

A REVIEW OF FLOOD RISK AND SURFACE WATER MANAGEMENT IN FYLDE BOROUGH

ENVIRONMENT, HEALTH & HOUSING COMMITTEE



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FOREWORD

The natural environment is a thing of beauty and pleasure to us all yet is so fragile, impacted globally and locally by human activity like never before. The growth of CO2 emissions has fuelled climate change and the devastating effects that is having on our weather patterns through increased storms and rainfall. Measurements show that the average temperature at the Earth's surface has risen by approximately 1°C since the pre-industrial period. The 21st century saw 17 of the 18 warmest years on record, and each of the last 3 decades have been hotter than the previous one.

Climate change will increase the frequency and intensity of storms and rainfall on Fylde, the rise in sea levels will affect the ability of surface water to drain into the Ribble Estuary and sea water may ingress into some areas.

As Chairman of the Council's Environment Health and Housing Committee, I have been concerned for some time that not enough is being done to tackle the effects of flooding on land and properties, which impacts hugely on people's lives and livelihoods. The effect of flood water is devastating and can have a lasting effect, both financially and psychologically.

Several storm events in the past few years have brought Flooding to the fore, with flooding incidents in Fylde and elsewhere across the county that have seen water ingress to many properties and has brought the drainage arrangements for new developments under a keen focus.

Flooding and its effects do not respect administrative boundaries, and it is clear that Fylde Council must work better with its partners by taking the lead locally.

I asked for this review of how the Borough deals with flooding and surface water management to look carefully as to how we and others can learn to work more efficiently to hopefully lessen the negative impacts of flooding on communities and individuals. The report makes 30 recommendations which are directed at Fylde Council and other partners.

I hope you read and consider this review and join us in working more efficiently to make a difference for the people of Fylde.



A handwritten signature in black ink, appearing to read 'Tommy Threlfall', written over a white background.

Cllr Tommy Threlfall
Chairman of Environment,
Health and Housing Committee

EXECUTIVE SUMMARY

This report provides the findings from several meetings of a working group established at Fylde Council in 2020/21 to look at the impacts of flooding and how matters could be improved. The working group took evidence from several Risk Management Authorities (RMAs) and other external organisations involved with flood risk management within Fylde Council's administrative boundary. The review also heard from concerned residents and community groups and undertook a borough wide survey of concerns and perceptions on flooding.

The responsibility for surface water management and its impacts rests with several bodies and organisations as flooding is no respecter of boundaries and responsibilities. A key objective of the review was to better understand the interface that exists between these different roles, and to establish what the Borough Council can and should be doing in the future to help improve the situation and minimise the negative effects that flooding can have on residents and communities in Fylde.

The review covers the history and legislation of drainage, the roles of the RMAs along with the different statutory and enabling roles the Borough Council plays. The working group identified several issues of concern which led to a proposal of 30 recommendations directed to the Borough Council, other RMAs and partnership groups for change. Central to this is the Borough Council taking on a greater role to act as community leader on flooding and surface water management in Fylde, including adoption of natural flood management techniques.

BACKGROUND

There is growing concern about the increased incidents of flooding occurring in Fylde, affecting both property and land. The concerns are that climate change is resulting in more episodes of intense rainfall which needs to drain away and that development in the Borough contributes to increase risk from surface water run-off. Consequently, the Council and its partners should be encouraging the effective management of surface water runoff to reduce flood risk, by mimicking / harnessing nature to reduce flood risk and deliver benefits to the environment and our communities.

Significant flooding events were experienced at Park View Playing fields on the 28th September 2019 and various locations across the Fylde Coast including Freckleton, Warton, Wrea Green, Clifton, Newton, Kirkham, Elswick, Staining, Cropper Road, Moss Side and Greenhalgh on the 10th and 11th August 2020 resulting in flooded property, businesses, roads, and other land.

The majority of the Borough is serviced by a combined surface water/foul drainage system which is under pressure at times of high rainfall. Most of the system is historic and is managed/owned by United Utilities.

Fylde Borough is low lying, and the relatively flat topography means that water courses drain slowly.

The drainage of the Fylde is impacted by tidal influence each day, inhibiting surface water flow from the ditch systems reaching both the Ribble & Wyre Rivers and ultimately out to sea. Surface water is held back for several hours a day by tide-controlled gates on most of the stream outlets.

There is concern that regular maintenance of the ditches and dykes in Fylde is insufficient and that weeds and debris impede proper water flow. Only ditches classed as 'main river' are managed by the Environment Agency (EA), the remainder are generally the responsibility of the landowners (riparian ownership) and many are in a poor condition.

For all these reasons, the Environment Health and Housing Committee at Fylde Council agreed at its November 2020 meeting that a member working group be established to review flood risk and surface water management in Fylde.

This report presents the results of that working group and its findings and recommendations.

SCOPE OF THE REVIEW

The objectives of the review as agreed by the Environment Health and Housing committee at its meeting on 5th January 2021 are:

- To review the roles and responsibilities of the various organisations involved in the management of surface water in Fylde to ensure greater coordination and effectiveness of resources to reduce flooding in the future.
- To ensure that arrangements for dealing and responding to emergency flood incidents in Fylde are robust and effective, to provide reassurance to members, residents, and landowners.
- To understand how the Development Plan System, strategic flood risk assessments and planning decisions taken by Fylde Council impact on surface water management in the borough, and make any observations or recommendations how the Council, as Local Planning Authority, along with statutory consultees, can improve the imposition, assessment, monitoring, and enforcement of conditions to mitigate the impacts of flooding from new development.

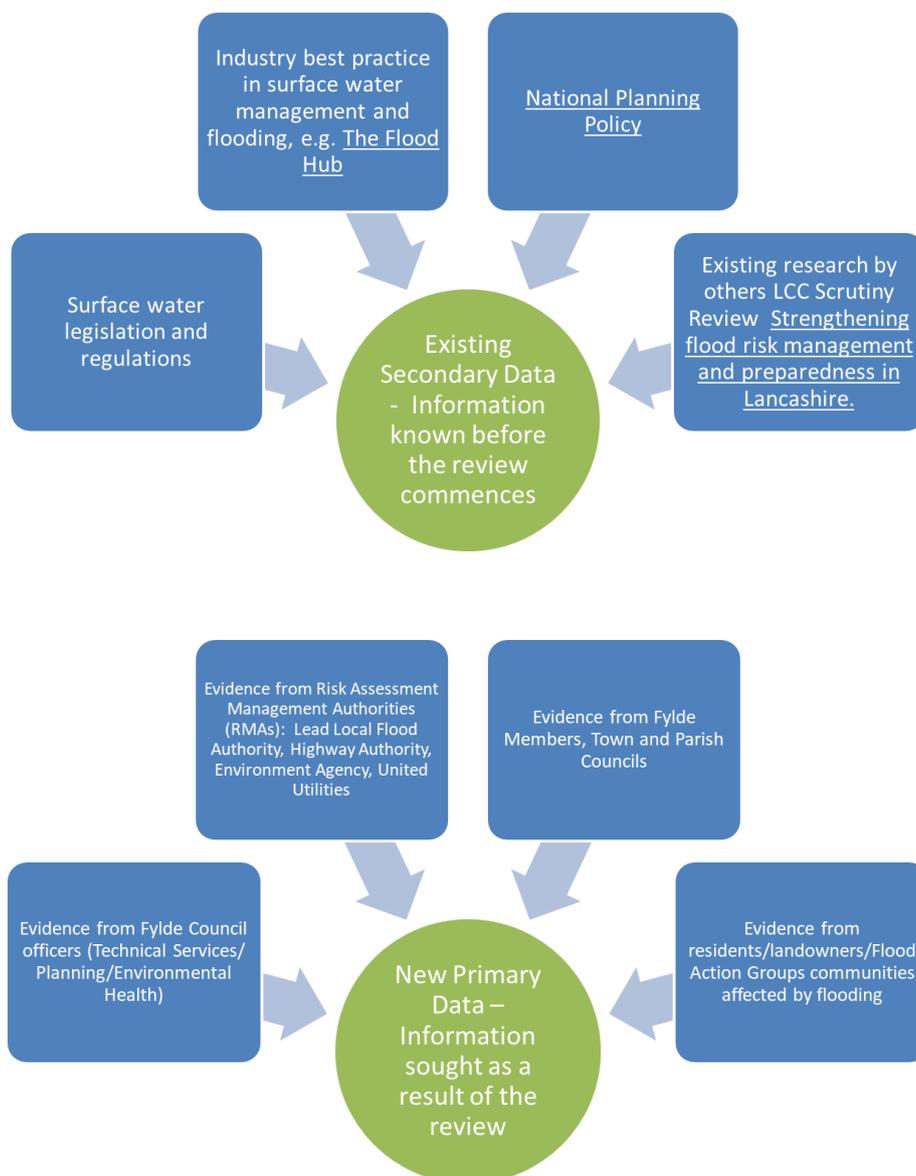
MEMBERSHIP OF THE MEMBER WORKING GROUP

The Environment Health and Housing Committee, at its meeting on 3rd November 2020, resolved that a member working group be established, made up of Councillors Threlfall, Lloyd, Singleton, Dixon, Anthony and Mulholland, to review flood risk and surface water management. The group was selected as a cross party group of members, to help ensure any findings and recommendations are representative of the committee and the Council as a whole.

METHODOLOGY

The Methodology of the review agreed by the committee is:

- a. Identify where we need to be to match best innovative practice in surface water management
- b. Take evidence to identify where we are now in Fylde in comparison to that best innovative practice
- c. Make recommendations on how we can get to where we need to be to reduce flooding and the impacts of it.



OUTCOMES OF THE REVIEW

The agreed outcomes of the review are to reduce flooding and the impacts of it, and ensure a sustainable surface water drainage system for Fylde that can cope with development growth and climate change. This to be achieved by:

- Organisations having a better understanding of each other's roles and responsibilities.
- More effective coordination and partnership working.
- The identification and agreement of any changes in operational practices to improve surface water management.
- The identification, agreement and delivery of any capital projects considered necessary, to protect communities from surface water flooding.
- Strong local leadership and sufficient resource to manage and respond to flooding incidents.



North up Saltcotes Rd with Main Drain to left, Dec 2015 post Storms Desmond & Eva

CONTEXT

THE LEGISLATIVE BACKGROUND TO SURFACE WATER MANAGEMENT

Prior to the 1930s, land drainage in the United Kingdom was regulated by the Statute of Sewers, passed by King Henry VIII in 1531, and several further acts which built upon that foundation.

A royal commission was set up, which produced a report which described the existing laws as "vague and ill-defined, full of anomalies, obscure, lacking in uniformity, and even chaotic." It recommended that any replacement should have powers to carry out the work necessary for efficient drainage, together with the provision of financial resources to enable them to carry out their duties.

The report formed the basis of what would become The Land Drainage Act 1930, which provided a new set of administrative measures to ensure that drainage of low-lying land could be managed effectively.

The Act sought to set up catchment boards with overall responsibility for each of the main rivers of England and Wales, and to alter the basis on which drainage rates or levies could be collected.

One unusual aspect of the Act was that it repealed most of the legislation that had preceded it. In total, 16 acts dating from 1531 to 1929 were repealed, and three others were amended.

However, the 1930s was a time of economic uncertainty, agricultural depression and falling prices, so such rates were unrealistic. Internal drainage boards raised their funding by a levy on the landowners and occupiers who lived within their district.

The passing of the River Boards Act 1948 transferred the land drainage, fisheries and river pollution functions of the catchment boards to river boards.

Thirty-two river board areas were defined covering the whole of England and Wales, and a river board was constituted for each one. The 1948 Act was repealed by the Water Resources Act 1963, and the river boards were replaced by twenty-seven river authorities on 1 April 1965.

In 1991 The Land Drainage Act was further amended, and now requires that a watercourse be maintained by its owner in such a condition that the free flow of water is not impeded. The riparian owner must accept the natural flow from upstream but need not carry out work to cater for increased flows resulting from some types of works carried out upstream, for example a new housing development.

In association with the Land Drainage Act 1991 (amended 1994), The Flood and Water Management Act 2010 was introduced in England and Wales. It was intended to implement Sir Michael Pitt's recommendations following the widespread flooding of 2007 when more than 55,000 homes and businesses were flooded ([see Pitt Review](#)). The flooding was largely caused by surface water run-off overloading drainage systems. The Act was also a response to the need to develop better resilience to climate change.

The Act requires better management of flood risk, it creates safeguards against rises in surface water drainage charges and protects water supplies for consumers. It gives a new responsibility to the Environment Agency for developing a National Flood and Coastal Risk Management Strategy and gives a new responsibility to upper tier local authorities, as Lead Local Flood Authorities (LLFA's), to co-ordinate flood risk management in their area. The Act also gives other RMA's defined roles in flood and surface water management.

Duties include developing a Local Flood Risk Management Strategy, investigating significant flooding incidents (typically defined as five or more properties), maintaining a register of flood assets and power to request information.

The government consulted on the proposals again in 2011/2012. A further consultation was completed between Sept - Oct 2014 setting out an alternative approach to the one envisaged in Flood

and Water Management Act 2010 through changes to the planning regime. Proposals failed to address the current approach of fragmented maintenance responsibilities. In 2019, an [independent review of the arrangements for determining responsibility for surface water and drainage assets](#) was carried out by David Jenkins. The government immediately accepted 12 of the recommendations on publication and has now considered the review in full and has accepted 24 out of the 28 recommendations. Other independent reviews have also been undertaken.

The Scottish government were the first to adopt the SAB¹ principles and more recently on 7 January 2019 the Welsh government followed. The Government have yet to adopt the legislation for England.

In January 2017, The Environment, Food and Rural Affairs Committee launched an inquiry into how effectively the Government was implementing the Act. The inquiry found the government was failing to protect communities from flood risk and was missing opportunities to improve amenity and the environment. The Committee ²called for a significant improvement in the number and quality of sustainable drainage systems, suggesting that the government had '*...adopted sub-standard planning policies which have led to far too few schemes, many of which are of low quality, being installed in new developments*'.

The Flood and Water Management Act 2010 defines a flood as '*...any case where land not normally covered by water becomes covered by water.*'

Causes of flooding include:

- i) Heavy rainfall
- ii) A river overflowing or its banks being breached
- iii) A dam overflowing or being breached
- iv) Tidal waters
- v) Groundwaters

It does not include:

- A flood from any part of a sewerage system, unless wholly or partly caused by an increase in the volume of rainwater (including snow and other precipitation) entering or otherwise affecting the system.
- A flood caused by a burst water main (within the meaning given by Section 219 of the Water Industry Act 1991).

Floods may have a harmful consequences on:

- i) Human health.
- ii) The social and economic welfare of individuals and communities
- iii) Infrastructure
- iv) The environment (including cultural heritage).

The Water Industry Act 1991 is '*...an Act to consolidate enactments relating to the supply of water and the provision of sewerage services, with amendments to give effect to recommendations of the Law Commission*'.

The Act is in three parts. Part I relates to water charging in England and Wales and is based on a Government consultation document, 'Water Charging in England and Wales: A New Approach',

¹ (SAB) Sustainable Drainage Approving Body

² [Post-legislative scrutiny: Flood and Water Management Act 2010 inquiry](#)

published in April 1998. Part II relates to the water industry in Scotland and Part III contains supplemental provisions.

The Act sets out the regulatory requirements, competition and consumer representation frameworks for the water industry in England and Wales.

The Water Act 2014 received Royal Assent in May 2014. It amended the Water Industry Act 1991 and also introduced changes to other legislation. It was seen as a major development for companies operating within the industry and for commercial water customers.

The aim of the Act was to reform the water industry to make it more innovative and responsive to customers and to increase the resilience of water supplies to natural hazards such as droughts and floods. The Act was intended to introduce competition into the market and bring benefits to businesses and the economy.

The Act applies to England and Wales, with some provisions also applying in Scotland.

In England and Wales, water supply and wastewater services were privatised in 1989.

The Development Management Procedure Order (DMPO) 2015 came into force on 15 April. The DMPO sets out the procedures for applicants to gain deemed consent if an application for consent, agreement or approval on a planning condition has not been determined by the LPA within 8 weeks or an agreed extended period. There are exemptions to the deemed consent provisions for some types of development or for some types of conditions. The deemed discharge provisions will apply to applications for discharge submitted after that date. The deemed consent provisions set a challenge to LPAs. Conditions properly applied (i.e. meeting the test of necessity), are an essential part of the approval process, and as such, the LPA will want to consider proposals and determine the application rather than allow determination through the deemed consent provisions.



Lytham Road, Freckleton Aug 2020 post Storms Ellen & Francis

WHO DOES WHAT? THE ROLES OF THE RISK MANAGEMENT AUTHORITIES (RMAS)

There is no single body responsible for managing flood risk in the UK because of the role of the devolved administrations in Scotland, Northern Ireland and Wales. Responsibility is joint among a number of bodies.

Government

The Department for Environment, Food and Rural Affairs (Defra) is the policy lead for flood and coastal erosion risk management in England. New or revised policies are prepared with other parts of government such as the Treasury, the Cabinet Office (for emergency response planning) and the Department for Communities and Local Government (for land-use and planning policy). These national policies are then delivered by Risk Assessment Management Authorities (RMAs) which are.

- Environment Agency
- Lead Local Flood Authorities
- District and Borough Councils
- Coast protection authorities
- Water and sewerage companies
- Internal Drainage Boards
- Highway authorities.

The Flood and Water Management Act 2010 requires these Risk Management Authorities to:

- co-operate with each other
- act in a manner that is consistent with the National Flood and Coastal Erosion Risk Management Strategy for England and the local flood risk management strategies developed by Lead Local Flood Authorities
- exchange information.

They have flexibility to form partnerships and to act on behalf of one another.

One way RMAs can cooperate is through public sector cooperation agreements (PSCAs). PSCAs allow either party to undertake inland and coastal work and flood incident response on behalf of the other where they agree to do so and where they will achieve cost savings. Reports, templates and briefing notes are available on the Association of Drainage Authorities website [here](#) .

The Environment Agency

The Environment Agency has a strategic overview of all sources of flooding and coastal erosion (as defined in the Flood and Water Management Act 2010). It is also responsible for flood and coastal erosion risk management activities on main rivers and the coast, regulating reservoir safety, and working in partnership with the Met Office to provide flood forecasts and warnings. It must also look for opportunities to maintain and improve the environment for people and wildlife while carrying out all of its duties.

The Environment Agency's work includes:

- Developing long-term approaches to Flood and Coastal Erosion Risk Management (FCERM). This includes developing and applying the [national flood and coastal erosion risk management strategy](#).
- Allocation of national Government funding to projects to manage flood and coastal erosion risks from all sources
- Delivering projects to manage flood risks from main rivers and the sea



Environment Agency Flood Alleviation measures, River Wyre, Garstang Aug 2021

- Working with others to prepare and deliver Flood Risk Management Plans (FRMPs). FRMPs explain the risk of flooding from rivers, the sea, surface water, groundwater and reservoirs, and set out how the Environment Agency, Lead Local Flood Authorities (LLFAs) and other Risk Management Authorities work with communities to manage those risks. The Environment Agency and Defra provide guidance to LLFAs on their role in developing FRMPs. FRMPs for England for the period 2016-2021 are published on [GOV.UK](https://www.gov.uk).
- Providing evidence and advice to support others. This includes national flood and coastal erosion risk information, data and tools to help other Risk Management Authorities and inform Government policy, and advice on planning and development issues
- Working with others to share knowledge and the best ways of working. This includes work to develop FCERM skills and resources
- Monitoring and reporting on flood and coastal erosion risk management. This includes reporting on how the national FCERM strategy is having an impact across the country.
- Responsibility for Regional Flood and Coastal Committee (RFCC) that brings together members appointed by Lead Local Flood Authorities (LLFA) and independent members.

The Environment Agency has permissive powers, contained in the Water Resources Act 1991, as amended by the Flood and Water Management Act 2010, to undertake flood defence works, including maintenance works, on Main Rivers. However, the Environment Agency has no legal obligation to undertake this maintenance work.

Where the Environment Agency owns no land or flood defence assets at a location, the responsibility for maintenance of the watercourse/asset usually rests with the 'Riparian Owner'.

Riparian owners have responsibilities for the stretch of watercourse they own. Ownership normally includes a watercourse which extends on, or under, an individual's land or on the boundary of land, up to its center. The Environment Agency provides guidance to landowners on their responsibilities in owning a watercourse.

Under Environmental Permitting (England and Wales) Regulations 2016, an environmental permit must be obtained from the Environment Agency for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culvert (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the riverbank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission.

Some flood risk activities are excluded or exempt from needing an environmental permit however works must be completed in accordance with certain conditions.

The Environment Agency provides flood zone mapping of flood risk arising from sea and river sources. There are three broad categories of flood zone defined by the Environment Agency:

- Flood Zone 3 (FZ3) - Land having a 1 in 100 or greater annual probability of river flooding; or land having a 1 in 200 or greater annual probability of sea flooding (FZ3a). FZ3b is land in the functional flood plain.
- Flood Zone 2 (FZ2) - Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
- Flood Zone 1 (FZ1) - Land having a less than 1 in 1,000 annual probability of river or sea flooding, that is all land outside Flood Zones 2 and 3.

The Environment Agency nationally provides a flood warning system to property owners/occupiers in specific flood warning area who may be affected by flooding incidents who have registered to receive alerts. In Fylde the total number of properties in each flood warning area in relation to those that have registered is shown in appendix C.

Lead Local Flood Authorities (LLFAs)

LLFAs are County Councils and Unitary Authorities. They lead in managing local flood risks (i.e. risks of flooding from surface water, ground water and ordinary (typically smaller) watercourses). This includes ensuring co-operation between the Risk Management Authorities in their area. Lancashire County Council is the LLFA for the Fylde Borough area.

Under the Flood and Water Management Act 2010 and other legislation, LLFAs are required to:

- prepare and maintain a strategy for local flood risk management in their areas, coordinating views and activity with other local bodies and communities through public consultation and scrutiny, and delivery planning. They must consult Risk Management Authorities and the public about their strategy (F&WMA 2010 section 9).
- maintain a register of assets – these are physical features that have a significant effect on flooding in their area (F&WMA 2010 section 21).
- investigate significant local flooding incidents and publish the results of such investigations (F&WMA 2010 section 19). Although there are no statutory timescales associated with S19 reports.
- undertake a statutory consultee role providing technical advice on major development (10 dwellings or more) with surface water drainage to local planning authorities under the [Town and Country Planning \(Development Management Procedure\) \(England\) Order 2015](#).

LLFA's also have permissive powers under the Land Drainage Act 1991 to:

- carry out works to manage local flood risks in their areas (the power for works in relation to minor watercourses sits with either the district council or unitary authorities outside of Internal Drainage Board (IDB) areas) (section 14a).
- regulate ordinary watercourses (outside of internal drainage districts) to maintain a proper flow (schedule 2) by:
 - issuing consents for altering, removing or replacing certain structures or features on ordinary watercourses; and
 - enforcing obligations to maintain flow in a watercourse and repair watercourses, bridges and other structures in a watercourse.

LCC is responsible for the governance and facilitation of several partnerships across Lancashire which includes the Lancashire Flood and Coastal Erosion Risk Management (FCERM) Partnership and Making Space for Water Meetings.

LLFAs should encourage local communities to participate in local flood risk management. Depending on local circumstances, this could include developing and sharing good practice in risk management,



Kirkham Allotments, off Church Street, Kirkham Aug 2020 post Storms Ellen & Francis

training community volunteers so that they can raise awareness of flood risk in their community and helping the community to prepare flood action plans. LLFAs must also consult local communities about their local flood risk management strategy.

In 2020 Lancashire County Council published a [report and recommendations](#) following a review of flood risk management and preparedness across Lancashire. The County Council has made significant progress in delivering these recommendations with updates published on the Council's webpages.

All Local Authorities

Local Authorities are 'category one responders' under the [Civil Contingencies Act](#) and must have plans to respond to emergencies, and control or reduce the impact of an emergency.

District and Borough Councils

District and Borough Councils such as Fylde Council are Risk Management Authorities and key partners in planning local flood risk management. They:

- can carry out flood risk management works on minor watercourses (outside of IDB areas),
- work in partnership with LLFAs and other Risk Management Authorities to ensure risks are managed effectively, including in relation to taking decisions on development in their area.

How Fylde Council discharges its statutory roles and responsibilities in relation to flooding and surface water management is discussed later in this report.

Coastal Protection Authorities

District and unitary authorities in coastal areas such as Fylde Council are Coastal Protection Authorities. They lead on coastal erosion risk management activities in their area. They are responsible

for developing Shoreline Management Plans (SMPs) which provide a long-term holistic framework for managing the risk of coastal change delivering coastal protection schemes.

The Environment Agency has a strategic overview to ensure that decisions about the coast are made in a joined-up manner.

Water and Sewerage Companies

Water and sewage companies are Risk Management Authorities (RMAs) and play a major role in managing flood and coastal erosion risks. They manage the risk of flooding to water supply and sewerage facilities and flood risks from the failure of their infrastructure. United Utilities is the company responsible for providing water and wastewater service in the Fylde Borough area.

The main roles of water and sewerage companies in managing flood and coastal erosion risks are to:

- make sure their systems have the appropriate level of resilience to flooding, and maintain essential services during emergencies
- maintain and manage their water supply and sewerage systems to manage the impact and reduce the risk of flooding and pollution to the environment. They have a duty under section 94 of The Water Industry Act 1991 to ensure that the area they serve is “effectually drained”. This includes drainage of surface water from the land around buildings as well as provision of foul sewers.
- provide advice to LLFAs on how water and sewerage company assets impact on local flood risk
- work with developers, landowners and LLFAs to understand and manage risks – for example, by working to manage the amount of rainfall that enters sewerage systems
- work with the Environment Agency, LLFAs and district councils to coordinate the management of water supply and sewerage systems with other flood risk management work.

United Utilities work closely with Local Planning Authorities and the Lead Local Flood Authorities to influence all aspects of the developments drainage including mitigating and or reducing the impact of new development on the existing sewers, limiting discharge rates from the developments into the existing sewerage network, ensuring Sustainable Drainage Systems (SuDS) are considered and prioritized and can voluntarily adopt some SuDS components which meet the required standards.

Developers have a legal right to connect both foul and surface water (from properties) to existing sewerage systems and a legal right to choose the point of connection.

United Utilities can't control what goes into the sewer system or how much rain falls (both of which could cause blockages and flooding). As a result, United Utilities does not have any legal liability for damage caused by flooding from public sewers, except where it can be shown that they have been negligent. In addition, UU are not liable for flooding arising from the customer's private drainage.

Public sewer flooding from the United Utilities network can occur for a number of reasons such as blockages, collapses or because the system is overwhelmed. There are three main reasons why a public sewer can cause flooding:

1. Overloaded Sewers –also known as hydraulic flooding -this is where the flows entering the sewer are above the capacity of the pipe causing it to eventually flood. This will occur during heavy rain.
2. Exceptional Weather –similar to above, this occurs during heavy rain and is where flows are greater than the sewer network would be expected to cope with.
3. Flooding Other Causes –this includes operational issues such as blockages, collapses and equipment failure.



Park View, Lytham Oct 2019 post Storm Lorenzo

In each case UU will try to determine the cause as part of their investigations.

Where there is frequent and severe sewer flooding, sewerage undertakers are required to address this through their capital investment plans, which are approved and regulated by Ofwat. This happens every 5 years through the Price Review process. Water companies have outcome delivery incentives (ODIs) that they agree with customers and partners. All water and sewerage companies have sewer flooding ODIs. Some companies have ODIs on partnership working, sustainable drainage and resilience of services.

UK Water Industry Research have prepared some good practice - *How best to align the funding processes with the various bodies involved in resolving flooding: Unlocking collaborative opportunities between water companies and partners*. The aim of the research is to help facilitate more co-funded schemes between water companies and other RMA's. The report includes case studies to celebrate good practice, support partnership working and bring the guiding principles for collaboration to life.

Water UK represents all UK water and wastewater service suppliers at national and European level. It provides a framework for the water industry to engage with government, regulators, stakeholder organisations and the public. They share information on water companies' performance on the Discover Water site.

Internal Drainage Boards (IDBs)

IDBs have an important role to play in flood risk management, and in creating and managing natural habitats. Each IDB operates within a defined area, known as a drainage district. They are made up of elected members who represent land occupiers, and others nominated by local authorities who represent the public and other interest groups.

IDBs are independent public bodies responsible for managing water levels in low-lying areas. They are the land drainage authority within their districts and their functions include supervising land drainage

and flood defence works on ordinary watercourses. There is only one IDB in Lancashire which is Earby and Salterforth.

IDBs hold the powers in Section 25 Land Drainage Act 1991 to require works to maintain a proper flow of water in ordinary watercourses in internal drainage districts

This is primarily funded by drainage rates and levies from land occupiers and local authorities. By doing this, they closely manage water levels, both in watercourses and underground (groundwater), by improving and maintaining ordinary watercourses, drainage channels and pumping stations to reduce the risk of flooding.

They are able to involve local people, encourage volunteering and raise funds from those who benefit from their work.

Highways Authorities

Highways authorities (the Highways Agency and unitary/county councils) have the lead responsibility for providing and managing highway drainage and roadside ditches under the Highways Act 1980. The owners of land adjoining a highway also have a common-law duty to maintain ditches to prevent them causing a nuisance to road users.

They co-operate with the other Risk Management Authorities to ensure their flood management activities are well coordinated.



Staining Old Road, Staining Jan 2008

Lancashire County Council (LCC) is the Highway Authority for the Fylde Borough area and has a duty under the Highways Act 1980 to maintain the highway in a condition that is safe and fit for purpose. This includes ensuring that the highway is clear of excess surface water so as it is safe for highway users and does not cause flooding from the highway. It also includes ensuring that highway drainage systems including the road gullies drain surface water from the highway effectively.

LCC operates to the national well managed highway infrastructure code of practice which defines best practice in the management and maintenance of highway assets. LCC has developed and agreed a Highway Management Plan which is based on the national code.

This includes cyclic and reactive maintenance programmes to clean gully grates, empty gullies of silt/debris, clear blockages in connections and pipes, de silting highway drains and identify and repair damage to highway drainage infrastructure. LCC undertakes gully cleansing using a risk-based approach. In accordance with the national guidance the CoP splits gullies into different categories. Category is not fixed and can be re classified as circumstances change or new data is identified. This means a more efficient use of existing resources with the focus on problem areas resulting in an improved service and reduced incidents of highway flooding as resources target problem areas.

LCC liaise with landowners and explain their duties and the consequences of them not keeping watercourses clear. If watercourses continue to cause highway flooding LCC can take enforcement action on the riparian owners. The statutory duty on landowners to maintain watercourses including ditches are as defined in the Land Drainage Act.



Tributary of Main Drain bank breach, Dec 2015 post Storm's Desmond & Eva

UNDERSTANDING THE STATUTORY ROLES AND RESPONSIBILITIES FYLDE COUNCIL HAS IN FLOODING AND SURFACE WATER MANAGEMENT

Fylde Council's statutory roles and responsibilities in the management of flooding and surface water management fall into five main areas, they are Fylde Council as:

- the Local Planning Authority
- the Public Health Authority
- a Risk Management authority as defined by the Flood and Water Management Act 2010
- a Coastal Protection Authority as defined by the Coast Protection Act 1949
- a Category 1 responder under the Civil Contingencies Act 2004

Fylde Council as the Local Planning Authority (LPA)

The National Planning Policy Framework (NPPF) sets the framework for national and local planning decisions. Chapter 14 deals with Climate Change, flooding and coastal change. This is a high level document but key in all aspects of planning. National Planning Practice Guidance (NPPG) provides more detailed guidance to including flood risk and coastal change.

The Fylde Local Plan to 2032 was informed by a Strategic Flood Risk Assessment. This was used to direct new development to areas that were not at risk of flooding. Local Plan preparation also involved planning for water supply and wastewater infrastructure by ongoing dialogue with statutory consultees.

The Environment Agency categorise land as Flood Zone 1, Flood Zone 2, or Flood Zone 3. The LPA must consider whether proposed development is vulnerable to flood risk and require a site specific Flood Risk Assessment to be carried out and if so how risks are addressed/mitigated.

The LPA must consult with EA/LLFA over certain types of development proposals. These include major applications and where development is proposed in Flood Zones 2 or 3 or close to a main river or an ordinary watercourse. Although UU are not a statutory consultee for development proposals they review weekly list of applications and are consulted where views are helpful. UU can however require contributions to management of infrastructure and capacity of pumping stations if they consider it necessary.

The drainage hierarchy is set out in NPPG and Building Regulations. The aim should be to discharge surface run off as high up the drainage hierarchy of drainage options as reasonably practicable:



Permeable paved car park with swales, Lytham Crematorium Nov 2020

1. into the ground (infiltration);
2. to a surface water body;
3. to a surface water sewer, highway drain, or another drainage system;

4. to a combined sewer.

The LPA consults with the community and Parish/Town Councils over development proposals. The LPA needs to consider comments of consultees. Concerns are often raised over how surface water drainage will be dealt with as part of a development.

The LPA regularly impose planning conditions on planning permissions that are either requested by drainage consultees or to ensure the development is effectively implemented. The LPA has powers to enforce these, but there is currently no specialist expertise or capacity in the Development Management team dedicated to drainage issues.

Fylde Council as the Public Health Authority

The Environmental Protection team investigate and deal with defective drainage e.g., blocked sewers, defective septic tanks, and illegal connections. Also, the clearing of land after floods.

Fylde Council as a Risk Management Authority (RMA) as defined by the Flood and Water Management Act 2010



*Kirkham Road, Freckleton, Jan 2020
post Storm Brendan*

District Councils are key partners in planning local flood risk management and can carry out flood risk management works on minor watercourses, working with Lead Local Flood Authorities and others, including through taking decisions on development in their area which ensure that risks are effectively managed.

The Technical Services team currently employs a Principal Drainage Engineer on a temporary contract to work on Fylde Council projects and support work of other teams.

The Technical Services team also administer flood grants which are from time to time provided by the Government.

Fylde Council does not provide sandbags to residents/business affected by flooding. This is due to the limited impact such measures can have when dealing with major flooding emergencies and the disposal of contaminated bags after waters recede.

Fylde Council as a Coastal Protection Authority as defined by the Coast Protection Act 1949

Fylde Council is a Coastal Protection Authority. Fylde lead on coastal erosion risk management and are responsible for developing Shoreline Management Plans (SMPs) which provide a long-term holistic framework for managing the risk of coastal change delivering coastal protection schemes

This work is undertaken in conjunction with the EA and the Marine Management Organisation (MMO) whose approval must be sought for specific works.

Fylde Council as a Category 1 Responder under the Civil Contingency Act 2004

The Civil Contingencies Act 2004 has defined an emergency as 'Any event or situation which threatens serious damage to human welfare in a place in the UK, the environment of a place in the UK, or war or terrorism which threatens serious damage to the security of the UK.'

Fylde Council is a Category 1 responder and has, in conjunction with Lancashire County Council and the Lancashire Local Resilience Forum, completed specific emergency plans to deal with a number of

scenarios, preparation of a flood plan). This involves the facilitation and opening of rest centres if evacuation is required. The main rest centre for Fylde is at Lowther Pavilion but also two others are identified; Warton Village Hall and Elswick Village Hall.

The council may also be involved in assisting residents affected by a flood if they become homeless.

THE VIEWS OF RESIDENTS AND LOCAL BUSINESSES INCLUDING CASE STUDIES

The working group took evidence from several residents/landowners/councillors on flooding in Fylde. Each were invited to:

- share their personal experiences of flooding within Fylde
- describe the effect this had on them and their community
- explain what they believed to be the causes of the flooding they experienced
- outline what they believed were the solutions to prevent it reoccurring

The responses to the above questions were then discussed and helped to inform the findings and conclusions of the review set out later.

Also, as part of this review, Fylde Council consulted with residents through an open-access survey to understand the extent and impact of flooding on both residents and business owners in the area.

The online survey was designed and hosted by Fylde Borough Council, running from late January to early March 2021. In total, there were 318 complete responses to the survey from residents and businesses. 9 additional paper responses have also been included where questions aligned, resulting in an overall response total of 327.

An analysis of the survey is provided in [appendix D](#), attached which also helped to inform the findings and conclusions of the review set out later.

Headlines of the survey are shown below.

Headlines.

Numbers

-  **327**
Survey responses
-  **244**
Respondents who have experienced flooding to their home premises
-  **49**
Respondents who have experienced flooding to their business premises
-  **40%**
Of residents (and 35% of businesses) referred to repeated flooding incidents in their comments

Context

-  **77%**
Of those who experienced flooding to their home premises, reporting that it occurred in their garden
-  **79%**
Of those who experienced flooding to their business premises, reporting that it occurred on their land
-  **August and October**
The months where most flooding incidents were reported to have occurred
-  **64%**
Of those who experienced flooding to their home, reporting that they experienced some form of emotional distress

Reasons and Action

-  **43%**
Of those who experienced flooding to their home premises giving drains or gulleys not coping as the reason
-  **46%**
Of those who experienced flooding to their home premises reporting it to the relevant agencies
-  **27%**
Of those businesses that experienced flooding, identifying that it came from neighbouring land or waterways
-  **25%**
Of those businesses that experienced flooding, indicating that they conduct their own checks and maintenance

BEST PRACTICE IN THE MANAGEMENT OF SURFACE WATER AND FLOODING

Strategic

National Flood and Coastal Erosion Risk Management Strategy (FCERM)

The Government's 2020 National Flood and Coastal Erosion Risk Management Strategy for England is a long-term vision for: a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100. It has 3 long-term ambitions, underpinned by evidence about future risk and investment needs. They are:

- Climate resilient places: working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change.
- Today's growth and infrastructure resilient in tomorrow's climate: making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilient to flooding and coastal change.
- A nation ready to respond and adapt to flooding and coastal change: ensuring local people understand their risk to flooding and coastal change and know their responsibilities and how to take action.

To deliver the Government's strategy locally will require a continued partnership approach, support for the programmes and activities to be delivered, support for the partner organisation and the potential formation of specialist drainage resources with the right skills, knowledge, and experience to be able to address the issues in the long term.

A Green Future

In 2018 the Government set out a 25 year plan for the environment in preparation for leaving the European Union. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first. By adopting this plan, the Government aim to achieve:

1. Clean air.
2. Clean and plentiful water.
3. Thriving plants and wildlife.
4. A reduced risk of harm from environmental hazards such as flooding and drought.
5. Using resources from nature more sustainably and efficiently.
6. Enhanced beauty, heritage and engagement with the natural environment.

In addition, we will manage pressures on the environment by:

7. Mitigating and adapting to climate change.
8. Minimising waste.
9. Managing exposure to chemicals.
10. Enhancing biosecurity.

The Government intend to take action on a number of fronts, looking to join up policies in a way that maximises benefits and value for money. They have identified six key areas around which action will be focused. These are:

- Using and managing land sustainably.
- Recovering nature and enhancing the beauty of landscapes.
- Connecting people with the environment to improve health and wellbeing.

- Increasing resource efficiency and reducing pollution and waste.
- Securing clean, productive and biologically diverse seas and oceans.
- Protecting and improving the global environment

The plan includes an intention to adjust current land management practices that will reduce risks from flooding by expanding the use of natural flood management solutions, put in place more sustainable drainage systems and making 'at -risk' properties more resilient to flooding. Other measures will aim to improve water quality.

One action proposed by the Government includes establishing three new Environmental Land Management Schemes (ELMS) that will reward environmental land management:

- Sustainable Farming Incentive
- Local Nature Recovery
- Landscape Recovery

These schemes are intended to support the rural economy while achieving the goals of the 25 Year Environment Plan and a commitment to net zero emissions by 2050. Through these schemes, farmers and other land managers may enter into agreements to be paid for delivering the following:

- clean and plentiful water
- clean air
- thriving plants and wildlife
- protection from environmental hazards
- reduction of and adaptation to climate change
- beauty, heritage and engagement with the environment

The Environment Bill 2019 introduced mandatory biodiversity net gain (BNG) to ensure that new developments enhance biodiversity and help deliver thriving natural spaces for communities. The requirement will apply to the majority of developments and be mandatory by 2023.

Best Practice Guidance

CIRIA is a member-based research and information organisation dedicated to improvement of all aspects of the construction industry.

CIRIA has produced a number of guidance documents covering a range of opportunities and challenges related to general water management, all the way through to specific SuDS components.

The CIRIA guidance documents are accepted as best practice guides to general water management.

- SuDS
- Surface Water management
- General Water Management
- SuDS components

One project established using CIRIA principles is at Eddington in Cambridge. This newly built neighbourhood, created in conjunction with planners from the University of Cambridge, has the UK's largest site-wide water recycling system. The SuDs system channels rainwater through blue and green roofs and swales, before it is collected in lakes. Rainwater is then treated and reused in buildings across the neighbourhood for purposes such as washing machines and toilet flushing. While reducing water usage the system also minimises the risk of localised flooding in a high flood risk area.

The Rivers Trust

The Rivers Trust is the umbrella organisation for 63 Rivers Trusts in the UK and Ireland. [The Ribble Rivers Trust](#) and [the Wyre Rivers Trust](#) operate in the Fylde area. They are working on building nature based solutions to restore and replenish our local environments.



WRT Natural Flood Management & Water Quality project, Hillylaid Industrial Estate Aug 2021

Nature-based solutions (NbS) are green, living infrastructure, supported and inspired by nature. They help protect the environment, create habitat and offer an alternative, low carbon to traditional grey drainage infrastructure all the while providing valuable natural assets for local communities. Often green and grey infrastructure can work best together.



WRT Natural Flood Management & Water Quality project, Hillylaid Industrial Estate Aug 2021

The Rivers Trusts have adopted many nature-based approaches to tackling some key environmental issues. For several years, local Trusts have been implementing Natural Flood Management (NFM) techniques across the country in both urban and rural locations. Natural Flood Management uses natural materials to slow the flow of water, reducing the chance of flash flooding, as well as increasing water storage throughout the landscape.

Some NFM techniques include:

- Leaky dams - a series of logs across the watercourse to mimic naturally fallen trees, this helps to slow the movement of water through the catchment.
- Rain gardens and Sustainable Urban Drainage (SuDs) - Often in urban areas to reduce the risk of flooding and run-off.
- Woodland creation - Tree planting (in the right places) is a natural way to manage flood risk. The leaves can intercept rainfall, slowing the rate at which rain hits the ground and subsequently enters our rivers. In addition, the roots can help bind together the soil reducing sediment washing into our rivers. Tree planting is also a fun task for volunteers; it's a really satisfying activity that can have amazing impacts on the wider ecosystem.



WRT NFM Leaky dams, Dolphinholme, Wyre Catchment, Lancs, Aug 2021

- Making space for water such as wetlands and storage ponds - The wetland plants help filter and improve water quality. Not only that, but wetlands can also help us to adapt to our changing climate, by storing water during extreme rainfall events, wetlands can reduce the amount of surface water elsewhere in the catchment.

As well as the practical side of implementing NbS, they are instrumental in addressing some of the financial barriers to funding the adoption of NbS.

By implementing natural flood risk management features at scale, there could be significant financial returns from a better river environment. The Rivers Trust are in the process of setting up a pilot project to lead future natural capital investment and build a credible case for green investment to restore river landscapes.

This will also ultimately have a beneficial impact on water quality including bathing waters.

The Wyre Catchment Project

An environmental project in Lancashire has been selected as one of first schemes to receive grant funding to encourage sustainable private sector investment for the benefit of the local community and the surrounding environment.

Defra, the Environment Agency (EA), [Esmée Fairbairn Foundation \(EFF\)](#) and [Triodos Bank UK](#) have formed a collaboration to support environmental projects to create sustainable funding models.

Having been sourced and evaluated by Triodos Bank UK, The Rivers Trust's work on natural flood management in the Wyre catchment is one of four projects that will receive grant funding from Defra, the EA and EFF to support their development, complete business plans to attract private sector investment, and deliver long-term environmental benefits and sustainable financial returns.

The project will evaluate the effectiveness and certainty of a variety of natural flood management solutions. This will help prioritise investment in solutions which offer the greatest social, economic and environmental return for the catchment and its community.

The use of natural flood management, including the building of leaky dams, the creation of bog, and the rewetting of peat, on 70 hectares of the River Wyre catchment by the Rivers Trust would help to reduce the frequency of flooding for a large number of 'at risk' properties identified in a village in Lancashire.

At the same time as reducing flood risk, these natural flood management schemes will create new habitats for wildlife and help to mitigate climate change through the storage of greenhouse gases in the newly created wetlands and peat lands.

The seed funding will allow the Wyre Rivers Trust, Environment Agency, United Utilities, Triodos Bank UK, Co-op Insurance and Flood Re, to develop a financial instrument that would allow upfront investment from the private sector to be reimbursed by the beneficiaries of a healthier environment.

The Rivers Trust have made a short video on the benefits of Natural Flood Management which is useful in demonstrating some of the best practice work being delivered.

Susdrain provides a number of examples of schemes that demonstrate the advantages of SuDS and provide improvements in either water quality, water quantity and amenity/biodiversity compared to traditional drainage.

FINDINGS AND CONCLUSIONS

In concluding the work of the review, the members of the working group identified several areas of discussion, the current position/existing approach on each of these and the issues of concern emerging, which are outlined below. Each issue of concern is identified A to X which are then carried forward into the recommendations section.

Areas of discussion	Current position/existing approach	Issues of concern emerging
Collaboration & Partnership working	<p>Fylde Council is a member of the:</p> <ul style="list-style-type: none"> • Lancashire FCERM Partnership • North West North Wales Coastal Group and its Northern Sub Group • Fylde Peninsula Water Management Group • Making Space for Water Group • Lancashire Resilience Forum (Flooding & Severe Weather Group) <p>There is also:</p> <ul style="list-style-type: none"> • Collaboration amongst technical service heads across Fylde, Blackpool and Wyre councils • Some working between LLFA officers and the council's technical services team. • Staining Flood Action Group 	<p>A. Existing partnership groups have been in existence for several years and need reviewing in order to remain effective.</p> <p>B. There is no dedicated officer at Fylde to attend to the various drainage queries and complaints raised by the community.</p>
Government Decision not to adopt schedule 3 of the Flood and Water Management Act 2010	<ul style="list-style-type: none"> • There is no statutory requirement for Developers to get their surface water drainage assets adopted and maintained by the public sector in the long term. 	<p>C. Surface water assets (e.g., SuDs/balancing ponds) are installed by developers, with no guarantee of long-term management and maintenance.</p>
Easement Access adjacent to watercourses on development sites	<ul style="list-style-type: none"> • There is no statutory requirement for developers to provide easement access to (non mains river) ordinary water courses. 	<p>D. Without proper access to maintain water courses it is difficult to maintain the flow and in a storm situation, blockages can cause unnecessary flooding</p>
LLFA responsiveness to consultation on planning applications	<ul style="list-style-type: none"> • The Lead Local Flood Authority have previously been slow to respond to planning consultations but have now put increased staff resources in place including a specialist planning officer. 	<p>E. Lack of timely consultation comments from the LLFA on planning applications.</p>
Consent regime for riparian owners	<ul style="list-style-type: none"> • The current consent system seen as complex and a barrier by farmers and landowners. Primarily concerns are the cost and time in submitting applications. 	<p>F. Farmers and Landowners not maintaining their ditches and water courses appropriately.</p>

Areas of discussion	Current position/existing approach	Issues of concern emerging
Environment Agency main river responsibility	<ul style="list-style-type: none"> • Currently the Environment Agency are responsible for maintaining main river including key strategic drainage assets such as Dock Bridge pumping station and various tidal flood gates. However, EA responsibility does not extend to the entire river catchment 	G. Mains River catchment areas that are not under the maintenance of the EA may be poorly maintained and so are unable to cope with the amount of water in a flood situation.
Strategic planning of the watercourse catchments including modelling, future management, and maintenance	<ul style="list-style-type: none"> • No single ownership/oversight from RMA's for the entire catchment. • River/watercourse catchments cross administrative boundaries. • Riparian owners expected to maintain flow of water across their land. • Due to national planning legislation, policy and guidance, consideration of planning applications focus on issues such as impermeable area and rate of discharge and not on existing condition and maintenance of watercourses. 	<p>H. Many existing water courses are in a fragmented state of maintenance and repair.</p> <p>I. Increased discharge into the watercourse from poorly attenuated development sites or unauthorised connections.</p> <p>J. Difficulty coping with the amount of water in a storm situation in particular locations.</p> <p>K. Riparian owners not aware of their responsibility to maintain the flow of water across their land.</p>
Maintenance of Highway Drainage assets.	<ul style="list-style-type: none"> • Risk based approach to maintaining road gulleys based on level of silt build up and frequency of required cleansing 	L. Blocked road gulleys causing flooding to roads which spills onto adjoining land and into properties.
Publication of flood investigation reports under Section 19 of the Flood and Water Management Act	<ul style="list-style-type: none"> • Section 19 investigations and reports are produced to investigate flood events • Section 19 investigation reports can be used to help evidence the need for external funding to alleviate flood risks 	M. There is often sometime between a flood occurring and when a Sec 19 flood investigation report is published which means the causes and lessons are not learnt and actioned.
Drainage implications of new development.	<ul style="list-style-type: none"> • Site specific flood risk assessments are only required when considering Flood Zones 2 & 3 and development within 20m of a main river 	N. Flooding issues caused downstream of the proposed development
Mapping of watercourses	<ul style="list-style-type: none"> • Not all watercourses are recorded on digital mapping system • Riparian owners of water course are not known 	O. It is unclear who has the maintenance responsibility of particular water courses.
Combined foul/surface water drainage system in Fylde.	<ul style="list-style-type: none"> • The current capacity of the combined foul/surface water drainage system meets the 30-year storm event standard. 	P. UU are not required to upgrade/replace the existing combined system

Areas of discussion	Current position/existing approach	Issues of concern emerging
Expansion of UU infrastructure	<ul style="list-style-type: none"> UU work in partnership with the EA, LLFA and Fylde Council to discuss their 5 year development plans for the borough. 	Q. That development is not taken into account in the preparation of the 5 year plan.
Fylde Council Flood Risk Management & Emergency Planning	<ul style="list-style-type: none"> The flood plan is reactive in dealing with incidents rather than taking a proactive approach. Emergency Planning limited to specific officers at Fylde. Lack of capacity in Emergency Planning at Fylde. 	<p>R. No dedicated qualified/experienced Emergency Planning Officer in post at Fylde.</p> <p>S. Lack of skills, knowledge, and experience to deal with a major flood incident</p> <p>T. Lack of effective resources to deal with a major flood event</p>
Land management, diversification and, natural flood management (NFM)	<ul style="list-style-type: none"> Climate change is resulting in extreme weather situations with wetter winters and drier hotter summers. Flooded land preventing farmers and landowners from farming land they have traditionally used Natural Flood Management schemes starting to be introduced into the landscape Environment Agency's Flood Innovation fund which is piloting innovative ways to manage surface water 	<p>U. Farmers and Landowners resistance and ability to change.</p> <p>V. Concern that there are different agencies involved which may result in a disjointed and uncoordinated approach on the ground.</p> <p>W. Lack of resources on the ground to engage and work with farmers and landowners.</p>
Public awareness of the Flood Hub and grants available to help local communities and businesses.	<ul style="list-style-type: none"> Only 25% of survey respondents have heard of The <u>Flood Hub website</u> Limited take up of Property Flood Resilience grants 	X. Lack of awareness of The Flood Hub and the grants that are available to local communities and businesses to provide resilience measures to prevent future damages.

RECOMMENDATIONS

In reaching the recommendations of the review, the members of the working group took each issue of concern set out in the previous section; (findings and conclusions) which were identified A to X which are now shown in the second column of the table below and arranged under the Government's Flood and Coastal Erosion Risk Management (FCERM) strategy action plan headings (left column below). The resulting 30 recommendations are shown in the third column of the table below with the timescales in the right column.

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
GENERAL	A. Existing partnership groups have been in existence for several years and need reviewing in order to remain effective.	1. Fylde Council to strengthen partnership working with Environment Agency (EA), United Utilities (UU), Local Lead Flood Authority (LLFA), Blackpool Council, Wyre Council and the River Wyre and Ribble Trusts to create climate resilient places, today's growth and infrastructure in tomorrow's climate and communities ready to respond and adapt to flooding and coastal change.	Quarter 4 2021/22 Ongoing
	B. There is no dedicated officer at Fylde to attend to the various drainage queries and complaints raised by the community.	2. The Fylde Peninsula Water Management Group should give priority and focus on flooding and surface water management.	Quarter 4 2021/22
	W. Lack of resources on the ground to engage and work with farmers and landowners.	3. Fylde Council to consider increasing resources to be able to better investigate and resolve incidents of flooding concern, develop projects for addressing surface water management in the longer term and provide support to the Development Management service to help monitor and enforce compliance.	Quarter 3 2021/22
	M. There is often sometime between a flood occurring and when a Sec 19 flood investigation report is published which means the causes and lessons are not learnt and actioned.	4. All Risk Management Authorities to explore further joint working opportunities, to improve sharing of resources, staff skills, and software, etc.	Quarter 4 2021/22
	V. Concern that there are different agencies involved which may result in a disjointed and	5. Fylde Council to monitor performance of the LLFA in the publication of Section 19 investigation reports.	Quarter 1 2022/23

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
	uncoordinated approach on the ground.	6. Fylde Council to consider preparation and adoption of a Fylde flood risk management strategy and action plan which sits under the <u>Lancashire and Blackpool Local Flood Risk Management Strategy 2021-27.</u>	Quarter 3 2022/23
CLIMATE RESILIENT PLACES			
Deliver practical and innovative actions that help to bolster resilience to flood and coastal change in local places	<p>H. Many existing water courses are in a fragmented state of maintenance and repair.</p> <p>I. Increased discharge into the watercourse from poorly attenuated development sites or unauthorised connections.</p> <p>J. Difficulty coping with the amount of water in a storm situation in particular locations.</p>	<p>7. Fylde Council, the LLFA and the Environment Agency to work together with riparian owners to proactively regulate the water course network in Fylde and develop and implement future flood attenuation measures.</p> <p>8. Fylde Peninsula Water Management Group to work with partners, to deliver practical and innovative actions and schemes like the Innovative Flood Resilience fund (IFRF) in conjunction with more traditional flood defences.</p> <p>9. Fylde Council to ensure that localised flood alleviation schemes are developed and delivered through the EA's FCERM Investment Programme via Flood Defence Grant in Aid funding.</p>	<p>Quarter 1 2022/23</p> <p>Quarter 1 2022/23</p> <p>Quarter 2 2022/23</p>
Make greater use of nature-based solutions that take a catchment led approach to managing the flow of water to improve resilience to both floods and droughts	U. Farmers and Landowners resistance and ability to change.	10. The Fylde Peninsula Water Management Group to work with DEFRA to ensure Farmers and landowners in river catchments are diversifying and taking advantage of DEFRA'S Natural Flood Management (NFM) methods under the Environmental Land Management Scheme (ELMS).	Quarter 3 2022/23

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
Maximise opportunities to work with farmers and land managers to help them adapt their businesses and practices to be resilient to flooding and coastal change	S. Lack of skills, knowledge, and experience to deal with a major flood incident	11. Fylde Council to consider establishment of a Fylde Flood Forum to bring together Flood Action Groups (FIAG's), Landowners, National Farmers Union (NFU), UU, EA, LCC Highways & LLFA.	Quarter 4 2022/23
	F. Farmers and Landowners not maintaining their ditches and water courses appropriately.	12. The Environment Agency to work with other RMA's to publicise its consent regime process to enable landowners to apply for a multi consent permit over several years.	Ongoing
Develop adaptive pathways in local places that equip practitioners and policy makers to better plan for future flood and coastal change and adapt to future climate hazards.	K. Riparian owners not aware of their responsibility to maintain the flow of water across their land.	13. Fylde Council to undertake a survey of existing watercourses to map, survey and record key ownership and management responsibilities.	Quarter 1 2022/23 Ongoing
	O. It is unclear who has the maintenance responsibility of particular water courses.	14. The Fylde Making Space for Water Group to identify a schedule of locations known to flood because of previous blocked road gulley assets and implement an action plan to address each.	Quarter 1 2022/23
	L. Blocked road gulley's causing flooding to roads which spills onto adjoining land and into properties.	15. All RMA's to work together to develop and implement projects to help separate foul from surface water	Ongoing

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
	<p>P. UU are not required to upgrade/replace the existing combined system.</p> <p>G. Mains River catchment areas that are not under the maintenance of the EA may be poorly maintained and so are unable to cope with the amount of water in a flood situation.</p>	16. Fylde Council, the LLFA and the EA to work together to secure increased modelling of watercourse catchments in Fylde to identify potential issues and capacity restrictions.	Ongoing
TODAY'S GROWTH AND INFRASTRUCTURE RESILIENT IN TOMORROW'S CLIMATE			
Put greater focus on providing timely and quality planning advice that helps avoid inappropriate development in areas at risk of flooding and coastal change.	E. Lack of timely consultation comments from the LLFA on planning applications.	17. Fylde Council to monitor performance of the LLFA in responding to planning applications.	Quarter 1 2022/23
	N. Flooding issues caused downstream of the proposed development	18. Fylde Council Development Management team with the assistance of the LLFA, EA, Highway Authority and UU to ensure development complies with any planning conditions agreed and current guidance.	Quarter 4 2021/22
Leave the environment in a better state by contributing to	D. Without proper access to maintain water courses it is difficult to maintain the flow and	19. Fylde Council to work with partners to encourage National Government to secure proper future access to all water courses.	Quarter 1 2022/23

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
biodiversity net gain for new development proposals	<p>in a storm situation, blockages can cause unnecessary flooding.</p> <p>N. Flooding issues caused downstream of the proposed development</p>	20. Fylde Council to draft and adopt Surface Water and Flood management Supplementary Planning Guidance to include the principles of Biodiversity Net Gain and the four pillars of SuDs.	Quarter 3 2023/24
Ensure that spending on flood and coastal resilience contributes to job creation and sustainable growth in local places	C. Surface water assets (e.g. SuDs/ balancing ponds) are installed by developers, with no guarantee of long-term management and maintenance.	21. Fylde Council to work with partners to encourage National Government to adopt schedule 3 of the Flood and Water Management Act 2010.	Quarter 1 2022/23
Mainstream property flood resilience measures and to 'build back better' after flooding to reduce damages and enable faster recovery for local communities	X. Lack of awareness of the Flood Hub and the grants that are available to local communities and businesses to provide resilience measures to prevent future damages.	22. The Fylde Peninsula Water Management Group to promote awareness of The Flood Hub and Property Flood Resilience grants to local communities and businesses when and where available.	Quarter 3 2022/23
Provide expert advice on how infrastructure providers (road, rail, water, and power	L. Blocked road gulleys causing flooding to roads which	23. Fylde Council to monitor performance of LCC in the maintenance of highway drainage assets in Fylde.	Quarter 1 2022/23

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
supplies) can ensure their investments are more resilient to future flooding and coastal change avoiding disruption to peoples' lives and livelihoods	<p>spills onto adjoining land and into properties.</p> <p>Q. That development is not taken into account in the preparation of the 5 year plan.</p>	24. The Fylde Peninsula Water Management Group should take account of the UU's development plans in its consideration and development of flooding and surface water management initiatives.	Quarter 4 2021/22
A NATION READY TO RESPOND AND ADAPT TO FLOODING AND COASTAL CHANGE			
Support communities to better prepare and respond to flooding and coastal change, including transforming how people receive flood warnings	A. Existing partnership groups have been in existence for several years and need reviewing in order to remain effective.	25. Fylde Council to investigate the establishment of more Flood Action Groups in Fylde to address areas of local concern.	Quarter 2 2022/23
	R. There is no dedicated qualified/ experienced Emergency Planning Officer in post.	26. The LLFA to review the structure and format of Making Space for Water meetings to identify, resolve and track local flooding occurrences to ensure they are effectively resolved.	Quarter 3 2021/22
		27. Fylde Council to consider providing and appointing a dedicated and qualified/experienced Emergency Planning Officer with experience and knowledge of responding to flooding emergencies.	Quarter 1 2022/23
Ensure people and businesses receive the support they need from all those involved in recovery so they can get	S. Lack of skills, knowledge, and experience to deal with a major flood incident.	28. Fylde Council to review its approach to providing assistance to residents and businesses before, during and after flood events.	Quarter 2 2022/23

FCERM strategy action plan headings	Areas of concern identified in the review	Recommendations of the working group	Timescales
<p>back to normal quicker after flooding</p> <p>Help support communities with managing the long-term mental health impacts from flooding and coastal change</p>	<p>T. Lack of effective resources to deal with a major flood event</p>		
<p>Develop the skills and capabilities needed to better support communities to adapt to future flooding and coastal change</p>	<p>R. There is no dedicated qualified/ experienced Emergency Planning Officer in post.</p> <p>S. Lack of skills, knowledge, and experience to deal with a major flood incident</p>	<p>29. Fylde Council to provide and deliver appropriate training for officers who would be expected to respond/attend flooding emergencies.</p> <p>30. Fylde Council to provide training and support for flood wardens based in local communities in conjunction with other RMA's</p>	<p>Quarter 4 2021/22</p> <p>Quarter 4 2022/23</p>

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GLOSSARY OF TERMS AND ABBREVIATIONS

Regional Flood and Coastal Committee (RFCC). There are 12 regional flood and coastal committees (RFCCs). RFCCs play an important role in helping to protect communities from flooding and coastal erosion. They help the EA and partners to understand local issues better, and to balance local and national priorities. Each Regional Flood & Coastal Committee (RFCC) is a committee established by the EA under the Flood & Water Management Act 2010. The EA must consult with RFCCs about flood and coastal erosion risk management (FCERM) work in their region and take their comments into consideration. RFCCs approve the annual programme of FCERM work in their region and set the local levy that funds FCERM activities within the region that are a local priority. This is attended by a nominated officer from the Technical Services team at Fylde.

Lancashire Flood & Coastal Erosion Risk Management (FCERM) Partnership is sub regional partnership in the management of Flood and Coastal Erosion Risks in Lancashire including all flood risk management authorities in Lancashire County, Blackpool and Blackburn with Darwen.

Fylde Peninsula Water Management Group (FPWMG) is a sub-regional partnership established to take infrastructure projects forward. The group has been highly successful in delivering coastal defence and bathing water improvements. The group consists of Blackpool, Fylde and Wyre Councils. LLFA, UU, EA, the river Wyre and Ribble Trusts and Turning Tides/Love my Beach. It is attended by officers and includes a lead member from each council (Chairman of EH&H committee at Fylde) and normally meets quarterly.

Making Space for Water Group is established by the Lead Local Flood Authority (LCC) to identify and coordinate actions to address operational flood issues and projects. It includes officers from all the flood risk management authorities and meets quarterly.

Lancashire Flood Resilience Forum (LRF) is a group of organisations that work together to prepare and respond to emergencies in Lancashire. It is attended by a nominated officer from the Environmental Protection team at Fylde Council.

The North West North Wales Coastal Group is one of six Coastal Group's in England. It is a strategic partnership focused on developing a long-term sustainable vision for the North West Coast by encouraging proactive management and pooling resources across the region.

Flood Action Group (FIAG) is a voluntary group of local residents who meet on a regular basis to work on behalf of the wider community to help to try and reduce the impact of future flood events. The focus of the group can be based around emergency planning and can also tackle local issues, whilst providing a unified voice for the community to communicate ideas and queries to others. There is currently one group in existence in Fylde at Staining.

Risk Management Authorities (RMA's) include the Environment Agency, Lead Local Flood Authorities, District and Borough Councils, Coast protection authorities, Water and sewerage companies, Internal Drainage Boards, Highway authorities.

The Flood and Water Management Act 2010 requires these Risk Management Authorities to cooperate with each other, act in a manner that is consistent with the National Flood and Coastal Erosion Risk Management (FCERM) Strategy for England and the local flood risk management strategies developed by Lead Local Flood Authorities and exchange information.

Sustainable Drainage Approving Body (SAB). Schedule 3 of the Flood and Water Management Act 2010 (FWMA) which came in on 7 January 2019 established SABs in Welsh unitary authorities, these bodies have statutory responsibility to evaluate and approve drainage applications for new developments where construction work has drainage implications and adopt and maintain SuDS schemes, subject to conditions and exemptions.

APPENDIX A – UNDERSTANDING DIFFERENT SOURCES OF FLOODING

(extract from Environment Agency guidance: Flooding – minimising the risk October 2012)

"Floods can happen anywhere at any time, caused by rising ground water levels, burst water drains, rainwater running off hillsides as well as flooding from rivers and the sea.

Even if you live miles away from the coast or a river, there's still a chance flooding could affect you.

The most common sources of flooding are:

- **River flooding** happens when a watercourse cannot cope with the water draining into it from the surrounding land. This can happen, for example, when heavy rain falls on an already waterlogged catchment.
- **Coastal flooding** results from a combination of high tides and stormy conditions. If low atmospheric pressure coincides with a high tide, a tidal surge may happen which can cause serious flooding.
- **Surface water flooding** happens when heavy rainfall overwhelms the drainage capacity of the local area. It is difficult to predict and pinpoint, much more so than river or coastal flooding.
- **Sewer flooding** happens when sewers are overwhelmed by heavy rainfall or when they become blocked. The likelihood of flooding depends on the capacity of the local sewerage system. Land and property can be flooded with water contaminated with raw sewage as a result. Rivers can also become polluted by sewer overflows.
- **Groundwater flooding** results from water levels in the ground rising above surface levels. It is most likely to occur in areas situated over permeable rocks, called aquifers. These can be extensive, regional aquifers, such as chalk or sandstone, or may be more local sand or river gravels in valley bottoms underlain by less permeable rocks. This is not a significant source of flooding in Wales.
- **Reservoir flooding.** Some reservoirs hold large volumes of water above ground level, contained by walls, or 'dams'. Although the safety record for reservoirs is excellent, it is still possible that a dam could fail. This would result in a large volume of water being released very quickly.

APPENDIX B – WHO'S RESPONSIBLE FOR MANAGING FLOOD RISK?

THE FLOOD HUB

Who's responsible for managing flood risk?

Property owner
The property owner is responsible for private drainage and surface water up to the boundary of the property. They may also want to consider property flood resilience (PFR) measures to protect their property from flood damage.

Watercourse (riparian) ownership
You own a watercourse if it runs adjacent to, through, or under your property. This includes both main rivers, and ordinary watercourses such as streams, culverts and ditches. You are responsible for maintaining the natural flow of water and reporting incidents such as blockages and flooding.

Main river and coastal flooding
The Environment Agency (EA) is responsible for managing the risk of main river and coastal flooding. Main rivers are those which are designated as such on the EA's Main River Map. To report incidents and flood risk issues, call the Incident hotline on 0800 80 70 60. To sign up for flood warnings, call Floodline on 0345 988 1188.

Groundwater flooding
The Lead Local Flood Authority (LLFA) are responsible for managing the risk of groundwater flooding. This can occur when periods of prolonged rainfall cause the water table to rise and emerge in basements or above ground.

Public sewers and utility pipes
Water companies (e.g. United Utilities) are responsible for managing the risk of flooding from public sewers and utility pipes. This includes shared sewer pipes where they meet between properties before joining the public sewer.

Highway gullies and drains
Highway roads, footpaths, drains and gullies are the responsibility of the local highway authority which will be either the County Council or the Unitary Authority.
Major roads and motorway drainage
Responsibility of Highways England.

Surface water flooding
The Lead Local Flood Authority (LLFA) are responsible for managing the risk of surface water flooding. This can occur when the capacity of drainage systems on land or roads is exceeded by heavy rainfall.

APPENDIX C – FLOOD WARNING ALERTS PROVIDED BY THE ENVIRONMENT AGENCY IN FYLDE

The flood risk in Fylde comes from multiple sources including:

- Tidal or tidal/fluvial combined (1,580 properties)
- Surface water (600 properties)
- Fluvial (995 properties)

The Environment Agency nationally provides a flood warning system to property owners/occupiers in specific flood warning area who may be affected by flooding incidents who have registered to receive alerts. In Fylde the total number of properties in each flood warning area in relation to those that have registered is shown below:

Flood Warning System in Fylde

Flood Warning Area	Total Properties in Area	Total Properties Fully Registered
Lancashire coastline at Lytham St. Annes, along the coast from Squires Gate to Warton Bank	35	9
Lancashire coastline at Lytham St. Annes, between Lytham Hall Park and Warton Bank	1,156	514
Lancashire coastline at Clifton Marsh, adjacent to Freckleton Pool	5	3
Lancashire coastline at Clifton Marsh, between Freckleton and Savick Brook	18	15
Wyre estuary at Skippool, area east of Breck Road. NB: Included for completeness, only a small sliver of this FWA, on the right bank of Main Dyke at Skippool Bridge, falls within Fylde BC.	144 (only 6 properties in Fylde Borough)	31 (only 1 property in Fylde Borough)

APPENDIX D - FLOODING AND SURFACE WATER MANAGEMENT IN FYLDE – SURVEY OF RESIDENTS AND BUSINESS OWNERS

The full analysis of the survey data can be found online at:

<https://www.fylde.gov.uk/flooding-survey-results>