

APPENDIX 2

Appendix C - List of Measures (Schemes)

ID	Priority	Current phase	Scheduled Phase Completion Date	Measure	PF % Score	Whole Scheme Estimated Cost	Location (if applicable)	Category	Relevant Objective from LFRMS	Progress/Comments (reference other sources of information)	Benefits/ Outcome	Lead Organisation	Support Organisation	Last Reviewed
CURRENT SCHEMES AND FEASIBILITY STUDIES														
S37	High	Feasibility	2018	Leeds Flood Alleviation Scheme Phase 2, River Aire City Centre to Upper Catchment	TBC	£112m	River Aire - City Centre to Upper Catchment	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Phase 2 of the Leeds FAS, looking at solutions across the whole catchment upstream of Leeds that will reduce flood risk to the city along the river Aire. Modelling and feasibility work largely complete, Outline Business Case submitted to the EA and Treasury Jan 2018. Moving in to more detailed design in 2018 with construction starting late 2018 early 2019, advanced works have taken place on some 'quick win' items and works at Stourton about to start as is a programme of advanced maintenance and stewardship.	Reduce flood risk from River Aire	LCC Flood Risk Management	Environment Agency	17/10/2018
S29	High	Design / Construction (on hold)	2018	Queen Street Culvert	NA	TBC	Allerton Bywater	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Outline design completed. Japanese knoweet treatment taking place this is a 3 year programme due to complete in 2018	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S40	High	Design / Construction	2019	Hawthorn Terrace Flood Alleviation Scheme Phase 2	TBC	TBC	West Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Initial scheme completed, but further defects with existing assets and connected infrastructure identified so further works needed and being designed	Reduced risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S15	High	Construction	2019	Killingbeck Meadows Flood Alleviation Scheme	TBC	£1.6m	Halton Moor	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Flooding to residential and commercial areas from Wyke Beck. Accelerated scheme due to combining the benefits of releasing development sites (11 housing sites and land within the Enterprise Zone and providing green infrastructure improvements to a Local Nature reserve as well as providing flood risk reduction, this scheme should receive planning permission in March 2018 and become a registered flood storage area under the Reservoirs Act. This forms part of a joint Wyke Beck Programme delivering housing growth from Brownfield land and Local Nature reserve and green space improvements.	The risk of flooding will be managed	LCC Flood Risk Management	Environment Agency	17/10/2018
S16	High	Feasibility	2019	Farnley Wood Beck Flood Alleviation Scheme	104%	£500k	Cottingley	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Flood risk to residential areas, long term issue - scheme being scoped, developer contribution secured, this scheme is now being progressed as part of the wider Wortley Beck study.	Reduce flood risk from Farnley Wood Beck	LCC Flood Risk Management	Environment Agency	17/10/2018
S31	High	Feasibility	2020	Lin Dyke Catchment Assessment - Upper and Middle catchments	TBC	£1.25m	Garforth & Kippax	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Continuation of work included in Section 19 Report, regarding flooding of the SE Leeds area in August 2014 and 2015, design works are continuing to be progressed as schemes are identified.	Reduced risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S30	High	Feasibility	2020	Wyke Beck Catchment Assessment	NA	£50k	Communities along Wyke Beck	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Continuation of work carried out by both LCC & EA within the Dunhills, this has now progressed in to a catchment wide approach bringing together the EA and many departments across LCC, resulting in an initial stage bid to the LEP for ESIF funding to complete various schemes including Killingbeck meadows	Reduced risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S17	High	Feasibility	2020	Wortley Beck Flood Alleviation Scheme	111%	£1.1m	Wortley Beck	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Flooding to residential area and outer ring road. Work in partnership with the EA and YWS to develop a detailed flood alleviation scheme that integrates with all sources of flooding. This measure is listed in the Aire Catchment Flood Risk Management Plan.	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S39	High	Feasibility	2020	Wharfedale Flooded Communities Study	NA	£90k	Collingham, Linton, Wetherby, Thorp Arch	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Linked to wider catchment partnership work and Otley Flood Alleviation Study, initial modelling work currently being assessed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S9	High	Design/ Construction	2021	Lower Mickleton Road Flood Embankment	138%	£1.1m	Mickleton	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Construction of larger flood embankment along Lower Mickleton Road to protect properties from flooding. Being taken forward separately from Mickleton (Pit Lane) Flood Embankment as is substantially larger scheme. New model information only recently developed scheme proposal to be assessed in line with the	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S38	High	Feasibility	2021	Otley Flood Alleviation Scheme	TBC	£2m	Otley	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Initial £90k studied greatly extended to develop full Otley FAS to be constructed by December 2020, currently assessing shortlisted options to identify solutions to protect 58 properties from flooding, funding announced in the Autumn Statement 2016 linked to wider catchment partnership work and Wharfedale Flooded communities study	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S5	High	Design (on hold)	TBC	Barnsdale Road Property Level Protection Scheme	TBC	TBC	Allerton Bywater	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Surface water flooding to properties. Install property level protection measures - flood barriers and doors to reduce flood risk to residential properties on Barnsdale Road. Funding has now been made available from Local Levy. This is currently on hold due to changes in the ownership of the properties involved to allow time to link with their plans for the properties	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S12	Medium	Pre Outline Business Case	2021	Potternewton Surface Water Flood Alleviation Scheme	153%	£250k	Potternewton	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Surface water flooding. Install attenuation and pumping station to remove flood water to adjacent culverted watercourse. Local levy funding secured	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S10	Medium	Pre Outline Business Case	2022	Thomer Beck Flood Alleviation Scheme	101%	£150k	Thomer	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Restricted capacity of existing culverts causing overland flooding. Improve Culvert capacity. Local levy funding secured	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S11	Medium	Pre Outline Business Case	2022	Victoria Road Surface Water Flood Alleviation Scheme	100%	£250k	Guiselby	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Surface water flooding to properties. Install attenuation and pumping station to remove flood water to adjacent culverted watercourse.	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S18	Low	Pre Outline Business Case	2020	Sheepscair: evaluate the condition of formal and informal flood defences along the Sheepscair Beck which were recently breached to identify potential remedial works required.	TBC	TBC	Sheepscair	4. Asset management and maintenance	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Evaluate flood defence improvement works required.	Helps ensure that problems or new works are identified to prevent recurrence of flooding.	LCC Flood Risk Management	Environment Agency	17/10/2018
S19	Low	Pre Outline Business Case	2020	Develop and implement feasibility studies for fluvial flood alleviation schemes to improve the standard of protection along Meanwood Beck, Bagley Beck and Farnley Wood Beck - integrating with all sources of flooding.	TBC	TBC	Meanwood Beck, Bagley Beck & Farnley Wood Beck	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	This measure is listed in the Aire Catchment Flood Risk Management Plan for the Leeds Policy Unit - to be progressed by 2030.	Helps ensure that areas with proven flood risk are provided with an appropriate flood defence scheme at the earliest possible opportunity and that the Council supports the EA in developing any flood alleviation scheme in the longer-term	Environment Agency	Leeds City Council & Yorkshire Water Services	17/10/2018
S33		Ongoing	NA	Improvements to surface water drainage outfalls	NA	TBC	City wide	4. Asset management and maintenance	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Identify improvements to improve discharge of surface water from flooding hot spots, work programme ongoing	Reduce risk of flooding	LCC Flood Risk Management	Yorkshire Water Services	17/10/2018
S21		Ongoing	NA	LCC Significant Maintenance	NA	TBC	Across the District	4. Asset management and maintenance	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Continuation of regular maintenance of Watercourses and Hot-Spots	Reduced risk of flooding	LCC Flood Risk Management	Yorkshire Water Services & Environment Agency	17/10/2018

COMPLETED SCHEMES AND FEASIBILITY STUDIES SINCE 2011

S22	Completed	2011	Flood Alleviation Scheme - Leeds Road (Allerton Bywater) pumping station (local levy)	NA	£34k	Allerton Bywater	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S23	Completed	2011	Newton Road property protection and resilience scheme	NA	£88k (estimated)	Newton Road, Potternewton	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Improve flood resistance and resilience of properties	LCC Flood Risk Management	Environment Agency	17/10/2018
S24	Completed	2011	Lower Wortley - property protection and resilience scheme	NA	£47k (estimated)	Lower Wortley	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Improve flood resistance and resilience of properties	LCC Flood Risk Management	Environment Agency	17/10/2018
S25	Completed	2011	Church Lane, Bardsey - property protection and resilience scheme	NA	£10k (estimated)	Bardsey	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Improve flood resistance and resilience of properties	LCC Flood Risk Management	Environment Agency	17/10/2018
S26	Completed	2011	Dean Park Drive, Drighlington - property protection and resilience scheme	NA	£25k (estimated)	Drighlington	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Improve flood resistance and resilience of properties	LCC Flood Risk Management	Environment Agency	17/10/2018
S27	Completed	2012	Barley Hill Recreation Ground - (Local Levy)	NA	£113k	West Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S28	Completed	2013	Oakdene, Watercourse Improvements	NA	£8k	Swillington	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S1	Completed	2014	Lowther Road, Garforth - Culvert Improvements	NA	£84k	Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Improve flood resistance and resilience of properties	LCC Flood Risk Management	Environment Agency	17/10/2018
S4	Completed	2014	Wellhouse Drive Flood Alleviation Scheme	NA	£22k (estimated)	Gledhow	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S7	Completed	2014	Culvert Headwall Repair Scheme - (Local Levy)	NA	£36k	Otley	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S3	Completed	2017	Leeds Flood Alleviation Scheme Phase 1, River Aire City Centre	100%	£50m	River Aire - City Centre	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce flood risk from River Aire	LCC Civil Engineering Projects	Environment Agency	17/10/2018
S34	Completed	2017	Giebelands Recreation Ground	101%	£70k	Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Parks and Countryside	Environment Agency	17/10/2018
S36	Completed	2017	Barley Hill Recreation Ground Phase 2	NA	£160k	West Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Parks and Countryside	Environment Agency	17/10/2018
S2	Completed	2017	Ramsden Street, Kippax, Flood Alleviation Scheme - (Local Levy & FDGIA)	NA	£220k	Kippax	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S14	Completed	2017	Carry out flood warning feasibility studies for Wortley Beck and Meanwood Beck and implement findings.	NA	£10k	Wortley Beck and Meanwood Beck	1. Flood awareness, response and recovery	6. Improve understanding of local flood risk and seek to decrease local flood risk.	This measure is listed in the Aire Catchment Flood Risk Management Plan	Establish the potential for advanced warning of flooding. Develop more accurate flood warnings for tributaries of the River Aire which will result in reduction of economic damages and improve community safety.	Environment Agency	Leeds City Council	17/10/2018
S35	Completed	2018	Westfields, Allerton Bywater	101%	£600k	Allerton Bywater	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme Completed	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S32	Completed	2016	Hawthorn Terrace Flood Alleviation Scheme Phase 1	125%	£47k	West Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Initial scheme completed, but further defects with existing assets and connected infrastructure identified so further works needed and being designed	Reduced risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S20	Superseded	2020	Investigate the interaction between the Leeds and Liverpool Canal and the River Aire.	TBC	£10k	River Aire and Liverpool Canal	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	This study should identify the potential for managing this interaction to ensure that flood risk is managed effectively. This measure is listed in the Aire Aire Catchment Flood Risk Management Plan for the Leeds Policy Unit - to be progressed by 2030. - this has now been included in the scope of Phase 2 of the Leeds Flood Alleviation Scheme	Investigate this relationship to improve knowledge of the risk of flooding posed by the Leeds & Liverpool canal	Environment Agency	Canal & River Trust	17/10/2018
S8	Transferred	NA	Cotton Mill Beck Culvert, Valley Road	NA	£25k	Morley	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Scheme transferred to Network Rail for Review	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S13	Transferred	NA	Wakefield Road Flood Alleviation Scheme (transferred to S31)	102%	£190k	West Garforth	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Restricted culvert and surface water flow. Install new culvert and widen highway ditch, design being reviewed in line with the findings from the Lin Dyke study, as per the above link	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018
S6	Transferred	NA	Mickleton (Pit Lane) Flood Embankment (transferred to S9)	153%	£400k	Mickleton	3. Studies, schemes, assessments and plans	6. Improve understanding of local flood risk and seek to decrease local flood risk.	Assessment of a proposed setback bank is being Carried out, funding from FCRM GiA and Developer Contribution. Being taken forward separately from larger scheme - Lower Mickleton Road Flood Embankment, relies on much delayed Lower Aire Modelling work now being reviewed by LCC consultants	Reduce risk of flooding	LCC Flood Risk Management	Environment Agency	17/10/2018