

Southampton Pathfinder Project

**Improving household and community flood
resilience in St Denys, Southampton**

Project Plan

April 2013



Project Objective	Improve household and community flood resilience using an integrated approach to managing all sources of flood risk
How will things have changed at the end of the project?	Community will be fully aware of the flood risk, prepared and self-sufficient in responding to a flood event (prior and during); Measures installed to residential properties to reduce the damages from flood events; Assistance with reducing insurance premiums; Facilities provided to enable residents to implement measures to reduce flood risk prior to and during flood events.
Expected long term impact	Community resilience to flood events; Individual financial resilience to enable quick recovery after flood events.

Rationale

The option to implement property level resistance measures was identified in the Southampton Coastal Flood & Erosion Risk Management Strategy (2012) as the preferred approach to manage tidal flood risk within the St. Denys area. A frontline flood defence scheme is not desired by the residents at present and sufficient Flood Defence Grant in Aid funding is unlikely to be attracted over the next 50 years. Given the identified significant flood risk to a number of residential properties in this area, Southampton City Council aim to help the community to reduce the risk through implementation of a property level protection scheme. However, recent engagement with residents within the community at significant risk has identified that flood risk is not limited to a tidal source as there is a reported interaction between the tide level and both groundwater and surface water in the local area. Hence, it is likely that resistance measures alone will be ineffective and there is a need to improve our understanding of the overall flood risk in this area in the short, medium and long term.

Given the nature of the potential interaction between the different sources of flooding it would be beneficial to the community (and risk management authorities) to take an integrated approach to holistically manage the overall flood risk which this community faces. Hence the proposed approach would be to work with the community to further improve the understanding of the flood risk interactions in the local area, assess and implement the most appropriate suite of measures (both resistance and resilience) to reduce the risk to individual households and empower residents to implement their own local response to flood events. The emphasis of the project would be enabling the community to become more resilient through taking ownership and engendering a feeling of control (through minimising reliance on outside organisations and implementing a pre-determined plan) to reduce physical damages and psychological distress.

Results/outputs

The expected results/outputs include:

- Improved understanding of the local hydrology and interactions between the various sources of flood risk;
- Greater awareness and acceptance among residents of the flood risk within the area;
- Reduced flood risk to households through implementation of appropriate resistance measures;
- Improved household resilience through implementation of appropriate resilience measures (capital) to enable quick recovery following flood events;
- Improved community resilience by enabling them to be prepared for a flood event and implement any necessary local response actions prior to, during and after a flood event;
- Demonstrate the quantitative risk reduction for communication with household insurance companies to assist with reducing premiums.

Beneficiaries

There are 39 residential properties in the lower Priory Road/Adelaide Road area which have been identified within the significant tidal flood risk area (1 in 50 year flood zone) in the Southampton Coastal Flood & Erosion Risk Management Strategy (2012). It is these

households who would be targeted within the project. Also, any general communications about the project will be distributed to the wider community throughout the duration of the project and any interested residents outside of the identified households will be considered with provisions included in any organised community events to enable the transferable benefits of the project to be disseminated to the wider community.

Formal consultation on the proposals within the Southampton Coastal Flood & Erosion Risk Management Strategy (2012) was undertaken for 12 weeks from November 2011 – January 2012. During this period a dedicated open day was held within the local vicinity to provide residents with an opportunity to find out more about the proposals, talk directly to the project team and give their views on the proposed option for managing tidal flood risk in their area. The option for property level protection was well received.

Current engagement work on adaptation to coastal change with the wider community in this area is being undertaken in partnership with Hampshire County Council and the Solent Forum through the CCATCH project (part of the wider EU funded Coastal Communities 2150 project) until Summer 2013. Each of the 39 identified households were invited to be involved with the CCATCH project and within the introductory information reference was made to the proposed property level protection scheme which Southampton City Council would be looking to take forward in the near future. The current engagement work is seeking to provide information to the wider community to improve understanding of present and future flood risk to the area and begin to work with residents to develop an approach for how the community will respond to flood events now and in the future. The community group have expressed the need to target any implementation of measures to reduce the risk to those within the significant flood risk area as they are the most vulnerable to lower return period flood events, as experienced in the past. It was through this engagement work that residents from the target community reported the interaction between the different sources of flooding in the local area and their desire to help themselves was expressed. The majority of the community resilience ideas put forward in this project originate from the local residents.

Methodology

Through this project we would explore and implement the most appropriate measures (resistance and/or resilience) to each property to reduce flood risk for individual households, improving the financial resilience of those households who participate. Implementation of resistance and resilience measures (where required) which will reduce the likely flood damage through prevention of water entering the buildings and enable households to recover more quickly (and less costly) if water does enter the buildings. All households will have a better understanding and ownership of the risk, and acceptance that flooding cannot be entirely prevented given the complexity of the flood sources and their interactions but they will be empowered to manage it which will also reduce unnecessary stress and the associated impacts on short/medium/long term health. Through the project we aim to provide a quantifiable reduction in risk which can be used by households to negotiate insurance premiums and/or increase insurance uptake.

By enabling residents to take ownership of developing their community response to future flood events the project will develop actions which will provide a lasting resilience to equip them with the ability to prepare for, respond and recover from flooding without the need for extensive intervention from outside agencies. The project will also enable identification of vulnerable individuals within the community who would disproportionately suffer during and after a flood event and provide a support network within the community to reduce the impacts of flooding to them.

The project will be delivered as a number of different work packages which are outlined in a later section. Where services or works have to be contracted to deliver any elements these will follow the Contract Procedure Rules.

The project will be delivered with support from the National Flood Forum (NFF). This will include involvement from the Chief Executive on the project board and a dedicated part time Community Officer in the project team (to be based within Southampton City Council's offices) to support the day-to day delivery of the project. The Community Officer will be supported by the Project Manager and the NFF's Community and Recovery Support Manager. The project governance arrangements are illustrated in Figure 1.

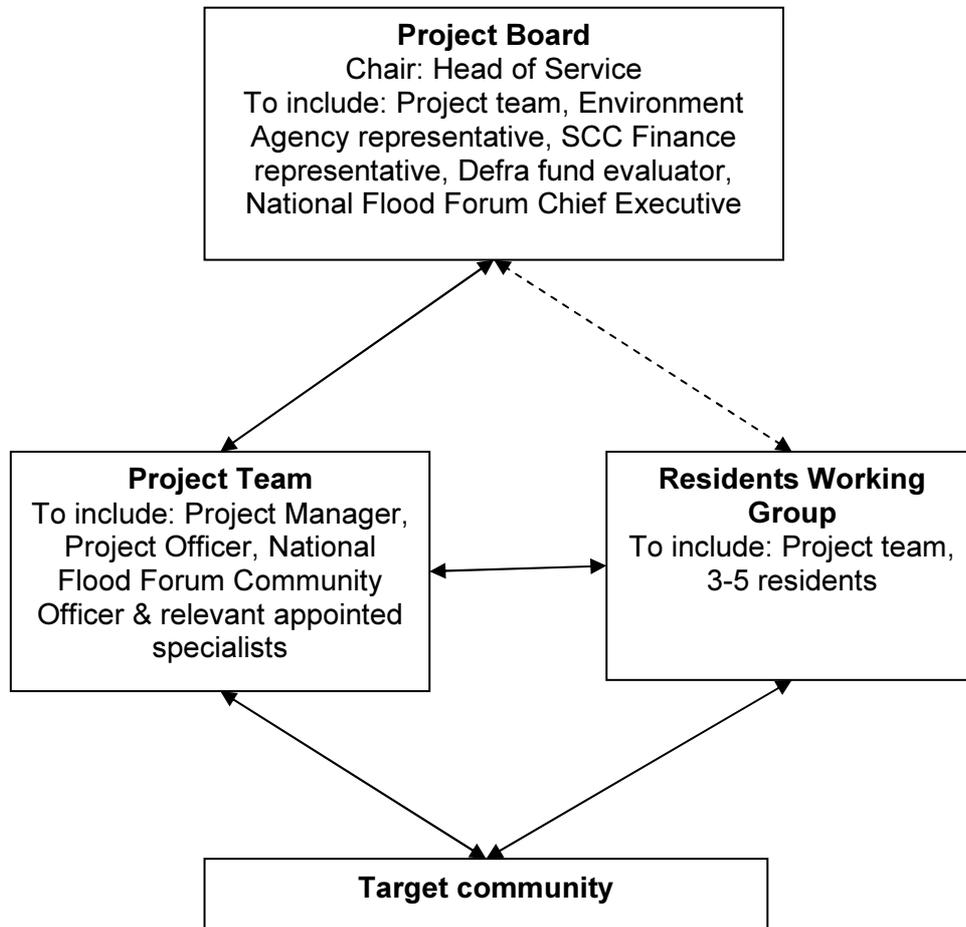
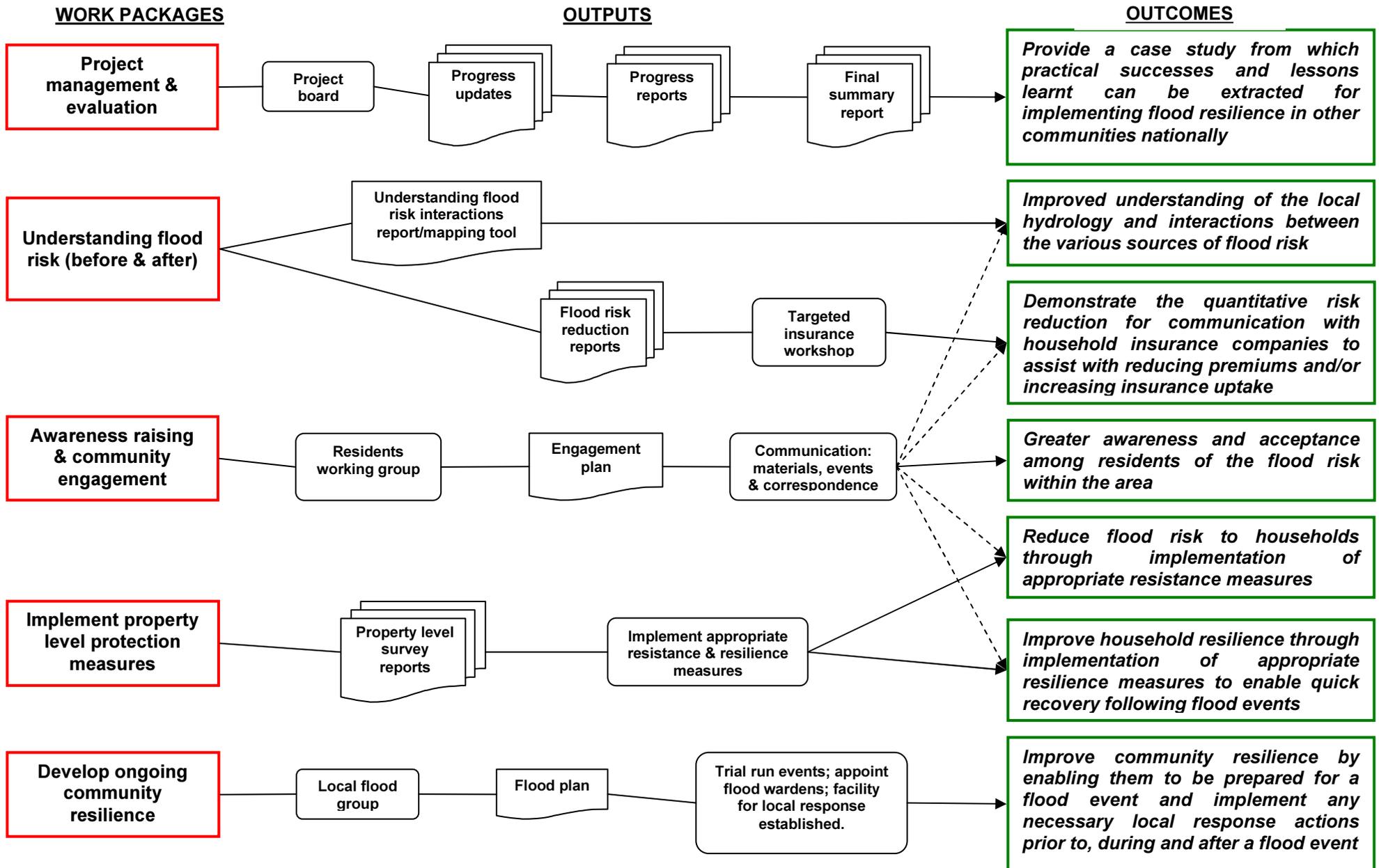


Figure 1: Project governance arrangements

Work packages



Work package	Description	Expected output(s)	How the outputs will deliver project outcomes	How the outcomes deliver the aim of the project
Project management & evaluation	Appropriate project governance and management structures are implemented to ensure the project is successfully completed to meet the identified outcomes & suitable monitoring & evaluation is undertaken at relevant stages throughout.	Establish a project board; Successes/lessons learnt log; Progress updates; Bi-annual assessment report by project board.	Provide a mechanism for monitoring & evaluating the lessons learnt/ successes throughout the duration of the project. Regular project board meetings will enable progress to be properly tracked & any issues can be addressed quickly through the hierarchy. Successful delivery of the project.	Accountability of the project board for monitoring progress will ensure the project is successful by meeting the quality, time & budget criteria of the project. Input from the working group will ensure the project is steered so the outputs meet the needs of the local community in developing resilience to flood risk.
Understanding flood risk (before & after)	Undertake investigations to establish the interaction between groundwater, tidal and surface water flood risk in the area, to determine the quantitative risk reduction following implementation of measures & to support residents with negotiating better insurance deals.	Report on the investigations into flood risk interactions in the local area; Interactive mapping tool; Individual flood risk report on the quantification of risk reduction following implementation of measures; targeted insurance workshop(s).	Information should facilitate increasing awareness and acceptance among residents of the flood risk within the area. Demonstrate a quantitative reduction in flood risk to enable effective engagement with insurance companies (with the support of an insurance specialist) leading to reduced premiums and/or increased insurance uptake.	Full understanding of the interactions between the different sources of flood risk will enable better informed engagement and awareness raising and household resilience can be tailored accordingly. Quantifying risk reduction & improving access to & affordability of insurance will demonstrate a measured improvement in household resilience.
Awareness raising & engagement with community	The community is at the heart of this project so it is important to raise awareness of the project at the outset, develop improved understanding and awareness of flood risk in the local area and encourage involvement from the residents to develop household and community resilience.	Establish a resident working group; Engagement plan; Targeted outreach to engage individual households; Awareness raising materials; Awareness raising events; Community events (meet the surveyor & supplier); Regular communication (letter/newsletter/emails).	Greater awareness & acceptance of flood risk within the area & opportunities for individual & collective action leading to increased community resilience. Maximum sign up for implementation of measures achieved from affected residents, which will help deliver maximum reduction in flood risk and improvement in household resilience.	Maximum sign up will enable household resilience to be improved across the entire target community. Shared understanding/acceptance of the risk should enhance community cohesion creating potential for successful community resilience through a willingness to work together during future flood events.
Implement resistance and/or resilience measures	Capital works to reduce flood risk and improve household resilience.	Property level flood survey completed for all participating households; Identified resistance/ resilience measures installed.	Delivering tailored resistance/resilience measures based on a comprehensive understanding of flood risk & with the active support of the local community will lead to quantifiable reductions in flood risk.	The outcomes achieved through this work package will deliver improvement of household resilience, delivering this part of the aim of the project.

Work package	Description	Expected output(s)	How the outputs will deliver project outcomes	How the outcomes deliver the aim of the project
Develop ongoing community resilience	Activities to improve community resilience through preparedness for responding prior to, during and after a flood event.	Establish a local flood group; Community trial run event; Completed flood plan; Local facility established with equipment necessary for local response to future flooding; Flood wardens appointed.	Proactive, targeted awareness raising & engagement & tailored support, advice & guidance will lead to greater awareness of flood risk & provide residents with the capacity & capability to enable individual & collective action thereby building community resilience.	The outcome achieved through this work package will deliver improvement of community resilience, delivering this part of the aim of the project.

Risk register

Risk Item	Likelihood	Consequence	Preventative Measures	Residual Likelihood	Residual Consequence	Countermeasures
Technical						
Due to urbanised nature of the frontage it is difficult to monitor groundwater levels	Med	Med - Delay to programme	1. Select appropriate site(s) at outset for monitoring. 2. Procurement methodology to consider quality heavily as well as price.	Med	Low	1. Escalate to project board. 2. Consider alternative sites nearby. 3. Report to Defra.
Modelling difficulties with interactions of different sources of flood risk	Med	Med - Delay to programme/inaccuracies in modelling or additional work to improve	1. Appoint competent specialists - procurement methodology to consider quality heavily as well as price.	Low	Low	1. Escalate to project board. 2. Consider alternatives. 3. Report to Defra.
Difficult to quantify the risk reduction	Med	Med – Unable to satisfactorily deliver an outcome of the project	1. Appoint competent specialists - procurement methodology to consider quality heavily as well as price. 2. Utilise NFF's network of contacts & understanding of insurance	Low	Low	1. Escalate to project board. 2. Consider alternatives. 3. Report to Defra.
Community engagement						
Homeowners refuse to accept the flood risk	High	High – limited number of residents signing up for resistance/resilience measures	1. Establish a residents working group. 2. Appoint interested residents as champions. 3. Targeted outreach & engagement. 4. Involvement from National Flood Forum (NFF).	Med	Med	1. Escalate to working group/project board. 2. Consider alternatives. 3. Report to Defra.

Risk Item	Likelihood	Consequence	Preventative Measures	Residual Likelihood	Residual Consequence	Countermeasures
Residents concerned about drawing attention to the flood risk issues	High	High – limited involvement with the project	1. Targeted awareness raising. 2. Involvement from the NFF. 3. Emphasise development of risk reduction report as part of the project.	Med	Med	1. Escalate to working group/project board. 2. Consider alternatives. 3. Report to Defra.
Scepticism about the effectiveness of resistance/resilience measures	Med	Med – limited number of residents signing up for resistance/resilience measures	1. Use of the demonstration house which should be developed as part of the CCATCH project. 2. Involvement from NFF. 3. Identify individual champions to promote measures to fellow residents. 4. Involve residents in design & specification. 5. Arrange meet the surveyor/supplier events to allay any concerns. 6. Ensure products are independently verified.	Low	Low	1. Escalate to working group. 2. Consider alternatives. 3. Report to Defra.
Inconvenience of disruption during implementation phase	Low	Med - limited number of residents signing up for involvement	1. Appoint interested residents as champions. 2. Arrange meet the surveyor/supplier events to allay any resident concerns.	Low	Low	1. Escalate to working group. 2. Consider alternatives. 3. Report to Defra.
People in the locality do not wish to form a flood group	High	High – progress in developing established community resilience and legacy of the project is not possible	1. Raise awareness about the benefits of establishing a flood group. 2. NFF to proactively facilitate & support establishment of local flood group. 3. Ensure regular communication with the residents working group/champions.	Low	Med	1. Escalate to working group/project board. 2. Develop a specific action plan. 3. Consider alternatives. 4. Report to Defra.
Unable to re-establish the flood warden network	Med	Med – unable to get interest in re-establishing the network	1. Identify why the network diminished previously. 2. Identify & implement appropriate measures to overcome the barriers. 3. NFF to proactively support recruitment of flood wardens including provision of tailored training.	Low	Low	1. Escalate to working group. 2. Consider alternatives. 3. Report to Defra.
Delivery						
Inexperienced surveyor/supplier	Low	High - difficulty with identifying appropriate measures; problems with technical quality.	1. Procurement methodology to consider quality heavily as well as price. 2. Ensure all products are independently verified.	Low	Med	1. Escalate to project board. 2. Consider alternatives. 3. Report to Defra.
Environmental						
Major flood effects south coast during the project	Low	High – political, public and media focus on the	1. Clear project roles and responsibilities. 2. Robust project management system. 3. Involvement from NFF.	Low	Med	1. Escalate to project board. 2. Consider

Risk Item	Likelihood	Consequence	Preventative Measures	Residual Likelihood	Residual Consequence	Countermeasures
	w	project				managing expectations. 3. Report to Defra.
Financial						
Additional activity required to deliver outputs/outcomes	Low	High – project plan cannot be delivered to the available budget	1. Establish a limit per household for spend on measures. 2. Prepare a robust budget. 3. Regular budget monitoring throughout the project.	Low	Med	1. Escalate to project board. 2. Report to Defra. 3. Reconfigure the budget.

Project milestones

The key milestones within the project (and predicted spend) include:

Milestone	Duration	Start	Finish	Predicted spend
Commencement		Mon 25/03/13	Mon 25/03/13	
Project management & evaluation	527 days	Mon 25/03/13	Tue 24/03/15	£18,000
→ Liaison with Defra/NFF	30 days	Mon 25/03/13	Fri 03/05/13	
→ Establish project board		Wed 01/05/13	Wed 01/05/13	
→ Project board meetings	8 days	Wed 01/05/13	Mon 02/02/15	£8,000
→ Project reporting	27 days	Wed 01/05/13	Tue 24/03/15	£10,000
Understanding flood risk (before & after)	399 days	Mon 03/06/13	Sat 06/12/14	£62,000
→ Appoint appropriate specialists		Mon 03/06/13	Mon 03/06/13	£1,000
→ Identify, quantify & understand flood risk interactions	100 days	Mon 03/06/13	Fri 18/10/13	£40,000
→ Appoint appropriate specialist		Wed 01/10/14	Wed 01/10/14	£1,000
→ Quantification of risk reduction	30 days	Wed 01/10/14	Tue 11/11/14	£18,000
→ Targeted insurance workshop	1 day	Sat 06/12/14	Sat 06/12/14	£2,000
Awareness raising & community engagement	309 days	Mon 03/06/13	Mon 04/08/14	£48,000
→ Establish residents working group		Mon 03/06/13	Mon 03/06/13	£1,400
→ Residents working group meetings	8 days	Mon 03/06/13	Mon 04/08/14	£5,600
→ Undertake insurance survey	10 days	Thu 01/08/13	Wed 14/08/13	£2,000
→ Engage all households (Various engagement activities)	204 days	Mon 24/06/13	Mon 31/03/14	£39,000
Implement property level resistance & resilience measures	233 days	Mon 01/07/13	Fri 16/05/14	£307,000
→ Appoint appropriate specialists		Tue 01/04/14	Tue 01/04/14	£1,000
→ Survey properties	30 days	Mon 07/04/14	Fri 16/05/14	£12,000
→ Appoint appropriate specialists		Mon 01/07/14	Mon 01/07/14	£1,000
→ Implementation of suitable measures	60 days	Mon 08/07/14	Fri 27/09/14	£293,000
Develop ongoing community resilience	246 days	Tue 01/04/14	Fri 06/03/15	£36,900
→ Engagement with residents throughout implementation phase	154 days	Tue 01/04/14	Fri 31/10/14	£2,000
→ Establish a local flood group		Fri 01/08/14	Fri 01/08/14	£1,000
→ Local flood group meetings	7 days	Mon 01/09/14	Mon 02/03/15	£4,900
→ Identify & appoint flood wardens	45 days	Mon 01/09/14	Fri 31/10/14	£1,000
→ Identify & implement local response actions	60 days	Mon 01/09/14	Fri 21/11/14	£10,000
→ Develop community flood plan	60 days	Mon 01/09/14	Fri 21/11/14	£5,000
→ Develop 'flood information pack'	30 days	Mon 01/12/14	Thu 08/01/15	£5,000
→ Flood fair (& trial run)	1 day	Sat 21/02/15	Sat 21/02/15	£6,000
→ Undertake final survey of households	10 days	Mon 23/02/15	Fri 06/03/15	£2,000

Dissemination

A communication plan will be developed at the outset of the project which will set out how, when and with whom engagement throughout the project will be directed. The proposed methods of engagement to be utilised throughout the project are detailed below:

Type of engagement	Method/activities	Purpose
Passive	Letter/Newsletter	Introduction to the project
	Email/Newsletter	Regular updates on progress throughout the project
Active	Working group	Engage & involve residents in the development & delivery of the resilience & resistance measures
	Champions/key representatives	To encourage other residents to get involved with the project
	Drop-in surgeries /one-to-one sessions	Provide information/guidance (e.g. on insurance), answer queries
	Public meetings /workshops	Provide opportunity for two way communication including sharing of information
	Community events	Create a fun interactive way to raise awareness, generate interest in the project, introduce surveyor/suppliers etc
	Local flood group	Provide the community with ownership leading to greater community resilience & a lasting legacy
	Trial runs	Test the effectiveness of the flood plan, community response & to ensure residents are confident in using their property level measures
	Flood wardens	Main points of contact to disseminate flooding information and maintain community resilience beyond the project
Training	Provide individuals with the skills & knowledge to act as a local champion and/or flood warden	

Monitoring and evaluation

An overview of the monitoring and evaluation activities for the project is detailed below:

Activity	Monitoring & evaluation
Project management & evaluation	<ul style="list-style-type: none"> • Regular monitoring of all indicators against set targets established at the outset (quantitative); • Regular progress updates to the project board (qualitative); • Bi-annual assessment by project board (qualitative); • Interim & final evaluation plan (qualitative); • Resident feedback (qualitative).
Understanding flood risk	<p>Successful delivery of the following at the end of the relevant key milestones of the project:</p> <ul style="list-style-type: none"> • Report detailing the improved understanding of the interactions between different sources of flood risk (qualitative); • Mapping facility for use as an awareness raising tool (qualitative); • Report for households outlining the quantitative risk reduction following the implementation of measures (qualitative).
Awareness raising & engagement	<ul style="list-style-type: none"> • Record the number of each meeting type (for example, project board, working group and community events) held throughout the project (quantitative); • Record attendance at all meetings/events (quantitative); • Record type & frequency of all forms of communication used (quantitative); • Record the number of key representatives appointed and their level of involvement throughout the project (quantitative); • Record the level of uptake at implementation stage (quantitative); • Types of engagement tools utilised (quantitative); • Engagement plan produced, implemented and reviewed periodically throughout the project (qualitative);

	<ul style="list-style-type: none"> • Resident feedback (qualitative).
Implementation of measures	<ul style="list-style-type: none"> • Record the type and number of resistance/resilience measures implemented in each property (quantitative); • Risk reduction for households/community (quantitative); • Resident feedback (qualitative).
Influence on flooding behaviour – improved household & community resilience	<ul style="list-style-type: none"> • Initial household insurance survey – establish baseline (qualitative); • Local flood group established (qualitative); • Community flood plan (qualitative); • Local facility developed to enable the community to implement local response actions during flood events (qualitative) • Record the number of residents involved in a trial run event (quantitative); • Undertake a survey of households to gather information regarding level of awareness following the project, preparedness for a flood event, effects on insurance uptake /premiums, their opinions on the successes of the project and most effective method of communication (quantitative & qualitative).

Legacy

The legacy of this project will be extremely important as the ability for households and the community to remain resilient will require all residents to be fully aware of the risks, the established measures that will be in place in order to manage these risks and knowledge about their role prior to and during a flood event. In order to deliver this it is the ambition to support the following actions throughout and prior to the end of the project:

- Establish a local flood group & continue the links between SCC, other risk management authorities and local residents. NFF will continue to provide support to the flood group after the project through their existing networks & support packages.
- Re-establish the flood warden network. NFF will continue to provide support to the flood wardens after the project through their existing networks & support packages.
- Develop a 'flood information pack' tailored to each household which outlines the flood risk in the local area, the measures which have been implemented within their property, a guide on how to use these measures, the community flood plan, contact details of the appointed flood warden(s) and details of the next flood fair & trial run, which is distributed to all existing residents prior to completion of the project. Through the local flood group, any new residents who move to any of the targeted properties in the future would be provided with an updated pack.
- Develop an annual flood fair in the community, organised by the local flood group, which would include a trial run to ensure any new residents to the area are aware of the risk and fully informed about the established community response to flood events.