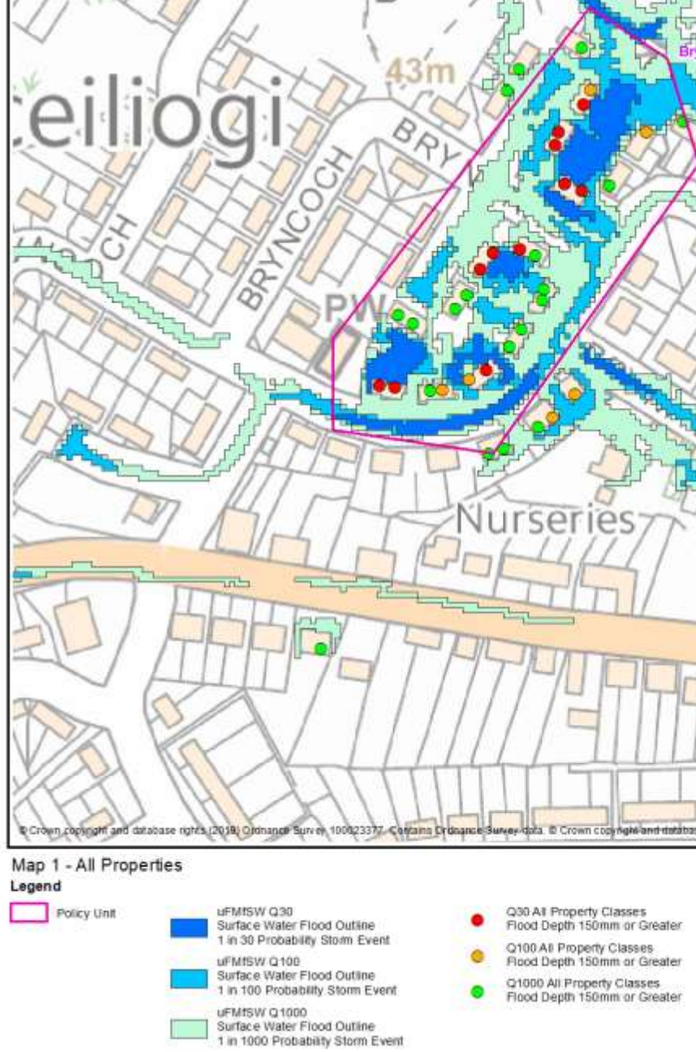
44.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

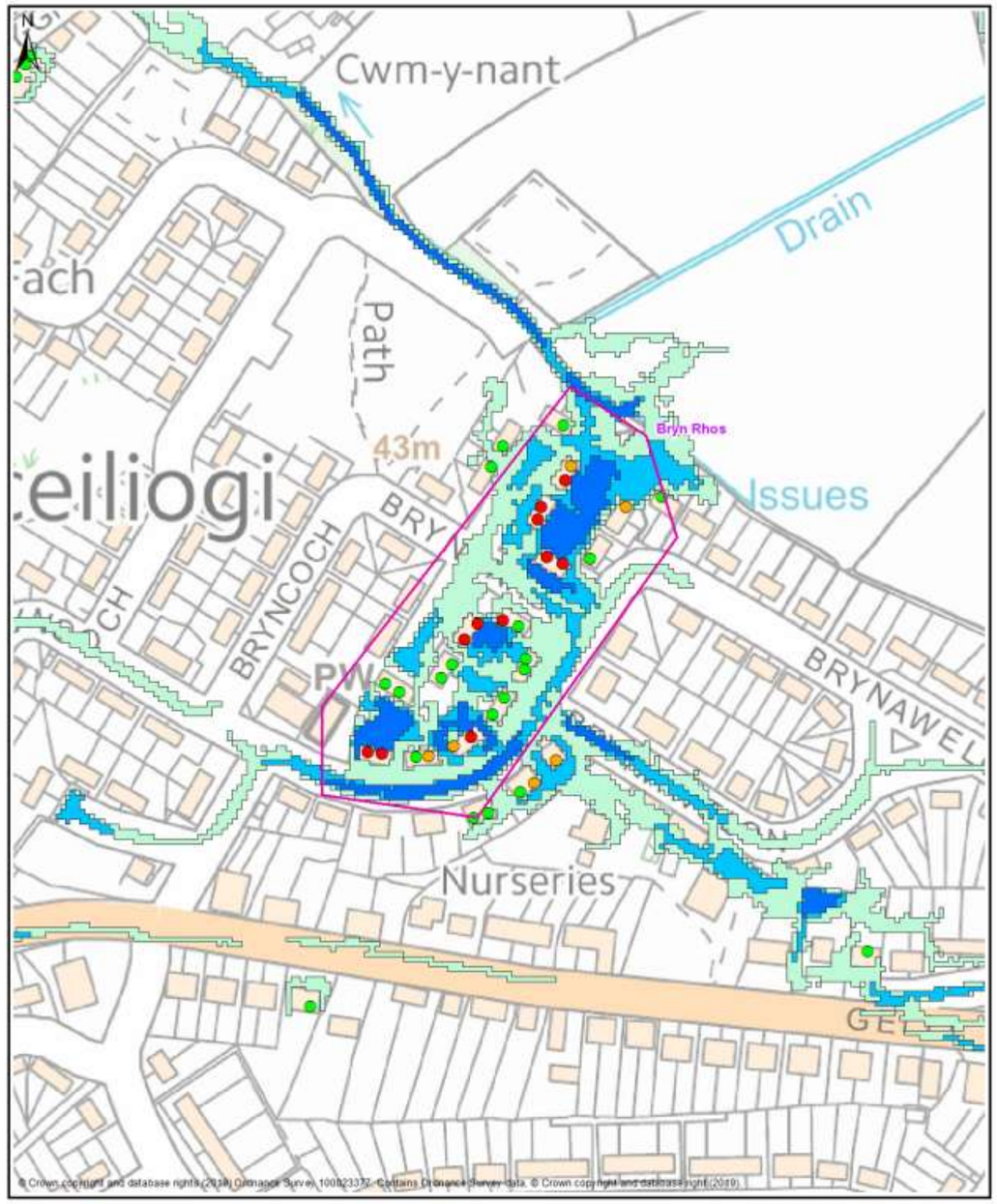
	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	11	15	28
Map 2 Dwellings and Services	11	15	28
Map 3 CaRR	n/a	0	n/a



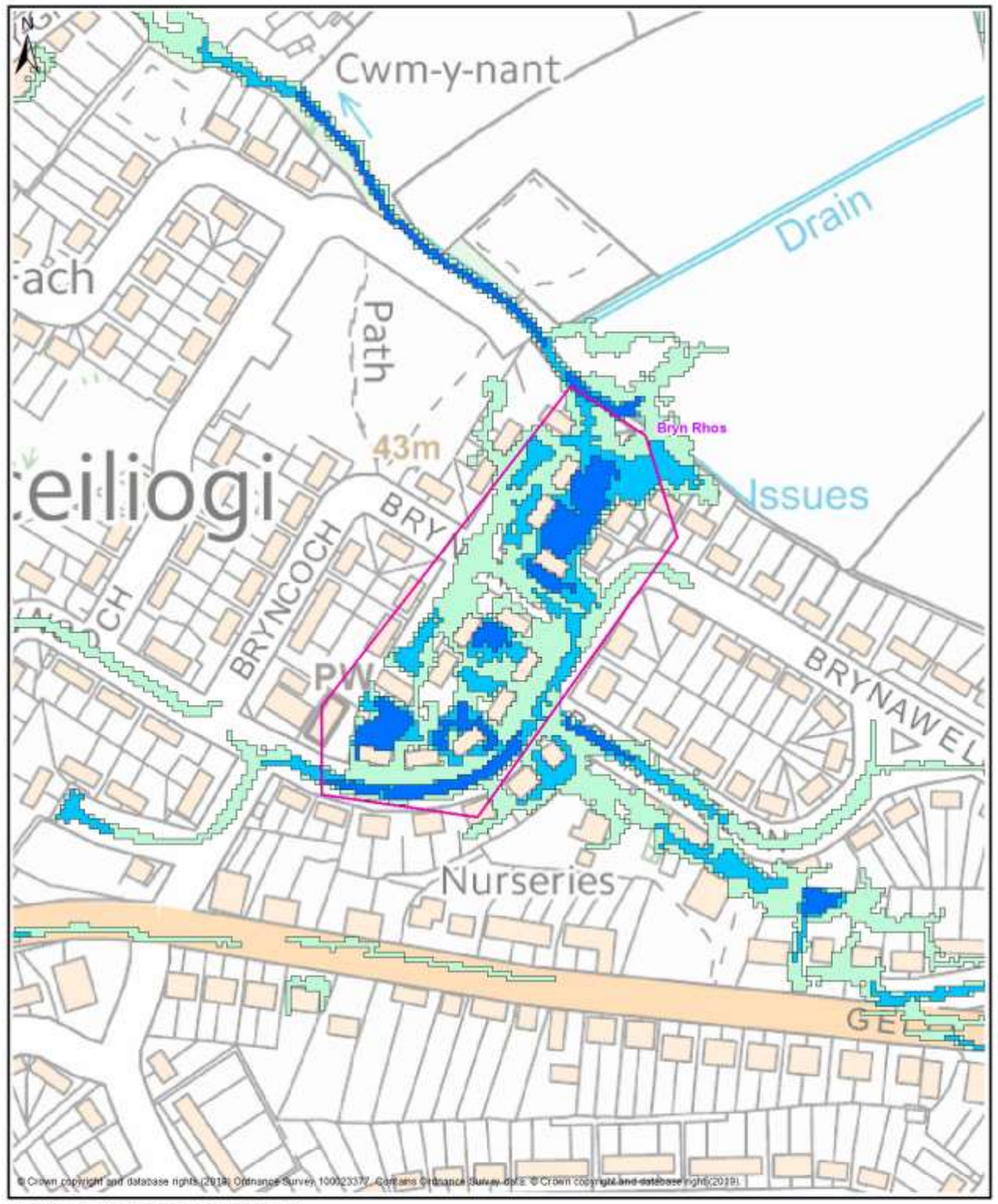
Map 1 - All Properties



Llwynhendy Ward
Bryn Rhos Policy Unit



Map 2 - Dwellings and Services


Cwm-y-nant
Drain
Path
43m
Bryn Rhos
Issues
BRYNCOCH
BRYNAWEL
Nurseries
Map 3 - Communities at Risk Register
Legend
Policy Unit
uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event
uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event
uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event
CARR Pluvial
CARR Fluvial
Llwynhendy Ward
Bryn Rhos Policy Unit
0
0.0275
0.055
0.11
Km

45 Llwynhendy Ward, Heol Elfed Policy Unit

45.1 Area Description

The Heol Elfed Policy Unit comprises the urban catchment at Heol Elfed, The Avenue, Bro Wen and Heol Hen Llanelli.

45.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

This indicates that properties at Heol Elfed, The Avenue, Bro Wen and Heol Hen are at risk of flooding. This area is served by a surface water sewer system, indicated as private on DCWW asset records.

45.3 Flooding Events

CCC Senior Engineers recollects flooding in this area but no records exist.

45.4 Flood Defence Capital Works undertaken by CCC

None

45.5 Flood Defence Assets

None

45.6 Routine Works and Maintenance

None

45.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis

45.8 Flood Risk

45.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

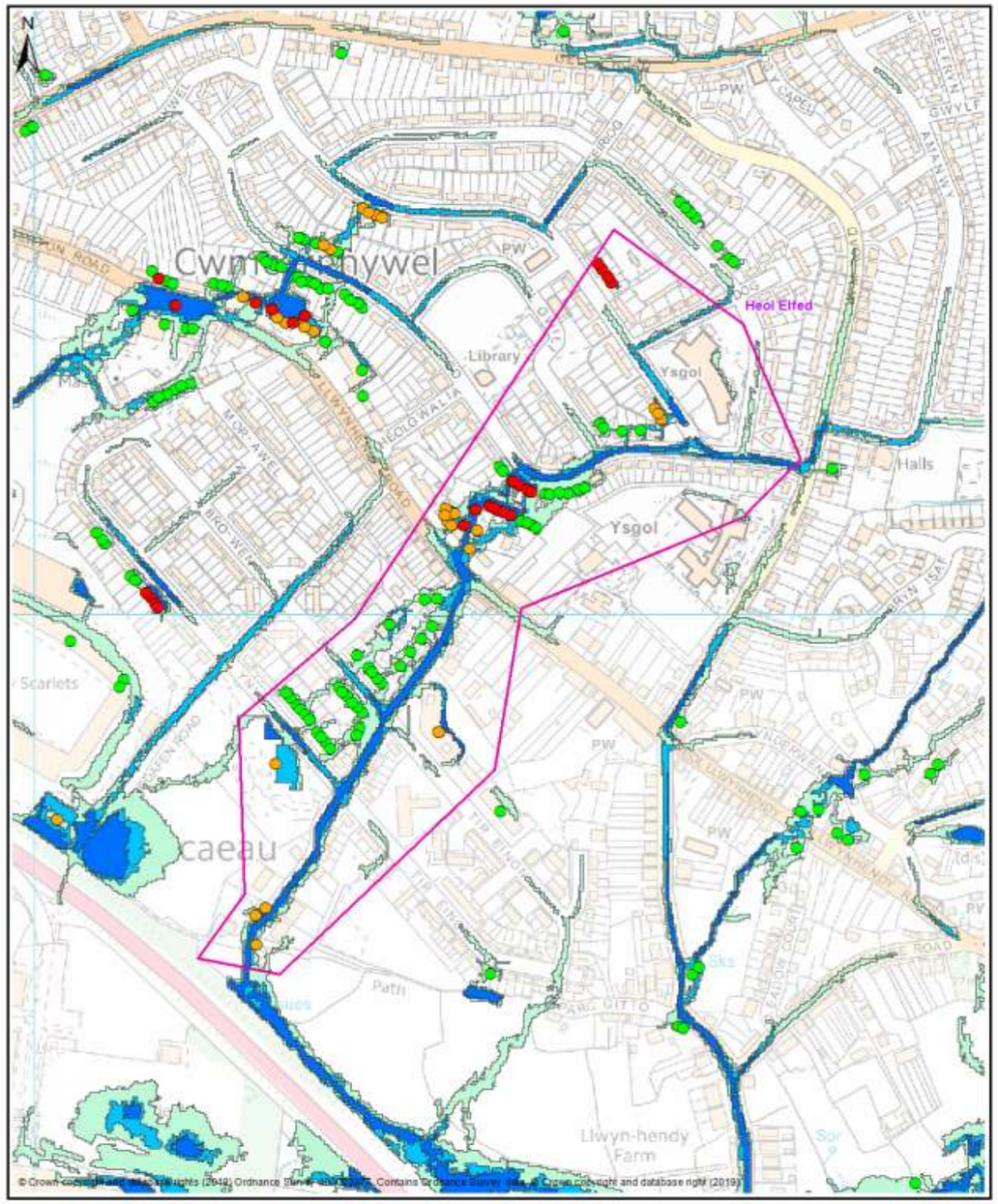
45.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

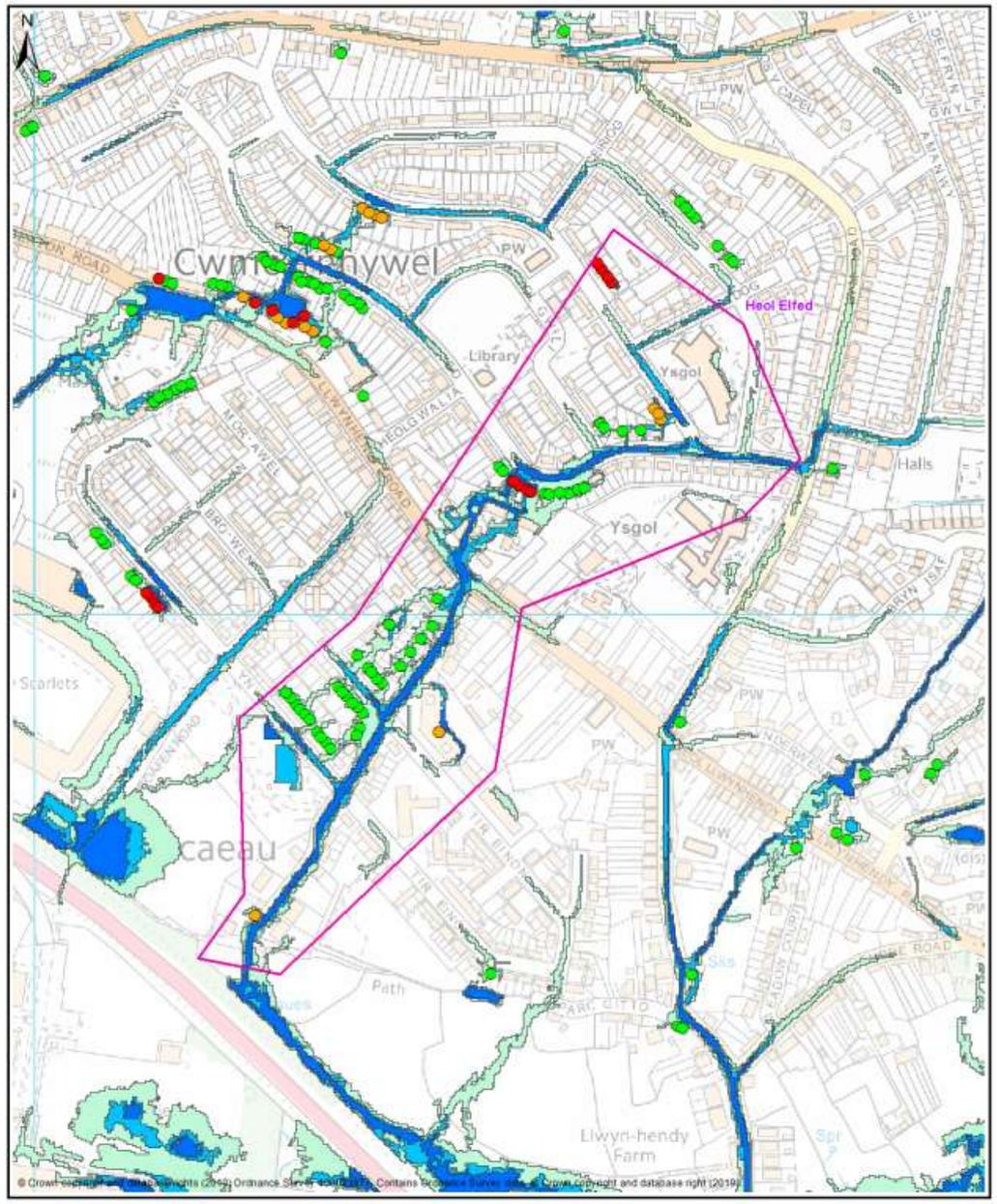
45.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	15	58	104
Map 2 Dwellings and Services	8	41	82
Map 3 CaRR	n/a	9	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

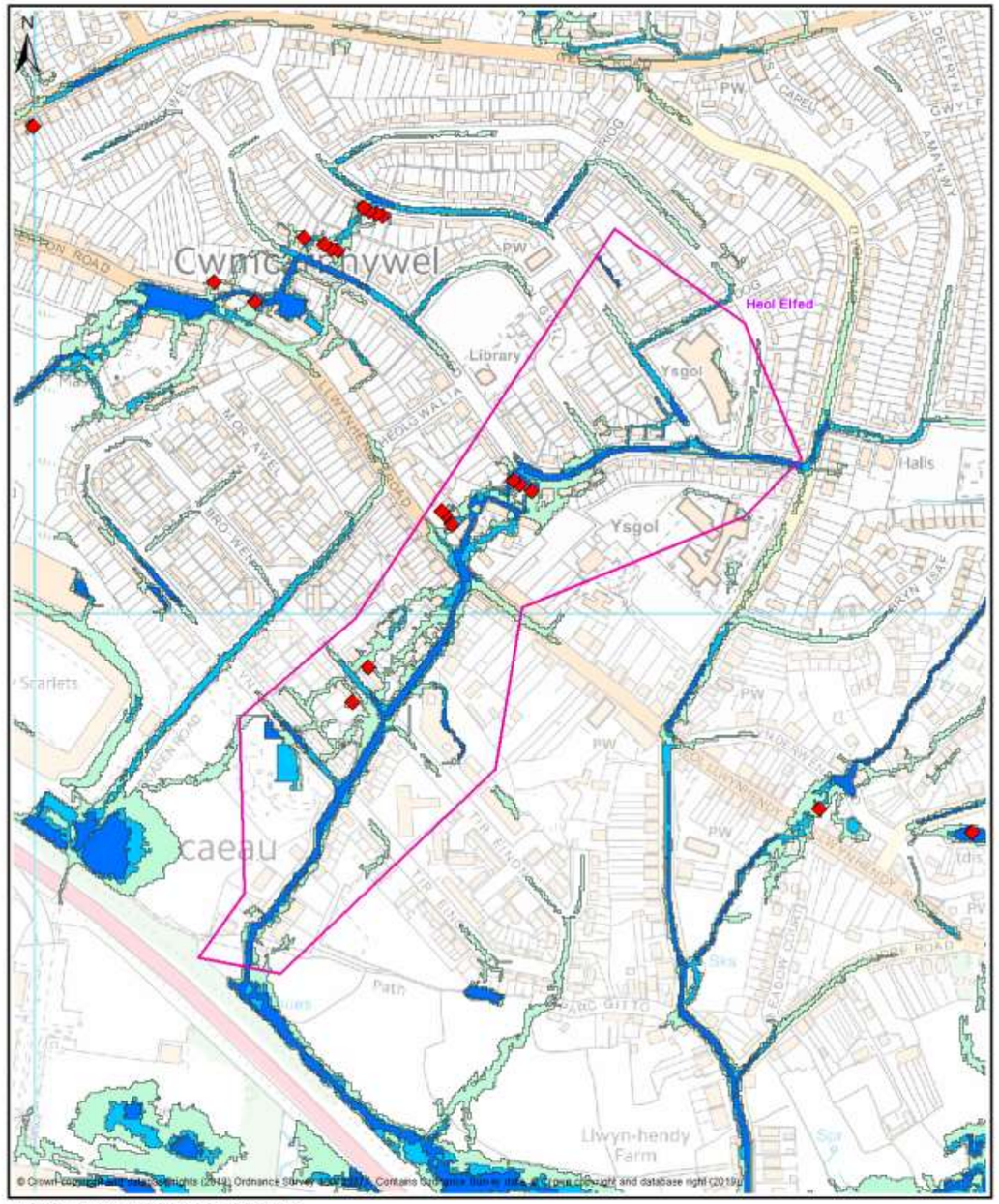
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Llwynhendy Ward
Heol Elfed Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

Policy Unit

uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event

uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event

uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event

CARR Pluvial

CARR Fluvial

Llwynhendy Ward
Heol Elfed Policy Unit

0 0.05 0.1 0.2 Km

46 Llwynhendy Ward, Pemberton Road Policy Unit

46.1 Area Description

The Pemberton Road Policy Unit comprises the urban catchment at Pemberton Road Llanelli.

46.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses. This indicates that properties at Pemberton Road are at risk of flooding.

This area is served by a DCWW surface water sewer system.

46.3 Flooding Events

CCC have no record of flooding in this area.

46.4 Flood Defence Capital Works undertaken by CCC

None

46.5 Flood Defence Assets

None

46.6 Routine Works and Maintenance

None

46.7 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

46.8 Flood Risk

46.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

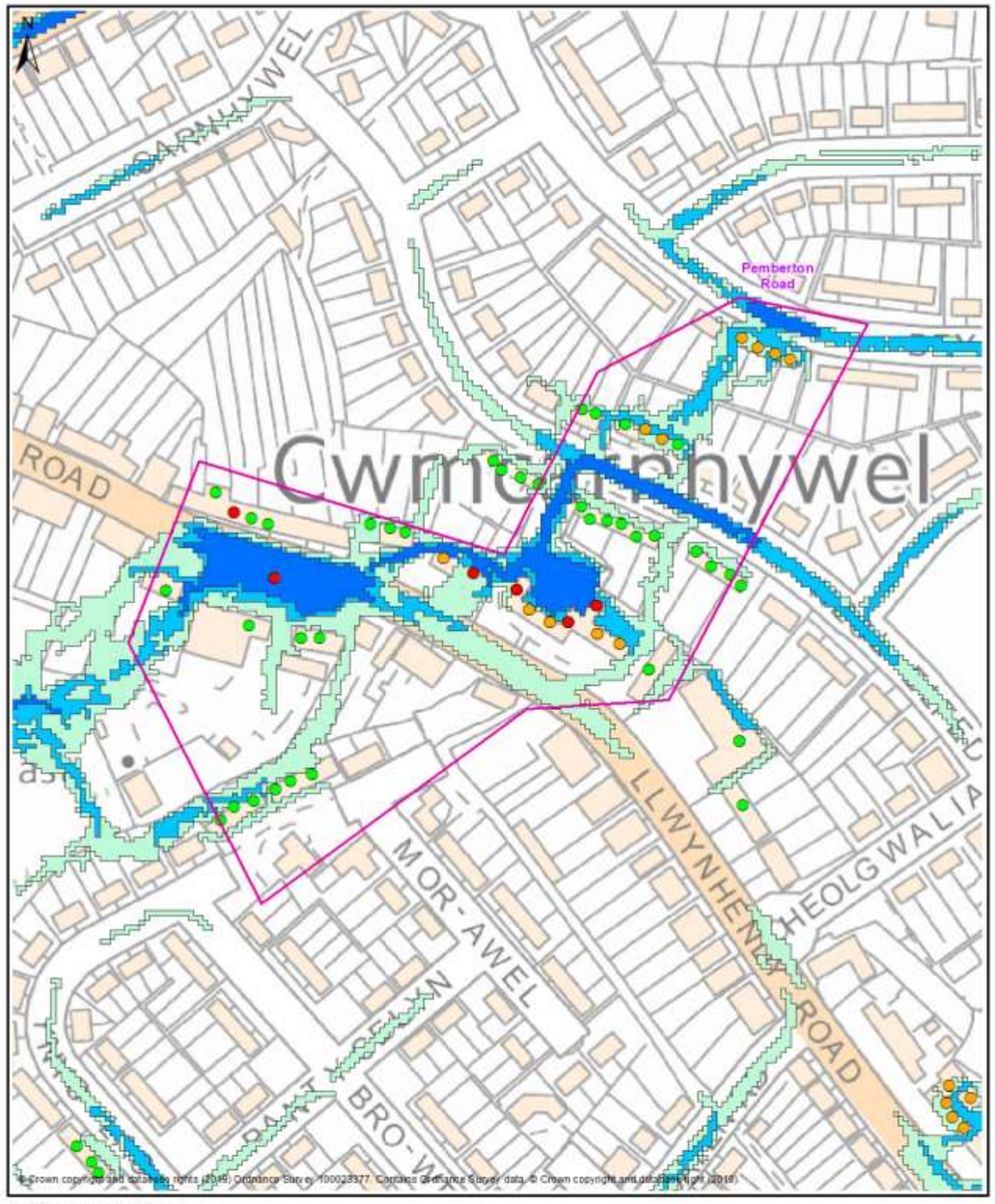
46.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

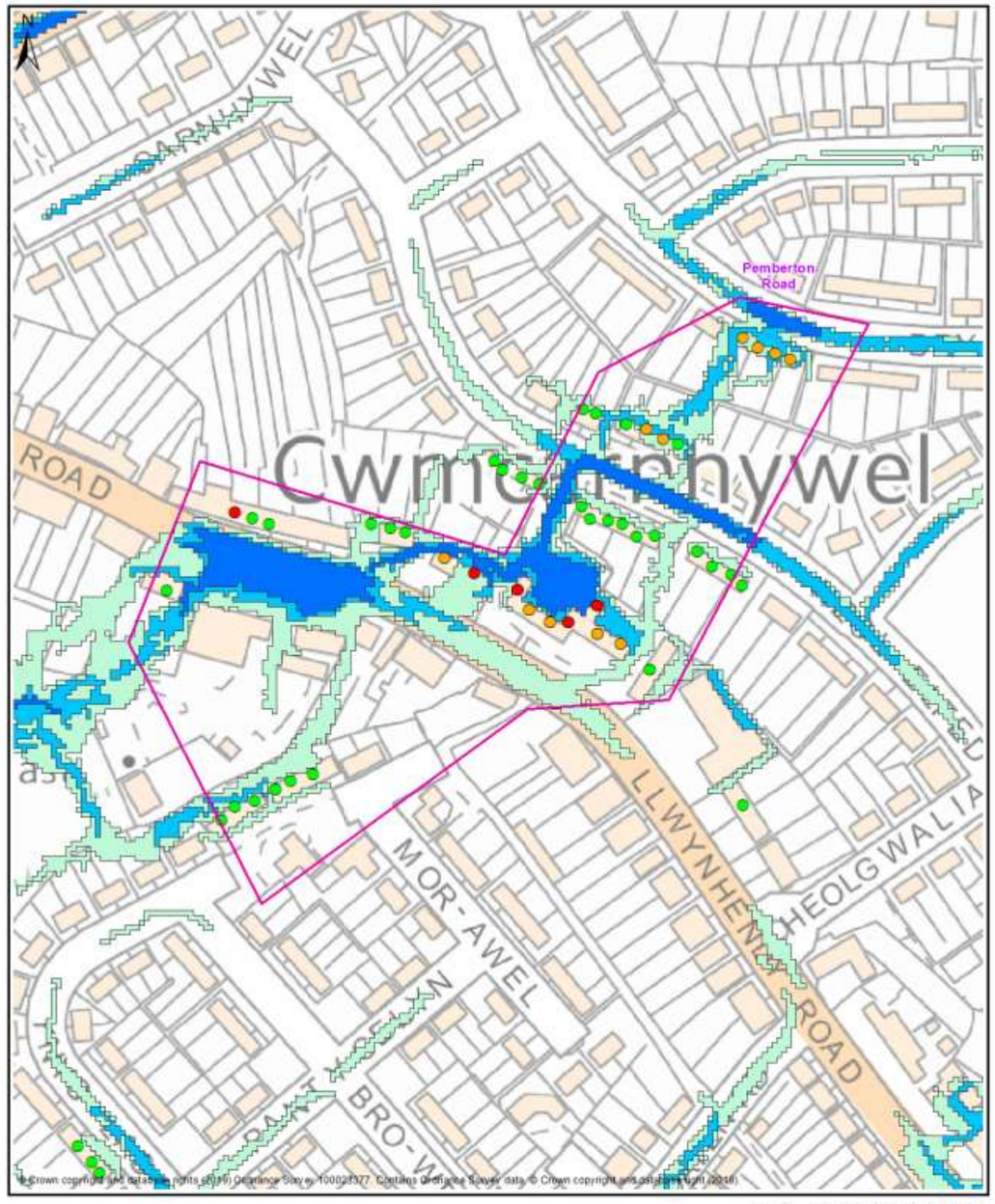
46.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	9	24	55
Map 2 Dwellings and Services	8	23	50
Map 3 CaRR	n/a	10	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

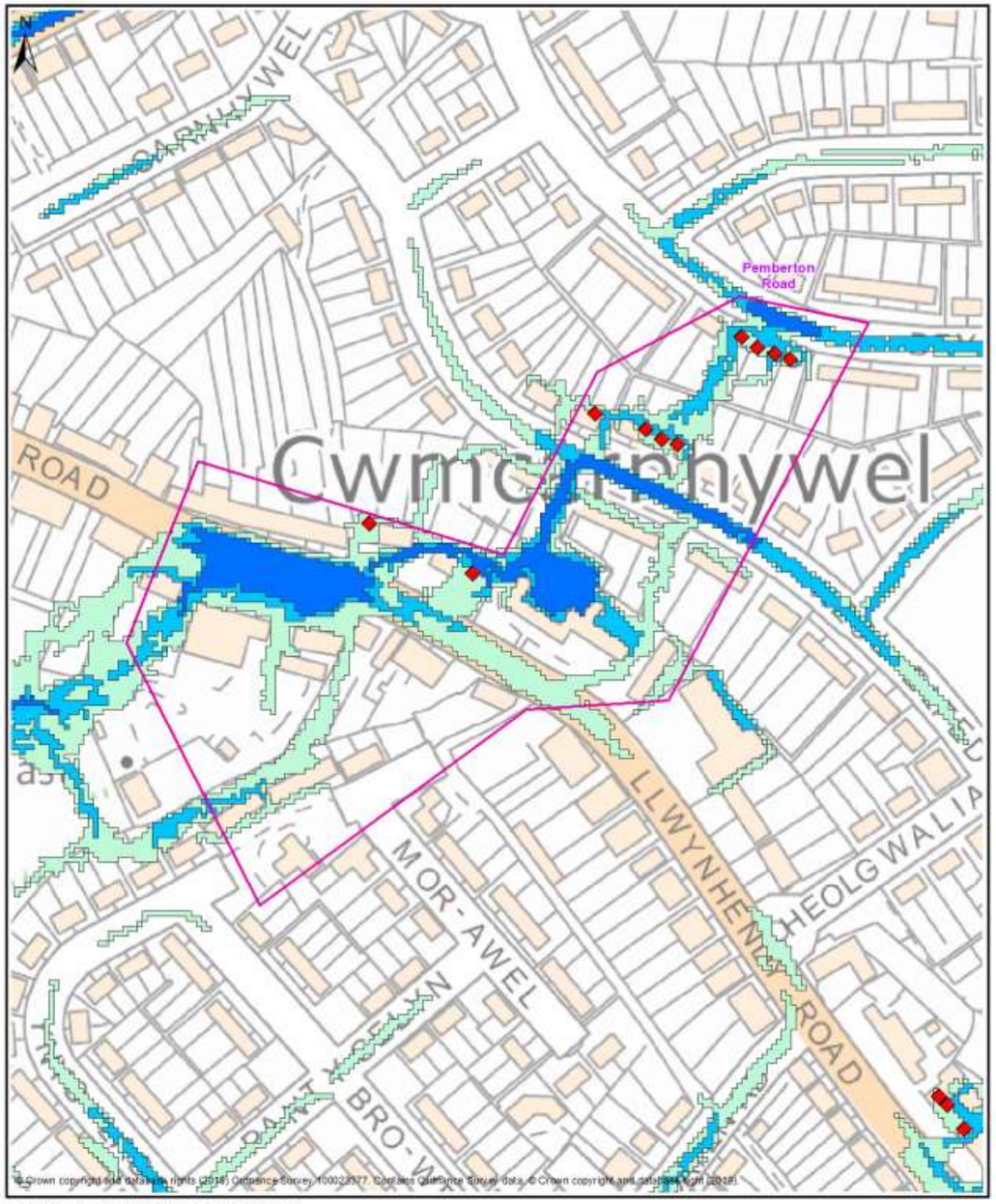
- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Llwynhendy Ward
Pemberton Road Policy Unit

0 0.0275 0.055 0.11 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

47 Pembrey Ward, Furnace Policy Unit

47.1 Area Description

The Furnace Policy Unit in Pembrey comprises a predominantly rural and suburban area with culverted unnamed ordinary watercourse. The watercourses originate to the north on top of Mynydd Pen-bre and discharge into the canal that heads towards Burry Port Marina. The watercourses are culverted from Jerusalem Chapel and Gwscwm Quarry to an open section of watercourse by Dwynant, from here it is culverted again until it discharges to the canal leading to the Marina.

47.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Pembrey, and in particular the Furnace Policy Unit, is a suburban area comprising of mainly single dwelling properties, above this is a very steep catchment with a large area of rural agricultural fields that drain towards Pembrey. During periods of heavy rain, the area can be particularly flashy and water can be conveyed very quickly towards the culverted watercourses below.

In addition to this, culverted sections of watercourse and trash screens are at risk of blockage and these blockages can result in flooding. There is also a capacity issue within the culvert and watercourse which can lead to the watercourse coming out of the channel.

47.3 Flooding Events

- Dwynant has had incidents of flooding in 2008, 2012, 2013 and 2016.
- Gwscwm Road had an incident of flooding in 2008.
- The cycle path floods frequently.

47.4 Flood Defence Capital Works undertaken by CCC

CCC have done works to upgrade the trash screen at Jerusalem Chapel and Dwynant, increasing their size for improved capacity. The culvert from Jerusalem Chapel has also been relined to remove a serious risk of collapse. In 2017 CCC installed a bypass channel along the open watercourse at Dwynant due to the restrictions caused by residential accesses across the watercourse, increasing the overall capacity of the channel.

CCTV works have also been undertaken in the area at various points.

47.5 Flood Defence Assets

Jerusalem Chapel Trash Screen	**Gwscwm Quarry Outfall**	**Gwscwm Park Sluice**
Dwynant Trash Screen	**Dwynant Outfall**	

47.6 Routine Works and Maintenance

Area	Works Undertaken	When
Gwscwm Quarry, Dwynant & Waun Wen	Watercourse trashing and grass cutting	Annually
Trash Screens	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Culverts	CCTV camera survey	2018, 2020
Outfalls	Formal T98 Inspection	Annually

47.7 Proposed Future Works

Undertake CCTV camera survey. Any structural or service faults will be actioned on a risk-based basis.

47.8 Flood Risk

47.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

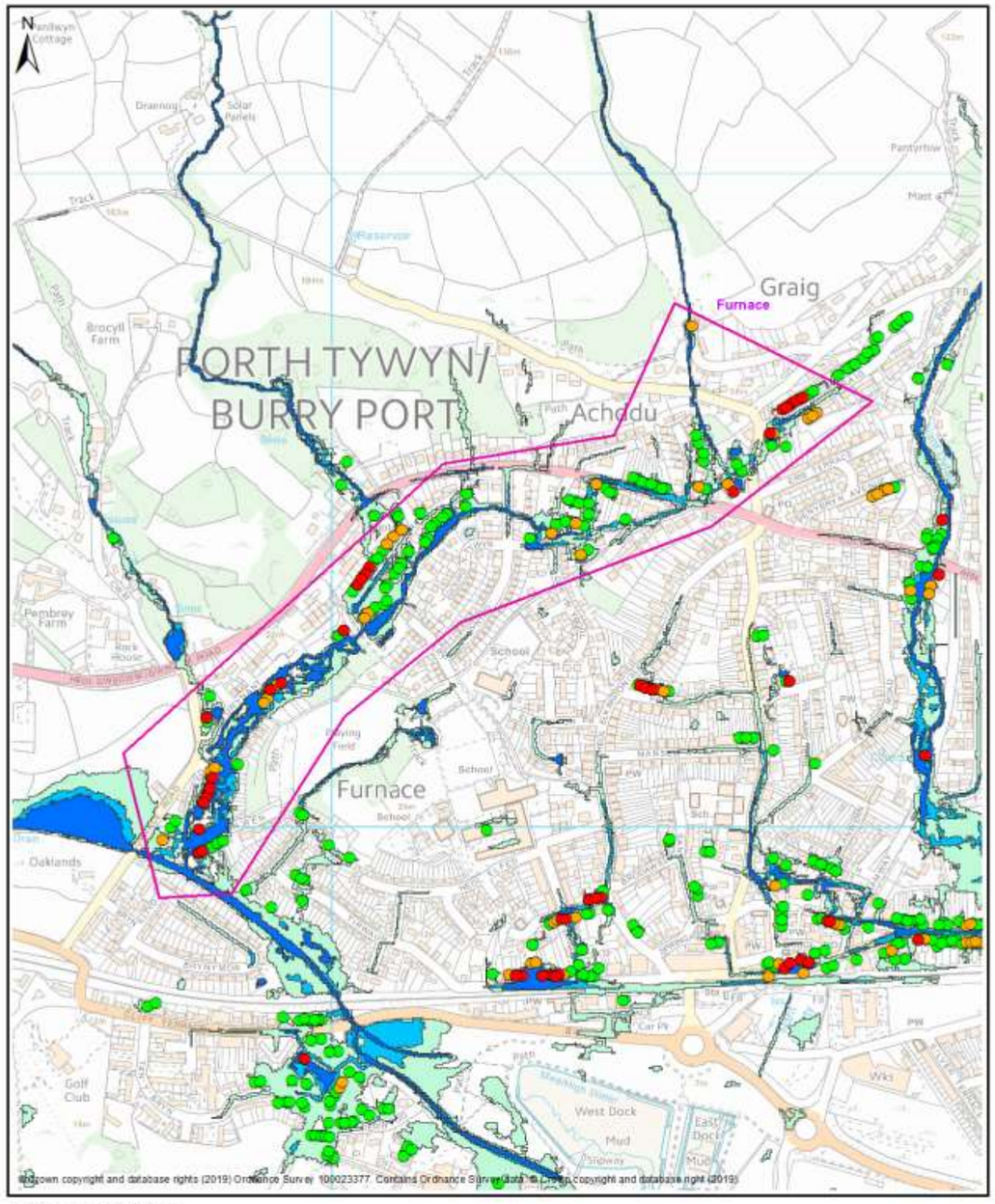
47.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

47.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	27	49	120
Map 2 Dwellings and Services	26	46	111
Map 3 CaRR	n/a	10	n/a



Map 1 - All Properties

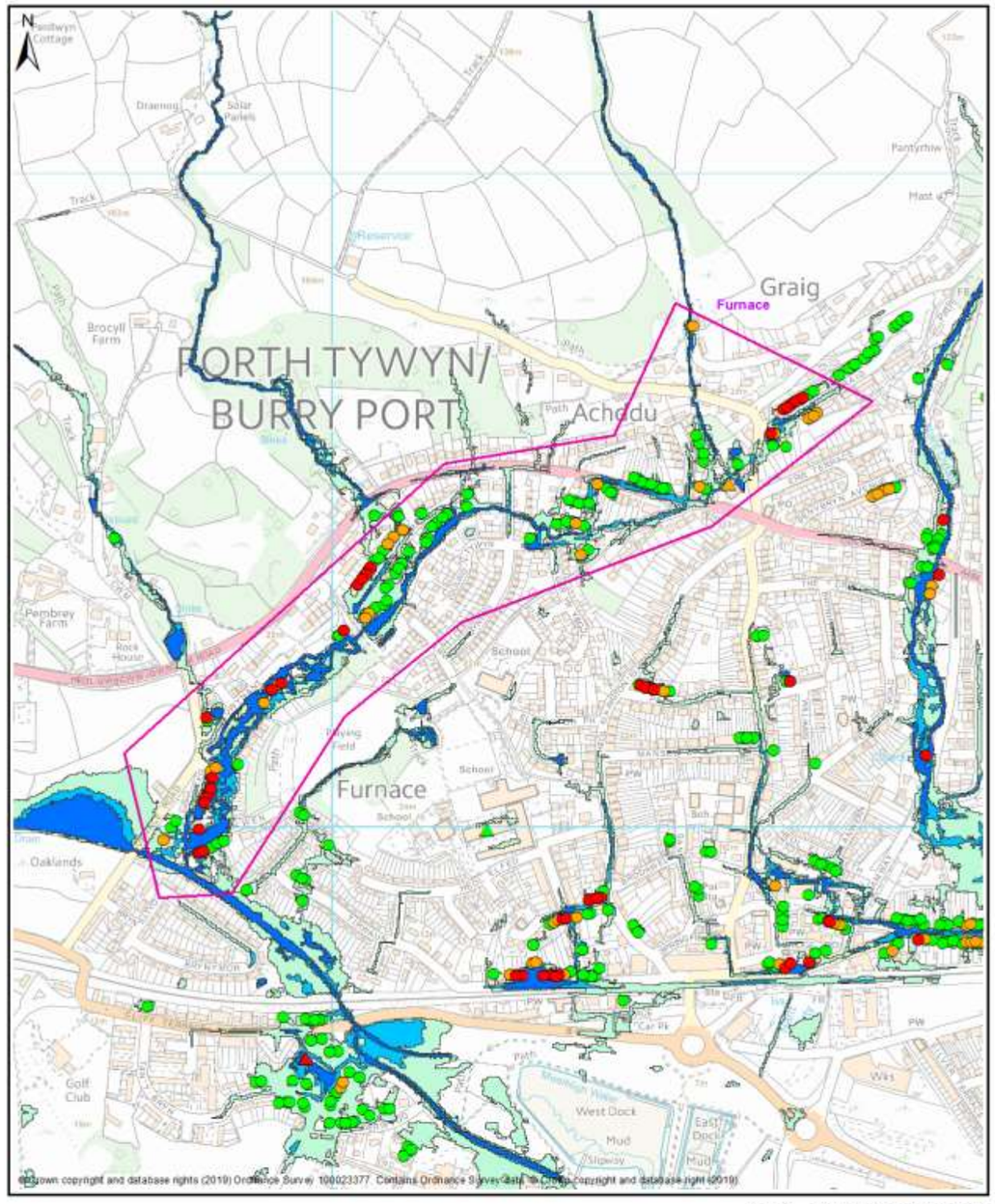
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Pembrey Ward

Furnace Policy Unit

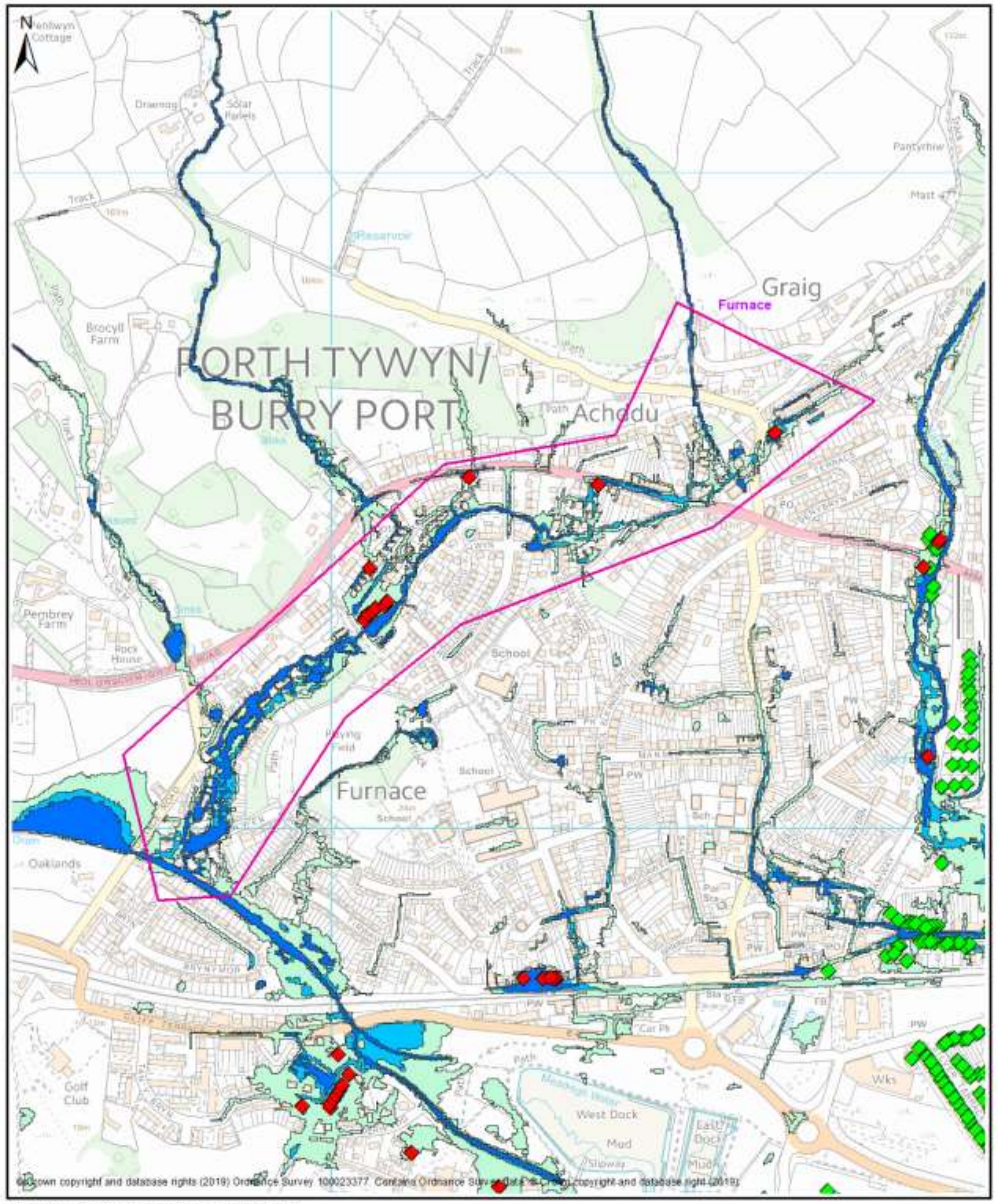
0 0.1 0.2 0.4 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

Policy Unit

uFMfSW Q30
Surface Water Flood Outline
1 in 30 Probability Storm Event

uFMfSW Q100
Surface Water Flood Outline
1 in 100 Probability Storm Event

uFMfSW Q1000
Surface Water Flood Outline
1 in 1000 Probability Storm Event

CARR Pluvial

CARR Fluvial

Pembrey Ward
Furnace Policy Unit

0 0.1 0.2 0.4
Km

48 Pontamman Ward, Arthur Street Policy Unit

48.1 Area Description

The Arthur Street Policy Unit comprises the catchment associated with an unnamed ordinary watercourse. This watercourse originates north of Myddynfych, Ammanford. It flows initially in an open channel before being culverted at Arthur Street. It is culverted beneath Arthur Street, College Street and Station Road before discharging back into an open watercourse on private land at the rear of Lon Tir-T-Dail.

48.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

At Myddynfych, the highway and dwellings are below the level of the neighbouring watercourse. As such there is a risk that any water overtopping the river bank will impact on the highway and neighbouring properties. In addition to this, culverted sections of watercourse are at risk of blockage and blockages can result in flooding.

Upstream of Myddynfych there are a number of private culverts. The blockage of any one of these could result in water being forced out of channel. This water could flow towards neighbouring properties.

There is also a risk of blockage at the Arthur Street culvert.

48.3 Flooding Events

CCC have no record of any flooding in this area.

48.4 Flood Defence Capital Works undertaken by CCC

2005 the Arthur Street trash screen was upgraded.

48.5 Flood Defence Assets

Arthur Street Trash Screen	Arthur Street Culvert
	

48.6 Routine Works and Maintenance

Area	Works Undertaken	When
Myddynfych	Watercourse trashing and grass cutting	Annually
Arthur Street Trash Screen	Formal T98 Inspection	Annually
	Debris management	Weekly in the winter Monthly in the summer
Arthur Street Culvert	CCTV camera survey	2018
Arthur Street Outfall	Formal T98 Inspection	Annually

48.7 Proposed Future Works

An outline business case (OBC) is currently being prepared (2019) to evaluate flood management options. A bid for capital funding will be submitted to WG in 2020 if the OBC identifies any viable options.

48.8 Flood Risk

48.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

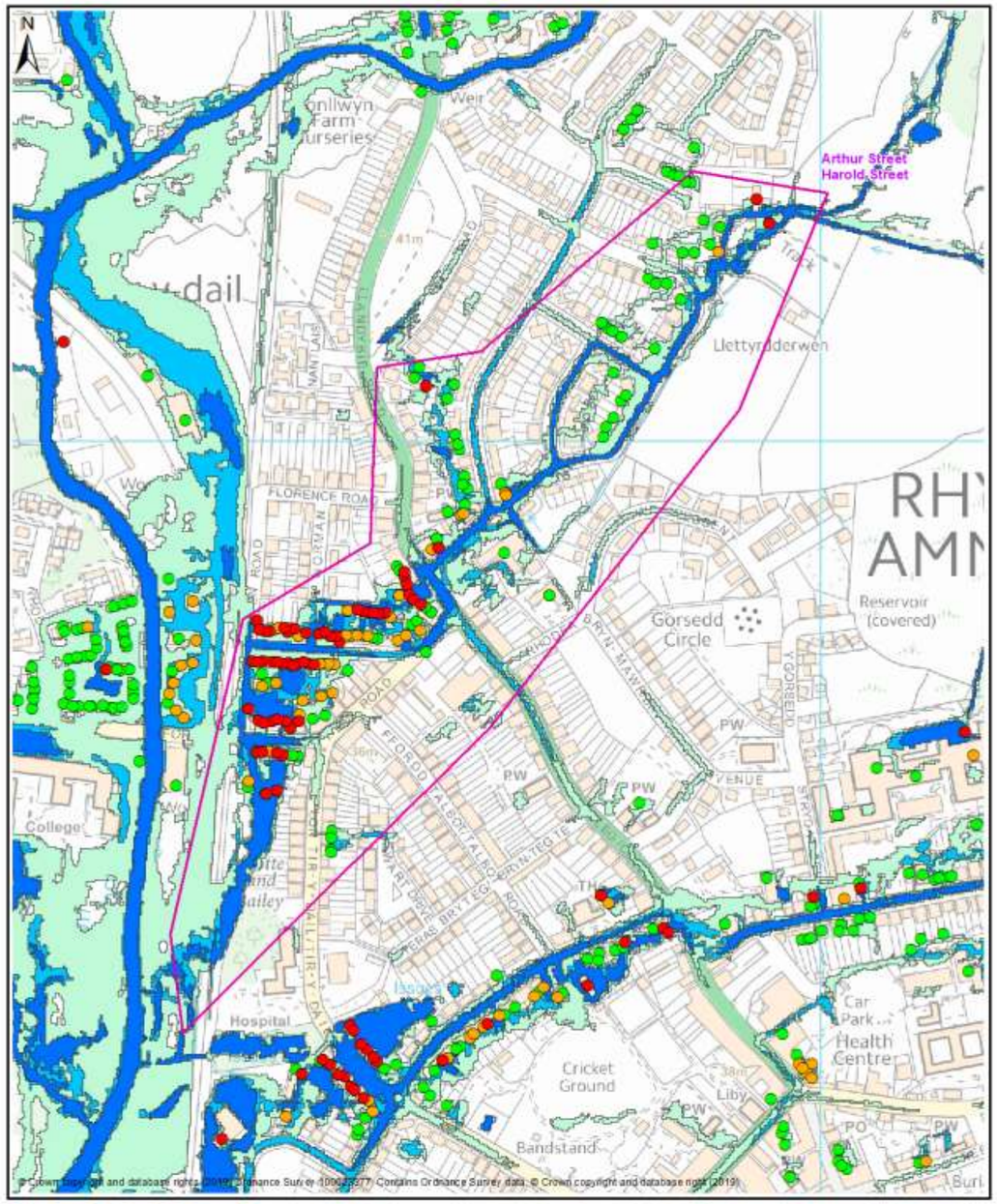
48.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

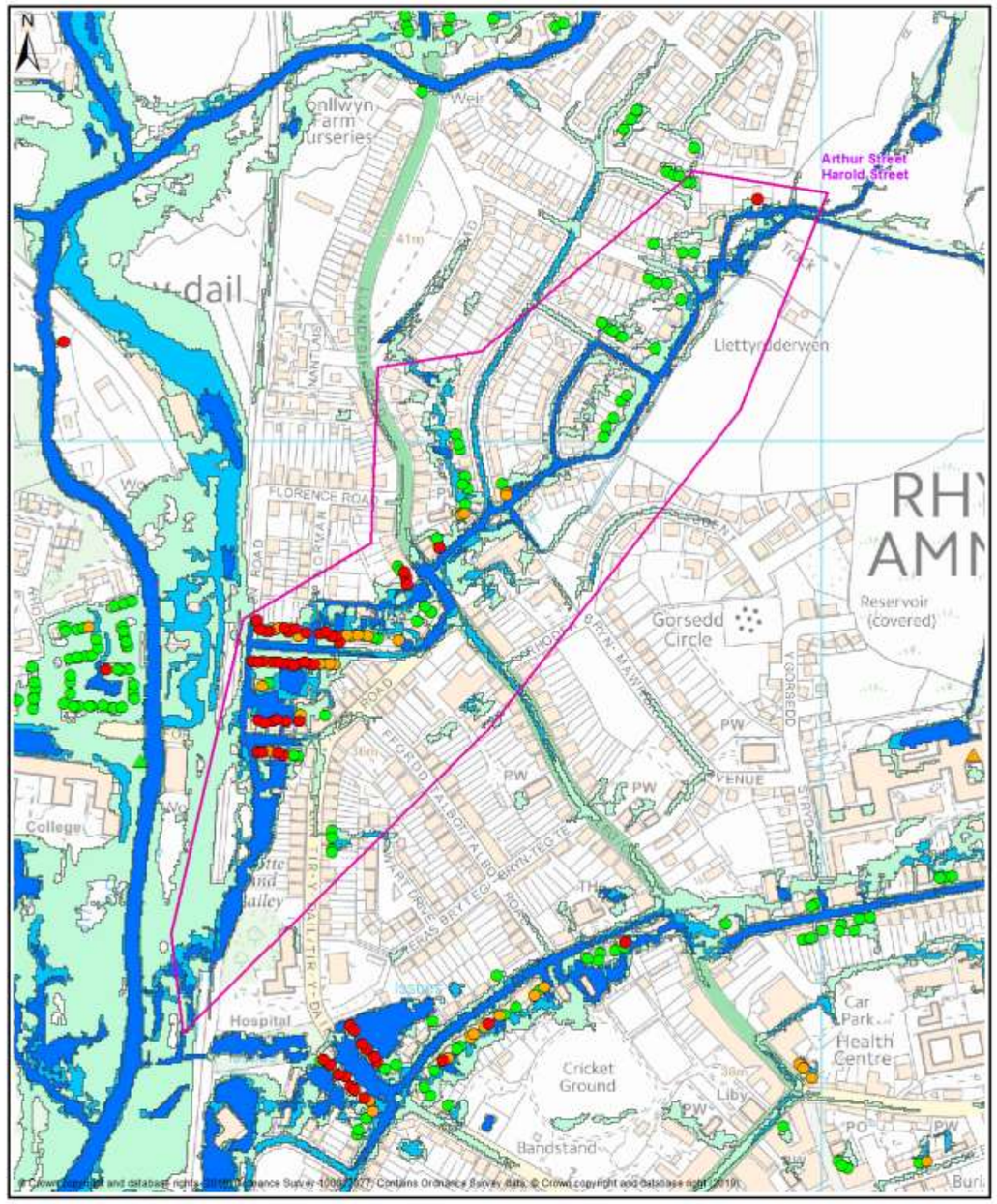
48.8.3 Map 3: Community at risk register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	60	93	165
Map 2 Dwellings and Services	45	66	119
Map 3 CaRR	n/a	41 Pluvial 278 Fluvial	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

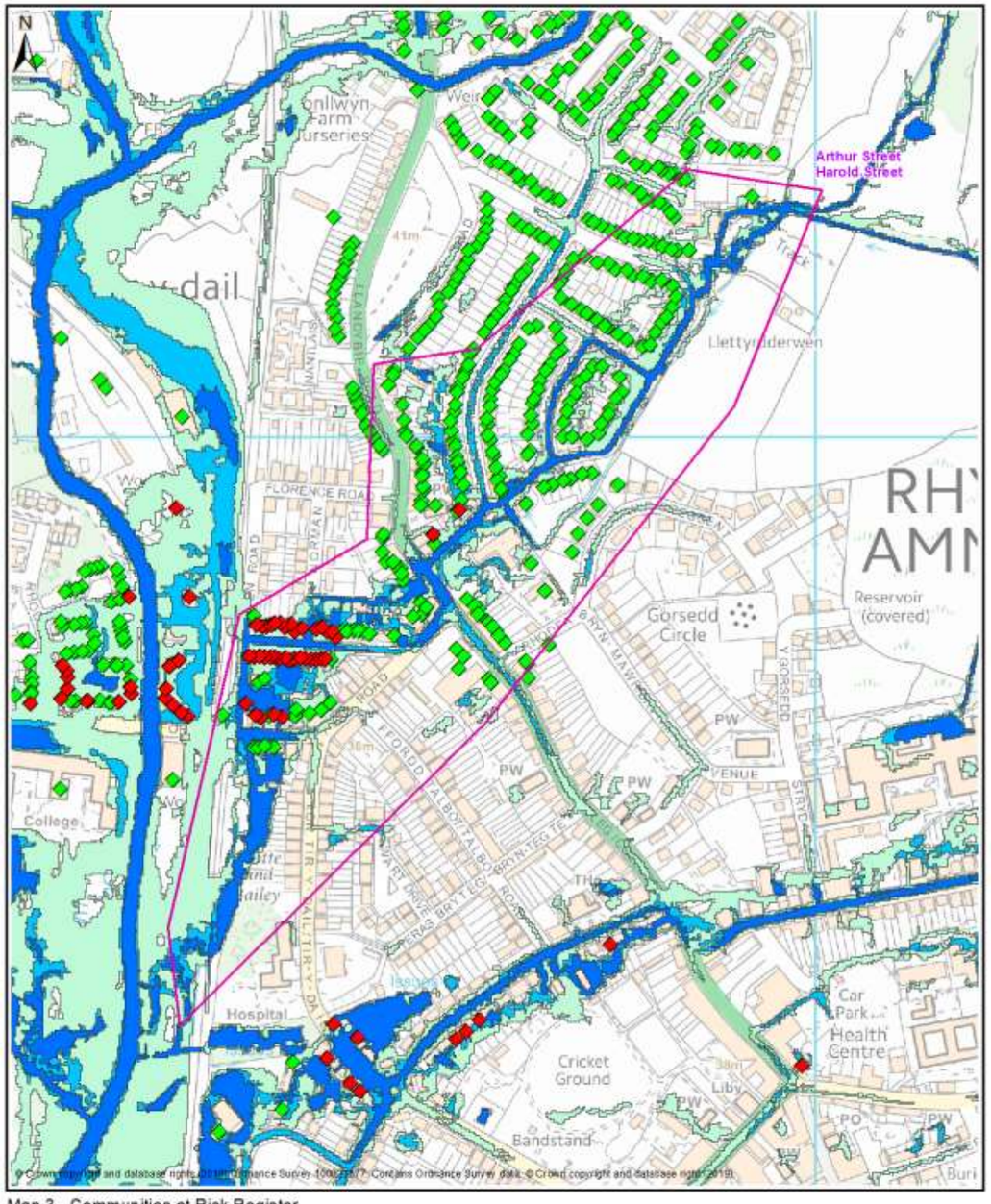
Pontamman Ward

Arthur Street Harold Street Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Pluvial

Pontamman Ward

Arthur Street Harold Street Policy Unit

0 0.05 0.1 0.2 Km

49 Quarter Bach Ward, Upper Brynamman Policy Unit

49.1 Area Description

The Upper Brynamman Policy Unit comprises the catchment associated with Nant Melyn ordinary watercourse. The topography of the area is very steep and rising up to the Brecon Beacons.

49.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

Due to the steep nature of the catchment there is, in certain areas, a possibility that certain properties have been identified as liable to surface water flooding.

49.3 Flooding Events

Flooding from surface water / small watercourses in upper Brynamman.

49.4 Flood Defence Capital Works undertaken by CCC

None

49.5 Flood Defence Assets

15 Llandeilo Road Trash Screen

49.6 Routine Works and Maintenance

Area	Works Undertaken	When
15 Llandeilo Road Trash Screen	Formal T98 Inspection	Annually
	Debris Management	Weekly in Winter
		Monthly in Summer
50 Mountain Road Trash Screen	Formal T98 Inspection	Annually
	Debris Management	Weekly in Winter Monthly in summer

49.7 Proposed Future Works

Continue to manage the flood risk assets in the area.

49.8 Flood Risk

49.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

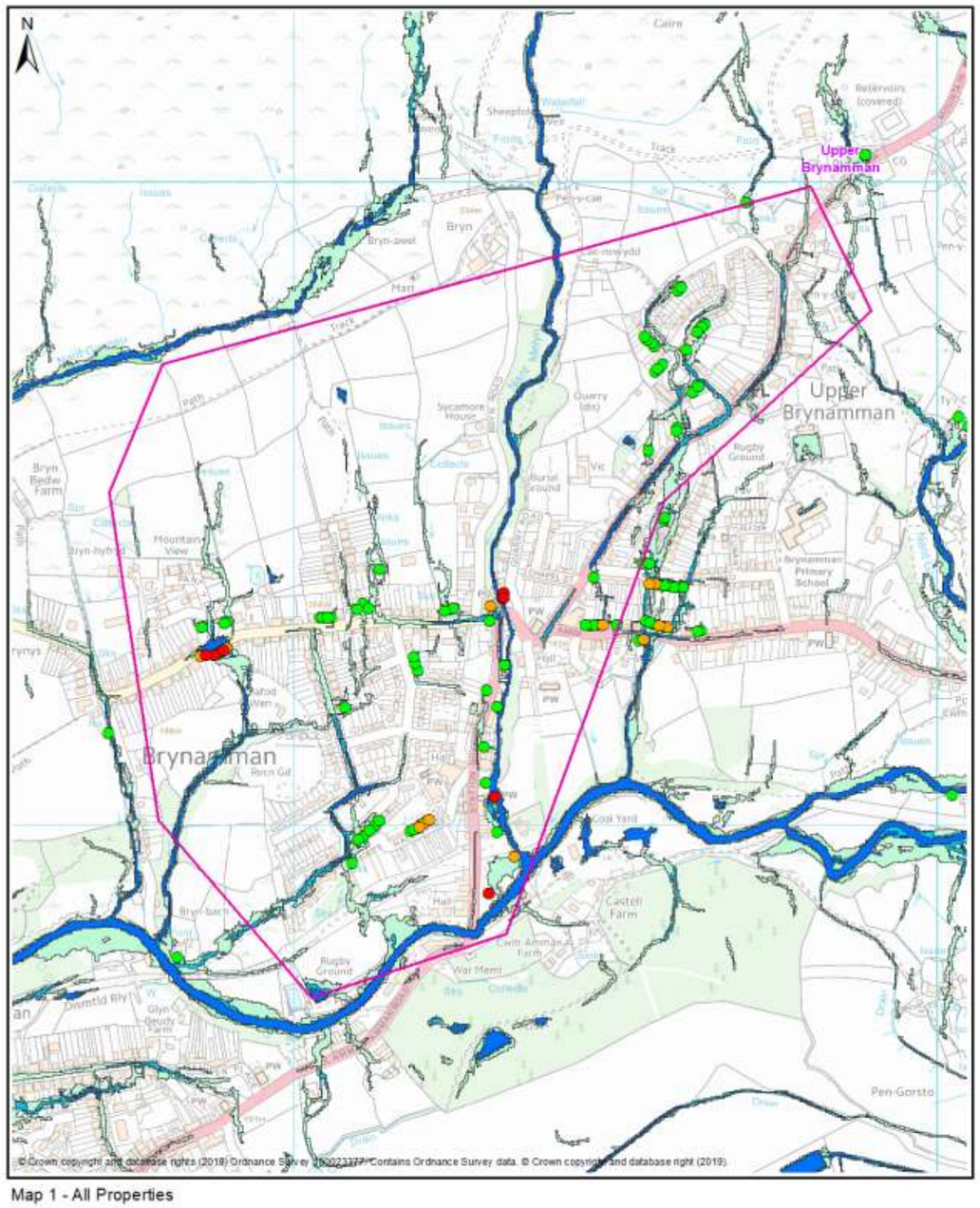
49.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

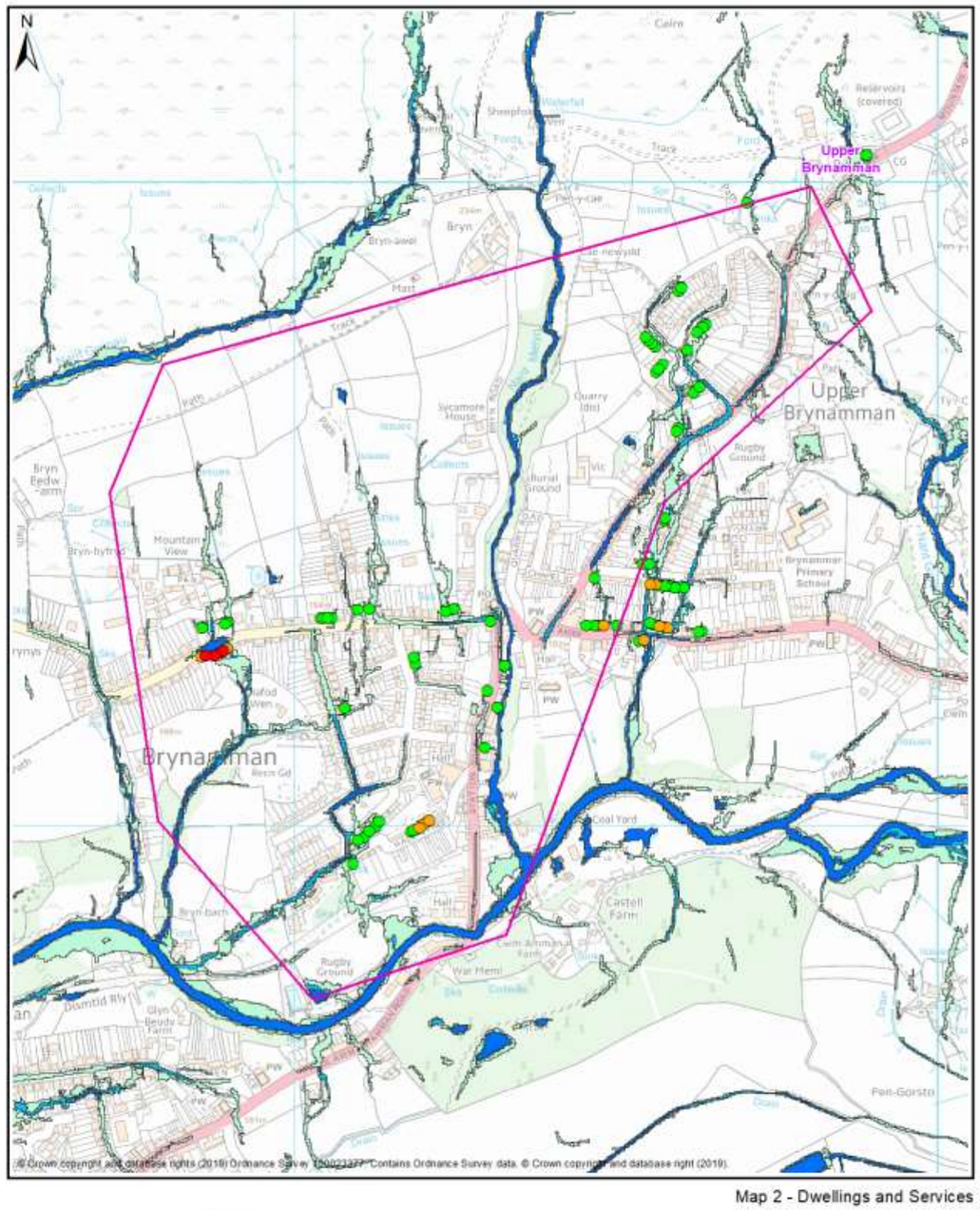
49.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	8	17	85
Map 2 Dwellings and Services	4	11	71
Map 3 CaRR	n/a	12	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

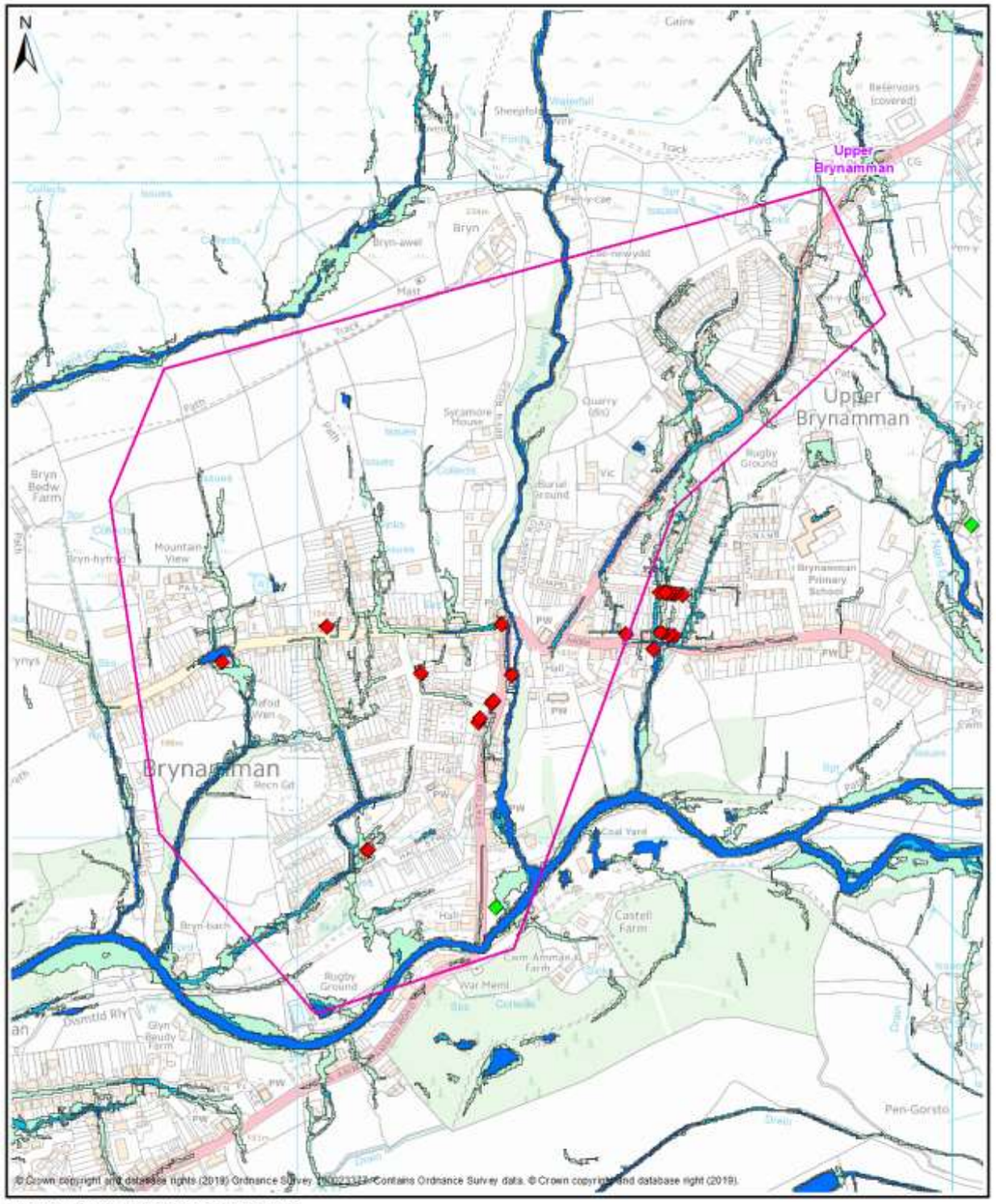
Quarter Bach Ward

Upper Brynamman Policy Unit

0 0.1 0.2 0.4 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

50 Quarter Bach Ward, Ystrad Owen Policy Unit

50.1 Area Description

The Ystrad Owen Policy Unit comprises the housing development of Dolawel. The valley sides are steep and heavily wooded.

50.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding.

Flood maps indicate that surface water runoff from adjacent farmland may cause flooding.

50.3 Flooding Events

None Recorded

50.4 Flood Defence Capital Works undertaken by CCC

None

50.5 Flood Defence Capital Works

None

50.6 Flood Defence Assets

None

50.7 Routine Works and Maintenance

None

50.8 Proposed Future Works

Work with Highways Authority to manage flood risk.

50.9 Flood Risk

50.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

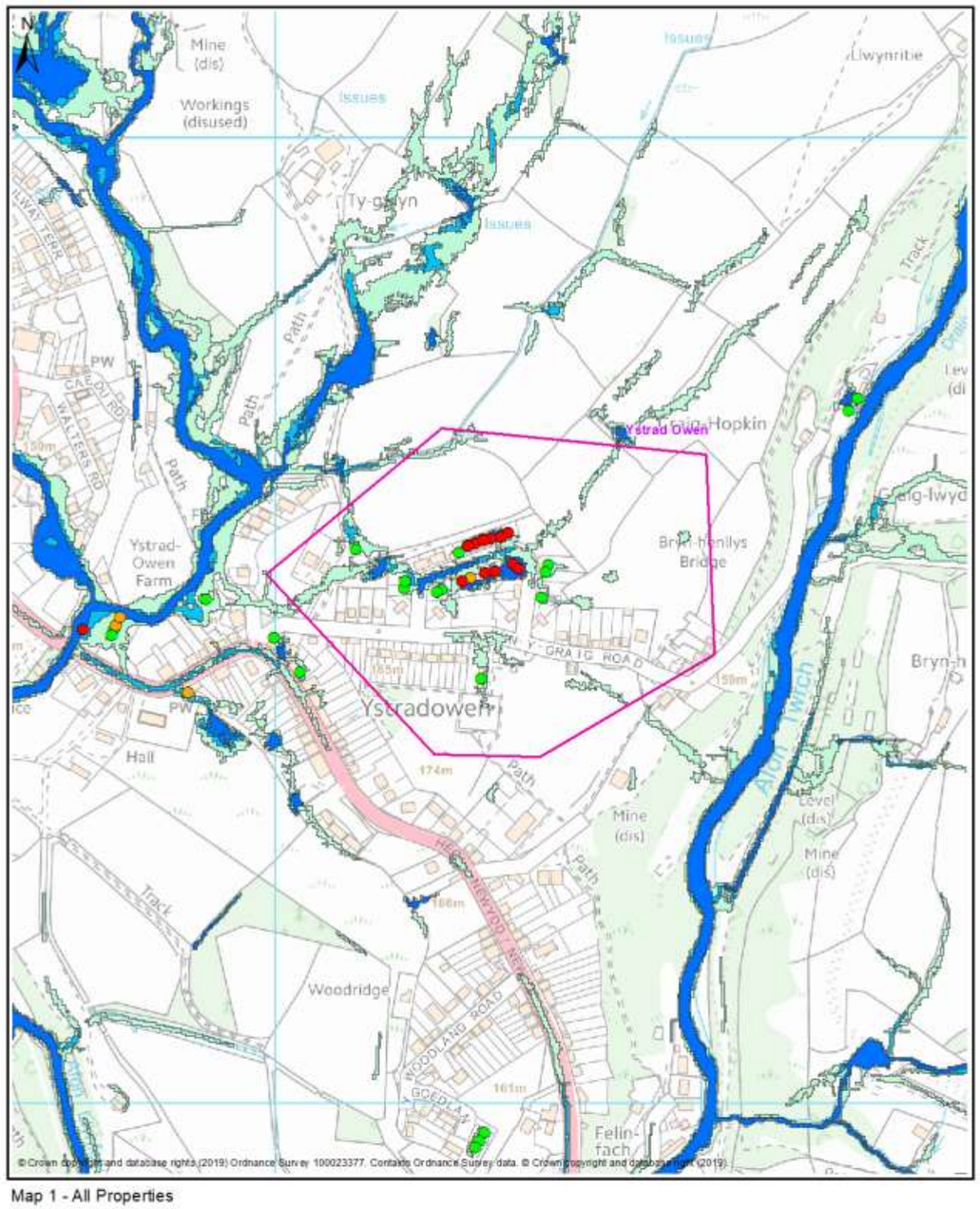
50.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

50.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	11	12	22
Map 2 Dwellings and Services	11	12	20
Map 3 CaRR	n/a	0	n/a



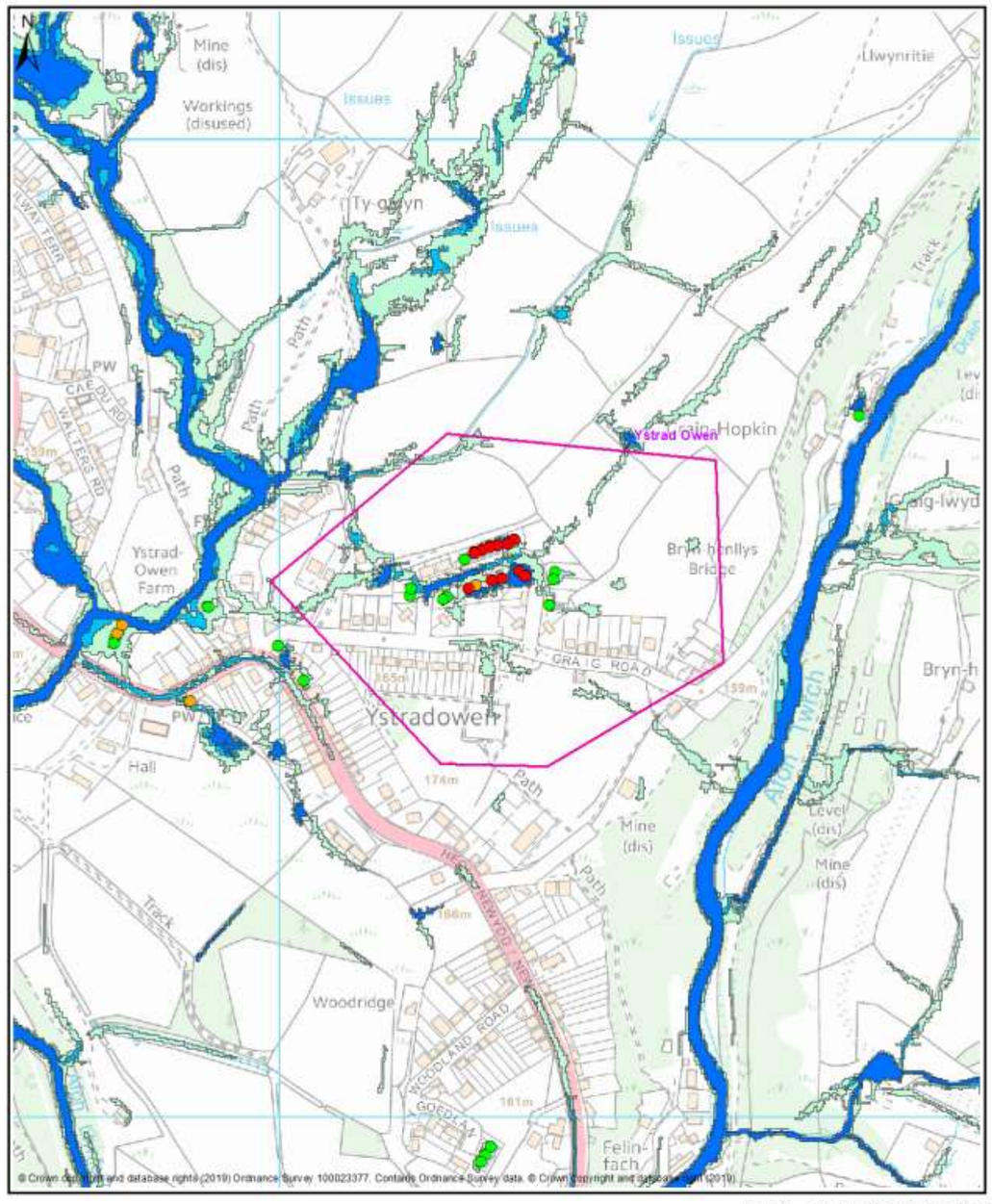
Map 1 - All Properties

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Quarter Bach Ward
Ystrad Owen Policy Unit

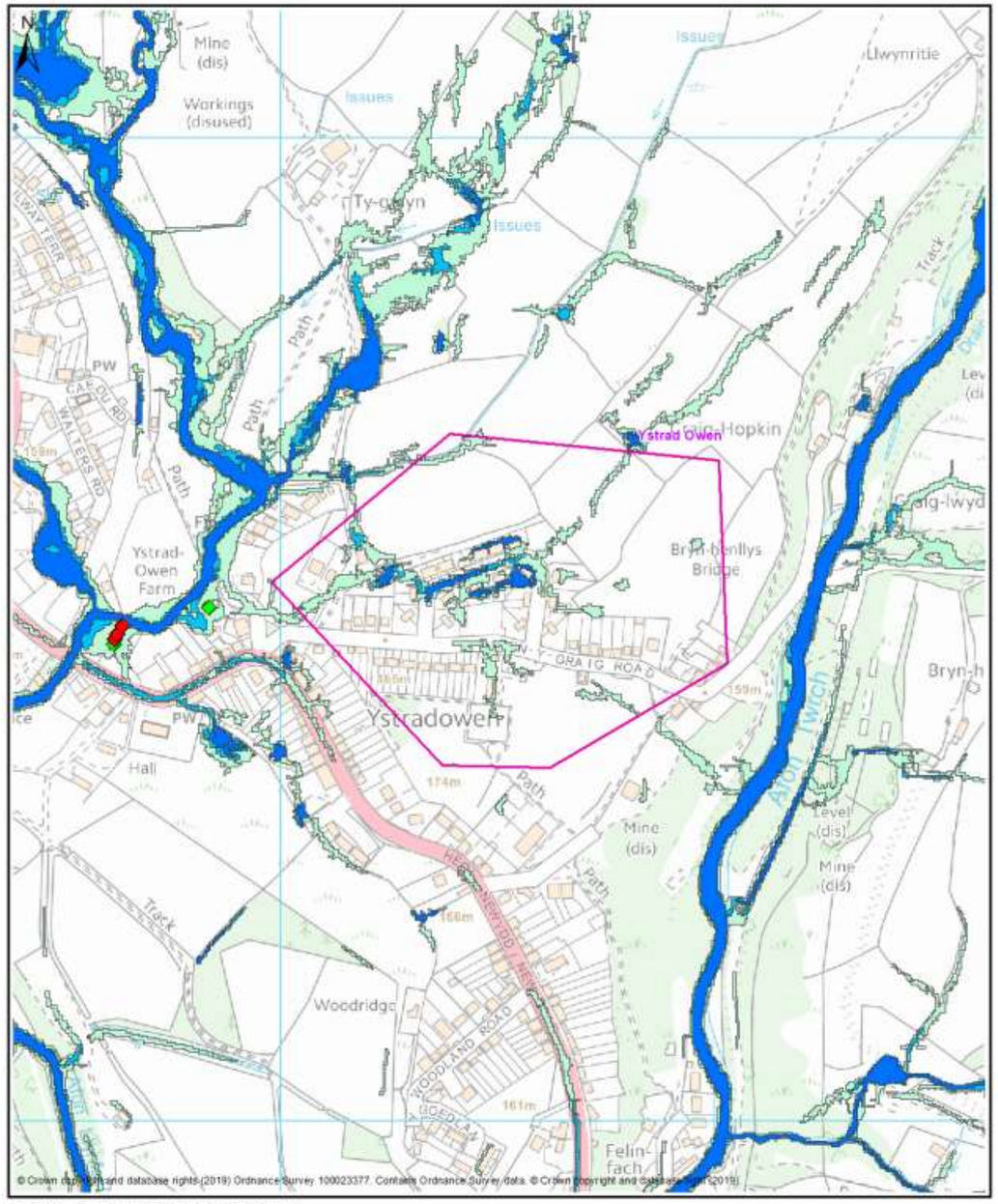
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

Quarter Bach Ward
Ystrad Owen Policy Unit

0 0.05 0.1 0.2 Km

51 St Ishmaels Ward, Ferryside North Policy Unit

51.1 Area Description

The Ferryside North is the portion of the village to the North of Heol Portway and the railway station.

This is a hydrologically separate area from Ferryside South.

Ferryside is a coastal village on the Tywi Estuary with the railway forming an embankment between the river and the estuary. The Main River Cwm Mill Stream is on the northern side of the village and there is high land behind the village to the east.

51.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

There are multiple sources of flooding for this area; fluvial from the main Cwm Mill Stream, pluvial from the high ground, with a catchment of approximately 50ha, and tidal from the estuary.

Although the FRMP is only looking at Ordinary Watercourse and surface water flooding it is necessary to look at considering their interaction with main river and tidal.

The lowest properties in this area have surrounding ground levels of 4.1mAOD and are some of the lowest dwellings in Carmarthenshire. When this is looked at against the tide levels for Ferryside it can been seen that it will be challenging to prevent flooding:

MHWS	HAT	T1	T10	T50	T100	T200
4.1mAOD	5.1mAOD	5.00mAOD	5.25mAOD	5.43mAOD	5.51mAOD	5.58mAOD

Communities at Risk Register shows 3 properties at risk of pluvial flooding, 0 at risk of fluvial flooding and 98 at risk of tidal flooding.

Any potential scheme is likely to be expensive and to require pumping.

51.3 Flooding Events

- Regular flooding of the road leading into Ferryside due to the main river overtopping
- Flooding at Glan Morfa January 2013
- Flooding at Glan Morfa in October 2018 due to a combination of main river and tidal
- Flooding at Glan Morfa Believed to be DCWW issues with pumping station
- Pluvial Flooding of the Chapel at Eva Terrace
- Pluvial Flooding at Glan Tywi with water running off higher land

51.4 Flood Defence Capital Works undertaken by CCC

None

51.5 Flood Defence Capital Works undertaken by Partner Organisations

Periodic dredging of Cwm Mill Stream by NRW.

51.6 Flood Defence Assets

The railway line is the main flood defence asset preventing tidal flooding.

CCC does not maintain any assets.

51.7 Routine Works and Maintenance

None

51.8 Proposed Future Works

Given the complexities at this location, discussion with NRW Railtrack and Local Community needed on potential to manage flooding.

Sea level rise will result in increased frequency and severity of flooding.

51.9 Flood Risk

51.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

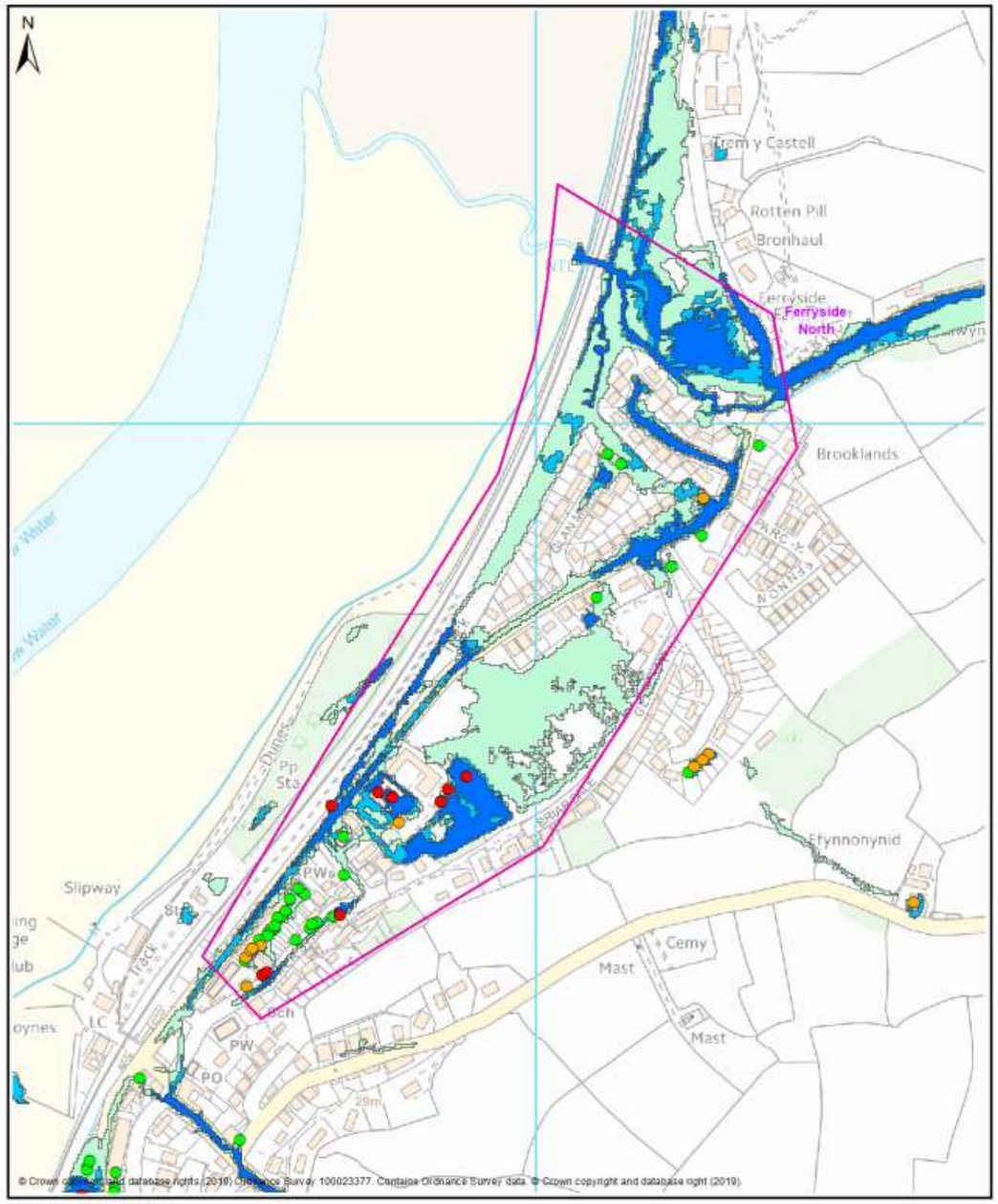
51.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

51.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	9	17	44
Map 2 Dwellings and Services	4	10	31
Map 3 CaRR	n/a	3 Pluvial 0 Fluvial 98 Tidal	n/a



Map 1 - All Properties

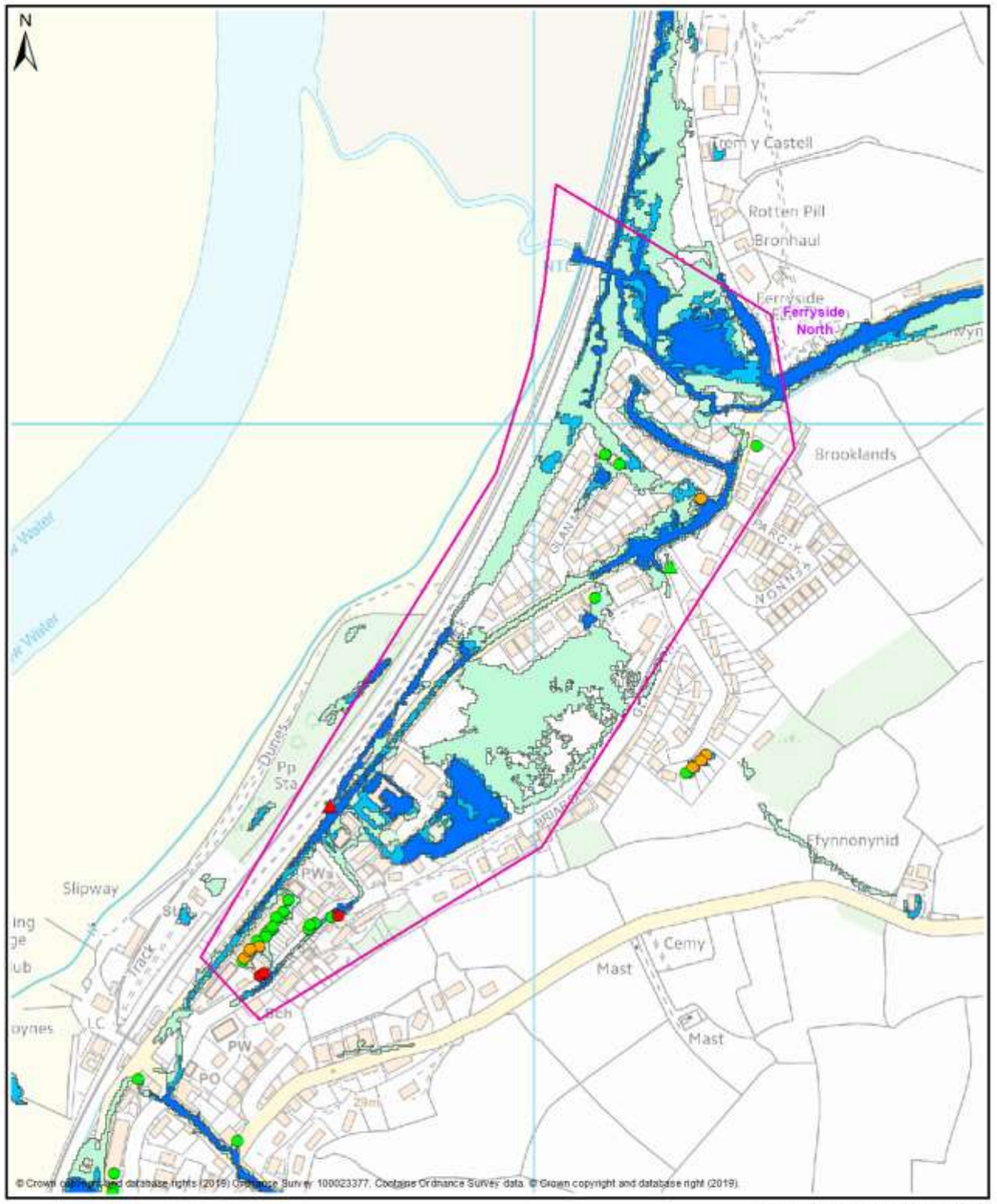
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

St Ishmaels Ward

Ferryside North Policy Unit

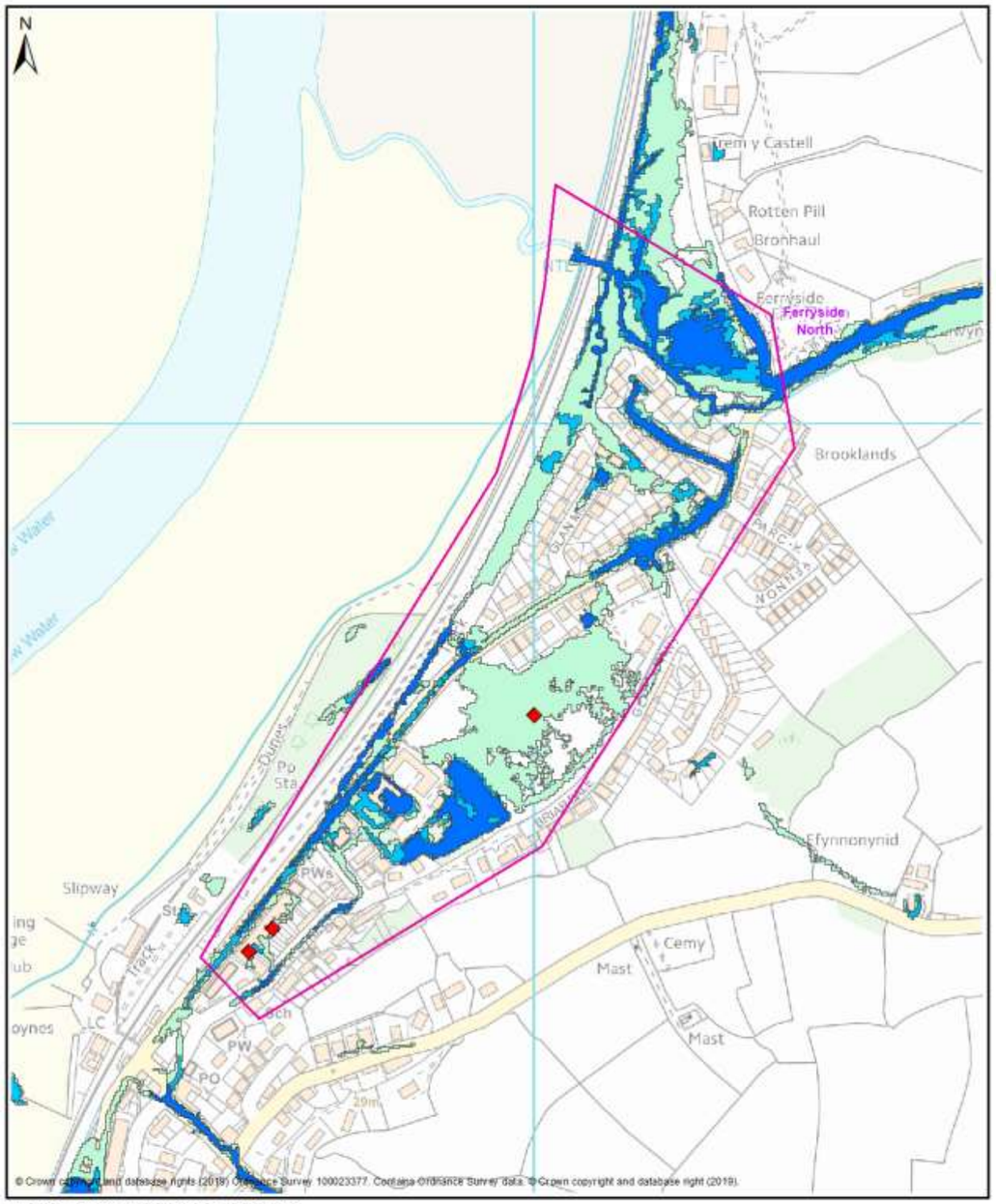
0 0.05 0.1 0.2 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

St Ishmaels Ward
Ferryside North Policy Unit

0 0.05 0.1 0.2 Km

52 St Ishmaels Ward, Ferryside South Policy Unit

52.1 Area Description

The Ferryside South Policy Unit comprises the area of Ferryside, south of the Railway Station.

This community is adjacent to the Tywi estuary and is protected from the tidal by the railway embankment. There is high ground to the east and surface water from this area has to flow through this area and under the railway embankment to the estuary. This area is very low lying with significant areas below sea level during spring tides with a storm surge.

There is a small watercourse at the south of the area coming from Broadlay (Holcwm Way). In storm conditions this can overflow causing flooding.

52.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlights this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses. These indicate significant properties at risk of flooding This is exacerbated by its low-lying nature and the railway embankment preventing surface water from flowing away. The railway embankment does provide critical defence against tidal flooding.

52.3 Flooding Events

There have been several instances of flooding particularly in the area in front of the "1904 Houses", although no internal flooding has been recorded. This has been from water flowing down Holcwm Way and has either overflowed from the culvert or has not entered the stream or culvert and flows down the road carrying large amounts of mud and debris.

In the past, flooding of this area was commonplace due to waves pushing large volumes of water through 'the Arch' byway access to the beach.

52.4 Flood Defence Capital Works undertaken by CCC

- 2011: Construction of steps and improved stop log at 'the Arch'.
- 2012: Block stone breakwater at seaward side of 'the Arch' – disrupts wave and reduces funnelling effect.
- 2013: New Flap Valve Chamber constructed opposite 1904 Houses.

52.5 Flood Defence Capital Works undertaken by Partner Organisations

None

52.6 Flood Defence Assets

- Stop logs

52.7 Routine Works and Maintenance

Area	Works Undertaken	When
The Arch Stop logs	Formal T98 Inspection	Annually
Chamber opposite 1904 Houses	Formal T98 Inspection	Annually
	Gravel Removal	
Holcwm Way Culvert	CCTV camera survey	2018, 2020
Poachers Rest Outfall	Formal T98 Inspection	Annually
Warwick House Outfall	Formal T98 Inspection	Annually

52.8 Proposed Future Works

Undertake CCTV camera survey. Works to address any structural or service faults identified will be actioned on a risk-based basis.

52.9 Flood Risk

52.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

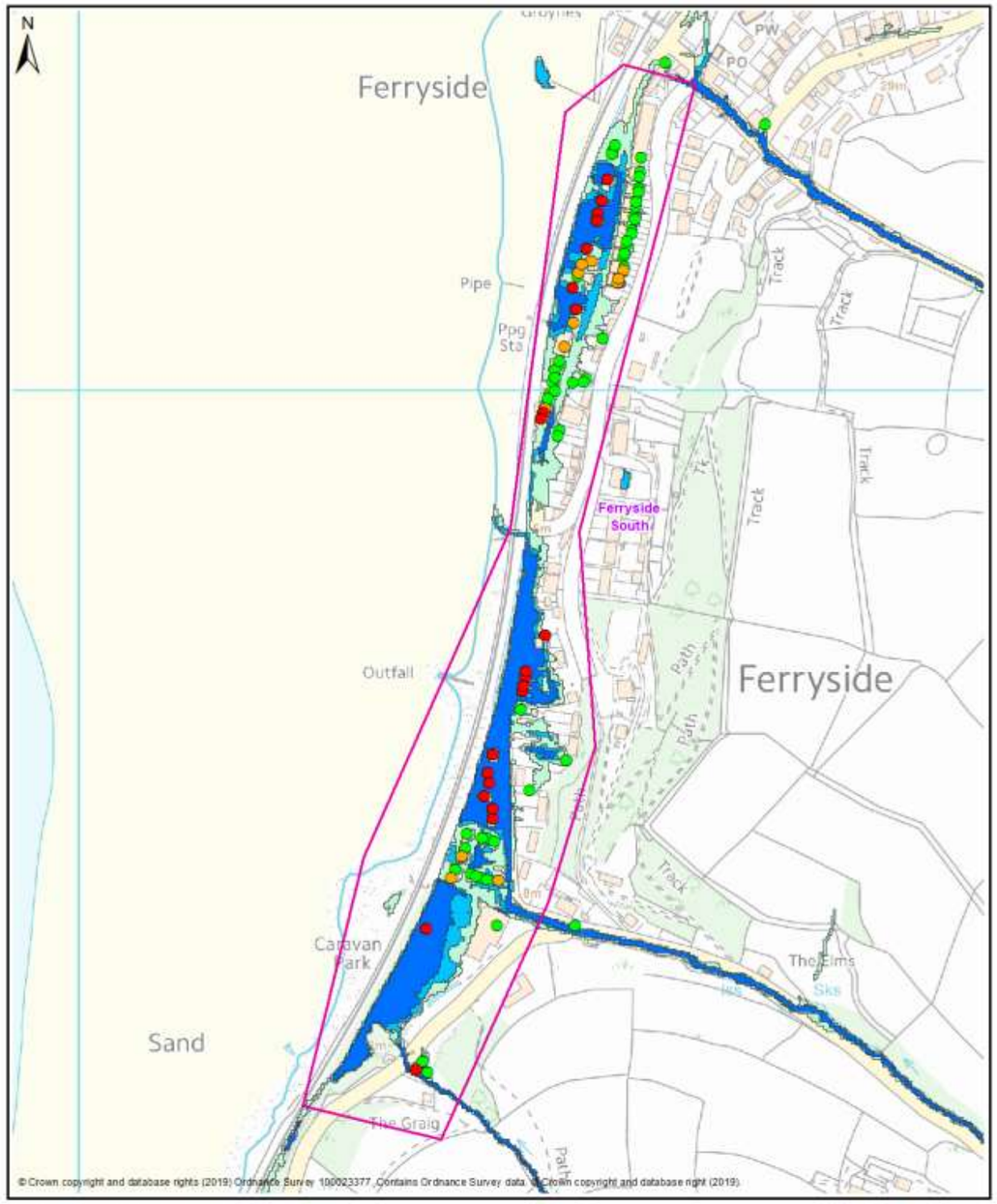
52.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

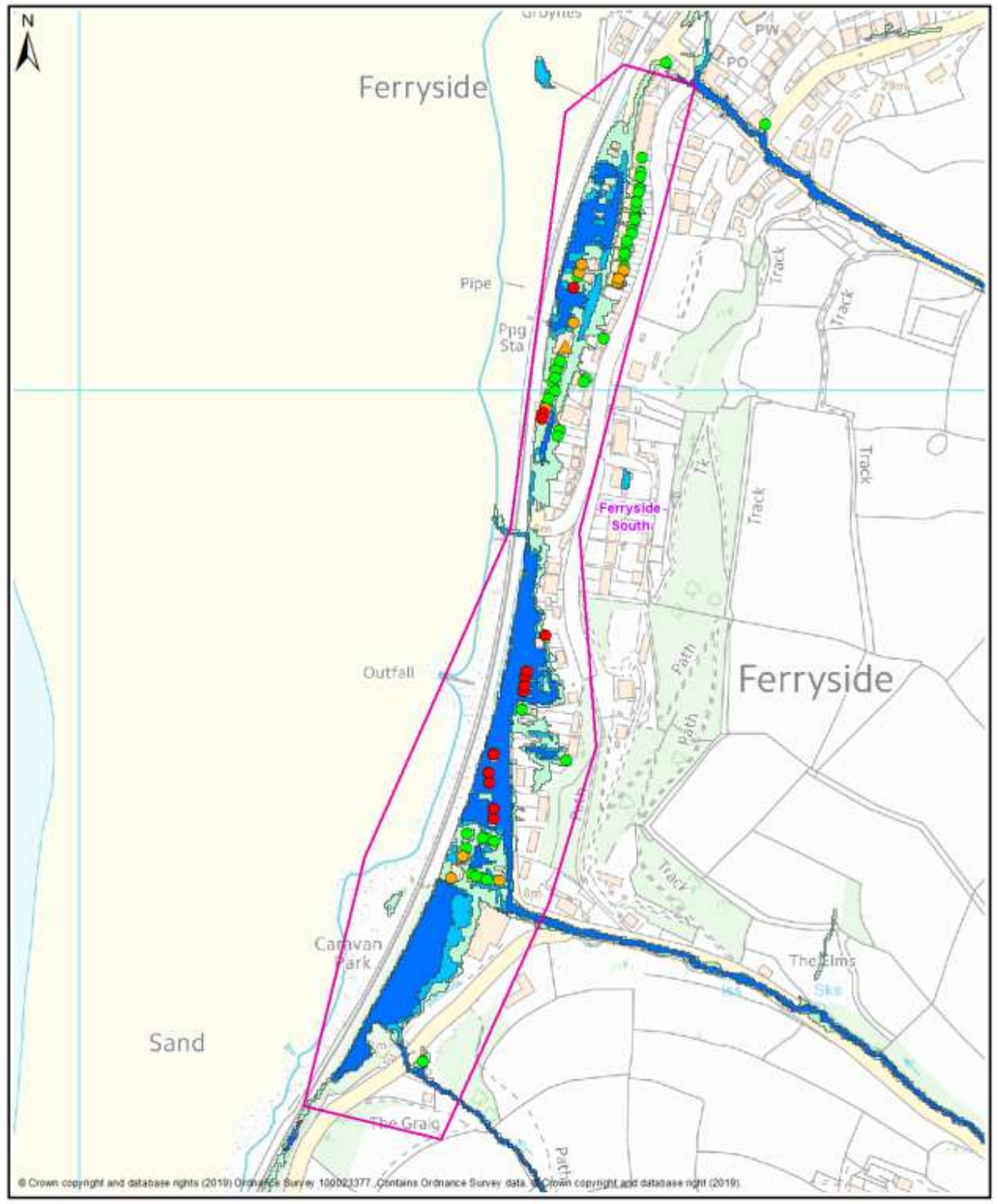
52.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	23	35	86
Map 2 Dwellings and Services	14	25	68
Map 3 CaRR	n/a	13	n/a



Map 1 - All Properties



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

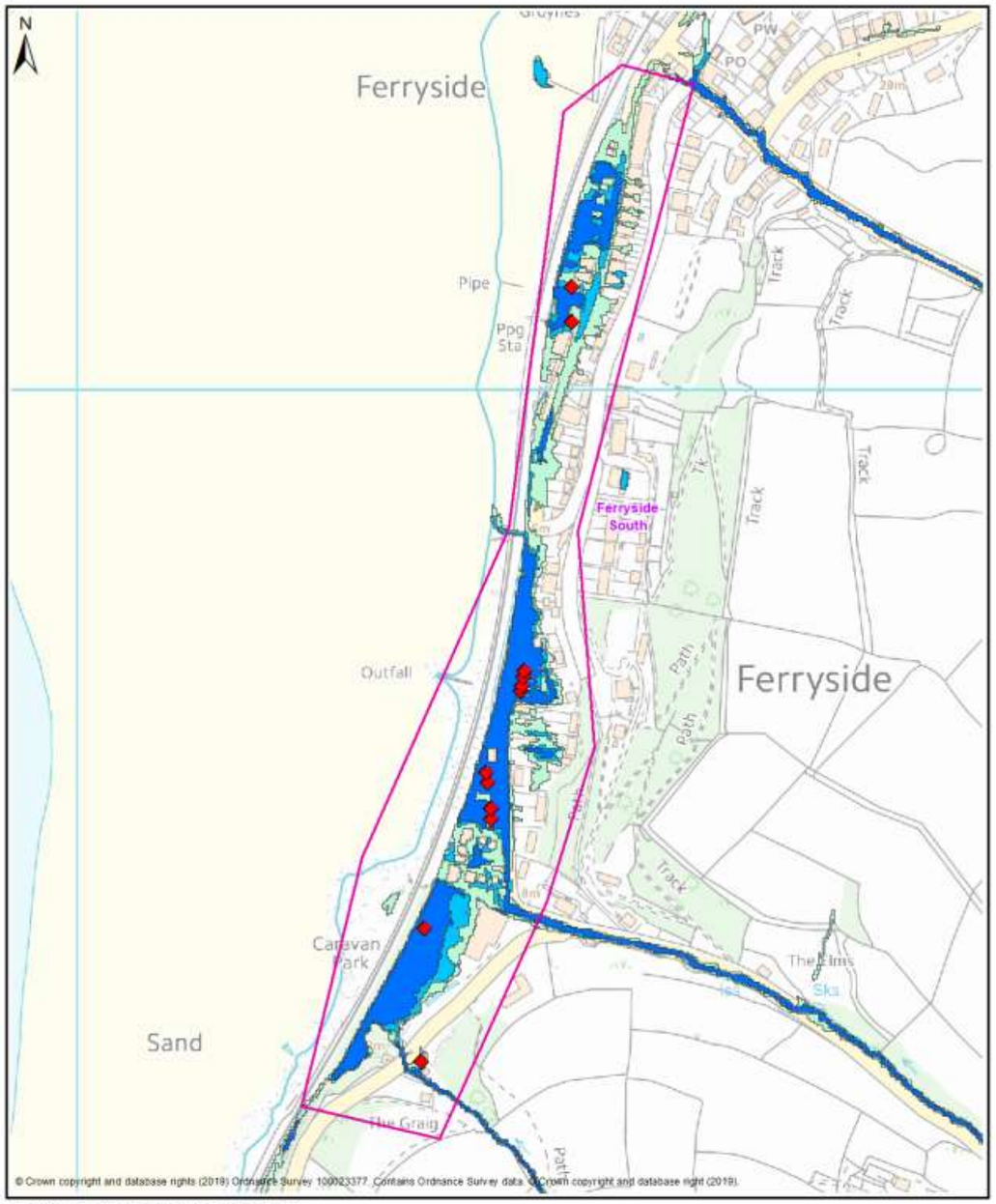
St Ishmaels Ward

Ferryside South Policy Unit

0 0.05 0.1 0.2 Km

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- CARR Pluvial
- CARR Fluvial

St Ishmaels Ward
Ferryside South Policy Unit

0 0.05 0.1 0.2 Km

53 Tyisha Ward, Station Road Policy Unit

53.1 Area Description

The Station Road catchment comprises the urban area around Station Road in Llanelli. This area is characterised by dense terraced housing and hydraulically the area is served by DCWW sewer systems.

The area is flat and generally low lying but above the tidal flooding range.

The northern part of this area is also at risk from fluvial flooding from the Main River Lleidi (NRW managed watercourse).

53.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

uFMfSW indicate a large number of properties at risk of flooding form surface water and this is also reflected in the Communities at Risk Register. These models are sensitive to the drainage capacity assumptions in the model and the true flood risk may be less than that indicated.

53.3 Flooding Events

None recorded

53.4 Flood Defence Capital Works undertaken by CCC

None

53.5 Flood Defence Capital Works undertaken by Partner Organisations

DCWW are currently undertaking a major capital scheme in the form of the Station Road Surface Water Tunnel. This will facilitate diversion of surface water from the existing combined sewer and should provide additional capacity to the drainage network.

53.6 Flood Defence Assets

None

53.7 Routine Works and Maintenance

None

53.8 Proposed Future Works

liaise with and support DCWW in their Rainscape Project.

53.9 Flood Risk

53.9.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

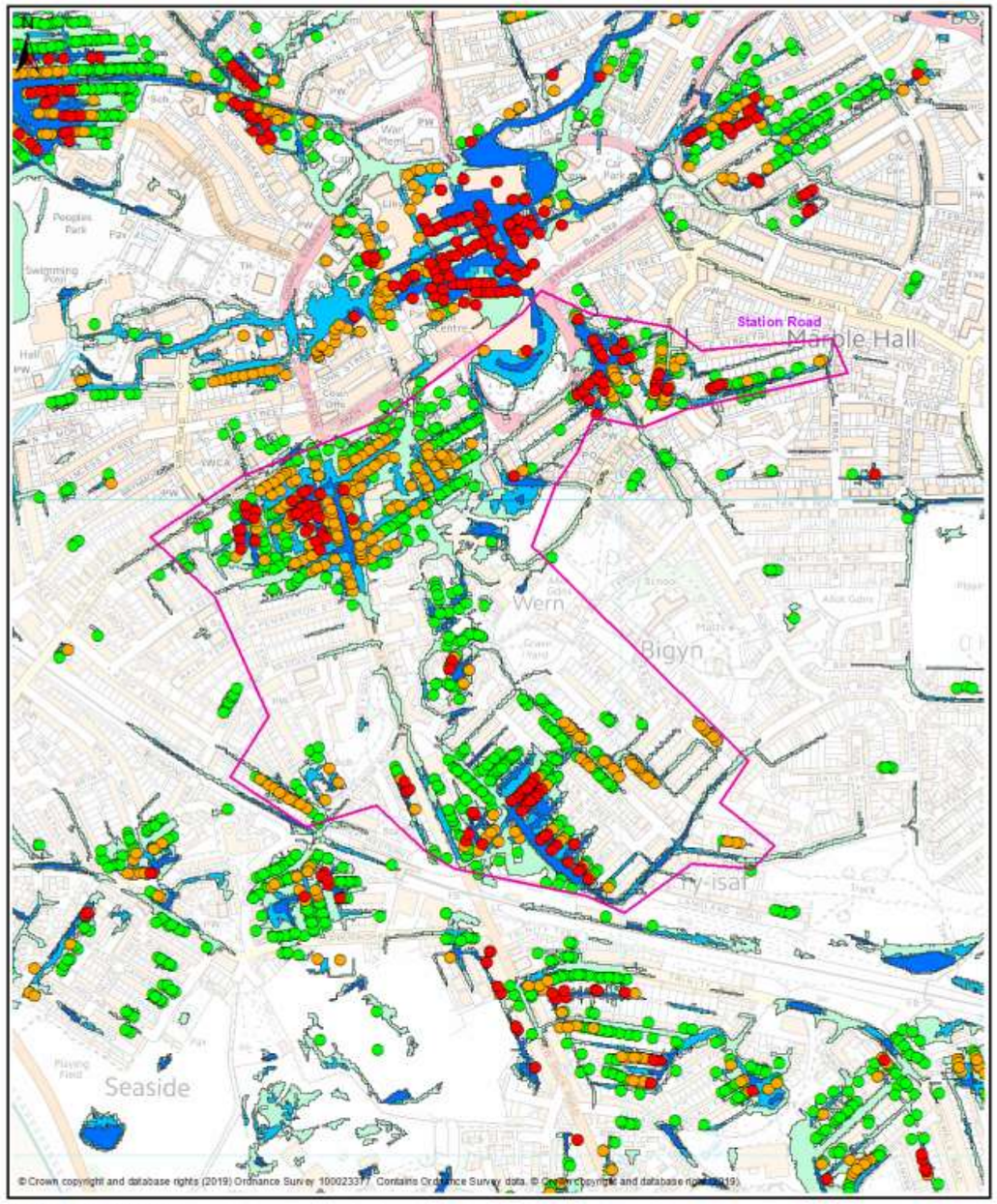
53.9.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

53.9.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	**1 in 100 probability storm event**	**1 in 1000 probability storm event**
Map 1 Total Properties	116	421	848
Map 2 Dwellings and Services	82	311	673
Map 3 CaRR	n/a	232 Pluvial 321 Fluvial	n/a



Map 1 - All Properties

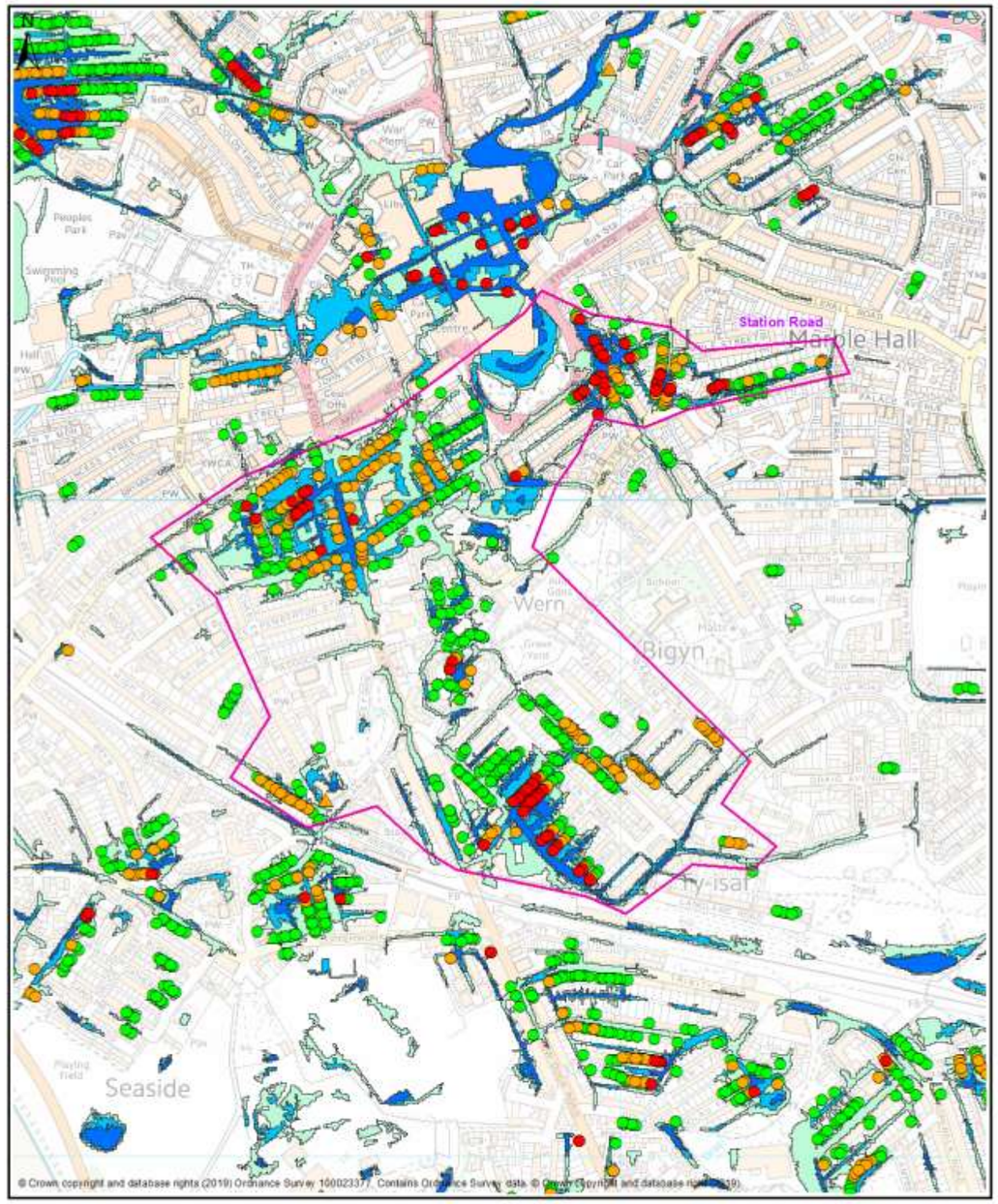
Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

Tyisha Ward

Station Road Policy Unit

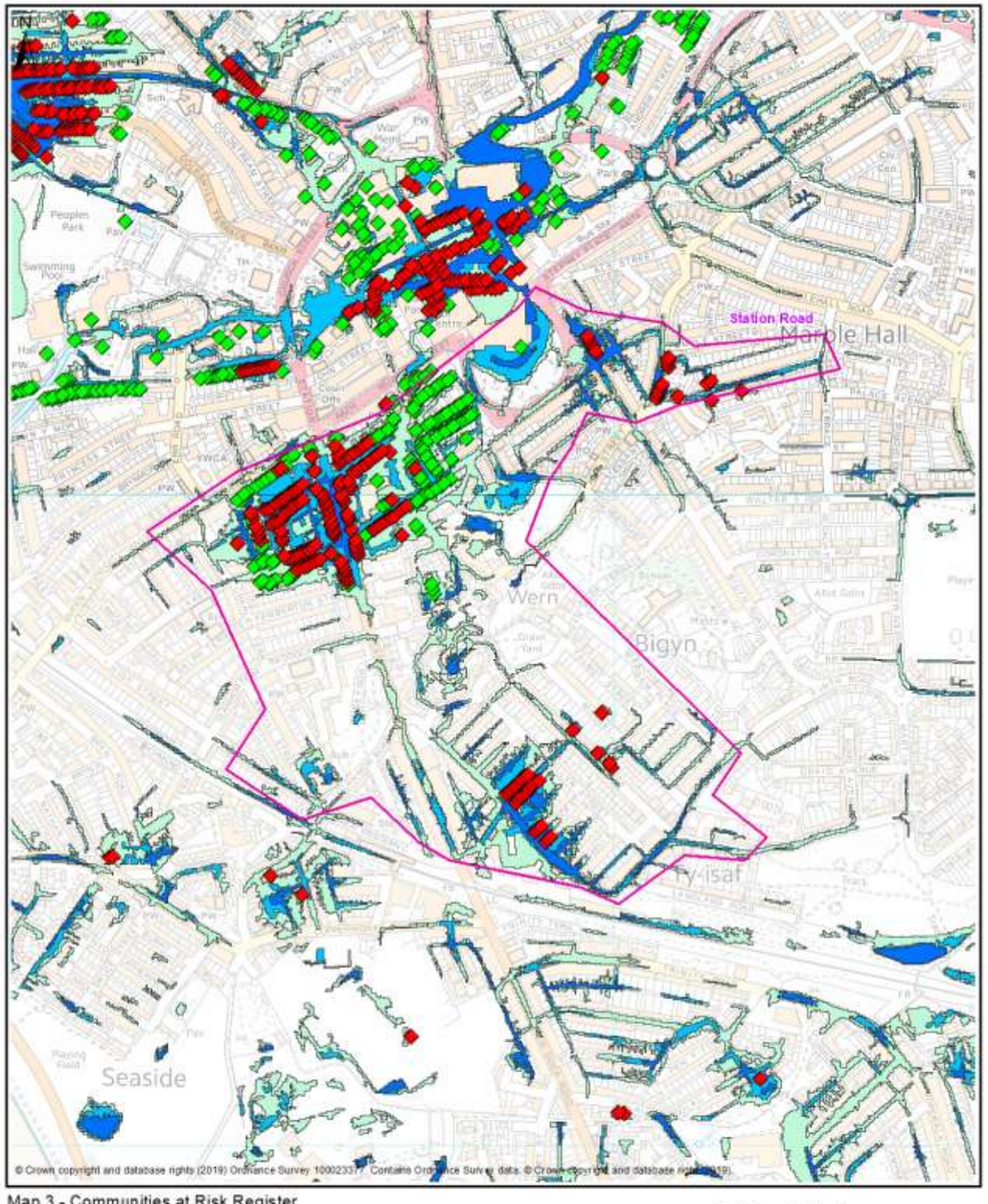
0 0.1 0.2 0.4 Km



Map 2 - Dwellings and Services

Legend

- Policy Unit
- uFMfSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMfSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMfSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30- Dwellings Flood Depth 150mm or Greater
- Q100- Dwellings Flood Depth 150mm or Greater
- Q1000- Dwellings Flood Depth 150mm or Greater
- Q30- Services Flood Depth 150mm or Greater
- Q100- Services Flood Depth 150mm or Greater
- Q1000- Services Flood Depth 150mm or Greater



Map 3 - Communities at Risk Register