

Sustainable Communities Pilot Study

Final Report

Prepared for

Welsh Government and Natural Resources Wales

Ву

National Flood Forum, and

Collingwood Environmental Planning Ltd

June 2018





Sustainable Communities Pilot Study Final Report June 2018

Executive Summary

The Flood Awareness Wales (FAW) programme has been operated by Natural Resources Wales (NRW) since 2012. An Independent review carried out in 2016 by Collingwood Environmental Planning Limited included the following recommendations:

- NRW to review what approaches to community flood planning communities may require depending on their resilience capacities.
- NRW to review this assessment against targets for new work, with the potential for changing current targets for engagement with new communities and to review the resource requirements with Welsh Government as necessary.
- NRW to develop indicators for community resilience capacities in relation to flood risk management, building on previous work in this area.

This project, Wales Sustainable Communities Pilot Study was commissioned to address the specific challenges, limitations and recommendations in the report. It tested the new approach that was developed as part of the Defra Flood Resilience Community Pathfinder (FRCP) project in England.

The intention is that the project provides evidence for:

- a. Understanding a different approach used successfully elsewhere in the UK
- b. Shaping future work in Wales

The main aims of the study were to:

- Test the Pathfinder project approach to community engagement in Wales and assess its efficacy of delivery over a short timescale.
- Provide evaluation to include (as a minimum) direct feedback from communities and individuals within the project areas. This includes a capture of their initial perceptions of improved community resilience along with the views of children and young people.
- Make recommendations on preferred approaches, comparing the existing FAW approach to the Pathfinder model, and any other relevant models.
- Make recommendations which inform longer term delivery with a specific focus on the approaches that are most effective in ensuring long term sustainability.

The methodology consisted of two interrelated elements:

- Practical action by the National Flood Forum (NFF) over five months between November 2017 and March 2018 to engage with three communities and set up flood groups. This used a methodology developed by the National Flood Forum incrementally since 2002
- 2. Evaluation of the work programme led by Collingwood Environmental Planning using an evaluation framework that ran concurrently with the practical action.

Underpinning the practical action was a series of principles that were applied throughout the project, and which are fundamental to the work of the National Flood Forum in general. These principles are what guided the decisions to be taken in applying the methodology.

The project governance arrangements were agreed so that they were proportionate for the length and scale of the project. The project was overseen by the National Flood Risk Manager for NRW.

Overall management of the project was overseen by a Project Board which consisted of representatives from Natural Resources Wales, National Flood Forum and Welsh Local Government Association (an umbrella organisation for the 22 Local Authorities in Wales). The Project Board and this project reported to the Head of Flood Risk Management and the Flood and Incident Risk Management Programme Board as one of the projects under the NRW Business Area Review (BAR) programme.

The project also reported to Welsh Government and the wider joint programme on research and development work (England and Wales)

In addition, regular project team meetings were convened with wider attendance from individuals who led on sustainable development, climate change and community engagement so that the learning could be applied wider than just for flooding.

The approach of practical action and parallel evaluation was applied to three locations, in Gelli, Tremadog and Taibach. These pilots developed in different ways, as set out in Chapter 2.

Chapter 3 contains findings from the National Flood Forum about the work in the three pilots. Enablers and Blockers were identified, including community interest, the community as enabler and leaders, community cohesion, elected member attitude and enthusiasm, local knowledge, developing a detailed understanding of the community, social networks, the role of the independent broker, young people and the role of partners.

Recommendations are made on next steps for each community.

Chapter 4 provides the conclusions and recommendations from the evaluation undertaken by Collingwood Environmental Planning, with the main evaluation report at Annexe A. Key conclusions were:

- The project was successful in achieving the project outcomes and showed the value of the approach, specifically in terms of **developing capacity in communities** in order for them to take action to manage their flood risk and **strengthening relations** between communities and flood authorities.
- 2. The project demonstrated how this approach, which differs from the NRW approach in its focus largely **on process** rather than outputs such as community flood plans works in practice in areas where NRW have previously found engagement difficult.
- 3. However, the focus on achieving some key outcomes (e.g. Multi Agency Meeting) in a specified, short time frame risks the sustainability of the groups established.
- 4. The project showed the vital nature of having an independent process whereby those carrying out the engagement:

- 1. Facilitate personal **Contacts** with and between members of the local communities and staff from relevant authorities
- 2. Have **Credibility** in terms of their knowledge of flood risk and are able to translate across different perspectives
- 3. Are **Committed** to a clear objective of empowering communities to engage with flood risk management
- 4. Have the **Confidence** and independence to ask difficult questions if needed
- 5. Build **Capacity** within communities to enable them to take action to manage their flood risk
- 5. The project showed that understanding the different people/place/flood relationships in each community was a prerequisite for meaningful engagement to proceed.
- 6. The project suggests that the current NRW community engagement approach potentially undermines its own principles of good practice due to a focus on outputs rather than process. The pilots showed that the NRW process has aspects in common with the NFF approach, however, the past research for NRW (Twigger-Ross et al, 2016) showed the process as being largely focussed on signing up people for Floodline Warning Direct (FWD) and developing community plans, rather than on building capacity and knowledge of flood risk within local communities. Partly, a focus on specific targets e.g. numbers signed up to FWD leads to this emphasis.
- 7. The project revealed a potential lack of clarity in places as to the strategic objectives of NRW's engagement approach. Specifically, it was not entirely clear to partners or people in the community as to why Taibach was chosen as a pilot site

Key recommendations were:

- 1. This approach could be **a very useful addition** and **complement** to NRW's current approach to community engagement. Specifically, we would suggest that whilst NRW staff have some of the key characteristics referred to above, they would need help from others outside of the organisation if trust in institutions and independence were a key aspect in a specific community.
- 2. We would suggest that, as with the pilot areas, this approach is used to focus on areas that are classed by NRW as **hard to connect with** (which may be due to past issues, lack of community capital, etc.) and **urgent in terms of the nature flood risk** (the pilot sites were medium flood risk). This approach may also be ideal just after people have flooded.
- 3. Careful consideration should be given to **developing/reviewing the strategic objectives** for NRW engagement approach so as to be able to understand when this approach might be useful to implement, and to clarify NRW's role in local community engagement with flood risk.
- 4. We would suggest that a simple participatory decision tool could be developed, drawing and training provided to use it, to facilitate the structured consideration[PA1] of the nature of the issue/s, demand from the community, the nature of the community and availability of resource when deciding on the appropriate engagement approach. This could draw on indicators identified as part of this project and tools being tested in other places.

- 5. Now we know one doesn't exist we need to look at doing this, or identifying one that can be adapted for use, as this seems to be essential in progressing recommendation above (3)
- 6. Welsh Government should **liaise at national and area level** with relevant Risk Management Authorities around the role and engagement of communities in flood risk management, such that economies of scale can be achieved.
- 7. Given that understanding the people/place/flood profile of areas is shown to be an important input into the success of engagement processes, it is suggested:
 - a. that NRW flood risk management staff are made aware of the Well-Being assessments¹ of the 19 Public Service Board areas as a basis for their understanding of local areas. This would help joining up across authorities and provide valuable local contextual knowledge for NRW staff.
 - b. that NRW in partnership with other key authorities consider how they can gather local information on people/place/flood relationships in key areas of consideration.
 For example, this could be through regular liaison with key community representatives, as at present, plus wider information gathering from the community.
 - c. that all NRW engagement processes allow for a period of listening to community representatives and members about flood issues, to enable appropriate actions to be delivered. This may mean a shift in resources to more intensive "upstream" engagement requiring specific indicators to measure progress.
- 7. In order to move the current NRW approach towards a more process focus it is suggested that:
 - a. indicators for success of the process are developed for the current NRW community engagement approach. The project used indicators to assess which aspects of the NFF process had been achieved and these were seen to be simple to use and useful to the NFF engagement staff and could be adapted for use by NRW.
 - b. development of outcome and impact indicators for NRW's current engagement work should be carried out as at present the measures appear to be largely focussed on **outputs**, e.g. numbers of people signed up to FWD and number of flood resilience plans in place.
 - c. Regular discussion are held between NRW and other key Risk Management Authorities partners on **what is working/not working in** relation to community engagement in flood risk management to create a learning culture within the organisation.

¹ Well-being assessments have been carried out for all 19 PSB areas and cover a wide range of topics within the following areas: cultural, economic, environmental and social. NRW are part of the PSBs and flooding is mentioned in the environmental well-being context. <u>http://gov.wales/topics/improvingservices/public-services-boards/?lang=en</u>

Contents

Executive	Summary	1
CHAPTER	1 - Project Background / Introduction	8
1.1	Scope	9
1.2	Aims of the Project	10
1.3	Methodology Outline	10
1.3.1	Community engagement method	10
1.3.2	Outline evaluation methodology	14
1.4	Governance – steering group arrangements	16
1.5	How this report is presented	17
CHAPTER	2 – Approach	18
2.1	Flood Action Plans	18
2.2	Gelli	18
2.3	Tremadog	19
2.4	Taibach	21
CHAPTER	3 – National Flood Forum findings and recommendations for pilot areas	22
3.1	Enablers and blockers	22
3.1.1	Community interest	22
3.1.2	The community as enablers and leaders	22
3.1.3	Community cohesion	23
3.1.4	Elected member attitude and enthusiasm	23
3.1.5	Local knowledge	24
3.1.6	Developing a detailed understanding of the community	24
3.1.7	Social Networks	24
3.1.8	Independent broker	24
3.1.9	Young people	25
3.1.10	The role of partners	25
3.2	Recommended next steps for pilot areas	26
3.2.1	Gelli	26
3.2.3	Taibach	28
	4 – Conclusions and recommendations from the evaluation - Collingwood Environm	
4.1	Conclusions and recommendations from the evaluation	30
4.1.1	General	30
4.1.2	Conclusions in relation to the project's three intended outcomes	30
4.1.2.1	Communities taking action to manage flood risk:	30

4.1.2.2	Stronger support networks and relations within the community	
4.1.2.3	Stronger relations between the community and the flood authorities	
4.1.3	Conclusions related to the project process	
4.1.4	Summary of conclusions	
4.1.5	Recommendations	34
Annexes		
Annex 1	Final Evaluation Report	
Backgro	und	
2. Phase O	ne of the evaluation – Baseline	
2.1 Back	ground to the location of the community pilots	
2.2 Sout	h-East Pilot: Gelli	
2.3 Nort	h Pilot: Tremadog	41
2.4 Sout	h-West Pilot: Taibach	43
2.5 Nat	ural Resources Wales' (NRW) approach to community engagement	45
3. Phase	Two of the evaluation - The engagement process	50
3.1 Reco	rd of pilot activities	50
3.2 Anal	ysis of community engagement timelines	52
4. Phase Th	rree of the evaluation – analysis and conclusions	53
4.1 Proc	ess evaluation	53
4.2 Outo	ome evaluation	59
5. Conclus	ions	63
5.1 Gene	eral	63
5.2 Cond	lusions in relation to the project's three intended outcomes	64
5.3 Conclu	sions related to the project process	65
5.4 Sum	mary of conclusions	65
5.5 Reco	mmendations	66
6. Referen	ces	68
7. Appendi		
	Ces	69
Appendi	ces x A.1 Interview schedule	
••		69
Appendi	x A.1 Interview schedule	69 70
Appendi Appendi	x A.1 Interview schedule x A.2 – Template log sheet	69 70 71
Appendi Appendi Appendi	x A.1 Interview schedule x A.2 – Template log sheet x A.3 –Interview schedule for multi-agency meeting	69 70 71 72
Appendi Appendi Appendi Appendi Appendi	x A.1 Interview schedule x A.2 – Template log sheet x A.3 –Interview schedule for multi-agency meeting x A.4 – Focus group schedule	69 70 71 72 75 mework

Gelli		80
Tremado	g	80
Taibach.		81
Annexe 3	Approach	82
Gelli		82
Tremado	g	84
Taibach.		86
Annexe 4	National Flood Forum (NFF) and Collingwood Environmental Planning (CEP) roles	90
Annexe 5	Flood Plan template	92

CHAPTER 1 - Project Background / Introduction

The Flood Awareness Wales (FAW) programme has been operated by Natural Resources Wales (NRW) since 2012. The project targets communities at risk of flooding in Wales to raise public awareness of the local risk and help individuals and communities be better prepared so they can respond and recover more quickly from the impacts of flooding.

The current FAW approach involves the completion of community flood plans supported by local Flood Volunteers. The programme has been highly successful with a tried and tested approach, but some limitations and challenges were identified during the 2016 review carried out by Collingwood Environmental Planning Limited.

The overall aims of the review were:

- To assess the effectiveness of NRW's approaches to date, specifically in relation to the current model of operation, that being the development of flood plans, which are supported and maintained by local flood volunteers.
- To provide evidence and recommendations drawing on local, national and international best practice and approaches to date, to inform future practice in increasing community flood resilience across Wales.

A mixed methods approach was used to gather data for the review. This included an evidence review and a survey and interviews of flood plan volunteers and professional partners.

The review identified a simple logic model based on the assumptions underlying FAW about the way that the programme's resources and activities would produce the intended outcomes and impacts. Collecting and analysing evidence from each of the FAW's activities made it possible to see how far these assumptions were borne out and the way in which the different activities have contributed to the programme's results.

A number of limitations and challenges associated with the FAW programme were identified by the FAW Independent Review (2016). These are:

- The need to identify the future roles and responsibilities of FAW, other organisations and communities to ensure that local flood risk can be owned and sustainably managed in the long term.
- The identification of where to target NRWs diminishing resources for maximum benefit. Specifically, should this include the maintenance of previously developed flood plans and support to Flood Volunteers or the targeting of new areas.
- The identification of the future evaluation mechanisms that are required to track progress against long term drivers and that focus on the outcome of increased community flood resilience. This needs to include measures around the individual's social and emotional resilience.

Relevant findings of the review were:

- The programme's targeted approach and flexible methods reflect good practice.
- There is a tension between the aspiration for greater collaboration with at risk communities and the roles that partner organisations are willing to take on

• Fundamental changes to the role of NRW in community engagement in flood risk management would be needed if budget cuts were required.

Three main recommendations emerged from the review that relate to this project. These are:

- NRW to review what approaches to community flood planning communities may require depending on their resilience capacities.
- NRW to review this assessment against targets for new work, with the potential for changing current targets for engagement with new communities and to review the resource requirements with Welsh Government as necessary.
- NRW to develop indicators for community resilience capacities in relation to flood risk management, building on previous work in this area.

As a result of the findings of the FAW Independent Review, this project was commissioned to address the specific challenges, limitations and recommendations. The project tested the new approach that was developed as part of the Defra Flood Resilience Community Pathfinder (FRCP) project in England.

1.1 Scope

The project tested the new approach to community engagement, as used in the FRCP Project in England. The engagement focused on areas that were known to be challenging in terms of community engagement. Specifically, these areas had medium levels of flood risk, no or low public awareness of flood risk or high levels of apathy to the risk.

Careful consideration was given to the feasibility of the project and whether there was merit in going ahead given such short timescales or whether we should not go ahead but make it part of a larger programme at a later date. Four months would normally be insufficient for a project of this nature, which might typically be spread over 12 and 24 months to take account of the pace at which a community works.

Consideration was also given to managing the possible risks to the community of the short term intervention, looking to test an approach rather than solve local issues. In particular, the project was a short term intervention to test techniques, rather than a longer term community project that might typically take 6 to 36 months, working at the pace of the community. The concerns of note were:

- That the community would be given false hope that issues would be resolved
- That the process of developing a sustainable flood action group would be started but not completed, resulting in dissatisfaction, apathy and resentment and a contentious group of people as well as long term additional work for agencies
- That expectations would be raised inappropriately

To mitigate this, a number of measures were put in place:

- Use of the guiding principles set out below
- Consideration of these issues and risks in the selection of pilots
- Concentrated input from a team of National Flood Forum staff, including a Senior Manager, a project officer and office support, with overall project management by the Chief Executive, rather than a single project officer with some office support overseen by a senior project officer

- Ongoing basic support by the National Flood Forum
- A limited amount of post project support by the National Flood Forum, where there was a particular issue, to ensure continuity and reputational risk.

A key factor was that this project was designed to test out and evaluate techniques, rather than being a full blown delivery project.

1.2 Aims of the Project

The main aims of the project were to;

- Test the Pathfinder project approach to community engagement in Wales and assess its efficacy of delivery over a short timescale.
- Provide evaluation to include (as a minimum) direct feedback from communities and individuals within the pilot areas. This includes a capture of their initial perceptions of improved community resilience along with the views of children and young people.
- Make recommendations on preferred approaches, comparing the existing FAW approach to the Pathfinder model, and any other relevant models.
- Make recommendations which inform longer term delivery with a specific focus on the approaches that are most effective in ensuring long term sustainability.

1.3 Methodology Outline

The methodology consisted of two interrelated elements:

- Practical action by the National Flood Forum over five months between November 2017 and March 2018 to engage with three communities and set up flood action groups. The identified community, Gelli in the Rhondda Valley, was confirmed at the inception meeting held on 14/11/2017. Subsequently Tremadog, Gwynedd and the Taibach area of Port Talbot by the end of November.
- 2. Evaluation of the work programme led by Collingwood Environmental Planning using an evaluation framework.

1.3.1 Community engagement method

Underpinning practical action is a series of principles that were applied throughout the project, and which are fundamental to the work of the National Flood Forum in general. These principles are what guides the decisions to be taken in applying the methodology below:

- 1. A **people centric approach** -start where the community is at, not what is useful to you or the organisation
- 2. **Time** Work at the pace of the community. Don't impose your timescales of deadlines.
- 3. **Trust** Build strong relationships. They ease contention and build trust
- 4. Every place is different. **Context** is critical to the success of interventions
- 5. **Positive, proactive two-way communication is essential.** Listening to what people have to say and demonstrating that they have been heard is a starting point
- 6. **Language** clear and concise, thoughtful and positive; plain everyday language, considered positive responses, no acronyms, condescending language or clever sentences that discourage a response.

- 7. **Honesty** Clarity on what can and cannot or done. Where there is a commitment to an action, it is important that this is fulfilled, otherwise it will reinforce rejection, the impression that organisations don't care, a lack of trust, apathy and failure
- 8. A **partnership** involves a commitment from all, organisations and individuals, to confront issues together. These commitments may be informal, but they are important
- 9. Join the partnership with **no preconceived ideas** about what the community or individuals want or need. Don't show disregard to their thoughts on solutions.
- Equity Everyone in the community has a right to be heard in equal measure. Do those who claim to represent people really do so? Or are those with the loudest voices preventing quieter people speaking. Actively engage with everyone. Robert Chambers (1983) ethos of "Putting the last first" (Routledge ISBN-10: 0582644437 ISBN-13: 978-0582644434) is a difficult but useful starting point.
- 11. Equality communities should be treated as equal partners
- 12. **Respect** people in communities have the greatest vested interest in managing their flood risk. They are the <u>only</u> ones who will suffer the impacts of flooding. For everyone else this is part of their professional work and they go home to a dry house
- 13. **Embrace** People in communities with knowledge, professional skills and perception about their locality, that the various agencies maybe unaware of and will prove beneficial.
- 14. Apparent disinterest, reluctance or anger are often behaviours used as **coping mechanisms** to manage the trauma suffered and enable moving forward with life
- 15. **Community reluctance** is what is being said, true? Are facts correct? What are the community's thoughts and vision? What is publicly visible that brings awareness to people of the threat of residual risk, often this actually is enough or all that can be done.

The methodology is a development of work that the National Flood Forum has been undertaking since its formation in 2002, drawing from best practice, testing new ideas, such as through the Defra Flood Resilience Community Pathfinder and improving the processes further. It draws strongly on an international body of work on community development, such as is summarised in the Rapid Evidence Assessment (REA) carried out for the Defra Flood Resilience Community Pathfinder Evaluation

http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed= 0&ProjectID=18744

The methodology requires:

- Facilitation and community development skills
- A thorough understanding of the impacts of flooding and flood risk on peoples' lives.
- A thorough knowledge of flood risk management, the issues and interventions.
- An understanding of, and an ability to work with, the institutional arrangements for managing flood risk.

The combination of these four elements provides the skill base for the methodology.

Some elements are very new. In particular, the indicators of what a successful flood group looks like have been brought together coherently for the first time. This provides the basis for the evaluation.

The work to set up a flood action group using National Flood Forum methodology consisted of:

1. Working at grassroots with people who have been affected by flooding, or are at risk, and engaging behind the scenes to identify and contact key individuals, those with concerns and people who are potential leaders

- 2. Calling an initial meeting of interested individuals to start developing a group
- 3. Organising a series of closed meetings (approximately 3 depending on the work needed with the community to establish a functioning group) to develop the group, collect the key issues of concern, ensure a mutual understanding of flooding in the area and develop an understanding of the roles and responsibilities of organisations involved with flood risk management.
- 4. Organising a series of multi-agency meetings
- 5. Supporting the group to run the multi-agency meetings

Experience from previous work to set up and support a good working flood action group has led to a generic methodology consisting of two elements:

- 1 The creation of a functioning, sustainable flood action group, a "Team" of people able and wanting to work together on a common endeavour, with and for the wider community and alongside partners
- 2 Supporting the flood action group Team to address the issues of concern

STAGE ONE – Supporting the creation of a flood action group – The Team

Beginning resilience with community cohesion & a community agenda

Several meetings are needed to:

- 1. allow the community to off load/listen to what they have to say
- 2. facilitate them through the process of formalising a flood action group
- 3. focus the flood action group on a positive and productive way forward
- 4. support them to actively gather views and concerns from their wider community (circumventing an insular group focus)
- 5. collate information gathered and populate a rolling Flood Action Plan to work from
- 6. explain the roles and responsibilities of the various agencies and authorities involved in flood risk management
- 7. explain the constraints that these agencies and authorities must work to
- 8. explain how funding mechanisms work
- 9. determine how the flood group will engage with partners
- 10. research the professionals needed to form the partnership
- 11. set up a Multi-Agency Meeting (MAM)
- 12. send out invitations with agenda and rolling action plan
- 13. support the group as the lead through the meeting

STAGE TWO – Helping the flood action group to achieve its goals

Adding additional resilience such as an emergency resilience plan.

Note that there are many different types of action that flood action groups will wish to undertake, dependent upon the priorities identified in their rolling action plan. This example is used for illustrative purposes only.

Several meetings are needed to:

- 1. focus the group on what they can achieve by helping and supporting themselves as a community
- 2. ask them to talk about their experiences in a flood event or a close encounter
- 3. support them to identify what would have helped in that situation
- 4. support them to populate an emergency plan that is bespoke for their situation and needs
- 5. set up a Resilient Agency Meeting (RAM) with different professionals than the MAM
- 6. ensure that what is produced fits well as part of an appendices of other plans for the area
- 7. ensure that the grassroots plan is fed up to County level

The National Flood Forum's experience shows time and again that Stage one needs to be implemented first, to generate a community willing and focused on achieving Stage two.

The process and indicators of success have been summarised as follows:

Table 1 The process of developing a flood action group and indicators of success

Engagement	Actions	Indicators
Objectives		
Stage 1		
Forming the group	 Liaise with individuals to identify existing community groups and leading individuals Contact groups and individuals to understand the appetite for future flood risk work, interrelationships, etc. Discuss with individuals setting up a flood action group Organise a meeting of interested parties Gain agreement for further work using either an existing group or forming a new group Organise a series of meetings to form/ consolidate a flood action group 	A Flood Action Group in place with a chair
Communication with the wider community	Support the flood action group to gather information from the wider community on: Interest in flood risk Experience of flooding Flood risk issues Experience of working with partners 	Evidence of wider community engagement by the flood action group
Articulating the flood risk issues	Through flood action group meetings generate a common written understanding of flood risks and issues of concern.	A list of issues agreed by the flood action group
Understanding roles and responsibilities of organisations	Through discussion at meetings, generate a common understanding of the roles and responsibilities of Risk Management Authorities and other organisations; what they can and cannot do	Session completed with the flood action group
Ability to work with partners	Through discussion at meetings agree how the flood action group will work with Risk Management Authorities and other organisations	Multi-agency meeting
Stage 2		
Multi-agency meetings	Organise and support the group to lead and chair Multi-agency meetings (typically $1 - (3) - 5$ to work through the issues identified by the community Develop a rolling action plan	Multi-agency meeting
Start to introduce and steer towards proactive work	 Supporting the Flood Action Group to identify actions that the group could, and may wish to, take forward, such as: Working in an equitable partnership with agencies and authorities to develop possible solutions as a supportive partner e.g. natural flood management, engineering solutions, land management, PFR (property flood resistant products), modelling detail, etc. 	Work programme introduced

	• Gather data for agencies and authorities e.g.	
	drain mapping, photographs as issues	
	happen, reporting issues to incident phone-	
	lines	
	 Helping agencies and authorities deal with 	
	unresolved riparian issues	
	 Community flood awareness events lead by 	
	the flood action group and supported by	
	flood risk management agencies and	
	authorities	
	Emergency resilience plan	
	Planning and development issues	
	 Riparian management 	
	 Natural Flood Risk Management 	
Working with the	Supporting the group to deliver its work programme	Work
group to		programme
undertake		started
proactive work		

The second phase of this project was the evaluation work carried out by CEP alongside the practical activity, the results of which are presented in Annexe 1 of this report. The evaluation is divided into four distinct phases. Phase 1 established the community baseline of the pilots, by detailing the socioeconomic background of each pilot location, and any previous engagement work within each community around the risk of flooding. The baseline also describes Natural Resources Wales (NRW) staff's interests in the project and its outcomes, and any likely enablers or barriers they identified. This evidence was collected through desk-based social research of each community from local authority sources and grey literature, an interview with a representative of the National Flood Forum (NFF), and interviews with one member of NRW in each of the organisation's three area offices. Please see appendix A.1 in the evaluation annex for a copy of the interview schedule.

Annexe 1 also details the evidence used to inform Phase 2 of the evaluation, which was to examine the process of community engagement that takes place in each pilot location, and how the duration and characteristics of each engagement process differed across the three pilot communities. The evidence for this was collected through activity logs completed by NFF staff.

1.3.2 Outline evaluation methodology

Evaluation objectives

The objectives for the evaluation element were outlined at the Inception Meeting. These were to:

- Establish the extent to which the community engagement aims and objectives have been met.
- Describe how the community engagement aims and objectives have been met, identifying what change has occurred and how this has been brought about.
- Highlight underlying causes, enablers, barriers and factors that led to the results identified.
- Provide additional learning about the relevance of the approach to flood risk management and Flood Awareness Wales business challenges (e.g. increasing Flood Warning take up, understanding and action) to improve future delivery) if these aspects come up within the pilots.

To achieve these objectives, it was proposed that the evaluation would:

- Gather direct feedback from communities and individuals within the pilot areas, including children and young people, to capture their initial perceptions of improved community resilience
- Compare the existing FAW approach to the Pathfinder model, and other models if relevant, in order to make recommendations on preferred approaches, considering which approach would be most effective in ensuring long term delivery and sustainability.

The team used three broad research questions to guide the analysis of the evidence. The first question looks at the project's **outcomes** and the last two consider the **processes** followed.

Research questions

- 1. How far and in what ways has community flood resilience been increased?
- 2. How effectively and in what ways did the pilot approach enable communities to take ownership of and improve local flood resilience within a short timescale?
- 3. What factors facilitate or act as barriers to community engagement?

A challenge for the outcome assessment was to identify outcomes that could be expected to be achieved within the short project timescale and recognising that community engagement is affected by many factors that are outside the control of those leading the project, including pre-existing community characteristics such as physical (geographical), social, institutional and economic factors, as well as unplanned events or developments. To address this challenge, intermediate outcomes were identified which could be expected to be achieved or progressed within the project timescale. This is explored below.

Evaluation phases and methods

The evaluation was carried out as a four-phase process. Table 2 below shows the phases and the methods used to inform the evaluation.

Phase	Description	Methods and tools
Phase 1	Establish the baseline	 Desk-based data collection on communities / locations. Baseline interviews with NRW staff and NFF engagement coordinator.
Phase 2	Record project activities	 Log of activities. Progress reports (telecons and written reports) Records of activities e.g. note of discussion of local flood issues for flood action group development of a local Flood Plan.
Phase 3	Review of pilot results	 Direct observation of multi-agency meetings. Analysis indirectly through interviews with the NFF. Focus group with FAG participants. End of project interviews with NRW staff and with NFF engagement coordinator.
Phase 4	Assessment, conclusions and recommendations	 Mixed methods analysis. Statistical analysis of quantitative data. Comparison of evidence from different data sources to identify common themes relevant to the evaluation. Thematic approach involving analysis of data according to

Table 2 Phases and methods for the evaluation2

² The tools are available in the Report Appendices

	emergent themes (inductive analysis).
	• Evaluation against stepped outcomes for the pilots, as set
	out in the project Evaluation Framework.

Phase 1 established the baseline by describing relevant characteristics of the three selected communities and previous experience of engaging these communities around the risk of flooding. The baseline also describes Natural Resources Wales (NRW) staff's perspectives on and interests in the project and its outcomes and any likely enablers or barriers they identified. The evidence for the baseline was drawn from desk research on the characteristics of the three communities, an interview with a representative from the National Flood Forum (NFF) and interviews with one member of NRW in each of the area offices.

Phase 2 involved monitoring the project activities in order to begin to tease out what activities were carried out, how much time was needed for each step in the community engagement process and what similarities and differences could be observed across the three pilot communities. This was based on a review of activity logs, progress reports, and records of flood group activities collected by NFF staff as well as participation in project telecons.

Phase 3 explored the views of participants (members of the community, NRW staff and the NFF) on the community engagement process itself and its outputs, assessing to what extent steps had been taken towards achieving the desired outcomes.

Phase 4 The data collected in Phases 1-3 was analysed to identify common themes relevant to the evaluation, to assess how far process and outcomes objectives had been achieved and to draw out conclusions and recommendations.

1.4 Governance – steering group arrangements

The project governance arrangements were agreed so that they were proportionate for the length and scale of the pilot.

Overall management of the project was overseen by a Project Board which consisted of representatives from Natural Resources Wales (National and area staff), National Flood Forum and Welsh Local Government Association (umbrella organisation for the 22 Local Authorities in Wales). The Project Board and this project reported into the Head of Flood Risk Management and the Flood and Incident Risk Management Programme Board as one of the projects under the NRW Business Area Review (BAR) programme.

The project also reported to Welsh Government who directly funded this project

In addition to the Project Board, a project team was established. Membership of this group was expanded so that it included attendees who led on other related areas of work such as climate change, sustainable development; wider environmental engagement; Area Statements; Public Service Boards and social science and community resilience experts from The Environment Agency, NRW and CEP. Regular team meetings via telecon were held to maintain the focus of the project, provide an information exchange, gather information from NRW area staff and provide updates on the delivery aspects at local community level.

1.5 How this report is presented

The report consists of two separate elements, the work undertaken with communities by the National Flood Forum and the independent evaluation by Collingwood Environmental Planning. The National Flood Forum is responsible for the report overall. Each section has been written separately, as set out below with discussions held to ensure that the overall report is coherent:

- Chapter 1 Project Background/ Introduction- National Flood Forum
- Chapter 2 Approach National Flood Forum
- Chapter 3 National Flood Forum findings and recommendations for pilot areas
- Chapter 4– Conclusions and recommendations from the evaluation Collingwood Environmental Planning
- Annexe 1 Evaluation report Collingwood Environmental Planning
- Annexe 2 Target Area Backgrounds, Demographics and Flood Risk
- Annexe 3 Approach
- Annexe 4 National Flood Forum (NFF) and Collingwood Environmental Planning (CEP) roles
- Annexe 5 Flood Action Plan template

CHAPTER 2 – Approach

The chapter describes the key activity undertaken in each of the three locations, recorded against the engagement activity framework. A more detailed narrative for each area is provided at Annexe 3.

NRW staff from three areas, North, South East and South, put forward several proposals for pilot areas. From these three pilot areas were selected through Team Meetings and confirmed by the Project Board.

2.1 Flood Action Plans

Reference is made in the tables to "Flood Action Plans". Flood action groups wish to develop plans for all sorts of different purposes, including incidents, current issues, long term flood risk management, spatial planning, etc. The National Flood Forum holds several example templates for all of these and others, that allow communities choose the template that they feel is most useful to them. In the context of this report, Flood Action Plans are a mechanism to gather, agree and refine the issues that the community are concerned with, presenting them as a series of concise questions. The questions provide an agenda for Multi-Agency Meetings with partners, so that it is clear to all what is being discussed. They also provide a mechanism to record agreed action and where progress is being made over time. They roll forward from one meeting to the next. An example template is at Annexe 5, but note that without the process alongside it the template could easily become a barrier to progress.

The approach supports the work of partners who have important statutory and other roles. It is not a replacement.

2.2 Gelli

Engagement Objectives	Key activity
Stage 1	
Forming the group	 This project started with no available contacts, so a great deal of time was spent initially exploring the area, visiting businesses, considering contacts. Initial meetings took place with two County Borough Council councillors A venue for a meeting was selected Through a local, established mechanism, leaflets were distributed notifying people of a get together at the local church Information on flood risk was obtained through flood map analysis and local knowledge Schools were contacted An initial wider community meeting held A core group of residents was formed Gelli Flood Action Group was formed at the 2nd meeting. The meeting identified issues of concern
Communication	Between the first and second meetings the project team continued
with the wider	to develop contacts with the community
community	Between the first, second and third meetings participants from the first meeting discussed the project with the wider community

Table 3 Details of the approach used in Gelli

Articulating the flood risk issues	 At the second flood group meeting, issues of concern were identified An initial flood action plan was developed with discussion points and discussed at the third meeting
Understanding roles and responsibilities of organisations	 A third meeting Gelli Flood Action Group meeting addressed roles and responsibilities
Ability to work with partners	 The third meeting of the Gelli Flood Action Group discussed how participants would conduct themselves with partners at meetings.
Stage 2	
Multi-agency meetings	 A multi-agency meeting was held with 10 members of the Gelli Flood Action Group, along with representatives from Natural Resources Wales and Rhondda Cynon Taf Council. Welsh Water were unable to attend due to an emergency At the meeting it was agreed to undertake a joint visit with partners to better understand the issues. This is being arranged A follow up meeting of the Gelli Flood Action Group took place to go over the conversations held at the meeting to ensure an agreement as to the accuracy of the conversations held Gelli Flood Action Group subsequently met with Collingwood Environmental Planning A follow up meeting of the Gelli Food Action Group is planned after the site visit
Start to introduce and steer towards proactive work	This stage was not reached in the project
Working with the group to undertake proactive work	This stage was not reached in the project

2.3 Tremadog

Table 4 Details of the approach used in Tremadog

Engagement Objectives	Key activity
Stage 1	
Forming the group	 No contacts were available for Tremadog, so a great deal of time was spent initially exploring the area and speaking to people to find the right leads In order to inform the local councillor about the project, initial contact was made through an email to the Town and County Councillor of Porthmadog A meeting was held with three councillors and Gwynedd Council's Flood Risk Team where discussions were held about the nature of the project, the needs of the community and the use of the Welsh language. In particular there was concern to avoid giving false hope to people who had been flooded that solutions were going to be provided that removed them from flood risk and be constructed imminently

Communication	 A further meeting was held with a councillor to describe the empowerment process and the issues in the community A site visit was undertaken to gain an understand the issues and meet residents. It was clear that some residents were still traumatised following the 2015 floods and that further support will be needed following the project. A first meeting with residents was held with residents. Conversations focused on historic events and also possible solutions. Tremadog Flood Action Group was formed, with a good mix of residents, home owners, business owners and farmers
Communication with the wider community	 Well known and influential residents spread the word to other community members and local businesses affected by the floods The Flood Action Group circulated the news of the formation of the group to their community through local businesses, the supportive elected members and word of mouth. They did this to circumvent insular opinion, gather people's concerns and offer the ability to join the group if they wished to.
Articulating the flood risk issues	 3 meetings were held with Tremadog Flood Action Group to explore, understand, identify and agree the issues that the community wished to address. A Flood Action Plan was developed
Understanding roles and responsibilities of organisations	 During the 3 Tremadog Flood Action Group meetings the roles and responsibilities of the partner organisations were discussed and explored
Ability to work with partners	 During the 3 Tremadog Flood Action Group meetings, it was discussed and agreed how people would approach working with partners and what behaviours they would use
Stage 2	
Multi-agency meetings	 The Multi-Agency Meeting took place with 9 members of Tremadog Flood Action Group, the Councillor for the area, an ex-officio member for Gwyneth Council, representatives from NRW Peiriannydd Cynorthwyol Council, Highways in Gwynedd Council and Welsh Water It was agreed to hold a site visit to explore some of the issues identified. A date was being arranged at the end of the project A subsequent meeting was held the following week to go over the conversations held at the Multi-Agency meeting to ensure agreement as to the accuracy of the conversations held Following this the group had a meeting with CEP A Tremadog Flood Group meeting is planned to consider the Flood Action Plan in preparation for the next Multi-Agency meeting
Start to introduce and steer towards proactive work	This stage was not reached in the project
Working with the group to undertake proactive work	This stage was not reached in the project

2.4 Taibach

Table 5 Details of the approach used in Taibach

Engagement	Key activity
Objectives	
Stage 1	
Forming the group	 There was some initial confusion about what the purpose of the pilot was, leading to delays. This confusion remained throughout the project amongst partners and residents Initial contact with councillors did not lead to engagement with the community The issues in Taibach were explored on site and with residents, a church, historical society, business, and partners. A significant amount of time was spent trying to understand where flooding had occurred historically, what measures had been put in place and where residual risk remains Consideration was given as to whether a flood action group was the right approach in this situation, due to the deprivation present An open door event at the Church community centre was held to see if anyone would come and discuss flooding and risk, and awareness discussions held with individuals on residual risk and what that meant. See Annexe 3 for details
Communication with the wider community	 Work was done by the team to engage with the wider community through individual conversations about residual risk and what that meant, leaflet dropping to invite people to the open door event, etc. But no flood action group was in place to undertake work of this type
Articulating the flood risk issues	This stage was not reached in the project
Understanding roles and responsibilities of organisations	This stage was not reached in the project
Ability to work with partners	This stage was not reached in the project
Stage 2	
Multi-agency meetings	This stage was not reached in the project
Start to introduce and steer towards proactive work	This stage was not reached in the project
Working with the group to undertake proactive work	This stage was not reached in the project

CHAPTER 3 – National Flood Forum findings and recommendations for pilot areas

Chapter 3 contains findings from the National Flood Forum about the work in the three pilots. The findings from the evaluation being undertaken by CEP are at Annexe 1.

3.1 Enablers and blockers

Many factors affected the progress of the project. Issues that were enablers in one area were blockers in another, as outlined below. Local context affected how the project could be developed in each area. Personalities could be both supportive and get in the way. Therefore, the list of issues below should be seen as positive, neutral and negative, depending upon the context.

3.1.1 Community interest

Trauma, stress and devastation, memories of flooding, are retained in both Gelli and Tremadog. Memories in both are very strong.

Gelli flooded last in the 1970s; community interest is huge, particularly from people who experienced the floods. People were worried about what is happening now and how it will affect them. They saw changes in maintenance and neglect (from their perspective) and regarded these as risks to their wellbeing. The interest in Gelli is very large. People kept on joining the process, with 22 people participating in one meeting. In the experience of the NFF, working with Flood Action Groups across England and Wales, this is normal for a newly forming group, however, newcomers to the process are often not interested in the process itself and can disrupt the development of the flood action group. Over time, a self-selection process would normally take place leading to the creation of the cohesive group of those people who have the greatest commitment and who would form the flood action group, the "Team", who work with the rest of the community and partners. As in any other team, people in the flood action group need time to build their relationships, trust and working practices so that they can work effectively together. In Gelli the process of forming and building the team started and the people participating were increasingly those who were more committed.

In Tremadog, flooding is a much more recent experience and affects people's daily lives. They are still traumatised, and flood risk issues are very much at the forefront of their minds. Therefore, people exhibited a variety of emotions, such as anger, tearfulness, trauma and despondency, particularly where they felt that no one was listening.

3.1.2 The community as enablers and leaders

Although the short timescale of the project and the need to keep elected members informed meant that they were contacted very early in the process, it was people in the community in Gelli and Tremadog who acted as enablers and leaders. For example, when a councillor in Tremadog did not deliver an action, the affected community embraced the issue and took it forward with passion. One person took the lead and future meetings were organised very rapidly in collaboration with the NFF.

In Gelli, people were shy, lacking in confidence to actively participate in action and take the lead. It was not possible to find a chair within the community in the short time available. Normally the NFF would work with the group to develop confidence and would support a new chair to fulfil their role effectively. In this case, the Councillor was especially sympathetic and recognised that the chairing role was one of facilitating and supporting the group to make progress and so it was agreed that she should act as chair. Further work will be needed to find and develop a future chair.

3.1.3 Community cohesion

In Gelli and Tremadog there was a strong sense of community amongst the residents with many having lived there all of their lives. The interest in their area and its people that flowed from this was reflected in the positive attitude of people in the communities when they were approached.

In Taibach there was a similar situation. However, with the level of deprivation care needed to be taken in designing the type of intervention, otherwise there was a risk that any action would cause problems rather than solving them. In particular, care was needed to ensure that action taken in good faith to raise awareness didn't impact on people's mental health. Relevant questions asked:

- Is raising awareness of flood risk is always the right thing to do?
- How will it impact on the community?
- What are you expecting the community to do?
- What benefit will raising awareness bring to the community?
- What problems could it cause, such as agencies being regarded as scaremongering where risk is low?
- Where communities have other priorities, such as putting food on the table, is raising awareness of flood risk going to help them, or add to their problems?

3.1.4 Elected member attitude and enthusiasm

Normally the National Flood Forum would go directly to the community, involving elected members only as appropriate to support local residents. This applies to elected members of any sort, from Community Councillors to MEPs. The short timescale of this project and the importance of keeping elected members informed and involved meant that the NFF contacted councillors right at the beginning of the project. The attitude and enthusiasm of the local councillors varied between the areas.

In Gelli, Councillors welcomed the focus on their town and embraced the project. They were enthusiastic, and this made the-process of engaging effectively with the community smoother. The councillors shared details of their approach for contacting their constituents, which involved sending out invitations to the residents and, if the residents were interested in being contacted, they would place the invitation in their front window to draw attention to their interest. NFF contacted residents and the councillors contacted the businesses. This approach is particular to Gelli and allows people to be in contact with a range of organisations in a novel way. It allowed the NFF engagement approach to be tailored to fit in with the community's preferred approach of contact.

This process worked because people in the community were used to this approach, the councillors took a very hands-on attitude and were trusted. It also provided a quick route to contacting people who were then the enablers.

In Tremadog, councillors were more traditional in their approach to the elected member role. At the initial meeting with the local and county councillors, the NFF was met with a reluctance to become involved. Councillors expressed considerable concern that residents in the community had already been subjected to a great deal of upset and stress as a result of recent flood events. One was worried about scaring residents unnecessarily. The councillors were concerned for the wellbeing of their residents and acted as gatekeepers to the community. They were therefore very reluctant to allow the NFF any contact with the residents themselves. However, after the NFF provided an indepth explanation of their method of the project and the long-term support that the charity offers to flood risk communities, the councillors became less reluctant to help. One councillor then willingly spent several hours introducing the NFF representatives to key members of the community.

In Taibach, Councillors were confused as to what the problem was that people were trying to solve. They all felt that there was no longer a flood risk issue, or that it lay elsewhere.

3.1.5 Local knowledge

Local knowledge is a hugely valuable resource, particularly when used in combination with technical expertise and other evidence. Triangulation in this way can help to validate modelling, for example, and bring out important detail and information.

Local knowledge about previous flooding, when and where it had occurred, validated the approach that was being taken in the eyes of others in the community. There was a previous flood focused group in Gelli that fought for the flood defences and remembered the type of engagement in the past. To get attention they had been very militant. They had a huge amount of local knowledge and had to adapt to a more participative approach on this occasion.

3.1.6 Developing a detailed understanding of the community

In each of the three areas a great deal of time was spent at the beginning of the project understanding what the flood risk and social issues were, as perceived by individuals in the community and by partners, before a meeting was called. This was important in order for the meeting, and any potential flood action group, to have a focus.

In Taibach, all individuals felt that the residual risk was low, because a great deal had been done through capital works schemes and NRW's intensive management. This view was held by other organisations, such as the local authority, who therefore felt that intervention was not a priority.

In Gelli and Tremadog there was immediate interest. People were concerned about a range of flood risk issues.

3.1.7 Social Networks

Both Gelli and Tremadog had strong social networks. Consequently, the project aims were spread rapidly amongst the residents through word of mouth, resulting in considerable community interest in both areas. People in the communities took the lead in communicating that a meeting was going to be held, for example.

The key was to invest time at the initial stages to find the individuals who lay at the centre of social networks, who were interested and who were prepared to take on a leadership role.

3.1.8 Independent broker

In both Gelli and Tremadog, the role of the NFF as an independent broker enabled progress to be made where this may sometimes have been difficult in the past. People who were sceptical of government organisations may have been more open when they realised that there was not a hidden agenda. People may also have had poor experiences in the past, feeling that promises made were not being delivered, believing that they are getting mixed signals and engagement from different organisations. In Tremadog, the initial reticence of the local councillor to engage was overcome when they realised that the NFF was independent and had no hidden agenda.

The role of the independent broker can also be useful when dealing with difficult individuals, be they from the community, partners or elected members. The independent role, together with the appropriate skillsets, enables difficult conversations to be had which in other circumstances might not be appropriate.

3.1.9 Young people

Engagement with schools in the three areas was varied. Overall the short nature of the project meant that there was little time to develop relationships with the schools and to involve people in the community in the work with them. It was decided to concentrate on secondary schools where it was felt that they could better engage with the process of developing the flood groups. In Taibach the process did not reached the stage where young people would be engaged.

The school councils in two large secondary schools were approached and the project was explained to them. The response from the schools and school council representatives was very positive. The school council was made up from pupils from one of the schools; it was hoped that they would attend the multi-agency meeting and be given the opportunity to express their thoughts, concerns and vision for their community for the future. However, this did not materialise.

Previous experience elsewhere is that the critical factor in working with schools and youth groups is to find an enthusiastic person in the relevant organisation and to work with them, rather than going through the standard structure. This correlates with what is known about effective engagement of Children and Young People. Engaging them effectively takes time and energy and it shouldn't be assumed that young people will be comfortable attending a traditional group (although conversely, one shouldn't discount the fact that there may be some who will).

3.1.10 The role of partners

The pilots demonstrated a wide range of behaviours from organisations and individuals within those organisations. These directly acted as barriers or enablers.

Working with communities is an exercise in partnership working and if the principles set out at Section 1.3.1 are followed communities can be effectively supported and empowered, leading to good functioning relationships between organisations and the community. Examples of this occurred in all of the pilots, but not consistently. As is found in many places, it is reliant on individuals who are both willing and wilful, who recognise and understand the role of communities in managing flood risk and the behaviours needed by organisations to support it.

Partners can generate enthusiasm, drawing in skills and knowledge, generating volunteer activity. Or they can focus solely on their business objectives. Without realising it, partners can and often do effectively block community action, reinforcing beliefs that the organisations do not care, that however hard people in the community try nothing will ever change, stoking frustration and anger that can often appear as disinterest to those outside.

Examples of all of these behaviours were witnessed in all three pilots. On the positive side:

- People who took the time to listen actively showing that they had heard by discussing points raised thoughtfully, staying behind after the meeting to chat to people and build relationships and treating people seriously and equitably.
- People who had taken the time to prepare for the meeting, who were clear and straightforward, were honest in what they said and didn't hide behind jargon
- People who were knowledgeable about their subject, were honest about their limitations and those of the organisation and respected the knowledge and skills of others, including those from the community
- People who demonstrated that they had made an effort
- People who put the needs of people first, even where what they were able to do was limited

• People who recognised the long term value of working with communities in a supportive and enabling way.

Negative behaviours included:

- People who came with preconceived notions of what was right for the community or what they should do. This might be the organisation's plans or their own preconceptions. "They knew best"
- People who did not respect what people in the community had to say
- People who hid behind jargon in an attempt to bluff their way through, due to a lack of knowledge, technical or social skills or a lack of preparation. People were not fooled
- People who had decided that working with communities to help individuals and communities to take more control of the flood risk in their lives was not their responsibility and something they were not going to support
- People who promised things that were not delivered
- People who were clearly only interested in their businesses' agenda and were not interested in collaborating with partners or the community
- People who felt that they represented the community adequately and that there was no need to speak to people directly

Evidence from other projects (e.g. the Flood Resilience Community Pathfinders in England) shows that the process of participating in MAMs gives partners a better appreciation of the knowledge, interest and commitment of community members and results in more respectful behaviours which in turn allow constructive discussions between communities and flood risk authorities and progress in finding solutions to the problems identified.

3.2 Recommended next steps for pilot areas

The following recommendations for next steps in each of the pilot areas were developed by National Flood Forum staff involved in the project

3.2.1 Gelli

The future of the Flood Action Group in Gelli will very much rely on support and facilitation from all the organisations and individuals involved in the partnership. There is a strong chair in place who is focused and committed, and the community are on board. Time is the biggest requirement here due to the damaging legacy of past engagement. Time is needed to develop trusting relationships particularly with Natural Resources Wales. This will need patience and understanding from the flood risk authorities, where they need to be committed to helping the community understand how things are approached from their perspective, the constraints they have to work within and an introduction to the bigger picture of flood risk management, all done with a 'yes if' approach. Collective attendance at Multi-Agency Meetings is paramount to enable discussions and possibilities of innovative ways forward and to draw the community into actively participating.

Suggested ways forward;

• Focus on relationship building to start to bring about trust between the community and flood risk management organisations. Any small wins that can be achieved will help this along

- Once the group has had the opportunity to embed itself a little more into the process, suggest they hold a flood awareness day and help to make this happen (ensure that it is designed and lead by them, no logos from agencies/authorities)
- Ensure that there is an active presence at any meeting the community arrange (the quickest death to engagement is non-response from those whose job lies in risk management)
- Support the group to make it happen; This maybe through printing materials, a visible presence, talking to partners to progress things, advising positively, etc.
- Think about how the beautiful river that runs right through the residential area could be opened up as a community amenity where pride and ownership can be established. What different pots of funding might this attract? Is there a possibility regeneration funding could also tie in with achieving actions to reduce the communities risk?
- Supply rubbish bins and dog poop bins where rubbish is dumped in the river
- Invite collective engagement in litter picking and clearing of the canalised part of the river which the community are unable to access through restrictive barriers and walls.
- Allow the river to become accessible, giving opportunities to encourage organised school visits to examine the ecology as part of their curriculum. It could also be a place where leisure and awareness of the association of the river and its risk to the town can develop. The integral part the river played to the town's mining history could also be highlighted.
- Markers that the community identify could be established, with support, that show the flooding history of the area, using a variety of sources of funding, involve NGO's like the rivers or wildlife trusts
- Story sessions (positive not alarming) could be encouraged, run by the group but facilitated by risk management authorities, by the river for the younger generation to encourage lasting awareness.
- With the little time that is allocated to engagement, think about a more impactful innovative activity for the area rather than energy spent on formulating and handing out information.

These steps will strengthen both community resilience (the networks and support structures within the community) and institutional resilience (the linkages and support structures between the community and flood risk management authorities or institutions.

3.2.2 Tremadog

The future of Tremadog Flood Action Group is positive. Already there are signs of future relations between the Flood Action Group and the flood risk agencies and authorities being positive and fruitful. There is no space for complacency though; interest in forging good and productive partnership needs consistency and commitment to ensure that the community does not go back to feeling let down, contentious, and that agencies and authorities gain support, help and understanding from the community. There is plenty being proposed for the area by different agencies, so it is incredibly important to have a flood action group there to consult and work with. Tremadog relies on tourism so there are opportunities to work with the flood action group on retro SuDS that would enhance the area such as rain gardens, central road verges, etc., making good use of the square that suffers badly from flooding but also embracing opportunities to encourage tourism by creating an area that brings people together to socialise.

Suggested way forward:

- Work with the Flood Action Group at the inception of an idea proposed for the area rather than making decisions on what should be proposed, developing it and then bringing it to the community for consultation.
- Continue with the excellent communication of being honest and managing expectations, but with a positive 'want to do, yes if' approach
- Encourage and support the community to think of small innovative ideas that they could work on that would contribute to reducing the flood-risk further by complimenting the larger work proposed by the various agencies and authorities and encourage tourism
- Give time for the group to settle, feel confident and encouraged (approximately one year) and then suggest the idea of an emergency plan that they could work on with Natural Resources Wales or local authority support.
- Suggest and support a Flood Action Group initiative to create a once a year flood awareness event that they lead on.
- Look at different departments and NGO's, such as highways, wildlife trust, Flood and Coastal Erosion Committee for contributions towards retro SuDS.

3.2.3 Taibach

Taibach is an area where deprivation is evident and where people feel well protected from a future flood event. Some are aware of past events but as flooding has not been an issue for decades. There is a feeling from the few that remember these events that it would not be something that the younger generation or people moving into the area would necessarily realise or if they did, worry about. It is evident & praiseworthy how incredibly well maintained the stream is by Natural Resources Wales; there is no evidence of any litter either. In our opinion to set up a flood action group here would not be sustainable, nor would it be a situation where the group would be able get their teeth into driving anything forward. If an emergency plan was a desired outcome for the area, we would suggest that this is produced by the Community Council. To organise an event (Natural Resources Wales drop-in style) to bring about an awareness of any residual risk is likely to see very low numbers, although the National Flood Forum's presence in the area may have stimulated thinking, leading to more interest, but it is felt unlikely.

Suggested ways forward;

- Investment in setting-up a flood action group could be pursued if the risk of the ability to do so, and the future sustainability risk was felt to be worth it
- Awareness packs of information could be made-up and posted to every household. They would need to contain simple and accessible information particularly over explanations on what residual risk means and be provided in lasting durable packaging.
- A Multi-Agency meeting of leaders, emergency planners, and flood risk managers from Natural Resources Wales, county and local council, Traffic Wales, Welsh Water and any other official body in the area collectively, to draw out the risk in discussions and come up with a plan to bring about awareness for the whole area. (National Flood Forum can help advise if needed)
- Invest in visible signs that create interest in the area's historic flood risk, maybe along the Ffrwdwyllt Stream opposite Ffrwdwyllt Cottages, and on the wall at the top of West End. It may also create interest to have a gauge board that has markers that tell the height of

historic flooding in the area. (We have noted there is a gauge marker with no information on it by the bridge tunnel that goes under the road)

• Carry out a dry run flood incident exercise, to include the public, local organisations and professionals, in the area opposite St Theodores Church. This would draw attention, create interest and bring a reality to the residual risk.

CHAPTER 4 – Conclusions and recommendations from the evaluation - Collingwood Environmental Planning

4.1 Conclusions and recommendations from the evaluation

4.1.1 General

The project demonstrated that the National Flood Forum (NFF) was able to progress towards the establishment of flood action groups, with groups having had a first meeting with relevant flood risk management agencies in two out of the three pilot communities.

As expected, time was one of the biggest barriers preventing further progress towards community engagement for all three pilots. It constrained the ability to both develop each engagement step in depth (for example the NFF typically send multi-agency meeting agendas 4-6 weeks in advance, but this was not possible given the quick turnaround of time between flood group meetings and the multi-agency meeting), and constrained the ability to progress to further steps, such as engaging with the wider community, and for Taibach, progressing further than gathering community flooding issues.

The short amount of time allowed for the pilots had two major consequences for the outcomes. On the one hand, it meant neither of the two groups that formed during the project had progressed to the stage where they felt themselves able to work autonomously to take forward their work programmes. This represents a risk to the long-term sustainability of the groups. Both felt they were on the right path in terms of taking forward the actions needed, but they were still relying to some extent on NFF to structure the work. The practical experience of moving forward in the direction that has been defined will probably give group members the confidence they need to continue but some level of uncertainty remains.

Linked to this is a second consequence that was not clearly identified at the start of the project. By making completion of the process within a short timescale a factor on which the project would be evaluated (how much progress could be made within the time available), NFF had to use a more limited version of their normal process. This was recognised in Gelli, where the MAM was organised when the NFF team would have preferred to continue working to establish a core group. There is a risk that spending less time on developing the core group could have knock on effects for the group's sustainability.

In the case of Taibach, the NFF team vigorously rejected suggestions that they should continue with the steps of the community engagement process (i.e. begin initial community contacts) in the absence of clarity about the flood issues for the area among the agencies involved. While this meant that the project outcome was not achieved, it could be argued that there has been an equally important output, in the shape of conversations within and between relevant flood risk management authorities about the current state of flood risk and priorities for action. Getting this right is important as will affect the consistency and accuracy of external public messages regarding risk.

4.1.2 Conclusions in relation to the project's three intended outcomes

4.1.2.1 Communities taking action to manage flood risk:

To evaluate this outcome, and progress towards this outcome, indicators were developed for each of the steps in the NFF approach. The table below shows those steps along with the progress made for Gelli and Tremadog:

Key: Green – evidence this NFF indicator has taken place. Orange – evidence this NFF indicator is beginning to take place.

NFF	Stepped assessment indicators	Gelli	Tremadog
indicators			memadog
A group in place with a chair	Core of participants regularly attending meetings	\checkmark	\checkmark
	One or more participants taking responsibility for organisation tasks (agenda setting, chairing meetings, etc.)	\checkmark	~
	Group gives itself a name		
	Recognised group chair, lead or coordinator	\checkmark	✓
Evidence of wider community engagement by the group	Participants report on discussions of flood topics covered in previous meetings with other members of the community.		
	Participants bring to the meetings flood issues gathered from other members of the community.		
	Community engagement activities carried out by group (door knocking, distribution of information, participation in local events, etc.)		
A list of issues agreed by the group	Group discusses local flood issues	√	✓
	Group collates flood issues raised in discussion	\checkmark	✓
	A list of local flood issues agreed by the group	✓	√
Session completed with the group	Flood group meeting (internal)	~	V
Multi-agency meeting	Group plans and prepares agenda for multi-agency meeting	\checkmark	✓
	Flood group meeting with agencies with responsibilities for flooding	\checkmark	\checkmark
	Group and flood agencies establish regular liaison mechanism (meetings)	~	✓
Work programme agreed	Group develops list of possible actions.		
	Group agrees prioritised list of actions		
	Flood group has agreed work programme		
Work programme started	Flood group members participate in implementing work programme		

Section 4.2 in the Evaluation report provides more detail against each of these indicators. What is clear, however is that good progress has been made in developing capacity within these two communities to enable them to take action to manage their flood risk. Current work³ reviewing groups set up under the Defra FRCP pathfinder has found that groups using this approach, frequently do go on to develop focussed actions to manage their flood risk with adequate support

³ CECAN fellowship to investigate FRCP projects two years on led by Clare Twigger-Ross with Paula Orr (CEP) and Stacy Sharman (Defra)

and involvement. However, as noted in the discussion above, time was the biggest issue within this project, having a shorter time period over which to develop relationships may make them more fragile.

It will be noted that Taibach does not appear on this table. This is because the nature of the context in Taibach meant that a different approach was undertaken, with more time spent understanding the community, the flood risk and the objectives for NRW in that situation.

4.1.2.2 Stronger support networks and relations within the community

Less emphasis was put on this element of the engagement, probably because of the focus on the formation of a flood action group as the mechanism that will allow community engagement to continue into the future. There was some evidence of new relationships being built between people in the local area, specifically in Tremadog. This is something that could be examined at a future point.

4.1.2.3 Stronger relations between the community and the flood authorities

The holding of MAMs in two out of the three pilot communities is a really important step in establishing a new kind of relationship. In Gelli one participant who had been involved in a group that was formed after flooding in the 1980s said that relations with the authorities at that time had been 'chaotic'. This participant continued:

The MAM was different: we got round the table and they listened to us. (Gelli)

4.1.3 Conclusions related to the project process

- Each pilot has involved differing progress towards community flood risk management, for a multitude of factors unique to each location. These include, but are not limited to, the gatekeepers contacted during the engagement process, the level of local authority spending available for each location, the nature of previous flooding events, the socio-economic background of each community, the personal capacity of community members, and the institutional capacity of local agencies, authorities, and other stakeholders.
- Uncertainty of the future working relationship between communities and partners remains, although the progress has helped to develop relations and reduce community frustration around the management of local flood risk.
- The approach carried out by NFF had key characteristics which in combination contributed to the achievement of the outcomes:
 - Staff who are knowledgeable about flood risk and are able to help communities to tease out issues so that they can be presented to relevant agencies and solutions found.
 - Ability to build trust with communities, starting by identifying relevant gatekeepers and ways in to making contact with people at flood risk. This means that people are willing to come along and talk to them, even in communities where engagement with authorities on flood risk is perceived to have been unsuccessful in the past. Some of the participants in the Gelli and Tremadog focus groups spoke of their 'anger' with the flood authorities; one said that before they began to work with NFF, they didn't know how to relate to flood agencies and just shouted at them.
 - A method of quickly structuring the issues that come out of community meetings into lists of issues which can be used as a transparent 'action plan', which helps community members to identify which agencies are responsible for which issues and to record where measures have been taken.

- Keeping everyone both community members and the relevant agencies and institutions up to date with progress so that they know what is happening and what input they will need to provide.
- Ability to adapt the process to respond to situations arising in different communities and context, avoiding a rigid approach. Each pilot followed the steps of the NFF community engagement model, but the way that the steps were carried out and the amount of time spent on each, varied. This reflects the flexibility of the approach and its ability to respond to the conditions in each location. In Gelli, for example, the NFF moved almost immediately into organising and running the community group, given the support and enthusiasm of the local councillors. In Tremadog, there was a much longer process of initial contacts with community members before the first community meeting was organised.
- The engagement pilots have involved a considerable level of support from the NFF, which local authorities are unlikely to have the resources to replicate. The local community have welcomed the support and direct contact as part of the process, and so it remains uncertain to what extent the flood groups will become autonomous in the near future.

4.1.4 Summary of conclusions

- 1. The project was successful in achieving the project outcomes and showed the value of the approach, specifically in terms of **developing capacity in communities** in order for them to take action to manage their flood risk and **strengthening relations** between communities and flood authorities.
- 2. The project demonstrated how this approach, which differs from the NRW approach in its focus largely **on process** rather than outputs such as community flood plans works in practice in areas where NRW have previously found engagement difficult.
- 3. However, the focus on achieving some key outcomes (e.g. Multi Agency Meeting) in a specified, short time frame risks the sustainability of the groups established.
- 4. The project showed the vital nature of having an independent process whereby those carrying out the engagement:
 - a. Facilitate personal **Contacts** with and between members of the local communities and staff from relevant authorities
 - b. Have **Credibility** in terms of their knowledge of flood risk and are able to translate across different perspectives
 - c. Are **Committed** to a clear objective of empowering communities to engage with flood risk management
 - d. Have the **Confidence** and independence to ask difficult questions if needed
 - e. Build **Capacity** within communities to enable them to take action to manage their flood risk
 - Start by listening to and understanding Communities in terms of people/place/flood relationships and know how to build trust
 - Have a **Clearly** structured approach enabling lists of issues from community meetings to be used as a transparent 'action plan'
 - Become "trusted intermediaries", advocating on behalf of communities as well as providing a bridging role between NRW and communities, and keeping all parties regularly informed.
- 5. The project showed that understanding the different people/place/flood relationships in each community was a prerequisite for meaningful engagement to proceed.

- 6. The project suggests that the current NRW community engagement approach potentially undermines its own principles of good practice due to a focus on outputs rather than process. The pilots showed that the NRW process has aspects in common with the NFF approach, however, the past research for NRW (Twigger-Ross et al, 2016) showed the process as being largely focussed on signing up people for FWD and developing community plans, rather than on building capacity and knowledge of flood risk within local communities. Partly, a focus on specific targets e.g. numbers signed up to FWD leads to this emphasis.
- 7. The project revealed a potential lack of clarity in places as to the strategic objectives of NRW's engagement approach. Specifically, it was not entirely clear as to why Taibach was chosen as a pilot site.
- 4.1.5 Recommendations
 - 8. This approach could be **a very useful addition** and **complement** to NRW's current approach to community engagement. Specifically, we would suggest that whilst NRW staff have some of the key characteristics referred to above, they would need help from others outside of the organisation if trust in institutions and independence were a key aspect in a specific community.
 - 9. We would suggest that, as with the pilot areas, this approach is used to focus on areas that are classed by NRW as hard to connect with (which may be due to past issues, lack of community capital etc) and urgent in terms of the nature flood risk (the pilot sites were medium flood risk). This approach may also be ideal just after people have flooded
 - 10. Careful consideration should be given to **developing/reviewing the strategic objectives** for NRW engagement approach so as to be able to understand when this approach might be useful to implement, and to clarify NRW's role in local community engagement with flood risk.
 - 11. Development of a simple participatory decision tool and training to use it could facilitate consideration of appropriate engagement in terms of nature of the issue, demand from the community, nature of the community and availability of resource.
 - 12. NRW should **liaise at national and area level** with relevant Risk Management Authorities around the role and engagement of communities in flood risk management, such that economies of scale can be achieved.
 - 13. Given that understanding the people/place/flood profile of areas is shown to be an important input into the success of engagement processes, it is suggested:
 - a. that NRW flood risk management staff are made aware of the Well-Being assessments⁴ of the 19 Public Service Board areas as a basis for their understanding of local areas. This would help joining up across authorities and provide valuable contextual knowledge for NRW staff.
 - b. that NRW in partnership with other key authorities consider how they can gather local information on people/place/flood relationships in key areas of consideration.
 For example, this could be through regular liaison with key community representatives, as at present, plus wider information gathering from the community.
 - c. that all NRW engagement processes allow for **a period of listening** to community representatives and members about flood issues, to enable appropriate actions to

⁴ Well-being assessments have been carried out for all 19 PSB areas and cover a wide range of topics within the following areas: cultural, economic, environmental, and social. NRW are part of the PSBs and flooding is mentioned in the environmental well-being context. <u>http://gov.wales/topics/improvingservices/public-services-boards/?lang=en</u>

be delivered. This may mean a shift in resources to more intensive "upstream" engagement requiring specific indicators to measure progress.

- 14. In order to move the current NRW approach towards a more process focus it is suggested that:
 - a. a simple participatory decision tool could be developed, drawing and training provided to use it, to facilitate the structured consideration of the nature of the issue/s, demand from the community, the nature of the community and availability of resource when deciding on the appropriate engagement approach. This could draw on indicators identified as part of this project and tools being tested in other places.
 - b. research should be commissioned to test indicators of the **success of the process** for their applicability to the current NRW community engagement approach and for any gaps in relation to the Welsh context. The project used indicators to assess which aspects of the NFF process had been achieved and these were seen to be simple to use and useful to the NFF engagement staff; they could be adapted for use by NRW.
 - c. development of outcome and impact indicators for NRW's current engagement work should be carried out as at present the measures appear to be largely focussed on **outputs**, e.g. numbers of people signed up to FWD and number of flood resilience plans in place.
 - d. Regular discussion are held between NRW and other key Risk Management Authority partners on **what is working/not working in** relation to community engagement in flood risk management to create a learning culture within the organisation.
- The development of better processes using new tools and indicators could inform the new national strategy for flood risk management. They should be reflected in refined outcome measures for example of the number of community flood groups involved in structured engagement with flood risk management authorities and be adopted consistently by all risk management authorities.

Annexes

Annex 1 Final Evaluation Report

1. Introduction

Background

Natural Resources Wales, on behalf of the Welsh Government through an open tender, commissioned the National Flood Forum to carry out a sustainable community engagement pilot study to test an alternative engagement process that could complement and inform the way Flood Awareness Wales and other community flood engagement work could be delivered in future to increase long-term sustainability and local ownership. The objectives for the pilots⁵ were to:

- 1. Test the new Pathfinder project approach⁶ in Wales, in particular whether it can be effectively delivered within a short timescale
- 2. Provide evaluation to include (as a minimum) direct feedback from communities and individuals within the pilot areas. This needs to capture their initial perceptions of improved community resilience and must include the views of children and young people
- 3. Make recommendations on preferred approaches, comparing existing FAW approach to the Pathfinder model, and any other relevant models.
- 4. Make recommendations which can inform longer term delivery with a specific focus on which approaches would be most effective in ensuring long term sustainability.

CEP was commissioned to carry out the evaluation of the pilots. The focus has been on delivering and evaluating the process of building social and institutional capital by establishing local flood action groups Given the tight timescales (the project has lasted five months), it was not anticipated that the outcome of 'sustainable community flood groups' would be achieved for each area.⁷

Evaluation objectives

The objectives for the evaluation element were outlined at the Inception Meeting. These were to:

- Establish the extent to which the community engagement aims and objectives have been met.
- Describe how the community engagement aims and objectives have been met, identifying what change has occurred and how this has been brought about.
- Highlight underlying causes, enablers, barriers and factors that led to the results identified.
- Provide additional learning about the relevance of the approach to flood risk management and Flood Awareness Wales business challenges (e.g. increasing Flood Warning take up, understanding and action) to improve future delivery) if these aspects come up within the pilots.

To achieve these objectives, the evaluation was intended to:

 $^{^{\}scriptscriptstyle 5}$ As set out in the tender specification.

⁶ The 'Pathfinder project approach' is understood as the approach used by the National Flood Forum (NFF) in eight of the 13 projects implemented by local authorities and their partners in England between 2013-15 as part of Defra's Flood Resilience Community Pathfinder scheme http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=18744 ⁷ From the minutes of the project Inception Meeting, 18/12/2017.

- Gather direct feedback from communities and individuals within the pilot areas, including children and young people, to capture their initial perceptions of improved community resilience
- Compare existing FAW approach to the Pathfinder model, and other models if relevant, in order to make recommendations on preferred approaches, considering which approach would be most effective in ensuring long term delivery and sustainability.

The team used three broad research questions to guide the analysis of the evidence. The first question looks at the project's outcomes and the last two look at the processes followed.

Research questions

- 4. How far and in what ways has community flood resilience been increased?
- 5. How effectively and in what ways did the pilot approach enable communities to take ownership of and improve local flood resilience within a short timescale?
- 6. What factors facilitate or act as barriers to community engagement?

A challenge for the outcome assessment was to identify outcomes that could be expected to be achieved within the short project timescale, recognising that community engagement is affected by many factors that are outside the control of those leading the project, including pre-existing community characteristics such as physical (geographical), social, institutional and economic characteristics as well as events or developments. To address this challenge, intermediate outcomes were identified which could be expected to be achieved or progressed within the project timescale. This is explored below.

Structure of the report

This Final Evaluation Report covers the four-phase evaluation process, as described in Table 1 below. The period covered is from the beginning of the project (2nd November 2017) until the end of April 2018. Table 1 also details the methods and tools used to inform the evaluation, indicating their appendix reference.

Phase	Description	Methods and tools
Phase 1	Establish the baseline	 Desk-based data collection on communities / locations. Baseline interviews with NRW staff and NFF engagement coordinator (please see appendix A.1 for interview schedule).
Phase 2	Record pilot activities	 Log of activities (please see appendix A.2 for log template sheet). Progress reports (telecons and written reports) Records of activities e.g. note of discussion of local flood issues for Flood Action Group development of a local Flood Plan.
Phase 3	Review of pilot results	 Direct observation of multi-agency meetings. Analysis indirectly through interviews with the NFF. (Please see appendix A.3 for interview schedule). Focus group with FAG participants (please see appendix A.4 for focus group schedule). End of pilot interviews with NRW staff and with NFF engagement coordinator (please see appendix A.5 for interview schedule).

Table 1 Phases and methods for the evaluation

emergent themes (inductive • Evaluation against stepped	om different data sources to elevant to the evaluation. ng analysis of data according to e analysis). outcomes for the pilots, as set ework (please see appendix A.6
--	---

Phase 1 established the baseline by describing relevant characteristics of the three selected communities and establishing what previous experience there has been of engaging these communities around the risk of flooding. The baseline also describes Natural Resources Wales (NRW) staff's perspectives on and interests in the pilot and its outcomes and any likely enablers or barriers they identified. The evidence for the baseline was drawn from desk research on the characteristics of the three communities, an interview with a representative from the National Flood Forum (NFF) and interviews with one member of NRW in each of the area offices.

Phase 2 involved monitoring the pilot activities in order to begin to tease out how much time and what activities were needed for each step in the community engagement process and to establish similarities and differences across the three pilot communities. This was based on a review of activity logs, progress reports, and records of flood group activities collected by NFF staff.

Phase 3 explored the views of participants (members of the community, NRW staff and the NFF) on the community engagement process itself and its outputs, assessing to what extent steps are being taken towards achieving the desired outcomes.

Phase 4 The data collected in Phases 1-3 was analysed to identify common themes relevant to the evaluation, to assess how far process and outcomes objectives had been achieved and to draw out conclusions and recommendations.

2. Phase One of the evaluation – Baseline

2.1 Background to the location of the community pilots

Three communities in Wales were selected as pilots by NRW. The criteria for the selection of these communities were defined in the tender specification (p.10) as:

• Areas that are known to be challenging (medium levels of flood risk, no or low public awareness of flood risk or high levels of apathy to the risk)

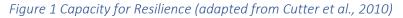
Medium level of flood risk is defined by NRW as "an area that has a chance of flooding of between 1 in 100 (1%) and 1 in 30 (3.3%) each year" (Natural Resources Wales, 2018a, p1).

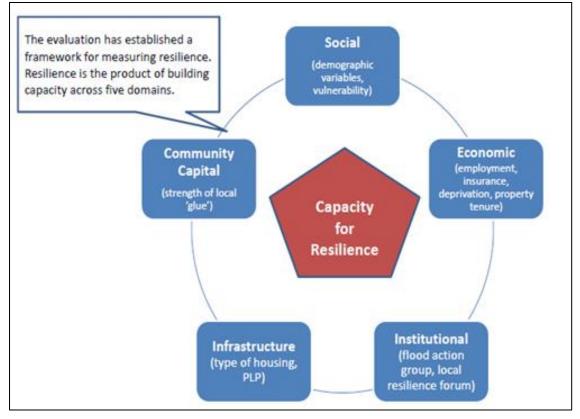
Each of the pilot communities is in a different NRW area, in order to provide a representative sample across NRW's three areas.

The evaluation has looked at the level of **community resilience** in each of the areas. The following definition of community resilience has been used for this project:

Communities working with local resources (information, social capital, economic development, and community competence) in partnership (Natural Resources Wales, water companies, local councils, highways, and county councils) to reduce their flood risk in ways that sustain an acceptable level of community functioning.

The evaluation has selected demographic data that is a good indicator of different elements of community resilience, in order to establish a community baseline in each of the 3 pilot areas. Figure 1 below demonstrates the constituents of community resilience. The discussion of 5 elements of community resilience capital (social resilience, economic resilience, infrastructure resilience, institutional resilience and community capital) and the indicators used to assess the levels of each type of capital is in the *Flood Resilience Community Pathfinder Evaluation Report* (Twigger-Ross et al., 2015). Figure 1 below (Cutter et al., 2010) reveals the 5 constituents of resilience.





2.2 South-East Pilot: Gelli

Background (from baseline interviews and end of pilot interviews)

Interviews with NRW staff describe Gelli as an average valleys town, typical of other valley towns in the area of South East Wales. Gelli is susceptible to flooding due to its low-lying geomorphology, and experienced significant flooding in 1979, with many residents still conscious of its impact and current flood risk. The two principles types of flood risk are fluvial and pluvial (as seen in table 8), with the river Rhondda running through the centre of the town. Focus groups with the flood action group revealed there is a history of activism in Gelli around flood risk, during the floods of 1979. Present activism in Gelli is focused on general community matters through the Police Action Committee, of which all of the focus group attendees were members of, showing a degree of social capital within the area.

As seen from the Welsh Index of Multiple Deprivation score in Table 6, Gelli is in the top 30% most deprived areas across Wales. Employment rates are below average, and interviews with the NFF revealed that many young people who leave school for University do not return to the community. The council borough of Rhondda Cynon Taff, of which Gelli is a part of, is ranked in the top 25 of areas most flood vulnerable, in a recent study on social flood risk vulnerability (Sayers et al., 2017). The study combines metrics on social vulnerability to flooding (social, personal and environmental attributes such as age, gender, quality of housing, inequality) with physical exposure to flooding to produce a flood disadvantage metric. Note that the Social Flood Risk Index (SFRI) is the metric for flood disadvantage, not the metric for social vulnerability to flooding, which is the Neighbourhood Flood Vulnerability Index (NFVI). The SFRI metric combines the social vulnerability metric with risk of two main types of flooding (fluvial and coastal). All figures in Table 7 below are the ranking for the local authority of Rhondda Cynon Taff. Ranking is based on the total council areas in Scotland (391), District Council Areas in Northern Ireland (26), and Unitary Authorities in England and Wales (123 and 22, respectively). The total ranking is 562, with a rank of 1 indicating the most vulnerable local authority.

Table 2. Demographics (StatsWales, 2015)

Local area	Total population	Ages 0 to 15	Ages 16 to 64	Ages 65 and over
Ystrad 2 (Gelli)	1,581	289	1,012	280
		18%	64%	18%

Table 3. Proportion of Welsh speakers (StatsWales, 2011)

County boro	ugh	Able to speak Welsh	Not able to speak Welsh	Percentage able to speak Welsh
Rhondda, Taff	Cynon,	27,779	197,776	12.3
Wales (all)		562,016	2,393,825	19%

Table 4. Car ownership (RAC Foundation, 2012)

County borough	% of households with car/van (2011)	% change since 2001
Rhondda, Cynon, Taff	73	+ 6.6
Wales (all)	78	+ 4.4

Table 5. Voter turnout (Wales Online, 2017)

Constituency	Turnout (%)
Rhondda	65.2% (up from 61%)
Wales (all)	68.4

Table 6. Index of Multiple Deprivation (Welsh Government, 2018)

This table shows the rank of Lower-layer Super Output Area (LSOA), where 1 is the Most Deprived LSOA, and 1909 is the Least Deprived LSOA in Wales

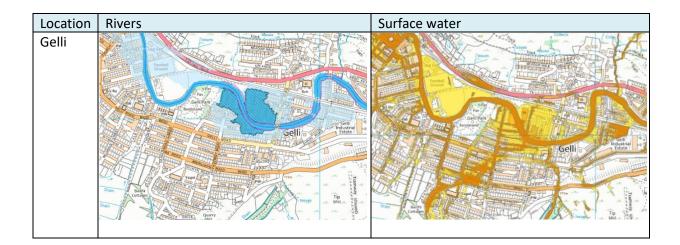
LSOA	WIMD	Income	Jobs	Health	Education	Access	Community	Physical	Housing
name	2014					to	safety	environment	
	(r)					services			
Ystrad 2	547	529	494	417	677	1105	865	594	426

Local autho		Social flood risk index (SFRI) (r)	Floodplain population (r)	Expected annual probability of flooding (r)	Number of people exposed to frequent flooding (r)	Expected annual damages	Relative economic pain	Neighbourhood flood vulnerability index
Rhon Cyno	dda n Taff	25	37	17	25	58	147	14

Table 7. Flood vulnerability, risk and disadvantage (Sayers et al., 2017)

Table 8. Types of flood risk (Natural Resources Wales, 2018b)

The NRW flood maps as shown in table 8 below classify the flood risk from rivers as 'medium' in some areas immediately located next to the river Rhondda, with areas not directly next to the river identified as 'low risk'. Gelli has flood defences in place along the stretch of the river Rhondda that runs through the centre of the town. The pattern of flood risk is the same for surface water flooding, predominantly low risk with pockets of medium risk flood areas adjacent to the river.



2.3 North Pilot: Tremadog

Background (from baseline interviews and focus groups with the community flood action group)

Tremadog a north-west Wales town, with a high proportion of welsh-speakers (65%, see Table 10). Interviews with NRW staff reveal there is a large working class population, with strong community ties and lower than average socio-economic status when compared to other areas of Wales. A key input to the economy is tourism, with many visitors to the area supporting local businesses that are integral to the economy of the town. Tremadog has a good number of local amenities for its size, with a local hospital, primary school and sheltered housing association. The latter is particularly vulnerable to flooding.

The town has a relatively high elderly population (29% of residents aged 65 and over, Table 9) as opposed to 20% nationally (StatsWales, 2015) and 18% (Table 2) and 19% (Table 15) in Gelli and Taibach, respectively. This has implications for community vulnerability to flooding. The flood action group recalled of three major floods in the last 30 years, with the town recently flooded in 2015. Focus group discussions reveal many members of the community flood action group had direct

experience of its impacts. After the 2015 floods, the council contacted the local community and held meetings about the flooding experience.

Table 9. Demographics (StatsWales, 2015)

Local area	Total population	Ages 0 to 15	Ages 16 to 64	Ages 65 and over
Porthmadog	1,268	182	722	364
Tremadog		14%	57%	29%

Table 10. Proportion of welsh speakers (StatsWales, 2011)

County borough	Able to speak Welsh	Not able to speak Welsh	Percentage able to speak Welsh
Gwynedd	77,000	40,789	65.4
Wales (all)	562,016	2,393,825	19%

Table 11. Car ownership (RAC Foundation, 2012)

County borough	% of households with car/van (2011)	% change since 2001
Gwynedd	78.6	+ 3.3
Wales (all)	78	+ 4.4

Table 12.Voter turnout (Wales Online, 2017)

Constituency	Turnout (%)
Dwyfor Meirionnydd	67.89% (up from 65.1%)
Wales (all)	68.4

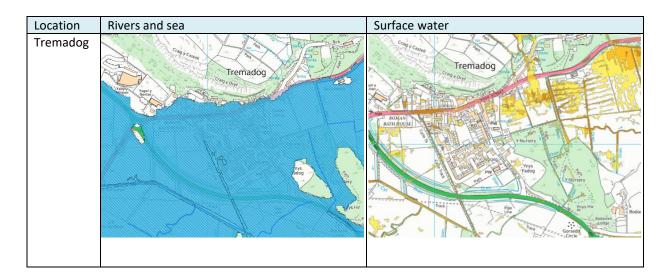
Table 13. Index of multiple deprivation (Welsh Government, 2018)

Rank of Lower-layer Super Output Area (LSOA), where 1 is the Most Deprived LSOA, and 1909 is the Least Deprived LSOA in Wales.

LSOA name	WIMD 2014 (r)	Income	Jobs	Health	Education	Access to services	safety	Physical setting	Housing
Porthmadog – Tremadog	1033	1160	1322	1575	1107	94	914	775	908

Table 14. Types of flood risk (Natural Resources Wales, 2018b)

As confirmed with interviews with local NRW staff, pluvial and fluvial flood risks typically cause the most flooding issues in the area. The NRW flood maps, as shown in table 14 below, classify the risk of flooding from rivers and sea as 'low' in the centre of Tremadog. Areas further out that border Tremadog are classified as 'high' risk. For surface water, the risk is classified as 'low'.



2.4 South-West Pilot: Taibach

Background (from baseline interviews and end of pilot interviews)

Taibach is a town at the bottom of the Port Talbot catchment area and valley area, before the river Afan meets the sea of Swansea Bay. It is a valley area and suburban part of Port Talbot. The town has had recent experience of surface water flooding in August 2011 and 2013, with a flood several years ago causing the gardens of some residential properties to be affected. However, major flooding is reported to not have occurred for several decades, since a flooding in the centre of the town from river Afan in March 1972. Flood alleviation walls on the river Afan has since been built, which is seen by some community members as sufficient to protect against future major flood incidents. The town is generally at medium risk of flooding from fluvial flooding, with some areas at high risk (see table 20).

The town is a low socio-economic community, with a high proportion of social housing. The town has a higher level of social and ethnic diversity than some areas of North Wales such as Tremadog that are typically welsh-speaking and white British. It was observed by the NFF that there seemed to be more obvious evidence of social deprivation in Taibach than in Gelli which has a similar IMD score. There is a higher proportion of manufacturing jobs than other areas of Wales.

Tuble 19. Demographics (Stats Wales, 2019)							
Local authority	Total population	Ages 0 to 15	Ages 16 to 64	Ages 65 and over			
Taibach (average of	1,644	294	1034	316			
all the wards)		18%	63%	19%			

Table 15. Demographics (StatsWales, 2015)

Tuble 10. Troportion of Weish speakers (Statswales, 2011)								
County borough	Able to speak Welsh	Not able to speak	Percentage able to					
		Welsh	speak Welsh					
Neath Port Talbot	20,698	114,580	15.3%					
Wales (all)	562,016	2,393,825	19%					

Table 16. Proportion of Welsh speakers (StatsWales, 2011)

Table 17. Car ownership (RAC Foundation, 2012)

County borough	% of households with car/van (2011)	% change since 2001
Neath Port Talbot	74.5	+ 6.8
Wales (all)	78	+ 4.4

Table 18. Voter turnout (Wales Online, 2017)

Constituency	Turnout (%)
Aberavon	66.7% (up from 63.3%)
Wales (all)	68.4

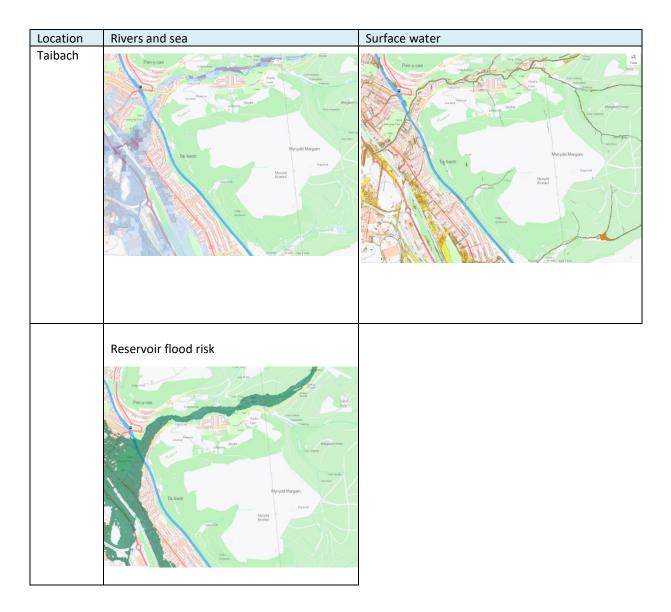
Table 19. Index of multiple deprivation (Welsh Government, 2018)

The pilot engagement work is being focused in one area of Taibach (numbered 'Taibach 2') and Rank of Lower-layer Super Output Area (LSOA), where 1 is the Most Deprived LSOA, and 1909 is the Least Deprived LSOA in Wales. As can be seen from tables 6, 13, and 19, Gelli and Taibach are more socioeconomically vulnerable areas than Tremadog, with higher than average levels of deprivation. Where Gelli is additionally vulnerable is in the context of flooding, with social vulnerability to flooding score (as seen in table 7) that is in the top 25 of all UK local authorities.

LSOA name	WIMD 2014 (r)	Income	Jobs	Health	Education	Access to services	safety	Physical setting	Housing
Taibach 2	361	377	450	241	573	1238	311	30	940
Port Talbot 4	680	872	753	268	1242	1786	695	62	556

Table 20. Types of flood risk (Natural Resources Wales, 2018b)

The NRW flood maps shown below in table 20 classify the risk of flooding from rivers and sea in Taibach as generally 'medium risk' with pockets of 'high risk' areas within the centre of the town. There is a low risk of surface water flooding. The map of reservoir flood risk shows the extent of land that could be susceptible to flooding, if flooding defences failed, although NRW classify this as 'extremely unlikely'. As confirmed with interviews with local NRW staff, the greatest flooding risks are fluvial and pluvial, because of the gradient across the town and the fact that Taibach is located within a basin. If flooding occurs, the breaching of upstream watercourses is a risk.



2.5 Natural Resources Wales' (NRW) approach to community engagement

The aim of engagement work

From the work carried out in the *Flood Awareness Wales Community Engagement Review* (Twigger-Ross et al., 2016) there are several overarching goals for the NRW community engagement work:

- Increasing flood awareness within communities
- Developing an independent community flood plan⁸
- Increasing sign-up to NRW's flood warning service

These aims were confirmed during interviews with NRW staff for this project. Awareness-raising was presented as a key goal by all NRW interviewees, because there is hesitation by communities that flood risk management is their responsibility and not the role of the government. Awareness-raising can thus help demonstrate the need for communities to take ownership of flood risk management

⁸ Interviews revealed that NRW refers to 'Community Flood Plans', rather than 'Flood Action Plans' as described by the NFF. Flood plans developed by NRW typically take the form of incident plans to manage community flood response.

themselves. The two facets of the goal of awareness-raising are; 1) making people aware of their flood risk and encouraging them to be more prepared (for example, by signing up for flood warnings), and 2) making people aware of their own responsibility for protecting themselves, emphasising the need for communities to take responsibility.

The physical presence of NRW carrying out statutory responsibilities (e.g. maintaining physical flood defences such as flood alleviation walls) were considered by two interviewees to be potentially detrimental to community engagement. This is because it i) could encourage communities to blame NRW for previous flooding if they are seen as being responsible for protecting the community from flooding and ii) hides the residual risk of flooding (because physical flood defence measures are themselves not 100% flood-proof). Although some interviewees did not sit within the maintenance work team in NRW, the organisation's statutory responsibilities include maintaining flood defences, such as the tidal defence system in Porthmadog which has some effect in Tremadog.

Ways of making contact with local communities

For one interviewee, community and town councils are seen as a favourable route to community engagement, for the following reasons; they are established, are vested with responsibility for community matters, are able to obtain information, are able to network with the community and often members will put themselves forward as volunteer flood wardens. The interviewee also felt that engagement was more likely to succeed as the community council were seen as a local voice, coming from the community itself, whereas NRW was sometimes seen as external to the community.

However, another interviewee felt that there are issues of sustainability with an approach through community councils, as members are typically of an older generation, thus if community members choose to later step down there is a loss of social community networks for NRW. Another issue could be that community council members don't recognise the need for engagement around flooding if they don't live locally and haven't experienced flooding themselves.

NRW approach towards community flood plans

As explored in the Flood Awareness Wales Community Engagement Review, flood plans were seen by NRW staff as 'live' documents which help to formalise networks, relationships and actions that will be carried out in the event of a flood, with the ultimate aim to raise awareness and change behaviours in relation to flood risk.

There is no pre-existing community flood plan at present in the North and South-East pilot locations, (Tremadog and Gelli, respectively). A community flood plan had been developed in Taibach in the South-West, but it was on a small scale covering 8 residential properties. The reason for success in developing community flood plans was presented as the result of individuals being engaged and prepared to act on behalf of others in their community.

"Getting that group set up where they want to make a difference really pushes that. Without community support there's nothing you can do really"

However this was felt to be asking a lot of local people:

"(it's) a big ask to take that on for the community. To assume people want to help out is a silly assumption"

For one interviewee, community flood plans were seen as a point of contact for two-way communication between NRW and the local community. This mirrors the NFF community engagement approach, which emphasises relationships and understandings between NRW and the

local community. This is felt to be an asset in future instances of flooding, in developing future flood data rather than relying on news reports or hearsay, and in undertaking future annual flood risk maintenance works. Therefore the value of a community flood plan, asides from flood risk management, was presented by the interviewee as enabling communication and dialogue for the future.

Further to this, all interviewees felt community flood plans are not an end in itself to community engagement, as the presence of a plan does not necessarily lead to a change in community resilience. Rather, community flood plans are the means to building community resilience, which is the ultimate goal of engagement work. This is consistent with the NFF engagement approach and principles. For one interviewee, the success of any community flood plans in their NRW region beyond the pilot location had been demonstrated where they had been tested during past flood events. For another interviewee it was stressed that being equipped with information and being aware of flood risk is integral to building resilience, alongside any community flood plan.

Change in approach

Figure 2 shows a simplified flow chart of NRW's community engagement process, as described in the Flood Awareness Wales Community Engagement Review (Twigger-Ross et al., 2016).

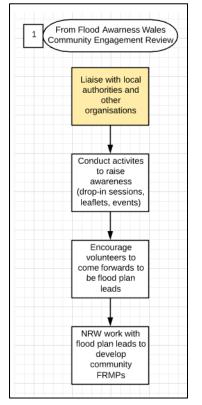


Figure 2. NRW engagement approach

Figure 2. Simplified flow chart of typical NRW engagement approach as described in the Flood Awareness Wales Community Engagement Review (Twigger-Ross et al., 2016). Note this diagram is not exhaustive.

NRW Interviewees did not mention partnership working beyond attending meetings with the local police, or approaching community councils or the local authority. The NRW route to community engagement within each sub-region was found to be slightly different from the Flood Awareness Wales process as seen in Figure 2 above:

• NRW North approach: Contact community and town councils (to gauge community interest)

• NRW South-East typical approach: Contact local community by door-knocking (to gauge community interest and understanding of flood risk)

• NRW South-West typical approach: Contact local authorities (to gauge community interest) A theme across interviews with NRW staff is that funding, resources, and governance for flood risk management are very changeable. For example, when NRW was previously part of the Environment Agency, there was an annual national flood campaign where properties at risk of flooding were contacted. After the separation of NRW from the Environment Agency this annual campaign was discontinued. Interviewees spoke of having fewer resources available for their engagement work as a result of changes to public sector budgets. One interviewee suggested that the engagement approach used was tried and tested and had been found to work relatively well, so there was little incentive to change it, especially in a context of limited resources.

NRW's approach to community engagement in each area has evolved in response to past experience. In North Wales, the approach of contacting community councils as a route in to community engagement has been retained, as it has worked well in the past. By contrast, the South-West region dropped the approach of contacting community councils three to four years ago. It is now typical for the community to be contacted directly through approaches such as door-knocking, as from experience this results in greater engagement success. It is interesting to understand what was considered to be success from the perspective of the NRW staff. The interviews revealed that there are no formal indicators or definition of what constitutes an 'unsuccessful' engagement. Successful engagement is seen in part as reaching as many community members as possible, as reflected in NRW's annual reporting targets.

Heterogeneity of approach within each NRW sub-region

As described in the *Community Engagement Review*, approaches to engagement vary widely depending on local context, and this was apparent within the interviews. And so while the purpose of initial engagement (to raise awareness of flood risk and gauge community interest) was the same across regions, the choice of who is initially approached differed. This may reflect the fact that choosing the route in to community engagement is the most context specific aspect of the overall approach. For example, one interviewee felt that communities in the South can be more diverse than communities in the North:

"Engagement with South Wales has been more varied because it is more heterogeneous in that there are communities within communities down there, different ethnic groups for example – whereas we don't have that to the same extent up here".

In the North sub-region, there used to be a focus on approaching communities by door-knocking, and this had been tried in Tremadog (North pilot) in 2011, but this approach has since changed to a more community-based approach by going through community and town councils. In direct contrast, the South-West region described stopping their approach of contacting community councils to instead door-knock and contact communities directly. Whereas the North interviewee revealed door-knocking achieved lower engagement than contacting community councils, the South-West interviewee revealed the opposite. The South-West interviewee also mentioned that NRW staffs are sometimes approached by local communities themselves. The interviewee for the South-East region described the initial route in to communities as through local authorities, rather than community and town councils.

All interviews revealed the areas have had difficulty in each pilot location in engaging with the local community. In Gelli (South-East pilot), there was very little community interest when approached by NRW in 2012, with one or two attendees at meetings and drop-in sessions. Previous engagement in

Taibach was mixed, with successful engagement and a small-scale community flood plan developed in one place, while there was no luck with engagement a few streets away. For Tremadog, there had been previous attempts to set up a flood action group, but these had not materialised. All interviewees stressed that the approach, and success, differs post-flooding where there is a higher level of community interest.

Hopes for the pilot - rationale of pilot studies

NRW interviewees understood the following as the rationale for the pilots:

- Testing an engagement process in medium-risk areas that could provide lessons for future approaches to community engagement.
- To engage in an area where previous engagement work had been attempted (the aim of which varied by area; for example, to set up a flood warden group, or to encourage more residents to sign up to NRW's flood warning service) but had not been fully successful.

Interviews revealed that NRW staff do not have formal indicators for what is considered a 'successful' engagement, but that they do have financial year reporting targets in terms of the number of individuals engaged with during the year.

The NRW interviewees' expectations of the pilots were:

- To learn from a different method of working, from an independent, outside organisation. Interviewees expressed they would like to see a new and novel approach to engagement that they could try in their own work.
- To achieve better engagement and to generally increase resilience and awareness in the pilot locations. Interviewees felt that, however far the community engagement progresses in the pilot locations, it would demonstrate an approach that is successful or not so successful, which NRW can consider for future engagement work. Aside from showcasing different methods of working, interviewees hoped the pilots would progress towards the creation of flood action groups and establish a basis of community flood plans.

One interviewees' understanding of the objectives of the pilot changed as the project progressed. They considered that the engagement approach tested by the NFF was similar to the NRW's approach in that area (that is, beginning the engagement process by contacting community councillors) and so that it does not necessarily demonstrate a different method of engagement.

Challenges of the pilot studies

Interviewees commonly recognised time as the biggest risk in preventing the pilot from achieving its aims within a timescale of five months. One interviewee felt a risk with a pilot of that duration is that the pilot might not get further than having meetings with the community council, as this process can be quite lengthy. Another interviewee expressed concern about engagement through community and town councils, as with a large community reach, the message of flood risk about the pilot location could be diluted and unsuccessful.

3. Phase Two of the evaluation - The engagement process

3.1 Record of pilot activities

The information in this section comes from the analysis of activity logs kept by the NFF staff. The logs capture the kinds of work being done by the NFF team up until mid-April 2018.

In the logs, the types of activity were described by NFF staff (field workers and back office staff) in their own terms. These types of activity were analysed in relation to the NFF's standard methodology (see section 1.3 of the Final Project Report). This resulted in the definition of five principal types of activity, as follows:

Researching community: understanding the local history of flooding and current flood risk, characteristics of the community (socio-economic characteristics, community cohesion, etc.) and relations with local institutions.

Contacting gatekeepers: email, telephone and face-to-face contact with individuals and organisations that can provide trusted links with people who have experienced flooding. These gatekeepers differ from one place to another and finding the right people is part of the process.

Initial contact with community: working at grassroots with people who have been affected by flooding or are at risk and engaging behind the scenes to identify and contact key individuals, those with concerns and people who are potential leaders.

Organising and running community meetings: this covers the process of developing a group, from the first meeting of interested individuals through a series of meetings to collect key issues and the organisation of a meeting with relevant flood risk management organisations (multi-agency meeting).

Working with agencies: liaison, further meetings and site inspections between the flood action group and local flood risk management agencies and authorities.

Figures 3-5 display the different aspects of community engagement in each pilot location, and when they took place. Of importance to note is that the following Gantt charts reveal the timeline of pilot activities, but do not include the time spent by the NFF travelling to each pilot locations (on average a few hours per meeting). Therefore, the engagement process involved some additional time inputs by the NFF that are not captured by the Gantt charts below.

From the activity logs it is estimated the two NFF project officers directly liaising with the pilot communities spent 188.5 and 317.5 hours each on the project over the time period. Additionally, two other project staff spent 32 and 45 hours each, on administrative and strategic support, respectively. This gives a total of 583 hours over the whole project. These are likely to be underestimates, as there may be a few activities (such as phone calls) that were not documented.



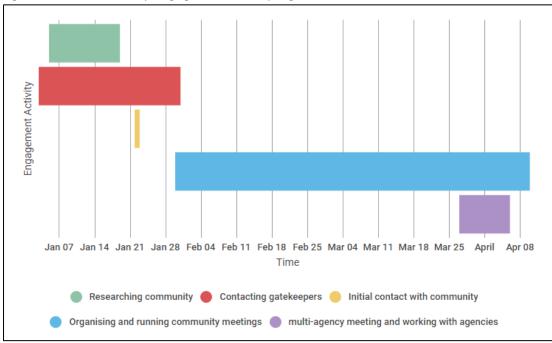
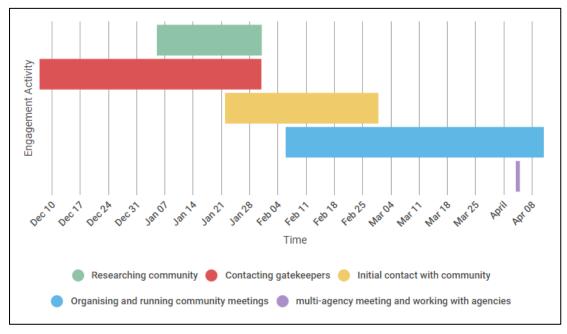
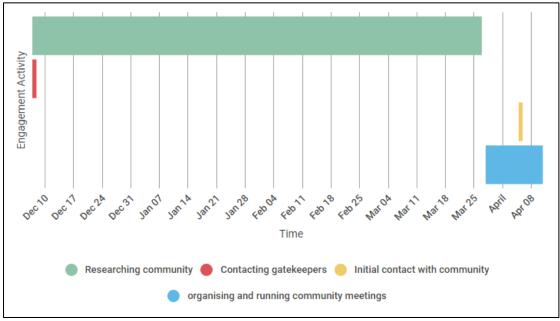


Figure 4. Tremadog community engagement activity log







3.2 Analysis of community engagement timelines

Researching community and contact with gatekeepers: In both Gelli and Tremadog, the process of researching the community took about one month and happened in parallel with the development of contacts with gatekeepers. In the case of Taibach, the need to clarify the nature and level of flood risk in the area and the objectives of engagement meant that community engagement work for this pilot location was delayed. This is reflected in the Gantt chart in terms of the extended length of time researching the community in Taibach (over a four month period). For further analysis on this, please see section 4.1 (Process Evaluation – Inputs).

Contacting gatekeepers: The Tremadog engagement process involved a longer process of contacting gatekeepers (roughly two months) than in Gelli (roughly one month). This was attributed by interviews to the councillors (gatekeepers) in Gelli being more proactive in support of the pilot from the outset, whereas in Tremadog there was apprehension as to whether the pilot might raise expectations. Further discussion of this can be found in Section 4.1 (Process evaluation – inputs).

Initial contact with community: The amount of time spent on initial contact with members of the community before the first meeting is held depends on a number of factors, including the level of proactive support from gatekeepers and whether the community is used to working in groups and organisations. The support of local Councillors in Gelli meant that a community meeting was organised very quickly, whereas in Tremadog the NFF team spent time talking to community members individually before moving on to a community meeting. In Taibach, because of the delay in defining the flood risk situation and the objectives of the engagement, NFF held an open session to gain feedback from the community on their own stories of flood risk and any concerns or interest they had in this topic. This was an informal drop-in style event so different from the community meetings in the other pilot locations.

Organising and running community meetings: There were five recorded meetings with the flood action group in Gelli and three recorded meetings in Tremadog.

For Taibach, Figure 5 reveals that 'organising and running community meetings' is reported to occur before 'initial contact with community'. This chronology is because the community meetings were different in Taibach than in Gelli and Tremadog. The community meeting held in Taibach was an informal drop-in style event, in response to leaflet distributed by the NFF.

Working with agencies: There is evidence from the pilot activity logs and focus groups that further meetings and site inspections between the flood action group and local agencies, authorities and stakeholders are in progress in both Gelli and Tremadog.

Project group meetings and project governance

In addition to the activity logs, insight into the project was provided through regular telecons with project stakeholders and coordination between the evaluation team and the NFF team. The former provided information on the project activities and governance arrangements, while the latter provided information for the evaluation and also allowed feedback to the NFF from the evaluation team.

It was felt important to evaluate the governance arrangements of the project. These are principally a project board and a project steering group. The project steering group is comprised of a large number of stakeholders. The benefits of this are that many relevant stakeholders are aware of the community engagement pilots in Wales and that it aids a transparent project process. The challenges of having a large steering group are that it is less straightforward for project decisions to get resolved. It was not clear how much power and influence the steering group had and it gave less of a steer on the project. The steering group would also have benefited from clearer terms of reference from the project board, for example, on the criteria for selecting pilot locations. This might have helped to clear up the uncertainty about why Taibach had been chosen as a pilot and the resulting delay in this pilot location.

4. Phase Three of the evaluation – analysis and conclusions

As set out in the Evaluation Framework agreed with NRW, because of the short timescale of the project, this evaluation report provides both a process evaluation (to determine whether project activities have been implemented as intended and how well the process has worked) and an outcome or effectiveness evaluation (to assess the progress towards the outcomes or outcome objectives to be achieved).

4.1 Process evaluation

The focus of the process evaluation is on the way that the community engagement has been carried out and whether this implementation has been as intended. It analyses the extent to which the causal relationship between the project inputs, activities and outputs that is described in the logic model has been demonstrated to exist in practice. That is, that the extent to which the right inputs were used to carry out the activities and that these in turn which result in the project producing the desired outputs. Figures 6 and 7 below details this project's theory of change. The following sections

will review each stage of this project's logic model, as outlined in steps in the theory of change below.

Figure 6. Theory of change – inputs leading to activities leading to outputs



Figure 7 Theory of change – outputs leading to anticipated outcomes and impacts

Outputs

- •Community Flood Action Group
- List of local flood issues
- Agreed rolling flood action plan
- Meeting betwen FAG and flood management agencies

Outcomes

 Community taking action to manage flood risk
 Stronger support networks and relations within community
 Stronger relations between community and flood authoritiesand

Impacts

- •Community members empowered to manage flood risk
- •Greater community flood resilience
- •Reduced damage from flooding

While the long-term impact of greater community resilience to flooding could be expected to result in wider wellbeing and greater capacity for recovery from flood events, there is not enough evidence to describe the linkages between resilience to flooding and either wellbeing or recovery outcomes, much less to identify indicators for measuring this capacity. These are topics that could be explored in future research.

Inputs

This section looks at whether all the inputs shown in the logic model were used and how; and whether any additional inputs were required.

NFF community engagement model and staff experience

End of pilot interviews with the NFF revealed that the NFF utilised their standard process of engagement in Tremadog and Gelli, and this did not change throughout the process. However, each pilot had a unique evaluation of their flood risk and capacities, and this informed how the NFF planned their engagement in both locations. The NFF staff bring considerable experience in engaging with flood risk communities, with a team of staff both on the ground directly engaging with communities, and also working remotely at the NFF's office to coordinate flood meetings and the administration of each pilot. This was instrumental to the communication between the flood action group and local authorities, agencies and other community flood risk partners. The short timescales of the pilot meant that there was a high intensity of working on the engagement pilots, and this contributed to the level of engagement outputs observed.

In Taibach, the NFF spent most of the pilot doing research in order to understand the local flood risk issues and the purpose of setting up a flood group, given that local stakeholders and community members generally agreed that measures to address the flood risk had been successful and it was not clear what could be achieved by community action. NFF were not willing to start contacting the community until they had clarity on these points to avoid creating confusion which might reduce trust in the process and make future work more difficult. By the end of the pilot period, NFF had enough information to be able to hold a different type of local event, to discuss local flood risk and provide information for people to sign up to flood warnings. NFF fed back information from the meeting to NRW, so that NRW can take any further action needed. NFF did not consider it appropriate to try to set up a flood action group in Taibach (which was the focus in the Tremadog and Gelli pilots).

The NFF's experience of working with communities at risk of flooding and their skills in quickly building trust and enabling members of the community to identify the issues of importance to them were fundamental to the successes in Gelli and Tremadog. In the focus groups with these communities, participants talked about a number of aspects of NFF support that had been important for them:

- They organised the meetings
- They had contacts
- The agencies wouldn't have responded without them
- They've built the work in a short time
- They have been clear and coherent
- They are knowledgeable

(Focus group)

W1 I've never known who to talk to. You never get a response. This is the first time in history that we have had a response. It's about NFF's knowledge of the situation, understanding of flooding and knowledge of who to contact. (Focus group)

In the case of Taibach, the NFF team raised questions about the nature of flood risk and the objectives of engaging with the community early on. NFF's experience meant that they were able to point out contradictions, for example in terms of what different stakeholders were saying about the level of flood risk and what further action was needed, until these began to be clarified. In this case, the NFF's role as an independent facilitator with expert knowledge was very important in getting to a better resolution.

Time of the NFF, flood management authorities and community members

National Flood Forum

The NFF's logs of time spent on the project indicated that as well as the specific tasks of researching the area and context, making contact with local organisation and gate keepers and meeting with local residents, staff spent considerable time on 'back office' work like arranging dates for meetings, organising venues, etc. As spoken about in end of pilot interviews and evident in activity logs, the NFF met regularly with local community members in Tremadog and Gelli. The distance between pilot locations in North (Tremadog) and South (Gelli and Taibach) Wales also meant more time spent travelling between locations and less opportunity to combine activities.

Focus group discussions with the flood action group in Gelli and Tremadog revealed that both groups are very positive about the level of support and attention given by the NFF to develop the flood group, and that the direct communication was a real asset. People in Gelli and Tremadog recognised that they had not initially expected to get much practical support from an external organisation like NFF:

M2 The first time they came, I didn't expect to see them again. But they started getting things done and letting us know about them.

M5 Keeping in touch with us was really important. (Focus Group)

Local authorities, agencies, and relevant partnership stakeholders

The local authorities worked with in each location greatly influenced the engagement process. This is an additional type of input that was not made explicit in the logic model. The councillors in Tremadog considered themselves much more as a 'gatekeeper' role to the pilots, whereas the councillors in Gelli were willing to engage further with the pilot, offering to chair the flood action group. In addition, there was initial concern by councillors in Tremadog of the impact of the engagement on flood risk communities. By comparison it was felt councillors were embracing of the pilot from the outset. Activity logs of the engagement process reveal there were four meetings in the space of three weeks with local councillors in Gelli, with largely weekly email correspondence. This indicates the considerable part the councillors in Gelli played in the engagement process. This additional, proactive offer of support by councillors in Gelli, it was felt by multiple interviewees, facilitated the engagement process and may reflect why meetings with the flood action group were established earlier on in Gelli than Tremadog. Nevertheless, there was also considerable input of time from councillors to organise a walk-around of the local community, to meet residents.

In the end of pilot interviews, NRW staff mentioned concerns about the sustainability of the engagement approach tested. More local authorities participated in the multi-agency meetings in Gelli and Tremadog than would typically be involved in the meetings organised by NRW. It was

suggested that this might be too demanding on the resources of local authorities, agencies other relevant authorities, particularly in a context of limited resources. Here it is relevant to look at the findings of evaluations of the NFF approach to community engagement in England⁹ where there was more time to look at how engagement between flood action groups and flood management agencies evolved. The evidence indicates that agencies can generally be motivated to get involved in the initial MAM: this establishes a new type of relationship and sense of partnership with the local community. Agencies tend to continue to be involved while there are relevant actions for them in the rolling flood plan. Over time and as issues are resolved, some agencies reduce their participation. So the demand on agencies' resources will generally tail off with MAMs being held less frequently.

Activities

This section will look at whether all the activities were carried out as intended in each of the three pilot areas and if not, why not.

In Gelli and Tremadog, there is evidence from various evaluation data collected that all activities as described in Figure 6 have been completed, bar one (*Interaction with wider community on flood risk issues*). In Gelli, the local flood action group met five times (excluding a public meeting), and in Tremadog, the group met three times. Both groups developed a set of action points that formed the agenda for the first multi-agency meetings at the end of March (in Gelli) and beginning of April (in Tremadog). Observation and interview notes demonstrate that local authority partners have begun to organise walk-arounds in Gelli and Tremadog, to further some of the flood issues spoken about in the multi-agency meetings.

In relation to *interaction with wider community of flood risk issues,* end of pilot interview with the NFF revealed that this activity typically occurs much later in the engagement process. Interaction with the wider community usually happens after the group has consolidated further and established communication through the MAM to work together with agencies to reduce community flood risk.

The community engagement process in Taibach resulted in two of the engagement activities being carried out: *meetings with community members to discuss concerns about flooding* and *support articulation of local flood risk issues*. A leaflet drop was carried out, a drop-in session was held and several walk-arounds of the community were conducted to gather the issues and concerns of members of the local community about flood risk. A variety of local perspectives were obtained, including from both businesses and local community members. The focus of the drop-in session was to discuss Taibach's residual risk of flooding. The local authorities (NRW and the Welsh Government) manage flood defences in the area and many local people feel that these would prevent future flooding.

The views of young people

End of pilot interviews with NFF revealed that there were attempts to include the direct views of young people in the engagement process in Gelli, through invitations to several local schools to flood action group meetings and the multi-agency meeting. There was an initial positive reception, but no schools chose to attend the meetings. Given the timescales of the project, it was necessary for NRW to not pursue this further, as engagement would not have the time to develop into a fully participatory process.

⁹ Twigger-Ross et al. 2015

Outputs

This section will explore whether all the outputs have been achieved as intended and if there are factors (enablers or barriers), apart from the inputs and activities, that contributed to the success or lack of success in achieving the outputs.

For Gelli and Tremadog, all outputs as described in figure 7 have been observed, with the exception of an agreed rolling flood action plan. It was evident in focus groups with local community members in Gelli and Tremadog that there is willingness to meet with the local council and NRW, and site inspections of local flood issues had been planned, demonstrating that both flood action groups are starting to work with agencies. In Gelli, a further multi-agency meeting is planned to report on work started to address local flood issues. This indicates that a work programme to manage community flood risk is beginning to be set up. Please see the following section (4.2 Outcome evaluation) for further evaluation on outputs.

Factors (enablers)

- Enthusiastic individuals: In Gelli, it was suggested across multiple interviews that one enabler for success and the cohesion of the community group was the enthusiastic councillor who chairs the flood action group. The councillors are newly elected and have shown positive signs that they are engaged and want to make a positive difference in the area, which was considered to facilitate the progress of the group.
- Individual capacity: End of pilot interviews revealed that the Tremadog group have a greater capacity to manage community flood risk in that they have greater confidence and experience to engage with local authorities. Interviews revealed that the Gelli flood action group show signs of being less confident in how they respond to local authorities.
- Availability of finance for flood risk management: It benefited the multi-agency meeting in Tremadog and the communication between local authorities, agencies and the community that there was flood risk management work planned in the area. This means that money is available and agencies are already looking at ways of collectively managing flood risk in the area and are able to make space to consider community views on flood risk management.
- Recent experience of flooding: As expected and outlined in the baseline interviews, previous experience of flooding increased community concern about local flood issues. Focus groups with the Tremadog and Gelli flood action group revealed that many members had experienced flooding, and the emotional impact of flooding on residents is present. The Tremadog community had recently flooded (within the last two years) and this coloured how members of the community thought and felt about flooding and their discussions at the MAM. In Gelli, experience of flooding was more distant, although it was observed that the community was also very aware of the issue. Much was spoken about community experience of flooding several decades ago, with many participants invoking memories of it.
- *Regularity of meetings:* End of pilot interviews discussed the frequency with which the NFF had met each flood group as an enabler to maintaining momentum and cementing the group. Interviewees raised the question of how the dynamics of the group will change as the NFF withdraw support
- Direct communication with the community: One NRW interviewee felt there is real value in the returns of engagement if the approach focuses on direct contact with the local community, rather than contacting gatekeepers through, for example, town and community councils. This was reflected in focus group discussions of the same pilot location, where the local community felt that they had received more feedback on local flood issues through this engagement pilot than previous engagement approaches, and expressed frustration in

previous attempts to contact local authorities about flood issues. One flood action group member said; "We have been discussing this after the MAM. We all felt more positive. I felt we were listened to by people who came from faceless agencies".

Factors (barriers)

- *Time:* From the perspective of the NFF, the amount of time available for each pilot was the dominant theme both at the baseline and at the end of pilot interview. This was also reflected on by NRW interviewees at both baseline and end of pilot interviews, and so was the most common theme when considering barriers to the engagement process.
- Communication styles: Observation of the multi-agency-meeting and focus groups with local community members revealed that there is a discrepancy between the technical flood risk management language used by agencies, and more emotive, anecdotal descriptions used by local community members. Focus group discussions in Tremadog and Gelli revealed that the local community wish for their local experience of flooding to be acknowledged. This different language use and framing of flood risk can create a barrier to communication and understanding between both groups at the multi-agency-meeting and led to frustration for the local community. This was more prevalent at the Gelli meeting than the Tremadog meeting.
- Emotional trauma/ experience of flooding: The past versus the present was a key theme when analysing evaluation data, particularly for the focus groups, in that the majority of community members engaged are still affected by past flood events, and in Gelli, many community members were challenging present flood risk with outdated knowledge. Sometimes what came up in the meeting is that authorities held to account for actions taken that may have exacerbated flood risk decades ago in Gelli. For Tremadog, focus group discussions revealed that the group still remain reticent about working with authorities because of experience of previous engagement. For example, a meeting after the 2015 floods with the Council was considered by group members to have been unhelpful. The dynamic nature of flooding in the future also present, in terms of how climate change could exacerbate flood risk.
- *Fragility of the group:* End of pilot interviews highlighted elements of fragility because of the early stage of development of the flood action groups. There is a degree of reliance on enthusiastic or knowledgeable individuals. Should these people become less involved, this could have an impact on the group's work.
- Austerity: Concern about sustainability in the context of austerity was apparent in the multiagency meetings and end of pilot interviews. While the pilots were successful in encouraging multiple partners to get involved and offer potential practical wins for local authorities in terms of encouraging a greater sense of community autonomy, some stakeholders had concerns about the resource requirements.

4.2 Outcome evaluation

End of pilot interviews with the NFF revealed that the overarching aim of their engagement process towards building community resilience is capacity building at the grassroots (local community level) to manage flood risk. It is apparent from the multi-agency meeting and from interviews that the engagement process has increased Gelli and Tremadog community members' understanding of how to manage and report local flood issues. For example, as the Gelli multi-agency meeting progressed

through the discussion points, it became apparent that community members are unaware of many of the reporting procedures and contact details for the flood risk authorities. This information was passed on to the group in the meeting. Some community participants felt that they had increased their understanding of flood r risk management. Others considered that they were already very aware before the engagement process began. The importance of community members knowing who to go to about different issues was noted by one NRW interviewee: "Now they are in a position, where if before they spotted a problem they might not report it, but now they know we are not there all the time, so might report it more often. If that will happen more, that's a great thing."

NRW staff felt that the pilots had established appropriate community groups who can work with local authorities to autonomously manage community flood risk. The outcome (an autonomous community flood group) and impact (increased community resilience to flood risk) is yet to be fully achieved, but shows promising signs. The objectives, actions and indicators for NFF's community engagement are set out in Table 21.

Engagement	Actions	Indicators
Objectives		
Forming the group	 Liaise with individuals to identify existing community groups and leading individuals Contact groups and individuals to understand the appetite for future flood risk work, interrelationships, etc. Discuss with individuals setting up a flood group Organise a meeting of interested parties Allow the community to off load/listen to what they have to say Gain agreement for further work using either an existing group or forming a new group Organise a series of meetings to form/ consolidate a group 	A group in place with a chair
Communicati on with the wider community	 Support the group to gather information from the wider community on: Interest in flood risk Experience of flooding Flood risk issues Experience of working with partners 	Evidence of wider community engagement by the group
Articulating the flood risk issues	Focusing the group on a positive and productive way forward Gathering the issues generated from the wider community to develop a rolling flood action plan	A list of issues agreed by the group
Understandi ng roles and responsibiliti es of organisations	Through discussion at meetings, generate a common understanding of the roles and responsibilities of Risk Management Authorities and other organisations: what they can and cannot do	Session completed with the group
Ability to work with partners	 Through discussion at meetings agree how the group will work with Risk Management Authorities and other organisations: set up a Multi-Agency Meeting (MAM) - send out provisional dates to gain a mutually convenient day send out invitations with agenda and rolling action plan 	Multi-agency meeting

Table 21: Engagement objectives, actions and indicators

	• support the group through their first meeting	
Multi-agency meetings	Organise and support the group to lead and chair Multi-agency meetings to work through the issues identified by the community	Multi-agency meetings

In order to ensure that the indicators shown in the third column of Table 21 above are sensitive enough to pick up small changes over the short project timescale, these have been broken down into steps, to create a scale or continuum against which progress can be measured (Table 22). This section reviews the extent to which the pilots have progressed towards the engagement objectives, by looking at the steps taken and outputs achieved. Where outputs are repeated across several objectives (as in the case of the Community Flood Action Group) these are only discussed once.

Table 22: Adapting NFF indicators for use in the pilots evaluation

Кеу

Green – evidence this NFF indicator has taken place.

NFF	Stepped assessment indicators	Gelli	Tremadog
indicators			
A group in place with a chair	Core of participants regularly attending meetings	\checkmark	~
	One or more participants taking responsibility for organisation tasks (agenda setting, chairing meetings, etc.)	\checkmark	~
	Group gives itself a name		
	Recognised group chair, lead or coordinator	✓	✓
Evidence of wider community	Participants report on discussions of flood topics covered in previous meetings with other members of the community.		
engagement by the group	Participants bring to the meetings flood issues gathered from other members of the community.		
	Community engagement activities carried out by group (door knocking, distribution of information, participation in local events, etc.)		
A list of issues agreed	Group discusses flood local flood issues	√	✓
by the group	Group collates flood issues raised in discussion	\checkmark	√
	A list of local flood issues agreed by the group	✓	✓
Session completed with the group	Flood group meeting (internal)	✓	~
Multi-agency	Group plans and prepares agenda for multi-agency meeting	\checkmark	✓
meeting	Flood group meeting with agencies with responsibilities for flooding	~	✓

Orange – evidence this NFF indicator is beginning to take place.

	Group and flood agencies establish regular liaison mechanism (meetings)	√	✓
Work	Group develops list of possible actions.		
programme	Group agrees prioritised list of actions		
agreed	Flood group has agreed work programme		
Work programme started	Flood group members participate in implementing work programme		

A group in place with a chair

Interviews and observations revealed both Gelli and Tremadog have a core group of individuals and a chair of the group. Although both Gelli and Tremadog flood action groups were observed to be cohesive, the sense of a group identity (indicators such as a group name) was not yet evident. Neither group seemed keen to promote its own image, for example with a newsletter, logo or other outward-facing activities. This seems to reflect a sense of resignation about the low level of interest in community activism:

It's like voting: a lot of people say, "Why bother to vote?" If we prevent the flooding from happening, the whole community will benefit. Other people are happy we are doing the work for them.

I tell anyone who'll listen about this. The more people who learn, the better. But a lot of people don't want to know.

Interviews with the NFF and NRW, as well as the focus groups, reveal that the groups still rely upon the leadership of the NFF for support and direction. A concern is how autonomous the groups would be once the NFF is not providing regular support after the community engagement pilots end.

Evidence of wider community engagement by the group

As previously discussed in Section 4.1 (process evaluation), the end of pilot interview with the NFF revealed that wider community engagement occurs later on in the process, so would be outside this project's timescales. Focus groups in Tremadog and Gelli revealed that that group members feel that some people in their local communities are disengaged from local flooding issues and that greater engagement could help collectively manage flood risk (one example given the physical labour of distributing sandbags around the community).

Participants in both the focus groups referred to a 'sense of community', suggesting that people would naturally look out for those with greater vulnerability, but also recognised that changes in society may undermine this:

Village life isn't what it used to be - people don't talk to their neighbours so much.

There is a sense of community here anyway. But people are more mobile now.

Sessions completed with the group

All three pilot studies have completed sessions with the community discussing local flood issues and concerns. For Taibach, outcomes of engagement do not progress beyond this. A group of individuals met on one occasion with the limited objectives of understanding people's flood experience and concerns, providing information about flood risk and providing information to enable people to sign up for flood warnings. In Gelli and Tremadog, the groups met on multiple occasions and decided to form community flood groups. The discussion points for the Gelli and Tremadog multi-agencymeetings reveal that these two pilot studies progressed to generating a list of local flood issues.

Multi-agency meeting

Both the Tremadog and Gelli flood groups drew up an agenda and list of discussion points for the multi-agency meeting. This was the starting point for contact between the local community and local authorities, agencies and other partners. The multi-agency meetings helped both groups better understand the agencies' needs and priorities, develop trust and relations, and begin a rolling dialogue so that the flood action group could work with partners to manage community flood risk. It was apparent from communication (emails and interviews) with the NFF that the NFF provided a lot of support in developing the agenda and discussion points. The NFF did most of the logistical tasks in setting up the multi-agency meetings. Multi-agency meetings took place in both Gelli and Tremadog, and it was observed (directly and through interviews) that the groups are beginning to set up further liaison with local authorities, agencies and stakeholders. For example, it was the last discussion point of the multi-agency meeting, and focus groups revealed that activities such as local inspections with local authorities and flood group members are being planned, in both Gelli and Tremadog.

Work programme agreed and started

As the pilots finish, two groups are at the stage of developing their programmes of work. Focus groups in both locations revealed some apprehension as to the group's ability to take forward the work programme on their own. This apprehension was more strongly felt in Gelli than Tremadog, in terms of uncertainty about the time and effort local authorities and agencies will provide for community flood risk management, and whether the right individuals would be sent to engage with the local community.

It was evident in both focus group discussions that scepticism remains on the involvement of local agencies and authorities in supporting community flood risk management. Going forwards, both flood groups said that they would prefer the support of the NFF to continue, to ensure a 'safety net' for keeping the flood group going. This reveals that the flood groups do not yet feel fully autonomous in community flood risk management.

5. Conclusions

5.1 General

The pilots demonstrated that the NFF was able to progress towards the establishment of flood action groups, with groups having had a first meeting with relevant flood risk management agencies in two out of the three pilot communities.

As expected, time was one of the biggest barriers preventing further progress towards community engagement for all three pilots. It constrained the ability to both develop each engagement step in depth (for example the NFF typically send multi-agency meeting agendas 4-6 weeks in advance, but this was not possible given the quick turnaround of time between flood group meetings and the multi-agency meeting), and constrained the ability to progress to further steps, such as engaging with the wider community, and for Taibach, progressing further than gathering community flooding issues.

The short amount of time allowed for the pilots had two major consequences for the outcomes. On the one hand, it meant neither of the two groups that formed during the pilots had progressed to the stage where they felt themselves able to work autonomously to take forward their work programmes. This represents a risk to the long-term sustainability of the groups. Both felt they were on the right path in terms of taking forward the actions needed, but they were still relying to some extent on NFF to structure the work. The practical experience of moving forward in the direction that has been defined will probably give group members the confidence they need to continue but some level of uncertainty remains.

Linked to this is a second consequence that was not clearly identified at the start of the pilot. By making completion of the process within a short timescale a factor on which the project would be evaluated (how much progress could be made within the time available), NFF had to use a more limited version of their normal process. This was recognised in Gelli, where the MAM was organised when the NFF team would have preferred to continue working to establish a core group. There is a risk that spending less time on developing the core group could have knock on effects for the group's sustainability.

In the case of Taibach, the NFF team vigorously rejected suggestions that they should continue with the steps of the community engagement process (i.e. begin initial community contacts) in the absence of clarity about the flood issues for the area among the agencies involved. While this meant that the project outcome was not achieved, it could be argued that there has been an equally important output, in the shape of conversations within and between relevant flood risk management authorities about the current state of flood risk and priorities for action.

5.2 Conclusions in relation to the project's three intended outcomes

To evaluate this outcome, and progress towards this outcome, indicators were developed for each of the steps in the NFF approach. Table 22 shows those steps along with the progress made for Gelli and Tremadog and Section 4.2 provides more detail against each of these indicators. What is clear however, is that good progress has been made in developing capacity within these two communities to enable them to take action to manage their flood risk. Current work¹⁰ reviewing groups set up under the Defra FRCP pathfinder has found that groups using this approach, frequently do go on to develop focussed actions to manage their flood risk with adequate support and involvement. However, as noted in the discussion above, time was the biggest issue within this pilot, having a shorter time period over which to develop relationships may make them more fragile.

It will be noted that Taibach does not appear on this table. This is because the nature of the context in Taibach meant that a different approach was undertaken, with more time spent understanding the community, the flood risk and the objectives for NRW in that situation.

5.2.1 Stronger support networks and relations within the community

Less emphasis was put on this element of the engagement, probably because of the focus on the formation of a flood action group as the mechanism that will allow community engagement to continue into the future. There was some evidence of new relationships being built between people in the local area, specifically in Tremadog. This is something that could be examined at a future point.

5.2.2 Stronger relations between the community and the flood authorities

The holding of MAMs in two out of the three pilot communities is a really important step in establishing a new kind of relationship. In Gelli one participant who had been involved in a group that was formed after flooding in the 1980s said that relations with the authorities at that time had been 'chaotic'. This participant continued:

¹⁰ CECAN fellowship to investigate FRCP projects two years on led by Clare Twigger-Ross with Paula Orr (CEP) and Stacy Sharman (Defra)

The MAM was different: we got round the table and they listened to us.

5.3 Conclusions related to the project process

Each pilot has involved differing progress towards community flood risk management, for a multitude of factors unique to each location. These include, but are not limited to; the gatekeepers contacted during the engagement process, the level of local authority spending available for each location, the nature of previous flooding events, the socio-economic background of each community, the personal capacity of community members, and the institutional capacity of local agencies, authorities, and other stakeholders.

Uncertainty of the future working relationship between communities and partners remains, although the progress has helped to develop relations and reduce community frustration around the management of local flood risk.

The approach carried out by NFF had key characteristics which in combination contributed to the achievement of the outcomes:

- Staff who are knowledgeable about flood risk and are able to help communities to tease out issues so that they can be presented to relevant agencies and solutions found.
- Ability to build trust with communities, starting by identifying relevant gatekeepers and ways in to making contact with people at flood risk. This means that people are willing to come along and talk to them, even in communities where engagement with authorities on flood risk is perceived to have been unsuccessful in the past. Some of the participants in the Gelli and Tremadog focus groups spoke of their 'anger' with the flood authorities; one said that before they began to work with NFF, they didn't know how to relate to flood agencies and just shouted at them.
- A method of quickly structuring the issues that come out of community meetings into lists of issues which can be used as a transparent 'action plan', which helps community members to identify which agencies are responsible for which issues and to record where measures have been taken.
- Keeping everyone both community members and the relevant agencies and institutions
 up to date with progress so that they know what is happening and what input they will need to provide.
- Ability to adapt the process to respond to situations arising in different communities and context, avoiding a rigid approach. Each pilot followed the steps of the NFF community engagement model, but the way that the steps were carried out and the amount of time spent on each, varied. This reflects the flexibility of the approach and its ability to respond to the conditions in each location. In Gelli, for example, the NFF moved almost immediately into organising and running the community group, given the support and enthusiasm of the local councillors. In Tremadog, there was a much longer process of initial contacts with community members before the first community meeting was organised.

The engagement pilots have involved a considerable level of support from the NFF, which local authorities are unlikely to have the resources to replicate. The local community have welcomed the support and direct contact as part of the process, and so it remains uncertain to what extent the flood groups will become autonomous in the near future.

5.4 Summary of conclusions

15. The pilots were successful in achieving the project outcomes and showed the value of the approach, specifically in terms of **developing capacity in communities** in order for them to

take action to manage their flood risk and **strengthening relations** between communities and flood authorities.

- 16. The pilots demonstrated how this approach, which differs from the NRW approach in its focus largely **on process** rather than outputs such as community flood plans works in practice in areas where NRW have previously found engagement difficult.
- 17. However, the focus on achieving some key outcomes (e.g. Multi Agency Meeting) in a specified, short time frame risks the sustainability of the groups established.
- 18. The pilots showed the vital nature of having an independent process whereby those carrying out the engagement :
 - a. Facilitate personal **Contacts** with and between members of the local communities and staff from relevant authorities
 - **b.** Have **Credibility** in terms of their knowledge of flood risk and are able to translate across different perspectives
 - c. Are **Committed** to a clear objective of empowering communities to engage with flood risk management
 - d. Have the **Confidence** and independence to ask difficult questions if needed
 - e. Build **Capacity** within communities to enable them to take action to manage their flood risk
 - Start by listening to and understanding Communities in terms of people/place/flood relationships and know how to build trust
 - Have a **Clearly** structured approach enabling lists of issues from community meetings to be used as a transparent 'action plan'
 - Become "trusted intermediaries", advocating on behalf of communities as well as providing a bridging role between NRW and communities, and keeping all parties regularly informed.
- 19. The pilots showed that understanding the different people/place/flood relationships in each community was a prerequisite for meaningful engagement to proceed.
- 20. The pilots suggest that that the current NRW community engagement approach potentially undermines its own principles of good practice due to a focus on outputs rather than process. The pilots showed that the NRW process has aspects in common with the NFF approach, however, the past research for NRW (Twigger-Ross et al, 2016) showed the process as being largely focussed on signing up people for FWD and developing community plans, rather than on building capacity and knowledge of flood risk within local communities. Partly, a focus on specific targets e.g. numbers signed up to FWD leads to this emphasis.
- 21. The pilots revealed a potential lack of clarity in places as to the strategic objectives of NRW's engagement approach. Specifically, it was not entirely clear as to why Taibach was chosen as a pilot site

5.5 Recommendations

- 22. This approach could be **a very useful addition** and **complement** to NRW's current approach to community engagement. Specifically, we would suggest that whilst NRW staff have some of the key characteristics referred to above, they would need help from others outside of the organisation if trust in institutions and independence were a key aspect in a specific community.
- 23. We would suggest that, as with the pilot areas, this approach is used to focus on areas that are classed by NRW as **hard to connect with** (which may be due to past issues, lack of community capital etc.) and **urgent in terms of the nature flood risk** (the pilot sites were medium flood risk).

- 24. Careful consideration should be given to **developing/reviewing the strategic objectives** for NRW engagement approach so as to be able to understand when this approach might be useful to implement, and to clarify NRW's role in local community engagement with flood risk.
- 25. Development of a simple decision tool could facilitate consideration of appropriate engagement in terms of nature of the issue, nature of the community and availability of resource.
- 26. NRW should **liaise at national and area level** with relevant Risk Management Authorities around the role and engagement of communities in flood risk management, such that economies of scale can be achieved.
- 27. Given that understanding the people/place/flood profile of areas is shown to be an important input into the success of engagement processes, it is suggested:
 - a. that NRW flood risk management staff are made aware of the Well-Being assessments¹¹ of the 19 Public Service Board areas as a basis for their understanding of local areas. This would help joining up across authorities and provide valuable contextual knowledge for NRW staff.
 - b. that NRW in partnership with other key authorities consider how they can gather local information on people/place/flood relationships in key areas of consideration.
 For example, this could be through regular liaison with key community representatives.
 - c. that all NRW engagement processes allow for **a period of listening** to community representatives and members about flood issues, to enable appropriate actions to be delivered. This may mean a shift in resources to more intensive "upstream" engagement requiring specific indicators to measure progress.
- 28. In order to move the current NRW approach towards a more process focus it is suggested that:
 - a. indicators for **success of the process** are developed for the current NRW community engagement approach. The project used indicators to assess which aspects of the NFF process had been achieved and these were seen to be simple to use and useful to the NFF engagement staff and could be adapted for use by NRW.
 - b. development of outcome and impact indicators for NRW's current engagement work should be carried out as at present the measures appear to be largely focussed on **outputs**, e.g. numbers of people signed up to FWD and number of flood plans in place.
 - c. regular discussion are held between NRW and other key RMA partners on **what is working/not working in** relation to community engagement in flood risk management to create a learning culture within the organisation.

¹¹ Well-being assessments have been carried out for all 19 PSB areas and cover a wide range of topics within the following areas: cultural, economic, environmental, and social. NRW are part of the PSBs and flooding is mentioned in the environmental well-being context. <u>http://gov.wales/topics/improvingservices/public-services-boards/?lang=en</u>

6. References

Cutter, S.L., Burton, C.G. and Emrich, C.T. 2010. Disaster Resilience Indicators for Benchmarking Baseline Conditions. Journal of Homeland Security and Emergency Mangement. 7(1), pp1-22. Accessed 11/04/18. Available from:

https://www.degruyter.com/view/j/jhsem.2010.7.1/jhsem.2010.7.1.1732/jhsem.2010.7.1.1732.xml

Natural Resources Wales. 2018a. *Medium risk of flooding from rivers and sea*. Accessed 11/04/18. Available from: <u>goo.gl/knj12e</u>

Natural Resources Wales, 2018b. *Long term flood risk*. Accessed 12/04/18. Available from: <u>goo.gl/69rw1j</u>

Sayers, P.B., Horritt, M., Penning-Rowsell, E. and Fieth, J. 2017. *Present and Future Flood Vulnerability, Risk and Disadvantage: A UK assessment. A report for the Joseph Rowntree Foundation Published by Sayers and Partners LLP.* [Online]. Watlington: Sayers and Partners. [Accessed 09/08/17]. Available from: <u>http://www.sayersandpartners.co.uk/flood-disadvantage.html</u>

RAC Foundation, 2012. *Car ownership rates per local authority in England And Wales*. Accessed 12/04/18. Available from: <u>goo.gl/GhVPhe</u>

StatsWales, 2011. *Welsh speakers by local authority, gender and detailed age groups*, 2011 Census. Accessed 12/04/18. Available from: <u>goo.gl/jWE6i1</u>

StatsWales, 2015. *Population estimates by lower super output area and age group (simplified geography)*. Accessed 12/04/18. Available from: goo.gl/tNLWvp

Twigger-Ross, C., Orr, P., Brooks, K., Sadauskis, R., Deeming, H., Fielding, J., Harries, T., Johnston, R., Kashefi, E., McCarthy, S., Rees, Y. and Tapsell, S. 2015. *Flood Resilience Community Pathfinder Evaluation Report*. Defra project code FD2664. For the Department for Environment, Food and Rural Affairs. Accessed 11/04/18. Available from:

http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Proj ectID=18744

Twigger-Ross, C., Papadopoulou, L., Sadauskis, R., Orr, P. and Johnston, R. 2016. *Flood Awareness Wales Community Engagement Review*. For Natural Resources Wales. Accessed 16/04/18. Available from: <u>https://naturalresources.wales/evidence-and-data/research-and-reports/reports-evidence-and-data-on-flooding/independent-review-of-flood-awareness-wales-2016/?lang=en</u>

Wales Online, 2017. *The full General Election turnout map for Wales as voter numbers rose*. Accessed 12/04/18. Available from: <u>goo.gl/mRUk2E</u>

Welsh Government, 2018. *Welsh Index of Multiple Deprivation – Indicator Data*. Accessed 12/04/18. Available from: <u>goo.gl/zoETjv</u>

7. Appendices

Appendix A.1 Interview schedule

Below details the interview questions asked during interviews with NRW staff, to build the community baseline so as to inform Phase 1 of the project evaluation.

Section A. Establishing a community baseline

From your perspective working on the ground, what socio-economic conditions characterise this community?

presence/absence of social deprivation e.g. in relation to economic resources, housing, health, education; level of community cohesion; presence / absence of community organisations, etc.

How does [named place] differ from other communities that are part of your NRW Wales subregion? Is there anything that distinguishes it from other areas?

Section B. NRW's previous and current community engagement work

Have you done, or are you currently doing, any community engagement in this place? If so, when was this started? Is it on-going?

Who do you work with at the community level in [named place]?

Do you work in partnership with other local stakeholders/partners, within this community?

Do you have a standard approach for engaging with local communities? If so, please briefly describe how you engage. If not, what are some of the approaches you have used to engage communities and what are the factors that influence your choice of approach?

What methods do you use for communicating with the local community? (i.e. drop-in sessions, flyers)

What is the main aim(s) of this communication – e.g. to provide information? to seek the views of the community?

What are the flood risk management objectives for this place? What level of flood risk does the community face? Is it viewed by NRW as being at high/ medium/ low risk?

What are the sources of flood risk for the local community? (I.e pluvial, fluvial)

Is there a pre-existing flood plan for this community, and if so, what was the process for preparing for it and who was involved?

What do you understand by community resilience in relation to flood risk in this community?

Section C. Hopes for the pilot study

What do you understand as the objectives of the pilot study?

What do you think the pilot will achieve?

What do you see are the main risks preventing the pilot from achieving its aims?

What are one or two main things you would like to see come out of the pilot study, in terms of your own work area?

How do you think the community engagement pilot could inform your work?

Appendix A.2 – Template log sheet

NRW COMMUNITY ENGAGEMENT PILOTS

ACTIVITY LOG

NAME: HEATHER / DEBBIE / JEAN (please underline one)

DATE	WHAT	WHO	PURPOSE	RESULT (If any)	Comment (if needed)
	<i>Type of activity:</i> <i>meeting, visit,</i> <i>phone call, etc.</i>	 Individual residents: just name or 'see attendance list', if there is one Organisation: name of individual + organisation name 	Main purpose of action	e.g. booked venue, individual / organisation signed up to attend meeting, etc.	Only complete this section if further information is needed to understand the entry

Weekly reflection on activities :

What is working well and why?

What is working less well and why?

Appendix A.3 –Interview schedule for multi-agency meeting

Interview date:

Interview time:

Attendees:

<u>Introduction</u>: The aim of the interview is to get your reflection on how you felt it went, what and how things were said, and for an insight into how the two MAMs contrast.

General notes on reflections:

Specific questions from the NFF

1. How did the dynamics of the meeting compare with Gelli? Prompt: did community members and authorities sit separately and communicate little between one another? Were there signs of frustration from community members at all?

- 2. In Gelli, I observed a group with a dynamic, enthusiastic chair, and a core group of individuals. What factors would you say enable the Tremadog group, as opposed to these for the Gelli group?
 - How would you compare the cohesion of each group?
- 3. In Gelli, we saw a discrepancy between the technical flood language used by authorities, and anecdotal, emotive language used by community members was that also evident in this meeting?
- 4. Information about the community group were the 'core' group in attendance? What is the background of the chair? What is their socio-economic background gender/age. Were there members of the group who were more vocal than others? Did everybody speak?
- 5. How participative did you feel the authorities were? Who was in attendance? To what extent were the attendees able to answer the flood action plan points?
- 6. In Gelli, the theme of austerity as a barrier to LA spending was apparent was this also evident in the Tremadog meeting?
- 7. To what extent do you feel the actions raised in the flood action plan progressed? In Gelli, there was a lot of focus on providing community members with the appropriate contact information and encouraging reporting, was that also evident here? If not, what were the main categories of actions raised from the discussion points?
- 8. Were there the memories of recent flooding present in discussions, as took place in the Gelli meeting?

Focus Group Schedule

Overall evaluation research questions:

- 1. How far and in what ways has community flood resilience been increased?
- 2. How effectively and in what ways did the pilot approach enable communities to take ownership of and improve local flood resilience within a short timescale?
- 3. What factors facilitate or act as barriers to community engagement?

<u>Aim of session</u>: "capture their initial perceptions of improved community resilience" (project research objective 2)

Length of focus group discussion: under an hour

<u>Note to Paula</u>: Questions developed from reading the project's evaluation framework, project proposal, and Flood Resilience Community Pathfinder Evaluation Final Evaluation Report (2015)

Focus group schedule

Thank you for making the time to attend this meeting. The purpose of the meeting is to ask you for feedback on the work you have been doing with the National Flood Forum. The project has been funded by Natural Resources Wales to test ways of involving communities in managing local flood risk. This evening I would like to find out about what this experience has meant for you and what, if anything, it has changed. What you say will be confidential: we won't report people's names or identify you in any way. We will use the information you provide to write a report for NRW. Do you want to ask any questions?

Introduction (10 mins)

- What encouraged you get involved in this Flood Action Group? *Prompts: (Aspirations)* What were you hoping that you / the area would get out of it? *(Experience)* Have you been involved in a community group like this before? *(Process)* Did anything make it easier or more difficult for you to get involved?
- 2. To what extent has the experience of being in this group met your expectations? Can you describe any positive and negative aspects? What has contributed to the positive aspects? And the negative ones?
- 3. Given that it is difficult to completely prevent flooding, could you describe to me an ideal future situation in which you would be able to say, "In ____ we are resilient, we know how to deal with flooding"? What is the role of the FAG in achieving this ideal future situation? [Explore attitudes to resilience is it about bounce back, coping or developing adaptation mechanisms?]

Section 1. A better understanding and awareness of flood risk (15 mins)

4. In what ways, if at all has your understanding of local flood risk in _ changed as a result of taking part in this process? And has being part of the group changed how you <u>feel</u> about flooding? *Prompt:* What did you feel before, e.g. fear, anger, powerlessness, etc. What do you feel now e.g knowledgeable, empowered, able to cope?

Section 2. A community perspective on solutions (15 mins)

- 5. What do you think should be the community's role in managing local flood risk?
- 6. How far do you think the FAG's work so far is helping the community to manage flood risk?
- In what ways do you feel the flood action group is becoming more cohesive?
- To what extent are FAG members becoming more or less engaged/involved? In what ways is the group engaging with the wider community?
- Can you describe any ways in which the process of working as a group has affected ties within the community to address flood issues?
- How confident are you that the FAG is or will become able to effectively manage local flood risk?
- 7. To what extent, if at all, does the flood action group represent or take account of the wider community's interests and concerns about flooding? *Prompt*: Has your group looked at the needs or concerns of people who are often left out, like vulnerable groups/ less powerful socio-economic groups/ 'hard to reach' groups (e.g. disabled, elderly, young children, etc)? If so, in what ways? what difference has this made to your work?

Section 3. The workings of the flood group (assessing community/institutional capacity) (15 mins)

8. What local resources do you draw upon to help yourselves better prepare and respond to floods?

Prompt: local information, social ties and knowledge, finance? Where do these resources come from?

9. How have you engaged so far with local authorities or organisations with responsibility for flooding?

Prompt: communication or dialogue with authorities, going on a rekke of the area with local emergency planners, voluntary sector, local responders, other.

- 10. To what extent has the work of the FAG changed relations between the community and the authorities responsible for managing flood risk, e.g. the local council, NRW or Welsh Water?
- 11. How far would you say that the FAG is developing an identity within the local community? Is it beginning to be known by others?
- 12. What role, if any, did the National Flood Forum play in setting up the FAG? What would have been different if they hadn't been involved? Can you say if there are things about the way that they worked that have particularly affected how the group was formed or developed?

Section 4. The future of the flood group (10 mins)

13. How do you see the local flood group evolving in the near future (next six months to one year)? Are there any specific things you would like to see it achieve? Do you think you will develop more of an identity a logo/webpage etc? Do you want to?

14. Is there anything additional that you would like the group to address or focus on?

Thank you very much for your time and contributions.

Appendix A.5 – End of project interview schedule

Interview with NRW representatives for South-East and North NRW sub-regions

Length of interview ~ 30 minutes

Introduction

1. What information have you had about the community engagement pilot in Gelli since our previous interview, e.g. information from members of the community, information from visits to Gelli, information from NFF from reports or direct contact with NFF staff, participation in project activities, other sources of information?

Further information about NRW's approach

2. What are NRW staff's statutory requirements in the area? (I understand NRW perform maintenance work, such as maintaining embankments/ditch)

3. What was the aim of past engagement in the area? When we spoke previously I asked what the aim of past engagement in the Gelli was – I just want to check I understand correctly – when we spoke last you described the aims as to raise awareness of the flood risk in the local area, to sign people up to our flood warning service, and to build a community flood risk management plan – is that correct?.

4. What is considered by NRW as a 'successful' or an 'unsuccessful' engagement process? (i.e. does NRW use any indicators in terms of number of local community members reached)

The impact of the pilot study

5. Has your understanding of the objectives of the pilot study changed? (Spoke about past reflection from baseline interview, that the understood aims of the pilot is "to have a look at the community which we are struggling to engage with, and see if there are any techniques that we can learn from" – I asked if this understanding has changed)

- 6. What do you think the pilot has achieved?
- 7. To what extent has the pilot demonstrated a novel approach to engagement?
- 8. Looking at some of the specific elements of the National Flood Forum approach:
 - a. How well do you think that the emerging flood action group is working? Are there any characteristics or ways of working that are likely to make it sustainable? (*Prompt: existence of a Chair, identification of issues by members, regular participation of a core of members, work programme agreed...*)
 - b. What about characteristics or ways of working that make it less sustainable?
 - c. How does this group differ from flood groups in other at risk communities where NRW is working?
 - d. How does the community flood action plan in Gelli differ from the type of plans in other at risk communities where NRW is working? (*Prompt: to what extent has the flood action plan enabled members of the community to discuss their concerns about*

flooding and articulate local flood risk issues? Have any new issues been identified or new perspectives revealed?)

- e. How do you feel the multi-agency meeting has progressed community flood risk management in Gelli? What are the benefits for flood risk management authorities of participating in multi-agency meetings? Do you think there could be any problems?
- 9. What have you learned from the approach used that will inform your work? How will NRW staff use the lessons learnt from the engagement?
- 10. To what extent has the approach been successful in progressing towards a flood action group and a community flood plan in Gelli?
- 11. To what extent has the pilot improved community resilience in Gelli?
- 12. Were there any barriers that prevented the pilot from progressing further? If so, how do you think that these might be addressed in the future?
- 13. How sustainable do you think the approach tested in Wales is? What are the main features that make it sustainable / less sustainable?

Interview with the NFF engagement coordinator

Section 1. Evaluation of the process

- 1. Could you briefly describe how the community engagement process in each pilot followed or differed from the NFF's standard approach and why?
- How has your understanding of the engagement objectives and risks in Taibach changed throughout this process?
- 2. For each of the three pilot studies, what factors would you say were facilitators to the engagement process?

Gelli: Tremadog:

- Taibach:
 - 3. For each of the three pilot studies, what factors would you say hindered the engagement process?

Gelli: Tremadog: Taibach:

4. What was the most challenging and / or time-consuming part of the engagement process in each pilot location?

Gelli: Tremadog: Taibach: - For example, NFFs record of engagement reveals that you spent double the amount of time contacting gatekeepers in Tremadog (2 months) than Gelli (1 month). What factors would you say led to this difference?

What engagement attempts were made to include the views of children and young people in the process, and what was the response? *At what stage / in what ways might children / young people be engaged in the future?*

To what extent did each flood group engage with the wider community? Do Flood groups usually engage with the wider community later on, when they are more established? Is the lack of engagement something that surprised you? Gelli: Tremadog:

Taibach:

Section 2. Evaluation of the outcomes

5. To what extent do you feel the community engagement aims and objectives have been met? (IC to have logic model to hand)

(A focus on <u>what</u> change occurred and <u>how</u> this was brought about, looking at the intermediate indicators that we identified in the evaluation framework - Table 4) Did you get as far in the engagement process steps as you expected? Why / why not?

- 6. Has your understanding of the objectives of the pilot study changed?
- 7. What do you feel were the principle outcomes of the pilot studies in each of the three locations?

(A focus on <u>what</u> change occurred and <u>how</u> this was brought about) Gelli: Tremadog:

Taibach:

- 8. Looking specifically at community resilience to flooding, in what ways do you feel the pilot study has a) improved community resilience, or b) set a path towards improving community resilience, in each of the three locations?
- 9. Looking forwards to the near future, what factors would you say might be a barrier to each group becoming autonomous/ sustainable?
- 10. Are there any other reflections that you would like to add?

(Shorter interview on Taibach engagement process, 10th April)

Prompts:

- What were the dynamics of the meeting?
- What issues were discussed? Broadly, how do these compare to the issues raised by the communities in Gelli and Tremadog?

- To what extent is the socio-economic profile of the community and of the people who participated in the meeting different from or similar to the groups in Gelli or Tremadog? How, if at all, did this affect your meeting?
- What were the dynamics of the group? i.e. Did everybody speak? What was the mood of the group, e.g. interested, positive, concerned, angry, etc?
- Were there any memories of recent flooding present in discussions, as evident in Gelli and Tremadog?
- Did you get a sense of factors that might facilitate engagement in the future? Conversely, factors that might be a barrier to engagement in the future?

Appendix A.6 – Stepped outcomes for the pilots, as set out in the project Evaluation Framework (p6, Table 3)

Final outcome	Community taking action to manage flood risk	Stronger support networks and relations within community	Strongerrelationsbetweencommunityand flood authorities
FINAL OUTPUT	Community Flood Action Group List of local flood issues Agreed rolling flood action plan	List of local flood issues	Community Flood Action Group Meeting between FAG and flood management agencies
STEPS	Hold community meeting(s) Core group of community members attend regularly Chair agreed & acting Group plans and runs meetings Group plans and carries out activities	Group develops list of local flood issues Group shares list of flood issues with wider community Group liaises with other local groups of flood issues Group collates flood issues raised by wider community	Group discusses of roles of flood agencies Group prepares meeting with flood agencies Group holds meeting with flood agencies Regular coordination with flood agencies

Steps in achieving community engagement outcomes

Annex 2 Target Area Backgrounds, Demographics and Flood Risk

Gelli

Gelli is a small town located in the Rhondda Valley. The town was built up around the historic coal mining industry in the area, which at its peak, employed over 40,000 workers. Since the closure of the coal mines, industry in the area has declined and, due to the lack of employment opportunities in the area, the population demographic is one of an ageing community with many younger people moving away to find work. The residents of Gelli live predominantly in small terraced houses that are constructed on a grid system. The River Rhondda runs through the centre of the town with the first row of terraced houses located with ten metres of the river edge on both banks. At present, the properties of Gelli are protected by a flood defence wall that was constructed in the early to mid-1970s.

Despite the flood defence wall, the town suffered significant flooding following a prolonged spell of heavy rainfall over the Christmas period of 1979. The wall was overtopped on the 26th December 1979 causing flooding of over 100 properties in Taff Street, Union Street, Dorothy Street, Shady Road, Princess Street, Lloyd Street, Rees Street and Ystrad Terrace. There was over six feet of water inside many of these properties and many residents suffered significant loss of personal property. These losses were exacerbated by a lack of home contents insurance for many residents, who were unable to afford insurance at the time.

According to the residents, significant work was carried out following this event to reduce future flood risk. This included raising several bridges in the area to prevent blockages from debris and trees and improved maintenance along the river banks to prevent unwanted vegetation growth. However, the area has been identified as a medium flood risk by NRW due to the potential residual risk associated with the overtopping of the existing flood defences.

Tremadog

Tremadog is small coastal town adjoining the popular tourist settlement of Porthmadog. The main part of the town was constructed by William Maddocks in the early 1800s, with many of the houses being of Georgian construction. The properties were constructed to house workers for the large woollen industry that dominated the area at this time. There is a large social housing development (Isgraig) located to the south west of the town with a small watercourse running along its western boundary. The backdrop of the northern boundary is a 200-foot cliff, which has three waterfalls cascading down into large culverts.

Tourism is now the main industry for the area, with the central market square being the site of gift shops, cafes, public houses, a hotel and restaurant. This market square and the adjoining Dublin Street, Dublin Lane and Stryd Yr Eglwys have suffered from notable flood events over the years, with the most recent being in December 2015. Isgraig has also been subjected to flooding from the adjoining watercourse and many of the gardens in the area are showing signs of being very wet with reeds being prominent. NRW have identified the area as being of medium flood risk. Previous attempts to engage with the community in Tremadog by NRW have had limited success despite the community expressing an interest in the creation of a Flood Partnership Group.

Taibach

Taibach is a suburban district to the south of Port Talbot centred on the main A48 road. The River Ffryd Wyllt, which means 'wild torrent' in English, dissects the district. The district of Taibach was developed in the early 19th Century to house workers from the local collieries and port industries. The houses in the original part of the district are predominantly terraced properties constructed to the south east of the River Ffryd Wyllt on a grid system. Newer houses to the north of the district are made up of both semi-detached and terraced housing.

Taibach has suffered from flooding in the past with the River Ffryd Wyllt coming out of its bank because of tidal surges combined with heavy rainfall. Flooding occurred in 2002 and in 2011/2012. The main areas affected in the past have been Conduit Place to the north of the town, Ffryd Wyllt Street to the east of the water course and West End Street to the north west of the watercourse. Following the 2002 floods, a flood defence wall was constructed along the River Ffryd Wyllt, which is believed to have prevented property flooding in 2011/2012. Local councillors also reported that work has been completed recently on the sea defences around the Tata Steel plant. They believe that this has reduced the flood risk substantially in the area.

Annexe 3 Approach

Gelli

The pilot started with no available contacts, so a great deal of time was spent initially exploring the area, visiting businesses, considering contacts. The National Flood Forum's (NFF) approach is to try and avoid door knocking and leaflet dropping wherever possible and to explore all other approaches of making contact with a community that encourage local ownership from the start.

Initial meetings in the area took place with two Rhondda Cynon Taf County Borough Council councillors. They felt that although the town had not seen flooding in many years there was still a great deal of community concern over a probable future event. Both councillors were very welcoming and helpful, as well as being keen to support the initiative. One Councillor explained that although their generation and those younger than them had not witnessed a flood event, the traumatic legacy had clearly impacted on them to the extent that they were all well aware of the stories around it. Taking account of all the evidence, information and advice obtained, a bespoke plan was then devised by the NFF to approach individuals in this particular community. NFF was told of a long established and unique approach in the area whereby invitations are posted to all residents through their front door. Residents who are interested or who wish to attend a meeting stick the invitation in their front window so that it can be seen. The NFF had not come across this method before, but it showed evidence of community cohesion and was a well-established process. Therefore, this mechanism was adopted for this project. The A5 invitation to get together at the local church was posted through the doors of all properties in roads identified as being at flood risk. Information on flood risk was obtained through a flood map analysis of the area and the local knowledge of residents. The councillors proactively supported this initial stage by ensuring that they also delivered invitations to businesses, other community hubs and their local contacts to raise awareness of the event.

Choosing a meeting venue is also a vital part of the planned approach. Exploring what is familiar and part of 'home' for the community is key to ensuring that people don't feel overwhelmed and apprehensive, which could then lead to a lack of confidence and a nervousness about leadership. The local church is an imposing building that stands on the main approach to the residential estate. It is well used by the residents and has weekly groups such as the kids club, youth club and other community events. It might be assumed that this typical Victorian stone-built building would be cold, damp and uninviting, but this could not be further from the truth. It was warm, bright and inviting and it is easy to see how this is a welcome and well used venue for the local population.

The Well-being of Future Generations (Wales) Act 2015 puts the effective involvement of people and communities at the heart of improving well-being, as well as being one of the five ways of working set out in the Act. The basis for having a voice is found in Article 12 of the United Nations Convention on the Rights of the Child (UNCRC) which sets out the right for children and young people to have a say in what they think should happen, when adults are making decisions that affect them, and to have their opinions taken into account. This has been adopted by Welsh Government and incorporated into the Act.

From the inception of this project this Act has clearly formed part of the targeted engagement technique. NFF used it to ensure that every opportunity was given to children and young people to be involved within the project time restraints imposed. Gelli has only a primary school; feeding into two secondary schools, Treorchy Comprehensive School and Ysgol Gyfun Cwm Rhondda.

Both schools were contacted, and the initiative explained. the NFF wrote to the Schools Student Council, inviting them to contribute to the discussion. The same approach and conversations were

had with Ysgol Gyfun Cwm Rhondda. Had time allowed, engagement with Gelli Primary Pchool would also have been part of the engagement process. Both secondary schools were approached by phone and emailed several times. One school responded, identifying a contact and requested that the email was resent. Numerous emails and telephone calls were made to various people and it appeared that students would participate in the meetings. Unfortunately, the students did not materialise at either meeting. If the project had been longer, more time could have been spent finding an enthusiastic lead.

The initial wider community meeting was attended by 22 residents and two councillors who took an observing role to support the meeting. Most attendees had living memories of the flood and tended to be retired, however, there were also parents in employment. The NFF invited residents to tell their stories and this created a lively discussion about past and future flood risk. The meeting clearly showed that the legacy of flooding was still very much a traumatic experience remembered with a lasting impact on those whose lives were devastated. Many flooding concerns expressed were relevant to today and to their future risk. From the attendees of this wider community meeting, a core group of residents was identified who were interested in forming a flood action group.

A second meeting was proposed for the following week, and the Gelli Flood Action Group formed.

At the 2nd meeting, all members who had volunteered attended. Gelli Flood Action Group identified areas of concern they had and formed a list of questions that would help them to better understand the management of the assets in their area and the constraints that agencies and authorities are made to work with. The questions may also enable the risk management authorities to access expert local knowledge that may help to address some of the flood risk problems in the area. The meeting resulted in the development of a Flood Action Plan, one which is owned by the flood action group and which is populated with discussion points.

A further meeting was then arranged to discuss the process further with the flood action group. By this point, word had got around as the community attendance increased to the point where it was difficult to include work with everyone. This was managed by explaining the commitment that was required and how consistency at meetings was paramount to ensure that all were familiar with the process.

A subsequent meeting saw a reduction back to the core group members, but this was still higher than would normally be suggested. Not wanting to disappoint or crush enthusiasm, and because the project time would restrict further meetings the NFF decided to work with these number.

In parallel to these community meetings, arrangements were made to book a venue and propose mutually convenient times with flood risk authorities inviting them to attend a Multi-Agency meeting with Gelli Flood Action Group.

The Multi-Agency Meeting consisted of 10 members of the Gelli Flood Action Group including two Councillors, one acting as Chair and the other as an observer, along with three representatives from Natural Resources Wales and two from Rhondda Cynon Taf Council. Unfortunately, no representative from Welsh Water was available due to an emergency. The meeting progressed with a brief introduction to the Flood Action Group and its Chair from the NFF, followed by the Chair doing a 'round robin' of introductions to all around the table. For the community this involved a brief synopsis of how flooding in the past had or is anticipated to have had an impact on their lives, and from the flood risk authorities an explanation of their job role.

The Flood Action Plan then became the focus, where the purpose of the concise questions was to develop conversations that would enable an understanding by everyone of the issues, including a better understanding of management by the community, and unidentified issues for the risk management agencies. It was also intended that this process would in the future identify mitigation or maintenance issues, linking the community's local knowledge, expertise and buy-in with risk management resources to tackle problems in a truly productive partnership.

The community seemed positive about the meeting, despite the disappointment of Welsh Water not being able to attend. There also remained a lack of understanding of some of the answers that were given. The community where particularly pleased that the flood risk management teams positively embraced going on a site visit with a few members of the group to see some of the issues first hand. This should not only help bring about better understanding for both sides but also help to forge relationships.

A subsequent meeting of the Flood Group was held a week later to go over the conversations held at the meeting so to ensure agreement as to the accuracy of the conversations held during the Multi-Agency meeting. Following this the group had a meeting with Collingwood Environmental Planning.

A date was arranged for the site visit with representatives of Gelli Flood Action Group, NRW, Welsh Water and the Local Authority. It is intended to hold a flood action group meeting after this to relook at the Flood Action Plan in preparation for the next Multi-Agency meeting.

Tremadog

No contacts were available for Tremadog, so a great deal of time was spent initially exploring the area and considering contacts. The National Flood Forum's (NFF) approach would be to try and avoid door knocking and leaflet dropping wherever possible and to explore all other ways to approach a community in ways that would result in ownership of the project by residents from inception.

Normally the NFF would contact the community directly with agencies informing elected members as part of standard briefing procedures. In this instance the Town and County Councillor for Porthmadog was informed by email of the project and subsequently arranged for the National Flood Forum to meet with three councillors covering the area. At the meeting, NFF found that two members of Gwynedd Council's Flood Risk Team had also been invited. The aims and objectives of the NRW project were explained along with the engagement process. There was much deliberation as to the appetite to embrace the offer and how this would overlap with existing work.

There was concern that residents had suffered enough, that many public meetings had already been held, promises had been made by agencies and authorities and the community felt anxious, let down and frustrated. The NFF approach was discussed, though grasping an understanding of the different approach that the NFF offers is not easy. It is often only by actively going through the process that people are able to understand the subtle differences and the important drivers that are key for successful engagement.

There was some discussion about the asset it would be to have a group made up of grassroots residents, how useful it would be to enable conversations and gain a grassroot perspective.

The Welsh language was also discussed. The area has a high percentage of residents speaking Welsh as a first language. There was a view that Welsh should be spoken by all, all of the time, and that the younger generation also needed to do so. It was explained that contingencies had been made to ensure that a Welsh speaker could be brought in if needed. It was questioned where they might be

from and when it was explained that this might be someone from either the North or the South of Wales, the possibility that the person might be from the South did not seem to go down well. A suggestion was made that a local person might be the answer if the issue arose and this seemed to be an accepted solution. It was concluded that Tremadog would be the most appropriate place for the pilot. As the pilot continued it became clear that the community were not averse to speaking English and none felt an interpreter was necessary.

At a following meeting, further discussion was held about the process of empowering people at risk of flooding, enabling them to lead discussions and manage a rolling process. It was also an opportunity to understand in more depth some of the issues that Tremadog was facing. The NFF was shown all the areas where there were concerns, dropping in on 5 residents along the way. The NFF was taken to resident's back doors and in all cases welcomed and invited into their homes. It became evident that this community were clearly still suffering from the impact of the last flood in 2015. Some were still traumatised and the NFF concluded that this was a community that the NFF would need to give further support to after the project. An outcome of these conversations was the decision to focus on the formation of a flood action group without the need for a public meeting.

The first meeting was held with the community and NFF in the local hostelry that had badly suffered from the flood in 2015. The residents were encouraged to talk freely about historic events, their concerns and the issues that they see exacerbate their flood risk. Conversations focused on historic events and possible solutions. They had also heard of other mitigation work that the flood risk management authorities were looking into, but, felt unclear about what might be proposed. They were concerned that some proposals might not be effective, mainly because they probably did not take account of their local knowledge, i.e. this enabled them to ask 'what if' questions. Ten residents formed the Tremadog Flood Action Group which included a good mix of home owners, businesses, farmers and representation from the vulnerable Isgraig estate.

The Flood Action Group circulated news of the formation of the group to their community through the hostelry, businesses, councillors and word of mouth. They did this to gather people's concerns and opinions and to offer people the opportunity to join the group if they wished to.

Subsequent meetings developed a rolling flood action plan and the start of imbedding the process. The Flood Action Group identified questions they wanted to ask that would help them to better understand the management of the assets in their area and the constraints that agencies and authorities have to work with. The questions may also enable the risk management authorities to access expert local knowledge that may help to address some of the flood risk problems in the area. The meetings resulted in the development of the Flood Action Groups own Flood Action Plan, one which is owned by the Flood Action Group and which is populated with discussion points.

In parallel with these community meetings, a Multi-Agency meeting with Tremadog Flood Action Group was organised in a local venue.

Participation in the Multi-Agency Meeting consisted of 9 members of Tremadog Flood Action Group, the Councillor for the area, an ex-officio member for Gwyneth Council, two representatives from NRW, two from Peiriannydd Cynorthwyol Council, one representative for Highways in Gwynedd Council and one from Welsh Water. The meeting progressed with a brief introduction to the Flood Action Group and its Chair from the NFF, followed by the Chair doing a 'round robin' of introductions to all around the table. The Flood Action Plan then became the focus, where the purpose of the concise questions was to develop conversations that would enable a common understanding of the issues.

The Flood Action Group embraced the meeting as did the agencies and authorities. Once the meeting had concluded the Highways and Welsh Water representatives continued informal interaction with members of the Flood Action Group for a good half hour. It was agreed by all the organisations that they would accompany members of the flood group on a site visit of the area to discuss issues and build relationships.

A subsequent meeting of the Flood Action Group was held the following week to go over the conversations held at the Multi-Agency meeting to agree their accuracy Following this the group had a meeting with Collingwood Environmental Planning.

A Flood Action Group meeting is intended after this to re-look at the Flood Action Plan in preparation for the next Multi-Agency meeting.

Taibach

There were some initial delays due to a sudden long-term health issue with a member of staff from one of the organisations. Initial contact was made by the NFF with two of the area's councillors by email. The response from one was; *"I am unaware of any significant problems having lived here for many years."* The other *"..... work has been carried out in the past few years to increase the height of the defence walls and the gating arrangements as the River enters Tata Steel, in an effort to alleviate the issue. Since this work was completed a few years ago, I am not aware of any further problems."* Further telephone conversations were held where residual risk was highlighted. The NFF also gained a greater understanding of the poor socio-economic status of the town's residents and further research identified elevated levels of unemployment and low incomes in the area. Furthermore, information presented by CEP shows that the area has very high social deprivation. Initial thoughts to planning engagement for this area showed that to set up a flood action group could well be inappropriate. NFF experience is that in a socially deprived area, where often the priority is getting the family food on the table each day, forming a group with a focus on flood risk can be the wrong approach and could be completely inappropriate. However, the NFF does have tools to engage with more deprived communities but the engagement processes would take longer.

The element of confusion and developing the understanding of the issues caused delays in getting the pilot underway.

NFF set up a meeting with two emergency planners from Neath Port Talbot County Borough Council to discuss their thoughts on the risk for Taibach and whether the area was written into the strategic emergency plan. they had however. They concluded that major mitigation works had been completed in the area. At the top of West End a large monitored & alarmed culvert had been constructed, along with a wall built higher on one side than the other, so that if the culvert did get blocked the water would tip into the park. A new wall had been built opposite Ffrwdwyllt Cottages along the channelled Ffrwdwyllt stream by NRW and TaTa Steel had invested in mitigating risk from their site. The Council said they rarely see the alarm activate however, it did happen recently; the department was immediately informed, and the team where already on their way to investigate. The residual risk was considered to be extremely small and the area was not highlighted in the emergency plan.

Further engagement and site visits identified physical deprivation.



Ffrwdwyllt Cottages in particular looked as if they could be at risk of flooding as a consequence of the bridge height to the water level, causing a debris trap. By coincidence an NRW maintenance team arrived during the site visit and it was found that the area was regularly checked due to the presence of low bridges and upstream trees. If not maintained, trees could block the bridges during high flows, creating dams that might lead to flooding. The bridges and vegetation have been maintaining the area for fifteen years without any floods, or risks of flooding occurring. The judgment was that so much mitigation work had been done in the past by NRW and the Council, that the risks of flooding were low.



The NFF contacted a business that had been in the area for twenty five years and never seen the area flood. He seemed unconcerned about any potential residual risk. This was validated by a local resident who had never seen a flood and was unaware of any risk.

The area is dominated by The Parish Church of St Thoedore and several attempts were made to speak with Fr. Mark Williams to no avail. A representative from the Church Council was contacted, who showed comprehensive knowledge of the area. They had lived there for over 60 years. They only remember flooding in the Aberavon area when the river Afan burst its banks in the 1972, but had never known flooding from the stream to Ffrwdwyllt Cottages. Nor did they know anyone concerned about the river either. The river Afan flood defence walls were built to mitigate the flooding. It was explained that West End properties are lower in height and did flood once in the 80's from the stream Frwd Wyltt because debris, like trees and leaves had not been cleared and caused a blockage. In Margam Road, there is a little stream that comes down from mountain, and affects a restaurant, causing bad flooding along with houses opposite them. This regularly occurs up to six

times a year. A little stream also runs past the hotel, under the A48 where there are two little bridges. If these overtop the road floods. When asked about the residual risk it was considered that new people to the area would definitely not be aware. It was also mentioned that since becoming aware that the NFF was in the area it had made them think about their own risk from the sea.

However, the Aberavon area was not an area that the NFF had been asked to focus on and to begin looking into this area would have exceeded the project time limit.

The area of Port Talbot has a good historical society and when speaking to a member they confirmed that the Afan burst its banks in 1972 and the response from the authorities was to build retaining walls on the riverbank between the Blanco Hotel and McDonalds stretch of the river. This was believed to have solved the problem.

With the information gathered so far and the end of the project approaching, the NFF decided to hold an hour's open door session at the Church community centre to see if anyone would come and discuss flooding generally on a one to one basis. The aim was to gather any remaining feedback on risk for the community, discuss residual risk with them and provide details of signing up to the flood warning system. It was decided that there was no further time to work towards discovering if there was an appetite for a flood action group and whether it would be sustainable, but it would be a further opportunity to gather information to provide feedback. Four local residents attended.

One gentleman had a great deal of local historical knowledge. The first flood he encountered was when he was eight, the second when he was eighteen, and then a third. He told us that there are three water courses at the top of the valley and after exceptional rainfall they join and head down the Valley like a wall of water. West End was the most vulnerable at the time, but he said that so much work had been done by the Council and NRW that he felt it would never flood again. He continued that if the river built up like that again it all goes over into the park which was used as a sacrificial site. He remembered the wall being built along the Ffrwdwyltt Stream opposite Ffrwdwyllt Cottages and remembered questioning the engineer at the time because it was being built a foot lower than the original wall. The gentleman felt that this was a fundamental mistake. He also mentioned what a dreadful state the drains where in, most were blocked except two in his road that he maintains himself.

A past resident who had lived most of his life in Ffrwdwyllt Street, felt that bringing up flood risk in the area was scare mongering and that people who still have their lives ruined from flood upstream ought to be where the focus of attention should be. He worked for Tata Steel Works and said that the last remaining risk to the area was from Tata Steel but that they have now rectified the area and are conscientious in maintaining the asset.

A third resident was interested to know who we were and if the issue of the intended building of a prison was something we would be able to help with. The site planned suffered flooding at quite a depth and people had suffered flooding in their property, so concern was high. There was obviously a lot of tension in the area and the resident seemed quite stressed.

The NFF spent time explaining the residual risk in the area. To help them visualise this other people's experiences were used to help them see what could happen in an exceptional event. The sudden drop in conversation after we had spoken indicated that this was something that they perhaps had not been thought about.

We concluded that we had picked up good evidence of people's perceptions by talking to a varied amount of people gaining enough to suggest a recommended way forward.

There was a repeated theme from everyone the NFF spoke to, including the Council & NRW maintenance staff, of a real confusion as to why the NFF was in the area. It wasn't complaining or damming, more a real puzzle to people. Even when the residual risk to all was being discussed, there was still a sense of "but there are so many people in other areas that suffer", and "but no residual risk has ever been seen in decades."

Annexe 4 National Flood Forum (NFF) and Collingwood Environmental Planning (CEP) roles

National Flood Forum Background

The **National Flood Forum** is a national charity dedicated to supporting and representing communities and individuals at risk of flooding. The charity does this by:

- 1. Supporting people to prepare for flooding to prevent it or mitigate its impacts.
- 2. Helping people to recover their lives once they have been flooded.
- 3. Campaigning on behalf of flood risk communities by working with government and agencies to ensure that community perspectives in flood risk are properly addressed.

As part of the flooded community, the National Flood Forum supports communities to tackle the things that matter to them; creating hope and reducing the fear of flooding; helping people to work together to reduce flood exposure and its impacts, both physical and emotional. We do this by helping people and communities take control of their flood risk

The National Flood Forum has a compelling reputation of supporting people who are at flood risk and working with them to reduce their flood impact, reduce people's fear and anxiety and to increase hope for a good quality of life with reduced risk of the consequences of flooding. Fundamental elements to the work that the NFF do include:

- 1. A strong focus on the needs and aspirations of the communities worked with.
- 2. Independent, long-term help and support for communities to take control of their flood risk issues, rather than solving some of the issues and walking away.
- 3. The development of effective partnerships for the community, Risk Management Authorities, identified specialists and appropriate NGOs, to enable the community's voice to be heard and their vision realised. The NFF supports communities to work with the agencies and organisations who manage flood risk in a spirit of partnership and collaboration.

National Flood Forum approach to working with communities at risk of flooding

The National Flood Forum has a track record of going into the heart of flood risk areas, engaging with the community, and bringing them together to form a core group. The NFF support the group with the initial work that is needed to prepare for partnership engagement with agencies and institutions and the group is charged with disseminating messages out into their wider community. These communities then feel empowered to move issues forward positively and un-contentiously in the area, looking for ways to reduce their flood risk and prepare for a potential future flood event.

The feedback that the NFF has received from previous projects with external organisations has been that:

- They have gained a better understanding and awareness of the problems through local knowledge
- They have gained a community perspective on solutions
- They have welcomed working with a group that is non-contentious, and willing to work alongside them in partnership
- They have valued the group supporting mutual decisions, and relaying positive messages out into the wider community
- They have welcomed the group supporting the physical work on the ground, reporting and datum gathering
- They have found reduced contact by the community with them by phone and email
- They have benefitted from building congenial relationships with the community

• They have a reliable point of contact with people who are abreast with flood risk issues in their area, including during a flood event

Collingwood Environmental Planning Limited Background

CEP is an independent multidisciplinary environmental and sustainability consultancy, established in 1995, which works both within the UK and internationally. It specialises in undertaking practical social research in the context of flooding and has led many projects for DEFRA, the Environment Agency and Cabinet Office in this area. CEP is a leading advocate for the value of the social sciences within the environmental arena. A key focus has been synthesising research and understanding the implications for practice.

CEP's role in the project was to provide an independent evaluation of the work undertaken, leading to a set of recommendations for Natural Resources Wales.

Annexe 5 Flood Plan template

ACTION GROUP						
DISCUSSION POINT	WHICH AUTHORITY	SUGGESTED WAY FORWARD	DATE OF ACHIEVEMENT	UPDATE FROM LAST MEETING		
1.						
2.						
3.						