

4/5 August 2020 Flooding in Lancashire

Lentworth Drive, Lancaster

Flood & Water Management Act 2010

Section 19 Investigation Report

November 2024



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Executive Summary

A very heavy rainfall in the Lancaster area overnight from 4 August to 5 August 2020 caused flows in Burrow Beck (main river) to increase rapidly. A series of obstructions in the channel through the Bailrigg, Scotforth and Hala areas of Lancashire had the cumulative effect of raising the water level to the extent that the river overflowed its banks. This brought water onto Lentworth Road and from there the water reached a number of homes which flooded overnight.

Site investigations were carried out by Lancaster City Council and the Environment Agency to ensure that all the obstructions were removed from the river, including a footbridge over the river which provides a convenient short-cut from a large area of housing to facilities along the A6 corridor. Lancashire County Council's local highway team checked all impacted gullies to confirm they were working normally.

A temporary bund was quickly installed along the boundary between Lentworth Drive carriageway and the open land between the road and the river, to provide a buffer in case of further flooding from the river. Following successful bids for national funding and planning permission from the City Council, in 2023 the Environment Agency installed a permanent bund barrier. This work has been complemented by the City Council's replacement footbridge to restore pedestrian access.

Since this incident, the South Lancaster Flood Action Group has been very active in organising local inspections of potential debris build-up in the river channel, raising awareness of the potential impact of local developments, and in organising 'slow the flow' works along tributaries to Burrow Beck.

In regard to this event, the risk management authorities that had a role were:

- a) Lancashire County Council in its role as local highway authority,
- b) the Environment Agency, and
- c) Lancaster City Council.

The investigation finds that there are no outstanding functions to be delivered by these risk management authorities although river channel maintenance remains a critical activity for relevant parties.

SECTION 1 – INTRODUCTION AND PURPOSE OF THE REPORT

Flood & Water Management Act 2010 Duty

Lancashire County Council as a Lead Local Flood Authority has a duty to investigate flooding in accordance with Section 19 of the Flood and Water Management Act 2010 as follows:

On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate:

- a) Which risk management authorities have relevant flood risk management functions, and
- b) Whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

Where an authority carries out an investigation under subsection (1) it must:

- a) Publish the results of its investigation, and
- b) Notify any relevant risk management authorities.

This report documents our understanding of the events resulting in flooding of homes at Lentworth Drive, Lancaster overnight on 4/5 August 2020.

SECTION 2 – THE WEATHER EVENT

2.1 On Friday 31 July, the Met Office Regional Advisor for the North West issued the routine horizon-scanning weather assessment for the forthcoming week, and identified that although that particular day was expected to be hot and sunny, there would be a general reduction in temperatures over the weekend. They particularly mentioned the risk of some organised rainfall and freshening winds threatening around Tuesday into early Wednesday of the following week (4 and 5 August). The message mentioned that localised impacts (mainly surface water) could result if Tuesday/Wednesday's rainfall totals were substantial enough. They advised that this would be reviewed again much nearer the time, and the main concern would be for Cumbria/North Lancashire.

2.2 Actual weather conditions then included a very wet overnight period from Monday 3 into Tuesday 4 August, due to a band of rain moving in from the Atlantic. The rain eventually pushed into western parts of northern England and Scotland, with some very heavy bursts of rain observed and some gusty winds.

2.3 Then heavy outbreaks of rain lingered in Northern England from Tuesday into Wednesday morning. During the morning, showery rain pushed into western areas of Wales and England and continued to travel eastwards through the morning. There was heavy rain across Northern Ireland which moved eastwards, and later in the morning, this heavy rain reached southwest England, Wales, northwest England and southwest Scotland. The rain eased off into the afternoon, but continued across these areas, spreading into eastern areas at times. It wasn't until the evening when the rain

cleared most western areas. Winds were very strong throughout the day, particularly along western coastlines.

2.4 The Environment Agency issued flood warnings at 10.46am on Wednesday 5 August for rivers in the following locations:

- Burrow Beck at Lancaster, around Canterbury Ave, Cranwell Ave and Bowerham Road, and
- Burrow Beck at Lancaster, between Newlands Ave, Lentworth Drive and Whinfell Drive.

2.5 At the same time, Flood Alerts were issued for:

- Lower River Lune and Conder; and
- Upper River Wyre, Brock.

SECTION 3 – RESPONSE TO THE FLOODING

3.1 Lancaster City Council officers attended a serious flooding incident overnight from 4 to 5 August 2020 at Hala in South Lancaster, close to Burrow Beck. The incident had caused the evacuation of a number of residents from their care home to a temporary rest centre established by the City Council. Officers had the opinion at the time that the river had overflowed its banks due to an obstruction in the river course. They alerted other authorities first thing on the Wednesday morning to ensure this would be properly investigated and any corrective steps taken as quickly as possible.

3.2 Lancashire Fire and Rescue Service also reported their involvement in the evacuation as follows:

0527hrs on 5 August 2020: Four fire engines including two swift water rescue teams, the high-volume pump and aerial support unit were called to assist at a flooding incident near Burrow Beck in Lancaster. Multiple properties have been affected by the flood waters and firefighters are assisting in moving any ground floor residents to safety, some of whom are being taken to a nearby rest centre set up by Lancaster City Council at St Pauls Church Hall, Scotforth.

By 0900hrs, fire crews were working alongside partners from Lancashire Constabulary, Lancaster City Council, Environment Agency and the Great Places Housing Group to assist those people in what is a localised flooding event. There were two multi-storey residential properties and approximately 10 other domestic properties were affected by the flood waters. Around 50 people have been affected and firefighters liaised with these residents. Pumping efforts were also underway in efforts to control and reduce the water levels. There were some road closures in place around the area and members of the public were urged to stay away from the area if possible. No injuries were reported at the incident.

3.3 During Wednesday morning 5 August, Environment Agency staff were directly monitoring river levels and keeping in contact with communities with a history of flooding from the impacted rivers, in particular the Flood Action Groups in South

Lancaster (close to Burrow Beck) and Galgate (close to the Rivers Conder and Whitley Beck).

3.4 Also on Wednesday morning, county council officers began their inspections following up on the city council reports.

3.5 It was identified very quickly that flooding occurred when the main river Burrow Beck was carrying high volumes of storm water, and the river channel was obstructed by excessive debris downstream from a local pedestrian footbridge. The river flowed out of bank, across nearby open grass then onto Lentworth Drive, before quickly finding its way into nearby residential premises.

3.6 Figure 1 below documents the extent of the impact of this weather event across the county as a whole, and in Lancaster district in particular:

District	Type of flooding reported			
	Residential Internal	Residential External	Commercial Internal	Commercial External
Burnley	None reported	3	None reported	None reported
Chorley	1	None reported	None reported	None reported
Fylde	None reported	2	None reported	None reported
Hyndburn	None reported	None reported	None reported	None reported
Lancaster	10	3	None reported	None reported
Pendle	None reported	None reported	None reported	None reported
Preston	None reported	None reported	None reported	None reported
Ribble Valley	None reported	1	None reported	None reported
Rossendale	None reported	1	None reported	None reported
South Ribble	None reported	1	None reported	None reported
West Lancashire	None reported	1	None reported	1
Wyre	None reported	1	None reported	None reported

Figure 1: Record of impacted properties

3.7 The South Lancaster Flood Action Group meeting of 13 October 2020 received a full report on the incidents affecting local people overnight from Tuesday 4 to Wednesday 5 August, how the various authorities responded to the flooding of the care home and the support given to the residents who were displaced by the flooding. The report covered the following points:

- The impact of Covid restrictions and PPE requirements on rest centres;
- The value of the city council bringing in an excavator to aid management of the flood waters;
- The professionalism of all responding agencies;
- Good coordination and links between County and City Council; and
- Effective coordination meetings between agencies at the scene.

3.8 This meeting also received details of the works to be carried out by the various authorities to reduce the risk of flooding happening again in this manner. The actions under consideration at the time included:

- Urgent removal of the footbridge (completed 17 September 2020) and consideration of how to replace it with increased clearance;
- Urgent installation of a raised bund to provide containment in the event of a future breach (completed October 2023);
- Increased maintenance visits to identify and remove any potentially obstructing material/debris;
- Upstream attenuation.

These details are documented in the annotated map at Figure 2 below.

3.9 The individual properties that experienced flooding elsewhere around the county on the night of 4/5 August 2020 were each a consequence of very local circumstances and they did not trigger their own full investigations. These individual circumstances were addressed at the time and have not been reported to the county council as having been repeated.



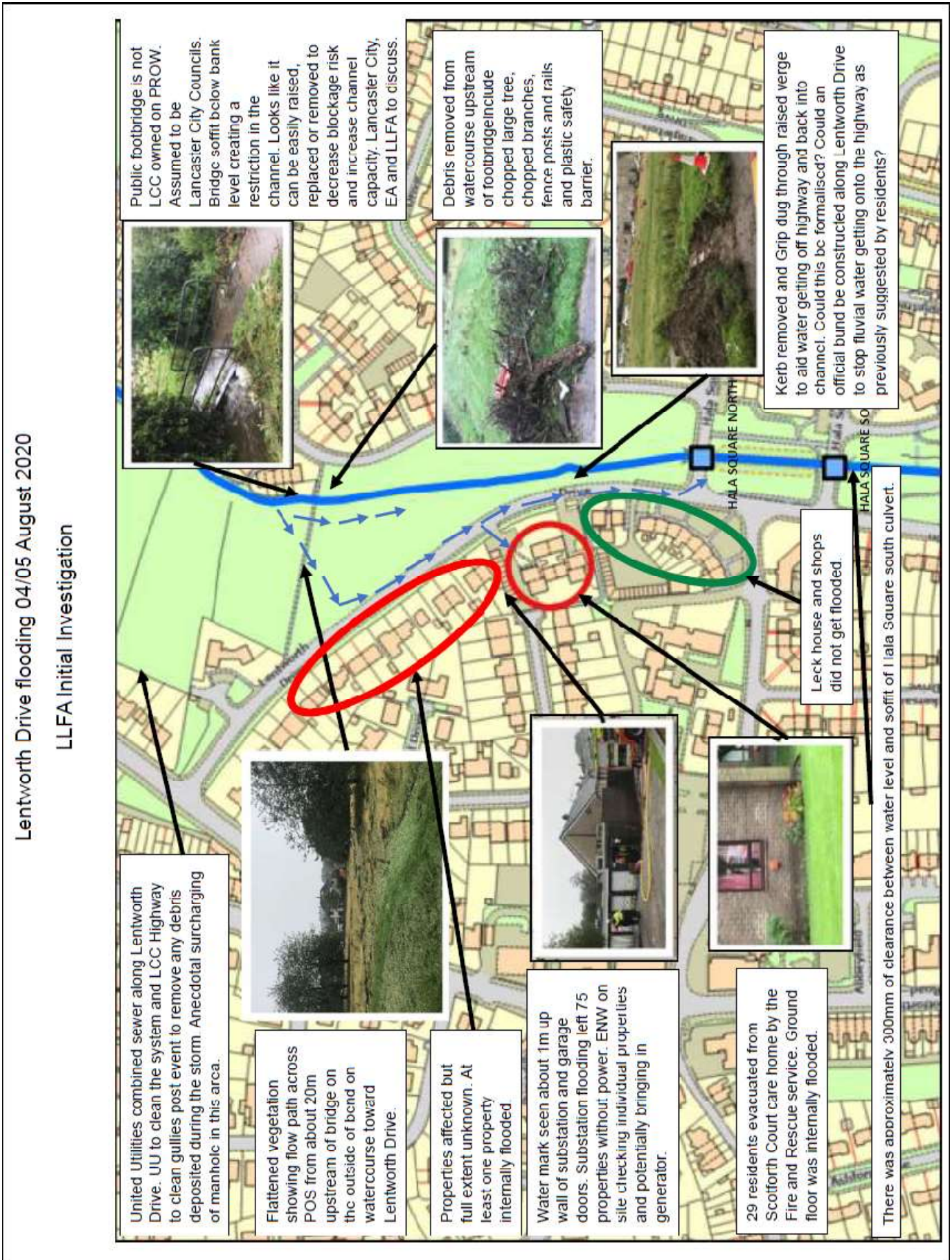


Figure 2: Lentworth Drive flooding mechanisms and impacts

SECTION 4 – SUMMARY AND CONCLUSIONS

4.1 An extremely heavy deluge of rain overwhelmed the capacity of Burrow Beck in Lancaster on the night of 4 to 5 August 2020. The channel capacity of Burrow Beck had been temporarily reduced by a collection of loose debris, and this combined with the unusually high flows led to the river overflowing its banks into Lentworth Drive to flood into local residential properties resulting in the temporary evacuation of a number of residents.

4.2 Urgent removal of the obstructions allowed the river to return to its normal channel, and a number of other investments have since been made to provide improved capacity for the river as well as containment for any future overflows that could happen. In particular, construction of a permanent bund around the open space east of Lentworth Drive, illustrated in Figure 3 below, will provide good protection to potentially vulnerable homes should Burrow Beck ever flow out of bank again.



Figure 3: Completed bund (looking south down Lentworth Drive)

4.3 The South Lancaster Flood Action Group has provided a very valuable local role in sharing information between anxious local people and the drainage authorities. Working with communities and working in partnership are key recommendations of the national flood risk management strategy. All the Lancashire Risk Management Authorities recognise the value and importance of the opportunities that arise through

appropriate engagement with our communities. In particular, we aim to develop constructive working relationships with the Flood Action Groups whose members take the time to understand local flood risks and potential mechanisms for managing them.

4.4 The relevant flood risk management authorities connected with this incident were:

- a) Lancashire County Council in its capacity as the local highway authority,
- b) the Environment Agency, and
- c) Lancaster City Council.

None of these authorities has any outstanding works or studies to deliver in connection with this flooding incident.

4.5 This incident has revealed how very important it is that the capacity of watercourses including main rivers are respected as essential conduits of storm water and are protected from obstruction by loose debris.

4.6 In regard to Burrow Beck in the location of this flooding incident, Environment Agency officers carry out regular maintenance checks and management of aquatic and riparian vegetation to maintain the conveyance function of the channel. The maintained section is roughly 2.6km between the point where Burrow Beck crosses the A6 (downstream point) to where the watercourse meets the Cork Road Allotments behind properties on Canterbury Avenue (upstream point).

4.8 The Government's advice on responsibilities of owning a watercourse can be found online here: [Owning a watercourse - GOV.UK \(www.gov.uk\)](https://www.gov.uk/owning-a-watercourse) .



APPENDIX A – DEFINITIONS AND RESPONSIBILITIES

Lancashire & Blackpool Local Flood Risk Management Strategy

In addition to the requirements of Section 19 of the Flood and Water Management Act ('the Act'), the Lancashire and Blackpool Local Flood Risk Management Strategy ('the Strategy') sets out how flood risk should be managed locally.

The Strategy states that the Section 19 investigations will help to:

- Improve the understanding of flood risk by providing an invaluable tool for understanding the sources and mechanisms of flooding;
- Identify assets that have a flood risk management function, which may need to be designated; and
- Identify where additional works and studies are likely to be necessary, that LCC or other risk management authorities can integrate into their prioritised flood risk management plans.

Key Definitions

The Risk Management Authorities

The risk management authorities are identified in the Act as follows:

- a. The Environment Agency,
- 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 Act 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 risk management authorities support partnership working in the following ways:

- at operational levels by joint investigations and through the Operational 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 Environment Agency 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 which replaces a number of the lead local flood authority functions.

The Risk Management Functions

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

- (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 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 it is



connected to a septic tank, cesspool or soakaway). Formal records indicating the location of private drainage systems are not held by any risk management authority. 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. 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, Environment Agency, IDB or local councils holding enforcement powers to use if the landowner/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 risk management authorities to share information and collaborate during investigations and that they are allocated to the appropriate organisation to lead.

Key Functions of the risk management authorities

Environment Agency

The flood risk management responsibilities of the Environment Agency 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 Environment Agency 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 lead local flood authorities' democratic processes;
- g. responsibility for managing coastal flooding;
- h. responsibility for managing fluvial flooding from main rivers;
- i. updated provisions for the regulation of reservoirs;
- j. permissive powers to carry out maintenance work on main rivers under Section 165 of the Water Resources Act 1991;
- k. the provision of flood forecasting and warning services;
- l. the provision of flood maps;
- m. the provision of flood related information and advice;
- n. investment in flood defences, supplemented through partnership funding where appropriate;
- o. a power to take enforcement action where flow in a main river has been impeded and may cause a flood risk.

Lancashire County Council

This council has a dual risk management role, in its capacity as both highway authority and lead local flood authority.

As the lead local flood authority, the council 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 Strategy for its area (copy available from the 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 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 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. Risk management authorities have a duty to co-operate with the lead local flood authority 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.

As the local highway authority, the council 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, the council 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.

The council 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 where this has been delegated by the lead local flood authority;
- 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.
- f. a power to take enforcement action where there is an obstruction to an ordinary watercourse that may cause a flood risk where the power has been delegated by the lead local flood authority.

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 Board

An Internal Drainage Board is a local public authority established in areas of special drainage need in England and Wales. These Boards have permissive powers to manage water levels within their respective drainage districts. The Boards undertake works to reduce flood risk to people and property and manage water levels to meet local needs.

The expenses of an Internal Drainage Board are predominantly funded by the local beneficiaries of the water level management work they provide. Each Board sets a budget for its planned work in the forthcoming year and any investments it needs to make for future projects.

More information about Internal Drainage Boards 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 lead 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 risk management authorities listed above (with the exception of the Internal Drainage Board) 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.

