

# Cynllun Rheoli Perygl Llifogydd Llanfair Talhaearn - Y cynnydd wnaed ers 2012

## Llanfair Talhaiarn Flood Risk Management Scheme – Our progress since 2012

### Ein Dull o Weithredu

Ers llif 2012, mae Cyfoeth Naturiol Cymru (CNC) wedi cwblhau gwaith i rwystro'r perygl o llifogydd ar gyfer y pentref.

### Beth wnaethon ni?

#### Gwaith Amddiffyn rhag Llifogydd:

- Ailosod sgrin falurion (debris screen) wrth fynediad y cwl fert (Water Street)
- Ychwanegu sgrin falurion bras i fyny'r afon o'r pentref
- Gosod Amddiffynfeydd Eiddo Unigol (IPP) drwy osod drysau neu rwystrau y gelir eu gosod a'u symud ar ddrysau a mynedfeydd
- Gosod system rhybudd o llifogydd (telemetreg a larwm)
- Gwaith clirio parhaus yn y cwl fert

#### Camau Gweithredu Cymunedol:

- Adolygu a diweddaru'r Cynllun Llifogydd Cymunedol
- Cyflwyno Wardeniaid Llifogydd Cymunedol

Mae'r Cynllun Llifogydd Cymunedol nawr ar waith ar gyfer y pentref, gydag 11 o wardeiniaid llif gwirfoddol yn gwarchod yr ardal.

### Gwerthusiad o'r Dewisiadau ar gyfer Rheoli Llifogydd

Rydym wedi gofyn i ymgynghorwyr Black & Veatch i ymchwilio i berygl llifogydd yngyd a chynnig dewisiadau i wella safon yr amddiffyniad ar gyfer y gymuned.

Rydym wedi ystyried nifer o ddewisiadau i leihau'r perygl o llifogydd i Llanfair Talhaearn. Roedd y dewis a ddewiswyd gennym yn seiliedig ar y cydwysedd rhwng cyflawni'r safon uchaf o amddiffyniad ar gyfer Llanfair Talhaearn mewn perthynas â'r gost, effeithiau amgylcheddol a'r her dechnegol a adeiladu'r gwaith. Mae'r dewisiadau a ystyriwyd wedi'u nodi yn y Tabl.

**I gael rhagor o wybodaeth am gynlluniau llifogydd neu rybuddion llifogydd, ewch i: [www.cyfoethnaturiolcymru.gov.uk/alerts](http://www.cyfoethnaturiolcymru.gov.uk/alerts)**

### Our Approach

Since the 2012 flooding, NRW has completed works to mitigate flood risk throughout the village.

#### What did we do?

##### Flood Defence Works:

- Replace the debris screen at the entrance to the culvert (Water Street)
- Addition of a new coarse debris screen upstream of the village
- Installation of Individual Property Protection (IPP) in the form of removable covers fitted to doorways and driveways
- Installation of flood warning system (telemetry and alarm)
- Ongoing clearance work at culvert

##### Community Actions:

- Review and update of the Community Flood Plan
- Introduction of Community Flood Wardens

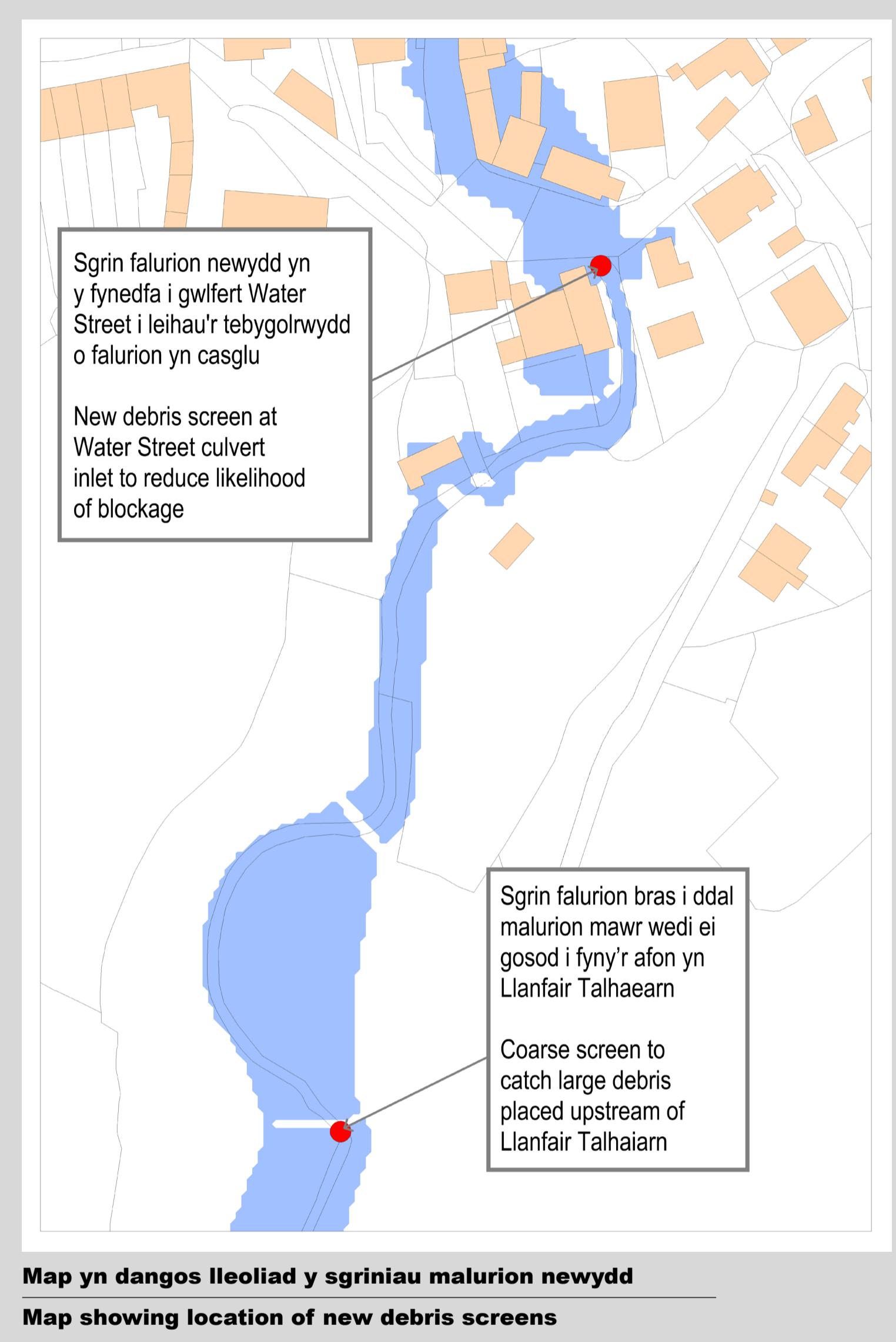
There is a Community Flood Plan now in place for the village, with 11 voluntary flood wardens covering the area.

#### Appraisal of Flood Risk Options

We have engaged consultants Black & Veatch to investigate the flood risk and put forward options to improve the standard of protection for the community.

We have considered a number of options to reduce the risk of flooding to Llanfair Talhaiarn. The option we selected was based on a balance between achieving the highest standard of flood protection for Llanfair Talhaiarn against the cost, environmental impacts and technical challenges of building the works. The options we considered are presented within the adjacent table.

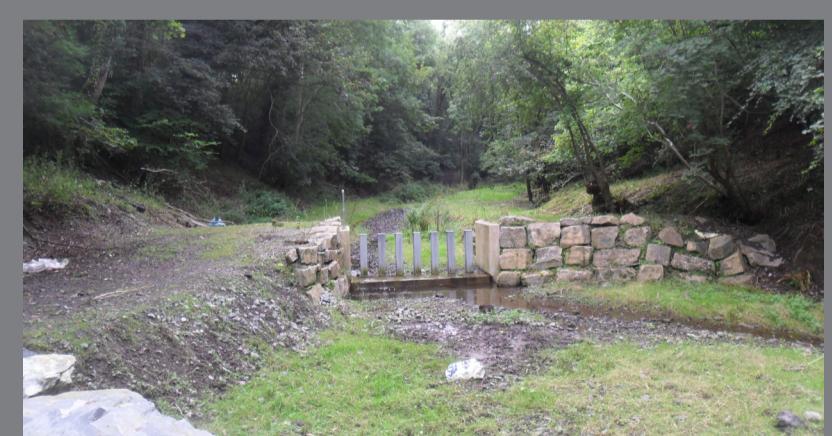
**For more information about flood plains or flood warnings, please visit: [www.naturalresourceswales.gov.uk/alerts](http://www.naturalresourceswales.gov.uk/alerts)**



**Llun o ddyfais Amddiffyniad Eiddo Unigol**  
**Photo of Individual Property Protection**



**Llun o sgrin falurion Water Street**  
**Photo of Water street debris screen**



**Llun o sgrin falurion bras**  
**Photo of coarse debris screen**

Pa ddevisiadau a ystyriwyd gennym?	A oedd yn ymarferol?	Pam?	Ein cynig
Ailosod rhan o'r cwl fert a mân wellianau i'r amddiffynfa ger y Capel	OEDD	Mae'r dewis hwn yn ffordd iadwy. Dyma'r dewis rhwydd o blith yr holl ddewisidau ac ni fydd yn effeithio llawer ar yr amgylchedd.	Ein hoff ddewis a'r un rydym yn ei gyflwyno heddiw.
Cronfeydd dŵr storio llifogydd i fyny'r afon	Nac oedd	Ni allwn adeiladu'r dewis hwn, oherwydd byddai angen pedwar arglwydd mawr lawn oddetu 11m o uchder	Ond... rydym wedi darganfod y gallai storfa llifogydd fach gael ei chynnwys fel yr hoff adewis rydym hefyd yn ei gyflwyno heddiw
Ailosod rhan o'r cwl fert a gwellianau mawr i'r amddiffynfa ger y Capel	Nac oedd	Roedd y dewis hwn yn ddrud iawn i'w adeiladu. Ychwaith, ni allwn adeiladu amddiffyniad uchel iawn wrth ochr y Capel, oherwydd gallai'r gwaith adeiladu ddifrodi a deliladu.	Ni allwn fwrr ymlaen a'r dewis hwn.
Ailosod y cwl fert i gyd	Nac oedd	Mae'r dewis hwn yn rhy ddrud i'w adeiladu. Ymhellach, byddai chwala a chodi'r holl gwlfert yn arwain at broblemau sylweddol, a gallai arwain at ddifrodi a deliladu.	Ni allwn fwrr ymlaen a'r dewis hwn.
Cwl fert neu sielan ddwygyfeirio ychwanegol	Nac oedd	Roedd y dewis hwn yn rhy ddrud i'w adeiladu ac ni fyddai'n leihau'r perygl llifogydd ar gyfer y pentref heb i Gwlfert Stryd y Dŵr gael ei ailosod	Ni allwn fwrr ymlaen a'r dewis hwn.
Rheoli Llifogydd yn Naturiol e.e. plannu coed a gwrychoedd	OEDD	Ceir sawl cyfle i wella'r dalgylch i fyny'r afon, fel y gelir lleihau rhyw faint ar y perygl llifogydd	Byddwn yn gweithio gyda thirfoddianwyr a phartneriaid i roi'r gwellianau hyn ar waith dros nifer o flynyddoedd

What Options did we consider?	Was it Viable?	Why?	Our Proposal
Replacing part of the culvert and minor defence improvements near the Chapel	YES	This option is affordable. It is the easiest of the options to build and has a low environmental impact.	Our preferred option which we are presenting today.
Upstream flood storage reservoirs	NO	We are unable to build this option as it would require four very large embankments around 11m high	But.... we have found small flood storage could be included as our preferred option which we are also presenting today
Replacing part of the culvert and major defence improvements near the Chapel	NO	This option was very expensive to build. We are also to build very high defences alongside 'The Chapel' as it might damage this building.	We are unable to take this option forward.
Replacing the entire culvert	NO	This option is too expensive to build. Digging up the entire culvert would also significant disruption and might lead to result in damage to buildings.	We are unable to take this option forward.
An additional culvert or a diversion channel	NO	This was too expensive to build and did not reduce flood risk in the village without replacing Water Street Culvert	We are unable to take this option forward.
Natural Flood Management e.g. tree & hedge planting	YES	There are a number of opportunities to improve the upstream catchment to provide a small decrease in flood risk.	We will work landowners and partners to implement these improvements over a number of years.