



Ribble Valley District Flood Report

Recommended Actions

February 2017

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1. Background:

As a Lead Local Flood Authority, Lancashire County Council has a role in coordinating flood risk activities and ensuring the free flow of communication and collaborative works. In order to help achieve this, Lancashire County Council and relevant risk management authorities meet regularly to discuss local flooding issues and to identify opportunities for managing future flood risks. This has worked very well up to now and has allowed risk management authorities to work closely together to tackle often complex and challenging situations. However following the significant flooding that hit Lancashire in December 2015, it became evident that improvements could be made to the way in which these messages get communicated to affected communities.

As such, Lancashire County Council has now developed a series of district level reports which aim to provide affected communities with information about what relevant risk management authorities are doing in their areas to help manage the risk of flooding from a variety of sources. These reports will identify opportunities for further investigation and investment, and will provide concerned homeowners and businesses with information about what they can do to help protect their own properties from flooding in the future. These reports will be compiled and published by the Lead Local Flood Authority based on data that has been provided by relevant risk management authorities.

2. Key Definitions

The Risk Management Authorities

The risk management authorities are identified in the Flood and Water Management Act, 2010 (FMWA) as follows:

- a) The Environment Agency (EA),
- b) The lead local flood authority,
- c) A district council for an area for which there is no unitary authority,
- d) An internal drainage board,
- e) A water company, and
- f) A highway authority.

Each of these organisations has powers and duties under various legislation and regulations for the responsible management of natural water, flood risk and in some cases coastal erosion. The FMWA requires all the risk management authorities to cooperate with other relevant authorities in the exercise of their flood and coastal erosion risk management functions. In Lancashire, the RMAs support partnership working in the following ways:

- at operational levels by joint investigations and through the Making Space for Water meetings;
- at tactical level by sharing priorities and direction between organisational managers, and
- at strategic level by engaging with Councillors/Cabinet Members/Senior Managers.

Lancashire, Blackpool and Blackburn-with-Darwen are also represented on the North West Regional Flood and Coastal Committee where cross-boundary projects, resources and data are shared with Cumbria, Greater Manchester, Merseyside and Cheshire.

The village of Earby in Pendle District is a special case in that it lies within a river catchment that falls towards North Yorkshire, so its local EA services are supplied through the Yorkshire team. This gives the Lancashire partnership a direct connection to the Yorkshire Regional Flood & Coastal Committee. Earby also receives services from the Earby and Salterforth Internal Drainage Board (IDB), which

replaces a number of the lead local flood authority functions. These functions are further explored in Section 3 of this report.

The Risk Management Functions

The risk management authorities have responsibility for flood risk management functions as defined under Section 4 (2) of the FWMA:

- a) a function under this Part,
- b) a function under section 159 or 160 of the Water Resources Act 1991,
- c) a flood defence function within the meaning of section 221 of that Act,
- d) a function under the Land Drainage Act 1991,
- e) a function under section 100, 101, 110 or 339 of the Highways Act 1980, and
- f) any other function, under an enactment, specified for the purposes of this section by order made by the Minister.

Riparian Landowners

The legal term 'riparian' is applied to landowners who own land adjoining or containing a river or watercourse. They have certain rights to use the water flowing across their land for their own purposes, and in regard to flood risk management they also have a number of responsibilities, including the following:

- to maintain the bed and banks of the watercourse, and also the trees and shrubs growing on the banks;
- to clear any debris, even if it did not originate from their land. This debris may be natural or man-made;
- to keep any structures within their ownership clear of debris. These structures include culverts, trash screens, weirs and mill gates.

If riparian landowners do not fulfil their responsibilities they may face enforcement action taken by the relevant risk management authority.

Interconnections between responsibilities

Public sewers in Lancashire are principally the responsibility of United Utilities plc or Yorkshire Water plc. Copies of the record maps indicating the location of public sewers in Lancashire are held in the water companies' head offices. These companies also keep records of pumping stations and any water treatment works which form part of the public sewage system.

Private drainage systems are the responsibility of each owner whose property it drains. Where more than one property uses a private pipe, responsibility is normally shared proportionately. The private system comprises all the pipes up to the point of connection with a public sewer (this can include the entire system where connected to a septic tank, cesspool or soakaway). Formal records indicating the location of private drainage systems are not held by any RMA. The deeds of a property may include details.

The highway surface water drainage of all adopted public roads, other than trunk roads or motorways, is the responsibility of LCC as the local highway authority, including roadside drainage gullies and certain roadside ditches. Drainage from trunk roads and motorways is the responsibility of Highways England (formerly the Highway Agency). Drainage of private unadopted roads is normally the responsibility of private property owners who make use of or adjoin the road.

Land drainage comprises systems of rivers, watercourses, ditches, culverts, pipes, lakes and ponds intended to drain water resulting from rainfall and flows from underground sources. Typically the

primary responsibility for maintaining responsible flows in land drainage systems lies with the riparian owner or owners, with the LLFA, EA, IDB and local councils holding enforcement powers to use if the land owner/s default in their duties.

All drainage systems eventually discharge into the sea as the lowest possible point for water to collect. In Lancashire, this is at Morecambe Bay or the Irish Sea directly.

All drainage networks are formed from combinations of these systems to overcome historic demands of efficiency, simplicity and convenience. For example, a highway gully may well connect to a length of highway drainage pipe before connecting to a private ditch, or a public surface water sewer, or directly to a main river. The original reasoning for these arrangements may now be forgotten or inappropriate for current needs, but the physical interconnection of drainage systems means that it is often impossible to tell just from looking at flood water exactly where the barrier to flow arises and therefore exactly which organisation may need to take remedial action.

It is therefore vital for the RMAs to share information and collaborate during investigations, and for the investigations to be allocated to the appropriate organisation to lead. Where 'appropriateness' is not immediately clear, the LLFA will usually take the lead until better information is available.

3. Key Functions of the Risk Management Authorities

The Environment Agency

The flood risk management responsibilities of the EA include the following:

- a) strategic overview for all forms of flooding;
- b) provision of a National Strategy for Flood and Coastal Erosion Risk Management (FCERM) to cover all forms of flooding;
- c) a power to request information from third parties in connection with flood risk management duties. Risk management authorities have a duty to co-operate with the EA in the provision of such information;
- d) a duty to co-operate with other relevant authorities in the exercise of flood risk management functions, which may include the sharing of information with other relevant authorities;
- e) a duty to have regard to Local Flood Risk Management Strategies;
- f) a duty to be subject to scrutiny from local flood authorities' democratic processes;
- g) responsibility for managing coastal flooding;
- h) responsibility for managing fluvial flooding from main rivers;
- i) responsibility for issuing environmental permits for work that might impact on main river flows;
- j) responsibility for maintaining its own flood risk management assets including pumps and flood basins;
- k) updated provisions for the regulation of reservoirs;
- l) permissive powers to carry out maintenance work on main rivers under Section 165 of the Water Resources Act 1991;
- m) the provision of flood forecasting and warning services;
- n) the provision of flood maps;
- o) the provision of flood related information and advice;
- p) investment in flood defences, supplemented through partnership funding where appropriate;
- q) a power to take enforcement action where flow in a main river has been impeded and may cause a flood risk.

Lancashire County Council

LCC has a dual risk management role, in its capacity as both highway authority and LLFA. The County Council as the LLFA has a number of duties and powers, in addition to the duty to investigate flooding set out above. These include:

- a) a duty to develop, maintain, apply, monitor and consult on an LFRMS for its area (copy available from the LCC website www.lancashire.gov.uk);
- b) a duty to develop and maintain a register of structures or features which might impact on flood risk, including ownership and condition (the Flood Risk Asset Register is available on the LCC website www.lancashire.gov.uk);
- c) the management of the consenting process for works that are likely to affect the flow characteristics of ordinary watercourses (Land Drainage Consent – guidance available on the LCC website www.lancashire.gov.uk);
- d) a power to undertake works for managing flood risk from surface run-off or groundwater;
- e) a power to request information from third parties in connection with flood risk management duties. RMAs have a duty to co-operate with the LLFA in the provision of such information;
- f) a power to designate structures and features that affect flooding or coastal erosion.
- g) a power to take enforcement action where there is an obstruction to an ordinary watercourse that may cause a flood risk.

LCC as the local highway authority has a duty under the Highways Act 1980 to maintain highways that are maintainable at public expense. This includes responsibility for highway drainage, as well as for the condition and safety for users of all highway assets including roads, footways, bridges and culverts, street lighting and traffic signals.

As local highway authority, LCC has a duty to co-operate with other relevant authorities in the exercise of flood risk management functions, which may include the sharing of information with other relevant authorities

LCC also has private responsibilities for land drainage where it is a land owner.

City and Borough Councils

The flood risk management responsibilities of City and Borough councils include the following:

- a) a power to designate structures and features that affect flooding or coastal erosion;
- b) a duty to exercise their flood risk management functions in a manner consistent with local and national strategies, and to have regard to those strategies in their other functions;
- c) a duty to be subject to scrutiny from LLFAs' democratic processes;
- d) a power to do works on ordinary watercourses
- e) a duty to co-operate with other relevant authorities in the exercise of flood risk management functions, which may include the sharing of information with other relevant authorities.

City and Borough Councils have a number of wider functions and roles that can be relevant to flood risk management and response. These include local planning, housing, environmental health and community engagement activity, as well as private responsibilities for land drainage where they are a land owner.

Internal Drainage Boards

An Internal Drainage Board (IDB) is a local public authority established in areas of special drainage need in England and Wales. IDBs have permissive powers to manage water levels within their respective drainage districts. IDBs undertake works to reduce flood risk to people and property and manage water levels to meet local needs. The expenses of an IDB are predominantly funded by the local beneficiaries of the water level management work they provide. Each IDB sets a budget for its planned work in the forthcoming year and any investments it needs to make for future projects. More information about IDBs can be found from the Association of Drainage Authorities (www.ada.org.uk).

Water Companies

The flood risk management responsibilities of water companies (in Lancashire: United Utilities plc and Yorkshire Water plc) include the following:

- a) a duty as sewage undertakers under Section 94 of the Water Industry Act 1991, to provide & maintain sewers for the drainage of buildings and associated paved areas within property boundaries;
- b) responsibility as sewerage undertakers for lateral drains and public sewers, the latter being defined as a conduit, normally a pipe that is vested in a Water and Sewerage Company, or predecessor, that drains two or more properties and conveys foul, surface water or combined sewage from one point to another point and discharges via a positive outfall;
- c) responsibility for any flooding which is directly caused by its assets – i.e. its water or sewerage pipes;
- d) a duty to be subject to scrutiny from local flood authorities' democratic processes;
- e) a requirement to exercise flood risk management functions in a manner consistent with the national strategy and guidance and have regard to the local strategies and guidance;
- f) a duty to co-operate with other relevant authorities in the exercise of flood risk management functions, which may include the sharing of information with other relevant authorities.

Civil Contingencies Responsibilities

The RMAs listed above (with the exception of the IDBs) have additional responsibilities under the Civil Contingencies Act 2004, which provides the statutory basis for dealing with a response to flooding in emergency situations. These include flood preparedness planning and flood response.

4. Recommended Actions:

This report is a living document and we want to continue working with relevant risk management authorities and communities to help develop it further. You can help us to do this by providing any additional information or evidence that you may have, along with any further ideas and actions that you feel should be included. It may not be possible to take all ideas and actions forward, but they will all be appropriately considered by the relevant risk management authorities. Please let us know by emailing highways@lancashire.gov.uk

County-wide Actions:

Who	What is needed and when?	What has been done and/or what will be done?
All RMAs	<p>In advance of forecast flood conditions, those risk management authorities with responsibility for flood risk-related assets, public infrastructure and/or flood defences should take preparatory action to minimise the risk of damage to their own property as well as the properties of others who rely on these assets for protection.</p>	<p>In advance of the December 2015 floods, those risk management authorities with responsibility for flood risk-related assets, public infrastructure and/or flood defences carried out a range of activities to minimise the risk of damage to their own property as well as the properties of others who rely on those assets for protection. Following its investigation in to the December 2015 floods, the Lead Local Flood Authority concluded that all risk management authorities that had relevant flood risk functions before the December 2015 floods, exercised those functions in regard to the flood event - no such functions are still to be exercised. Examples of planned preparatory activities included (but are not limited to):</p> <ul style="list-style-type: none"> • arranging for close monitoring of weather conditions; • bringing in extra staff resources to be available on the ground or within incident rooms, and out of normal working hours; • issuing flood warnings; • clearing gullies and trash screens where possible; • activating flood basins and pumps where possible; • establishing communications with partner organisations; • activating other pre-planned actions. <p>Whilst risk management authorities remain committed to providing the best possible protection for homes and businesses, it is recognised that the frequency and intensity of rainfall events is changing; making them increasingly difficult to predict and prepare for. In fact, December 2015 saw the highest river flow levels ever recorded, the wettest December on record and also the wettest calendar month overall since records began in 1910. This resulted in a huge impact upon people, homes and businesses, with over 2,500 properties flooded in Lancashire alone. The changing nature of these rainfall events means that flooding can occur almost anywhere and with very little warning. As such, homeowners and businesses are being encouraged to consider property level flood resilience measures to reduce the risk of flood water entering their properties and to speed up the recovery if it does. Property level flood resilience measures can be installed as either a preparatory measure for properties at risk of flooding, or during the repair of buildings after they have been flooded. Further advice regarding this can be found via the following link: http://www.lancashire.gov.uk/flooding.</p>

<p>All RMAs</p>	<p>Upon being notified of a flood event, those risk management authorities with relevant flood risk management functions should provide advice and support to local communities to help minimise the impact of the flooding and to help residents and businesses to get back on their feet.</p>	<p>The extreme and unprecedented storms and rainfall events of November and December 2015 caused flooding throughout December to over 2,500 properties in Lancashire. These floods also damaged private gardens, garages and out-buildings, business premises, agricultural property and many items of critical public infrastructure including roads, bridges and retaining walls, water treatment plants, power and communications installations, and essential community buildings such as schools, village and town halls.</p> <p>In order to help minimise the impact of the flooding across Lancashire, those risk management authorities with responsibilities under the Civil Contingencies Act 2004 acted under the direction of the Lancashire Resilience Forum (LRF) to provide practical support to the police, fire and rescue and NHS. This involved helping the emergency services contact vulnerable people to make sure they were safe; help evacuate people from flooded areas; close flooded roads and bridges; put diversions in place and clear blocked drains on the road. Sandbags were also provided by some district councils. Following its investigation in to the December 2015 floods, the Lead Local Flood Authority concluded that all risk management authorities that had relevant flood risk functions during the December 2015 floods, exercised those functions in regard to the flood event - no such functions are still to be exercised.</p> <p>Despite the best efforts of the emergency services and relevant risk management authorities, the impact of the December 2015 floods was significant. In order to help residents and businesses get back on their feet as quickly as possible, risk management authorities arranged and/or attended a number of 'drop-in' events that were held around the county during January and February 2016. These included:</p> <ul style="list-style-type: none"> 21 Jan 2016: New Road Community Centre in Pendle. 25 Jan 2016: Parbold Village Hall in West Lancashire. 26 Jan 2016: Our Lady's Catholic College in Lancaster. 27 Jan 2016: The Grapes Public House in Wyre. 28 Jan 2016: Chorley Town Hall in Chorley. 01 Feb 2016: Fiveways Public House in West Lancashire. 02 Feb 2016: The Civic Centre in South Ribble. 03 Feb 2016: St Leonard's Primary School in Burnley. 10 Feb 2016: Whalley in Ribble Valley. 10 Feb 2016: Irwell Vale in Rossendale. <p>The aim of these events was to provide information and support to residents and businesses, as well as to gather eye-witness reports to help improve the collective understanding of the main flood mechanisms. Affected residents were invited to discuss their issues with the relevant risk management authorities and were offered advice and support on flood recovery, flood warnings, property flood resilience measures and opportunities for accessing flood relief grants and other funding mechanisms. Where possible, relevant risk management authorities also attended many community led meetings to further explore local conditions and to identify ways of managing local flood risk. Residents were given support and advice regarding the formation of new Flood Action Groups and the development of community flood plans.</p> <p>Since December 2015, many hundreds more households have signed up to receive direct flood warnings from the Environment Agency and many new Flood Action Groups have formed to help residents and other community members to help each other, and to activate local Flood Plans. Lancashire County Council's own communications have been improved to give more useful and interactive information in advance of, during and after a flood event and the multi-agency response to major flood emergencies is in the process of adapting to take account of key lessons learned from December 2015 events.</p>
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<p>LCC LLFA</p>	<p>Following a flood event, the Lead Local Flood Authority should record details of the flood event and should establish a reliable flood timeline in order to assess whether it triggers an investigation under Section 19 of the Flood and Water Management Act, 2010. If an investigation is triggered, then this should be commenced at the earliest opportunity and the findings from the investigation should be published in a timely manner.</p>	<p>Together with other risk management authorities, Lancashire County Council has recorded and verified a significant amount of data relating to the December 2015 floods in Lancashire. This data has been used to establish a reliable flood timeline and to assess whether the event triggers an investigation under Section 19 of the Flood and Water Management Act, 2010 (known as Section 19 investigations). Despite the best efforts of all risk management authorities, some additional data identifying flooded property may yet come to light. This will need to be collected when opportunities arise and whilst other functions are being carried out.</p> <p>In assessing whether a Section 19 investigation is appropriate, the Lead Local Flood Authority considers the criteria outlined within the flood investigation policy which was published by Lancashire County Council in October 2014. This policy outlines the legal requirements to investigate flood incidents and provides details on the criteria applied in deciding whether or not an investigation is appropriate. A copy of this policy can be accessed via the following link: http://www.lancashire.gov.uk/media/392349/Flood-Investigation-Policy.pdf</p> <p>Due to the geographical distribution and magnitude of the events, it was concluded that a detailed investigation for each affected community wouldn't be a practical use of resources. As such, it was decided that the most efficient approach was to initiate a countywide investigation that encompassed all of the communities known to have been affected during December 2015; including communities which would have otherwise failed to meet the criteria for a Section 19 investigation. In delivering its countywide investigation, the Lead Local Flood Authority adopted a two-staged approach to ensure that it met its legal obligations as a minimum, but to also ensure that affected communities were identified and that appropriate prioritised actions were put in place.</p> <p>Stage one investigated the two major storm events in December 2015 and identified all known communities that experienced flooding as a result of these events, focussing on statutory responsibilities and the duties of flood risk management authorities during the events. The findings of this investigation have now been published and can be accessed via the links below. It should be noted that the Lead Local Flood Authority's responsibility for investigation only extends as far as establishing which of the risk management authorities has a flood risk management function and whether they have, or will be, exercising that function. The publication of this report therefore discharges the Lead Local Flood Authority's responsibility under Section 19 of the Flood and Water Management Act, 2010.</p> <p>Report: http://council.lancashire.gov.uk/documents/s96528/Annex%201.pdf</p> <p>Appendix: http://council.lancashire.gov.uk/documents/s96529/Appendix%20A.pdf</p> <p>Stage two reports on the progress of all recommended actions which have been identified by relevant risk management authorities following the December 2015 floods. This allows communities to see progress and resolution of as many issues as possible within each of the individual communities listed in Appendix A. The 'stage two' reports will be compiled and published by the Lead Local Flood Authority based on data provided by relevant risk management authorities. Whilst the reports do not form part of the formal Section 19 process, they are recognised as a necessary follow-on from the Section 19 investigation and from the commitments made under the Lancashire and Blackpool Flood Risk Management Strategy. An updated version of the 'stage two' reports will be published by the Lead Local Flood Authority.</p>
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District-wide Actions:

Who	What is needed?	What has been done and/or what will be done?	Status
LCC as LLFA	Review Surface Water Management Plan (Level 2) for Ribble Valley District	LCC consultants have reviewed all known surface water flood risks in the District and propose areas for deeper investigation leading to investment in improvement schemes where these would be cost-effective.	Complete

Community Actions:

MSFW146: Barrow (Barrow Brook Area)

1 property is known to have suffered from internal flooding at this location on 26th December 2015, as did the local primary school, and a report has recently been made relating to commercial premises. It seems likely from other sources of information that other homes were flooded but haven't been reported to Ribble Valley District Council yet. The key factor appears to have been overflow from Barrow Lodge, which contributed to access problems when local roads were submerged.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. In January 2016, highway gullies on Whalley Road were found to be in need of significant cleaning work which has since been completed.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a site specific investigation to gain a better understanding of the local issues. This investigation will be programmed and delivered by the Lead Local Flood Authority – however, the scope of the investigation and target for delivery is yet to be determined. In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
LCC LLFA	The Lead Local Flood Authority will programme and deliver a site specific investigation to gain a better understanding of the local issues. The scope of the investigation and target for delivery is yet to be determined.	The Lead Local Flood Authority is in the process of determining the scope of investigation required at this location. Once the scope of investigation has been determined, the Lead Local Flood Authority will then be better placed to provide further details relating to the investigation, including expected targets for delivery. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW148: Barrow (Cockerill Terrace Area)

2 properties are known to have suffered from internal flooding at this location on 26th December 2015.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. No such assets have been identified within this community.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a site specific investigation to gain a better understanding of the local issues. This investigation will be programmed and delivered by the Lead Local Flood Authority – however, the scope of the investigation and target for delivery is yet to be determined. In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
LCC LLFA	The Lead Local Flood Authority will programme and deliver a site specific investigation to gain a better understanding of the local issues. The scope of the investigation and target for delivery is yet to be determined.	The Lead Local Flood Authority is in the process of determining the scope of investigation required at this location. Once the scope of investigation has been determined, the Lead Local Flood Authority will then be better placed to provide further details relating to the investigation, including expected targets for delivery. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW261: Billington

50 properties are known to have suffered from internal flooding at this location on 26th December 2015. Preliminary reports indicate that the primary sources of the flooding were a combination of overland surface water flows and the River Calder which overtopped its banks.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. No such assets have been identified within this community.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a modelling and appraisal study to look at options for further reducing the risk of fluvial flooding in this community. The modelling and appraisal study will be programmed and delivered by the Environment Agency; though the scope and target for delivery is yet to be determined. It has also been concluded that a site investigation will be required to gain a better understanding of the surface water drainage systems in the areas that have been affected by flooding. This investigation will be jointly led by the Lead Local Flood Authority and Lancashire Highways and is planned to be delivered this financial year (2016/17). In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
EA	The Environment Agency will programme and deliver a modelling and appraisal study to look at options for further reducing the risk of fluvial flooding at this location.	The Environment Agency started work in mid-January 2017 to look at the feasibility of Government-funded measures to better protect Billington from flooding from the River Calder. This initial study (or 'Strategic Outline Case') of the Calder Review, should take around 6 months to complete and will include the following: <ul style="list-style-type: none"> • A thorough review of the modelling of flood risk for Billington to ensure that the Environment Agencies flood maps are fully up to date and use the best available techniques to accurately show the areas at risk. This work will also look into the flood event of 26th December 2015, and will determine the return period of that event. 	Open

		<ul style="list-style-type: none"> • An assessment of properties and infrastructure at risk of flooding, as well as the economic damages in Billington associated with flood events of various magnitude (this allows the Environment Agency to compare the cost of any work on the ground with the benefits in avoided damages that such work would provide). • An identification of all potential ways to better manage flood risk in Billington that could attract Government funding, before refining this down to a shortlist (3 or 4) of the most feasible and realistic options. This will include providing approximate costs, as well as the level of Government funding that each option would attract, and the subsequent partnership funding contributions that would also be needed for each to move forward and be implemented on the ground. <p>This stage of the Calder Review is the first in a series of steps that would be required to progress to a flood scheme potentially being built. Following this initial stage, the Environment Agency would need to secure funding to progress to the 'Outline Business Case'. This is where the Environment Agency would develop the preferred option/s further, carry out detailed design, secure any required permissions, finalise agreements for any required partnership funding contributions, and start engaging with suitable contractors to obtain likely costings.</p>	
LCC	In its joint roles as Lead Local Flood Authority and Lancashire Highways will jointly programme a site investigation of the surface water drainage systems in the area affected by flooding. The first stage of the investigation is planned to be delivered this financial year (2016/17).	The Lead Local Flood Authority has completed its initial investigation of the surface water drainage network at this location and the findings have been shared with the Whalley and Billington Flood Action Group. Subsequent discussions with the Flood Action Group have identified the need to expand the investigation to include other surface water drainage networks in the area. The Lead Local Flood Authority will consult with the Flood Action Group and other relevant risk management authorities as part of this wider investigation. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW225: Clitheroe

8 properties are known to have suffered from internal flooding at this location on 26th December 2015.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. Risk management authorities have identified the following works within this community: <ul style="list-style-type: none"> • Trash screens - The Environment Agency has carried out routine maintenance on 'at risk' main river trash screens located within the area as well as continuing to clear trash screens prior to anticipated flood events 	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a site specific investigation to gain a better understanding of the local issues. This investigation will be programmed and delivered by the Lead Local Flood Authority – however, the scope of the investigation and target for delivery is yet to be determined. In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
LCC LLFA	The Lead Local Flood Authority will programme and deliver a site specific investigation to gain a better understanding of the local issues. The scope of the investigation and target for delivery is yet to be determined.	The Lead Local Flood Authority is still in the process of determining the scope of investigation required at this location. Once the scope of investigation has been determined, the Lead Local Flood Authority will then be better placed to provide further details relating to the investigation, including expected targets for delivery. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW176: Longridge

1 property is known to have suffered from internal flooding at this location on 5th December 2015 and
1 property is known to have suffered from internal flooding at this location on 26th December 2015.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. No such assets have been identified within this community.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a site specific investigation to gain a better understanding of the local issues. This investigation will be programmed and delivered by the Lead Local Flood Authority – however, the scope of the investigation and target for delivery is yet to be determined. In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
LCC LLFA	The Lead Local Flood Authority will programme and deliver a site specific investigation to gain a better understanding of the local issues. The scope of the investigation and target for delivery is yet to be determined.	The Lead Local Flood Authority is in the process of determining the scope of investigation required at this location. Once the scope of investigation has been determined, the Lead Local Flood Authority will then be better placed to provide further details relating to the investigation, including expected targets for delivery. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW140: Read

3 properties are known to have suffered from internal flooding at this location on 26th December 2015. Preliminary reports indicate that the primary source of the flooding was the River Calder which overtopped its banks.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. No such assets have been identified within this community.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a site specific investigation to gain a better understanding of the local issues. This investigation will be programmed and delivered by the Lead Local Flood Authority – however, the scope of the investigation and target for delivery is yet to be determined. In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
LCC LLFA	The Lead Local Flood Authority will programme and deliver a site specific investigation to gain a better understanding of the local issues. The scope of the investigation and target for delivery is yet to be determined.	The Lead Local Flood Authority is in the process of determining the scope of investigation required at this location. Once the scope of investigation has been determined, the Lead Local Flood Authority will then be better placed to provide further details relating to the investigation, including expected targets for delivery. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW139: Ribchester

17 properties are known to have suffered from internal flooding at this location on 26th December 2015. Preliminary reports indicate that the primary source of flooding was Boyce's Brook, Duddel Brook and the River Ribble which overtopped its banks.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. No such assets have been identified within this community.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes an assessment to look at options for further reducing the risk of fluvial flooding at this location. This assessment will be programmed and delivered by the Environment Agency – though the scope of the assessment and target for delivery is yet to be determined. In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete
EA	The Environment Agency will programme and deliver an assessment to look at options for further reducing the risk of fluvial flooding at this location. The scope of the investigation and target for delivery is yet to be determined.	The Environment Agency is in the process of determining the scope of assessment required at this location. Once the scope has been determined, the Environment Agency will then be better placed to provide further details, including expected targets for delivery. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.	Open

MSFW93: Whalley

210 properties are known to have suffered from internal flooding at this location during December 2015. 11 properties are known to have flooded internally on 5th December 2015 and 3 properties are known to have flooded internally on 12th December 2015. Preliminary reports indicate that the primary source of the flooding was the Ordinary Watercourse adjacent to Brookside Close which overtopped its banks. 196 properties are known to have flooded internally on 26th December 2015. Preliminary reports indicate that the primary source of that flooding incident was the River Calder which overtopped its banks.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. Risk management authorities have identified the following works within this community: <ul style="list-style-type: none"> • Trash screens - The trash screen located at the junction between King Street and Brookside Close was inspected and maintained by Lancashire Highways following the flood event. The trash screen is now on a weekly inspection list and will be maintained by Lancashire Highways when necessary. 	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that further action will be required in response to this flood event. This includes a modelling and appraisal study to look at options for further reducing the risk of both fluvial and surface water flooding in this community. The Environment Agency will lead on a modelling and appraisal study of the fluvial flood risks and the Lead Local Flood Authority will lead on a modelling and appraisal study of surface water flood risks. The scope and target for delivery for these studies is yet to be determined. It has also been concluded that a site investigation will be required to gain a better understanding of the surface water drainage systems in the areas that have been affected by flooding. This investigation will be jointly led by the Lead Local Flood Authority and Lancashire Highways and is planned to be delivered this financial year (2016/17). In the meantime, the Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures in order to further reduce the risk of flood water entering their property in the future. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete

EA	<p>The Environment Agency will programme and deliver a modelling and appraisal study to look at options for further reducing the risk of fluvial flooding at this location. The scope of the study and target for delivery is yet to be determined.</p>	<p>The Environment Agency started work in mid-January 2017 to look at the feasibility of Government-funded measures to better protect Whalley from flooding from the River Calder. This initial study (or 'Strategic Outline Case') of the Calder Review, should take around 6 months to complete and will include the following:</p> <ul style="list-style-type: none"> • A thorough review of the modelling of flood risk for Whalley to ensure that the Environment Agencies flood maps are fully up to date and use the best available techniques to accurately show the areas at risk. This work will also look into the flood event of 26th December 2015, and will determine the return period of that event. • An assessment of properties and infrastructure at risk of flooding, as well as the economic damages in Whalley associated with flood events of various magnitude (this allows the Environment Agency to compare the cost of any work on the ground with the benefits in avoided damages that such work would provide). • An identification of all potential ways to better manage flood risk in Whalley that could attract Government funding, before refining this down to a shortlist (3 or 4) of the most feasible and realistic options. This will include providing approximate costs, as well as the level of Government funding that each option would attract, and the subsequent partnership funding contributions that would also be needed for each to move forward and be implemented on the ground. <p>This stage of the Calder Review is the first in a series of steps that would be required to progress to a flood scheme potentially being built. Following this initial stage, the Environment Agency would need to secure funding to progress to the 'Outline Business Case'. This is where the Environment Agency would develop the preferred option/s further, carry out detailed design, secure any required permissions, finalise agreements for any required partnership funding contributions, and start engaging with suitable contractors to obtain likely costings.</p>	Open
LCC	<p>The Lead Local Flood Authority and Lancashire Highways will jointly programme a site investigation of the surface water drainage systems in the area affected by flooding. The investigation is planned to be delivered this financial year (2016/17).</p>	<p>The Lead Local Flood Authority has completed its investigation at this location and has identified concluded that the magnitude and intensity of the rainfall event was likely to be the primary cause of the flooding at this location. No further investigation is planned by the Lead Local Flood Authority at this time. The Lead Local Flood Authority will continue to monitor this area and will reassess its position on this should any further flooding be reported in the future.</p> <p>The Lead Local Flood Authority has completed its investigation of the key surface water drainage network at this location and the findings have been shared with the Whalley and Billington Flood Action Group. The investigation identified a number of potential opportunities for managing the risk of flooding over the short, medium and long term. Further details regarding this can be found below.</p>	Complete

<p>LCC LLFA</p>	<p>The Lead Local Flood Authority will programme and deliver a modelling and appraisal study to look at options for further reducing the risk of surface water flooding at this location. The scope of the study and target for delivery is yet to be determined.</p>	<p>Flood risk management authorities can submit projects for flood and coastal erosion risk management (FCERM) grant in aid, allowing them to get financial support to deliver medium to long term flood mitigation projects in areas at risk of flooding. In order to access this funding, flood risk management authorities are required to submit their proposals to the Environment Agency for inclusion in their programme of schemes. FCERM projects and strategies must have technical and financial approval from the Environment Agency before risk management authorities can claim and spend FCERM grant in aid. Further information regarding this process can be found via the following link: https://www.gov.uk/guidance/flood-and-coastal-defence-funding-submit-a-project</p> <p>Following on from the flooding in December 2015, it was quickly recognised that any major flood mitigation schemes in Whalley are likely to require financial support and therefore, it was agreed that Lancashire County Council would submit a preliminary bid for FCERM grant in aid. This was to unlock funding to appraise and deliver medium to long term flood mitigation projects in Whalley. In order to identify how much funding may be required, Lancashire County Council carried out a high level review of various potential options; looking at the worst case scenario in those areas. For example, consideration was given to replacing large sections of the King Street culvert in the event that detailed investigations concluded that it would need to be replaced or repaired due to its size or condition. This review indicated that up to £2m worth of FCERM grant in aid may be required.</p> <p>As indicated above, further assessments and appraisals are required to enable flood risk management authorities to claim and spend FCERM grant in aid. This is to ensure that the cost benefit of any potential project can be clearly demonstrated and to ensure that all requirements of the technical and financial approval from the Environment Agency are satisfied in full. As such, access to FCERM grant in aid for medium to long term projects in Whalley is dependent on these principles being met.</p> <p>Lancashire County Council has bid for an initial £150k of FCERM grant in aid in order to deliver a detailed assessment and appraisal of various options throughout the village. It is intended for this to supplement the recommendations made in the surface water management plan level 2 for Whalley (refer to page 11 of this report for details), by considering the findings of the detailed site investigations carried out following the December 2015 floods.</p> <p>It is likely that further bids for FCERM grant in aid will then be submitted to the Environment Agency once this assessment has been completed and once the requirements of the technical and financial approval from the Environment Agency have been met.</p> <p>The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.</p>	<p>Open</p>
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<p>LCC Highways</p>	<p>Lancashire Highways will programme and deliver a scheme to improve the trash screen which is located at the junction between King Street and Brookside Close. Works are planned to commence this financial year (2016/17).</p>	<p>Lancashire Highways have received funding for these works from Lancashire County Council's 2016/17 Capital Drainage Programme. Lancashire Highways are in the process of designing and costing the scheme and remain confident that works can commence this financial year (2016/17). Supporting funds have been awarded by the North West Regional Flood and Coastal Committee. The Lead Local Flood Authority anticipates that further updates regarding this will be made available within the next update which is due to be published in June 2017.</p>	<p>Open</p>
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MSFW147: Wiswell (Pendleton Road Area)

1 property is known to have suffered from internal flooding at this location on 5th December 2015, however there is currently only limited information available regarding the cause and source of this event. A review of the area has identified an ordinary watercourse located close to the affected property, but it is not clear at this stage whether this was the primary source of the flooding.

Who	What is needed?	What has been done and/or what will be done?	Status
All RMAs	Following a flood event, any flood risk related assets, public infrastructure and/or flood defences which are likely to have been significantly impacted by the flooding, should be inspected and returned to full operation by the relevant risk management authorities and riparian landowner(s).	Following the December 2015 flood event, all relevant risk management authorities carried out a preliminary review of any flood risk related assets, public infrastructure and/or flood defences which were likely to have been significantly impacted by the flooding. No such assets have been identified within this community.	Complete
All RMAs	Following a flood event, all risk management authorities should work together to identify common methods for managing flood risk in the affected communities. They should also work together to identify opportunities for quick wins; site specific investigations; studies and/or major investment projects which may be required in response to the flood event. Where there is scope for future works, this should be commenced at the earliest opportunity.	Since the December 2015 flood event, all relevant risk management authorities have met to discuss the primary flood mechanisms and the impacts that this has had on the community. It has since been concluded that no further action is required by relevant risk management authorities as this is a private issue and as such, it is the riparian landowner's responsibility to resolve the issue. The Lead Local Flood Authority encourages any concerned residents to consider installing property level flood resilience measures. Further advice regarding this can be found via the following link: www.lancashire.gov.uk/flooding .	Complete

5. Useful links

Lancashire and Blackpool Flood Risk Management strategy:

<http://www.lancashire.gov.uk/council/strategies-policies-plans/environmental/lancashire-and-blackpool-flood-risk-management-strategy.aspx>

Lancashire County Council Flood Investigation Policy:

<http://www.lancashire.gov.uk/media/392349/Flood-Investigation-Policy.pdf>

Lancashire County Council Ordinary Watercourse Consenting & Enforcement Policy:

<http://www.lancashire.gov.uk/media/392352/Flood-Risk-Management-Consenting-and-Enforcement-Policy.pdf>