

2019

# A Summary of the Kirklees Local Flood Risk Management Strategy

A summary of the strategy which defines the Councils approach to the management of flood risk from local sources with proposals for measures and actions which will help to manage the risk



# Kirklees Local Flood Risk Management Strategy (Summary)

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### Use of the Information in the Report

As Lead Local Flood Authority (LLFA), Kirklees Council has a duty to develop, maintain, apply and monitor a strategy for local flood risk management. The local strategy will complement and support the national strategy, published by the Environment Agency, which outlines a national framework for flood and coastal risk management, balancing the needs of communities, the economy and the environment. The LLFA must specify objectives to manage flood risk and suggest measures to achieve those objectives. The LLFA has a responsibility to consider the flood risk management functions that it may exercise to reduce risk.

In support of the aim of a general reduction of flood risk across the district, the Council will prioritise investigations and works identified in this Strategy to the best of its abilities, based on perceived and evidenced risk and within limited resources.

The indications of flood risk in the report are high level and based on incomplete information. A level of subjectivity has been used in assessing relative flood risk and the results will be used to prioritise future, more robust, investigations and assessments which will, hopefully, lead to reliable measures of risk. Consequently, it is not appropriate to apply the information and recommendations in this report at a local, property level.

The Councils initial Strategy was published in February 2013, updated in 2016, and good progress has been made on many of the actions identified in the associated action plan. This revision to the Strategy reflects the improved evidence base that has developed over the last 5 years, resulting in a greater understanding of the location and extent of flood risk across the district. Reduced local government budgets, recent changes to planning legislation and a national move towards a catchment-based approach to flood risk management require reprioritisation of the actions in the original Strategy.

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### 1 Introduction

The risk of flooding in England is predicted to increase due to climate change and new development in areas at risk. It is not possible to prevent all flooding but there are actions that can be taken to manage these risks and reduce the impacts on communities. This flood management strategy for Kirklees aims to use a variety of techniques, measures and initiatives to provide a co-ordinated mitigation plan that balances the needs of communities, the economy and the environment.

#### The Scale and Type of Flood Risk in Kirklees

##### Characteristics of the Area

Kirklees is a unitary council in West Yorkshire bounded by Calderdale, Bradford, Leeds, Wakefield, Barnsley, Derbyshire and Oldham. In terms of size, it is the 11<sup>th</sup> largest district council out of 348 (Population of around 400,000) and 3<sup>rd</sup> largest metropolitan council in area (400km<sup>2</sup>). The main population centres are Huddersfield (125,000), Dewsbury (57,000) and Batley (45,000), with a further 10, or so, small towns (5-20,000). Around 40% of the area is heavily urbanised with 60% rural in character, of which half is in the Pennine hills. <sup>1</sup>

With respect to water resources, Kirklees has 27 large reservoirs in the Pennines, operated by the local Water and Sewerage Company, Yorkshire Water, with the associated emergency planning aspects managed by the Environment Agency. There are approximately 100km of enmained river, managed by the Environment Agency, and unrecorded, but substantial, lengths of culverted and open minor watercourses. The main rivers in the district are the rivers Colne and Calder flowing to the river Aire, which drains around 85% of the area, and the river Dearne flowing to the river Don, draining the remaining 15%. Average annual rainfall figures for the district range from 1800mm at the Pennine headwaters to 800mm in Huddersfield, compared with an average across England of 950mm.<sup>2</sup>

##### Flooding Characteristics

##### *Fluvial Flooding from Designated Main Rivers*

Kirklees is dominated by 2 main river systems, the River Calder to the North of the district and the River Dearne to the South, both rivers having their headwaters in the Pennines and both ultimately flowing to the Humber estuary.

In the upper reaches of the **Calder's** tributaries, valleys are generally narrow and steep-sided and consequently, flood zones are narrow. Existing development is mostly housing, commercial or small areas of light industry.

In the downstream catchment between Huddersfield and Dewsbury, the floodplain broadens and land-use includes large areas of heavy industry and housing within the high flood risk zone. Substantial lengths of main river tributaries to the River Calder, such as Grimescar Dyke, Batley Beck and Chickenley Beck are culverted through urban areas

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<sup>1</sup> Kirklees Council, *Factsheets 2010*,  
<http://www.kirklees.gov.uk/community/statistics/factsheets/factsheets.shtml>

<sup>2</sup> Environment Agency, *Calder Catchment Flood Management Plan July 2010*, page 54

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The upper reaches of the **Dearne** above Clayton West are fairly steep and respond quickly to rainfall. The industrial textile heritage of the area, resulting in recent residential conversions of riverside mills, and the general high density of residential development in the valley bottom leave a sizeable part of the local community at risk of flooding.

The Environment Agency has responsibility for managing the flood risk from main rivers.

### ***Minor Watercourse Flooding***

Many thousand km's of minor watercourses drain surface water across the district. The condition and capacity of the open watercourses has not historically been recorded and only limited information is available on the sections which have been culverted.

### ***Surface Water Flooding***

Surface water flooding is generally more prevalent in the hillier, rural, less developed south side of the district. The settlements along the Dearne, Holme, Colne and Woodsome Valleys are concentrated along the rivers and suffer the consequences of rapid surface water runoff from the uplands and fields on the steep valley sides.

The large settlements to the centre and north of the district, Huddersfield, Dewsbury and Batley, have significant networks of public sewers, owned and maintained by Yorkshire Water, with less evidence of smaller culverted watercourses remaining in those areas.

### ***Groundwater Flooding***

Groundwater flooding occurs as a result of water rising to the surface from underlying ground or abnormal springs, usually as a result of sustained increased rainfall raising natural groundwater levels. In Kirklees, it is very unusual to see groundwater breaking through the surface of the ground but the high number of basements in older properties in Kirklees, a product of its industrial heritage, means that groundwater flooding to "below ground" rooms is increasingly common.

### ***Sewer Flooding***

Yorkshire Water owns much of the combined and surface water sewers in the region. There are some known sewer related flooding issues within the Kirklees area. However, overall sewer performance is satisfactory.

### ***The interactions between different sources of flooding***

The general public, understandably, care little where the floodwater comes from but the LLFA has a responsibility to determine, where possible, which risk management authority is responsible. Where there are complicated interactions of different sources, the LLFA will take a lead to ensure that investigation, assessment and appropriate mitigation measures are carried out.

### ***Public Perception of Flood Risk***

Households and businesses which have suffered from disruptive and damaging flooding generally understand the risks involved but many still rely on the various agencies and organisations to manage future risks. Agencies, particularly the LLFAs, have a role to play but an important outcome from this strategy will be a programme of awareness-raising with affected property owners to give them the knowledge and tools to take measures to protect themselves.

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### The Size of Flood Risk in the District

Presenting a simple indication of the risk from flooding in the district is difficult. The risk comes from many sources and there are many methods of calculating predicted risk. A variety of studies and calculations have been made in the past 5 years which contribute to an understanding of the size of the flood risk in Kirklees.

#### Comparison across other Councils/LLFAs

Kirklees ranks **55<sup>th</sup> out of 150** LLFAs in England, in terms of general flood risk.

Excluding larger Counties and London Boroughs, **Kirklees ranks 7<sup>th</sup> behind Hull, Birmingham, Brighton, Doncaster, Leeds and Leicester.**

#### Number of properties at risk from flooding

If a rainfall event with a 1% chance of happening in any year occurred in Kirklees the number of properties at risk of flooding are:

3,000 from river flooding, and

9,000 from other local sources (surface water, minor streams and groundwater)

Many properties are at risk from collapse or blockage of underground drainage systems but it isn't easy to quantify the risk or number. Improving our understanding of drainage asset condition will allow us to prepare works programmes to manage this risk.

### What will the Strategy do?

The Strategy will explain how the Council, as Lead Local Flood Authority, will determine the location and size of flood risk, develop a co-ordinated, resourced and diverse action plan to mitigate the risk, presenting the objectives and measures in an understandable and accessible way.

#### The general principles of the Strategy are that:

- Flooding will always occur. It is uneconomic to totally prevent it and flood management will always be a balance of preventing flooding and managing the consequences of flooding.
- Flood risk management will be a compromise between managing today's problems and reducing the risk from future, larger, catastrophic flooding.
- More and better information on drainage systems and flood risk will result in more effective schemes and initiatives.
- Various authorities have flood risk management responsibilities but, ultimately, householders and businesses are best placed to protect their own properties.
- New developments offer the best opportunity to reverse the mistakes made by previous generations in building developments in high flood risk locations.
- The Strategy will pay due regard to the local, natural environment maximising opportunities for enhancement.

## 2 Responsibilities

### Roles, Responsibilities and Functions

The Risk Management Authorities (RMA's) in the district have a variety of roles, responsibilities and functions to be exercised, including the following:

#### The Environment Agency

- Strategic overview of all forms of flooding
- Risk-based management of flooding from “main rivers”
- Regulation of the safety of higher-risk reservoirs

#### The Water Company

- A duty to effectually drain their area
- A duty to register all reservoirs with a capacity greater than 10,000m<sup>3</sup> with the Environment Agency
- An agreement with Ofwat to maintain a register of properties at risk from hydraulic overloading in the public sewerage system (DG5 register).

#### The Lead Local Flood Authority

Powers and duties described below

#### The Highway Authority

Duties described below

In addition to the role of RMA's, individual landowners owning land adjacent to watercourses, known as **riparian owners**, have important rights and responsibilities relating to flood risk management from natural watercourses. They have

- A right to receive flow in its natural quantity and quality. Water may only be abstracted from a watercourse with the formal approval of the Environment Agency.
- A right to protect their land and property from flooding and erosion.
- A responsibility to allow water to flow through their land without obstruction, diversion or pollution.
- A responsibility to receive flood flows through their land
- A responsibility to keep the watercourse bed and banks free of litter and debris.

### The Powers and Duties of Kirklees Council

The Flood and Water Management Act 2010 identified Kirklees Council as the Lead Local Flood Authority for the district.

The Council's powers and duties relating to the management of local flood risk are:

#### As Lead Local Flood Authority

- A duty to produce a local flood risk management strategy
- A duty to co-operate with other risk management authorities

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- A power to arrange for a flood risk management function to be transferred to another risk management authority
- A power to request information in connection with its flood management functions from another person
- A duty to investigate flooding
- A duty to maintain a register of drainage assets/ features
- A power to designate features that affect flood risk
- A power to formally consent works within Ordinary Watercourses
- A duty to promote and manage Sustainable Drainage

### **As a Category 1 Responder (Emergency Planning)**

- A duty to put in place emergency plans

### **As Highway Authority**

- A duty to maintain the public highway network (excluding motorways)
- A duty to adopt and maintain SuDS draining new roads

### **As Planning Authority**

- A responsibility to consider flood risk in Local Plans
- A responsibility to consider flood risk when assessing applications for development, taking advice from the LLFA as Statutory Consultee for Surface Water Drainage

### **As a Riparian Owner**

- A duty to pass on flow in a watercourse without obstruction, pollution or diversion affecting the rights of others
- A duty to accept flow
- A duty to maintain the bed and banks of the watercourse

### 3 The Objectives for Managing Local Flood Risk

Objectives will be strategic in nature but it is important that the process, measures and actions to achieve the outcomes are pragmatic, deliverable and supported by both partners and stakeholders.

The Strategy sets out objectives which delivers statutory requirements and supports complementary objectives from other plans and strategies.

#### The Objectives of the Strategy

The Strategy needs to provide a clear vision as to how local flood risk will be managed by the Council and its partners. Some objectives and measures identified in the 2013 Strategy, particularly those around establishing new policies, processes and programmes, have been implemented and whilst still relevant to the overall Strategy, will not be the focus of the revised action plan.

The objectives are:

- Improve the level of understanding of local flood risk within the LLFA
- Improve the level of understanding of local flood risk amongst partners and stakeholders **(Actioned through the 2013 Strategy)**
- Ensure that local communities understand their responsibilities in relation to local flood risk management
- Maximise the benefits from partnership working with flood risk partners and our stakeholders **(Actioned)**
- Actively manage flood risk associated with new development proposals **(Actioned)**
- Take a sustainable approach to FRM, balancing economic, environmental and social benefits from policies and programmes **(Actioned)**
- Improve/ maintain the capacity of existing drainage systems by targeted maintenance
- Encourage proactive, responsible maintenance of privately-owned flood defence and drainage assets
- Influence planning policies in Local Plans to take account of flood risk **(Actioned)**
- Maximise opportunities to reduce surface water run-off from the upper catchments
- Identify projects and programmes which are affordable, maximising capital funding from external sources
- Ensure local FRM knowledge is aligned with the Councils emergency planning procedures

## Kirklees Local Flood Risk Management Strategy (Summary)

The objectives still to be delivered have been summarised and rephrased in the following tables:

### 3.1.1 Revised Objective 1 - Improve the level of understanding of local flood risk within the LLFA

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
1.1	<b>Assessment of high flood risk locations</b>	<p><b>Description:</b> <i>Continue to use and refine the prioritisation tool to identify areas for detailed investigation and to inform the future programme of works to manage flood risk.</i></p> <p><i>The Council will develop a structured programme of investigations and flood studies to improve its understanding of location and severity of local flood risk.</i></p> <p><b>Benefits:</b> <i>The assessment will provide the evidence base to deliver measure 6.1.</i></p>	Ongoing	Council Revenue/ Local Levy	Partial
1.2	<b>Improve skills and knowledge of FRM officers</b>	<p><b>Description:</b> <i>Continue to expand the expertise in the team, encouraging and facilitating a wider skill-base and utilising external consultants for specialist areas of work.</i></p> <p><b>Benefits:</b> <i>A multi-skilled team will be developed to maximise knowledge transfer within the team and provide a flexible resource.</i></p>	Ongoing	Council Revenue	✓

### 3.1.2 Revised Objective 2 - Ensure that local communities understand their responsibilities in relation to local flood risk management

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
2.1	<b>Publish and distribute information explaining responsibilities, local flood risk, property protection/ resilience etc</b>	<p><b>Description:</b> <i>Develop a comprehensive, district-wide engagement and information-sharing programme. The information and advice offered will be bespoke to each flood risk area, improving the understanding of drainage systems which may impact on communities at risk of flooding.</i></p> <p><b>Benefits:</b> <i>Providing the information and tools to encourage "self-help" will help communities to protect themselves from future flooding.</i></p>	Ongoing – multi-year programme (2018-21)	Council Revenue	✓
2.2	<b>Involve local communities in local initiatives and schemes</b>	<p><b>Description:</b> <i>Encourage information exchange with local residents, ward members and businesses to extend our knowledge of drainage systems and flooding locations.</i></p> <p><b>Benefits:</b> <i>Will encourage ownership of issues and solutions and taps into local knowledge.</i></p>	See 2.1	Council Revenue	✓

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### 3.1.3 Revised Objective 3 - Improve and/or maintain the capacity of existing drainage systems by targeted maintenance

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
3.1	<b>Identify highest risk open and culverted watercourses, highway drains and other drainage/flood features</b>	<p><b>Description:</b> <i>The Council has a statutory duty to maintain highway drains but only a riparian responsibility to keep watercourses within its ownership clear of obstructions. Some watercourses create a high flood risk for nearby communities and would benefit from a structured and targeted improvement programme. The council will carry out a comprehensive survey of all known, non-Environment Agency or Water Company drainage assets to determine those lengths of watercourse and drains which offer a significant flood risk.</i></p> <p><b>Benefits:</b> <i>The action will provide condition information for the Councils Drainage Asset Register and contribute to the programme in Measure 6.1.</i></p>	March 2020	Council Revenue/ Local Levy	Partial
3.2	<b>Develop an affordable cyclical and reactive maintenance regime based on risk</b>	<p><b>Description:</b> <i>Maintenance budgets are limited and will be targeted at those areas where the risk of flooding is highest. The extent of flood risk and the asset type, condition and vulnerability to temporary blockage will influence the type and frequency of maintenance required. Cyclical maintenance plans will be developed for trash grilles protecting council-owned culverts, highway gullies and open watercourses where regular clearance would be beneficial in protecting downstream properties.</i></p> <p><b>Benefits:</b> <i>Maintenance budgets will be optimised to prioritise maintenance in areas of highest risk.</i></p>	March 2020	Council Revenue	✓

### 3.1.4 Revised Objective 4 - Encourage proactive, responsible maintenance of privately-owned flood defence and drainage assets

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
4.1	<b>Identify highest risk private flood defence and drainage assets</b>	<p><b>Description:</b> <i>The vast majority of watercourses are in private, rather than council ownership. Whilst riparian owners have a responsibility to keep watercourses free of obstruction they need advice and encouragement to carry this out effectively. The opportunity will be taken during the Community Engagement programme to offer advice to riparian owners. A database of higher-risk private assets, with details of the risk and suggested maintenance regimes, will be compiled and shared with owners.</i></p> <p><b>Benefits:</b> <i>Improved understanding of the sources of local flood risk.</i></p>	Oct 2019	Council Revenue	✓

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4.2	<b>Develop technical advice for owners to guide them in preparing local maintenance plans</b>	<p><b>Description:</b> <i>Improving knowledge of the location and condition of private drainage assets, acquired through Measures 4.1, will allow the Council to suggest appropriate proactive maintenance measures to reduce the risk of flooding to themselves and adjacent landowners. Maintenance plans will manage and maintain both the efficient flow of water in the watercourse and a healthy and attractive bio diverse environment in all water bodies in private ownership.</i></p> <p><b>Benefits:</b> <i>Reductions in the levels of local flood risk through improved maintenance and greater awareness.</i></p>	Oct 2019	Council Revenue	✓
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### 3.1.5 Revised Objective 5 - Maximise opportunities to reduce surface water run-off from the upper catchments

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
5.1	<b>Develop proposals to engage with landowners to embrace land management techniques and initiatives which help to reduce the rate of surface water run-off</b>	<p><b>Description:</b> <i>The south-western side of the district lies in the foothills of the South Pennines, with substantial parts of the upper catchments for the rivers Colne and Dearne. Much of the Colne catchment is managed to provide a regular water supply to several large reservoirs, operated by Yorkshire Water, but significant areas provide opportunities through different land management practices to retain rainwater where it falls, delaying its entry to, or reducing the rate it enters, the river system. The council will work with landowners and partners to develop specific proposals.</i></p> <p><b>Benefits:</b> <i>Retention of rainfall in open land will help to reduce the risk from watercourses causing flooding downstream during periods of extreme rainfall.</i></p>	Ongoing	Council Revenue/ Local Levy/ Other funding	Partial

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### 3.1.6 Revised Objective 6 - Identify projects and programmes which are affordable, maximising capital funding from external sources

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
6.1	<b>Develop and deliver a pragmatic programme of schemes and initiatives which are likely to be funded through the National Programme or Local Levy</b>	<p><b>Description:</b> <i>The strategy describes a suite of measures which can be taken to manage local flood risk. Some measures are more affordable than others with larger capital improvement schemes offering the greatest challenges for funding. The council's immediate priorities, using the outputs from the work carried out under Measure 1.1, are to establish an evidence base for the location and the extent of the risk of local flooding, quantify the size and potential effect of the risk and then identify costed options for appropriate and affordable mitigation measures. The process is iterative, identifying priority areas for high level and then detailed assessment, which may then lead to local initiatives.</i></p> <p><b>Benefits:</b> <i>The process will make best use of limited resources to identify those projects which are most likely to attract external funding</i></p>	March 2020	Council Revenue (Develop), Local Levy/ FDGiA (Deliver)	Partial

### 3.1.7 Revised Objective 7 - Ensure local FRM knowledge is aligned with the Councils emergency planning procedures

Measure	Actions Proposed	Description and Benefits of Carrying out the Measure	Timescales	Funding	
				Source	In Place
7.1	<b>Embed the LFRMS into response and recovery plans and use developing knowledge on flood risk to "tune" emergency procedures</b>	<p><b>Description:</b> <i>The Corporate Safety and Resilience team have responsibility for the council's management of flood incidents affecting Kirklees communities. Any action required to manage the incident and its aftermath is co-ordinated through the council's Major Incident Plan. The new responsibilities outlined in the LFRMS will create an improving evidence base to target where council resources may be best deployed if a severe area-wide flooding event occurs. Post-flooding feedback will add to the information held by the Flood Management team to provide an ever-improving record of local flood risk. The Council has adopted an operational flood policy and plan which provides a "24/7" response to support communities in advance of extreme rainfall events.</i></p> <p><b>Benefits:</b> <i>The Council will use information from previous and future flood events to refine how best to use our resources to support communities to reduce the impact of such floods</i></p>	Oct 2019	Council Revenue	✓

### 4 Proposals, Timescales and Funding to Implement the Measures

#### Affordability and Funding of the Measures

The Government commits significant funding every year to flood management activities across the country. Funding for investigation, co-ordination and local management of flood risk issues has been allocated to LLFA's with a long term commitment to support this foundation work. Capital funding for mitigation works (such as flood defences, property resilience schemes, flood storage etc) is generally allocated on the basis of risk and, inevitably, areas where high density populations co-exist with high risk from river flooding tend to attract much of the available funding.

#### Delivery of the Measures

Each measure outlined in Section 3 has been developed into a set of activities, policies and procedures which are described in more detail in the full Strategy document. Funding is critical to the delivery of the strategy and whilst the Council has a legal responsibility to deliver many of the actions required to deliver the measures, the funding made available to do so is limited.

### 5 What is the Flood Risk in Kirklees?

It is imperative that the Strategy explains in simple terms the source and size of flood risk in Kirklees. An increasing amount of evidence is available to explain the general levels of risk from a variety of sources, some of which are managed by the Council and some by others.

The calculation of future flood risk is complex and approximate. Improved hydraulic modelling techniques are providing greater certainty on where flood risk is highest, with detailed accurate information available on flood extent, depth of water and speed of flow. Less certain is the location and severity of future rainfall events and the longer term impact that climate change may have on them. There is certainty that flooding will occur but less certainty on where and when. However, based on the hydraulic studies carried out over the last 10 years, it is reasonable to assume that **a minimum of 8,000 - 12,000 residential properties in Kirklees are at risk of flooding from a rainfall event with a 1% annual chance of occurring.** Other infrastructure such as commercial premises, roads, bridges and public utility buildings would also be affected. **With a conservative estimate of £25,000 recovery/repair costs per property, such a rainfall event could cost the local economy in excess of £300million. Associated economic, social and environmental costs would be substantially more.** In reality, the more realistic scenario is that a severe rainfall event would affect only part of the district. **However, an event affecting 10% of the district could still cause £30million of damage to housing infrastructure.**

The broad geographical areas of concern are listed in the following section.

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### Areas at Risk from Future Flooding (Fluvial and Surface Water)

Recent work using a Prioritisation Tool, which considers risk from all sources, has identified the following geographical areas as highest priority:

Flood Risk Area	Homes at Risk (1% AEP)			Businesses at Risk (1% AEP)		
	SW	Fluvial	Total	SW	Fluvial	Total
Mirfield	325	53	378	34	47	81
Cleckheaton	240	213	453	74	50	124
Liversedge	190	177	367	62	74	136
Dewsbury	396	0	396	167	0	167
Central Huddersfield	170	64	234	108	126	234
Ravensthorpe	150	188	338	21	34	55
North East Huddersfield	48	506	554	33	126	159
Heckmondwike	373	0	373	39	2	41
Batley	219	40	259	99	3	102
Marsden	308	28	336	41	13	54
Milnsbridge and Golcar	269	6	275	72	34	106
Holmfirth	142	11	153	53	25	78
Dalton and Waterloo	225	126	351	10	13	23
Clayton West	56	6	62	27	26	53
Berry Brow and Primrose Hill	95	47	142	32	49	81

## 6 How and When will we Review the Strategy?

The revised Strategy will provide the framework for the Council's delivery of its flood risk management responsibilities for the next 5 year period. It is a "living document" which will develop as new information, expertise and resources influence the delivery of the measures outlined in the strategy. The strategy and action plan will provide a framework for the work programme in the council's flood management team and progress against the action plan assessed by members through an annual report to the Councils **Overview and Scrutiny Panel**. The report will take the form of a **Progress and Implementation Plan** evidencing progress on the Strategy with reference to operational activities and works programmes.

## 7 A Sustainable Approach – Balancing Social, Economic and Environmental Needs

The focus on the Kirklees LFRMS is to reduce flood risk from local sources where it threatens private property and public infrastructure. The Council is also committed to maximising opportunities to carry out sustainable flood risk reduction in ways which complement national and council environmental priorities, are affordable and recognise social demographic differences across the district, delivering flood risk reduction across all its vulnerable communities.

### **8 Consistency with the National Strategy**

Recent legislation implies strong partnership working as a prerequisite in delivering more effective flood risk management. The National Strategy sets out the Environment Agency's priorities and it is vital that the Kirklees LFRMS supports those aspirations with complementary measures. Section 5 of the strategy references the main policies and measures suggested in the National Strategy ensuring that they are included within the general objectives for the Local Strategy.