

## Progress and Implementation Plan 2018/19 – April 2019

### The “Annual Progress and Implementation Plan”

Progress against the 32 actions in the 2013 Strategy have been reported annually through the Councils Overview and Scrutiny process using a “traffic light system”. A substantial amount of work has been carried out over the last few years which has improved both the Councils evidence base and the local infrastructure to help manage local flood risk. Much of this work has not been reported through the annual review and it is appropriate to begin to highlight progress made with such initiatives. It is proposed therefore to change the approach from rigid reporting against the action plan to summarising the work carried out in the previous year, with reference to the action plan. The new annual reporting mechanism will be through an ‘**Annual Progress and Implementation Plan**’. The plan will provide more specific details on

- current understanding of the location and extent of local flood risk
- progress against the Local Strategy objectives
- a record of works and studies carried out previously which are relevant to the Local Strategy objectives
- priorities for the forthcoming year

The plan should give a clearer appreciation of what the council needs to do, how it intends to do it and what it has actually done.

#### 1. Latest Analysis of the Location and Size of Flood Risk in Kirklees (on a ward basis)

**Note:** Numerous datasets are available which provide information on flood risk. The datasets are updated regularly as new hydraulic models are produced and are based on high-level assumptions which may under or over-estimate flood risk in some locations. However, the table gives an overview of our current assessment of the numbers of properties at risk from rainfall events that have a 1% chance of occurring in any given year (1% AEP). The actual risk to individual properties can only be determined through detailed local flood studies. A significant number of additional properties are at risk from flooding from blocked or collapsed underground drainage systems, particularly in urban areas.

Although many properties will be at risk from both river and surface water flooding, it is possible that flooding from each source could happen during different rainfall events. The “Total” numbers at the right hand side of the table provide an indication of the maximum number of properties at risk but, inevitably, includes some double-counting of properties.

|                             | Fluvial (river) risk |            | Surface Water risk |             | Total at risk from both Sources |             |
|-----------------------------|----------------------|------------|--------------------|-------------|---------------------------------|-------------|
|                             | Homes                | Businesses | Homes              | Businesses  | Homes                           | Businesses  |
|                             |                      |            |                    |             |                                 |             |
| Almondbury                  | 130                  | 6          | 251                | 13          | <b>381</b>                      | <b>19</b>   |
| Ashbrow                     | 72                   | 11         | 198                | 38          | <b>270</b>                      | <b>49</b>   |
| Batley East                 | 9                    | 54         | 237                | 94          | <b>246</b>                      | <b>148</b>  |
| Batley West                 | 0                    | 6          | 198                | 49          | <b>198</b>                      | <b>55</b>   |
| Birstall and Birkenshaw     | 31                   | 2          | 242                | 47          | <b>273</b>                      | <b>49</b>   |
| Cleckheaton                 | 236                  | 30         | 249                | 73          | <b>485</b>                      | <b>103</b>  |
| Colne Valley                | 88                   | 28         | 462                | 84          | <b>550</b>                      | <b>112</b>  |
| Crosland Moor and Netherton | 1                    | 4          | 229                | 39          | <b>230</b>                      | <b>43</b>   |
| Dalton                      | 651                  | 172        | 347                | 81          | <b>998</b>                      | <b>253</b>  |
| Denby Dale                  | 6                    | 11         | 197                | 36          | <b>203</b>                      | <b>47</b>   |
| Dewsbury East               | 3                    | 73         | 242                | 129         | <b>245</b>                      | <b>202</b>  |
| Dewsbury South              | 2                    | 7          | 181                | 34          | <b>183</b>                      | <b>41</b>   |
| Dewsbury West               | 69                   | 77         | 343                | 33          | <b>412</b>                      | <b>110</b>  |
| Golcar                      | 16                   | 27         | 336                | 68          | <b>352</b>                      | <b>95</b>   |
| Greenhead                   | 22                   | 9          | 425                | 58          | <b>447</b>                      | <b>67</b>   |
| Heckmondwike                | 52                   | 18         | 279                | 35          | <b>331</b>                      | <b>53</b>   |
| Holme Valley North          | 130                  | 61         | 341                | 55          | <b>471</b>                      | <b>116</b>  |
| Holme Valley South          | 42                   | 38         | 304                | 73          | <b>346</b>                      | <b>111</b>  |
| Kirkburton                  | 30                   | 11         | 192                | 30          | <b>232</b>                      | <b>41</b>   |
| Lindley                     | 0                    | 0          | 197                | 10          | <b>197</b>                      | <b>10</b>   |
| Liversedge and Gomersal     | 122                  | 26         | 251                | 28          | <b>373</b>                      | <b>54</b>   |
| Mirfield                    | 58                   | 38         | 407                | 24          | <b>465</b>                      | <b>62</b>   |
| Newsome                     | 164                  | 91         | 193                | 115         | <b>357</b>                      | <b>206</b>  |
| <b>Totals</b>               | <b>1934</b>          | <b>800</b> | <b>6301</b>        | <b>1246</b> | <b>8235</b>                     | <b>2046</b> |

## 2. Progress against the Actions Delivering the Objectives in the 2019 Strategy

**Note:** The outstanding measures from the 2013 Strategy form the basis of the action plan in the updated 2019 Strategy and are outlined below:

| Ref. | Measure   | How will we measure success?  | Timescale for the Action | Progress from February 2018  | Planned Activities up to March 2020   |
|------|---|---|--------------------------|--|---|
| 1.1  | Assessment of High Flood Risk Locations   | <ul style="list-style-type: none"> <li>Complete the assessment of the highest risk locations</li> <li>Have a clear understanding of the type and size of flood risk at each location</li> </ul>   | Ongoing                  | <ul style="list-style-type: none"> <li>Assessments at Birstall, Heckmondwike and Dalton have been completed</li> </ul>   | <ul style="list-style-type: none"> <li>Assessments at Marsden and Milnsbridge are in progress</li> <li>Assessment at the last remaining high priority area (Mirfield) to be completed</li> <li>Recommended works from all area assessments to be collated into work packages that can be put forward for EA funding</li> </ul>  |
| 1.2  | Improve Skills and Knowledge of FRM Officers  | <ul style="list-style-type: none"> <li>Develop a multi-skilled team</li> <li>Encourage knowledge transfer from technical consultants</li> </ul>   | Ongoing                  | <ul style="list-style-type: none"> <li>Graduate engineer working in the team</li> <li>External technical consultant providing support on planning advice</li> </ul>  | <ul style="list-style-type: none"> <li>Training programme in place for graduate engineer</li> <li>Summer placement offered to local undergraduate</li> </ul>  |
| 2.1  | Publish and distribute information explaining responsibilities, local flood risk, property protection/ resilience etc | <ul style="list-style-type: none"> <li>Identify programme of community engagement</li> <li>Produce information templates</li> <li>Complete programme of community engagement</li> </ul>   | Ongoing (2018-21)        | <ul style="list-style-type: none"> <li>3 year programme for member engagement and highest priority residential communities in place</li> <li>Information templates agreed</li> <li>Ward and community pilot areas completed</li> </ul> | <ul style="list-style-type: none"> <li>Continue to deliver programme, refining the process following member/public feedback</li> <li>Extend engagement to selected businesses at highest risk of flooding, if resources allow</li> </ul>  |
| 2.2  | Involve local communities in local initiatives and schemes  | <ul style="list-style-type: none"> <li>Develop an engagement programme which encourages information exchange (assets and flood incidents) with residents</li> </ul>   | See above                | <ul style="list-style-type: none"> <li>Information templates encourage residents to share information with the council</li> </ul>  | <ul style="list-style-type: none"> <li>Continue to engage with local members/residents and businesses</li> </ul>  |
| 3.1  | Identify highest risk open and culverted watercourses, highway drains and other drainage/flood features               | <ul style="list-style-type: none"> <li>Develop a prioritisation process to rank watercourses and other drainage systems/assets</li> <li>Develop a program of condition surveys on high priority assets</li> <li>Compile a list of highest risk council-maintained drainage systems</li> </ul> | March 2020               | <ul style="list-style-type: none"> <li>EA-funded culvert improvement project into year 3 of 5</li> <li>Ad hoc capacity improvement recommendations arising from area flood risk studies</li> </ul>                                     | <ul style="list-style-type: none"> <li>Establish and populate a highway drainage asset spreadsheet which records and ranks the highest risk assets, directing improvement budgets to the areas of highest need</li> <li>Develop an assessment process which highlights surface water drainage systems which are under capacity</li> <li>Bid for EA funding to address surface water flood risk</li> </ul> |

|     |  |  |            |   |   |
|-----|--|--|------------|---|---|
| 3.2 | Develop an affordable cyclical and reactive maintenance regime based on risk   | <ul style="list-style-type: none"> <li>• Document the inspection/ maintenance regime for trash grilles</li> <li>• Document the cleansing process for road gullies including performance management</li> <li>• Document an affordable inspection/ maintenance process for significant highway culverts</li> </ul> | March 2020 | <ul style="list-style-type: none"> <li>• Trash grille maintenance regime in place</li> <li>• Gully cleansing regime documented</li> </ul>   | <ul style="list-style-type: none"> <li>• Gully telemetry process to be in place, collecting condition information</li> <li>• Establish a periodic low-cost inspection regime for higher priority culverts</li> </ul>  |
| 4.1 | Identify highest risk private flood defence and drainage assets  | <ul style="list-style-type: none"> <li>• Document a process to record and risk-assess significant private drainage assets</li> <li>• Compile a list of highest risk privately-maintained drainage systems</li> </ul>   | Oct 2019   | <ul style="list-style-type: none"> <li>• No progress made</li> </ul>  | <ul style="list-style-type: none"> <li>• Establish a process to record private drainage assets</li> </ul>   |
| 4.2 | Develop technical advice for owners to guide them in preparing local maintenance plans   | <ul style="list-style-type: none"> <li>• Develop standard maintenance recommendations and a template for the plan</li> <li>• Distribute maintenance plans to asset owners identified in Item 2.1</li> </ul>  | Oct 2019   | <ul style="list-style-type: none"> <li>• Maintenance advice developed</li> </ul>  | <ul style="list-style-type: none"> <li>• Advice to be embedded within community engagement programme</li> </ul>   |
| 5.1 | Develop proposals to engage with landowners to embrace land management techniques and initiatives which help to reduce the rate of surface water run-off | <ul style="list-style-type: none"> <li>• Support council and regional initiatives to implement NFM measures</li> <li>• Identify local landowners in higher priority areas and offer encouragement/advice and support to help them to reduce surface water run-off.</li> </ul>                                    | Ongoing    | <ul style="list-style-type: none"> <li>• The council is a key regional player in developing plans to manage surface water at source in the undeveloped upper catchments eg Wessenden NFM</li> </ul> | <ul style="list-style-type: none"> <li>• Develop longer term plans to engage with smaller landowners to share advice on implementing low-cost, high-impact NFM measures</li> <li>• The regional Aire and Calder NFM project will deliver a method to identify the key landowners where NFM interventions will have the greatest impact</li> </ul> |
| 6.1 | Develop and deliver a pragmatic programme of schemes and initiatives which are likely to be funded through the National Programme or Local Levy          | <ul style="list-style-type: none"> <li>• Formulate the outputs of the studies carried out in Item 1.1 into an affordable long-term works programme</li> <li>• Deliver the programme, optimising the use of council budgets to attract external funding</li> </ul>  | March 2020 | <ul style="list-style-type: none"> <li>• Most of the high-priority area flood risk studies have been completed</li> </ul>   | <ul style="list-style-type: none"> <li>• Complete the remaining high-priority flood risk studies</li> <li>• Develop the identified works in the studies into a project(s) that can be submitted through the EA funding process</li> </ul>   |
| 7.1 | Embed the LFRMS into response and recovery plans and use developing knowledge on flood risk to “tune” emergency procedures                               | <ul style="list-style-type: none"> <li>• Update the Operational Flood Plan to reflect highest risk locations requiring most support</li> </ul>   | Oct 2019   | <ul style="list-style-type: none"> <li>• The Plan has been in place for 18 months but has yet to be tested in “real” conditions, plan to be tested in a practice event</li> </ul>                   | <ul style="list-style-type: none"> <li>• Use the information from Area flood risk studies to update the priority locations identified in the Plan</li> </ul>  |

### 3. Summary of Flood Management Initiatives carried out to support the original Strategy (2013-2018)

Many of the actions outlined in the 2013 Strategy involved establishing new council procedures to investigate flood events, introduce more robust data collection processes and to establish the LLFA as the main point of contact for the management of local flood risk.

A number of other actions in the 2013 Strategy involved improving the council's understanding of the location and size of local flood risk and developing a programme of mitigation measures to manage the risk. Some progress has been made on these actions through a variety of studies and works which have provided information and drainage infrastructure improvements. Some projects have been opportunistic, resolving immediate issues and others have formed part of a broader programme to better understand local flood risk. The latter is part of an iterative process to, ultimately, provide interventions at a local level in an informed and prioritised way.

The initiatives carried out in the last 5 years are detailed below:

| Initiative                        | Date Completed | Purpose  | Cost (£,000's) | Funded by (Council or External) | Benefits  |
|-----------------------------------|----------------|--|----------------|---------------------------------|---|
| Mill Ponds Surveys                | Feb 2014       | To understand the flood risk from "orphaned", raised mill ponds                      | 90             | FDGiA                           | Record of condition of mill ponds. Raised maintenance awareness with owners. Informed council planning policy to condition maintenance plans for mill ponds associated with development sites |
| Trash Grille Replacement          | Apr 2015       | Risk Assessment of all grilles. Works to improve capacity of around 50 grilles       | 300            | FDGiA/ Council                  | Improved capacity of grilles to reduce flood risk and to reduce maintenance burden  |
| Ox Field Beck                     | Apr 2015       | Improvement works to an ordinary watercourse passing under a disused railway viaduct | 60             | FDGiA/ Council                  | Removal of silt and debris in river bed. Rebuilding river wall. Removal of silt/vegetation downstream. Reduces risk to adjacent business and residential properties.                          |
| Radulf Gardens                    | Apr 2015       | Improvement works to river through new development to reduce flood risk              | 100            | FDGiA/ Council                  | Removal of debris and silt in river bed and vegetation on banks has improved the flow under a bridge, reducing flood risk from the river  |
| New Mill Road                     | Apr 2015       | To assess flood risk from River Holme  | 20             | Local Levy                      | Affordable and deliverable scheme not possible  |
| Liversedge flood study            | Mar 2015       | To identify higher risk locations and mitigation options                             | 20             | Local Levy                      | Broad assessment of risk in the area completed  |
| Blackhouse Dike study             | Apr 2015       | To identify risk from the dike   | 140            | FDGiA                           | Recommendations passed to EA as river manager   |
| Cooper Bridge drainage masterplan | May 2015       | To test a masterplanning approach for the development area                           | 30             | Local Levy                      | Options provided to encourage a strategic SuDS solution for the area  |
| Cleckheaton SWMP                  | Jun 2015       | To produce a surface water management plan for the area                              | 75             | Local Levy                      | SWMP produced   |
| Howley Beck                       | Mar 2016       | To assess flood risk near the beck.  | 100            | Local Levy                      | Higher risk locations identified  |
| Clayton W/Scissett Flood Study    | Apr 2016       | To identify higher risk locations and mitigation options                             | 30             | Local Levy                      | Broad assessment of risk in the area completed  |
| Meltham Flood Study               | Apr 2016       | To identify higher risk locations and mitigation options                             | 20             | Local Levy                      | Broad assessment of risk in the area completed  |
| Holmfirth Flood Risk Study        | Apr 2016       | To identify higher risk locations and mitigation options                             | 20             | Local Levy                      | Broad assessment of risk in the area completed  |
| Marsden NFM Study                 | July 2016      | Pilot project to identify NFM opportunities  | 20             | Local Levy                      | Options identified  |

|  |           |   |      |                |   |
|--|-----------|---|------|----------------|---|
| Dewsbury Asset Survey                        | July 2016 | To assess adequacy of current river defences                            | 80   | FDGiA          | Completed and additional SW risk assessment of area completed               |
| Defra pathfinder – small schemes             | Nov 2016  | Pilot project to look at aggregating small schemes into a single scheme | 95   | Defra          | Report completed with recommendations                                       |
| Flood Risk Prioritisation Tool               | Dec 2016  | Data analysis work to identify higher risk locations                    | 100  | Council        | Prioritised list of locations produced                                      |
| Property Clusters 2                          | Apr 2017  | Using pathfinder model  | 100  | Local Levy     | Mitigation measures identified  |
| Batley SWMP                                  | Aug 2017  | To produce a surface water management plan for the area                 | 110  | Local Levy     | SWMP produced   |
| Central Huddersfield                         | Apr 2017  | To identify higher risk locations and mitigation options                | 30   | Local Levy     | Broad assessment of risk in the area completed                              |
| Dearne Valley                                | Aug 2017  | To identify NFM measures in the upper catchment                         | 20   | Local Levy     | Report completed  |
| Honley Flood Risk Study                      | Oct 2017  | To identify higher risk locations and mitigation options                | 20   | Local Levy     | Broad assessment of risk in the area completed                              |
| Mirfield/ Ravensthorpe                       | Dec 2017  | To assess viability of flood mitigation measures                        | 25   | Local Levy     | Report completed  |
| Birstall Viability Study                     | Apr 2018  | To identify higher risk locations and mitigation options                | 15   | Local Levy     | Broad assessment of risk in the area completed                              |
| A62 Leeds Rd (River Colne) Feasibility Study | May 2018  | To assess viability of flood mitigation measures                        | 200  | FDGiA/ Council | Options report produced and passed to the EA for further scheme development |
| Heckmondwike Viability Study                 | Jul 2018  | To identify higher risk locations and mitigation options                | 20   | Local Levy     | Broad assessment of risk in the area completed                              |
| Dalton/ Waterloo Viability Study             | Sep 2018  | To identify higher risk locations and mitigation options                | 15   | Local Levy     | Broad assessment of risk in the area completed                              |
| Challenge Fund – Drainage Resilience         | Ongoing   | Highway drainage improvement at high risk locations                     | 600  | DfT            | Drainage capacity improvement works   |
| Culverts Project                             | Ongoing   | Surveys and repairs to various culverts                                 | 1500 | FDGiA/ Council | Original culvert capacity reinstated  |
| Marsden Viability Study                      | Ongoing   | To identify higher risk locations and mitigation options                | 15   | Local Levy     | Broad assessment of risk in the area completed                              |
| Milnsbridge Viability Study                  | Ongoing   | To identify higher risk locations and mitigation options                | 15   | Local Levy     | Broad assessment of risk in the area completed                              |

The programme of local, area studies is almost complete. Some early studies were opportunistic but most have been initiated by the Prioritisation tool. The location and size of flood risk is now better understood and a programme of mitigation measures can now be developed to address the locations at highest risk with greatest impact.

In broad terms, the risk of flooding from fluvial sources (the main river network, including the Colne, Holme, Calder, Spennings, Dearne and Batley Beck) is such that major flood defence schemes to reduce the risk to property are likely to be unaffordable. Whilst a substantial number of residential properties in the district are at risk from river flooding, and a significant amount of historic industrial buildings lie adjacent to the river, the funding formula for the national Flood Grant in Aid programme is such that it won't generate significant amounts of grant funding to make such schemes affordable.

The focus for the 5 year period of this LFRMS will be to address surface water flood risk, including refining the LLFA's role as a Statutory Consultee to Planning, identifying opportunities for Natural Flood Management and developing a programme of works which mitigate surface water risk from residential property which could be funded from FDGiA/Local Levy programmes.

#### 4. Priorities for 2019/20

Much of the groundwork to establish information, assessment and performance management processes has been completed and future work will concentrate on making best use of our greater knowledge base. Local priorities have moved towards establishing programmes of capacity improvement and targeted maintenance of drainage assets, developing the role of Statutory Consultee to Planning and maximising external funding to support the Council's limited budgets. National priorities and policies for flood risk management are developing with an emphasis on managing flooding at source (natural flood management), ensuring that new developments minimise flood risk and that current climate change predictions are factored into hydraulic assessments. The main priorities for 2019/20 are therefore:

- Complete the high-level area flood risk assessment programme to help understand the location and size of flood risk in our highest risk areas
- Investigate the potential for drainage capacity improvement to address surface water flood risk, optimising the effectiveness of the Council's own operational activities in both improvement and maintenance programmes
- Continue with our engagement/information-sharing programme with local ward members and at-risk communities
- Support the planning department with technical advice on surface water drainage for new development sites
- Support regional initiatives around developing discussions with major landowners on land management practices which minimise surface water run-off