



Meeting: Highways and Transport Overview and Scrutiny Committee.

- Date/Time: Thursday, 9 November 2023 at 2.00 pm
- Location: Sparkenhoe Committee Room, County Hall, Glenfield
 - Contact: Mr A. Sarang (0116) 305 6844
 - Email: Aqil.Sarang@leics.gov.uk

<u>Membership</u>

Mr. T. Gillard CC (Chairman)

Mr. R. G. Allen CC Mr. B. Lovegrove CC Mr. D. C. Bill MBE CC Mr. K. Merrie MBE CC Mrs. A. J. Hack CC Mr. L. Phillimore CC

<u>Please note</u>: this meeting will be filmed for live or subsequent broadcast via the Council's web site at <u>http://www.leicestershire.gov.uk</u>

<u>AGENDA</u>

Report by

- 1. Minutes of the meeting held on 7 September 2023.
- 2. Question Time.

Item

- 3. Questions asked by members under Standing Order 7(3) and 7(5).
- 4. To advise of any other items which the Chairman has decided to take as urgent elsewhere on the agenda.
- 5. Declarations of interest in respect of items on the agenda.
- Declarations of the Party Whip in accordance with Overview and Scrutiny Procedure Rule 16.

Democratic Services • Chief Executive's Department • Leicestershire County Council • County Hall Glenfield • Leicestershire • LE3 8RA • Tel: 0116 232 3232 • Email: democracy@leics.gov.uk





(Pages 5 - 14)

7. Presentation of Petitions under Standing Order 35.

8.	Leicestershire Local Flood Risk Management Strategy - Public Consultation Outcomes and Publication.	Director of Environment and Transport	(Pages 15 - 300)
9.	Street Lighting Review - Proposed Changes.	Director of Environment and Transport	(Pages 301 - 322)
10.	Passenger Transport Update.	Director of Environment and Transport	(Pages 323 - 352)

11. Date of next meeting.

The date of the next meeting is scheduled for 18 January 2024, at 2:00pm.

12. Any other items which the Chairman has decided to take as urgent.

QUESTIONING BY MEMBERS OF OVERVIEW AND SCRUTINY

The ability to ask good, pertinent questions lies at the heart of successful and effective scrutiny. To support members with this, a range of resources, including guides to questioning, are available via the Centre for Governance and Scrutiny website <u>www.cfgs.org.uk</u>. The following questions have been agreed by Scrutiny members as a good starting point for developing questions:

- Who was consulted and what were they consulted on? What is the process for and quality of the consultation?
- How have the voices of local people and frontline staff been heard?
- What does success look like?
- What is the history of the service and what will be different this time?
- What happens once the money is spent?
- If the service model is changing, has the previous service model been evaluated?
- What evaluation arrangements are in place will there be an annual review?

Members are reminded that, to ensure questioning during meetings remains appropriately focused that:

- (a) they can use the officer contact details at the bottom of each report to ask questions of clarification or raise any related patch issues which might not be best addressed through the formal meeting;
- (b) they must speak only as a County Councillor and not on behalf of any other local authority when considering matters which also affect district or parish/town councils (see Articles 2.03(b) of the Council's Constitution).

Democratic Services ° Chief Executive's Department ° Leicestershire County Council ° County Hall Glenfield ° Leicestershire ° LE3 8RA ° Tel: 0116 232 3232 ° Email: democracy@leics.gov.uk





This page is intentionally left blank



Minutes of a meeting of the Highways and Transport Overview and Scrutiny Committee. held at County Hall, Glenfield on Thursday, 7 September 2023.

PRESENT

Mr. T. Gillard CC (in the Chair)

Mr. R. G. Allen CC Mr. D. C. Bill MBE CC Mrs. A. J. Hack CC Mr. K. Merrie MBE CC Mr. L. Phillimore CC

In attendance

Mr. O. O'Shea CC, Lead Member for Highways, Transport and Flooding Mr. M. Hunt CC (In remote attendance) for Agenda Item 3 (minute item 15 refers) Mr. S. Bray CC (In remote attendance) for Agenda Item 8 (minutes item 20 refers)

13. Minutes

The minutes of the meeting held on 8 June 2023 were taken as read, confirmed and signed.

14. Question Time.

The Chief Executive reported that no questions had been received under Standing Order 35.

15. <u>Questions asked by members under Standing Order 7(3) and 7(5).</u>

The following questions were received under Standing Order 7(3) and 7(5) and were put to the Chairman of the Highways and Transport Overview and Scrutiny Committee.

Questions asked by Mr. Hunt CC

"Following the development of the County Council's latest Cycling & Walking Strategy, I note that three particular documents cited in the document are badly in need of updating to meet the Government's latest guidance (including Gear Change and LTN Infrastructure 20/1).

These are:

- Leicestershire Highway Design Guide (Interim edition)
- LCC Rights of Way Improvement Plan (2011-2016)
- LCC Guidance notes on Development and Public Rights of Way (2011)

Without updating these documents we are frustrating the aims of the Strategy and limiting the powers of Local Planning Authorities in the County. See:

- 2. <u>https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2015/12/8/leics_rowip2</u> .pdf
- 3. <u>https://resources.leicestershire.gov.uk/sites/resource/files/field/pdf/faq/2018/6/5/Rights-of-way-guide.pdf</u>
- 4. <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attac</u> <u>hment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf</u>
- 5. https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-120
- 1) When can we expect to see the revised version of these three key policies?
- 2) LTP3 (1.4) says "we want to measure what these [School and Workplace Travel Plans] actually deliver – i.e. the actual changes in travel behaviour that result from these travel plans being in place". Have these travel plans been evaluated in this way and what place do the school and workplace travel plans occupy, if any, in the Loughborough Area CWIS?
- 3) What increase in active travel is expected of the Loughborough Area CWIS, assuming the funds become available.
- 4) According to the 2011 Census figures drawn from the recommended propensity app, the percentages of journeys to work by cycling or walking in the Loughborough Area are approximately Shepshed 25%, Quorn 20%, Outer Loughborough 31% and Inner Loughborough 52%. (The respective figures for cycling alone are only 3.7%, 3.0%, 6.2% and 7.0%); what are the particular measures to boost the take up in these areas?
- 5) The Cycling and Walking Strategy, agreed by the Cabinet, states that Leicestershire County Council is committed to increase levels of active travel in the county and is setting ambitious targets to meet the challenges of improving public health, air quality and congestion and have targets to increase cycling and walking stated in. What are the base lines for these 10 year targets and can they be broken down by area?"

Reply by the Chairman:

- "1) All three documents in question are in the process of being updated or scheduled to progress soon, with expected completion dates as detailed below.
 - The updating of the *Leicestershire Highway Design Guide (LHDG)* is well underway and is expected to be complete by Spring 2024, subject to public consultation feedback.
 - The project to update the *Rights of Way Improvement Plan (RoWIP)* is currently expected to begin in September this financial year 2023/24, with the expectation for it to be completed in 2024/25. The RoWIP update project will include several engagement activities seeking views from all key stakeholders to inform its development.
 - The guidance notes on *Development and Public Rights of Way (2011)* is to be included in the updated LHDG, which is expected to be complete by Spring 2024, subject to public consultation feedback.

- 2) At the end of each academic year, the Choose How You Move (CHYM) Schools' programme is evaluated to understand the impact of the behaviour change measures that have been implemented. In addition, we carry out an annual countywide school travel survey and for this year it will be carried out during October. Workplace and school travel plans are a key part of the Cycling and Walking Strategy and Local Walking and Cycling Infrastructure Plans. There are several actions within the Strategy under the Encouraging and Enabling Theme which contribute towards the development of travel plans. All schools and businesses can access the Modeshift Stars Travel Plan system free of charge and we also have funding for one business and one school from each district to receive direct support from LCC on their travel plan work. Free resources are also available on the CHYM website including an application form to apply for Active Travel Grants.
- 3) Utilising the Active Travel England toolkit, the estimate average increase in active travel trips across all LCWIP active travel improvement schemes in the first 10-year pipeline, assuming the improvement schemes were in place, is approximately 21% for cycling and 53% for walking.
- 4) The figures referenced do not match the 2011 Census data used in the development of the Loughborough Area LCWIP. Table below shows that cycling and walking make up 40.5%, 23% and 19.4% of internal trips from Loughborough, Shepshed and Quorn, respectively. For reference, the respective figures for cycling alone are 10.0%, 6.1%, and 6.4%. These figures have been derived from the Census table 'WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)' using only the output areas that fall within the study area.

Mode	% of Journeys			
	Loughborough	Shepshed	Quorn	
Car (driver or Passenger)	53.3%	69.6%	74.0%	
Bus	4.8%	5.9%	5.7%	
Walk	30.5%	16.9%	13.0%	
Cycle	10.0%	6.1%	6.4%	
Other	1.4%	1.4%	0.9%	

Journey to Work: Modal Split of Internal Trips

Regards the measures to improve take up of active travel; The proposed 10-year pipeline of improvement schemes is set out in the DRAFT Loughborough Area LCWIP which can currently be accessed on the Council engagement 'Have Your Say' page: <u>https://www.leicestershire.gov.uk/have-your-say/current-engagement/local-cycling-and-walking-infrastructure-plans-loughborough-area-and-south-of-leicester-area</u>

These and other schemes may come forward through development obligation or Section 106 funding, or wider highway infrastructure scheme programmes or funding secure from Active Travel England/other Government funding sources. Ongoing CHYM programmes will support the LCWIP as a whole. The level and type of programmes delivered are determined by the level of funding available and identified opportunities to encourage and enable our communities to travel actively more often. Current CHYM programmes can be accessed here: https://www.choosehowyoumove.co.uk/

5) The Cycling and Walking Strategy (CaWS) objectives are aligned to those of the Government's Cycling and Walking Investment Strategy (CWIS), with the initial three CaWS targets also being aligned to help deliver the CWIS targets. These initial CaWS targets were set in the absence of detailed local data baselines for active travel. The majority of existing data is from national studies at a less granular level and sample size, i.e., the National Travel Survey. To provide more granular local data, we are investing in a network of all-mode camera counters in our LCWIP areas to enable the collection of anonymous data for active travel trips, not only to set a baseline, but also to measure future changes. No baseline has been set yet, as 12 months' worth of data is being collected from the first camera counters. Once the first year's data is analysed, officers will be in a position to set the baseline.

Future annual active travel reports based on the annual collected data will detail the changing active travel trips recorded for each LCWIP area. This data will go on to help inform future CaWS targets."

Mr. Hunt asked the following supplementary questions:

- "A. Supplementary to the response to question 2, the "actual changes" in travel behaviour currently seem very marginal at best, are CaWS and the LCWIS programme expecting to strengthen travel plans if they are to be influential in driving the improvement programme?
- B. Supplementary to the response to question 3, what are the baselines of these Increases of 21% and 53% over 10 years, and how do these relate to the ATE's target of reaching 50% of short journeys.
- C. Supplementary to the response to question 4, could you explain why Table 9.2 of the Loughborough CWIS gives entirely different figures from the above, for example 82% travel by car to work but 53% (including passengers) in the figures quoted in your response? And could you provide comparative figures for walking and cycling inner and outer areas of Loughborough which are bound to differ significantly and are likely impact on the outcomes of improvements?
- D. Supplementary to the response for question 5, the Cabinet agreed to these percentage increases in cycling and walking in the CaWS without knowing the baseline, but do we have a target for total short journeys by a given date or something else more measurable?"

At the invitation of the Chairman, the Director of Environment and Transport indicated that this information would be provided to Mr. M. Hunt after the meeting.

[Subsequent to the meeting a response was provided to Mr. Hunt as follows]:

A. Travel Plans play a key role with the CaWS and LCWIP. We will work with schools and businesses as part of the CHYM programme to develop travel plans in line with the clear vision and priorities for cycling and walking improvements. Data collected through any travel plans developed in the LCWIP areas will be fed back into the monitoring and evaluation process.

B. The without-scheme weekday trips assumed (baseline) varies significantly across the improvement schemes. For instance, the minimum cycling trips without the intervention is 34 (for Scheme 8) and the maximum is 1522 (for Scheme 4B). The total assumed trips across all LCWIP active travel improvement schemes is 5,415 for walking and 11,774 for cycling, and the average is 271 for walking and 589 for cycling; see the two 'without scheme' columns highlighted below in Table 7.2, taken from page 85 of the LCWIP.

Cycling				Walking			
		Without Scheme		With Scheme		Without Scheme	With Scheme
Corridor No.	Corridor Segment	PCT 2011 Census	PCT 2011 Census	Govt. Target Scenario	Go Dutch Scenario	PCT 2011 Census	All Scenarios
	1A	119	176	243	786	216	280
1	1B	391	446	713	2101	210	272
1	1C	1137	1348	1827	4508	57	294
	1D	622	846	1035	2738	970	1222
3	3	1307	1479	2076	4842	509	702
	4A	277	361	458	1177	58	152
4 (NW)	4B	1522	1747	2602	6680	239	492
	4C	1063	1238	1816	4763	927	1123
	4E	45	219	68	167	127	323
4 (SE)	4F	588	819	1075	2947	153	412
	4G	334	383	628	1878	13	68
	6A	747	775	1335	3552	99	166
6	6B	368	472	62 8	1657	661	778
	6C	170	309	277	939	169	325
7	7	119	223	232	667	131	248
8	8	34	75	68	187	162	208
10	10	1307	1524	2076	4842	56	300
22	22	843	965	1324	3241	238	375

Table 7.2 - Daily cycling and walking trips without and with the proposed intervention

Prioritising our 10-year pipeline (85)

Assuming funding is secured to deliver the schemes, and estimates are achieved, the increases in cycling and walking in the LCWIP area will contribute toward achieving the Government's/ATE's CWIS2 Objective to 'Increase the percentage of short journeys in towns and cities that are walked or cycled to 50% in 2030....'.

The Government/ATE use the National Travel Survey (NTS) to measure progress against this objective, using a metric of 'trips of less than 5 miles' to define 'short journeys in towns and cities'. Therefore, the actual percentage contribution that these schemes in one LCWIP area would make to this national objective would depend on the sample size and location of residents who take part in the NTS, as that is the data that would be included in the calculation undertaken by the Government (i.e., data based on the NTS results for the area, at the relevant future year it was undertaken).

However, as part of any improvement schemes delivered the intention is for the Council to undertake monitoring and evaluation, pre and post scheme implementation, to enable a more directly related percentage change in active travel to be calculated as a result of the scheme, providing a more granular and locally meaningful picture of the positive outcomes for local communities. C. (It is assumed the question relates to Table 9.1 in the Loughborough area LCWIP). Table 9.1 shows data taken recently from the new multimodal counters installed in the area and relates to 2022-23 counts. The figures from the previous response came from the 2011 Census data, which would explain the disparity.

Nevertheless, the two tables are not directly comparable as the study work separated out the study area into Loughborough, Shepshed and Quorn, whereas Table 9.1 represents the LCWIP area in its entirety.

2011 Census data has been analysed to establish journey to work travel patterns, based on the Middle Layer Super Output Areas (MSOAs) in the study area. It would not be possible for officers to separate this out into 'inner' and 'outer' Loughborough due to the size of the output areas (see map below). Assuming that the town centre zone would make up the inner area, it spans over three large MSOAs so the data would not be specific to that inner area.



D. There currently is not a specifically defined 'short journey' target set in the CaWS. However, 'short journeys' are encompassed in wider targets.

The Government annual data 'baselines' established at the time of the CaWS development are based on the NTS and Active Lives Survey and offer granularity at County and district level. This data is published annually by the DfT on their website. Work is being undertaken to establish more local active travel trip data baselines to measure future progress against with greater granularity, which will include analysing a wide variety of data including that taken from the new multimodal counters installed in LCWIP areas.

16. Urgent items.

There were no urgent items for consideration.

17. <u>Declarations of interest.</u>

The Chairman invited members who wished to do so to declare any interest in respect of items on the agenda for the meeting.

Mr. Allen CC declared a non-registrable interest in Agenda Item 8: Update to Petition Response: Request for a School Crossing Outside of St Peters Catholic Primary School, as he had been handling the case on behalf of Dr. Luke Evans MP as a caseworker and had also received correspondence as Borough Councillor.

18. <u>Declarations of the Party Whip in accordance with Overview and Scrutiny Procedure Rule</u> <u>16.</u>

There were no declarations of the party whip.

19. Presentation of Petitions under Standing Order 35.

The Chief Executive reported that no petitions had been received under Standing Order 35.

20. <u>Update to Petition Response: Request for a School Crossing Outside of St Peters</u> <u>Catholic Primary School.</u>

The Committee considered a report of the Director of Environment and Transport which provided information on the outcome of investigations following the presentation of a petition voicing concerns about road safety outside of St Peters Catholic Primary School in Hinckley. A copy of the report marked 'Agenda Item 8' is filed with these minutes.

The Chairman welcomed Mr. S. Bray CC and Mr. M. Mullaney CC to the meeting for this item. Comments on the report from Mr. Mullaney had been circulated to Committee Members prior to the commencement of the meeting and a copy is filed with these minutes.

At the invitation of the Chairman, Mr. S. Bray CC raised the following issues on behalf of local residents:

- 1. Residents were pleased that the 24 hour assessment period had been undertaken in good weather during the school term but felt that it did not show a complete picture, for example, on a Monday there were a lot of school trips such as, swimming which may have given a different result.
- 2. For the full data to be published from the survey.
- 3. Residents wished the Committee to note that, when discussing accident history on the site, a constituent had died at that location a few years ago.
- 4. The timescales for the proposed measures to be brought in.
- 5. Residents wished the Committee to note that it had taken the best part of five years to reinstate the school crossing patrol, and it would cause a major problem should that person decide to retire or leave. There would be a call for more action if and when that patrol left.

The Director responded as follows:

1. She acknowledged that there might have been some differences in activity on a different day to when the survey was undertaken, but stressed that the survey had been conducted in June during nice weather on two different days. This had given a representative view of the level of activity outside the school, in line with the

requirement to consider average levels of activity in deciding whether a crossing would be justified.

- 2. The full data would be shared with Members.
- 3. The Director recognised sensitivities around accidents, however, officers had to operate to the recorded accident history over the past five years provided by the police, and there was no record of accident within the time period.
- 4. Consultation would be required for the parking bays, and school keep clear markings. Officers would be requested to set out a timetable of works which would be provided to Mr. Bray.

Arising from discussion, the following points arose:

- i. A Member requested that, in the future with the increased popularity of the school, the issue be revisited in the future to check whether the Crossing Justification Value (CJV) of 0.7-0.9 had been reached to justify a zebra crossing.
- ii. A Member queried how many people equated to the difference of 0.14 between the current Crossing Justification Value (CJV) and the required level to justify the provision of a zebra crossing, given there was a recent approval of a development of flats close to the location. The Director informed the meeting that the CJV was based on a formula used that included other factors, such as, vehicle flow on the road, pedestrians crossing and vulnerable people, therefore an absolute figure could not be given. However, if something significant changed in the vicinity, for example, if the school changed its size, that would then trigger a reassessment.
- iii. The Lead Petitioner would be updated on the contents of the report and on the comments received from Mr. Mullaney.

The Chairman said he was pleased progress had been made, and that it was commendable that local Members had offered their Highways Fund for a crossing, however, criteria for a crossing would still have to be met.

RESOLVED:

- a) That the update report on the outcome of investigations following the presentation of a petition voicing concerns about road safety on London Road, Hinckley be noted.
- b) That the Director of Environment and Transport be requested to:
 - i. Share full data resulting from the survey with local Members;
 - ii. Provide a timetable of works for parking bays and 'Keep Clear' markings to Mr. Bray;
 - iii. Update the Lead Petitioner on the contents of the report and comments received from Mr. Mullaney.
- 21. Local Cycling and Walking Infrastructure Plans

The Committee considered a report of the Director of Environment and Transport which provided an overview of work being undertaken on the development of a programme of Local Cycling and Walking Infrastructure Plans (LCWIPs) and sought the Committee's

views on the drafts of the first two LCWIPs in the programme for the Loughborough area and South of Leicester area, prior to seeking Cabinet approval in November 2023. A copy of the report marked 'Agenda Item 9' is filed with these minutes.

Arising from discussion, the following points arose:

- i. A Member queried what consultation had taken place with stakeholders engaged in the process regarding crossover journeys into the city. The Director explained that information had been collected from stakeholders and communities, Leicester City Council and the district councils to inform the development of the LCWIPs. Where funding streams were available, the planning of routes would be logical and on occasion link cross-border with joined-up development. Having the plan created a baseline and evidence base for securing funding.
- ii. A Member queried whether issues with maintenance of the highway could stop people from using cycles and asked if this had been raised as part of the consultation. It was confirmed that this issue had raised by local communities and fed back as part of the Council's regular meetings with the Department of Transport (DfT). The DfT was currently considering the future funding of highway maintenance, including looking at multi-year settlements. However, it was acknowledged that local authorities would need to make the case to the Treasury for more funding in this area.
- iii. It was reported there was a spike in walking and cycling during the pandemic, but that there had subsequently been a return to car usage. The collection of data around car usage was currently better that that for walking and cycling. It was suggested that one positive of the pandemic was that more people were now working from home at least some of the time. This gave an opportunity to encourage people to cycle or walk to local services.
- iv. In terms of the timetables for the LCWIPs it was expected that two plans per year would be developed. Where possible the plans would be aligned to the development of Local Plans.
- v. It was noted that all of the plans were dependent on funding for their delivery which would come from a range of sources, such as grants and funding from developers.
- vi. In response to a query as to how priority areas were chosen, it was noted the report contained some of the criteria for selecting those priority areas. However, priority areas were largely chosen around the ease of the potential to shift people from short journeys by car to walking and cycling, and also recognising that some areas had already benefited from a round of investment on infrastructure, Hinckley being one of them. The Committee was pleased to note that plans would be developed for areas that connected together, rather than creating arbitrary boundaries.

RESOLVED:

- a) That the report on the development of Local Cycle and Walking Infrastructure Plans (LCWIPs) be noted.
- b) That the comments now made by the Committee on the draft of the first two LCWIPs in the programme for the Loughborough area and South of Leicester area be submitted to the Cabinet for consideration at its meeting in November 2023.

22. <u>Highways and Transport Performance Report to June 2023</u>

The Committee considered a joint report of the Chief Executive and Director of Environment and Transport which provided the latest performance update on the key performance indicators (KPIs) the County Council was solely or partly responsible for within its Strategic Plan covering Highways and Transport Services (within the Environment and Transport Department) to June 2023 (Quarter One). A copy of the report marked 'Agenda Item 10' is filed with these minutes.

Arising from discussion, the following points arose:

- i. The Committee was advised that elected members would soon receive a request to complete the national highways and transport survey. The Director strongly encouraged Committee members to do so. It was explained that, whilst this was a national survey, it would include local information collected from members of the public, parish councils and elected members. The public survey results were aggregated and compared against the other 33 county councils, from which targets for improvement were set.
- ii. A Member asked whether the number of bus passengers included children travelling to school on public bus services. The Member also requested that statistical comparisons be provided. The Director of Environment and Transport would provide the detail of the passenger journeys to the Member after the meeting. However, it was noted the information would be about public, local bus services, and not specific school services.

RESOLVED:

- a) That the report on the latest performance update on the key performance indicators the County Council is solely or partly responsible for within its Strategic Plan covering Highways and Transport Services (within the Environment and Transport Department) to June 2023 (Quarter One) be noted.
- b) That the Director of Environment and Transport be requested to provide members with further detail regarding local bus passenger journeys originating in the authority area.

23. Date of next meeting.

It was noted that the next meeting of the Committee would be held on 9 November 2023 at 2.00pm.

2.00pm to 3.14pm 07 September 2023 CHAIRMAN



HIGHWAYS AND TRANSPORT OVERVIEW AND SCRUTINY COMMITTEE: 9 NOVEMBER 2023

<u>LEICESTERSHIRE LOCAL FLOOD RISK MANAGEMENT STRATEGY</u> – PUBLIC CONSULTATION OUTCOMES AND PUBLICATION

REPORT OF THE DIRECTOR OF ENVIRONMENT AND TRANSPORT

Purpose of Report

- 1. The purpose of this report is to:
 - a) Provide an overview of the findings of the public consultation on the draft updated Leicestershire Local Flood Risk Management Strategy (LLFRMS) attached as Appendix A to this report; and
 - b) Present the updated LLFRMS to the Committee (attached as Appendices B – K to this report). The updated LLFRMS will be presented to the Cabinet for consideration at its meeting on 24 November 2023 to request approval to publish the final documents.

Policy Framework and Previous Decisions

- 2. The Environment and Transport Overview and Scrutiny Committee considered the draft LLFRMS on 6 November 2014. The LLFRMS was later approved by the Cabinet on 11 September 2015.
- 3. Following significant flooding events in October and November 2019, the Environment and Transport Overview and Scrutiny Committee set up the Flooding Scrutiny Review Panel on 16 January 2020. The Panel's review considered the role of the Council as the Lead Local Flood Authority (LLFA), and the roles of other flood Risk Management Authorities (RMAs).
- 4. The Review Panel reported their findings to the Environment and Transport Overview and Scrutiny Committee on 14 January 2021.
- 5. On 5 February 2021, the Cabinet resolved that the Final Report of the Flooding Scrutiny Review Panel be noted, and its recommendations be approved. The first recommendation was for a refresh of the LLFRMS.

- 6. Updates on the implementation of the recommendations were then provided to the Highways and Transport Overview and Scrutiny Committee on 20 January 2022 and 26 January 2023. These included updates on the LLFRMS refresh.
- 7. On 26 May 2023, the Cabinet resolved to approve the draft refreshed LLFRMS and associated documents for public consultation.
- 8. On 8 June 2023, the Highways and Transport Overview and Scrutiny Committee reviewed the draft updated (LLFRMS), as part of the public consultation. The Committee supported the draft updated LLFRMS.

Background

- 9. In accordance with the Flood and Water Management Act (2010), the County Council as the LLFA is responsible for developing, maintaining, and monitoring a strategy for local flood risk management in Leicestershire. ¹ Local flood risk is defined by the Act as flood risk from surface water, ordinary watercourses, and groundwater sources.
- 10. The strategy must *inter alia* set out the lead authority's objectives for managing flood risk, proposed measures to achieve its objectives, and timescales for implementation of those measures. The strategy must also identify the costs and benefits of those measures (and required resources), and when the strategy will be reviewed².
- 11. The LLFRMS does not cover the approach to managing strategic flood risk as this is coordinated by the Environment Agency. This includes flood risk from main river and reservoirs.

Why is the strategy being updated?

- 12. The first, current, LLFRMS was published in August 2015. A full review and update has been undertaken for the following reasons:
 - a) Review timescales the current LLFRMS states that it is to be updated every six years. As originally intended, this timing aligns well with updates to regional River Basin Management Plans and Flood Risk Management Plans which were published by the Environment Agency in October and December 2022 respectively.
 - b) National strategy consistency an update of the LLFRMS is required in order for it to be consistent with the National Flood and Coastal Erosion Risk Management Strategy for England., which was updated and published in July 2020.
 - c) By recommendation of the Environment and Transport Overview and Scrutiny Committee - following significant flooding in 2019, the Environment and Transport Overview and Scrutiny Committee set up a Flooding Scrutiny Review Panel which published its findings in January

¹ Section 9(1) of the Flood and Water Management Act 2010.

² See Section 9(4) of the Flood and Water Management Act 2010.

2021. The Review Panel's recommendations included a full refresh of the LLFRMS.

- d) **Improved understanding** the Council and partners have an improved knowledge of local flood risk in Leicestershire, and how it is best managed, through better information, and through shared experience of issues across the County.
- e) Community engagement review of the current LLFRMS suggested it could be more useful as a community engagement tool, both in terms of content and format, whilst also achieving other requirements required by legislation, such as defining objectives and measures.
- f) Changes in approach since the existing LLFRMS was published, some ways of working have altered through efficiencies in delivering statutory functions, and through applying lessons learnt, and others are proposed to be updated through the Strategy update.
- 13. The report to the Committee on 8 June 2023 summarised the key differences between the current and updated LLFRMS. The main aspects include:
 - a) A refresh to principles, objectives and action plan (Appendix C) to become more closely aligned to the Council's Strategic Plan 2022-2026, and the National Flood and Coastal Erosion Risk Management Strategy.
 - b) A better structured and more engaging document, reflecting the partnership approach required, including the role of communities and individuals.
 - c) Better explanation of roles, responsibilities, and partnerships, including the Council's role as LLFA.
 - d) New and updated LLFA policies which better explain how the LLFA does and will continue to perform key responsibilities (Appendix D-F).
 - e) An updated assessment of local flood risk to support the risk-based approach principle (Appendix G).

Public Consultation

- 14. The report to the Committee on 8 June 2023 also detailed consultation undertaken prior to the public consultation. This included:
 - a) **July August 2022:** objective focus groups held, attended by members of the Leicestershire Flood Risk Management Board (FRMB), and relevant Council officers.
 - b) **January February 2023:** a four-week consultation on the first draft held internally, with FRMB members, and two community flood groups.
 - c) The Council's legal service being consulted on the LLFA policies, and its comments incorporated.
- 15. Public consultation was required by the Flood and Water Management Act 2010 and the Council's procedural rules. It was also considered to be beneficial to the formulation of the Strategy.

Process

- 16. The consultation was conducted through the Council's 'Have Your Say' webpage, for ten weeks, between 5 June 2023 and 13 August 2023.
- 17. The consultation questionnaire was shared directly with the FRMB internally, with County Council members, flood risk community partnerships, parish councils, flood action groups, flood wardens, and neighbouring LLFAs.
- The consultation questionnaire was also shared on social media, in Leicestershire Matters, and posters were circulated to all libraries. A press release was issued and used by some local media outlets.
- 19. A summary was produced for the purposes of the consultation (Appendix H). This will be published alongside the Strategy and associated documents on the 'Have Your Say' webpage.
- 20. Targeted communication was directed towards members of groups who are potentially more vulnerable to flooding (as identified in the Equality and Human Rights Impact Assessments) through the Leicestershire Equalities Challenge Board Summer Newsletter.
- 21. Response rates were reviewed periodically through the consultation with the Council's Senior Media Officer. The communications strategy was on occasion updated to increase participation in underrepresented areas.
- 22. As mentioned in paragraph 8 of this report, this Committee was consulted on 8 June 2023 as part of the public consultation and was supportive of the proposals.

Engagement

- 23. The online consultation received 254 survey responses. Respondents were:
 - a) 94% White and 5% Asian or British Asian;
 - b) 90% aged 45 or above; and
 - c) 17% had a long-standing illness, disability, or infirmity.
- 24. Responses were received from residents from all district councils:

District of residence	Number of respondents	Percentage of total (%)
Blaby	11	5%
Charnwood	98	42%
Harborough	20	9%
Hinckley	15	7%
Melton	23	10%
North-West Leicestershire	26	11%
Oadby & Wigston	32	14%

- 25. Part way through the consultation process, it was advertised in Leicestershire Matters, the County Council's residents' newsletter. This particularly appeared to increase response rates.
- 26. A number of localised flood events occurred during the consultation period, which appeared to increase response rates from areas affected in relation to flooding experiences. The most significant example of this was a flood event affecting Oadby and Wigston on 22 June 2023. Any location specific queries have been recorded as enquiries.
- 27. Several email responses were also received from RMAs (for example, district councils, Environment Agency, Severn Trent Water, others who have responsibility for the management of flood risk) and parish councils.

Post-Consultation

- 28. Following the consultation deadline, the Council met with most RMAs to discuss responses and outcomes relevant to them and agreed content for the Consultation Summary (Appendix A).
- 29. The Consultation Summary will be disseminated alongside the publication of the Strategy and associated documents, using the same communication channels as were used to advertise the public consultation.
- 30. Some respondents commented that they would like to see the Strategy communicated more regularly. Therefore, a communications plan will need to be agreed with the FRMB. This is likely to include disseminating the action plan when updated, and signposting to parts of the Strategy in web-based information and other communications.

Findings and outcomes

31. The 254 responses to the 'Have Your Say' survey were overwhelmingly supportive of the principles and objectives, with most respondents describing them as either 'very important' or 'important'.

Principles



Objectives



- 32. In recognition of this support, and previously received support from FRMB members, this Committee and the Cabinet, no major changes have been made.
- 33. There were, however, some themes to the 'Have your Say' feedback which led to minor updates, including:

20

- a) **Mention of specific communities:** some respondents expressed concern that their community had not been discussed directly in the Strategy. To address this, some additional text was added to the introduction to better explain that the Strategy is 'strategic' in nature, that all non-location specific measures are applicable to most communities, and that the Strategy should be read in this way.
- b) **Roles, responsibilities, and partnerships:** there were comments questioning the efficacy of RMA partnership working. To address this, explanation of the different partnerships has been expanded. A new diagram has also been added using Bottesford as a case study, to demonstrate how many different RMAs may have roles in any given location.
- c) Risk-based approach principle: several respondents commented on the 'risk-based approach'. It was clear from the comments that the meaning of this principle had been misunderstood on occasion. The definition of the principle was therefore clarified, and the Council will ensure principle definitions are communicated alongside principle titles (see Appendix H of this report).
- 34. Many of the common concerns raised through additional comments are considered to have already been addressed throughout the current Strategy. The consultation response document explains how and where the Strategy covers them, for example:
 - a) Adapting to climate change covered by the adapting to climate change principle.
 - b) Consideration of the cumulative impact of development upon flood risk, and other planning control concerns – explained in the sustainable development objective.
 - c) Testing flood response plans covered in the flood preparedness, response, and recovery objective.
- 35. Some comments received outside the scope of the Strategy. These included water quality issues which related to water and sewerage companies, and development on floodplains and in fluvial flood zones. Where this was the case, explanations have been provided in the consultation response document, agreeing responses with relevant RMAs.
- 36. Several comments relate to how RMAs engage with communities. These have been recorded and are being considered as part of the measure to "work together to develop initiatives and web-based information to enhance community preparedness and resilience to flooding", and generally through the 'working with communities' principle.
- 37. There were some comments suggesting the Strategy was too long and too technical. Following this, the Strategy has been shortened significantly, technical information was transferred to appendices and diagrams and case studies have been added. A summary is also available, and upcoming updates to web-based information will further improve provision of information to communities, particularly on roles and responsibilities.

- 38. A new measure has been added to the Strategy which relates to personal resilience as well as community resilience, as the Council wants to encourage people to consider what they can do personally to prepare for and be resilient to flooding.
- 39. Six responses were received from residents in Rutland. These were reported to Rutland Council. Follow up discussions have included the possibility of the Council providing LLFA statutory duties in Rutland through a service level agreement. These discussions are ongoing.

Environmental and Health Implications

- 40. An independent Strategic Environmental Assessment has been carried out (Appendix I). The Assessment concluded that none of the proposed measures are likely to have negative effects on the environment, population and human health, and material assets. It also concluded that many of the proposed measures are likely to have positive effects for these. This supports the updated LLFRMS principle of delivering multiple benefits (social, economic, and environmental).
- 41. An independent Habitats Regulations Assessment has also been completed (Appendix J). This assessment concluded that the updated LLFRMS will not have significant environmental effects on designated European sites, such as the River Mease Special Area of Conservation.
- 42. During the public consultation, no comments were received on either assessment and there were no changes which were required, as changes to the Strategy were only minor.
- 43. Following anticipated adoption of the updated LLFRMS, the Strategic Environmental Assessment consultants will produce a post-adoption statement. This will summarise the process undertaken, including how environmental considerations have been integrated into the Strategy, and how consultation feedback from both consultees and the public has been considered and incorporated.
- 44. The Council is also aiming to closely align the updated LLFRMS with the Local Nature Recovery Strategy (LNRS) for Leicestershire, as this develops. On 22 September 2023, LLFA officers met and held positive discussions as to how this can occur with the new LNRS Project Manager.

Partnership Working and Associated Issues

45. A principle for the Strategy is organisational partnership working. Maintaining this principle will be essential for the successful delivery of objectives and measures. Relevant partners have been consulted throughout the update process.

Resource Implications

- 46. The update has been delivered through existing resources.
- 47. There are no additional resource implications for the Council, as the remit of the LLFA is currently funded within the Environment and Transport Department budget, and the proposed LLFRMS details the basis for applying these resources.
- 48. The Strategy Action Plan details circumstances where the delivery of measures is subject to securing external funding.
- 49. The Director of Corporate Resources and the Director of Law and Governance have been consulted on the content of this report.

Timetable for Decisions

50. A report is to be considered by the Cabinet on 24 November 2023. The report will detail the outcomes of the public consultation and seek approval for the publication of the final updated LLFRMS and associated documents intended for December 2023.

Conclusions

 It is recommended that the Committee notes the results of the public consultation as provided above and in the appended Consultation Summary (Appendix A) and provides any final views on the final draft LLFRMS (Appendix B).

Background papers

Current Local Flood Risk Management Strategy and associated documents https://www.leicestershire.gov.uk/environment-and-planning/flooding-anddrainage/flood-risk-management

Environment and Transport Overview and Scrutiny Committee – 6 November 2014 – Consultation on current Local Flood Risk Management Strategy <u>https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=1044&Mld=3919&Ver=4</u>

Cabinet - 11 September 2015 – Approval of current Local Flood Risk Management Strategy http://politics.leics.gov.uk/ieListDocuments.aspx?CId=135&MId=4230&Ver=4

Environment and Transport Overview and Scrutiny Committee – 14 January 2021 -Report of the Flooding Scrutiny Review Panel. <u>https://politics.leics.gov.uk/ieListDocuments.aspx?CId=1044&MId=6392&Ver=4</u>

Cabinet - 5 February 2021 - Report of the Flooding Scrutiny Review Panel Approved https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=135&Mld=6440&Ver=4 Highways and Transport Overview and Scrutiny Committee – 20 January 2022 -Progress Review on Flooding Scrutiny Review Panel <u>https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=1293&Mld=6732&Ver=4</u>

Highways and Transport Overview and Scrutiny Committee – 26 January 2023 – Progress Review on Flooding Scrutiny Review Panel <u>https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=1293&Mld=7171&Ver=4</u>

Cabinet – 26 May 2023 - Leicestershire Local Flood Risk Management Strategy -Public Consultation https://politics.leics.gov.uk/ieListDocuments.aspx?CId=135&MId=7076&Ver=4

Highways and Transport Overview and Scrutiny Committee – 8 June 2023 -Leicestershire Local Flood Risk Management Strategy - Public Consultation https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=1293&Mld=7174&Ver=4

Section 9 Flood and Water Management Act 2010 - Local flood risk management strategies: England <u>https://www.legislation.gov.uk/ukpga/2010/29/section/9</u>

River basin management plans: updated 2022 <u>https://www.gov.uk/guidance/river-basin-management-plans-updated-2022</u>

Circulation under the Local Issues Alert Procedure

None.

Equality Implications

52. An Equality and Human Rights Impact Assessment has been completed (Appendix K). It was identified that some groups with protected characteristics are potentially more vulnerable to flood risks (for example, elderly, pregnant or disabled persons). Whilst officers were aware of this when preparing updated LLFRMS, there were no discernible opportunities to mitigate the risks for these specific groups other than addressing the risks for the communities in which they live.

Human Rights Implications

53. There are no human rights implications arising from the recommendations in this report.

Appendices

- A. Consultation Summary
- B. Updated Local Flood Risk Management Strategy for Leicestershire
- C. Strategy Action Plan
- D. Asset Register and Record Policy
- E. Formal Flood Investigations Policy
- F. Ordinary Watercourse Regulation and Culverting Policy
- G. Assessment of Local Flood Risk

- H. Local Flood Risk Management Strategy Summary
- I. Strategic Environmental Assessment
- J. Habitat Regulations Assessment
- K. Equality and Human Rights Impact Assessment

Officer(s) to Contact

Ann Carruthers Director, Environment and Transport Tel: (0116) 305 7000 Email: <u>Ann.Carruthers@leics.gov.uk</u>

Janna Walker Assistant Director, Development and Growth Tel: (0116) 305 7215 Email: Janna.Walker@leics.gov.uk

Pat Clarke Assistant Director, Highways and Transport Operations Tel: (0116) 305 4244 Email: <u>Pat.Clarke@leics.gov.uk</u> This page is intentionally left blank



Local Flood Risk Management Strategy for Leicestershire

27

Consultation Response



'You Said, We Did!'

We received 254 responses to the 10-week public consultation for the updated Local Flood Risk Management Strategy held between Monday 4th June 2023 and Sunday 13th August 2023.

Questions were asked about your current understanding of flood risk management and how flooding may have affected you. This information helps us better understand how confident you feel in preparing and responding to flooding and what your biggest concerns and priorities are.

Included within the comments of respondents was a range of local information and enquiry information. Where possible, an enquiry was raised for further investigation, particularly where a respondent had left contact information.

During the public consultation period there were a number of flood events including in, Oadby and Wigston on 22nd June. We are working with partners to investigate these flooding incidences and the information provided within the consultation responses will be encompassed within the flooding investigations being conducted. Other local information provided for locations across the whole county will be kept on record and can be used in support of future planning application responses, enquiries, bids for funding etc.



Flooding Experiences and Perceptions

68% of respondents said they had been affected by flooding in some way in the last ten years. Overwhelmingly, 81% of respondents said they had been most affected by flooding from the highway, with 48% from gardens and 27% from inside a residential dwelling.



A fair percentage of respondents ticked that they had already taken steps to prepare for flooding with 39% reporting that they had done more research to find out about flood risk to their property. What the results did highlight is that we (Risk Management Authorities) need to do more to encourage and support residents and businesses to take steps to be prepared for flooding. By being prepared for flooding, there is a better chance that the impacts can be lessened, and you can be more flood 'resilient'.

63% of respondents were very confident or fairly confident that they knew what to do if they think they may flood. 54% of respondents were very confident or fairly confident they knew what to do if they are flooded and only 38% of respondents were very confident or fairly confident, they knew who to call about flooding. This highlights that we need to focus on raising the awareness of what to do before, during and after a flood as well as setting out clearer guidance on responsibilities and who to call. There are a range of measures set out within the action plan that seek to address this.



84% of respondents were concerned a great deal or to some extent about insurance premiums/cost to recover from flooding. 74% of respondents were concerned a great deal or to some extent about the loss of sentimental items from flooding. 87% of respondents were concerned a great deal or to some extent about the Future sale of property and impact on property value. 75% of respondents were concerned a great deal or to some extent about the Future sale of property and impact a great deal or to some extent about time spent out of home/Loss of business hours. 93% of respondents were concerned a great deal or to some extent about Water quality, disease and the impact on the environment. 82% of respondents were concerned a great deal or to some extent about the safety of family or friends. 57% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about the safety of pets. 92% of respondents were concerned a great deal or to some extent about damage to property. Whilst all suggested concerns linked to flooding ranked reasonably highly from most respondents, damage to property, water quality, disease and the environment, insurance and future sale of property ranked the highest. Again, this highlights that we (Risk Management Authorities) need to focus on producing clear material to help residents and businesses recover from flood events.



Respondents concerns

The Strategy Update

The consultation requested feedback about the updated objectives and action plan, as well as supporting documentation including policies and the assessment of local flood risk. We wanted to gauge how much you agreed with our collective approach, identify if we have missed anything and understand which of our objectives (if any) you wanted to prioritise over others.

There was an overwhelming positive agreement with principles and the proposed objectives and action plan. There were also some concerns raised. These concerns have been noted and as a way to tackle these concerns, we (the Council and other Risk Management Authorities) are considering a range of potential measures that can be added to the action plan.

Accountability and Delivery

You said,

'How quickly can this action plan be implemented. Feeding back to residents / interested parties on these objectives, and how successful they have been, would be very interesting'.

Our response,

'We will be accountable to Leicestershire's Flood Risk Management Board. The action plan is proposed to be a live document and yearly updates on the progress of the action plan will be discussed at this board.'



Adapting to Climate Change

95% of respondents agreed that taking a risk-based approach was a very important or fairly important principle for managing local flood risk.

You said,

'I want to be kept safe and free from flooding through all eventualities. It should be an avoid and eliminate strategy. Managing the floods and consequences meant that the processes failed.'

Our response,

66 'It is not possible to prevent all flooding. You can only manage the risk of flooding and therefore reduce the impacts that flooding can have.'

You said,

You said,

'It is most important to take responsibility now for adapting to climate change.

Our response,

66 'We agree. This is why one of our five principles is adapting to climate change. We need to consider the impacts in the future with all our decision making.'

'Prevention is far better than 'cure'.'

Our response,

66 'We agree. Where resources allow, the Council advocates the proactive approach to flood risk management. The updated local flood risk management strategy details how the Council aims to proactively coordinate the management of local flood risk.

Taking a Risk-Based Approach

87% of respondents agreed that taking a risk-based approach was a very important or fairly important principle for managing local flood risk.



You said,

'A Risk-Based Approach could mean that smaller villages are forgotten about and that taking this approach is subjective especially if part of the risk is based on historical evidence'

Our response,

66 'A Risk-Based Approach is a way in which the Council can prioritise the allocation of limited resources. We need to allocate resources to those that need it the most and where most benefit can be realised for the level of input required. This does not mean however that smaller communities will be ignored. If you have experienced flooding, we will provide the same level of support that larger communities receive. The assessment of local flood risk has been conducted using the risk-based approach. This assessment has allowed us to be proactive and consider where we could target assistance to communities that may not have recently experienced flooding but are identified to be most at risk.'

We did,

'We have added further clarity to the assessment of local flood risk to explain that if a community is not highlighted to be 'at risk', but experiences flooding, that the community will still be entitled to the same level of support that communities identified at risk will receive.'



Working in Partnership

96% of respondents agreed that working in partnership was a very important or fairly important principle for managing local flood risk.



You said,

'I don't feel organisations especially the Councils and Environment Agency talk to each other enough.'

Our response,

66 'We consider working in partnership a key principle for effective local flood risk management. There are a number of well-established partnership arrangements set up to facilitate effective local flood risk management in Leicestershire of which the key ones are detailed on page 16 of the updated Local Flood Risk Management Strategy'.

We did,

'We have added additional detail to the partnership image on page 16 of the updated Local Flood Risk Management Strategy to further describe who attends which partnership and to more clearly demonstrate the proactive and well-established partnership arrangements already in place.'



Working with Communities

97% of respondents agreed that working with communities was a very important or fairly important principle for managing local flood risk.



You said,

'You give no examples of what working with communities might entail; Environment Agency/Councils need to get out into the villages and walk the areas where flooding takes place.'

Our response,

66 'We try to get out as much as possible to site but undertake desk-based assessments too. There is only a limited amount of resources and so given how time consuming site visits can be, we have to prioritise physically going on site using a risk-based approach. We agree that communities are the key to the success of local flood risk management. We are already working with a number of local communities delivering flood risk management schemes. In addition to local flood risk management schemes, we are also supporting the establishment of community flood action groups, community flood action plans, flood wardens, neighbourhood plan updates.'

You said,

[']Provide advice and training to the local community. Give provision of funding for local initiatives. Support those effected by the flooding with property level flood defences. Provide support for residents for purchasing (and installing) water butts and other small-scale local initiatives that can be done on a household level.'

Our response,

'We are already delivering property level flood defences in some communities in Leicestershire where we have been successful in obtaining National Flood Funding. Through our Flood Warden Scheme, we are providing advice and training to flood wardens to help guide the local community. We are looking at ways in which we can communicate support and guidance more effectively including our guidance notes which detail how you can better prepare yourself, your home, your business and your community for flooding. We are also reviewing our current guidance notes and looking to provide refreshed versions in Spring 2024 alongside a revised website.'

We did,

'We are considering more local initiatives based on the feedback to this strategy consultation.'

Delivering Multiple Benefits

96% of respondents agreed that delivering multiple benefits was a very important or fairly important principle for managing local flood risk.



You said,

'Plant trees to act as storage in uplands.'

Our response,

'We agree and techniques such as natural flood management are at the heart of our catchment wider initiatives for helping to reduce the negative impacts of flooding, as well as achieving wider benefits such as boosting local biodiversity and carbon capture.'

You said,

'Is there action to ensure that flooding does not mean water companies have the right to let sewage flow into canals, rivers and the sea?'

Our response,

66 'The County Council does not have the power to enforce water quality issues. If you spot an issue of this kind you should report it to the Environment Agency via their incident hotline on 0800 80 70 60.'

From the Environment Agency:

Part of the Environment Agency's responsibility for protecting and improving water quality includes the regulation of Combined Sewer Overflow's (CSO's). CSO's must have an Environmental Permit to authorise the discharge of storm sewage. The discharge of storm sewage is permitted if there has been heavy rainfall to prevent sewer's from being overloaded, flooding properties and has to be in strict compliance with the permit. The Environment Agency check permit compliance by inspecting CSO's and also assessing the discharge data that is collected from Event Duration Monitors which water companies have been required to install on all CSO's. The Environment Agency also respond to pollution incidents which can be reported on 0800 807060 with appropriate enforcement action being taken when there are breaches of permit or water pollution is being caused. Further information regarding CSO's can be found at: <u>Combined Sewer Overflows Explained -</u><u>Creating a better place (blog.gov.uk)</u>
Assets, Watercourses and Catchments



100% of respondents agreed that effective asset, watercourse and catchment coordination and management was a very important or fairly important objective for managing local flood risk.



You said,

'You should start dredging some places again to help.'

Our response,

66 'Dredging is an important tool for flood risk management but is not appropriate in all cases. Dredging one section can actually result in increased flooding downstream if not carefully considered. It can however in some cases create local capacity. The benefits of dredging must be balanced against the environmental impact and also the cost. Digging out and disposing of dredged material can be a costly exercise. In some cases, the siltation can return very quickly, particularly in silty/sandy catchments or catchments with limited vegetation, so soils wash easily into the watercourse. Therefore, the catchment must be considered as a whole and dredging considered as part of a wider solution in most cases.'

From the Environment Agency:

Publicly available guidance on desilting can be found here - **Desilting (environment**agency.gov.uk).



You said,

'Re-route waterways, streams etc. that have been diverted with a detrimental effect back to their original and natural course.'

Our response,

We agree. Restoring watercourse back to their original course can be beneficial for reduced flood risk but also other benefits such as improved habitat. In some cases, it is not appropriate particularly where a watercourse has been altered to facilitate a well-established multi-use playing field in an urban and built-up community. We look to promote the naturalisation of watercourses where possible and actively seek to discourage the alteration of watercourses and culverting.'

From the Environment Agency:

Most works or near statutory main rivers are regulated flood risk activities under the Environmental Permitting (England and Wales) Regulations 2016. The Environment Agency carries out enforcement on issued permits and follows up to reports of operators undertaking works without a valid permit. Further information can be found at: Flood risk activities: environmental permits - GOV.UK (www.gov.uk)

You said,

'No address of street kerbside cleaning which will hinder drainage in storms.'

Our response,

'Street sweeping is a function of the District and Borough Councils. It is recognised that some kerbside drainage would benefit from more frequent street sweeping and so when this is made aware to us, we can liaise with the relevant District/Borough Authority.'

You said,

'Upgrade the old small drainage pipes in our area to cope with the amount of excess water from the building more house on flood plain land.'

Our response,

'Most old drainage pipes are designed to cope with small rainfall quantities installed many years ago to standards that were applicable then. There are no requirements to upgrade these pipes to conform with the increasing pressures of climate change. In some parts of the county, there are partnership flood risk management which encompass old drainage pipes such as by fully replacing them (expensive) or by slowing the flow into them (natural flood management techniques).'



You said,

'You need to work with other authorities to ensure river flood areas etc are jointly managed'.

Our response,

⁶⁶ 'We agree. We have well established partnership arrangements whereby we liaise with our bordering partners and other Risk Management Authorities as detailed on Page 16 of the updated Local Flood Risk Management Strategy. All Risk Management Authorities and a wide range of other stakeholders/bodies were invited to help form and comment on the updated Local Flood Risk Management Strategy which considers the impacts of local flood risk management in Leicestershire in bordering authorities. The updated Strategy has also been developed to be consistent with the National Flood and Coastal Erosion Risk Management Strategy (the National Strategy). Where possible we also comment on our neighbouring authority strategies and other Risk Management Authority strategies such as water company Drainage and Wastewater Management Plans.'



Encouraging Sustainable Development



95% of respondents agreed that encouraging sustainable development was a very important or fairly important principle for managing local flood risk.



You said,

'More consideration of the effect of building new development on flood plains should be undertaken and the inherent risk that is caused forever to existing residents. Plus, the impact on residents' lives and properties should not be underestimated. Flood risk assessments should be accurate and if land is at risk of flooding, then say so and recommend that no building should be allowed on flood plains. They are there for a reason.'

Our response,

66 'We agree. Our role in the planning process is to review surface water drainage matters for major developments. Where resources allow, we also comment on some minor planning applications, particularly in areas we know are of flooding concern. When delivering this function, we utilise all datasets that we have access to. This includes predictive flood data for different sources of flooding as well as actual historical flooding information which is often reported to the Council by members of the public. Our role in the planning process however is advisory and the ultimate decision to grant or refuse a planning matter on any grounds, including flooding is the District or Borough Council (Local Planning Authority).'

From the Environment Agency:

Planning applications within flood zones 2 and 3 require a flood risk assessment. All major development in flood zone 3 will be reviewed by the Environment Agency to ensure that it is appropriately flood resilient without increasing flood risk elsewhere. Only 'essential infrastructure' and 'water compatible' development should be permitted within the functional floodplain (flood zone 3b). The Local Planning Authority will consider whether the developer has taken a sequential approach to their site selection, by ensuring that where there are sites in areas of lower flood risk, these are considered first. Further information regarding development in flood zones 2 and 3 can be found at: Flood risk assessment in flood zones 2 and 3 - GOV.UK (www.gov.uk)



You said,

'Neighbouring developments need to be taken into account at planning stage so that the overall effect on that area is effectively managed as a whole. Often a single development approach does not seem unreasonable but the cumulative effect of a number of large developments can have a wider reaching detrimental impact'.

Our response,

⁶⁶ 'The District or Borough Councils are the Local Planning Authority and consider the cumulative impact of development through the development of their Local Plans.'



You said,

'The strategy should include other local building enforcement powers. For example the power to stop property owners from paving over their gardens and grubbing up long established hedges. It is a fact that the loss of gardens contributes to excess rainwater run off.'

Our response,

66 'Whilst it is recognised that the loss of gardens can contribute to local flooding issues, we do not have these powers. It is the District or Borough Council (the Local Planning Authority) who have enforcement powers relating to contravention of planning law.'



You said,

'Does the working with communities consider the impact of more surface water draining into local brooks and streams'.

Our response

66 'We have revisited our blanket approach for recommending a discharge rate of 5 l/s/ha and are now applying more scrutiny to application consultations that are located within areas we know are of flooding concern because they have flooded historically, they are predicted to be at risk or the local community has alerted us to a flooding volume concern.'



Flood Preparedness, Response and Recovery

99% of respondents agreed that flood preparedness, response and recovery was a very important or fairly important principle for managing local flood risk.

You said,

'There should be improved liaison between the LLFA and Local (e.g. Parish) Councils.'

Our response,

⁶⁶ 'We have developed close working relationships with some Parish Councils particularly in areas where there has been severe flooding. We are looking at ways in which we can promote flooding guidance and support material to local councils and local flood action groups utilising existing network streams and more frequent engagement/communications material.'

You said,

'Can the local authorities guide householders in sourcing remedial measures, such as air-brick sealers/raisers for suspended floors? A communication (leaflet/poster etc) with key contact points could help.'

Our response,

⁶⁶ 'We already have guidance notes which we share frequently with members of the public, Parish Councils etc. We are currently updating them alongside updating our website to take on board the comments from this strategy consultation.'



You said,

'More information on your website, maybe a map highlighting watercourses and then who is responsible for looking after them.'

Our response,

We are already working on upgrades to our website. Whilst it won't be possible to identify individual landowners, we are working to include a map explorer function which indicates the different between Main Rivers and ordinary watercourses. We have guidance notes for Riparian Landownership and will be producing more images to help highlight and explain riparian landownership and responsibilities. We are also looking to undertake more communications exercises designed at raising awareness of riparian responsibilities amongst other flooding messages.'

Ð

You said,

'Send this information out to people. Leaving it in a website and hoping people find it organically is not an effective communication strategy.'

Our response,

66 'We agree. We are already looking at more communications exercises designed at raising awareness of the strategy and other flooding messages.'

You said,

'Once every two years stage a simulated exercise to test and verify plan and actions.'

Our response,

⁶⁶ 'The Leicestershire, Leicester City and Rutland Local Resilience Forum tests out the operation of the Multi-Agency Flood Plan at least every two years. They also work with local communities to test their community flood plans. More information about the Local Resilience Forum is contained with the partnerships section (page 16) of the updated Local Flood Risk Management Strategy.'





Better Understanding Local Flood Risk

100% of respondents agreed that better understanding local flood risk was a very important or fairly important principle for managing local flood risk.



You said,

'Install rain gauges and watercourse monitors'.

Our response,

We are aware of various watercourse monitors across the County and frequently use this information with regards to flooding investigations. We have already installed one flow gauge in Leicestershire. This gauge not only provided real time flow information to help calibrate our flood model for that community flood alleviation scheme, but it also doubles up as a community flood warning system alerting a community when water levels become high enough to risk property flooding.'



You said:

various comments related to risk from canals and reservoirs

From the Environment Agency:

The risk of flooding from reservoirs is very low. Large reservoirs are registered and regulated under the Reservoirs Act 1975. Reservoir flood maps are produced to ensure the impacts of dam failure are understood. You can check your risk of flooding from reservoirs at: Learn more about flood risk - Check your long term flood risk - GOV.UK (check-long-term-flood-risk.service.gov.uk)

The risk of flooding from canals can be from either a breach of an elevated section of canal or from overtopping the banks. Most canals in Leicestershire are maintained by the Canal and River Trust and part of their maintenance work includes bank repairs where required. Some sections of canal are linked to main rivers, such as the Grand Union Canal and the River Soar, which flows from south to north through Leicestershire. The canal and river combined as a single channel regularly and as such there is an associated fluvial flood risk. This can also be found at: Learn more about flood risk - Check your long term flood risk - GOV.UK (check-long-term-flood-risk.service.gov.uk)

Local Projects



95% of respondents agreed that local projects was a very important or fairly important principle for managing local flood risk.



You said,

'Local projects with local communities most at risk of flooding is something I would welcome'.

Our response,

⁶ 'The local community is at the heart of all project development and planning of any flood risk management project. It is important that the community accept and embrace proposed schemes to ensure the success and longevity of the flood benefits.'

You said,

'Local environmental projects to prepare for the worst'.

Our response,

We agree that the environment should be a consideration in all flood risk management projects and the multi benefits of flood alleviation measures should always be maximised where possible. It is important that environmental initiatives are aligned closely with flood risk management initiatives and environmental opportunities maximised where possible.'







X0500





Local Flood Risk Management Strategy for Leicestershire

Draft for final approvals (November 2023)



Foreword



Councillor Ozzy O'Shea

County council cabinet member for highways, transportation and flooding

In 2015, the County Council produced the first Local Flood Risk Management Strategy for Leicestershire. Since then, great progress has been made towards better understanding and managing local flood risk. Leicestershire has continued to experience significant flooding incidents including the countywide flooding in 2019/20 which resulted in flood damage to over 100 homes and businesses. We have witnessed how flooding devastates communities and the long-term impacts that this can have. This has helped to shape this strategy update.

Our ambition, through delivering the actions set out in this strategy update, is to contribute towards making Leicestershire a great place to live and work for now and for future generations. We want to ensure Leicestershire is safe and sustainable in terms of flood risk and implement actions which helps combat the impacts of climate change. We will aim to keep our communities informed and educated about flood risk and their responsibilities to encourage self-resilience, and to aid understanding about what is being done by responsible bodies to manage flood risk across the County. We also hope to contribute towards assisting in the recovery of nature in Leicestershire further contributing towards the County Councils Net Zero goal.

Though the County Council must produce this strategy, in its role as Lead Local Flood Authority, the Council does not have the power or responsibility to physically resolve or alleviate all flooding related matters. Managing flood risk requires a partnership approach between organisations and local communities. This strategy update has been delivered with the support of partner organisations and communities recognising that by working together and coordinating our actions, we can more effectively mitigate the impacts of future flooding. We will continue to work with all partners to maximise funding for helping to reduce flood risk across Leicestershire and our strategy update details how and where we will do this.

Contents

Introduction	4
Principles, Objectives and Measures	6
What is Local Flood Risk?	8
Roles, Responsibilities and Partnerships	11
Objective 1: Assets, Watercourses and Catchments	17
Objective 2: Encouraging Sustainable Development	27
Objective 3: Flood Preparedness, Response and Recovery	35
Objective 4: Better Understanding Flood Risk	45
Objective 5: Local Projects	51
Creation, Consultation, Monitoring and Review	59

Acronyms

To make the Strategy as readable as possible, the use of acronyms has been limited. Acronyms are also reintroduced within each section in which they are used.

LLFA	Lead Local Flood Authority
NFM	natural flood management
PFR	property flood resilience
RFCC	regional flood and coastal committee
RMA	risk management authority
SuDS	sustainable drainage systems

Introduction

The County Council are the Lead Local Flood Authority (LLFA) for Leicestershire. As LLFA, the County Council are responsible for developing, maintaining, and monitoring the Local Flood Risk Management Strategy for Leicestershire ('the Strategy'). The first Strategy was published in 2015. This revised and updated second version was published in December 2023. The Strategy includes an update to the principles, objectives and measures by which local flood risk will be managed. It is consistent with the National Flood and Coastal Erosion Risk Management Strategy for England ('the National Strategy') published in 2020.

The Strategy is focused on the management of the local flood risk sources of surface water, groundwater, and ordinary watercourses (see 'What is local flood risk?' section). It is divided into the following main sections.

Introduction

Introduces the Strategy, including the principles by which local flood risk will be managed.

What is local flood risk?

Explains local flood risk sources, and other sources of flood risk which may interact with these.

Roles, Responsibilities and Partnerships

Introduces the roles and responsibilities of risk management authorities (RMAs) and others involved in local flood risk management, including local communities. Key partnership working arrangements are also explained.

Objectives sections

Sections explaining each of the five objectives, and the measures proposed to deliver them. The application of the Strategy principles is explained at the end of each objective section.

Creation, Consultation, Monitoring and Review

How the current version of the Strategy was created, and how it will be monitored and reviewed.

How to read the Strategy

The Strategy is a Strategic document. The principles, objectives and many measures apply to all of Leicestershire's communities. We encourage you to read on with this in mind, and to not be discouraged if your local community is not mentioned specifically!

The Strategy has been written in such a way that it can be read as one document, or as standalone sections. A summary is also provided on the County Council's website.

Supporting information

The Strategy is supported by the following key documents. Further related or supporting information is signposted throughout this document.

Action Plan

The Action Plan lists the measures proposed to achieve the Strategy objectives. It includes timescales, costs, benefits, and how measures are to be paid for. A summary of progress against the former Strategy Action Plan is also provided.

Assessment of local flood risk

This is a 'live' assessment of local flood risk, which will be updated periodically as new information becomes available. It includes consideration of the impacts of climate change upon flood risk in Leicestershire.

LLFA policies

The policies describe how the County Council as LLFA will fulfil certain duties or exercise legislation. Each policy is introduced in the relevant objective section.

- Formal Flood Investigations Policy
- Asset Register and Record Policy
- Ordinary Watercourse Regulation and Culvert Policy

Strategic Environmental Assessment

The Strategic Environmental Assessment meets the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 (the <u>Strategic Environmental Assessment Regulations</u>). It provides an assessment of the Strategy objectives and measures against Assessment objectives with economic, environmental, and social scope. Appendix B of the Assessment provides the policy context for the Strategy, including related plans and legislation.

Habitat Regulations Assessment

The Habitat Regulations Assessment meets the requirements of the 'Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019 (<u>'the Habitat</u> <u>Regulations'</u>). It considers the impacts of the Strategy upon European designated sites, such as the Mease Special Area of Conservation.

Principles, Objectives and Measures

The Strategy 'wheel' displays headings for the five objectives, which will be implemented through the Strategy measures, in accordance with the five principles.



Strategy Principles and Objectives

Principles

The five principles are intended to apply across all local flood risk management work. They help to ensure consistency with legislation, <u>the National Strategy</u>, and other plans.

Objectives

The five objectives describe the main ways in which local flood risk is managed in Leicestershire. They are strategic objectives, implemented through the measures.

Measures - What we are doing

The measures detail the actions taken to implement the objectives. Most are included within the objective sections, and all are included within the Action Plan.

The Strategy principles

1

Working in partnership

- A wide range of organisations are involved in managing flood risk from different sources in Leicestershire. Effective partnership working is therefore required.
- Partnership working also helps to maximise other associated benefits, such as improvements to biodiversity and habitats.
- Practical examples of partnership working include sharing data, and partnership projects which address flood risks from multiple sources.



Working with communities

- The ambition of the National Strategy is for a nation ready to respond and adapt to flooding; by helping local people understand their risk, know their responsibilities, and how to take action.
- This is ambition shared in Leicestershire, as the County Council and others engage and work with individuals and communities across flood risk management actions.

Delivering multiple benefits

- Flood risk management is not considered in isolation. The National Strategy highlights multiple benefit opportunities of flood risk management actions, such as environmental enhancements, sustainable growth, and climate change mitigation.
- It is a requirement to assess how the Strategy can contribute to the achievement of such benefits. This was initiated through independent Strategic Environmental Assessment, which has helped to identify potential benefits of measures. These will be monitored alongside the Strategy Action Plan.

Adapting to climate change

- In May 2019 the County Council <u>declared a climate emergency</u>, in recognition of the local and wider impacts of climate change.
- Flood risk is increasing with climate change, with an increased likelihood of wetter winters, and more intense rainfall events.
- Core ambitions of the National Strategy are for climate resilient places, and for development to be resilient in tomorrow's climate; these ambitions are shared in Leicestershire. Adapting to a changing climate will be considered across all measures taken, using the best guidance available to do so.

Taking a risk-based approach

- Organisational resources for local flood risk management are finite. A risk-based approach assists prioritisation of these resources. Communities where lots of properties are at risk from internal flooding are likely to be prioritised (see the Assessment of Local Flood Risk), however other locations will still receive support.
- This approach also extends to other benefits. For example, risk assessing the effects of watercourse management activities upon public safety.
- Risk based decision making will be supported by use of the best evidence and guidance available. A broad range of evidence is considered, including the valuable local knowledge provided by communities.

What is Local Flood Risk?

What is flood risk?

The definition of 'risk' is the combination of the probability (likelihood or chance) of an event happening and the consequences (impact) of it occurring. Floods can happen often or rarely, have minor or major consequences, and positive or negative impacts. Where the probability and the consequences of flooding are high, then an area is at a high risk of flooding.

Did you know? Flood Risk = Probability x Consequences

Local Flood Risk in Leicestershire

Local flood risk is defined in the Flood and Water Management Act as risk from surface water, groundwater, and ordinary watercourses. The County Council as Lead Local Flood Authority (LLFA) coordinate the management of these risk sources. The Assessment of Local Flood Risk document which supports the Local Flood Risk Management Strategy (the Strategy) provides a more detailed assessment of risk from each source.

Surface water

Surface water occurs when rainwater does not drain away through the normal drainage systems or soak into the ground, but lies on or flows over the ground instead; the water has not yet entered a watercourse, drainage system or public sewer. Surface water flooding normally occurs during intense rainfall events, but can also occur during less severe rainfall events when assets or infrastructure are not able to drain water away effectively (i.e., they are at capacity or they may be obstructed).

Typically, surface water flood events have localised effects, impacting properties near to where the rain fell and for a short amount of time. The flooding can be in the form of flow paths, as water flows downhill, or pooling though accumulation at low points. Risk is increased by impermeable surfaces, which are more likely in urban areas, but can also be where ground is saturated, or baked hard due to hot weather.

Surface water flood risk is extensive across the County. The National Risk of Flooding from Surface Water mapping provides a good indication of areas at risk from surface water. This is viewable through the Check the long-term flood risk for an area in England service.

Additionally, Market Harborough, Loughborough and Hinckley and Burbage have been identified as 'nationally significant' surface water flood risk areas. Parts of the Leicester Surface Water Flood Risk Area also extend into Leicestershire (e.g., Oadby). The flood risk areas can be viewed on the Environment Agency Flood Plan Explorer.

Did you know?

Flood water can be positive in some areas providing much needed nutrients and water to land.

Ordinary watercourses

Ordinary watercourses include ditches, streams and culverts that are not classified as main river by the Environment Agency; they can also be ditches that are only wet for part of the year. Rainfall within a watercourse's catchment can cause them to exceed their capacity, leading to flooding. Blockages or obstructions can increase the risk of local watercourse flooding. Intense rainfall (e.g., thunderstorms) is more likely to cause flooding in small and/ or urbanised catchments. Watercourses fed by larger and/or rural catchments are more likely to be affected by longer winter storms or seasonally wet periods of weather, as the ground becomes saturated and less able to absorb more rainfall.

Groundwater

Groundwater flooding can occur when the level of water within the rock or soil (known as the water table) rises. It is most likely following extended periods of seasonally wet weather. The majority of Leicestershire is situated on geology and soils with properties that are associated with low groundwater flood risk, such as clays. The LLFA are not aware of any significant flooding incidents where groundwater has been the main source of risk.

Recent Historic Flooding

The County Council as LLFA holds historical flood event data collated from various sources. The **Preliminary Flood Risk Assessment** for Leicestershire highlighted records of approximately 1,300 local flood events that occurred across the County between 1996 and 2011. The most significant recent historical flood events in occurred in 2012, 2013, 2016, 2019 and 2020. 'The Autumn and Winter of 2019-20 was an extremely wet period with heavy rainfall and storms causing multiple flooding events. The County Council received around 100 reported incidents of confirmed internal property flooding and more than 500 enquiry reports relating to flooding issues.

Other sources of flood risk

There are other sources of flood risk which interact with local flood risk as per the illustration on the next page. For more information, please visit <u>leicestershire.gov.uk/flooding</u>.

Sources of flood risk and responsibilities

Groundwater

Landowner. LLFA coordinate management.

Network Rail Maintain drainage assets on public rail network.

Main river

Maintenance is riparian (landowner) including crossings. Regulated by the Environment Agency

Key Local flood risk sources Responsible body

> **Canal** Canal & River Trust responsibility

57

Reservoir

Asset owner. Environment Agency regulate safety

Ordinary watercourse

Maintenance is riparian (landowner) including crossings. LLFA coordinate management.

Private Landowner maintains assets (e.g. private sewers, drains)

A CARACTER AND A CARACTER

Π

П

Public Highway

Local Highway Authority for local roads. National Highways for motorways and trunk roads. Also responsible for maintaining culverts and bridges beneath highway.

while was a state of the second state of the s

Surface water

LLFA coordinate management. Close links with highways and sewer flooding.

Mains Sewer Water company if public supply П

П

Π

Wastewater Sewer (Surface water or foul) Water company responsibility if

company responsibility if public sewer

Roles, Responsibilities and Partnerships

Many different organisations are involved in flood risk management; there is no one organisation who has the means or authority to manage risk on its own. All organisations therefore need to work in partnership. It is also crucially important that local communities understand their flood risk, responsibilities, and how to take action.

Risk Management Authorities

Leicestershire Risk Management Authorities



Environment Agency

- Strategic overview all sources of flood risk
- Regulation of flood risk from main rivers and reservoirs

Water Companies

- Manage risk of flooding from public sewers
- Severn Trent
- Anglian Water

Highways Authorities

- Manage risk of highway flooding
- Leicestershire County Council for local highways
- National Highways for trunk roads

District and Borough Councils and Internal Drainage Boards

- Assist the County Council and other RMAs where possible
- Trent Valley Internal Drainage Board Regulatory role etc. within the Boards area

The Flood and Water Management Act 2010 requires the County Council as the Lead Local Flood Authority (LLFA) to establish arrangements to bring together all relevant bodies to work as partners in the management of local flood risk. This is further strengthened through the Localism Act 2011 and the 'Duty to cooperate'. Both Acts recognise the important roles played by district and borough councils, internal drainage boards, highways authorities and water companies. It identifies these bodies, together with the Environment Agency as flood 'Risk Management Authorities' (RMAs). The RMAs in Leicestershire are illustrated above. Their roles and responsibilities are introduced on the next page, and explained further in the objective sections.

Lead Local Flood Authority

As **LLFA**, the County Council is responsible for coordinating the management of local flood risk. The role includes responsibilities to develop and apply the Local Flood Risk Management Strategy ('the Strategy'); develop and maintain

the Asset Register and Record; regulate the management of ordinary watercourses; be statutory consultee for major planning applications, and investigate significant flooding incidences.

Environment Agency

The **Environment Agency** has a strategic overview role for all sources of flooding. They are responsible for regulating main rivers and reservoir safety. The Environment Agency work in partnership with the **Met Office** to provide

flood warnings and are involved in emergency response. They are also the water quality & environmental regulatory body, as well as regulating works on or near main rivers through the Flood Risk Activity Permitting regime. The Environment Agency is a statutory consultee on certain planning applications and the organisation oversees the production of regional Flood Risk Management Plans. They are the lead government organisation for the protecting the environment through the delivery of the regional River Basin Management Plans, and other environment protection work and regulation.

Water and Sewerage Companies

Two Water and Sewerage Companies operate in Leicestershire: **Severn Trent, and Anglian Water**. They are responsible for management of the public sewer network and have a role in emergency response. They also produce regional **Drainage and Wastewater Management Plans**.

Highway Authorities

National Highways for trunk roads (e.g., Motorways) and the **County Council as Local Highway Authority** for other public highways. They are responsible for maintaining public highways (including watercourses running under highway) and managing risk of highway flooding.

District and Borough Councils

The seven District and Borough Councils (**Blaby, Charnwood, Harborough, Hinckley & Bosworth, Melton, North West Leicestershire, and Oadby and Wigston**) have roles in relation to emergency planning and recovery after a flood event. They are also Local Planning Authorities, responsible for carrying out specific planning functions.

Internal Drainage Boards

There is a small part of the **Trent Valley Internal Drainage Board** within Leicestershire. The Board are responsible for regulation of watercourse management within this area. The Board also provide drainage related planning advice to the Melton Borough Council Local Planning Authority for proposed development within the board's jurisdiction.

EX)









60



The community of Bottesford is a good example of where multiple risk management authorities are involved in flood risk management. This demonstrates the need for effective partnership working and community engagement.

Other organisations

There are many other organisations, partners and bodies who are also involved in local flood risk management.

River trusts

The rivers trusts active in Leicestershire are <u>Trent Rivers Trust</u>, <u>East Mercia Rivers</u> <u>Trust</u> (River Welland Catchment), and <u>Severn Rivers Trust</u>. The relevant work of the trusts includes: coordinating catchment partnerships; community engagement with an environmental focus and; project development and delivery (particularly natural flood management).

Canal and River Trust

The <u>Canal and River Trust</u> are responsible for managing flood risk from Canals. Canals are generally designed to enable them to cope with flood waters. These artificial watercourses rarely flood because they contain water control locks. Most canals have overflows that run off into small rivers and streams. High intensity rainfall however can cause canal flooding. The Canal and Rivers Trust are also responsible for maintaining watercourse culverts under canals.

Emergency responders

Emergency responders are involved in preparing for and responding to incidences of flooding. Their role is further described in the Objective 3 section. Their role is further described in the partnerships section, and Objective 3: Flood Preparedness, Response and Recovery.



What we are doing

Risk management authorities will work together to encourage and support individuals to be more prepared for and resilient to flooding.

The role of individuals and communities

Individuals and communities have an important role to play across flood risk management actions. The roles shown below are expanded upon in the objective sections. It is crucially important that individuals and communities understand their flood risk, responsibilities, and how to take action.

F	Assets, watercourses, and catchments	Maintenance of private assets such as household drains, and reporting asset issues (e.g., blocked gullies). Riparian landowners maintaining their stretch of watercourse. Landowners supporting natural flood management where possible.
	Encouraging sustainable development	Engaging with the planning process by providing local knowledge of flood risk management and drainage issues. Engaging in neighbourhood planning.
≈ <u>∕</u> !\^	Flood preparedness, response and recovery	Property flood plans; community flood action plans; signing up for flood warnings; becoming or supporting local flood wardens; engaging with flood investigations.
Ð	Better understanding flood risk	Understanding risk to your property or community; providing local knowledge in support of flood studies.
2	Local projects	Supporting measures such as property flood resilience and natural flood management; helping others in the community to be informed of project progress.

Partnerships

The Flood and Water Management Act 2010 requires the relevant authorities to cooperate with each other in exercising their roles under the Act. Flooding comes from many sources, is managed by multiple agencies and is not discriminate of administrative boundaries. Organisations and agencies therefore need to work together to manage risk. Partnership arrangements help to deliver effective cross-organisation and cross boundary work. They can enhance the coordination of policy and actions. They can also provide strong accountability and transparency, through a clear demonstration of cooperation. Key partnership arrangements are shown in the diagram below.

Regional	Regional flood and coastal committees (RFCCs) Trent, Anglian Northern, Severn & Wye. Coordinated by the Environment Agency and attended by elected members.
	River catchment partnerships e.g. Mease, Soar, Welland. Coordinated by Rivers Trusts.
	LLR prepared (the Local Resillience Forum)
	& sub-groups e.g. Flooding, People & Communities. The Environment Agency chair the Flooding Sub-Group, which is attended by emergency responders.
Leicestershire	Leicestershire Flood Risk Management Board & sub-groups e.g. Flood Enquiries Partnership. Coordinated by the LLFA and attended by RMAs.
Community Level	Community flood partnership groups e.g. Loughborough Flood Board, Market Harborough Surface Water Management Plan Partnership, Diseworth Flood Action Group.

Key partnerships

Regional Flood and Coastal Committees (RFCCs)

RFCCs are committees established and managed by the Environment Agency under the Flood and Water Management Act 2010. The committees are made up of elected members (appointed by LLFAs) and independent members with relevant flood risk management experience. They meet to:

- ensure there are coherent plans for identifying, communicating, and managing flood and coastal erosion risks across catchments and shorelines;
- promote efficient, targeted, and risk-based investment in flood and coastal erosion risk
 management, that optimises value for money and benefits for local communities (this
 includes recommending the approval of the annual programme of flood and coastal risk
 management work in their region, and setting a local levy that supports local priorities); and
- provide a link between the Environment Agency and others, promoting a mutual understanding of flood and coastal erosion risks.

The County Council is a committee member at both the <u>Trent RFCC</u> and <u>Anglian Northern</u> <u>RFCC</u>, whilst a small area of Leicestershire is situated within the <u>English Severn and Wye</u> <u>RFCC's</u> jurisdiction.

River Catchment Partnerships

The <u>Catchment Based Approach</u> is a community-led approach that engages groups from across society to help improve water environments, managed through catchment partnerships. By working together, partnerships members have the capacity to access funding from a wide range of sources. The main partnerships with extents in Leicestershire are the:

- Soar Catchment Partnership;
- River Mease Partnership; and
- Welland Valley Partnership.

RMAs are actively involved to help integrate local flood risk management objectives into the work of partnerships, and contribute towards the delivery of wider objectives.

LLR Prepared (the Local Resilience Forum) & sub-groups

LLR Prepared is the Local Resilience Forum for the policing area covering Leicester, Leicestershire & Rutland. LLR Prepared fulfils statutory responsibilities arising from the Civil Contingencies Act 2004, which requires specific organisations within a policing area to work together to prepare for, respond to and recover from different emergencies. Its membership is made up of emergency responders (see Objective 3). A Flooding Subgroup of the Forum is hosted by the Environment Agency and meets quarterly. The group discusses emergency response plans in the region.

Leicestershire Flood Risk Management Board & sub-groups

The Flood Risk Management Board is a forum of RMA officers and others formed to develop a strategic, multi-agency approach to flood risk management in Leicestershire. The Board oversees the development and application of this Strategy. It facilitates discussion and cooperation around local flooding incidences, resource optimisation, lessons learnt, working together and reviewing and writing complimentary plans. It is important to maintain this framework of cooperation between the partners outlined above to ensure that the roles and responsibilities of all stakeholders are fully understood. Sub-groups of the Board include the Flood Enquiries Partnership where RMA's discuss enquiries requiring a partnership response.

What we are doing

Leicestershire LLFA will continue to coordinate the Leicestershire Flood Risk Management Board.

Community flood partnership groups

There are several community level flood partnership groups across the County. This includes those established by local communities (often called flood action groups), or by RMAs (e.g., surface water management plan partnerships). These groups often bring together relevant RMAs, other partner organisations, and community representatives to work in partnership locally.

Networking, skills and knowledge sharing groups

There are several networking skills and knowledge sharing groups which the LLFA or other RMAs attend. For example, the LLFA regularly attends the following groups:

- Association of Directors of Environment, Economy, Planning and Transport: Flood and Water Management Group (national)
- <u>Midlands Highway Alliance Plus: Flood and Water Management Service Improvement</u> <u>Group</u> (regional)
- LLFA Networking Meetings hosted by the Environment Agency (regional)

These partnerships are important for local flood risk management strategically, as they can provide opportunity to:

- discuss how existing or new requirements will be fulfilled;
- be informed regarding upcoming challenges (e.g., changes in policy) and opportunities (e.g., new funding sources);
- view examples of good practice and discuss lessons learnt; and
- agree collaborative responses to national consultations.

Objective 1:

Assets, Watercourses and Catchments

To manage local flood risk through the effective management of flood risk assets, watercourses, and catchments.

The condition of Leicestershire's watercourses and flood risk assets is vital for local flood risk management. Catchments can cross administrative boundaries. Watercourses can also fall within the land of various landowners and therefore be the responsibility of multiple parties. Raising awareness of these responsibilities is a key part of managing flood risk from watercourses, and a partnership approach is required to help achieve it. Watercourses and catchments also need to be managed with awareness of environmental impacts and benefits.

65



Case Study

Community Action -Diseworth Flood Action Group

- In 2021, volunteers from the local community set up the Diseworth Flood Action Group. With help from local farmers, the group assisted riparian landowners with watercourse maintenance to reduce risk of blockages that were increasing risk of flooding.
- The group also installed watercourse flow gauges to better understand risk and improve local resilience in the event of bad weather.
- The LLFA and others are working with the action group with plans to further alleviate reduce risk and increase community resilience. See the <u>Parish Council website</u>

Photos: Watercourses before (top) and after (bottom) following management.

Who is involved?

Are you a Riparian landowner? Further information and guidance for riparian landowners is available on the GOV.UK <u>Owning a watercourse</u> page and the County Council's <u>Regulation of activities on watercourses</u> page.

Property owners

8

Riparian landowners

Management and maintenance of private drainage assets (e.g.,

downpipes and driveway drains).

- Landowners with watercourses running through or alongside their land, who are either partially or wholly responsible for maintenance.
- This can include Councils and other organisations where they own land.

Lead Local Flood Authority (the County Council)

- Regulating ordinary watercourse management.
- Permissive enforcement powers for unconsented works or works that may increase flood risk.
- Maintain the Asset Register and Record of significant flood risk assets.

Local Highway Authority (the County Council)

Management and maintenance of drainage assets that serve to remove water which falls on public highway, and any culverts under highway (excluding trunk roads, managed by **National Highways**).

Water and Sewerage Companies

Management of public sewers, the design and condition of which is important for reducing the risk of surface water flooding.

Environment Agency

- Regulation of works carried out either on or adjacent to main rivers.
- Regulating authority for pollution and environmental damage (including watercourses).
- Catchment management role (River Basin Management Plans).

Catchment Partnerships

Coordinate the delivery of environmental objectives for catchments, alongside other benefits such as flood risk management.

Trent Valley Internal Drainage Board

Regulation of watercourses within the Boards area, of which a small part is within Leicestershire, around Bottesford, Redmile and Harby.

District & Borough Councils

Can be asset managers or riparian landowners where they own land. Some permissive regulatory powers.

Watercourses

A key source of local flood risk in Leicestershire is from ordinary watercourses; these can be ditches, streams, culverts and even watercourses that are only wet for part of the year. 'Ordinary' watercourses are those that are not classified as main river by the Environment Agency.

Riparian responsibility

Riparian landowners are responsible for the maintenance of watercourses passing through or alongside the boundary of their land. Further information on riparian responsibility, and guidance for riparian landowners is available on the GOV.UK **'Owning a watercourse'** page and the **Regulation of activities on watercourses** page. Riparian landowners can also contact the LLFA for further advice and support.

What we are doing

The LLFA will signpost and make available guidance for riparian landowner and proactively share this in locations of identified priority.

Case Study

Watercourse Management -The Meadow Brook, Appleby

- Appleby Magna flooded in November 2019, and again in February 2020. A <u>formal flood</u> <u>investigation</u> was published.
- During the investigation, several watercourse obstructions were identified on key assets. Guidance was provided to riparian landowners on how to remove blockages and maintain their section of watercourse. North-West Leicestershire District Council also carried out some watercourse maintenance.
- Key assets have been added to the Asset Register, and all partners are now working together to identify further works to help reduce flood risk to this community, such as installing natural flood management in the upper catchment.

Photos: Watercourses before (top) and after (bottom) following management.

Regulation

The County Council as LLFA is responsible for regulating the management of ordinary watercourses, with various permissive powers defined by the Land Drainage Act (1991); further information on the approach to watercourse regulation can be found in the Watercourse Regulation and Culvert Policy, and supporting guidance available on the Regulation of activities on watercourses page.

Did you know?

Should you plan to alter or carry out work near to a watercourse, you may need approval from the LLFA. Go to the website for more info.

The County Council as LLFA aims to ensure watercourses are managed in a way which balances flood risk management with other needs, such as the biodiversity and amenity benefits they can provide. This includes reducing culverting and encouraging the restoration of watercourses, including through deculverting.

What we are doing

The LLFA will regulate ordinary watercourses in accordance with the Leicestershire Ordinary Watercourse Regulation and Culvert Policy and supporting guidance.

Case Study

River Restoration - Leicester Golf Centre and Racecourse

The Wash / Saffron Brook flows through Oadby into Leicester. The '<u>Saving the Saffron</u> <u>Brook</u>' project aims to restore parts of the heavily modified river ecosystem via direct channel improvements, re-naturalisation and floodplain reconnection, whilst engaging

with local communities to bring them closer to nature. Part of this work included removal of four culverts and other channel improvement at Leicester Golf Centre and Leicester Racecourse, coordinated by <u>Trent Rivers Trust</u>. The plans were agreed with landowners, and checked and consented by the LLFA in their regulatory consenting role.

Assets

There are a broad range of existing assets that can affect flood risk in Leicestershire in a positive or negative way. For example: culverts, screens, sustainable drainage systems (SuDS), natural flood management measures and highway drainage. A risk-based approach is taken towards asset management, with more resources focused upon assets which have a significant effect upon local flood risk.

Section 21 Asset Register

The LLFA is required by Section 21 Flood and Water Management Act 2010 to maintain an asset register and record of structures or features which have a significant effect (positive or negative) upon flooding in Leicestershire. The Flood Risk Asset Register and Record Policy details the approach taken in Leicestershire, including defining why assets are added. The Register and Record are not intended to include all flood risk assets, but those with the most significant effects; RMAs are likely to hold more detailed records of assets they manage or regulate. The Register and Record help to inform asset inspection and maintenance, and the development of business cases for asset management funding.

What we are doing

The LLFA will continue to maintain the Flood Risk Asset Register and Record in accordance with Leicestershire's Flood Risk Asset Register and Record Policy.

Case Study

Trash Screen - Rugby Close, Market Harborough

- In December 2013, during heavy rainfall a culvert at Rugby Close became blocked with debris, causing flooding to homes.
- Following a <u>formal flood investigation</u>, a trash screen was installed by Harborough District Council, to reduce the risk of future blockages. The screen is on the Asset Register as it has significant effect upon risk.
- Harborough District Council regularly cleanse the screen before and during rainfall.
- Local residents have set up a social media group to enhance community resilience.

Photo: Rugby Close trash screen

Highway drainage assets

The County Council in their Local Highway Authority (LHA) role are responsible for the management and maintenance of drainage assets on or under public highway (excluding motorways and trunk roads managed by National Highways). These assets such as gulley pots, gulley grates, culverts, brides, and lateral flow pipes that are installed to deal with water that falls directly on the highway only or flows underneath. The LHA take a risk-based approach to asset maintenance, as defined in the Leicestershire Highways Infrastructure Asset Management Plan.

What we are doing

The Local Highway Authority will continue to maintain highway drainage assets in accordance with the Leicestershire Highway Infrastructure Asset Management Plan.

Case Study

Highway Assets -Gully cleansing

There are over 130,000 gullies on local public roads in Leicestershire. Gullies are cleansed by the LHA's highway contractors using a risk-based approach, which uses various data such as past and predicted flooding. This means some gullies will be cleansed more often than others. <u>Report</u> <u>a blocked roadside drain or gulley</u> on the County Council's website.

Photo: gully cleansing in Leicestershire

Privately maintained assets

Homeowners and businesses are usually responsible for maintenance of private flood risk and drainage assets, such as:

- Private sewer connections to public sewer
- Roof drainage
- Threshold drains
- Property flood resilience measures

The importance of good maintenance of such assets will be promoted as part of work to develop initiatives to enhance community preparedness and resilience to flooding (see Objective 3 - community preparedness and local community initiatives). Please note in some instances maintenance responsibility may be passed on to tenants.

Catchments

Catchments are the areas of land (urban, rural or both) draining into a watercourse. The way catchments are managed affects the peak and volume of watercourse flow; therefore, they are an important consideration when managing the risk of flooding from ordinary watercourses. Effective catchment management can only be achieved when all partners work together strategically and share information. Land in Leicestershire also provides many other benefits to society (e.g., food production, housing, industry), which are also duly considered by RMAs and other partner organisations in their work.

Environmental catchment initiatives

Natural flood management (NFM) involves using various techniques to restore or mimic the natural functions of rivers, floodplains, and the wider catchment. The main aims of NFM are to store water in the catchment, and slow the rate at which water runs off the landscape into watercourses and rivers, to help reduce flood risk to communities downstream. NFM is often delivered as a part of local projects (see Objective 5), however there are opportunities for implementation more widely across Leicestershire's catchments. One of these countryside stewardship schemes, where landowners can access funding to deliver and maintain NFM measures. The <u>National Strategy</u> emphasises maximising the flood risk management benefits of such schemes; this is also the aim in Leicestershire, particularly upstream of at-risk communities.

What we are doing

The LLFA with support from catchment partnerships will seek to maximise opportunities for natural flood management across Leicestershire.

The <u>Catchment Based Approach</u> is a community-led approach that engages groups from across society to help improve water environments, managed through catchment partnerships (see Partnerships section for further information). Much of RMAs catchment based work is integrated into the work of catchment partnerships. There is potential to develop and deliver multiple benefit projects that benefit the environment, reduce flood risk and improve the lives of people.

What we are doing

The LLFA will work with catchment partnerships and landowners to integrate environmental and flood risk management workstreams.
Case Study

The Catchment Approach -The River Mease Partnership

The River Mease is a Special Area of Conservation, which has not been meeting key environmental objectives. The top half of the catchment is in North-West Leicestershire, where communities such as Packington and Appleby Magna are at risk of flooding. The LLFA is therefore working with the <u>River Mease Partnership</u> to achieve both environmental and flood risk management catchment wide benefits. The potential for NFM has been assessed upstream of Appleby Magna, Packington and Moira.





Photo The River Mease

Local Nature Recovery Strategies are a system of locally led, decision-making tools which establish priorities and actions to drive natures recovery, whilst providing wider environmental benefits. The County Council are the responsible authority for developing and maintaining the Local Nature Recovery Strategy for Leicestershire. It will include local habitat maps that will guide and inform planning and nature recovery activities, and the approach to biodiversity net gain requirements. It is anticipated that the Strategy and habitat maps this will help in the delivery of both environmental improvements and local flood risk management'.

Catchment work addressing multiple flood risk sources

Risk management authorities also take a catchment-based approach managing interactions between local flood risk and other sources. Flood Risk Management Plans are regional strategic plans which set out how organisations, stakeholders and communities will work together to manage flood risk in England, including nationally significant flood risk areas.

There are four Flood Risk Management Plan measures related to surface water flood risk areas in Hinckley and Burbage, Loughborough, Market Harborough, and Oadby (Leicester) which are also included as Strategy measures within the Action Plan.

Risk management authorities are also supporting Severn Trent and Anglian Water with the production and delivery of **Drainage and Wastewater Management Plans.** The plans assess current and future capacity, pressures, and risks to sewer networks, such as climate change and population growth. There are links with local flood risk sources, particularly surface water.

Principles

Examples of how the Strategy principles are followed through the Assets, Watercourses and Catchments Objective:



Working in partnership

- Asset data is shared between partners where required.
- Watercourse regulation is coordinated with other processes (e.g., environmental, highway management).
- The LLFA and others are active members of catchment partnerships.



Working with communities

- Guidance is available or signposted on how to fulfil riparian responsibilities and how to maintain privately owned assets.
- Communities can report observed issues with assets to relevant RMAs (e.g., blocked gullies to the highway authority).
- Partners work with local landowners upstream of flood risk areas to deliver NFM.



Delivering multiple benefits

- The Watercourse Regulation and Culvert Policy promotes the protection and where possible restoration of watercourses, minimising hard engineering and encouraging nature-based solutions.
- NFM measures (e.g., tree planting) provide benefits for the environment and carbon sequestration.
- Managing catchments to alleviate flood risk is balanced with other benefits, such as food production.



Adapting to climate change

- The impacts of climate change are considered in watercourse regulation, for both existing assets, and the design of new assets.
- NFM measures if widely implemented can help build resilience to the effects of climate change upon flood risk within catchments.



Taking a risk-based approach

- Policies and internal processes help support consistent and fair risk-based watercourse regulation.
- The asset register helps to direct recourses towards assets with most significant effects.

75



Encouraging Sustainable Development

To manage local flood risk through encouraging sustainable development

The **National Strategy** sets out a long-term ambition for climate resilient places. In Leicestershire, local flood risk to all future development should be limited as much as possible, and development should not increase the risk of flooding elsewhere. The **Strategic Growth Plan** sets out the aspirations for delivering growth in Leicestershire up to 2050 to support population change, economic growth and other needs. Considerable development is expected. There is a need to be ready for challenges and opportunities this presents for local flood risk management.





Case Study

Sustainable Urban Extension - New Lubbesthorpe

New Lubbesthorpe Sustainable Urban Extension is a major development area in Blaby District, comprising of over 4000 homes and associated infrastructure. The allocation of land for development was approved through the **Blaby District Local Plan**, adopted in 2013. The first homeowners moved in during 2017. Construction work is ongoing.



The Blaby Local Plan includes policies related to the provision of Sustainable Drainage Systems (SuDS), and retainment of watercourse corridors. Multi-benefit SuDS have been incorporated throughout the development so far. For example, 'Pond 1' pictured above provides surface water storage, water quality treatment and wetland habitat. Amenity benefits for local residents are also provided; the boardwalk features and fencing allow the local community view and enjoy the pond area safely.

Flood risk management and sustainable development

77

Planning applications

As local planning authorities, the seven district and borough councils are responsible for determining most planning applications in Leicestershire. Since April 2015, the County Council as Lead Local Flood Authority (LLFA) has been a statutory consultee for surface water, for all major applications. The LLFA make recommendations to the local planning authorities which are in accordance with national and local planning policy and guidance.

Did you know?

The LLFA are not formally obliged to pass comment on non-major applications.

The following are ordinarily required as part of the planning approval process:

- **Flood risk assessments** review all sources of flood risk to the development site, and the likely impacts of the development upon risk, and make recommendations for how this risk can be managed.
- **Surface water drainage proposals:** detail how surface water will be managed during construction and after the development. This includes SuDS, which are designed to prevent increases in the amount and rate at which surface water leaves sites, either by infiltration to ground, or temporary storage.
- Management and maintenance plans: explain how SuDS and other drainage assets will be managed and maintained going forwards. The LLFA require a SuDS management and maintenance plan for all major developments.

National requirements are defined in the <u>National Planning Policy Framework</u> and <u>Planning Practice Guidance</u>. Guidance on these, and the LLFA's local requirements are set out in the <u>LLFA Statutory Consultation Checklist and Planning and Development LLFA</u> <u>Guidance Note</u>.

\equiv

What we are doing

The LLFA will continue to fulfil its role as statutory consultee for surface water drainage matters on all major planning applications, in accordance with national and local policies and guidance.

The cumulative impact of multiple development sites upon catchments is considered and managed through the strategic flood risk assessments commissioned by district and borough council's, and development policies within the local plans (see <u>Local Planning</u> <u>Policy and Guidance sub-section</u>). Local communities can also review and comment on planning applications, highlighting local flood risk issues and other matters. The information provided can help shape development proposals.

Pre-application advice

It is widely accepted that the pre-application stage is the easiest time to work with developers, and influence site layouts. It is not a statutory duty for the LLFA to provide pre-application advice. There are often benefits to the provision of advice, but resources are limited. Other LLFAs have implemented chargeable advice, helping to resource the advice. This is being considered by the LLFA.



What we are doing

The LLFA will review all options for implementing a chargeable service for planning pre-application advice and other service delivery.

Case Study

Sustainable Drainage Systems - Everards Meadows

SuDS can help make commercial areas attractive places to work and visit. Everards Meadows, Blaby, includes a brewery and outdoor recreation space. The area around the brewery and access road incorporates above ground SuDS, including permeable paving, grassed paving and swales which manage surface water runoff and provide biodiversity, water quality and amenity benefits. There is also a large area of open space, some of which which provides compensatory flood storage so the risk of main river flooding from the River Soar is not increased. This is so the risk of main river flooding from the River Soar is not increased as a result of the development.





78

Management and maintenance

Post development, the long-term management and maintenance of SuDS and other drainage features is important to ensure continued benefits. The management of drainage systems is often split between one or more organisations. The most common scenarios are shown in the below table.

Sewers	Usually, Water and Sewerage Companies under section 104 of the Water Industry Act (1991).
Highway Drainage	Usually, Local Highway Authority under section 38 of the Highways Act (1980).
Sustainable Drainage Systems	Varies. Often private management & maintenance companies. The County Council as SuDS Approval Body if Schedule 3 is implemented (see next page).
Riparian areas	Varies. Often private management & maintenance companies, or those adopting adjacent greenspaces.

If you are concerned about the function of SuDS or drainage features within developments in your area, please contact your District or Borough Council.



SuDS maintenance -Wigston

These photos show SuDS near Wigston shortly after they were constructed. It is important that they are maintained well to ensure they function as designed during heavy rainfall.



SuDS Approval Bodies

In January 2023, a <u>Government review</u> recommended implementation of Schedule 3 of the Flood and Water Management Act 2010. As written, Schedule 3 implementation would result in new national standards for SuDS, and the creation of SuDS Approval Bodies, responsible for:

- approvals; and
- operation and maintenance (if offered and approved for adoption) of SuDS.

At the time of publication of this Strategy (December 2023), implementation was expected in 2024, with the County Council as LLFA expected to become SuDS Approval Body for Leicestershire. This is a significant extension of the current statutory consultee role. The expected change has the potential to improve the design, construction, and management of SuDS in Leicestershire.

What we are doing

The LLFA and other RMAs will prepare for implementation of Schedule 3 of the Flood and Water Management Act 2010 and revise the Strategy Action Plan if implemented.

Case Study

Sustainable Drainage Systems – Hathern

Daisy Bank is a development of 56 houses on greenfield land at the North-Western edge of Hathern, Charnwood Borough. The on-site SuDS include a swale feature, crossed by a wooden bridge to a play area. This provides a good example of how SuDS features can be incorporated into attractive greenspaces.



Local Planning Policies and Guidance

Clear local policies and guidance help to ensure developments are designed to the expected standards. Statutory consultees and adopting organisations all provide such information for developers. It is important that such organisations/bodies work in a coordinated way. For example, the culverting of a watercourse under new public highway will require planning approval, land drainage consent and highways adoption approvals.

What we are doing

Risk management authorities and those involved in development approvals will continue to work together to ensure coordinated local standards and developer guidance, from pre application to completion.

In their role as Local Planning Authorities, district and borough councils must prepare Local development plans (or local plans) which set out local planning policies for their administrative area, including allocations of land for development. The plans can include both general and site-specific flood risk management and drainage related policies. RMAs can assist with the development of these policies, and local communities can provide their input during consultations. The following documents are also of importance:

- **Infrastructure development plans** detail the strategic infrastructure required to deliver the growth planned within a local development plan.
- <u>Strategic flood risk assessments</u> help consider flood risk when making planning decisions about the design and location of any development; they often inform the development of local plans.
- <u>Neighbourhood plans</u> give communities the opportunity to help shape the development and growth in their local area. The plans are often linked to parish council's and can include consideration of local flood risk issues.

What we are doing

RMAs will support the development and review of local planning policy affecting local flood risk management. This includes local development plans, infrastructure development plans, strategic flood risk assessments, and neighbourhood plans.

Principles

Examples of how the Strategy principles are met through the Encouraging Sustainable Development Objective:



Working in partnership

- Partners work together to ensure coordinated local standards and developer guidance, from pre application to completion.
- The LLFA and others engage in the development of local planning policy.
- Planning responses are coordinated where necessary.
- 2

Working with communities

- Advice is provided on how to engage in the planning process on flood risk matters. Any local information provided can be used to inform planning responses. Guidance on how SuDS work is also provided.
- Planning documents including consultation responses are available on the planning portal.

Delivering multiple benefits

- Flood resilient homes, and avoiding development in the wrong places, can reduce the risk of flooding to new homes and businesses, and the associated negative economic, social, and environmental impacts.
- Local planning policy and guidance supports SuDS which deliver water quality control, biodiversity benefits, and carbon sequestration, also helping to achieve biodiversity net gain targets.
- Local policy also supports the protection of existing habitats and biodiversity, such as open watercourses and their floodplains. Betterment (e.g., through deculverting) is also sought where possible.



Adapting to climate change

- Future risk is considered in local planning policy and all application reviews through use of <u>climate change allowances</u>.
- Resilient construction is supported, and statutory in some cases (e.g., raised finished floor levels).



Taking a risk-based approach

- Additional resource and expertise are directed towards higher risk or complex planning consultations.
- Necessary evidence is requested from applicants to make sustainable risk-based planning recommendations.
- Developer requirements are clearly stated, and the requirements are applied equitably (e.g., LLFA checklists).
- Local planning policy is also supported by evidence (e.g., through Strategic Flood Risk Assessments).





Flood Preparedness, Response and Recovery

83

To manage local flood risk through effective preparedness, response to, and recovery from flood events.

There is much that can be done to reduce the risk of flooding occurring, however it cannot always be avoided, especially with climate change increasing flood risk. Therefore, working in partnership and with local communities, we need to be prepared for flooding when it does occur so we can respond and recover well.



Case Study

2019-20 Countywide Local Flooding

- From June 2019 to March 2020, Leicestershire received significantly higher than average rainfall. Rural catchments became saturated, increasing the impacts of rainfall running off the land and therefore the risk of flooding. Local drainage infrastructure was unable to cope with the sheer volume of water.
- Flooding occurred in the Autumn/Winter (e.g., Cossington and Stoney Stanton) and also the Spring (e.g. Appleby Magna). In total over 150 homes were flooded across Leicestershire.







Appleby Magna, 17th February 2020

- Reported flooding was investigated and four formal flood investigations were published.
- 48 affected properties in Charnwood and North West Leicestershire benefitted from £5000 Government Property Flood Resilience grants, and local projects are being considered in various locations that flooded.
- The County Council also conducted a detailed review of flooding, making 25 recommendations, all of which have been considered in this Strategy.

Who is involved?

Various organisations have a role to play in being prepared, in responding and in recovering from flooding. The main organisations and their roles are briefly shown in the table below. With so many organisations potentially involved, arrangements for partnership working are essential.

85

LLR Prepared (the Resilience Forum)



 Coordination of both Multi-Agency Flood Plan enactment and tactical response for Leicestershire, Leicester & Rutland

Emergency Services

- Important role during response
- Police (response and recovery) Fire (rescue) and Ambulance (emergency healthcare assistance)

The Met Office



 Issuing severe weather warnings, and providing local weather advisories in partnership meetings

Environment Agency

• Flood forecasting and issuing of flood warnings



- Flood defence asset operation (main river)
- Coordination role for regional flood events, including chairing initial Flood Advisory Service meetings.

Leicestershire County Council

- Local Highway Authority role reactive arm during events protecting highway network, or protecting properties from highway flooding
- Provision of flood risk information
- Assisting recovery and formal flood investigations

District and Borough Council's



- Assisting vulnerable individuals and establishing rest centres
- Local flood recovery

Water and Sewerage Companies



- Maintenance of essential assets and services (e.g., sewerage pumping stations, water treatment works), and sewers if blockages
- Maintain clean water supply or provide alterative supply

Transport network operators



- E.g., National Highways, Network Rail (closures if necessary)
- Arrangement of alternative transport routes if possible

Local communities (including flood wardens)



- Preparing and enacting community response plans
- Recording evidence of flooding when safe to do so

Voluntary sector

• A variety of roles including advice (e.g., National Flood Forum) and welfare (e.g., British Red Cross)

Flood plans

Flood plans are important for enabling incident management organisations to understand their roles and responsibilities, and work in partnership effectively. The Multi-Agency Flood Plan for Leicestershire, Leicester & Rutland is key, providing full details of flood event response roles and responsibilities. The diagram below shows how the Multi-Agency Flood Plan links with other plans.



How the Multi-Agency Flood Plan links to other emergency response plans

What we are doing LLR Prepared will continue to maintain the Multi-Agency Flood Plan for Leicestershire, Leicester City and Rutland.

Communities can also be prepared for flooding by preparing community flood action plans (part of <u>community response plans</u>), often linked to flood action groups and Parish Councils. LLR Prepared and risk management authorities (RMAs) can assist in the development of these plans.

87



What we are doing

LLR Prepared, and risk management authorities will continue to assist local communities in producing and maintaining Community Flood Action Plans.

Preparedness

Flood Exercises

Flood exercises of varying scale are important for testing flood plans, training officers, and preparing communities. Cross-border, river basin wide and national exercises can allow for the testing of multiple plans (see Flood Ex22 case study below). More locally, exercises can be used to test community response plans, including the deployment of property flood resilience measures. The effectiveness of plans and procedures can then be reviewed and updated as required.

What we are doing

LLR Prepared and risk management authorities will continue to plan and support flood exercises as and when required and resources allow, implementing lessons learnt.

Case Study

Flood Exercises - FloodEx 22

- Flood Ex22 brought together multiple agencies to exercise a multi-agency response to widespread flooding across Leicester, Leicestershire, and Rutland.
- To test multi-agency and internal incident response plans, the exercise simulated a significant flooding event across multiple days.
- Multi-agency coordinating groups were required to respond to several scenarios. Some of these required evacuation and shelter arrangements being activated, joint messaging being produced, and water rescues in some cases.
- The exercise was part of a wider national exercise, which also provided the opportunity to exercise mechanisms for mutual aid and reporting into Central Government.
- In total 96 individuals attended from 26 local and national organisations.

Warning and informing

Flood forecasting, and the communication of flood forecasts can provide valuable time to prepare for possible flooding. The Environment Agency provide a flood warning service to most communities at significant risk to flooding from main river, and further communities at high risk will be provided a service by 2024. Homes and businesses can <u>sign up for flood</u> warnings, and are encouraged to do so by RMAs.



What we are doing

Risk management authorities will continue to promote the Environment Agency's flood warning service where it is available in Leicestershire.

The Environment Agency's flood warning service does not cover all communities at risk of flooding, particularly those at risk from local sources, such as surface water or smaller watercourses. Through better understanding flood risk, RMAs work to identify communities that would benefit from local warning systems (e.g., see Breedon case study below). This is subject to funding arrangements for installation, and ongoing management and maintenance. Local warning systems are particularly effective in supporting the deployment of property flood resilience (PFR) measures such as flood barriers.

Case Study

Local Flood Warning System – Breedon

- Breedon-on-the Hill is mainly at risk from ordinary watercourse and surface water flooding.
- Following flooding in 2016 (formal flood report), a flow gauge was installed to (1) check modelling outputs and (2) provide a local warning system.
- The maintenance of the system is managed by Breedon Parish Council.
- Now, as the watercourse level rises, text messages are sent to the local community.
- The system has been successful in warning the local community of further flood events.



Photo: Local Flood Warning System in Breedon

Community preparedness and local community initiatives

It is important that homeowners, communities and businesses understand their flood risk, and their responsibility to prepare for potential flooding. The gov.uk <u>Check the long term</u> <u>flood risk for an area in England</u> webpage provides an opportunity to do so based upon national flood risk mapping. The County Council as Lead Local Flood Authority (LLFA) can also be contacted to discuss flood risk from local sources.

There are various other actions which homes, communities and business can take to enhance preparedness and reduce the impacts of flooding. RMAs and emergency responders are not always able to provide advice and support before, during or immediately after a flood event as resources can be stretched across affected communities.

The flood risk management section of the County Councils website is designed to be an easy-to-use information source, supporting local communities and businesses in Leicestershire to be flood ready. For example, there is either guidance or signposts to guidance on:

- appropriate Insurance
- home or business flood plans
- property flood resilience
- community flood action plans (see flood plans section), and
- flood wardens.

Such measures can help communities respond (e.g., deploying flood barriers) and recover (e.g., being ready to make an insurance claim) from flooding quicker.



What we are doing

Risk management authorities will work together to develop initiatives and web-based information to enhance community preparedness and resilience to flooding.

Case Study

Flood Wardens

 Flood Wardens are members of local communities at risk from flooding who assist with flood preparedness, response and recovery, and other matters such as monitoring the condition of assets, better understanding risk, and project delivery.

Response

The Leicestershire Leicester & Rutland Multi-Agency Flood Plan clearly defines response roles. Communication is essential for direction of resources to those that need it most. Initially, the County Council and/or Leicestershire Police are likely to lead and co-ordinate the response to a flooding incident. If large scale evacuations are required, it may be more appropriate for Leicestershire Police or Leicestershire Fire and Rescue Service to become the lead agency.

Business continuity and risk management

Individual agencies and organisations are responsible for ensuring that they have robust business continuity plans in place. This is so that during the response to a major incident, they can continue to provide statutory services. This includes processes for depleted resources and concurrent incidents. It is also important for agencies and organisations to have risk management processes in place to manage the safety of those involved in response.



Photo: Evacuation by Fire and Rescue Service in Breedon, 2016

Recovery

Effective recovery from flood events aims to assist those communities which have been affected, and repair assets and infrastructure. A Recovery Coordinating Group can be set up through the Multi-Agency Flood Plan to manage organisational resources efficiently. RMAs also seek to promote national schemes, such as the **Build Back Better**. The scheme is designed to reduce the cost and impact of floods, by including new or improved property resilience measures as a part of the insurance claim process.

91

What we are doing

Risk Management Authorities will continue to support national recovery schemes following flood events.

Review and investigations

Section 19 of the Flood and Water Management Act 2010 requires the County Council as LLFA to complete formal flood investigations. The <u>Leicestershire Formal Flood</u> <u>Investigations Policy</u> details the criteria which may lead to a formal flood investigation. The LLFA must publish the results of its investigation and notify any relevant RMAs. Between 2014 and 2022, the LLFA published 35 formal flood investigations, all of which are available to view on the <u>County Council's website</u>.

What we are doing

The LLFA will continue to complete and publish formal flood investigations in accordance with Leicestershire's Formal Flood Investigations Policy.

Other investigations

Not all flood events meet the criteria for a formal flood investigation, however this does not mean they are not investigated; all flooding from local sources is investigated. A risk-based approach is taken to prioritising flood investigations.

Investigations seek information from a wide variety of sources, for example: issuing flood surveys to residents and businesses; desk top data reviews; and asset condition inspections. RMAs meet at Flood Enquiries Partnership meetings to discuss investigations and agree responsibilities, such as which RMA will lead on community communications.

Did you know?

Leicestershire County Council receives hundreds of enquiries relating to drainage and flooding, but most of these do not trigger the local threshold for formal investigation.

Principles

Examples of how the Strategy principles are followed through the Flood Preparedness, Response and Recovery Objective:



Working in partnership

• Roles and responsibilities, and methods of communication are detailed in flood plans, which are agreed, revised, and updated in partnership.



Working with communities

- Partners support community initiatives to improve community resilience, helping communities to reduce flooding impacts.
- During recovery and investigation, information is gathered from local communities, including their views on how risk of reoccurrence could be reduced in the future.
- Communities can be kept up to date with flood investigation progress, and formal flood investigations are available online.



Delivering multiple benefits

- Preparedness can significantly reduce the socio-economic and environmental impacts of flooding to homes and businesses.
- Alternatives to temporary measures such as sandbags are promoted, as sandbags can only be used once before disposal is required.
- The safe disposal of waste from flooded properties is considered as part of the recovery phase.



Adapting to climate change

- The potential for more frequent and severe flooding due to climate change is being communicated amongst stakeholders.
- Organisations are preparing for more severe events more often, including the possibility of wetter winters. For example, flood plans were reviewed following the wet winter of 2019-20 flooding (see case study).

Taking a risk-based approach

- Preparedness measures such as local warnings are informed by local weather forecasting and river level information.
- Flood plans promote the effective coordination of organisational and community resources, so highest risk issues are prioritised.
- The Formal Flood Investigation Policy directs investigative resources towards communities where they are needed most.



Better Understanding Flood Risk

To better understand local flood risk and impacts, informing approaches to managing this risk.

It is important to improve understanding of flood risk. This particularly assists in taking a risk-based approach, so finite resources can be targeted to those who need them most. It helps to inform management approaches and future bids for funding to help tackle current and future flood risk. As mentioned previously, all risk management authorities (RMAs) must work together to effectively understand and manage flood risk, and where appropriate identify joint solutions.

93





Case Study

Local Study – Stoney Stanton

- Over 30 homes, a commercial property and a school were flooded in October 2019.
- A <u>formal flood investigation</u> followed, which recommended further study work, including flood modelling, which was commissioned and funded by national flood funding.
- The investigation and modelling study were informed through a variety of sources, including CCTV investigations, and valuable photos and videos from the local community.
- Through using the model and obtaining better information, options have been assessed for reducing flood risk, and the potential impacts of climate change.
- Work is ongoing to determine whether a local project will be viable for the community.





Photos: outfall (left) and CCTV survey (right)

How do we better understand risk?

Information is used from a variety of sources and shared between organisations where necessary. Some key types of sources are shown on the next page. RMAs aim to be resource efficient, by only collecting new data where required, and ensuring it is created and stored in ways which it can be used again.

Modelling

Computer modelling is often required to better understand the complexities of flooding, particularly for infrequent events, and to assess the effects of climate change. It is important to remember models are always a simplification of reality, which are most reliable when informed by good data and local knowledge.



Examples of computer flood risk modelling in Leicestershire

The County Council as Lead Local Flood Authority (LLFA) has been managing the production of detailed surface water flood modelling for the county. The modelling provides alternative uses to nationally available surface water flood modelling, such as the ability to test the impact of a range of rainfall events. The modelling will help to inform a range of flood risk management activities including the Assessment of Local Flood Risk which supports the Strategy.

What we are doing

The LLFA will manage the production and maintenance of detailed surface water modelling for Leicestershire.

Other examples of how we better understand flood risk

Reviewing historic events

Past flood events provide a valuable insight into how flooding may occur in the future. Information sources include weather and river level data, and the valuable information provided by local communities (e.g., photos, videos, descriptions). The LLFA also maintain records of local flood risk events.



Photo: Flooding in Appleby Magna

Site walkovers

Site walkovers are used to gather information not available at the desk or checking that desk-based information is accurate (e.g., locating and inspecting assets). Site walkovers are often done in collaboration with local communities or responders who witnessed previous flood events.



Photo: Watercourse at Stoney Stanton

Desk based information

A variety of desk-based information is used, such as mapping, street view, modelling outputs and existing surveys. These are shared between organisations when necessary, and often help inform further site-based data collection.



Site Surveys

Potential site surveys include:

- CCTV to survey the condition of pipes or culverts.
- **Property** to review potential routes of water ingress, and the measures required for protection.
- **Topographical** to survey watercourses and land to inform computer modelling.



Photo: CCTV survey at Stoney Stanton

Studies for better information

Details of current and planned studies, including locations and timescales, are available in the Action Plan or on the website.

Local studies

Local studies are focused on a particular community, such as a village or town. They are often where there has been flooding and investigations have followed, but questions remain as to the causes, and what could be done to potentially alleviate risk. Local studies are used to provide information towards the development of local projects, though not every study will ultimately lead to a project. For example, the study may identify potential measures which are too costly to be funded.

Surface water management plans

Surface water management plans are a framework to help understand the causes of surface water flooding, and agree preferred strategies for the management of risk. They are usually focused on larger towns or cities. Surface water management plans have so far been developed in Loughborough and Market Harborough. The LLFA and Severn Trent have also been working closely to better understand surface water flood risk in Hinkley and Burbage.

Case Study

Market Harborough Surface Water Management Plan

- There is a long history of surface water flooding in Market Harborough, including a major event on 27th July 2013 (formal flood report)
- In 2018, a partnership of risk management organisations was formed and agreed to develop a surface water management plan for the town.
- Specialist consultants carried out modelling and economic analysis of flood damages, identifying 15 hotspots for further investigation.
- In 2022, two working groups were formed to identify and develop measures for alleviating risk and improving resilience.
- Work continues to identify further flood mitigation options for the local community.

Principles

Examples of how the five Strategy principles are followed through the Better Understanding Flood Risk Objective:

Working in partnership

- Information is shared between organisations where possible, such as flood records, asset information and modelling outputs.
- RMAs regularly meet to discuss issues with multiple sources of risk.
- Studies can provide better understanding of how local flood risk interacts with other sources of risk, such as fluvial flood risk from larger rivers.



Working with communities

- Partners help communities to better understand their flood risk, through web based information and other support.
- Study outcomes can be shared so communities better understand their risk and can be better prepared.
- Local knowledge is sought after and valued when assessing risk.
- Community members will where possible have equal opportunity to be involved and engaged in studies.



Delivering multiple benefits

- Flood risk studies may also involve environmental assessments, to better understand status, and how improvements may be achieved.
- Studies are desk based where possible to reduce travel carbon.
- Better understanding flood risk may lead to local projects which deliver social and economic benefits.

4

Adapting to climate change

- Future risk can be assessed by modelling climate change scenarios.
- Studies can provide information to support resilience measures, such as property flood resilience schemes.

5

Taking a risk-based approach

- Studies are prioritised using a risk-based approach, usually in areas where there is a high risk of flooding, but a better understanding is required.
- Evidence is collected from a broad range of sources and evaluated in the most appropriate way.

Objective 5:

Local Projects

To manage local flood risk through developing and or managing local projects for at-risk communities.

Current projects and progress can be viewed on the website and are listed in the **Action Plan.**

99



\bigcirc	

Local projects for flood alleviation measures can result in better protection against future flooding for a community. For any project, a variety of flood alleviation measures may be possible. For example, a project may include property flood resilience (PFR) and natural flood management (NFM). Detailed analysis of available data is required to identify the most effective measure or combination of measures to be implemented.

Local projects are focused on communities which have flooded before or are identified to be at risk. Homes, businesses, and infrastructure can all benefit from a local project. There may also be a range of other benefits provided through a project, including economic, environmental, and social outcomes.

Case Study

Local Project - Swithland Property Flood Resilience Scheme

The village of Swithland has flooded on multiple occasions. A study was commissioned by the County Council as Lead Local Flood Authority (LLFA) to better understand flood risk and consider options. It was found that the only costeffective and technically viable option was PFR (e.g., flood barriers and doors), combined with a local flood warning system. Funded through a mixture of national flood funding (Grant in Aid), local levy, and LLFA contributions, PFR was installed to 22 homes including 15 Grade II listed buildings.



Photo: flood barrier covering two doors, Swithland

Who is involved and how?

Whilst projects form an important part of the Strategy, it is important to note that other statutory responsibilities may take precedence over project development and delivery.

Lead Local Flood Authority (County Council)

- Although the LLFA have no statutory responsibility to deliver projects, there is a developing programme of projects for Leicestershire on the National Flood Risk Management Programme.
- Develop and bid for funding from a range of different sources.
- Attend the Regional Flood and Coastal Committee meetings and report regularly on progress to the Environment Agency on any projects on the National Flood Risk Management Programme.

Local Highway Authority (County Council)

• The approval and potential delivery of highway drainage improvement that links to local projects

Environment Agency

- Responsible for managing the National Flood Risk Management Programme.
- Provide advice and guidance on project delivery.
- Lead delivery of main river projects, with potential local flood risk benefits.

Regional Flood and Coastal Committees

- Promote targeted and risk-based investment in flood and coastal erosion risk management that optimises value for money and benefits for local communities.
- General oversight of regional projects on the National Flood Risk Management Programme.
- Responsible for the distribution of local levy funding to projects.

Water and **Sewerage Companies**

- Manage sewer infrastructure schemes with potential local flood risk benefits.
- Potential source of partnership funding for projects which benefit the sewer network.

Local Communities

- Potential involvement in project development and delivery.
- Subject to their agreement, landowners or homeowners may become responsible for maintaining measures.

Charities, businesses, and local organisations

 Can be involved in local projects bringing added value, funding, and various other benefits.

Consultants

 Become involved in local projects where specialist skills are required, such as for surveys, economic analysis, or flood risk modelling.

Contractors

- Construction or installation of measures.
- Locally based contractors are used where possible.











Typical Measures for Local Projects in Leicestershire

Natural Flood Management (NFM)

Using or mimicking natural processes within a catchment, to reduce flood risk downstream. For example, leaky dams, floodplain reconnection, and altering farming practices. NFM can also have significant environmental benefits.



Photo: Leaky dam upstream of Breedon

Watercourse asset improvements

102

In channel improvements to reduce the risk of watercourse flooding. This can include replacing or upgrading assets of poor condition or design, such as culverts and screens.



Photo: Footbridge to be removed at Breedon to increase channel capacity.

Property Flood Resilience (PFR)

Measures installed to properties, such as flood barriers or doors. PFR is often used where there is no other feasible cost-effective way of alleviating risk to a property. PFR can be in the form of resistance (resisting water entering the property) or resilience measures (minimising the impact of internal flooding).



Photo: Automatically closing airbrick, Swithland

Sustainable Drainage Systems (SuDS)

SuDS can have significant, water quality, biodiversity, and amenity benefits as well as helping to mitigate local flood risk.



Photo: SuDS at Measham Leisure Centre

How are local projects in Leicestershire funded?

Local projects can be funded through a combination of sources, of which the following are most likely (proportions are indicative only).



National Flood Funding is available to risk management authorities. Detailed businesses cases are required to secure the funding and projects must demonstrate a good cost benefit and a partnership approach.

Regional local levy is raised by a levy on local authorities based on band D properties in the areas. It is distributed by RFCC's according to local priorities.

Private contributions can be secured from businesses, developments or even beneficiary homeowners, particularly where they are set to benefit from schemes.

Others grants include special grants to help protect schools, or funding for innovative projects. They may have an alternative primary focus, such as environment or heritage, but also deliver flood risk management benefits.

Risk Management Authorities (RMAs) The limited capital resources of RMAs or other partner organisations may occasionally be used to support schemes. For example, the staff time taken to develop and manage schemes is often recorded as a contribution.

How are local projects delivered?

Project delivery can be a complex and resource intensive process that can take many years. There is also no guarantee that a project will move from scoping all the way to construction. A project can end at any point if it becomes unviable such as the cost becomes so high that it outweighs the benefits of implementing it.

Did you know?

The LLFA report monthly to the Environment Agency on project progress as well their own internal reporting functions.

The following steps are usually required in the lifecycle of a local project. This takes place over a number of years:





What we are doing

Risk management authorities will monitor the benefits of completed flood risk management schemes.

How are local projects prioritised?

The main factor by which projects are prioritised is the level of local flood risk. Communities identified in the Assessment of Local Flood Risk as being at higher risk are likely to be prioritised. There are other factors which may affect prioritisations, such as

- funding opportunities
- technical feasibility
- opportunities to address other sources of flood risk in partnership
- community vulnerability
- cost benefit analysis, including the delivery of other benefits (e.g., environmental), and
- flooding over recent years.

The County Council as LLFA maintain a pipeline of local projects for potential scoping and development, which is subject to resource availability.

What we are doing

The LLFA will continue to maintain a pipeline of local projects.

Case Study

Local Project - Breedon Flood Alleviation Scheme

A major flood event in 2016 cause flooding to over 20 properties in Breedon (<u>formal</u> <u>flood report</u>),

- A local study (which incorporated detailed flood modelling) led to the development of a successful business case for national flood funding and local levy funding.
- The local project is delivering a combination of measures designed to reduce risk, including:
 - 1. NFM in the upstream catchment
 - 2. Removal of an inefficient asset (historical twin arch culvert)
 - 3. Upgrades to a SuDS scheme on a new development site
 - 4. PFR to a handful of properties



2016 Flooding



NFM installed upstream of Breedon

Principles

Examples of how the Strategy principles are followed through the Local Projects Objective:



Working in partnership

- Projects often involve managing multiple sources of flood risk. Partnership working between the relevant RMAs helps to achieve this.
- Partnership working can also help to identify and secure a wider range of funding sources.



Working with communities

- Partners aim to provide regular project updates to affected communities in agreed forms of communication.
- Measures such as NFM, or PFR will require collaboration and agreement from property owners or landowners.
- Communities may also be involved in post project monitoring to check measures are working as planned.

-

Delivering multiple benefits

- Multiple benefits are delivered as a part of projects where possible. Such benefits can be estimated and form part of cost-benefit analysis within business cases, to help secure funding.
- The whole life carbon of projects is calculated at an early stage, and assessments refined as projects develop. Lower carbon options are preferred where possible.



Adapting to climate change

- Future risk is considered in all projects, for example through modelling.
- National flood funding is also available to help protect properties which are at risk in the future.
- Projects measures will be designed to increase resilience to the changing climate, either by alleviating risk, or improving resilience.

Taking a risk-based approach

- The Assessment of Local Flood Risk is used to help prioritise which locations are scoped for local projects.
- For each project, existing 'baseline' risk is thoroughly assessed before possible mitigation measures are appraised.

107

Creation, Consultation, Monitoring and Review



Why was the Strategy updated?

The following lists the six key reasons for a full Strategy update which were presented to the Leicestershire Flood Risk Management Board.

1. Review timescales

- The former Strategy was published in August 2015. It stated that it was to be updated every 6 years, therefore an update was due.
- This aligned well with updates to regional <u>Flood Risk Management Plans</u> and <u>River Basin Management Plans</u> (as intended), published in December 2022.

2. National Strategy Consistency

- The Strategy must be consistent with the National Strategy.
- A full update to the National Strategy was published on 14th July 2020. Updates were required to ensure consistency.

3. By recommendation of scrutiny

- Following significant flooding in Autumn 2019, a panel of County Council members reviewed flood risk management arrangements.
- The panel **published their findings in 2021**, supporting a Strategy refresh.

4. Improved understanding and Strategy utility

- Risk Management Authorities (RMAs) have an improved knowledge of local flood risk in Leicestershire, and how it is be managed.
- This updated Strategy reflects this, better defining what is being done (objectives and measures), and the way in which it is approached (principles).

5. Community engagement

• Review of the former Strategy suggested it could be more useful as a community engagement tool, both in terms of content and format, whilst also achieving other requirements.

6. Changes to policies and approaches

• Upon review of the former Strategy, some ways of working had already changed. Other changes were proposed and approved, such as changes to the thresholds for formal flood investigations.
How was the Strategy updated?



Monitoring and Review

The County Council as LLFA are required to maintain and monitor the Strategy.

- Annual maintenance will be carried out to check documents are functional and accurate. This will include checking and amending links, and minor amendments to text and supporting documents. Please <u>contact the LLFA</u> if you identify any such issues.
- Action plan progress will be monitored, with updates provided to the Leicestershire Flood Risk Management Board. New measures may be added as they are identified, or removed when completed.
- **Supporting documents** such as the Assessment of Local Flood Risk will be reviewed regularly. Minor changes will be reported to the relevant organisations and detailed on the Council's website. The process for consulting on more significant changes will be discussed with the Flood Risk Management Board and senior officers.
- The Strategic Environmental Assessment Regulations require the monitoring of significant environmental effects of the implementation of the Strategy. Further details are provided within the monitoring section of the **Strategic Environmental Assessment**. The environmental effects of measures will be monitored alongside the Action Plan.
- An internal Equality and Human Rights Impact Assessment will also be monitored.



Scrutiny

The County Council is a public body subject to public scrutiny. This will be conducted through the <u>Highways and Transport Overview and Scrutiny Committee</u>. The Committee will act as the County Council's 'Flood Risk Management Committee' and monitor the performance and activities of the Leicestershire Flood Risk Management Board, in accordance with Section 9FH of Schedule 2 of the Localism Act 2011.

Full review and update

It is not anticipated that another full review and update of the Strategy will be required for several years. Any significant triggers such as changes in policy will be reported to the Flood Risk Management Board, and a decision made as to whether this Strategy requires a partial or full review and update.



W0890

Leicestershire County Council

Appendix C - Strategy Action Plan

Objectives

- 1. To manage local flood risk through the effective management of flood risk assets, watercourses, and catchments.
- 2. To manage local flood risk through encouraging sustainable development
- 3. To manage local flood risk through effective preparedness, response to, and recovery from flood events
- 4. To **better understand local flood risk** and impacts, informing approaches to managing this risk
- 5. To manage local flood risk through developing and or managing local projects for at-risk communities

Measures

The LLFA will maintain a more detailed action plan internally, including detail of costs, benefits, and progress. Measures are ordered in the order in which they appear in the Strategy document. A colour tag is included to show which objective each mainly relates to. Some measures (mainly studies or projects) are not included within the main strategy document text.

Measure title		Measure text	Completion by	Key funding source
	Leicestershire Flood Risk Management Board	The LLFA will continue to coordinate and chair the Leicestershire Flood Risk Management Board	Ongoing	LCC
	Individual preparedness and resilience	Risk management authorities will work together to encourage and support individuals to be more prepared for and resilient to flooding	Ongoing	LCC
	Riparian guidance	The LLFA will signpost and make available guidance for riparian landowners, and proactively disseminate this in locations of identified priority.	Ongoing	LCC
	Ordinary watercourse regulation	The LLFA will regulate ordinary watercourses in accordance with the Leicestershire Ordinary Watercourse Regulation and Culvert Policy, and supporting guidance.	Ongoing	LCC
	Asset register and record	The LLFA will continue to maintain the Leicestershire Flood Risk Asset Register and Record in accordance with Leicestershire's Asset Register and Record Policy	Ongoing	LCC

114 Leicestershire County Council

Measure title Measure text		Completion by	Key funding source
Highway drainage maintenance	HighwayThe Local Highway Authority will continueHighwayto maintain highway drainage assets indrainageaccordance with the LeicestershireOngoingmaintenanceHighway Infrastructure Asset ManagementPlan		LCC
Natural Flood ManagementThe LLFA with support from catchment partnerships will seek to maximise opportunities for natural flood management across Leicestershire		Ongoing	LCC
Catchment partnerships	The LLFA will work with catchment partnerships and landowners to integrate environmental and flood risk management workstreams.	Ongoing	LCC
Surface water consultee major applications	The LLFA will continue to fulfil its role as statutory consultee for surface water drainage matters on all major planning applications, in accordance with national and local policies and guidance.	Ongoing	LCC
Pre- application advice and chargeable services	The LLFA will review all options for implementing a chargeable service for planning pre-application advice and other service delivery.	December 2024	LCC
SuDS Approval Bodies	The LLFA and other RMAs will prepare for implementation of Schedule 3 of the Flood and Water Management Act 2010 and if required revise the Strategy Action Plan if implemented	December 2024	LCC
Local planning guidance coordination	Risk management authorities and those involved in development approvals will continue to work together to ensure coordinated local standards and developer guidance, from pre-application to completion.	Ongoing	Various
Local planning policy	Risk management authorities will support the development and review of local planning policy affecting local flood risk management. This includes local development plans, infrastructure development plans, strategic flood risk assessments, and neighbourhood plans.	Ongoing	Various

115 Leicestershire County Council

Measure title Measure text		Completion by	Key funding source
Leicestershire and Rutland Multi-agency Flood Plan	LLR Prepared will continue to maintain the Multi-Agency Flood Plan for Leicestershire, Leicester City and Rutland	Ongoing	Leicestershire County Council (LCC)
Community flood action plans	nity tion LLR prepared, and risk management authorities will continue to assist local communities in producing and maintaining community flood action plans		LCC
Flood exercises	LLR Prepared and risk management authorities will continue to plan and support flood exercises as and when required and resources allow, implementing lessons learnt.	Ongoing	LCC
Environment Agency Flood Warning Service	Risk Management Authorities will continue to promote the Environment Agency's flood warning service where it is available in Leicestershire.	Ongoing	Various
Community initiatives	Risk management authorities will work together to develop initiatives and web- based information to enhance community preparedness and resilience to flooding.	Ongoing	LCC
Recovery schemes	Risk Management Authorities will continue to support national recovery schemes following flood events.	Ongoing	LCC
Flood investigation and reporting	The LLFA will continue to complete and publish formal flood investigations in accordance with Leicestershire's Formal Flood Investigations Policy	Ongoing	LCC
Surface water modelling	The LLFA will manage the production and maintenance of detailed surface water modelling for Leicestershire.	March 2024	National flood funding
Market Harborough Surface Water Management Plan	The LLFA will maintain and coordinate the Market Harborough Surface Water Management Plan	Ongoing	LCC

116 Leicestershire County Council

Measure title		Measure text	Completion by	Key funding source
	Cossington flood study	The LLFA will continue to investigate flooding mechanisms for the community of Cossington.	March 2024	National flood funding
	Loughborough Surface Water Management Plan	Loughborough Surface Water Management Plan The LLFA will maintain and coordinate the Loughborough Surface Water Management Plan.		LCC
	Diseworth	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Diseworth.	March 2024	Local Levy
	Long Whatton	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Long Whatton.	March 2024	National flood funding
	Stoney Stanton	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Stoney Stanton.	March 2024	National flood funding
	Mease Special Area of Conservation	The LLFA and Environment Agency will continue to investigate options for reducing flood risk including natural flood management in the Mease Special Area of Conservation	Ongoing	To be confirmed
	Oadby	The LLFA will coordinate work with relevant risk management authorities to better understand flood risk in Oadby	Ongoing	To be confirmed
	Hinkley and Burbage	The LLFA will coordinate work with relevant risk management authorities to better understand flood risk in Hinkley and Burbage.	Not yet identified	To be confirmed
	Completed scheme monitoring	Risk management authorities will monitor the benefits of completed flood risk management schemes	Ongoing	Various

117

Final approvals

Leicestershire County Council

Measure title	Measure text	Completion by	Key funding source
Pipeline of schemes	The LLFA will maintain a pipeline of local projects	Ongoing	LCC
Breedon-on- the-Hill Flood Alleviation Scheme	The LLFA will manage the delivery of the Breedon-on-the Hill flood alleviation scheme.	Mar 2025	National flood funding

This page is intentionally left blank

Appendix D

Leicestershire Asset Register and Record Policy

Contents

1	Introduction and scope	. 1
2	The purpose of Asset Register and Record	. 2
3	Local definitions and interpretations	. 2
4	State of repair	. 3
5	Data fields	. 5
6	Consultation and review	. 6

1 Introduction and scope

1.1 Leicestershire County Council (LCC) is the Lead Local Flood Authority (LLFA) for Leicestershire. Section 21 of the Flood and Water Management Act (FWMA) 2010,

Box 1. Section 21 FWMA, 2010. Lead local authorities: duty to maintain a register

(1) A lead local flood authority must establish and maintain-

(a) a register of structures or features which, in the opinion of the authority, are likely to have a significant effect on a flood risk in its area, and

(b) a record of information about each of those structures or features, including information about ownership and state of repair.

(2) The Minister may by regulations make provision about the content of the register and record.

(3) The lead local flood authority must arrange for the register to be available for inspection at all reasonable times.

(4) The Minister may by regulations provide for information of a specified description to be excluded from the register or record.

(5) In this section, "the Minister" means-

- (a) the Secretary of State in relation to authorities in England, and
- (b) the Welsh Ministers in relation to authorities in Wales.

"Lead local authorities: duty to maintain a register" came into force on 6th April 2011. The legislation is contained within Box 1.

- This policy defines LCC's local approach to fulfilling the requirements of the legislation.
 It is not intended to outline the full process for managing the Asset Register and Record.
- 1.3 The following information and guidance has been reviewed in support of this policy:
 - FD2680 Evaluation of the arrangements for managing local flood risk in England (Defra, 2017)
 - Surface water and drainage: review of responsibilities (Jenkins, 2017)
 - Living Draft Information Note: Lead Local Flood Authority Duty to Maintain a Register (2011)

2 The purpose of Asset Register and Record

- 2.1 Through the Asset Register and record, LCC aims to:
 - collaboratively identify structures or features with a significant effect (see definition in 3.7) on flood risk, and compile information about them;
 - communicate information regarding the most significant flood risk assets to stakeholders such as risk management authorities (RMAs), communities at risk, local planning authorities and developers;
 - through the record, encourage responsible bodies or persons to proactively inspect and maintain assets;
 - build evidence to support business cases for asset maintenance and investment and applications for external funding.

3 Local definitions and interpretations

- 3.1 Most terms are not currently defined in the legislation or associated guidance, meaning local interpretation and definitions are required.
- 3.2 The definition of significant effect is particularly important, as it allows LCC to focus on maintaining a register and record of the most significant assets. Data on other assets is still compiled and maintained by relevant RMAs.
- 3.3 **Register:** A tabular format which can also be displayed spatially using Geographical Information System (GIS) software.
- 3.4 **Record:** A tabular format which can also be displayed spatially using GIS software. Not made publicly available for inspection.
- 3.5 **Structures or features:** these can be manmade (usually structures) or a natural or man-made feature of the environment. These may be recorded individually (e.g. a culvert), or as a group of structures or features which together have a significant effect (e.g. urban drainage system, or a floodplain system).

- The Register and Record will not contain individual properties with Property Flood Resilience (PFR), but may record sizeable groups, for example where a PFR scheme has been delivered.
- In GIS, the assets may be represented as point, line, or polygon data. Groups of assets are likely to be presented using a polygon.
- 3.6 **In the opinion of the authority are likely:** In forming an "opinion", a risk-based assessment is made using the evidence available to determine whether significant effect has already occurred or is likely to occur, with or without the structures or features (refer to 3.7 below).
- 3.7 **Significant effect:** where the design or condition of the structures or features can significantly impact the likelihood of internal flooding to one or more properties, or the flooding of critical infrastructure. This effect can be positive (e.g., a well-functioning flood storage area), or negative (e.g., an undersized culvert).
- 3.8 **On flood risk in its area:** this is interpreted to include all sources of flood risk, not just local sources (ordinary watercourse, surface water and groundwater). Structures or features affecting other sources of flood risk (e.g., main river) may also be considered for addition to the register. The inclusion of these structures is not compulsory; RMAs often maintain their own extensive registers and records of assets, and it is not the purpose of the asset register to replicate these.

Most entrants to the register will be wholly located within Leicestershire, however there may be some crossover into other administrative areas. Where this is the case, the relevant organisations will be consulted.

- 3.9 **Ownership:** Responsibility for management and maintenance. Not always, but often, riparian.
- 3.10 State of repair: see section 4.
- 3.11 **Visual inspection**: Systematic visual assessment of the condition of the visible elements of an asset resulting in the assignment of a condition grade.
- 3.12 **Register to be available for inspection at all reasonable times:** This does not require LCC to publish the register, although, the register may be published in the future with the agreement of relevant stakeholders. The register will be available for inspection upon request, with the method of sharing will be agreed with the persons making the request. The record will not be published.

4 State of repair

4.1 There is no formal obligation on the asset owner to provide information on the state of repair of an asset for the purposes of the record, or for LCC to inspect other RMAs assets. LCC may consider it necessary to advise or request that assets are inspected in line with their role as LLFA.

Leicestershire County Council

- 4.2 An inspection conducted by LCC may take the form of an in person visual inspection, analysis of photographic evidence or via the use of online photo images such as street imaging. Local anecdotal information may also be considered.
- 4.3 Any visual assessments made of state of repair will use a 1 to 5 grade system defined by LCC (please refer to Section 4.7). A 1 to 5 asset condition scoring system is commonplace within UK FCRM organisations. It is not necessary for partner organisations providing information graded in this way. The information provided can be interpreted by LCC, and assets graded accordingly.
- 4.4 It will not always be possible to conduct a visual inspection of an asset at the time of publication to the register and confidence in asset condition will be recorded accordingly. The condition and confidence ratings will be stored in the asset record and will not be made publicly available.
- 4.5 Ratings will be assigned based on confidence of the visual assessment of each asset as per Section 4.7. Where further condition information is known beyond visual inspection (e.g., structural information) grades may be adapted to reflect the descriptions.
- 4.6 Confidence ratings will also be assigned using a corresponding score of 1 to 5 as defined by the LLFA in Section 4.7.
- 4.7 Based on the asset record, the LLFA will make an assessment on when an asset may need to be re-inspected to update its state of repair, and whether there has been any change to the level of flood risk associated with the structure.
- 4.8 The 1 to 5 grading systems for Visual Inspection Condition and Condition Confidence have been defined by LCC below:

Visual Inspection Condition Grades		
<u>Grade</u>	Rating	Description
1	Very Good	Cosmetic defects that will have no effect on performance.
2	Good	Minor defects that will not reduce the overall performance of the asset.
3	Fair	Defects that could reduce performance of the asset.
4	Poor	Defects that would significantly reduce the performance of the asset. Further investigation needed.
5	Very Poor	Severe defects resulting in complete performance failure.

	Visual Inspection Condition Confidence Grades		
<u>Grade</u>	<u>Rating</u>	Description	
1	Very Good	Thorough on-site inspection by more than one LCC officer, includes access to all elements of the asset	
2	Good	On-site inspection conducted by a LCC officer, clearly able to see and access most elements of the asset.	
3	Fair	Site visit conducted by a LCC officer with access to a limited number of elements of the asset. Or assessment supported by photos/CCTV or detailed anecdotal information.	
4	Poor	No on-site inspection by a LCC officer but limited anecdotal information on condition available.	
5	Very Poor	No information available.	

5 Data fields

- 5.1 Asset register information may include but not be limited to:
 - Unique ID
 - Watercourse name
 - Watercourse type (main river, ordinary watercourses)
 - Feature type
 - District / Borough
 - Town / Village
 - Ward
 - Easting / Northing
- 5.2 Asset record information may include but not be limited to:
 - Ownership
 - Last Inspection Date
 - Condition
 - Condition Confidence (at time of last inspection)
 - Published S19
 - Notes
 - Confirm Central asset ID

6 Consultation and review

- 6.1 The Asset Register and Record are 'live' documents.
- 6.2 RMA's will be consulted when proposing that assets they manage are added to the register. This will include discussion of how they are best presented in GIS format. Assets added to the register will predominantly be those identified during formal flood investigations and those identified as being high-risk on the resilient highway network.

Appendix E

Leicestershire Formal Flood Investigations Policy

Contents

1	Introduction and Scope	. 1
2	The purpose of formal flood investigations	. 2
3	Local investigation threshold	. 3
4	Threshold definitions	.3
5	Report contents	.4
6	Partnership working	.4
7	Actions	.5
8	Consultation	.6
9	Publication	. 6
10	Notification	. 6

1 Introduction and Scope

- 1.1 Leicestershire County Council (LCC) are the Lead Local Flood Authority (LLFA) for Leicestershire.
- 1.2 Section 19 of the Flood and Water Management Act 2010, 'local authorities: investigations' came into force on 6th April 2011. The legislation is shown in Box 1.
- 1.3 This policy defines LCC's local approach to fulfilling the requirements of Section 19, through formal flood investigations.
- 1.4 The following information and guidance has been reviewed in support of this policy:
 - British Standard BS 85600:2017 post-event flood assessments
 - FD2680 Evaluation of the arrangements for managing local flood risk in England (Defra, 2017)
 - Surface water and drainage: review of responsibilities (Jenkins, 2017)
 - Report of the Flood Scrutiny Review Panel, Leicestershire (January 2021)

Box 1. Section 19 FWMA, 2010. Local Authorities: Investigations

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

(a) which risk management authorities have relevant flood risk management functions, and;

(b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

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

(a) publish the results of its investigation, and;

(b) notify any relevant risk management authorities

2 The purpose of formal flood investigations

- 2.1 LCC makes a distinction between "standard' flood enquiries, and formal flood investigations. A formal flood investigation is most useful where there is a particular need to communicate publicly and consistently with communities affected, through published investigation results, as required by the legislation. This need is dependent upon:
 - (1) the number of persons or groups affected by flooding;
 - (2) the severity of the consequences of flooding both locally and regionally; and
 - (3) whether the causes of flooding are unknown.
- 2.2 This does not mean to say that the impacts of an event not requiring a formal flood investigation are not severe, but that it does not necessitate the publication of a formal report. Such events are still investigated and recorded by the relevant RMA or RMA's.
- 2.3 Internal flooding which does not meet formal flood investigation criteria will be recorded using an internal flood report proforma (see Figure 1).
- 2.4 Short flood investigation summary reports for such events can still be provided to individuals upon request, subject to resource availability, and if investigations are being led by the LLFA.

3 Local investigation threshold

- 3.1 The legislation provides no standard thresholds or requirements for formal flood investigations, other than to the extent which the respective LLFA considers *necessary or appropriate*. It is commonplace therefore for local thresholds to be defined. LCC's formal flood investigation thresholds are defined in Box 2.
- 3.2 Internal flooding is defined as flooding which enters a building or passes below a suspended floor. It does not include garages or conservatories.
- 3.3 The thresholds allow LCC to focus resources on those investigations which require publication for the reasons outlined in paragraph 2.2. Flooding not meeting these thresholds is still investigated on a priority basis using a risk-based approach. These investigations may be led by other risk management authorities (RMA's) as established at RMA enquiry meetings.

Box 2. Leicestershire County Council formal flood investigation thresholds

LCC would ordinarily expect to exercise its statutory discretion to investigate a flooding incident occurring in its local area, in the following circumstances:

- 1) If the causes of flooding are unknown prior to the investigation, and
- 2) one or more of the following criteria apply:
 - a) there is loss of human life as a direct result of the flood event
 - b) critical infrastructure is flooded in a way which impacts delivery of essential services
 - c) there is internal flooding confirmed to five or more residential properties
 - d) there is internal flooding confirmed to two or more commercial properties.

These thresholds are not absolute and the decision to conduct a formal flood investigation is at the discretion of the Director for Environment and Transport.

4 Threshold definitions

- 4.1 **The causes of flooding are unknown:** where the source(s) and / or pathway(s) are unknown to LCC or not well understood.
- 4.2 **Critical infrastructure delivering essential services:** the following specifies what would be classed as critical infrastructure as defined by the LLFA:
 - Emergency Services Stations and associated access roads.
 - Hospitals
 - Council owned buildings
 - Council leased buildings
 - Care homes
 - Highways (<u>LCC's Resilient Highway Network</u>)

- Bridges
- Pipelines
- COMAH Sites
- Power Stations
- Electricity sub-station
- Water treatment works

4.3 Residential properties:

Includes:

- internal property flooding at ground level floors and above that were originally intended to be habitable.
- flooding of a sub-surface structure, such as a basement or cellar, where the floodwater contains sewage or other contaminants that cause concern for public health.

Does not include:

- structures that were not originally designed to be part of the habitable property such as sheds, summer houses, conservatories or garages, even if they are within the fabric of the building.
- flooding of a sub-surface structure, such as a basement or cellar, where the floodwater does not cause concern for public health.
- external driveways, paths and gardens.
- 4.4 **Commercial properties**: in a way which affects the commercial activities of the property.

5 Report contents

- 5.1 The content of formal flood investigation reports will include but not be limited to:
 - Location and setting, including local drainage
 - Relevant risk management authorities, and their responsibilities
 - A report of the flood event, including details pre, during and post event
 - A summary of flooding impacts and findings
 - Recommended actions and timescales for completion

6 Partnership working

6.1 All relevant RMA's are expected to cooperate during the formal flood investigation process. This is supported in legislation by Section 13 of FWMA 2010: A relevant authority must co-operate with other relevant authorities in the exercise of their flood and coastal erosion risk management functions.

- 6.2 Cooperation in relation to the formal flood investigation process includes but is not limited to:
 - Timely provision of data related to the flood incident; and
 - Relevant persons/ RMA's attending meetings, either specific to the formal flooding investigation or in RMA Flood Enquiries Partnership meetings arranged by LCC
 - Responding to consultation on the final draft of the formal flood investigation report in the agreed timeframe (see section 8)
- 6.3 LCC will conduct formal flood investigations in the following manner:
 - Timely meeting invites.
 - A transparent process.
 - Clear aims (e.g., target date for publication from onset).
- 6.4 If information is not forthcoming, LCC may reference Section14 of FWMA 2010, Power to request information: An authority listed in subsection (2) may request a person to provide information in connection with the authority's flood and coastal erosion risk management functions.
- 6.5 Where possible, LCC will engage with any community groups or interested parties (such as flood action groups) for the creation of formal flood investigation reports.
- 6.6 The LLFA will be responsible for coordination of communications with the community affected by flooding, until such a time that coordination is not required anymore. For example, where most actions have been completed.

7 Actions

- 7.1 Actions and expected delivery timescales will be drawn up and included in the formal flood investigation in consultation with RMA's.
- 7.2 RMA's are expected to deliver their own prescribed actions within the agreed timescales.
- 7.3 LCC will monitor agreed actions and the delivery by RMA's by email or in RMA Flood Enquiries Partnership meetings.
- 7.4 Where the RMA does not agree with a listed action and delivery timescale, LCC will endeavour to work with the RMA to set suitable achievable actions. However, LCC reserves the right to set actions where they are deemed appropriate even if not agreed with the RMA.

8 Consultation

- 8.1 All relevant RMA's will be consulted prior to the publication of formal flood investigation reports. All RMA's are given a minimum of 15 working days to pass comment on the final working draft. Timeframes will be discussed with RMA's and may vary dependent upon resource availability).
- 8.2 Consultation responses should include comment on the proposed actions, as to whether they are acceptable, or if amendments are desirable.
- 8.3 Issues highlighted in the consultation will be resolved by email and/or meeting with the RMA. Where concerns cannot be resolved, LCC reserves the right to publish at its discretion information that is considered valuable to the community in relation to the formal flood investigation. This excludes any information which cannot be shared, for example due to data sharing agreements.

9 **Publication**

- 9.1 Subsection 2a of Section 19 requires LCC to publish the results of its investigation. All formal flood investigations reports are published on LCC's website. <u>https://www.leicestershire.gov.uk/</u>
- 9.2 The Head of Service for Network Management has delegated authority to approve formal flood investigation reports for publication.
- 9.3 Based upon the nature of formal flood investigation reports, there is no set deadline from trigger event, however LCC aims to publish reports within 12 months of confirmation of threshold being met.

10 Notification

- 10.1 Subsection 2b requires LCC to notify relevant RMA's of publication. All relevant RMA's will be notified by email and provided with a link to the report.
- 10.2 Where possible, the relevant organisations, community groups, and agreed key contacts will also be notified.

Leicestershire County Council

Appendix F

Ordinary Watercourse Regulation and Culvert Policy

Contents

1	Introduction and scope	1
2	Ordinary watercourse regulation criteria	2
3	Culverts	3
4	Consenting	5
5	Unconsented works	5
6	Enforcement	6
7	Enforcement Options	7
8	Other relevant legislation	. 10
9	Publicity and sharing of evidence	. 10
10	Review	. 10

1 Introduction and scope

- 1.1 Leicestershire County Council (LCC) is the Lead Local Flood Authority (LLFA)ⁱ for Leicestershire. The LLFA has permissive powers for consenting and enforcement of ordinary watercourses. Together, ordinary watercourse consenting, and enforcement are referred to as watercourse regulation.
- 1.2 "Watercourse" includes all rivers and streams and all ditches, drains, cuts, culverts, dikes, sluices, sewers (other than public sewers within the meaning of the Water Industry Act 1991) and passages, through which water flows as defined in section 72 Land Drainage Act (LDA) 1991ⁱⁱ
- 1.3 "Ordinary watercourse" means a watercourse that does not form part of a main river as defined in section 6.3 Flood and Water Management Act (FWMA) 2010ⁱⁱⁱ
- 1.4 A "culvert" means a covered channel or pipe which prevents the obstruction of a watercourse or drainage path by an artificial construction (LDA 1991)
- 1.5 This policy sets out the LLFA's approach to the regulation of ordinary watercourses within the LDA (1991), including:
 - **Section 14A:** Permissive power for a local authority to perform works for the prevention or mitigation of flood risk.
 - Section 21: Permissive power to serve notice on persons to repair or maintain watercourses, bridges, or drainage work.
 - Section 23: Permissive power to consent works which affect the flow of ordinary watercourses

- Section 24: Permissive power to serve notice requesting the removal of structures or rectification of alterations to watercourses which have not received consent under section 23 of the same act.
- Section 25: Permissive power to serve notice on persons requiring them to carry out necessary works to maintain the flow of any water course, and the power to carry out works in default and recover its reasonable expenses should the riparian owner fail to carry out their responsibility.
- Section 64: Permissive power to enter any land for the purposes of carrying out their functions under the Act and to survey any land and inspect the condition of drainage work on it.
- 1.6 The ordinary watercourse regulation criteria (see Section 2) are also relevant to the LLFA role as statutory consultee for surface water drainage matters for major planning applications.
- 1.7 The policy updates and expands upon the Culverting of Ordinary Watercourses Policy within Appendix 3 of the former Flood Risk Management Strategy. Section 3 is focused upon culverts, and how the regulation criteria in Section 2 may apply. It helps to inform and is supported by watercourse regulation guidance and internal processes.
- 1.8 The policy does not apply to ordinary watercourses within the Trent Valley Internal Drainage Board.

2 Ordinary watercourse regulation criteria

- 2.1 Regulatory decisions will be informed by the following criteria. The criteria are defined for the purposes of transparency, and there may be other criteria by which decisions are made.
- 2.1.1 **Legal and administrative:** applications and administrative details should have been made correctly and approved. This is mainly in relation to land drainage consents. It may also relate to other permissions, for example, those related to planning, highway, ecology, and rights of way.
- 2.1.2 **Flood risk and hazard:** the effects upon current and long-term flood risk are considered. There may be changes to fluvial risk through changes in hydraulic capacity, or risk of blockage. The effects of climate change should be considered. Impacts upon other sources of flood risk will also be considered; for example, groundwater throughflow to watercourses can be affected by watercourse structures. The flood risk hazard is also considered.
- 2.1.3 **Environmental impacts:** the impacts upon water quality and biodiversity (direct and indirect) are considered. Watercourse management should be consistent with environmental legislation and targets such as the Water Framework Directive and Local nature Recovery Strategy. The whole life carbon footprint, and any potential impacts upon other benefits, such as the historical and cultural environment, will also be considered.
- 2.1.4 **Management and maintenance:** the long-term management and maintenance requirements for watercourses and other assets will be considered. Assessment will

133

be made as to whether assets are realistically maintainable, with regard to the capabilities of those with riparian responsibility.

2.1.5 **Public safety and amenity:** risk to riparian landowners and the public will be considered, and any impacts or benefits for public amenity.

3 Culverts

- 3.1 In general, the LLFA are opposed to the culverting of watercourses due to the adverse impacts. The LLFA will therefore only approve an application to culvert a watercourse if there is no reasonably practicable alternative, or if the detrimental effects of culverting would be so minor that they would not justify a more costly alternative.
- 3.2 If culverting is proposed by way of land drainage consent, applicants should justify why they believe there is no reasonably practical alternative.
- 3.3 In relation to the watercourse regulation criteria in section 2:
- 3.3.1 **Flood risk and hazard:** culverts can reduce the hydraulic capacity of watercourses if not sized adequately, increasing risk of fluvial flooding. Culverts can also inhibit groundwater throughflow to watercourses, potentially increasing risk of groundwater flooding. There may also be increased risk of blockage. Culverts may also disconnect a watercourse from its floodplain, straighten it, or reduce roughness, potentially increasing downstream flood risk.
- 3.3.2 **Environmental impacts:** Culverting can lead to loss of habitat within the watercourse and floodplain. The longitudinal connectivity of watercourses may also be reduced, leading to fragmentation of habitats. Culverts can also have a high carbon footprint within construction and installation.
- 3.3.3 **Management and maintenance:** When watercourses are culverted, different maintenance requirements are created. Blockages and other maintenance issues may not be visually apparent without specialist inspection equipment. Repairs can be costly. Drain connections are more easily made to open watercourses where the performance of drainage systems can be visually monitored. Maintenance of these outfalls is considerably easier in open channels. Culverts may also be built over, leading to long term management and maintenance issues.
- 3.3.4 **Public safety and amenity:** There are dangers associated with natural open watercourses, but culverted watercourses can be equally dangerous. Culverting does not remove the risk of drowning or injury and they can represent a considerable safety hazard. This can be minimised through the use of screens, although this creates maintenance requirements. An existing or potential amenity is also lost for present and future generations.

- 3.4 We do however understand there may be cases where culverting is unavoidable, such as short lengths for access purposes, or where highways cross small watercourses. In such cases the length should be restricted to a minimum, the hydraulic and environmental design assessed, and appropriate mitigating enhancements to the surrounding environment included.
- 3.5 However, culverting will not be considered until other options have been thoroughly explored, for example: clear open span bridges with existing banks and bed retained; revision of site layout to incorporate an open watercourse; diversion of the watercourse in an environmentally sympathetic channel and corridor. Any diversion of a watercourse is likely to require a substantial ecological and geomorphological assessment (including, for example, a Water Framework Directive assessment).
- 3.6 All culverts should be 450mm or greater in diameter.
- 3.7 Where it is appropriate to do so, adequate mitigation must be provided for environmental impacts.
- 3.8 The LLFA are also supportive of the de-culverting of watercourses and return them to a more natural condition.
- 3.9 Riparian owners are also responsible for accepting the natural flows from adjoining land and must not create or allow an obstruction to that natural flow where culverts are constructed.

4 Consenting

- 4.1 Under Section 23 LDA 1991, Individuals and or corporate or unincorporated bodies and associations are prohibited from placing an obstruction in a watercourse, specifically a mill, dam, weir, a culvert including altering a culvert or other obstruction to the flow without the consent of the LLFA. Applications for consent should be made direct to the LLFA, details of the application process can be found at:
 - Ordinary Watercourse Land Drainage Consent Checklist
 - LLFA Guidance Note: Ordinary Watercourse Land Drainage Consent Applications. New Consentable Activities document. <u>https://www.leicestershire.gov.uk/environment-and-planning/flooding-and-</u> <u>drainage/regulation-of-activities-on-watercourses</u>

5 Unconsented works

- 5.1 Any works carried out without consent under Section 23 of LDA 1991 will be logged and recorded as 'unconsented'.
- 5.2 The circumstances for unconsented works could include the following:
 - A consent application was refused, but works were still carried out
 - A consent application was approved, but the works undertaken were not in accordance with the conditions of the certificate of consent.
 - No application for land drainage consent was made
- 5.3 It is not possible to provide retrospective consent for unconsented works and therefore enforcement action under Section 24 of the LDA may be required.
- 5.4 An assessment of the risk associated with the unconsented works will be completed, and a decision made on whether further action is required. The Council will keep a register of all unconsented works. Some incidents of unconsented works may require structures to be added to the Council's Asset Register and Record.
- 5.5 If it becomes apparent that the unconsented works are presenting a flood risk at a point in the future, it may become necessary to take enforcement action against a responsible party. In other cases, the enforcement issue may be temporary in nature or may have already ceased by the time the Council has been made aware of the situation. Where this activity has not led to a significant flood risk. damage to the environment, or other significant issue with regards to the regulation criteria in section 2, then it is unlikely enforcement action will be taken.

6 Enforcement

Decision making

- 6.1 The use of the Council's enforcement powers is permissive however, enforcement action in relation to flood risk management will be based on our regulation criteria, and regard to any statutory duty. Assessment of risk will be based on current legislation, existing case and common law, relevant technical guidance, and the evidence available. In any case, enforcement action will only be used where the Council has exhausted all other avenues. Details of enforcement options are provided in section 7.
- 6.2 The Council's Constitution¹ includes delegations to the Chief Executive to Executive to: "Generally take action, and operate all legislative, enforcement and administrative procedures in relation to the Council's functions and duties as a drainage authority." The power is further delegated to the Director of Environment and Transport, who can also authorise other officers to do so on their behalf.
- 6.3 Officers will use their training and experience to make informed judgements taking into account all the evidence in each case. They will decide on appropriate action after considering the criteria within this Policy and any relevant written procedures. The Director for Environment and Transport will give prior approval to all formal action falling outside the scope of this Policy.

General enforcement principles

- 6.4 In enforcing relevant legislation, the Council will pay due regard to the following principles of good enforcement practice some of these are set out in the Regulators code 2014:
- 6.4.1 **Transparency:** Persons against whom enforcement action is taken will receive sufficient explanation to enable them to understand what is expected of them and what they can expect from the Council. Clear distinctions will be made between what are legal requirements and what are recommendations. Correspondence and advice will be delivered in plain and easy to understand language. Where necessary, translation will be provided and/or correspondence will contain a statement, in the recipient's language, indicating the importance of the correspondence.
- 6.4.2 **Consistency:** The Council recognises that businesses and citizens expect consistency from officers in the Council's flood risk management team with whom they come into contact, e.g., in securing compliance with the law, and the investigation of complaints. The Council will endeavour to co-ordinate enforcement services to minimise unnecessary overlap and time delays. The Council has set out internal process charts to be used by all officers embedding a culture of consistency. The Council will continue to take measures to promote consistency of enforcement. These include training, effective liaison with other local authorities, enforcement

¹ Leicestershire County Council Constitution

https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=1187&Mld=7227&Ver=4&Info=1

bodies, and professional organisations, through attending local, regional, and national meetings and benchmarking exercises with similar providers.

- 6.4.3 **Proportionality:** Enforcement action will be proportional to the risk and the public interest. Any action taken by officers to achieve compliance with the law will depend upon the seriousness of any breach.
- 6.4.4 **Accountability:** If any person is aggrieved by the enforcement of legislation by the Council, they may register a complaint either:
 - Using the online Complains, Comments and Compliments form
 <u>https://leicestershire.secure-forms.co.uk/</u>
 - by telephone through the Customer Service Centre 0116 232 3232; or
 - in person by visiting County Hall, Glenfield, Leicester, LE3 8RB; or
 - by writing to the Director (Environment and Transport) County Hall, Glenfield, Leicester, LE3 8RB; or
 - in the case of a legal notice, by appeal to the appropriate authority or body (in accordance with appeal details which will be enclosed with each statutory notice if applicable).
 - The complaint or comment will be noted and responded to in accordance with the Council's "Corporate Complaints and Compliments Policy". Taking this action does not affect any right to complain to a local Councillor or to the Local Government Ombudsman.

7 Enforcement Options

7.1 Introduction

- 7.1.1 The Council recognises and affirms the importance of achieving and maintaining consistency in the approach to making decisions that concern regulatory enforcement action, including prosecution. To achieve and maintain consistency, relevant guidance and advice are always considered and followed where appropriate.
- 7.1.2 The Council may seek to secure compliance with regulatory legislation through the use of the following actions:
 - informal action (written guidance, advice, and notices).
 - statutory notices.
 - simple cautions.
 - carrying out work in default; and
 - prosecution (as a last resort).

7.2 Informal action

- 7.2.1 Informal action will be the normal means of securing compliance with legislation, except where more formal courses of action are warranted. Informal action includes:
 - offering advice.
 - giving verbal and written warnings.
 - negotiating agreements between complainants and other residents or businesses.
 - the negotiation of specific conditions with licences; and
 - the use of informal notices.
- 7.2.2 It is generally considered appropriate to take informal action in one or more of the following circumstances:
 - where the act or omission is not serious enough to warrant enforcement.
 - where the history of the business or the member of the public creates a reasonable expectation that informal action will achieve compliance with the law; and
 - the consequence of non-compliance is unlikely to pose an unacceptable risk such as but not limited to death or serious injury or substantial damage to property

7.3 Statutory notices

- 7.3.1 Some legislation includes provisions for the use of statutory notices, these will be served by officers specifically authorised in writing to serve statutory notices. Notices will normally be served where:
 - informal action has not achieved the desired effect.
 - there is a lack of confidence that the individual/company will respond to an informal approach.
 - there is a history of non-compliance with informal action.
 - standards are generally poor with little management awareness of statutory requirements; and /or
 - the consequences of non-compliance could be potentially serious to the health and safety of the public.
- 7.3.2 Where a notice is not complied with by the expiry date, a prosecution may be considered appropriate. In these circumstances a report, in accordance with the Constitution, will be made to decide what further enforcement action is appropriate.

7.4 Simple cautions

- 7.4.1 The Council may use Simple Cautions, this is a formal warning in writing to a person who admits to an offence. It is advocated by the home office in cases where there is evidence of a criminal offence, but where the public interest does not support a prosecution.
- 7.4.2 Simple Cautions may be used for cases involving first time low-level offences where a Simple Caution can meet the public interest. A decision to issue Simple Cautions

must be made in accordance with the Director of Public Prosecutions' Guidance on Charging under section 37A of the Police and Criminal Evidence Act 1984.

- 7.4.3 A simple caution must be accepted in writing by the offender (or officer of a limited company), who is then served a copy of the caution. A second copy is held as the official record. Failure to accept a simple caution leaves the authority with an option to instigate legal proceedings instead.
- 7.4.4 Simple cautions are viewed as valuable enforcement tools because they can be cited in court if the same person or organisation reoffends within three years of the original offence and typically both save officer time and reduce the burden placed upon the court system.

7.5 Work in default

7.5.1 In some circumstances, failure to comply with a notice may result in the Council arranging for the necessary works to comply with the notice to be carried out (work in default). This power is specific to certain legislation. A letter will be sent informing the person on whom the notice was served of the intention to carry out the work in default. This will detail timescales of the work to be carried out and the officer's contact details. In all cases the Council will seek to recover the money spent in carrying out any works in default.

7.6 Prosecution

- 7.6.1 All decisions to prosecute will be made by the Case worker and approved by the Head of Service.
- 7.6.2 A report document will be prepared for the County Council's legal services outlining the following
 - The offence(s) committed
 - Evidence to support the prosecution and prospects of success
 - Effect on public/property/environment
 - Any aggravating or mitigating circumstances

Legal services will consider the report and will prepare a concurrence taking into full account the evidential and public interest tests and the threshold criteria, and subject to these being met the commencement of prosecution will be approved.

- 7.6.3 Any person subject to potential prosecution action will be informed in writing of the council's intention to prosecute and will be invited to send in written representations to the Council for consideration prior to any final decision being made. If circumstances change, cases may need to be reported back to the Head of Service for further consideration.
- 7.6.4 All prosecution will be reported for inclusion on relevant national or local databases of offenders, the Police National Computer, and others as considered appropriate.

8 Other relevant legislation

- 8.1 Consideration will be given to the provisions of the Human Rights Act 1998 when considering action in respect of regulatory enforcement work. Particular attention will be given to
 - Article 6: Right to a fair trial.
 - Article 8: Right to respect for private and family life, home, and correspondence.
 - Article 14: Prohibition of discrimination on any grounds.

9 Publicity and sharing of evidence

- 9.1 We will endeavour to secure media presence at hearings in the Courts when we are seeking prosecution of offenders, with the aim of drawing their attention to the court case. Thereafter we will publicise any conviction, which could serve to draw attention to the need to comply with the law or, deter anyone tempted to act in a similar manner. Details of such cases will also be published on our website.
- 9.2 The Council will share intelligence and evidence, secured in the ordinary course of our business, with other statutory enforcement bodies and relevant partners in accordance with information sharing protocols signed by the Council and our duties under Crime and Disorder Act 1988 section 17.
- 9.3 Information will be made available in public registers where the legislation requires it. These will be freely available for public viewing within normal office hours.

10 Review

10.1 The Council will periodically review this Policy to reflect current political management arrangements, or changes in statute, guidance, and opinions.

ⁱ Section 6(7) Flood Management Act 2010 "Lead local flood authority" in relation to an area in England means-

⁽a) the unitary authority for the area, or

⁽b)if there is no unitary authority, the county council for the area.

ⁱⁱ Section 72 (1) Land Drainage Act 1991"watercourse" includes all rivers and streams and all ditches, drains, cuts, culverts, dikes, sluices, sewers (other than public sewers within the meaning of the <u>M3</u>Water Industry Act 1991) and passages, through which water flows.

ⁱⁱⁱ Section 6(3) Flood Management Act 2010 "Ordinary watercourse" means a watercourse that does not form part of a main river.

Leicestershire County Council

Appendix G

Assessment of Local Flood Risk

Contents

1	Introduction	. 1
2	Prioritisation in practice since 2015	. 2
3	Updated Assessment of Local Flood Risk	. 2
4	Climate change	. 4
5	Next steps	. 4

1 Introduction

- 1.1 The Flood and Water Management Act (2010) requires an assessment of local flood risk for the purposes of the Strategy.
- 1.2 This appendix is a 'live' document which will be updated periodically as new flood risk information becomes available.
- 1.3 The Assessment is a high-level analysis of local flood risk information to help the LLFA and others take a risk-based approach towards prioritisation of resources. It is predominantly focused upon estimated risk. Please note that if a community is estimated to be at lower risk and flooding is experienced, the necessary support will still be provided.
- 1.4 The allocation of resources to investigate local flood risk and develop local projects is determined by several other factors too including:
 - funding opportunities;
 - technical feasibility;
 - cost benefit analysis, including other benefits (e.g., environmental); and
 - flooding over recent years.

2 Prioritisation in practice since 2015

- 2.1 Communities that have been prioritised for further investigation are usually because one or more of the following is true.
 - a) Flooding to the community has triggered a formal flood investigation.
 - b) The community has reported flooding that is solely or primarily from local sources (surface water, groundwater or ordinary watercourses).
 - c) The community had been identified as being at high risk of flooding from local sources or were identified as being a priority community in the Council's 2015 Local Flood Risk Management Strategy.
- 2.2 The Council and partners have actioned and progressed various activities for these communities across Leicestershire.

3 Updated Assessment of Local Flood Risk

Groundwater

- 3.1 **Groundwater flood risk** is comparatively low in Leicestershire, and there have been minimal reports of groundwater flooding. The previous Strategy included the Environment Agency's Areas Susceptible to Groundwater Flooding dataset, which provided groundwater flood risk vulnerability from bedrock sources and superficial deposits, in 1km grid squares.
- 3.2 For the purposes of this assessment, the Council has procured the British Geological Society <u>Groundwater Flooding Susceptibility</u> dataset, an updated dataset with a more detailed effective spatial resolution of 50m². The data shows the degree to which areas are susceptible to groundwater flooding based on geological and hydrogeological conditions. It does not show the likelihood of groundwater flooding occurring (i.e., it is a hazard not risk-based dataset).
- 3.3 The data will be used to help prioritise any investigatory work into groundwater flood risk, alongside other data such as groundwater flooding incidences.

Ordinary watercourse and surface water

- 3.4 There is currently no available single dataset communicating flood risk from **ordinary watercourses**.
 - Where upstream catchments are greater than 3km², risk will usually be mapped as part of the Environment Agency's Risk of flooding from Rivers or the Sea dataset. This applies to the downstream sections of larger ordinary watercourses.
 - A small number of ordinary watercourses have been modelled as part of local studies and projects, or to support flood risk assessments.
- 3.5 For the purposes of the Strategy, local flood risk has mainly been assessed by using the national Risk of Flooding from Surface Water (RoFfSW) maps. RoFfSW is the most up to date dataset for surface water flood risk, and provides some indication of flood risk from ordinary watercourses.
- 3.6 RoFfSW has been used to estimate the number of properties potentially at local flood risk at a community level. The assessment has not been for the purposes of identifying the likelihood of whether individual properties will flood. The 1% annual exceedance probability (1 in 100 year) extent layer of the dataset is used.
- 3.7 Where more detailed local models are available (Swithland, Breedon on the Hill and Stoney Stanton), the predicted flood risks (i.e., number of properties predicted to be at risk) have been used in preference to the national RoFfSW data.
- 3.8 RoFfSW may also highlight properties which are at risk of main river flooding (e.g., Sileby). This will be considered when reviewing the risk levels indicated.
- 3.9 Figure 1 illustrates the calculated level of local flood risk to communities across Leicestershire. The darker the shade of blue, the higher the number of properties within that community estimated to be at risk of flooding from local sources in the 1 in 100-year flood event.
- 3.10 The County Council and others can use this information to help direct resources using a risk-based approach.

4 Climate change

- 4.1 An internal Council wide Climate Change Risk and Resilience Review was undertaken in 2021. This noted a "strong awareness of climate change risks" within local flood risk management in Leicestershire.
- 4.2 Adapting to climate change is a principle of the Strategy. The effects of climate change upon local flood risk must be considered.
- 4.3 The Environment Agency provides <u>climate change allowances</u> for the purposes of flood risk assessment, in the form of peak changes in river flow and rainfall intensity. These can be used if you are a "*risk management authority developing a flood and coastal risk project, scheme or strategy*".
- 4.4 Peak rainfall intensity is best used for surface water mapping in small (less than 5km²) and / or urbanised drainage catchments. This is appropriate for much of Leicestershire, as many ordinary watercourse catchments are less than 5km², with some exceptions (e.g., catchment upstream of Swithland Reservoir).
- 4.5 The below table displays the estimates for increases in peak rainfall intensity for 1 in 100 year storms, based upon a 1981-2000 baseline. Peak rainfall intensity for such storms is expected to increase by 20%, and as much as 40%.

Time period	Central estimate	Upper estimate
2022 – 2060	20%	40%
2061 – 2125	25%	40%

5 Next steps

- 5.1 The Council are currently developing detailed surface water flood modelling for the County. There is the possibility of better understanding the effects of climate change, by applying peak rainfall climate change allowances to model inputs. It is possible that some areas will be more affected by climate change than others.
- 5.2 The Environment Agency are also in the process of updating the National Flood Risk Assessment (NAFRA2), which will include model outputs that replace RoFfSW.
- 5.3 This assessment will be updated when new data becomes available.


Figure 1 Assessment of Local Flood Risk. Please note that if a community is estimated to be at lower risk and flooding is experienced, the necessary support will still be provided.

24/1/2023

145

This page is intentionally left blank



Local Flood Risk Management Strategy for Leicestershire

147

Summary



The County Council are the Lead Local Flood Authority (LLFA) for Leicestershire.

As LLFA, the County Council are responsible for developing, maintaining, and monitoring the Local Flood Risk Management Strategy for Leicestershire ('the Strategy').

The Strategy is focused on the management of the local flood risk sources of surface water, groundwater, and ordinary water watercourses. It does not cover flood risk from larger 'main rivers' and reservoirs.

The Strategy **'Wheel'** displays the five **principles** followed across all measures taken to manage local flood risk, and five **objectives** covering the main workstreams of organisations working in partnership with local communities.



Principles



Working in partnership

A range of organisations are involved in managing flood risk from different sources. Effective partnership working is therefore required. This also helps to maximise other benefits (e.g. environmental)

Working with communities

Organisations will engage and work with communities so they can be ready to respond and adapt to flooding by understanding risk, responsibilities, and how to help and take action.



Delivering multiple benefits

Flood risk management is not considered in isolation. There are multiple benefit opportunities such as environmental enhancements, sustainable growth, and climate change mitigation.



Adapting to climate change

Local flood risk is increasing with climate change, with an increased likelihood of wetter winters, and more intense rainfall events. The effects of climate change will be considered across all measures taken.



Taking a risk-based approach

Organisational resources for local flood risk management are finite. A risk-based approach assists prioritisation of these resources. Risk based decision making will be supported by use of the best evidence and guidance. A broad range of evidence is considered, including the valuable local knowledge provided by communities.

Objectives

To manage local flood risk through the effective management of **flood risk assets, watercourses, and catchments**.

To manage local flood risk through **encouraging sustainable development** working to ensure development is resilient to flooding, and does not the increase risk of flooding elsewhere.



To manage local flood risk through effective **preparedness**, **response to**, **and recovery** from flood events.

To **better understand local flood risk** and impacts, informing approaches to managing this risk.

To manage local flood risk through developing and or managing **local projects** for at-risk communities.

Full details of the measures taken to meet objectives can be found in the Strategy and Action Plan.

This page is intentionally left blank

Appendix I



Leicestershire LFRMS SEA Environmental Report

Final Report

April 2023

www.jbaconsulting.com





JBA Project Manager

Harriet Thomlinson Salts Mill Victoria Road Shipley BD18 3LF

Revision History

Revision Ref/Date	Amendments	Issued to
05/01/2023	Draft Report	Leicestershire County Council
12/01/2023	Final Report for Consultation	Leicestershire County Council
29/03/2023	Final report – for public consultation	Leicestershire County Council

Contract

This report describes work commissioned by Leicestershire County Council. Harry Rowlands and Harriet Thomlinson of JBA Consulting carried out this work.

Prepared by	Harry Rowlands BA (Hons)
	Assistant Analyst
Checked by	Fiona Lee BSc MSc MCIfA Principal Consultant
Reviewed by	Harriet Thomlinson BA MSc MIEMA CEnv
	Chartered Senior Environmental Consultant

Purpose

This document has been prepared as a Final Report for Leicestershire County Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to Leicestershire County Council.

Copyright

© Jeremy Benn Associates Limited 2023.



Carbon Footprint

A printed copy of the main text in this document will result in a carbon footprint of 404g if 100% post-consumer recycled paper is used and 514g if primary-source paper is used. These figures assume the report is printed in black and white on A4 paper and in duplex. JBA is aiming to reduce its per capita carbon emissions.



Contents

1	Introduction	1
1.1	Overview	1
2	SEA Process and Methodology	1
2.1	Stages in the SEA Process	3
2.2	Habitats Regulations Assessment (HRA)	4
3	Background to the Leicestershire LFRMS	4
3.1	Overview	4
3.2	Study Area	6
3.3	Historic flooding in the Study Area	7
3.4	Future flood risk	8
4	Stage A: Scoping Stage Findings	9
5	Environmental Characteristics and Key Issues	12
5.1	Introduction	12
5.2	Landscape and Visual Amenity	12
521	Key Issues	13
5 3	Biodiversity Flora and Fauna	13
531	Statutory protected sites	13
532	Leicester Leicestershire and Rutland Biodiversity Action Plan (LLR BAP)	15
533	Habitats Regulations Assessment	17
531	Key Issues	17
5 4	Water environment	18
541	Watercourses	18
542	Water Resources	18
543	Water Auglity	18
544	Summary of Key Issues	20
55	Geology and Soils	20
551	Key Issues	20
5.6	Historic Environment	24
5.6.1	Key Issues	25
5 7	Population	26
571	Health	26
572	Deprivation	26
573	Summary of Key Issues	26
5.8	Material Accets	20
5.0 5.8.1	Key Issues	20
50.1	Climate	20
501	Climate Summary of Koy Issues	20
5.9.1	SEA Framowork	20
6 1	Introduction	29
6.2	SEA Objectives and Criteria	29
0.Z 7	Stage B: Developing and Defining Options and According Effects	29
7 7 1	Developing Alternatives	22
/.1 7.2	Approved of Reasonable Alternatives	22
/.Z 0	Appraisal of LDEMS Objectives and Actions to Improve Fleed Piels	32
0		30
0.1	Appraisal	30
0.2	Impact Significance	30
ö.j	Assessment Approach	31



Limitations and Assumptions	37
Assessment	37
Summary of Assessment	54
Mitigation	57
Conclusions and Recommendations	58
Recommendations	58
Monitoring	59
Next Steps	62
Consultation	62
References	63
Maps	65
Planning Policy Context	74
	Limitations and Assumptions Assessment Summary of Assessment Mitigation Conclusions and Recommendations Recommendations Monitoring Next Steps Consultation References Maps Planning Policy Context

IKH-JBAU-XX-XX-RP-EN-0001-S0-P03-SEA_Environmental_Report



List of Figures

Figure 1-1 Leicestershire County Council Location	6
Figure 5-1 Locally Designated geological sites in Leicestershire.	22
Figure 5-2: Provisional Agricultural Land Classification (ALC) against Flood Risk Zones	
(2/3)	23
Figure 5-3: Historic Landfill Sites in Leicestershire.	24
Figure 5-4 Designated heritage assets within Leicestershire	25
Figure 5-5 Location of key infrastructure assets.	27

List of Tables

Table 2-1 Stages in the SEA Process as Identified within Schedule 2 of the SEA	
Regulations	2
Table 2-2 Stages in the SEA Process	3
Table 4-1 Environmental Topics Scoped in	9
Table 5-1 Statutory designated sites within Leicestershire (excluding 76 SSSI's) (NE,	
2022)	14
Table 5-2: Annual physical and monetary flow of ecosystem services of Leicestershire	
county (using EA NCRAT 2021 tool)	15
Table 5-3 Priority species of principal importance Leicestershire	16
Table 5-4 Priority habitats of principal importance Leicestershire	16
Table 5-5 Hydromorphological designation of water bodies within Leicestershire	
operational catchments	19
Table 5-6 Ecological status of water bodies within Leicestershire operational	
catchments	19
Table 5-7 Chemical status of water bodies within Leicestershire operational	
catchments	19
Table 6-1 Definition of SEA Objectives, Criteria and Targets	29
Table 6-2 SEA Objectives and Criteria	29
Table 7-1 Assessment of the Strategy and Alternative Options Against the SEA	
Objectives	32
Table 8-1 Impact Significance Key	36
Table 8-2 Assessment of LFRMS Objectives and SEA Objectives	38
Table 8-3 Assessment of LFRMS Actions Against SEA Objectives	40
Table 8-4 Cumulative effects of LFRMS objectives against SEA objectives	54
Table 9-1 Possible Monitoring Partners for SEA objectives	60

Abbreviations

Acronym	Description
ВАР	Biodiversity Action Plan Plans developed by organisations to protect and enhance the biodiversity of an area.
DWMP	Drainage and Wastewater Management Plan Report that details the long-term strategy for how wastewater systems, and the drainage networks that serve them, are to be extended, improved, and maintained to ensure they are resilient against future pressures such as climate change and population growth.
EA	Environment Agency Non-departmental public body responsible for protecting and improving the environment.
FCERMS	Flood and Coastal Erosion Risk Management Strategy



	The strategy describes what needs to be done by all risk management
	authorities involved in flood and coastal erosion risk management for the
	benefit of people and places.
GCSE	General Certificate of Secondary Education
	A gualification in a specific subject typically taken by school students between
	14-16.
HER	Historic Environment Record
	Information service that provides access to comprehensive and dynamic
	resources relating to the archaeology and historic built environment of a
	defined geographic area.
IMD	Indices of Multiple Deprivation
	The Index of Multiple Deprivation measures relative deprivation in an area. It is
	a combined measure of deprivation based on 37 separate indices of deprivation,
	grouped into seven key domains reflecting different aspects of deprivation.
LCA	Landscape Character Assessment
	The process of identifying and describing variation in character of the
	landscape, the assessment identifies and explains the unique combination of
	elements and features that make landscapes distinctive by mapping and
	describing character types and areas.
LFRMS	Local Flood Risk Management Strategy
	Strategies produced by lead local flood authorities, considering local issues and
	policy. It should also consider the extent and severity of flood risk and the
	geography of the authority area including the environmental or social setting.
LGeoS	Local Geological Site
	Geological sites that are important for historical, scientific research or
	educational reasons.
LLFA	Lead Local Flood Authority
	County councils and Unitary Authorities which lead in managing local flood
LINK	Local Nature Reserve
	Access to Countryside Act 1949. Those can be declared by Parish and Town
	Councils, but these must be delegated to by principle local authority
1504	Lower Laver Super Output Area
LSUA	lower Layer Super Output Area are areas of population household minimum
	and maximum thresholds. These areas were designed to improve the reporting
	of small area statistics.
NCA	National Character Area
	National Character Area is a natural subdivision of England based on a unique
	sense of place. The Character Area framework is used to describe and shape
	objectives for the countryside, its planning and management.
NFM	Natural Flood Management
	The utilisation of natural processes to reduce the risk of flooding and coastal
	erosion
NNR	National Nature Reserve
	Reserves established to protect some of our most important habitats, species,
	and geology, and to provide outdoor laboratories for research.
NPPF	National Planning Policy Framework
	The National Planning Policy Framework constitutes all policy statements and
	guidance documents into one document which forms a core part of the national
	planning system.



	Central department to bring together key responsibilities for regional and local government, fire, housing, planning and regeneration, social exclusion, and
	neighbourhood renewal.
ONS	Office of National Statistics The Office for National Statistics is the executive office of the UK Statistics Authority, a non-ministerial department which reports directly to the UK Parliament.
RBMP	River Basin Management Plan River basin management plans set the locally specific environmental objectives that underpin water regulation (such as permitting) and planning activities.
RIGS	Regionally Important Geological Sites Regionally Important Geological Sites are designated by locally developed criteria, and are important educational, historical, and recreational resources. The designation aims to recognise and protect earth science and landscape features.
SAC	Special Area of Conservation Special Areas of Conservation are protected in the UK under, the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales. The purpose of this designation is to conserve the habitat and species identified in the EU Habitats Directive.
SEA	Strategic Environmental Assessment Strategic Environmental Assessment is a decision support process which aims to promote sustainable development by assessing the extent to which the emerging plan will help achieve relevant environmental, economic, and social objectives.
SPA	Special Protection Areas Special Protection Area are protected areas are protected areas for birds in the UK, under the Wildlife & Countryside Act 1981 and the Conservation Regulations 2010.
SPZ	Source Protection Zones Areas defined around large and public potable groundwater abstraction sites, to provide additional protection to safeguard drinking water though constraining the proximity of an activity that may impact upon a drinking water abstraction.
SSSI	Sites of Special Scientific Interest Sites of Special Scientific Interest is a conservation designation legally protected under the Wildlife and Countryside Act 1981 (as amended). These sites are selected for wildlife and natural features in England.
SuDS	Sustainable Drainage Systems Drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses.
SWMP	Surface Water Management Plan A plan which outlines the preferred surface water management strategy in each location. In this context surface water flooding describes flooding from sewers, drawings, groundwater and runoff from land small water course and ditches that occurs because of heavy rainfall.
WFD	Water Framework Directive The Water Framework Directive is a European Union directive which aims to get polluted waters clean again, and ensure they stay clean.
WRMP	Water Resources Management Plan Plan developed by water companies which sets out how they intend to achieve a secure supply of water for customers and protect and enhance the environment.

Non-technical summary:

Introduction

A detailed Local Flood Risk Management Strategy (LFRMS) is being developed for Leicestershire County Council (LCC) to replace the existing LFRMS published in 2015, encompassing the risks associated with local flood risk sources, as stipulated by Section 9 of the Flood and Water Management Act 2010.

The following Non-Technical Summary outlines the conclusions of the Strategic Environmental Assessment (SEA) undertaken as part of the review of Leicestershire County Council's (LFRMS), fulfilling the requirements of the SEA Regulations.

Purpose of this assessment

When preparing a LFRMS, it is a statutory requirement to carry out a SEA to identify any potentially significant environmental effects arising from the implementation of the strategy. SEA is an integrated, systematic appraisal of the potential environmental impacts of policies, plans, strategies and programmes during their development before they are approved; ensuring that implications for the environmental issues including biodiversity, population, human health, flora and fauna, soils, water, air, climate, material assets, heritage, landscape and the interactions between these factors.

A SEA of the LFRMS has been undertaken in order to identify any potentially significant environmental effects arising as a result of the implementation of the measures contained within it. This document forms the Environmental Report stage of the SEA process.

Background to the Leicestershire LFRMS Review

The Flood and Water Management Act (2010) determined the need for flood risk to be managed within the framework of National Strategies for England and Wales and within Local Strategies for each Lead Local Flood Authority Area (LLFA).

The National Flood and Coastal Erosion Risk Management Strategy for England, published by the Environment Agency in 2020, sets out the principles for flood risk management and which organisations are responsible for their implementation.

In accordance with the national strategy for England, LLFAs have been allocated responsibility for developing independent LFRMSs to address sources of local flooding (defined as surface runoff, groundwater and ordinary watercourses).

Leicestershire's first LFRMS was adopted in 2015; since this document was produced, knowledge of the broad nature and extent of flood risk across Leicestershire has grown. It was determined that the 2015 LFRMS should be revised to facilitate continued statutory compliance, improved action planning and partnership working, improved resource efficiency and support for funding applications, and improved community understanding and engagement to facilitate management of flood risk within Leicestershire.

Summary of the Strategic Environmental Assessment Process

SEA is a staged process, which ensures that the potential environmental effects of a policy or plan are identified during the development of the plan. It provides a framework through which to consult upon the potential environmental effects of the LFRMS and to amend the LFRMS prior to its adoption. The stages of SEA can be summarised as follows:

- JBA consulting
- Stage A: Setting the context, establishing the baseline and deciding on the scope of the assessment. A Scoping Report is produced at this stage.
- Stage B: Developing and refining options and assessing effects
- Stage C: Preparing the Environmental Report
- Stage D: Consulting on the draft plan
- Stage E: Monitoring significant effects of implementing the plan.

The first stage of the SEA process involved the preparation of a Scoping Report for consultation (October/November 2022). The Scoping Report identified key plans, policies and programmes of relevance to the strategy. It also set out the baseline environmental characteristics and key issues. The Scoping Report identified key environmental topics that needed to be assessed in the SEA, and scoped out issues where significant effects were not anticipated.

The Scoping Report was finalised following consultation and after this, Stage B commenced including developing and refining options and assessing effects. This Environmental Report has been prepared as Stage C. A draft Environmental Report was issued for consultation alongside a draft LFRMS (in January/February 2023). This Environmental Report captures comments received and updates made to the LFRMS.

Developing the SEA Framework

The SEA framework is made up of a number of SEA objectives which are used to test the objectives, policies and options of the LFRMS. The SEA objectives were identified based on the findings of the Scoping Report, including baseline environmental characteristics and other plans, policies and programmes of relevance. The SEA objectives are outlined in Table 1 below:

Receptor	Objective
Landscape and Visual Amenity	Protect the integrity of local urban and rural landscapes in the area.
Biodiversity, Flora and Fauna	Maintain, enhance and extend biodiversity, wildlife and habitat connectivity.
Water Environment	Protect and enhance the quality of water features and resources.
Geology and soils	Maintain soil quality and conserve geological designations.
Historic Environment	Preserve and where possible, enhance important heritage assets.
Population and Human Health	Protect and enhance human health and wellbeing.
Material assets	Minimise the impacts of flooding to the transport network and key critical infrastructure
Material assets	Minimise local and national contribution to climate change.

Table 1: SEA objectives

SEA Assessment

The LFRMS was developed including a series of overarching principles, objectives and actions. The objectives and measures contained within the action plan were subject to the SEA appraisal process.

161

Three alternative management processes and their associated likely environmental impacts were assessed including: Do Nothing, Maintaining the Current Leicestershire County Council Local Flood Risk Strategy (2015), and Manage and Reduce Local Flood Risk. It was determined that the development of a new LFRMS was the only realistic option for managing flood risk in Leicestershire.

The objectives and actions as set out in the LFRMS were fully assessed against the SEA objectives to identify aspects of the strategy that may require revising as a result of potential impacts identified. Colour coding was used to outline likely impacts, to present a clear overview of the assessment findings. This colour coding reflected likely impact significance, as per Table 2 below:

Table 2: SEA Impact Significance Framework	<
--	---

Symbol	Explanation of Effect
++	Significant positive impact – significantly beneficial to the SEA objective. Multiple opportunities for environmental improvement or potential to resolve existing environmental issue.
+	Minor positive impact – partially beneficial (not significant) to the SEA objectives. Contributes to resolving an existing environmental issue or offers some opportunity for improvement.
0	Neutral effect on the SEA objective and environment.
-	Minor negative impact – partially undermines (not significantly) the SEA objective. Would contribute to an environmental issue or reduce opportunities for improvement.
	Significant negative impact – significantly undermines the SEA objective. Will significantly contribute to an environmental problem or undermine opportunity for improvement.
?	Uncertain impact – insufficient detail on the option or baseline. Cannot effectively assess the significance of the strategy on the SEA objective.

Summary of SEA findings

The result of the assessment concluded that the LFRMS will likely have direct positive effects on the SEA objectives, relating to Population and Human Health and Material Assets. There is also opportunity for the LFRMS actions to contribute positively to other SEA objectives, including: landscape and visual amenity; biodiversity flora and fauna; water environment; soils and geology and historic environment.

There is some uncertainty regarding the scale and location of some of these positive effects. Sometimes this is because for some measures the scale, location and/or process of implementation is currently unclear, also, some indirect positive effects may be outside the control of the organisations delivering measures. However, positive effects are generally likely across the implementation of the strategy, across a wider range of the SEA objectives.

The assessment also suggests mitigation should be implemented to avoid any potential adverse effects to SEA objectives resulting from the development of flood alleviation



schemes. It also suggests opportunities to better meet objectives relating to carbon reduction should be promoted.

From the assessment, no potential negative effects on any of the SEA objectives were identified from any of the LFRMS objectives or actions at this stage.

Proposed monitoring

This Environmental Report provides some suggested monitoring measures for each SA/SEA objective. These simple, effective and measurable indicators will aid the future monitoring of the plan.

Concluding statement

The LFRMS has been developed and informed by a clear evidence base of baseline environmental data and complies with relevant national and local planning policy.

The SEA did not identify any significant negative effects of the LFRMS. Many of the proposed measures detailed in the LFRMS have the potential for direct and indirect benefits. The majority of the LFRMS objectives are likely to have indirect beneficial effects upon the environment as they relate to enhanced understanding and awareness of flood risk along with high-level flood risk management measures rather than individual actions. The assessment of the LFRMS objectives and actions against the SEA objectives highlights positive impacts, especially on SEA objectives 6 and 7. By actively managing the flood risk, there will be obvious benefits to the population, human health and material assets. Through promoting a greater understanding of flood risk, encouraging community involvement and promoting self-resilience as well as a coordinated county-wide flood risk management approach, communities and responsible parties will be better placed to effectively minimise the risk of flooding in the Leicestershire area.

1 Introduction

1.1 Overview

Leicestershire County Council as Lead Local Flood Authority (LLFA) is working to produce a Local Flood Risk Management Strategy (LFRMS) under the Flood and Water Management Act 2010. The current LFRMS, which was adopted in 2015, has been reviewed and is being updated to provide an overall strategic approach to the management of flood risk in Leicestershire.

The aim of a LFRMS is to guide the management of local flood risk, reflecting local circumstances such as the level of risk and the potential impacts of flooding. Leicestershire's updated LFRMS must assess local flood risk, set out measures for managing local flooding and determine the costs and benefits associated with the implementation of such measures.

When preparing a flood management plan that will inform decision making and identify actions to be taken to reduce the risk of flooding, it is a statutory requirement to conduct a Strategic Environmental Assessment (SEA) in accordance with the SEA Regulations (implementing the European SEA Directive into UK law).

Due to the scale of the changes proposed in the updated LFRMS and the potential for significant environmental effects, it was considered appropriate that an update to the SEA be undertaken.

The SEA process, culminating in the preparation of this Environmental Report, will inform the preferred long-term flood risk management Strategy through the identification of likely significant impacts upon the environment, resulting from the implementation of the LFRMS.

This SEA Environmental Report will outline how objectives, measures and options have been appraised.

2 SEA Process and Methodology

The Environmental Assessment of Plans and Programmes Regulations 2004, or SEA Regulations, were originally transposed from the European Directive 2001/42/EC (the SEA Directive) into English Law, prior to the UK's departure from the EU. The Environmental Assessment of Plans and Programmes (Amendment) Regulations 2020 (the 'SEA Regulations') now apply to this work. These Regulations require a SEA to be undertaken for certain types of plans or programmes that could have a significant environmental effect.

The SEA Regulations form the basis by which all SEAs are carried out to assess the effects and impacts of certain plans and programmes on the environment. Detailed practical guidance on these regulations can be found in the Office of the Deputy Prime Minister (ODPM) Government publication, A Practical Guide to the Strategic Environmental Assessment Directive (ODPM, 2005). This document has been used as the basis for undertaking this environmental report, in conjunction with the SEA Regulations.

SEA involves the systematic identification and evaluation of the potential environmental impacts of the LFRMS. This information is then used to aid the selection of a preferred option(s) for the strategy, which are those that best meet its economic, environmental and social objectives, and legal requirements. Carrying out an SEA in conjunction with developing the LFRMS helps influence flood risk management at an early stage, and influences the selection of preferred measures or ways forward where alternatives exist.

Schedule 2 of the SEA Regulations sets out the scope of information to be provided by the SEA. This is described in Table 2-1 below, which also identifies where in the SEA process for the LFRMS that the relevant requirement will be met.



Table 2-1 Stages in the SEA Process as Identified within Schedule 2 of the SEA Regulations

SEA Regulations Requirements	Where Covered in the SEA Process
a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;	SEA Scoping Report (Section 3, 4 and 5); SEA Environmental Report (Sections 3, and 5 and Appendix B).
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	SEA Scoping Report (Section 4); SEA Environmental Report (Section 5).
(c) the environmental characteristics of areas likely to be significantly affected;	SEA Scoping Report (Section 4); Environmental Report (Section 5).
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds(a) (amended to 2009/147/EC and transposed into UK law through Part I of the Wildlife and Countryside Act 1981) and the Habitats Directive 92/43/EEC (transposed into UK law through the Conservation of Habitats and Species Regulations 2017 (as amended);	SEA Scoping Report (Section 4); Environmental Report (Section 5).
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	SEA Scoping Report (Sections 3 and 4); Environmental Report (Section 5 and Appendix B).
(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape, and the interrelationship between the above factors;	SEA Environmental Report (Section 8)
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	SEA Environmental Report (Section 8)
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	SEA Environmental Report (Section 7)
(i) a description of the measures envisaged concerning monitoring in accordance with regulation 17.	SEA Environmental Report (Section 9)

JBA
onsulting

SEA Regulations Requirements	Where Covered in the SEA Process
(j) a non-technical summary of the information provided under the above headings.	SEA Environmental Report (Non-technical Summary)

2.1 Stages in the SEA Process

This report has been produced in conjunction with the SEA Regulations and follows the guidance contained within the OPDM *A Practical Guide to the Strategic Environmental Assessment Directive* (ODPM, 2005). The guidance outlines the stages that should be carried out in the SEA process; these are outlined in Table 2-2. In accordance with this process, this report addresses 'Stage C' of the SEA process; wherein the predicted environmental effects of the plan, including alternatives, are presented, to be used by decision-makers and in public consultation. This Environmental Report has subsequently been updated following comments received during the consultation process (Stage D).

Table 2-2 Stages in the SEA Process

SEA Stages and Tasks	Purpose	Where Covered in the SEA
Stage A	Setting the context and objectives, establishing the baseline, and deciding on the scope	SEA Scoping Report
(A1) Identifying other relevant plans, programmes and environmental protection objectives	To establish how the plan or programme is affected by outside factors, to suggest ideas for how any constraints can be addressed and to help to identify SEA objectives.	SEA Scoping Report
(A2) Collecting baseline information	To provide an evidence base for environmental problems, prediction of effects, and monitoring; to help in the development of SEA objectives.	SEA Scoping Report
(A3) Identifying potential environmental problems	To help focus the SEA and streamline the subsequent problems, prediction of effects, and monitoring; to help in the development of SEA objectives.	SEA Scoping Report
(A4) Developing SEA objectives	To provide a means by which the environmental performance of the plan or programme and alternatives can be assessed.	SEA Scoping Report
Stage B	Developing and refining options and assessing effects	Options development phase
Stage C	Preparing the Environmental Report	SEA Environmental Report

SEA Stages and Tasks	Purpose	Where Covered in the SEA
Stage D	Consulting on the draft LFRMS and the Environmental Report	Consultation phase
Stage E	Monitoring the significant effects of implementing the LFRMS	Monitoring phase

Stage A of the process (scoping) was carried out in October 2022 and a SEA Scoping Report was submitted for consultation in November 2022. An updated Scoping Report was then produced in November 2022 to incorporate responses from statutory consultees. Further details on the scoping process are provided in Section 4 of this report.

The purpose of this Environmental Report is to report the findings of the SEA of the Leicestershire LFRMS. This Environmental Report summarises;

- how the SEA has been conducted and how it informs the current emerging LFRMS;
- the likely significant effects on the emerging LFRMS on people, communities, the economy and the environment; and
- how the SEA will continue to inform the implementation of the emerging LFRMS, such as through recommended mitigation and monitoring.

This report documents Stage B of the SEA process and fulfils the requirements of Stages C and D.

2.2 Habitats Regulations Assessment (HRA)

Due to the potential for the LFRMS to have significant effects on sites of international nature conservation importance (Ramsar sites, Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), a Habitats Regulations Assessment (HRA) has been undertaken in parallel with this SEA. This has been produced a separate standalone report, details of which are summarised in Section 5.3.3 of this report.

3 Background to the Leicestershire LFRMS

3.1 Overview

The Flood and Water Management Act (2010) determined the need for flood risk to be managed within the framework of National Strategies for England and Wales and within Local Strategies for each Local Flood Authority Area.

The National Flood and Coastal Erosion Risk Management Strategy for England, published by the Environment Agency in 2020, sets out the principles for flood risk management and which organisations are responsible for implementation.

In accordance with the national strategy for England, LLFAs have been allocated responsibility for developing independent LFRMSs to address sources of local flooding.

Local flooding is defined by the Flood and Water Management Act 2010 as flood risk derived from:

- surface runoff,
- groundwater, and
- ordinary watercourses.

Surface water flooding often occurs where drainage systems (natural and/or artificial) are unable to cope with the volume of water. Surface water flooding issues are linked to issues of poor drainage (or drainage blocked by debris) and sewer flooding.

JBA



Surface water is one of the primary flood risks in Leicestershire and there has been widescale surface water flooding across the area (LCC, 2017).

Groundwater flooding occurs when the water table within the underlying rock or soil rises above ground level or interacts with properties or infrastructure below ground level. The level of the table varies as a result of seasonal changes in precipitation, recharge, and groundwater abstraction. When the water level reaches ground level, water can start to emerge causing flooding, which can result in significant property damage.

Flooding from ordinary watercourses occurs when water levels in a non-main river, canal, sewer, lake, ditch, reservoir or stream rises and overflows onto the neighbouring land.

Flood risk from the sea, main rivers and large reservoirs is therefore not defined as local flood risk and is the concern of the Environment Agency. Such sources of flood risk do, however, need to be considered insofar as they may interact with those flood risks defined as "local", to ensure that all joint risks of flooding are assessed at the local scale.

Each LFRMS identifies which local organisation is accountable for managing flood risk and establishes roles and responsibilities and partnership agreements, as well as undertaking an assessment of flood risk and developing plans / actions for tackling these risks.

As stipulated by the Flood and Water Management Act 2010, Leicestershire County Council as a LLFA has a responsibility to develop, maintain, apply and monitor a strategy for local flood risk management, considering flood risk from surface water, groundwater and ordinary watercourse.

3.2 LFRMS Updates

Leicestershire's first LFRMS was adopted in 2015. Since this document was produced, the knowledge of the broad nature and extent of flood risk across Leicestershire has grown.

In Section 9 "Monitoring and Review" of the LFRMS it stated that 'the review triggers will be discussed with the Flood Risk Management Board (FRMB) and a decision made as to whether the strategy requires a full or partial review'. A discussion was undertaken and subsequently it was determined that a full review and update of the LFRMS was necessary. This is due to increased knowledge and understanding of the nature and extent of flood risk across Leicestershire, to ensure national strategy consistency, by recommendation of Scrutiny and to increase public engagement.

On this basis, it was determined that the 2015 LFRMS should be revised to facilitate continued statutory compliance, improved action planning and partnership working, improved resource efficiency and support for funding applications, and improved community understanding and engagement to facilitate management of flood risk within Leicestershire.

In order to achieve this, LCC has identified five overarching principles for the strategy:

- Organisational partnership working.
- Working with communities.
- Delivering multiple benefits.
- Adapting to climate change.
- Taking a risk based approach.

These overarching principles have informed a framework of objectives and "measures". The objectives of the draft strategy are:

- 1. To manage local flood risk through the effective management of flood risk assets, watercourses, and catchments.
- 2. To endeavour to manage local flood risk through supporting and encouraging sustainable development.

- 168
- 3. To manage local flood risk through effective preparedness, response to, and recovery from flood events.
- 4. To better understand local flood risk and impacts, informing approaches to managing this risk.

"Measures" proposed at this stage (in accordance with the Flood and Water Management Act) for achieving the LFRMS objectives are procedures and general approaches to how flood risk will be managed across Leicestershire, including how LCC and its partner organisations can work together to investigate and manage flooding issues now and in the future. This includes, for example, the coordination and monitoring of a multi-agency local flood risk communications and engagement plan for Leicestershire.

3.3 Study Area

The study area for the LFRMS is within the administrative boundary of LCC.

Leicestershire is a non-metropolitan county, located in the East Midlands, England (see Figure 3-1). The area consists of the following local authorities:

- Blaby District Council;
- Charnwood Borough Council;
- Harborough District Council;
- Hinckley and Bosworth Borough Council;
- Melton Borough Council;
- North West Leicestershire District Council; and
- Oadby and Wigston Borough Council.

The City of Leicester is located at its centre but is administered separately from Leicestershire County Council's local authorities, therefore it is not covered within this LFRMS.



Figure 3-1 Leicestershire County Council Location

IKH-JBAU-XX-XX-RP-EN-0001-S0-P03-SEA_Environmental_Report

JBA

3.4 Historic flooding in the Study Area

There have been several recorded flood incidents across Leicestershire from a combination of sources.

According to past flooding records (LCC, 2017), flooding events in Leicestershire prior to 2017 have been predominantly characterised as flash floods, with several natural floods also recorded. Flash floods are characterised by an immediate increase in peak flows, a steeper rising limb, and a shorter duration. Notable and more severe flood events to affect the county include the 1947 and Easter 1998 flood events. Several rural settlements have also been affected by the December 1999, 2000, summer 2007, January 2008 and November 2012 flood events. Communities which have experienced frequent flooding include Market Harborough, Melton Mowbray, Great Glen, Burton Overy and Anstey. Several sources of flooding have been identified across the county and include: fluvial; surface water; sewer; and flood incidents associated with water infrastructure issues such as culvert blockages or insufficient capacity in the sewer network.

During 2012 and 2013, there were several flash flood events localised to Loughborough (LCC, 2014a) and Market Harborough (LCC, 2014b) with the most significant of which recording structural damage to five properties in The Square, Market Harborough. In 2016, a significant flood event occurred in Whitwick and Thringstone (LCC, 2021a). Flooding occurred over two days, with probability estimated to be between a 1-in-20 and 1-in-50 rainfall events. Various sources are thought to have contributed, primarily natural exceedance of Main River, sewer and highway drainage and surface runoff from surrounding land resulting in flash floods.

Between June 2019 and February 2020, Leicestershire received significantly higher than average rainfall which led to a number of severe flooding events.

Multiple flood incidents have occurred in the Appleby Magna area during the periods of November 2019 and February 2020. These events resulted in the ingress of storm flood water to 16 residential properties and external flooding to 25 additional properties. As a result of intense rainfall onto an already waterlogged catchment, the local drainage highway, and public sewer networks were rapidly inundated, overwhelmed and surcharged. This caused high volumes or surface water to enter the Meadow Brook (also known locally as 'Appleby Brook') which quickly overwhelmed the brook's capacity and caused extensive fluvial and foul water flooding which subsequently entered residential properties (LCC, 2021b).

Under Section 19 of the Flood and Water Management Act, Leicestershire County Council, in their role as the LLFA, publish investigation reports detailing severe flooding events.

Since 2017, Leicestershire County Council have published reports covering the following communities and events:

- Thornborough Road, Coalville December 2017;
- Watling Street, Hinckley December 2017;
- Paterson Place, Shepshed April 2018
- Loughborough Road, Mountsorrel July 2019;
- Main Street, Leire July 2019;
- Main Street, Cossington October 2019;
- Stoney Stanton October 2019;
- Barrs Way, Mountsorrel October 2019;
- Bramcote Road, Loughborough October 2019;
- West End, Long Whatton November 2019;
- Appleby Magna November 2019 and February 2020;
- Buckthorn Way, Great Glen December 2019;

IKH-JBAU-XX-XX-RP-EN-0001-S0-P03-SEA_Environmental_Report

JBA





- Redmile village February 2020;
- Newtown Linford June 2020.

3.5 Future flood risk

There is considerable uncertainty regarding the localised impact of climate change, but it is likely that the risk of flooding will increase under current climate change scenarios.

The climate in the UK is generally anticipated to shift towards warmer, wetter winters and hotter, drier summers (Met Office, 2022). Climate change is increasing the frequency and magnitude of hazardous weather events such as flood and heatwaves.

A review of recent evidence of the anthropogenic intensification of short-duration rainfall extremes concluded that heavy rainfall extremes are intensifying (Fowler et al. 2021). Combined with warmer, generally drier summers, the harder ground struggles to instantly absorb water from rainfall – which in turn intensified the frequency of flash flooding (Met Office, 2022).

This increased risk could manifest itself as more frequent flooding, increase in flood extent and increase in flood depth.

4 Stage A: Scoping Stage Findings

Stage A of the SEA process involves gathering evidence to help set the context and objectives, establish the environmental baseline and determine the scope of the SEA.

The Scoping Report produced as part of Stage A outlined the findings of the evidence gathering and the scope of the SEA.

Table 4-1 below describes the SEA topics which were scoped into the assessment. Further details on the environmental baseline for each of the topics is provided in Section 5: Environmental Characteristics and Key Issues.

SEA	Definition in	Relevance
Regulations	relation to	
Requirements	this report	
Biodiversity (including flora and fauna)	Designated nature conservation sites; protected and notable species and habitats; trends in condition and status; invasive non- native species (INNS).	Potential impact on designated and priority habitats both from the LFRMS and a scenario without it. There is the potential for both positive and negative impacts as a result of the LFRMS. Potential impacts to protected species and sites must be considered throughout development and implementation of the LFRMS.
Climatic factors	As the LFRMS is a flood risk strategy, this topic will focus on	Scope to include greenhouse gas emissions only (e.g. embodied carbon and emissions from plant and vehicles).
	emissions. Flood risk and adaptation to climate change will be assessed under each of the other SEA topics.	The impact of climate change on flood risk will be considered as part of the LFRMS itself. In addition, the LFRMS is unlikely to have a significant impact on climate.
Cultural heritage	Designated and non- designated heritage assets, including historic landscapes; pressures on heritage assets (including changes to setting).	Flooding and flood risk management measures have the potential to impact sites and monuments of archaeological and historical importance, including listed buildings and Scheduled Monuments.
Human health	Trends and patterns in human health, including life	People, properties and settlements potentially affected by flood risk, as well as the community infrastructure around them.
	expectancy.	The LFRMS has the potential to provide benefits to the population of the study area by managing flood risk.
Landscape	National and local landscape character; protected and notable landscapes; key local landscape features.	Local landscape qualities and integrity across the study area could be affected by changes to the way watercourses and flood risk is managed in the area. Furthermore, impacts on locally important urban and rural landscapes and landscape features may occur, for example as a result of flood defence construction.
Material assets	Critical infrastructure (including transport and other	The study area contains several important infrastructure assets including motorways and railways. Flooding may compromise the

Table 4-1 Environmental Topics Scoped in

JBA
consulting

SEA	Definition in	Relevance
Regulations	relation to this report	
	infrastructure), community services; and Green Infrastructure	function of these assets and the LFRMS must take this into account.
Population	Population trends and demographics; education; inequality and deprivation; key community facilities; recreation opportunities; trends and patterns in human health.	People, properties and settlements potentially affected by flood risk, as well as the community infrastructure around them. The LFRMS has the potential to provide benefits to the population of the study area by managing flood risk.
Soil	Variety of rocks, minerals and landforms; the quantity and distribution of agricultural land including the highest quality soils; soil health and functions; designated geological sites; land contamination.	Flooding has the potential to affect geodiversity and soil quality, which support designated sites within the area. Flood risk management of potentially contaminating land uses or sources of land (or water) contamination. Conversely, flooding may provide a beneficial effect through mitigation such as natural flood management processes, catchment sensitive farming and soil erosion reduction.
Water	The availability/supply and quality of water. It considers in turn surface and groundwater resources, chemical and biological water quality; surface and groundwater resources.	Flood risk management has the potential to impact on water availability and quality within the study area and WFD objectives. There is also the potential for indirect impacts on water dependent designated sites/ species. Impact on water resources and quality must be considered in developing the strategy. Effects on flood risk have not been considered as an explicit theme or topic within the SEA.
Interrelationship between the above factors	The relationship between environmental features and issues	The effect of known proposals/commitments.

The LFRMS and SEA have been influenced by many different plans and programmes. This is recognised by the SEA Regulations, which require a review of relevant plans and programmes to be completed in the preparation of documents.

Key international, national, regional and local documents were reviewed as part of the SEA Scoping stage. The full review can be found in Appendix B. The review process has provided a valuable source of information and a framework for developing different components of the LFRMS and SEA. In particular:

- At a high level, key legislation and national policies provided the planning context for the LFRMS; and
- Regional and local documents provided a valuable source of baseline information and identified local priorities and objectives as well as conditions that the LFRMS and SEA should adhere to'.



As part of the SEA process, an assessment of the integration of existing policies, plans and programmes on the LFRMS has been undertaken. This is required under Schedule 1 of the SEA Regulations:

a) 'the degree to which the plan or programme sets a framework for projects and other activities either with regard to the location, nature, size and operating conditions or by allocating resources.

b) The degree to which the plan or programme influences other plans and programmes including those in a hierarch;

c) The relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development.



5 Environmental Characteristics and Key Issues

5.1 Introduction

A desk-based study for baseline environmental data was undertaken to identify the key environmental characteristics within the Leicestershire County Council area. This section presents a summary of the findings of the desk-based study in topic specific sections, as detailed in the SEA Scoping Report.

The baseline information may require updating throughout the duration of the SEA process as the LFRMS is developed further and new information becomes available.

5.2 Landscape and Visual Amenity

The primary use of the Leicestershire landscape is agriculture, with arable cultivation dominating. As outlined by Natural England, the Leicestershire County Council area encompasses a number of National Character Areas (NCAs), as follows:

- NCA 48 Trent and Belvoir Vales: characterised by undulating, rural and arable farmland, centred on the River Trent. The southern edge of the Vales is defined by the adjacent Leicestershire and Nottinghamshire Wolds NCA.
- NCA 69 Trent Valley Washlands: comprises the river flood plain corridors of the middle reaches of the River Trent's catchment. It is a narrow, linear and low-lying landscape, clearly delineated by higher ground. The NCA is mainly comprised of the flat flood plains and riverine gravel terraces.
- NCA 70 Melbourne Parklands: is a rural landscape of rolling farmland, ancient (between the ancient forests of Needwood and Charnwood) and plantation woodland. 18 Moreover, as the name suggests, a cluster of landscaped parklands with grand country houses.
- NCA 71 Leicestershire and South Derbyshire Coalfield: consists of a plateau with unrestricted views of shallow valleys and gentle ridges which become less pronounced in the south. The NCA borders Charnwood National Character Area in the east and to the north the Melbourne Parklands NCA. The landscape is in continuing transition from a landscape scarred by abandoned collieries, spoil tips and clay pits to a mix of woodland and commercial developments woven into the rural landscape.
- NCA 72 Mease/Sence Lowlands: largely agricultural landscape centred around the rivers Mease, Sence and Anker The area extends across Leicestershire in the east and Staffordshire in the west.
- NCA 73 Charnwood: This area consists of a mosaic of heathland, farmland, parkland and woodland. It is a relatively well wooded landscape, with many areas of mixed, deciduous and coniferous woodlands. The western part of Charnwood lies within The National Forest. It is situated between Coalville, Loughborough and Leicester.
- NCA 74 Leicestershire and Nottinghamshire Wolds: The NCA forms part of a belt of Wold landscapes formed by gently dipping Jurassic rocks which stretch from the Cotswolds to Lincolnshire. The area includes the market town of Melton Mowbray.
- NCA 75 Kesteven Uplands: rolling, mixed farming landscape dissected by the rivers Witham and the East and West Glen. The majority falls within Lincolnshire.
- NCA 89 Northamptonshire Vales: Although proportionately smaller within the county, This NCA area adjoins the Leicestershire Vales NCA to the north-west and has many similar characteristics.

- JBA consulting
- NCA 93 High Leicestershire: As a majority feature of the county, to the east of Leicester, this NCA rises out of the clay of the Leicestershire and Northamptonshire Vales on the western and southern sides and above the lowland plains of the Soar, Wreake and Welland valleys. This landscape of wide, rolling ridges and secluded valleys has a remote and rural character with small villages and farmsteads. The majority of the NCA is classified as rural, despite skirting the eastern edge of Leicester and Uppingham with the A47 across the centre of the NCA.
- NCA 94 Leicestershire Vales: This NCA is a large, open, regular landscape composed of low-lying clay vales disrupted by an array of varied river valleys. The NCAs sense of place comes less from its overall landform and more from its dominant settlements such as nearby Leicester, which overlooks the north-east of the NCA. The northern urban area contrasts strongly with the more rural southern area where farmland is mostly found.
- NCA 95 Northamptonshire Uplands: This NCA is the southernmost (bordering) within the county, an area of rolling limestone hills and valleys with several major rivers; the Cherwell, Avon, Welland, Tove, Ouse, Nene and Ise.

5.2.1 Key Issues

Local flooding has the potential to affect local landscape characteristics in Leicestershire. This includes impacts on existing character areas and on the setting of local landmarks and landscape features. The key issues relating to the landscape and visual amenity are summarised below:

- Alteration of existing landscapes due to increased flooding.
- Disturbance to existing views.

To maintain the landscape within the county, the LFRMS should consider and take account of the key issues.

5.3 Biodiversity, Flora and Fauna

5.3.1 Statutory protected sites

The Leicestershire area encompasses many high-quality environments which have been recognised through international, national and local ecological designations.

Statutory protected sites include:

- Special Areas of Conservation (SAC): designated to conserve habitats and species listed on the European Council Directive 92/43/EEC (the Habitats Directive). SACs are protected by the Conservation of Habitats and Species Regulations 2017 (as amended), and the Conservation of Offshore Marine Habitats and Species Regulations 2017;
- Sites of Special Scientific Interest (SSSI): areas which are of special interest due to its flora, fauna, geological, geomorphic, or physiographical features and are designated under the Wildlife and Countryside Act 1981 (as amended);
- National Nature Reserve (NNR): protected areas under the Wildlife & Countryside Act 1981 (as amended);
- Local Nature Reserve (LNR): declared and managed by district and county council under the National Parks and Access to the Countryside Act 1949 due to biological, geological, educational, or public interest importance; and

Non-statutory sites include Local Wildlife Sites (LWS), which are areas with a considerable nature conservation value selected due to important habitats and species within a region (JNCC 2019; The Wildlife Trusts, 2021).



There is one European designated site (National Site Network site), River Mease SAC, within the study area. The River Mease is also nationally designated as a SSSI.

Rutland Water (Special Protection Area, Ramsar Wetland & Nature Conservation Review sites:) lies 30 km east of Leicester outside of the administrative boundaries of the Leicestershire area.

Leicestershire is amongst the poorest counties in the UK for sites of recognised nature conservation value. The very best sites (Sites of Special Scientific Interest, SSSI) represent only about 1.3% of the land area. As of 2018, there are 76 SSSIs in the county. Table 5-1 below includes descriptions of national and international statutory designated sites and are derived from the relevant Natural England citations.

Table 5-1 Statutory designated sites within Leicestershire (excluding 76 SSSI's)(NE, 2022)

Site	Designation	Qualifying features
River Mease	SAC, SSSI	River Mease (23 ha) runs between Alrewas in Staffordshire and Packington in Leicestershire. The river has a nationally significant freshwater fish population of two species; the spined loach and bullhead. Freshwater white-clawed crayfish and otter are also found. The SSSI contains habitats such as riffles, pools, slacks, vegetated margins and varied amounts of bank tree cover. As well as courses of plain to montane levels with R. fluitantis.
Charnwood Lodge	NNR	Charnwood Lodge (80 ha) is an important geological site, with rocks that are amongst the oldest in England. Around 600 million years ago Charnwood was part of a volcanic island chain.
Cribbs Lodge Meadows	NNR and SSSI	Cribbs Meadow (4 ha) is an important lowland grassland site.
Muston Meadows	NNR	 Muston Meadows (9 ha) is one of the finest lowland meadows in England. The meadows are rich in plant life, with 33 types of grass and over 100 other species of flowering plant. The reserve is most notable for its colony of over 10,000 green-winged orchids. <i>Significant features of interest include:</i> Green-winged orchid, lady's bedstraw, yellow rattle, pepper saxifrage and cowslip Great crested newt Skylarks, meadow pipits, yellowhammers, linnets and whitethroats Voles and bats

A high-level strategic natural capital study of Leicester and Leicestershire (LLEP, 2021) presented analyses on several ecosystem services directly derived from water and the associated environment. The study asserts that the diverse economy of Leicestershire is underpinned by benefits that flow from the area's natural capital assets and ecosystem



services, such as opportunities that might exist in managing flood risk. This includes regulation of flooding and atmospheric gases by woodlands – as seen below in Table 5-2.

Table 5-2: Annual physical and monetary flow of ecosystem services ofLeicestershire county (using EA NCRAT 2021 tool)

Ecosystem Service	Annual Physical Flow	Annual Monetary Flow (£M)
Flood storage by woodlands	1.05 million m ³	0.46
Water Quality	-	1.77
Water Supply	20.71 million m ³ /year	40.44
Carbon Sequestration	40,134 tCO ₂	4.33

Local reports also reflect the area need for green infrastructure interventions. The Landscape Sensitivity and Green Infrastructure Study for Leicester & Leicestershire (2016) highlighted a range of GI interventions which can delivered at small sites in the study area, including:

- Tree planting;
- Transforming paved areas to 'pocket' parks;
- Habitat enhancement along river corridors;
- Opening up culverted brooks;
- Rain gardens;
- SuDS;
- Adapting maintenance of green spaces to improve biodiversity;
- Building-mounted features such as green roofs and walls; and/or
- Improve drainage for parks and green corridors.

Additional considerations for the implementation of green infrastructure are as follows:

- Planting of native species.
- The removal and treatment of invasive non-native species (INNS)
- Where appropriate, consider building floating structures such as the use of Biomatrix floating coir mats.
- Weir removal should be considered to improve fish passage, particularly for migratory species.
- Consider larger scale improvements, including the re-naturalisation of rivers and making space for water.

5.3.2 Leicester, Leicestershire and Rutland Biodiversity Action Plan (LLR BAP)

The LLR BAP identifies objectives for the conservation and enhancement of biodiversity within the Council area and describes targets and actions that will help to deliver these objectives. The plan identifies three main components for the conservation and enhancement of biodiversity within the Council area. These are:

- To promote the restoration, management and creation of BAP priority habitats;
- To promote the creation of new wildlife habitat in the wider countryside;
- To survey, monitor and promote favourable management of existing good sites through the Local Wildlife Sites system. (L&RWT, 2016).



Numerous priority species and habitats of principal importance listed in Section 41 of the Natural Environment and Rural Communities Act are known to be present in Leicestershire and are included in the LLR BAP. These are summarised in Table 5-3 and Table 5-4Table 5-4 below.

 Table 5-3 Priority species of principal importance Leicestershire

Туре	Species	
Plants	Black Poplar	
	Purple Small-Reed	3
	Violet Helleborine	
	Wood Vetch	
Invertebrates	Black Hairstreak Butterfly	
	Dingy Skipper	
	Grizzled Skipper	
Birds	Barn Owl	
	Nightingale	
	Nightingale	
	Sand Martin	
	Swift	
	Swallows	
	House Martins	
Mammals	Bats	
	Dormouse	
	Otter	
	Water Vole	
Invertebrates	White-clawed Crayfish	

Table 5-4 Priority habitats of principal importance Leicestershire

LLR BAP Habitat
Broad-leaved woodland
Wet woodland
Lowland wood-pasture and parkland List of historic parklands
Hedgerows
Mature trees
Eutrophic standing water
Mesotrophic lakes
Floodplain wetland
Reedbed
Fast-flowing streams
Sphagnum ponds
Springs and flushes
Neutral grassland
Heath grasslands

IKH-JBAU-XX-XX-RP-EN-0001-S0-P03-SEA_Environmental_Report

Calcareous grassland	
Roadside verges	
Field margins	
Rocks and built structures	
Urban habitats	
Broad-leaved woodland	
Rivers	

The LFRMS should also consider the wider UK BAP species which are not captured in the Local BAP. In particular, the following fish species should be considered:

- European Eel (Anguilla Anguilla)
- Spined Loach (Cobitis taenia)
- River Lamprey (Lampetra fluviatillis)
- Brown/ Sea Trout (Salmo trutta).

5.3.3 Habitats Regulations Assessment

Under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, a screening assessment must be carried out for any plan or project which may impact on the protected habitats or species, with a Habitats Regulations Assessment (HRA) to be undertaken if there is a possibility of a significant effect. Mitigation or avoidance measures must then be applied should the HRA determine that significant adverse effects on site integrity, in view of a site's conservation objectives, are likely. HRA screening has been undertaken to consider potential direct or indirect adverse effects on the River Mease SAC to ensure the integrity of the site is not compromised.

A HRA has been produced for the LFRMS plan. It concludes that:

- Due to the high-level and strategic nature of the objectives and measures proposed, and the lack of proposals for physical works on the ground in the vicinity of European Sites, all of the LFRMS objectives and measures can be screened out.
- Leicestershire LFRMS will not have significant effects, either alone or incombination with other plans/strategies, on any European sites.
- As no likely significant effects have been identified, there is no need for Appropriate Assessment.

5.3.1 Key Issues

The key issues relating to ecological receptors in Leicestershire are summarised below:

Sensitive designated sites for nature conservation, including priority habitats and species, which are at increased risk of flooding due to surface water flooding and groundwater flooding.

Many of the statutory and non-statutory designated nature conservation sites within Leicestershire are dependent on specific hydrological regimes and support water-dependent habitats and species. Flooding may introduce contaminated or nutrient enriched waters to be designated sites which could adversely import on interest features. Flooding and flood risk therefore has the potential to adversely impact upon water levels and hydrological regimes of these sites; however, some sites may also have the potential to be enhanced by the management measures within the LFRMS.

To maintain and improve existing habitats, species and ecologically designated sites, the LFRMS must consider and take account of the issues outlined above.

Often traditional flood risk management methods can result in the physical modification of water bodies. The LFRMS should consider how to implement natural flood management IKH-JBAU-XX-XX-RP-EN-0001-S0-P03-SEA_Environmental_Report 17

JBA



methods which may deliver multiple benefits such as maintaining and restoring biodiversity whilst providing recreational green infrastructure.

5.4 Water environment

5.4.1 Watercourses

The River Soar flows northwards through the centre of the county. It crosses over the Warwickshire border between Hinckley and Lutterworth, before flowing through 'Greater' Leicester and onwards to the east of Loughborough. It continues north out of Leicestershire before meeting the River Trent in neighbouring counties Derbyshire and Nottinghamshire. The River Avon and River Welland are two other important rivers, and together form the southern boundary of the county.

Several other rivers in the area include the River Mease, River Sence, Tweed River, River Swift and River Welland. As well as rivers, the Leicester Line of the Grand Union Canal, Charnwood Forest Canal and Ashby Canal are also located within Leicestershire.

Ordinary watercourses in the area include ditches, streams and culverts that are not classified as Main River by the Environment Agency. They can include ditches that are only wet for part of the year. Ordinary watercourses are present throughout the county.

5.4.2 Water Resources

Severn Trent Water and Anglian Water are responsible for the water supply across the area. Water is obtained from reservoirs, abstractions and boreholes. Whilst the area is predominantly supplied by Severn Trent Water, small parts of Harborough and Melton are Anglian Water regions (JBA, 2017).

The Severn Trent area is classified by the Environment Agency as a seriously water-stressed area. However, Severn Trent Water anticipates a 'significant deficit will develop between supply and demand for water over the medium term unless we act'. The Water Resources Management Plan (WRMP) acknowledges the prevention of environmental deterioration. Including finding alternative means of meeting demand to protect the environment.

The WRMP also recognises climate change uncertainty as a continued risk and impact on water resources. The application of UKCP09 data reveals that all climatic scenarios point to a long-term loss of deployable output due to changing weather conditions.

The Anglian Water supply region is also identified as an area of 'serious' water stress.

5.4.3 Water Quality

The study area falls across three separate River Basin Districts; Humber, Severn and Anglian, of which the most overlap coincides with Humber. Associated management catchments are Tame Anker and Mease, Soar (the largest in Leicestershire), Welland and Avon Warwickshire. Management catchments are further broken down into operational catchments.

Associated operational catchments include Soar River, Wreake River, Welland Upper, Mease rivers, Nottinghamshire South B, Avon Rural Rivers and Lakes and Sence, Anker and Bourne Rivers and Lakes.

Table 5-5, Table 5-6 and Table 5-7 below outline the hydromorphological designation, ecological status and chemical status of WFD water bodies. These water bodies include both rivers and lakes. The results show that most water bodies in Leicestershire based operational catchments are natural, of moderate ecological status and fail in chemical status. Whilst some water bodies are partially or wholly external to the Leicestershire administrative boundary, certain hydromorphological functions may be affected by activities within Leicestershire if upper catchments are located in the area.


Table 5-5 Hydromorphological designation of water bodies within Leicestershire operational catchments

Hydromorphological Designation of Water Bodies					
Operational Catchment	Natural	Artificial	Heavily Modified		
Mease River	3	1	0		
Soar River	26	2	7		
Welland Upper	10	0	0		
Wreake River	16	0	0		
Avon Rural Rivers and Lakes	4	0	2		
Sence Anker and Bourne Rivers and Lakes	6	1	0		
Total	65	4	9		

Table 5-6 Ecological status of water bodies within Leicestershire operational catchments

Ecological Status (Water bodies) - Status or potential (2019)					
Operational Catchment	Bad	Poor	Moderate	Good	High
Mease River	0	2	1	1	0
Soar River	1	9	23	1	0
Welland Upper	0	5	3	2	0
Wreake River	0	3	13	0	0
Avon Rural Rivers and	0	1	3	2	0
Lakes					
Sence Anker and Bourne	1	2	3	1	0
Rivers and Lakes					
Total	2	22	46	7	0

Table 5-7 Chemical status of water bodies within Leicestershire operational catchments

Chemical status		
Operational Catchment	Fail	Good
Mease River	5	0
Soar River	35	0
Welland Upper	10	0
Wreake River	16	0
Avon Rural Rivers and Lakes	6	0
Sence Anker and Bourne	7	0
Rivers and Lakes		
Total	79	0

River Basin Management Plans (RBMPs) are prepared under the WFD and assess the pressure facing the water environment in River Basin Districts. The updated 2022 Anglian, Humber and Severn RBMPs identified a number of pressures on the water environment and significant water management issues.

Generally, Anglian, Humber and Severn water bodies are classified as 'moderate' ecological status. Below are specific priority river basin management issues for several catchment partnerships (as described at the RBMP District level).

- JBA consulting
- Welland water pollution from agriculture; flood alleviation; habitat quality and hydromorphology.
- Soar water pollution from urban and rural areas, specifically phosphates; habitat quality; and hydrology.
- Tame, Anker and Mease diffuse pollution from urban and rural areas, habitat quality; and hydrology.

Groundwater is important for public water supply within Leicestershire. Impacts on groundwater are broadly related to land use, with agricultural areas representing a major source of nitrates. There are two main areas of Source Protection Zone (SPZ), which are located in North West Leicestershire – both are SPZ3 – which are areas around a supply source within which all the groundwater ends up at the abstraction point.

The entire area is covered by the combined Nitrate Vulnerable Zone (e.g., Soar), a designated area at risk from agricultural pollution which may lead to nitrate pollution of waters (Environment Agency, 2021).

Following the introduction of nutrient neutrality notification (2022) for the River Mease SAC, to improve nutrient levels, new development in affected areas such as Ashby de-la Zouch, Packington, Measham, Oakthorpe, Blackfordby, Norris Hill and part of Moira would have to contribute to a Developer Contribution Scheme; this begins a strategic approach to off-setting the negative effects of development – this will fund short-term projects – such as the installation of silt traps.

Prior to notification, a restoration plan for the River Mease has been produced (2012). The plan intends to provide a framework for the improvement of the River Mease SSSI/SAC for the next 20-30 years (2012-2042), with the aim being to identify river restoration or enhancement actions that can address physical modifications to the River Mease SSSI/SAC. The plan includes: determining the impacts of physical modification; developing plans for the river on a reach-by-reach basis; and identifying potential delivery mechanisms.

5.4.4 Summary of Key Issues

The key issues relating to the water environment within the study area are summarised below:

- Water quality Whilst generally, the hydromorphological status of Leicestershire's water environment is natural, both the ecological status/potential (predominantly moderate) and chemical status/potential reveal (all fail) indicate water quality issues within the local area. For the Soar catchment, key issues causing water quality problems arise from overflows from sewage works, surface water runoff from industrial workings and the road network.
- Increased pressures on water resources Leicestershire's water resources are not classified as 'water stressed' although action is likely to be taken to increase capacity to address future deficits driven by climate change, Water Framework Directive and population growth.

5.5 Geology and Soils

The geology of a catchment can be an important influencing factor on the way that water runs off the ground surface. This is primarily due to variations in the permeability of the surface material and bedrock stratigraphy.

The bedrock geology of Leicestershire County Council Area is composed of several predominant bedrock formations & members, including; Branscombe Mudstone Formation, Blue Lias Formation, Charmouth Mudstone Formation, Edwalton Member and the Gunthorpe Member. Almost the entire study area is designated as being Secondary A, or Secondary B aquifer, with minimal principal aquifer.

Superficial deposits in Leicestershire are primarily comprised of a terrigenous sedimentary deposit (Oadby Member – Diamicton), whilst alluvium - clay, silt sand and gravel are found



interspersed around main river channels such as the River Soar – which runs south through Leicester to Loughborough.

There are 23 confirmed locally designated geological sites (LGeoS – formerly named Regionally Important Geological and Geomorphological Sites (RIGS)) within Leicestershire as outlined below and shown in Figure 5-1 (Leicestershire and Rutland Environment Records Centre, 2022).

- West of Charnwood and southwest of Loughborough: Newhurst Quarry, Ives Head Dyke, Morley Lane Quarry, Longcliffe Quarry, Ulverscroft, South Quarry and Bucks Hill
- In close proximity of Charnwood: Mountsorrel Buddon Wood Quarry and Old quarry at Swithland Reservoir
- West of Leicester: Groby Quarries and Park Breccia at Bradgate Park.
- Proximate to Woodhouse Eaves: Windmill Hill and Forest Rock
- Within Blaby: Croft Quarry, Croft Pasture, Narborough Bog, Stoney Cove, Granitethorpe and Sapcote Quarry.
- East of Harborough: Slawston Railway Cutting, Great Merrible Wood, Sauvey Castle and Tilton Railway Cutting.
- North West Leicestershire: Acresford Quarry, Dimminsdale Mine & Quarry, Breedon Hill Quarry, King's Mills and Quarry Hill Plantation, Cloud Hill Quarry, Ogasthorpe quarry, Grace Dieu, Whitwick Quarry, Bardon Quarry, Cliffe Hill Quarry, Bradgate Home Farm Quarry and Cadeby Gravel Pit.
- Melton: Sproxton Quarry, Stonesby Quarry, Old Dalby Cutting, Gaddesby Erratic and Burrough on the Hill.

There are also 19 SSSIs that have been designated for geological importance.



Figure 5-1 Locally Designated geological sites in Leicestershire.

Soil classifications by the Soil Landscapes Online Viewer (Defra, 2022) have classified the study area as containing multiple soil landscapes. The study area is predominantly categorised as 'Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils'. This soil landscape impedes drainage which may result in severe winter waterlogging as the result of very wet ground conditions; a possible factor of flood-risk. The land cover for this soil type is mainly grassland, arable and some woodland.

The Provisional Agricultural Land Classification (ALC) published by Natural England (2020) classifies agricultural land into five grades with grade one the best quality and grade five the poorest quality. The majority of the study area is classified as Grade 3 (good to moderate) with some scattered areas of Grade 1 and 2 (Excellent Quality Agricultural Land and Very Good Quality) surrounding Loughborough and the north of the county.

This is displayed in Figure 5-2 against flood risk zones 2 & 3. The figure displays that most of the best quality agricultural land in within close proximity to the Soar River – particularly for flood zone 3, north of Loughborough.

JBA





185

Figure 5-2: Provisional Agricultural Land Classification (ALC) against Flood Risk Zones (2/3)

Contaminated land contains substances in or under the land that are actually or potentially hazardous to health or the environment. Landfill sites are areas of potential contamination. There are 309 historic landfill sites within the study area. Figure 5-3 shows the location of these landfill sites alongside the Environment Agency Flood Zones (2 and 3).





Figure 5-3: Historic Landfill Sites in Leicestershire.

5.5.1 Key Issues

The geological context of the study area, including geological designations is outline above. The key issues are summarised below:

- Local flood risk may result in contaminants leaching into surface water, increasing levels of pollution, and threatening human health and the environment; and
- Risk of damage or disturbance to geologically designated sites including LGeoS and geologically designated SSSIs.

The LFRMS must consider the issues outlined above to prevent erosion of landfill waste into watercourses which would threaten human health and the environment.

5.6 Historic Environment

There are a number of heritage assets with the study area, reflecting a rich and diverse built and historic environment.

Leicestershire contains approximately 4,031 listed buildings, 2.0% of these are Grade I listed buildings, 7.3% are Grade II* and 90.7% are Grade II listed.

Leicestershire also contains 182 scheduled monuments, these are awarded protection against potentially damaging activities, including those associated with development, under the Ancient Monuments and Archaeological Areas Act 1979. There are also 14 Registered Parks and Gardens - Grade II* (3) & Grade II (11) shown in Figure 5-4. There is one registered battlefield within Leicestershire, the Battle of Bosworth (Field) 1485, located within Hinckley and Bosworth.

The Leicestershire and Rutland Historic Environment Record (HER) provides a comprehensive gazetteer of the previously recorded heritage assets within the historic environment of the the study area. The purpose of which is to alert applicants, planning teams and other land use managers to potential impacts on heritage that would need to be addressed in line with



relevant legislation and the National Planning Policy Framework (NPPF). There is also the potential for unknown archaeological features to be present across the study area.

There are 10 assets on the Heritage at Risk Register, which are assets at risk as a result of neglect, decay or inappropriate development – or have the potential to become so. These are:

- Church of St. Margaret of Antioch Grade II North West Leicestershire;
- Church of St. Mary, Coleorton Grade II* North West Leicestershire;
- Church of St. John the Baptist Grade II* Melton;
- Church of St Michael, Ravenstone Grade II* North West Leicestershire;
- Church of St Michael and All Angels Grade II* North West Leicestershire;
- Church of St Mary and St Hardulph Grade I North West Leicestershire;
- Snibston Colliery Scheduled Monument North West Leicestershire;
- The Royal Hotel, Ashby-de-la-Zouch Grade II* North West Leicestershire; and
- Chapel of the Holy Trinity, Staunton Grade I North West Leicestershire.



Figure 5-4 Designated heritage assets within Leicestershire

5.6.1 Key Issues

There are a variety of heritage assets present within the study area. The key issues are summarised below:

- Potential flood-related damage to many historical, cultural and archaeological features within the study area due to changed water levels or through the force and inundation of flood waters.
- Watercourses and their surrounding fluvial landscapes are important component of the historic environment, containing a wider range of heritage assets.

IKH-JBAU-XX-XX-RP-EN-0001-S0-P03-SEA_Environmental_Report



The provision of flood protection provided by the LFRMS must consider the potential consequences for the historic environment.

5.7 Population

The population of Leicestershire is estimated to be 712,300 (ONS, 2021) an increase of over 61,811 people from 2011 census data.

5.7.1 Health

The general health of the population of Leicestershire is slightly better than that of England and Wales as a whole. According to the Leicestershire County Council Community Insight Survey (2017-2021), 82.7% of respondents reported being in good/very good health, whilst 3.5% reported being in bad/very bad health (England and Wales: 81.2% and 5.6% respectively).

The life expectancy for women is 84.1 years of age and is higher than that for men who have a life expectancy of 80.5 years (Office for Health Improvement and Disparities, 2019). Approximately 5.3% of adult mortality (30+) in 2020 (new method) was attributable to particulate air pollution, compared to 5.1% in England.

5.7.2 Deprivation

In 2019, Leicestershire is one of the 20% least deprived counties/unitary authorities in England, however, about 10.9% (12,415) of children live in low-income families.

The Indices of Multiple Deprivation (IMD) is based on 39 criteria which cover the seven key themes of deprivation. The IMD splits each local authority into Lower Super Output Areas (LSOA) which have an average population of 1500 people or 650 households, to further breakdown and compare data.

The IMD deciles are calculated by ranking the 32,844 LSOAs in England from most to least deprived. LSOAs in decile 1 fall within the most 10% deprived of LSOAs nationally and LSOAs in decile 10 falls within the least deprived 10% of LSOAs nationally.

Leicestershire is ranked 137th out of 152 upper tier authorities in England for Multiple Deprivation, where 1st is the most deprived. Overall, IMD (2019) data reveals that the rank of proportion of LSOAs in most deprived 10% nationally for the Leicestershire is 114 (out of 130).

However, pockets of significant deprivation exist; 4 neighbourhoods in the county fall within the most deprived decile in England. These areas are found in Loughborough (Loughborough Bell Foundry and Loughborough Warwick Way - LSOAs) and 2 in the Greenhill area of Coalville.

5.7.3 Summary of Key Issues

The key issues relating to the population and health of the study area are outlined above and summarised below:

- Growing population leading to increased demand for water resources and development.
- Areas of deprivation and local flood risk exposure inequality in the area.

The provision of flood management strategies provided by the LFRMS should consider the potential consequences for the local population.

5.8 Material Assets

As outlined within the Leicestershire Local Transport Plan (2014), the County is a midlands transport hub, the major settlements in Leicester and Leicestershire are connected by a number of important A-class roads, predominantly in a radial pattern linking Leicester to the county towns in Leicestershire. Also, Leicester and Leicestershire provide proximity to the M1 granting connectivity to London.



The Plan reveals that car ownership has also increased across the County from the period of 2001-2011. The percentage of households without access to a car in Leicestershire has fallen, whilst the percentage of multiple-vehicle households has increased (particularly in rural areas of the County). Although overall bus patronage in the region has fallen – other transport modes such as cycling have seen double-digit increases (16% from 2009-2010).

Within the study area the rail network includes the Midland Main Line (running north-south between London St. Pancras and Nottingham) and other rail routes that run through, and across, Leicester and Leicestershire (The South Leicestershire Line, The Syston & Peterborough Line and The Leicester & Burton Line).

The area is also served by one airport nearby – the East Midlands Airport, which lies in the north of the County - and is one of the UK's major freight airports. Additionally, the airport has one of the largest catchment areas of any airport in the UK, with 10.6 million people living within a ninety-minute drive.



Key assets are shown on Figure 5-5.

Figure 5-5 Location of key infrastructure assets.

As outlined in the Leicester and Leicestershire enterprise partnership delivery plan (2021 – 2022), there are major infrastructure projects proposed across the study area;

- SportPark Pavilion 4 (Loughborough University) Charnwood -Constructing a 2,000m² extension to enable the growth of the successful sports cluster at Loughborough University Science & Enterprise Park (LUSEP).
- M1 Junction 23 & A512 Access Improvements (LCC) North West Leicestershire - Delivering road network improvements to increase capacity and ease congestion enabling the unlocking of land for new homes and employment.
- HS2 West Midlands to Leeds Subject to consultation, 30km of new railway is
 proposed to pass through Leicestershire to the north of the County



5.8.1 Key Issues

Leicestershire is a large county with an established network of infrastructure, transport routes, including rural and urbanised areas. The associated key issues are summarised below:

- Critical infrastructure including energy infrastructure, industrial areas, public amenity and transport routes may be vulnerable to local flood risk; and
- Sensitivity of infrastructure to damage/disturbance from local flooding and associated socio-economic costs.

The provision of flood protection provided by the LFRMS must consider the potential consequences for material assets.

5.9 Climate

Leicestershire falls within one climate region, the Midlands, as classified by the Met Office. The mean annual temperature range for the region is between 8.0 and 10°C, compared to the UK mean of 6-14°C (Met Office, 2022).

Temperatures in the region follow seasonal and diurnal variation. January is the coldest month with mean daily minimum temperatures of 0.5°C to about 1.5°C. These temperature extremes of both winter and summer are a key characteristic of the Midlands climate. July is the warmest month with mean daily maximum temperatures exceeding 22°C. Extreme maximum temperatures can occur in July or August.

Rainfall is generally well-distributed through the year, but the wettest month varies across the region. The East Midlands (Leicestershire) tend to have a more even distribution through the year, with summer amounts there associated with showery, convective rainfall. In the drier east and south, 30 to 35 wet days in winter and 20 to 25 wet days in summer are typical. Periods of prolonged rainfall can lead to widespread flooding, especially in winter and early spring when soils are usually near saturation.

The Midlands area is one of the more sheltered parts of the UK, the windiest areas being in western and northern Britain, closer to the Atlantic.

Data from the Department of Business, Energy & Industrial Strategy (2019) "subset dataset", representing carbon dioxide emissions within the scope of influence of local authorities reveals that as of 2019 Leicestershire emitted 4883.3 ktCO₂. Which represents around 4.3 tCO₂ per person. This is lower than the average Humber (6.0 tCO₂) and Midlands (5.1 tCO₂) per capita figures. Moreover, this figure is lower than neighbouring Nottinghamshire which emits around 4.6 tCO₂ per person.

5.9.1 Summary of Key Issues

The key issues relating to climate change is the projected increased variability in precipitation events. This is likely to result in the overwhelming of drains and sewers due to increased surface run-off. In turn, this could result in localised flood events, which would have implications for human health, infrastructure and designated sites.

During the summer months, projected rain increases would have an impact on the capacity of drainage systems. More intense events would exceed the capacity of drainage systems and cause surface water runoff and flooding causing localised surface water runoff and flooding from smaller watercourses, particularly in urban areas.

During the winter months, projected rainfall increases are likely to cause saturation of clayey soils, resulting in wet antecedent conditions, which may result in greater vulnerability to further storms, particularly in rural areas.

To ensure Leicestershire remains resilient to the impacts of climate change, the LFRMS must consider how to implement measures aimed at coping with them.

6 SEA Framework

6.1 Introduction

The SEA framework, developed at the scoping stage, is used to identify and evaluate the potential environmental issues associated with the implementation of the LFRMS. The framework comprises a set of SEA objectives that have been developed to reflect the key environmental issues identified through the baseline information review. These objectives are supported by a series of indicators, which are used as a means to measure the potential significance of the environmental issues and can also be used to monitor implementation of the LFRMS objectives. These LFRMS objectives are tested against the SEA framework to identify whether each option will support or inhibit achievement of each objective.

Table 6-1 below summarises the purpose and requirements of the SEA objectives, subobjectives and indicators.

Table 6-1 Definition of SEA Objectives, Criteria and Targets

	Purpose
Objective	Provide a benchmark 'intention' against which environmental effects of the plan can be tested. They need to be fit-for-purpose.
Sub- objective	Aid the assessment of impact significance. Provide a means of ensuring that key environmental issues are considered by the assessment process.
Indicator	Provide a means of measuring the progress towards achieving the environmental objectives over time. They need to be measurable and relevant and ideally rely on existing monitoring networks.

6.2 SEA Objectives and Criteria

SEA objectives and indicators have been compiled for each of the environmental receptors (or groups of environmental receptors) scoped into the SEA. The SEA objectives for the LFRMS are given in Table 6-2 below. These objectives can be refined or revised in light of any additional information obtained during the life of the project.

Receptor	Obj	ective	Sub-objective	Indicator	
Landscape and Visual Amenity	1	Protect the integrity of local urban and rural landscapes in the area.	Prevent changes to the landscape character of NCAs and local landscape character types.	Changes in the condition and extent of existing characteristic elements of the landscape. The condition and quality of new landscape features introduced to the environment (i.e. new flood defences).	
Biodiversity, Flora and Fauna	2	Maintain, and enhance and extend biodiversity, wildlife and habitat	Protect and enhance protected, important and notable habitats and species and	Recorded numbers of protected habitats and species.	

Table 6-2 SEA Objectives and Criteria

Receptor	Obj	ective	Sub-objective	Indicator
		connectivity.	designated nature conservation sites in the area.	Percentage change in area of priority habitats.
			Increase biodiversity by enhancing, expanding and connecting existing natural areas and wildlife refuges. Increase biodiversity resilience to flood risk and climate change.	'Condition' of designated wildlife, geological sites, and habitats.
Water Environment	3	Protect and enhance the quality of water features and resources.	Do not inhibit achievement of WFD objectives and contribute to their achievement where possible.	WFD chemical or ecological status of water bodies within catchment.
Geology and Soils	4	Maintain soil quality and conserve geological designations.	Reduce risk of contamination from all sources.	Number of contamination incidents.
			Maintain soil quality and quantity.	Risk levels of contamination.
			Conserve the condition of geological designated sites.	Soil quality. 'Condition' of
				designated sites.
Historic Environment	5	Preserve and where possible enhance important heritage assets.	No adverse impact on designated heritage assets as a result local flooding.	Number of designated heritage sites at risk from local flooding.
			No adverse impact on the integrity/setting of designated heritage assets as a result of local flood risk management measures.	Number of heritage assets adversely impacted upon by local flood risk management measures.
Population and Human Health	6	Protect and enhance human health and wellbeing.	Conserve and enhance open (including urban amenity areas) and natural green spaces	Number of open and natural green spaces. Number and value
			Including PROW.	of PRoW routes.
			infrastructure assets	residential
			and services from	properties at risk
			Tiooding and increase	from flooding.

JBA consulting

	E.	Λ	
	- /		
cor	ารน	Itir	

Receptor	Obj	ective	Sub-objective	Indicator
			resilience to climate change.	services at risk from local flooding. Health and wellbeing statistics.
Material assets	7	Minimise the impacts of flooding to the transport network and key critical infrastructure.	No increase in length of road and rail infrastructure at risk from local flooding.	Length of road and rail infrastructure at risk from local flooding.
			No increase in number of infrastructure assets at risk from local flooding.	Number of key infrastructure assets at risk from local flooding.
			No increase in number of Green Infrastructure assets at risk of local flooding and/or an enhancement of current Green Infrastructure Assets in the area.	Number of green infrastructure assets at risk from flooding/created or enhanced through implementation of the LFRMS.
	8	Minimise local and national contribution to climate change.	Minimise short-term carbon and reduce long- term emissions by preferencing low carbon and carbon neutral solutions.	Number of flood management measures implemented that will also sequester carbon.



7 Stage B: Developing and Refining Options and Assessing Effects

7.1 Developing Alternatives

The SEA Regulations require an assessment of the plan and its 'reasonable alternatives'. In order to assess reasonable alternatives, different strategy options for delivering the LFRMS have been considered and assessed at a strategic level against the SEA objectives (see Table 7-1) and environmental baseline. The results of this assessment will be used to inform the decision-making process in choosing a preferred way of delivering the LFRMS.

7.2 Appraisal of Reasonable Alternatives

The LFRMS has the purpose of managing and reducing local flood risk in the study area. A high level review of the options against the SEA Objectives was undertaken in the form of a simple matrix for each of the following options:

- Do Nothing where no action is taken, and existing assets and ordinary watercourses are abandoned.
- Do minimum: maintain current Leicestershire County Council Local Flood Risk Management Strategy (2015)- where existing assets and watercourses are maintained as present in line with the existing local flood risk management plan as an alternative to preparing a new one. Existing infrastructure is not improved over time and the effects of climate change are not taken into account.
- Manage and reduce local flood risk take action to reduce the social, economic and environmental impact due to flooding through the preparation of a new LFRMS.

Table 7-1 compares all three strategy options against each of the SEA objectives.

SEA Objectives		Options and Effects				
		Do Nothing	Do minimum: maintain current local flood risk strategy (2015)	Manage and reduce local flood risk		
1	Protect the integrity of local urban and rural landscapes in the area.	Potential negative effect resulting from no management that could adversely impact sensitive landscape character. Locally important landscape features, including those identified within the LCAs, would likely be exposed to damage and deterioration through increased exposure to flood risk.	Little change to baseline in the short to medium term. However, in the future, as a result of climate change and increasing flood risk, adverse impacts on local landscapes may arise.	Potential for managing and promoting this objective through sensitively designed flood risk management schemes which enhance local landscape character, such as natural flood management.		
2	Maintain and enhance biodiversity, wildlife and habitat connectivity.	Potential for both adverse and beneficial impacts. For example, abandonment of assets may allow for the development of more natural watercourses	Little/no change to baseline levels in the short to medium term. However, as a result of increased flooding in the	Potential for both adverse and beneficial impacts as a result of active management. Opportunities may arise to enhance biodiversity and		

Table 7-1 Assessment of the Strategy and Alternative Options Against the SEA Objectives

SEA Objectives		Options and Effects				
		Do Nothing	Do minimum: maintain current local flood risk strategy (2015)	Manage and reduce local flood risk		
		and wetland habitat creation/ enhancement through increased inundation. However, there could be an increased risk of spreading of non-native invasive species through flooding; deterioration of existing wildlife corridors; and detrimental impacts on habitats intolerant of increased inundation.	future due to climate change, new habitats may be created, or existing wetland habitats enhanced. Although, habitats intolerant of increased inundation or changes in water quality may be adversely affected.	notable habitats within the Council through the implementation of measures to reduce local flood risk, for example: natural flood management measures, improvements to fish passage; encouraging appropriate management of watercourses by riparian landowners; and undertaking watercourse maintenance.		
3	Protect and enhance the quality of water features and resources.	Potential for both adverse and beneficial impacts.	Little/no change to baseline levels. However, potential deterioration of water quality during flooding incidents.	Potential for both adverse and beneficial impacts.		
4	Maintain soil quality and conserve geological designations.	Potential negative effect resulting from increased erosion of soils as a result of increased flooding and no management of land contamination risks and subsequent effects.	Little/no change to baseline in the short to medium term. However, in the future, as a result of climate change, adverse impacts may arise through erosion and land contamination from increased flooding.	Potential for managing and promoting this objective through reduced flood risk, which will help to protect the Council area's soil resource from erosion and its quality.		
5	Preserve and where possible enhance important historic and cultural sites.	Heritage assets will likely be exposed to damage and deterioration through increased exposure to flood risk.	Little/no change to baseline in the short to medium term. However, in the future, important heritage assets may be exposed to increased flooding and damage due to climate change.	Potential for both adverse and beneficial impacts as a result of active management, for example through increased protection of vulnerable heritage assets or reduced inundation resulting in the desiccation of buried archaeology		
6	Protect and enhance human health and wellbeing.	Increased exposure to flood risk from a combination of no management and climate change. This	No improvements to health and well- being as existing flood risk is maintained and the	Active management to reduce local flood risk should help to protect residential properties and key social		

JBA consulting

	SEA Objectives	Options and Effects				
		Do Nothing	Do minimum: maintain current local flood risk strategy (2015)	Manage and reduce local flood risk		
		could lead to a greater number of people and their properties at risk of flooding, causing greater damage and disruption, increases in social exclusion, deprivation and health risks.	risk may increase in the future as a result of climate change.	infrastructure services from flooding. This has the potential to create a range of social benefits including reducing associated health impacts and social deprivation.		
7	Minimise the impacts of flooding to the transport network and key critical infrastructure.	This option is likely to result in increased flood risk to key infrastructure, which would cause significant disruption to the county, impacting on human and economic activity and the environment.	Maintains the current flood risk levels, although this risk may increase in the future due to climate change.	Managing and reducing local flood risk will minimise the impact of flooding on roads, railways and other infrastructure assets. This will reduce disruption during flood events and enable a more effective response.		
8	Minimise local and national contribution to climate change.	Increased exposure to flood risk may result in increased emissions locally. For example, from emissions associated with the recovery effort following flood events.	Little/no change to baseline levels in the short to medium term. However, as a result of future climate change and associated increased flood risk, there may be an increase in emissions following flood events.	Potential for negative impacts if management is carried out using hard engineering approaches which contribute embodied carbon. Potential for management through low carbon measures such as natural flood management.		

The assessment detailed in Table 7-1 indicates that Option 1 (do nothing) is likely to result in several significant adverse impacts, particularly in relation to people and property, and other environmental assets including heritage assets and biodiversity, where increased flooding may create new pathways for the spread of invasive non-native species. Surface water and groundwater quality could also be adversely affected, with increased flooding of contaminated sites leading to greater impacts on water resources. Given it is a statutory requirement under the Flood Management Act for the LLFA to maintain a strategy for local flood risk management in Leicestershire, it is not an appropriate option to pursue.

Option 2, maintaining the current Local Flood Risk Management Strategy (2015), is likely to result in little or no change in the environmental baseline in the short to medium term as the existing flood risk strategy would maintain existing levels of flood protection. However, as a result of climate change, flood risk will increase, resulting in many of the impacts identified under Option 1, although potentially to a lesser extent and significance. Whilst the existing LFRMS meets the statutory requirements for a flood plan, it does not take into consideration updates to the national strategy and improved knowledge and understanding of flood risk in Leicestershire and how it can be managed.

JBA



Option 3 requires the preparation of a new plan and has the potential to provide a range of environmental benefits. If designed and implemented appropriately, this could include reducing flood risk to people and property, contributing to the protection of heritage assets and improvements in water quality, and providing new opportunities for habitat creation and the provision of recreation and amenity assets. However, if implemented in an inappropriate manner, this could result in adverse effects on a range of environmental features. This risk is managed through the preparation of this SEA and through the correct application of the strategy, and associated policies and guidance, which is likely to require consideration of the sustainability of a project prior to its implementation. Therefore, it is evident that by doing nothing or maintaining existing management strategies, there are likely to be detrimental effects on the SEA objectives, which are likely to be prevented by carrying out active management measures as detailed in the LFRMS.

8 Appraisal of LRFMS Objectives and Actions to Improve Flood Risk

8.1 Appraisal

The LFRMS comprises a framework of five objectives, informed by five overarching principles, covering the main ways in which local flood risk is managed in Leicestershire.

They are strategic objectives implemented through the measures detailed in the Strategy action plan. The objectives and action plan measures have been compared against the SEA objectives in order to assess the potential effects and to understand how the objective considers and protects the environment, ensuring the principles of sustainability.

8.2 Impact Significance

The appraisal seeks to identify significant effects as required by the SEA Regulations and sets out potential mitigation measures (potential improvements), as detailed in Section 7.5.

The degrees of significance for an effect have been considered. Table 8-1 below lists the five significance categories that have been used to determine effects of the LFRMS.

The unmitigated impacts of the LFRMS Actions on achieving the SEA objectives will be identified through the analysis of the baseline environmental conditions and use of professional judgement. The significance of effects will be scored using the five-point scale summarised in Table 8-1 below. If there is high uncertainty regarding the likelihood and potential significance of an impact (either positive or negative), it will be scored as uncertain.

Impact Significance	Impact Symbol	Description
Significant positive impact	++	Significantly beneficial to the SEA objective -multiple opportunities for environmental improvement or resolves existing environmental issue.
Minor positive impact	+	Partially beneficial (not significant) to the SEA objectives – contributes to resolving an existing environmental issue or offers some opportunities for improvement.
Neutral impact	0	Neutral effect on the SEA objective and environment.
Minor negative impact	-	Partially undermines (not significantly) the SEA objective – would contribute to an environmental issue or reduce opportunities for improvement.
Significant negative impact		Significantly undermines the SEA objective – will significantly contribute to an environmental problem or undermine opportunity for improvement.
Uncertain impact	?	Insufficient detail on the option or baseline – cannot effectively assess the significance of the strategy objective on the SEA objective.

Table 8-1 Impact Significance Key

JBA

8.3 Assessment Approach

The LFRMS objectives and actions have been evaluated in light of their potential cumulative, synergistic, direct and indirect environmental effects on the different SEA receptors selected for further assessment. The assessment of these environmental effects has been informed by the baseline data collected at the scoping stage, professional judgement and experience with other water level management and flood risk related SEAs, as well as an assessment of national, regional and local trends. In some cases, the assessment has drawn upon mapping data and GIS to identify areas of potential pressure, for example due to presence of environmental designations.

Throughout the assessment the following will apply:

- Positive, neutral and negative impacts will be assessed, with uncertain impacts highlighted;
- The duration of the impact will be considered over the short, medium and long term;
- Consideration of whether the impact would be directly on a receptor or indirectly;
- The reversibility and permanence of the impact will be assessed. For example: temporary construction impacts, such as during decommissioning pumping stations; impacts which can be mitigated against/restored over time such as altered drainage pressures; or completely irreversible changes to the environment; and
- In-combination effects will also be considered.

The significance of effects upon each of the SEA objectives will then be evaluated and used to inform option selection.

8.4 Limitations and Assumptions

The LRFMS actions are fairly high level and generic and do not include specific details such as location, scale and/or implementation methods. As such, any assessment is based upon a high-level understanding of the individual actions.

It is assumed that actions will be undertaken in accordance with local and national policies, and to best practice guidance.

8.5 Assessment

The Assessment of LFRMS objectives and actions against the SEA objectives is shown below in Table 8-2 and Table 8-3. Cumulative effects of the actions against the SEA objectives are shown in Table 8-4. These are qualitative assessments that identify the range of potential effects that the LFRMS may have on delivering the SEA objectives.

Table 8-2 Assessment of LFRMS Objectives and SEA Objectives

LFRMS Objective	SEA Objective								Comments						
	1	2	3	4	5	6	7	8							
1. To manage local flood risk through the effective management of flood risk assets, watercourses, and catchments	+	+	+	+	+	+	+	+	This objective seeks to positively benefit population and human health and material assets through reduced flood risk. The impact upon the remaining SEA objectives is unclear as impacts will vary due to the type of management implemented. However, it is assumed that effective management will utilise increased understanding of flood risk in Leicestershire and take into account the existing environmental baseline to positively contribute to all of the SEA objectives.						
2. To manage local flood risk through encouraging sustainable development	+	++	+ +	+	+	+	+	+ +	Promoting sustainable development should positively benefit all SEA objectives, particularly if this development takes into consideration the existing environmental baseline and likely future issues. Sustainable development through implementation of SuDS would provide significant benefits to biodiversity, improve water quality, and sequester carbon.						
3. To manage local flood risk through effective preparedness, response to, and recovery from flood events.	0	Ο	0	0	0	+	+	0	This objective should positively benefit population and human health and material assets through improved resilience to flood events which may minimise impacts of flooding on communities and infrastructure. There will also be benefits through support provided during recovery from flood events. These measures are likely to significantly enhance human health and wellbeing. This objective will most have neutral effects for the rest of the SEA objectives as there are no direct links with the topic they cover.						

4. To better understand local	+	+	+	+	+	+	+	+	This objective should promote better flood management
flood risk and impacts, informing									in the area through implementation of appropriate
approaches to managing this risk.									measures. This has the potential to have positive
									benefits on population and human health and material
									assets by improving resilience to future flooding. There is
									also notential for there to be benefits to other recentors
									including biodiversity landscape, bistoric environment
									including blodiversity, landscape, historic environment,
									water environment, geology and soils and climate if a
									strong understanding of local flood risk is achieved and
									appropriate flood management measures are
									implemented to facilitate environmental improvements.
5. To manage local flood risk	+	+	+	+	+	+	+	+	This objective should positively benefit population and
through developing and or									human health and material assets through reduced flood
managing local projects for at-									risk and improved resilience in at-risk communities.
risk communities.									However, conducting cost-effective flood management
									solutions could mean that some communities are
									favoured over others and the LERMS must ensure that
									consideration is given to all communities and social
									Analysis of available data to inform appropriate selection
									of flood risk management measures would have the
									potential to positively contribute to the SEA objectives.
									For example, through the implementation of natural
									flood management or sustainable urban drainage
									systems there may be opportunities for habitat creation
									and improvements to water quality.

Main	Title	LFRMS Actions	SE	A Ob	jecti	ves					Comments
Objective Link			1	2	3	4	5	6	7	8	
All	Leicestershire Flood Risk Management Board	The LLFA will continue to coordinate and chair the Leicestershire Flood Risk Management Board	0	0	0	0	0	+	+	0	Coordinating and chairing the Flood Risk Management Board will not have any direct effects on the SEA objectives, but will likely have indirect effects on some objectives through promoting better flood management strategies in the area.
1	Riparian guidance	The LLFA will signpost and make available guidance for riparian landowners, and proactively disseminate this in locations of identified priority.	+	+	+	+	+	+	+	+	Providing advice to riparian landowners should help to promote appropriate measures for management of watercourses passing through their land. This presents opportunities to promote the implementation of measures (such as natural flood management and SuDS) which would have wider positive long-term indirect benefits on all SEA objectives (in particular landscape, biodiversity and water resources). However, targeting specific communities may mean that some are favoured over others and the LFRMS must ensure that consideration is given to all communities and social infrastructure

Table 8-3 Assessment of LFRMS Actions Against SEA Objectives

Main	Title	LFRMS Actions	SEA Objectives							Comments	
Objective Link			1	2	3	4	5	6	7	8	
1	Ordinary watercourse regulation	The LLFA will regulate ordinary watercourses in accordance with the Leicestershire Ordinary Watercourse Regulation and Culvert Policy, and supporting guidance.	+	+	+	+	+	+	+	0	Ordinary watercourses are a key source of local flood risk. Proper regulation of watercourses will ensure that any works do not increase flood risk and will have positive long-term effects on water resources (namely water quality) ecological and material receptors. Ensuring works do not increase flood risk may also have indirect positive effects on historic and cultural sites and geological designations in areas at risk of flooding, along with locally important landscape features.
1	Asset register and record	The LLFA will continue to maintain the Leicestershire Flood Risk Asset Register and Record in accordance with the Leicestershire Asset Register and Record Policy.	0	0	0	0	0	+	+	0	Maintaining a register will not have any identified direct effect on SEA receptors, however this action should promote better flood management in the area, particularly if there is a focus on assets which have a significant effect upon local flood risk.
1	Highway drainage maintenance	The Local Highway Authority will continue to maintain highway drainage assets in accordance with the Leicestershire Highway Infrastructure Asset Management Plan.	0	0	+	0	0	0	+	0	Continuing to maintain highway drainage assets will have positive benefits to material assets as a result of minimising surface water flooding impacts on infrastructure, including highways. This action will also have a positive impact upon water quality as a result of attenuation of highway runoff.

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
1	Catchment partnerships	The LLFA will work with catchment partnerships and landowners to integrate environmental and flood risk management workstreams.	+	+ +	+	+	+	+	+	+	Incorporating environmental workstreams into flood risk management will lead to management solutions which have direct benefits to the ecological receptors, for example, the implementation of natural flood management measures. This likely have an indirect positive effect on landscape, cultural assets, population, human health, material assets and climate change. Opportunities through partnership working may also arise for the benefit of other receptors (e.g. protection of cultural heritage assets).
1	Natural Flood Management	The LLFA with support from catchment partnerships will seek to maximise opportunities for natural flood management across Leicestershire.	+	+ +	++	+	+	+	+	++	Maximising opportunities for natural flood management will have direct, long-term benefits to ecological receptors and will also likely lead to improvements in water quality, along with sequestering carbon. Implementation of natural flood management may also have indirect positive effects on landscape, cultural assets, amenity, population, human health and material assets

205

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
2	Surface water consultee major applications	The LLFA will continue to fulfil its role as statutory consultee for surface water drainage matters on all major planning applications, in accordance with national and local policies and guidance.	+	+	+	+	+	+	+	0	Continuing the role of the LLFA as statutory consultee will have indirect positive benefits to material assets as a result of minimising surface water flooding impacts on infrastructure. As statutory consultee, the LLFA could promote the use of sustainable flood risk management measures, such as SuDS, which would indirectly positively impact several SEA objectives.
2	Pre-application advice and chargeable services	The LLFA will review all options for implementing a chargeable service for planning pre-application advice and other service delivery.	0	0	0	0	0	+	+	0	Reviewing pre-application arrangements should result in early consideration of flood risk in development proposals and would result in benefits to human and material receptors by ensuring that developments appropriately consider flood risk management measures.
2	SuDS Approval Bodies	The LLFA and other RMAs will prepare for implementation of Schedule 3 of the Flood and Water Management Act 2010 and if required revise the Strategy Action Plan if implemented.	+	+	+	0	0	0	0	+	Preparation for implementation of Schedule 3 and revision of an action plan for the implementation of sustainable drainage would indirectly positively impact on several SEA objectives. The implementation of sustainable drainage measures would be beneficial for biodiversity, water quality and amenity improvements along with carbon sequestration.

Main	Title	LFRMS Actions	SEA Objectives							Comments		
Objective Link			1	2	3	4	5	6	7	8		
2	Local guidance coordination	Risk management authorities and those involved in development approvals will continue to work to together to ensure coordinated local standards and developer guidance, from pre-application to completion.	+	+	+	+	+	+	+	+	Ensuring coordinated standards regarding flood risk will ensure development does not increase, and/or has the opportunity to decrease flood risk. Standards and guidance may also include measures to ensure development delivers wider environmental, social and economic benefits which can be ensured for the long-term.	
2	Local planning policy	Risk management authorities will support the development and review of local planning policy affecting local flood risk management. This includes local development plans, infrastructure development plans, strategic flood risk assessments, and neighbourhood plans.	+	+	+	+	+	+	+	+	Updating planning policies so that new development does not increase, and/or has the opportunity to decrease flood risk, has the potential to provide social benefits to local communities. Policies may also include measures to ensure development delivers wider environmental and socio-economic benefits in addition to resilient developments.	
3	Leicestershire and Rutland Multi- agency Flood Plan	LLR Prepared will continue to maintain the Multi-Agency Flood Plan for Leicestershire, Leicester City and Rutland	0	0	0	0	0	0	0	0	Continuing to maintain the Flood Plan will have beneficial impacts on local communities and material assets.	
3	Community flood action plans	LLR prepared, and risk management authorities will continue to assist local communities in producing and maintaining community flood action plans.	0	0	0	0	0	+	+	0	Community Flood Plans and flood action groups will promote awareness of flood risk and understanding of response plans. This will not have any identified direct effect on SEA receptors. However, this action should promote better understanding of flood risk and management plans in the area.	

Main	Title	LFRMS Actions	SEA Objectives							Comments		
Objective Link			1	2	3	4	5	6	7	8		
3	Flood exercises	LLR Prepared and risk management authorities will continue to plan and support flood exercises as and when required and resources allow, implementing lessons learnt.	0	Ο	0	0	0	+ +	+	0	Conducting flood exercises and implementing lessons learnt will increase preparedness for flooding and hence will benefit population and human health and wellbeing. This will also benefit management of social infrastructure.	
3	Environment Agency Flood Warning Service	Risk Management Authorities will continue to promote the Environment Agency's flood warning service where it is available in Leicestershire.	0	0	0	0	0	+	0	0	Continuing to promote the EA's flood warning service will indirectly benefit local communities through provision of alerts of likely flood risk. However, the Environment Agency's flood warning service does not cover all communities at risk of flooding, particularly those at risk from local sources.	
3	Community Initiatives	Risk management authorities will work together to develop initiatives and web-based information to enhance community preparedness and resilience to flooding.	0	0	0	0	0	+ +	+	0	Enhancing community preparedness and resilience to flooding will reduce the impact of flooding on communities and allow them to respond more effectively to flood events. This will lead to increased community health and wellbeing, and enable measures to be taken to protect infrastructure.	
3	Recovery schemes	Risk Management Authorities will continue to support national recovery schemes following flood events.	0	0	0	0	0	+ +	+	0	Supporting long-term flood recovery schemes will help communities recover after flooding and respond more effectively to future flood events, leaving them less vulnerable to further events in the future.	

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
3	Flood investigation and reporting	The LLFA will continue to complete and publish formal flood investigations in accordance with the Leicestershire Formal Flood Investigations Policy	0	0	0	0	0	+	+	0	Undertaking investigations will not have any identified direct effect on SEA receptors, however investigating potential contraventions of the Land Drainage Act should promote better flood management in the area.
4	Surface Water Model	The LLFA will manage the production and maintenance of detailed surface water modelling for Leicestershire.	+	+	+	+	+	+	+	+	Surface water modelling will not have any identified direct effects on the SEA objectives; however, the action should increase understanding of flood risk in the area (including flood risk to sensitive receptors). The results will inform better flood management which may lead to indirect benefits to multiple SEA objectives.
4	Market Harborough Surface Water Management Plan	The LLFA will maintain and coordinate the Market Harborough Surface Water Management Plan.	+	+	+	+	+	+	+	0	Coordinating the SWMP will not have any identified direct effects on the SEA objectives. However, there is the potential to identify opportunities for environmental enhancement through promotion of natural flood management and SuDS measures.

Main	Title	LFRMS Actions	SEA Objectives							Comments		
Objective Link			1	2	3	4	5	6	7	8		
4	Cossington flood study	The LLFA will continue to investigate flooding mechanisms for the community of Cossington.	+	+	+	+	+	+	+	0	Understanding flooding mechanisms should promote more effective flood management in the community of Cossington, reducing flood risk to key receptors including rivers Soar and Wreake (both of poor WFD ecological status); Cossington C of E primary school; residential and commercial properties; and numerous listed buildings. A map highlighting these receptors that could benefit from flood management as a result of this study can be found in Appendix A.1 of this report.	
4	Loughborough Surface Water Management Plan	The LLFA will maintain and coordinate an update to the Loughborough Surface Water Management Plan.	+	+	+	+	+	+	+	0	Updating the Loughborough SWMP will increase understanding of causes of surface water flooding in the area and promote better flood management in the area and will have indirect benefits to: ecological receptors including Loughborough Meadows SSSI, and Beaconhill, Hangingstone and Out Woods SSSI; numerous listed buildings and scheduled monuments; residential and commercial properties. A map highlighting these receptors that could benefit from the SWMP can be found in Appendix A.6 of this report	

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
4	Great Easton	The LLFA will work with partners to assess the feasibility of natural flood management upstream of Great Easton	+	+ +	+	+	+	+	+	+	Supporting use of nature-based solutions will have long-term, direct benefits to the ecological receptors, including the Eye Brook (poor WFD ecological status) and Eye Brook reservoir SSSI. Natural flood management can provide a solution that is low carbon and has the potential to increase habitats and improve water quality. The use of nature-based solutions would therefore also have an indirect positive effect on landscape, cultural assets, population, human health, material assets and climate change. A map highlighting these receptors can be found in Appendix A.7 of this report.
4	Diseworth	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Diseworth.	+	+	+	+	+	++	+	0	Investigating flood alleviation options will have indirect positive benefits on SEA objectives by promoting better flood management in the area of Diseworth. Key receptors in Diseworth which could benefit from flood alleviation measures include Diseworth C of E primary school; residential and commercial properties; and numerous listed buildings. A map highlighting these receptors can be found in Appendix A.2 of this report.

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
4	Long Whatton	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Long Whatton.	+	+	+	+	+	+ +	+	0	Investigating flood alleviation options will have indirect positive benefits on SEA objectives by promoting better flood management in the area of Long Whatton. Key receptors in Long Whatton that could benefit from flood alleviation include: the River Soar (poor WFD ecological status); Long Whatton C of E primary school; residential and commercial properties; and numerous listed buildings. A map highlighting these receptors can be found in Appendix A.3 of this report.
4	Stoney Stanton	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Stoney Stanton.	+	0	+	+	0	+++	+	0	Investigating flood alleviation opportunities will indirect positive benefits on SEA objectives by promoting better flood management in the area of Stoney Stanton. Key receptors in Stoney Stanton that could benefit from flood alleviation measures include: the River Soar (poor WFD ecological status) Manorfield primary school; several listed buildings; residential and commercial properties. A map highlighting these receptors can be found in Appendix A.4 of this report.

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
4	Mease Special Area of Conservation	The LLFA and Environment Agency will continue to investigate options for reducing flood risk including natural flood management, in the Mease Special Area of Conservation.	+	++	+ +	+	+	+	+	+ +	Supporting use of nature-based solutions will have direct benefits to the ecological receptors, including the River Mease SSSI, and will have a positive impact upon the Mease WFD classification, which is classified as Fail for chemical status and poor/moderate for ecological status. Natural flood management would also sequester carbon. Reduction in flood risk will have an indirect positive effect on landscape, cultural assets, population and human health (especially for receptors in flood- prone areas such as Appleby Magna, Packington and Moira), material assets and climate change.
4	Oadby	The LLFA will coordinate work with relevant risk management authorities to better understand flood risk in Oadby.	+	+	+	0	+	+	+	0	Reviewing flood risk will have indirect positive benefits on SEA objectives by promoting better flood management in the area. Key receptors in Oadby that would benefit from flood management measures include Lucas Marsh LNR; Knighton Spinney LNR; The Beauchamp College; residential and commercial properties; and numerous listed buildings and scheduled monuments. A map highlighting these receptors can be found in Appendix A.5 of this report.

213

Main	Title	LFRMS Actions	SEA Objectives Comments							Comments	
Objective Link			1	2	3	4	5	6	7	8	
4	Hinckley and Burbage	The LLFA will coordinate work with relevant risk management authorities to better understand flood risk in Hinckley and Burbage.	+	+	+	+	+	+	+	0	Reviewing flood risk will have indirect positive benefits on SEA objectives by promoting better flood management in the area. Key receptors in Hinckley and Burbage include: Burbage Wood and Aston Firs SSSI; Burbage Common & Woods LNR; Soar Brook (poor ecological quality); residential and commercial properties; and numerous listed buildings. A map highlighting these receptors can be found in Appendix A.9 of this report.
5	Completed Scheme Monitoring	Risk management authorities will monitor the benefits of completed flood risk management schemes	0	0	0	0	0	+	+	0	Understanding the benefits of completed flood alleviation schemes will not have any identified direct effects on the SEA objectives, however, the action should promote better flood management in the area.

Main	Title	LFRMS Actions	SEA Objectives Comments							Comments	
Objective Link			1	2	3	4	5	6	7	8	
5	Breedon-on-the- Hill Flood Alleviation Scheme	The LLFA will manage the delivery of the Breedon-on-the Hill flood alleviation scheme.	?	+	+	?	?	+ +	+	+	Delivery of a flood alleviation scheme will result in reduced risk to the local community for the benefit of population, human health and material assets; in particular, for the 20 homes impacted by the major flood event in June 2016. However, physical works to install, manage and maintain flood assets may have permanent adverse impacts on designated sites in the proximity of the works, including Breedon Hill SSSI, Ramsley Brook (poor ecological quality) and The Bulwarks scheduled monument. There is the potential that works will promote positive impacts for these receptors through managing water within the locality for their benefit. Natural flood management and SuDS is also proposed for the scheme which may have multiple benefits to SEA objectives. More detail is required to assess the precise impact to most SEA objectives. A map highlighting these receptors can be found in Appendix A.8 of this report.

Main	Title	LFRMS Actions	SEA Objectives								Comments
Objective Link			1	2	3	4	5	6	7	8	
5	Pipeline of schemes	The LLFA will maintain a pipeline of local projects	?	?	?	?	?	+	+	?	Delivery of flood alleviation schemes will result in reduced risk to the local community for the benefit of population, human health and material assets. However, it is unknown what these projects area and physical works to install, manage and maintain flood assets may have adverse impacts on designated sites (both ecological and cultural) in the proximity of the works. There is the potential that works will promote positive impacts for these receptors through managing water within the locality for their benefit.



8.6 Summary of Assessment

A Summary of effects of LFRMS Actions on SEA Objectives is outlined in Table 8-4 below. **Table 8-4 Cumulative effects of LFRMS objectives against SEA objectives**

Receptor	SEA Objective	Assessment Score	Justification	
Landscape and Visual Amenity	Protect the integrity of local urban and rural landscapes in the area.	+	In general, many of the LFRMS actions will directly contribute to objectives relating to landscape and visual amenity.	
			The LFRMS provides opportunities for landscape enhancements through the implementation of natural flood management and SuDS, which may enable the protection and enhancement of green spaces, river corridors and woodland to enhance visitor experience and provide recreational amenity.	
			There is the potential for adverse impacts to visual receptors through the construction of new defence schemes. New schemes should be designed to avoid the potential for significant landscape impacts, minimising hard engineering and encouraging nature- based solutions, and where impacts are identified, they should be mitigated appropriately.	
Biodiversity, Flora and Fauna	Maintain and enhance biodiversity, wildlife and habitat connectivity.	+	The LFRMS actions contribute both directly and indirectly to ecological objectives. Promoting better flood management and reducing flood risk to key ecological receptors, including designated sites, will enhance biodiversity whilst safeguarding habitat connectivity corridors.	
			The LFRMS provides opportunities for ecological enhancements through the implementation of natural flood management schemes, which would help deliver policy objectives for the natural environment including habitat enhancements, improved ecological connectivity and increased biodiversity resilience to flood risk and climate change.	
			There is the potential for adverse impacts to ecological receptors through the implementation of hard flood defence schemes. Impacts may arise from disruption of species and habitats from construction activities. New schemes should be designed to avoid the potential for significant ecological impacts, and where impacts are identified, they should be mitigated appropriately.	
	J	B	Δ	
---	----	---	---	--
С	or			

Receptor	SEA Objective	Assessment	Justification
Water Environment	Protect and enhance the quality of water features and resources.	+	Promoting better flood management and reducing flood risk will help to improve water quality and WFD status across the council area. A reduction in the frequency and magnitude of flood events will help prevent sewage spillage incidents and entry of litter into watercourses.
			The LFRMS provides opportunities for enhancement to the water environment through the implementation of natural flood management and SuDS schemes. Such schemes would help reduce flood risk whilst providing water quality benefits by improvements such as: restoring natural sediment processes; reducing surface runoff and increasing infiltration rates; and reconnection of floodplains.
			There is the potential for adverse impacts to the water environment through the construction of flood defence schemes. Impacts may arise from spillages and dust pollution during construction activities. New schemes should be constructed in line with industry best practice guidance in order to avoid the potential for significant impacts, and where impacts are identified, they should be mitigated appropriately.
Geology and Soils	Maintain soil quality and conserve geological designations.	+	The LFRMS will contribute to objectives relating to geology and soils by reducing flood risk and promoting better flood management. Reduction in the frequency and magnitude of flooding events will help prevent soil contamination incidents, soil erosion and help conserve the condition of geological designated sites.

Receptor	SEA Objective	Assessment Score	Justification
Historic Environment	Preserve and where possible enhance important historic and cultural sites.	+	The LFRMS will benefit historic environment assets due to better flood management and reduced flood risk. Reduction in flood frequency and magnitude will help prevent damage to cultural heritage receptors, including listed buildings and scheduled monuments, which are prone to loss of stability, collapse, biodegradation and moisture-induced damage following flooding. LFRMS actions will also help to improve the setting of heritage assets.
			There is the potential for adverse impacts to the water environment through the construction of flood defence schemes. Impacts may arise from damage to heritage assets and their setting during construction activities. New schemes should be constructed in line with industry best practice guidance in order to avoid the potential for significant impacts.
Population and Human Health	Protect and enhance human health and wellbeing.	++	The LFRMS actions will directly benefit population and human health receptors through reduced flood risk. A reduction in the frequency and magnitude of flood events will reduce flooding impacts to residential and commercial properties, and key infrastructure such as educational and healthcare facilities.
			Flood risk reduction and community involvement in planning and recovery will also help to decrease the cost and stress of living in high flood risk areas and dealing with flooding consequences. The construction of new flood defence schemes will improve infrastructure
Material assets	Minimise the impacts of	++	resilience to climate change. Overall, the LFRMS objectives are likely to
	flooding to the transport network and key critical infrastructure.		have a significant positive impact in relation to this SEA objective as the LFRMS includes several actions that seek to improve the resilience of material assets in the county. Reduction in flood risk will reduce impacts to key such as road, rail and power grid.

JDA
consulting

Receptor	SEA Objective	Assessment Score	Justification
	Minimise local and national contribution to climate change.	0	The majority of LFRMS actions do not directly contribute to climate change objectives as they do not reduce local carbon emissions. However, reduction in flood risk may indirectly reduce emissions by reducing the requirement for rebuilding/redevelopment after large flood events. In addition, natural flood management and associated green space enhancement may improve local carbon sequestration.

8.7 Mitigation

There were not any negative effects identified in the assessment and therefore on this basis no specific mitigation measures are required. However, potential areas of improvement and consideration for refining the LFRMS objectives and actions are included below.

This is in accordance with the Schedule 2 of the SEA Regulations (7) which states that the Environmental Report should include 'the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme'.

It should be ensured that any flood alleviation scheme be designed to avoid impacts to SEA receptors and take steps to actively enhance them. This may be completed through an Environmental Impact Assessment (EIA) methodology. Natural flood management approaches should be implemented where possible to best work with the natural and built environment and reduce impacts of flood alleviation schemes on the environment.

Where possible, options to reduce flood risk whilst contributing to local carbon reduction targets should be considered, such as through natural flood management.

JBA consulting

9 Conclusions and Recommendations

The key aim of the LFRMS is to manage local flood risk by technically, economically, socially and environmentally appropriate options. The intention of the strategy is to set out the roles and responsibilities and to improve local flood risk management so as to minimise the impact of flooding on infrastructure, businesses and properties.

The SEA has been undertaken to identify the likely significant environmental effects of the implementation of the LFRMS. A proportionate approach was adopted towards establishing the scope of the SEA, reflecting the high-level nature of the LFRMS.

A range of different strategy options for delivering the LFRMS have been assessed at a strategic level against the SEA objectives. These alternatives include the 'do nothing' scenario, where no action is taken and existing assets and ordinary watercourses are abandoned, and the 'maintain current Local Flood Risk Management Strategy (2015)' scenario, where existing assets and watercourses are maintained as present in line with current levels of flood risk.

The 'Do Nothing' approach would promote an overall negative effect on the SEA objectives as a result of abandoning current management practices, increasing the risk of local flooding. This impact would be likely to increase over time as responsible bodies will be unable to incorporate precautionary measures in existing or new developments in a response to climate change pressures. The mid-way option of 'Maintain Current Flood Risk Strategy' is unlikely to worsen the current impacts on SEA receptors or have significant change on baseline levels. However, by not fully considering the adaptation to climate change pressures, the current level of flood risk management may be insufficient to prevent detrimental impacts on the environment, socially and ecologically, in the future. The only realistic approach to be employed by LCC is the 'Manage and Reduce Flood Risk' option, which offers more beneficial environmental outcomes and a pro-active approach to flooding pressures.

Many of the proposed measures detailed in the LFRMS have the potential for direct and indirect benefits. The majority of the LFRMS objectives are likely to have indirect beneficial effects upon the environment as they relate to enhanced understanding and awareness of flood risk along with high-level flood risk management measures rather than individual actions. The assessment of the LFRMS objectives and actions against the SEA objectives highlights positive impacts, especially on SEA objectives 6 and 7. By actively managing the flood risk, there will be obvious benefits to the population, human health and material assets. Through promoting a greater understanding of flood risk, encouraging community involvement and promoting self-resilience as well as a coordinated county-wide flood risk management approach, communities and responsible parties will be better placed to effectively minimise the risk of flooding in the Leicestershire area.

There is some uncertainty regarding the scale and location of some of these positive effects. Sometimes this is because for some measures, the scale, location and/or process of implementation is currently unclear. Also, some indirect positive effects may be outside of the control of the organisations delivering measures. However, positive effects are generally likely across the implementation of the strategy, across a wide range of SEA objectives.

9.1 Recommendations

The assessment of the objectives and actions has identified a couple of areas where the LFRMS could be strengthened to promote a more sustainable approach:

- Ensure that climatic factors are fully accounted for in developments (existing and new) to ensure that flood risk management is appropriate and adaptable for the future.
- Ensure that low-carbon approaches to flood alleviation are prioritised to limit local contribution to climate change.
- Take steps to ensure a collaborative approach is taken to new development to involve all relevant stakeholders (both statutory and non-statutory) in discussions around sustainability.



Ensure that likely environmental and socio-economic impacts are considered when refining the details associated with actions relating to local flood alleviation schemes, detailed as part of Objective 4. This includes promoting opportunities for environmental enhancement where possible. The LFRMS primarily benefits SEA objectives 6 and 7 relating to population and health and material assets within Leicestershire but could also include a wider environmental focus that could help to deliver multiple benefits including to the natural and historic environment.

In order to ensure that the LFRMS does not result in adverse effects, all strategy actions should be integrated so that delivery of individual actions does not conflict with achievement of the wider strategy objectives (for example flood alleviation schemes in certain areas). Development and implementation of these actions should be effectively managed by ensuring that, where necessary, proposals are assessed to determine their potential environmental effects (positive and negative) in advance of their implementation and that appropriate mitigation measures are built into their delivery as required.

The LFRMS should seek to maximise the potential environmental benefits associated with the delivery of these objectives and measures. This can best be achieved through the integration of LFRMS objectives and through close partnership working, so that appropriate resources and funding are effectively allocated.

9.2 Monitoring

The SEA Regulations require Leicestershire County Council to monitor the significant environmental effects of the implementation of the LFRMS. Key indicators and targets that require monitoring are based on those used as part of the SEA framework, together with the main LFRMS objectives that they will help to monitor the achievement of.

The indicators and associated targets will enable the LFRMS to be monitored and any problems or shortfalls to be identified and remedied at an early stage. If failings are evident, it will be necessary for the LFRMS to be revised so that the achievement of the SEA objectives is not compromised. Of note, it is unlikely that any effects negative or otherwise will be seen immediately and that the relative time scale for monitoring will vary for each indicator/target.

Possible Monitoring partners are indicated against the SEA objectives in Table 9-1. These will be refined subject to the outcomes of the consultation process.

Receptor	SE/	A Objective	Monitoring Indicator	Target as a result of local flood risk management measures	Possible Monitoring Partners
Landscape and Visual Amenity	1	Protect the integrity of local urban and rural landscapes in the area.	Changes in the condition and extent of existing characteristic elements of the landscape. The condition and quality of new landscape features introduced to the environment (i.e. new flood defences).	No adverse impacts on landscape character of the NCAs, LCAs or other locally important landscapes/features as a result of implementation of the LFRMS.	Environment Agency Natural England
Biodiversity, Flora and Fauna	2	Maintain and enhance biodiversity, wildlife and habitat connectivity.	Area of designated nature conservation sites at risk of flooding and an assessment of the impact. Monitoring of reported conservation status of designated nature conservation sites.	No adverse impact on designated nature conservation sites as a result of changes to the current local flooding regime. No deterioration in the conservation status of designated sites as a result of implementation of the LFRMS. No adverse impact on designated nature conservation sites as a result of local flood risk management measures. Increase in the area of good wildlife habitat as a result of implementation of the LFRMS. No new impediments to fish and eel passage.	Environment Agency Natural England
Water Environment	3	Protect and enhance the quality of water features and resources.	Assessment of LFRMS options and their impact on the WFD objectives.	No deterioration to the WFD status of water bodies within the catchment as a result of implementation of the LFRMS.	Environment Agency Natural England Severn Trent Water

Table 9-1 Possible Monitoring Partners for SEA objectives

222

Geology and Soils	4	Maintain soil quality and conserve geological designations.	Area of agricultural land at risk of flooding and an assessment of the impact. The condition and quality of soils within the Council area (with emphasis on designated sites).	No reduction in the condition of geological designated sites as a result of implementation of the LFRMS. No reduction in condition of soils in designated sites within the Council area as a result of implementation of the LFRMS.	Environment Agency Natural England Internal Drainage Boards
Historic Environment	5	Preserve and where possible enhance important historic and cultural sites.	Number of designated heritage sites at risk from flooding and an assessment of the impact. Number of designated heritage sites adversely impacted upon by flood risk management measures	No adverse impact on designated heritage sites as a result of flooding. No adverse impact on the integrity/setting of designated heritage sites as a result of flood risk management measures.	Environment Agency Natural England Historic England
Population and Human Health	6	Protect and enhance human health and wellbeing.	Number of residential properties at risk from flooding	No increase in number of residential properties at risk from flooding.	Environment Agency National Health Service
Material assets and Climate Change	7	Minimise the impacts of flooding to the transport network and key critical infrastructure.	Length of road and rail infrastructure at risk from flooding. Number of key infrastructure assets at risk from flooding. Number of Green Infrastructure assets at risk from flooding or created/enhanced through implementation of the LFRMS	No increase in length of road and rail infrastructure at risk from flooding. No increase in number of infrastructure assets at risk from flooding. An enhancement of current Green Infrastructure Assets in the Council area.	Environment Agency Network Rail National Highways
	8	Minimise local and national contribution to climate change.	Carbon Footprint of proposed flood risk mitigation strategies.	Number of flood management measures implemented that will also sequester carbon.	Environment Agency Natural England

10 Next Steps

10.1 Consultation

Consultation has been undertaken with statutory consultees and stakeholders. The next stage of the SEA process (Stage D) involves consulting on the draft SEA Environmental report alongside the draft LFRMS. This consultation will be with the public to help identify any necessary amendments and updates to the documents.

All consultation responses received will be reviewed and taken into consideration for the next stage of the SEA process. This will involve the preparation of a Post-Adoption Statement, which will set out how the findings of the Environmental Report and the views expressed during the consultation period have been taken into account as the LFRMS is finalised and formally approved. The Post-Adoption Statement will also set out any additional monitoring requirements needed to track the significant environmental effects of the strategy.



11References

Ancient Monuments and Archaeological Areas Act 1979 c. 46 Available at: https://www.legislation.gov.uk/ukpga/1979/46

Environment Agency (2020) National Flood and Coastal Erosion Risk Management Strategy for England. [Online]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment __data/file/920944/023_15482_Environment_agency_digitalAW_Strategy.pdf

Environment Agency (2021) Nitrate Vulnerable Zones [Online] Available at: https://www.gov.uk/government/collections/nitrate-vulnerablezones#:~:text=Nitrate%20Vulnerable%20Zones%20(NVZs)%20are,for%20changes%20i n%20nitrate%20concentrations.

Environment Agency (2021) "Risk of Flooding from Surface Water Extent." Available at: https://www.data.gov.uk/dataset/bad20199-6d39-4aad-8564-26a46778fd94/risk-of-flooding-from-rivers-and-sea (Accessed: December 6, 2022).

Environment Agency (2022) "Risk of Flooding from Flooding and the Sea: 3.3 percent annual chance." Available at: https://www.data.gov.uk/dataset/95ea1c96-f3dd-4f92-b41fef21603a2802/risk-of-flooding-from-surface-water-extent-3-3-percent-annual-chance (Accessed: September 6, 2022).

Environment Agency (2022b) Humber River Basin District Flood Risk Management Plan 2021 to 2027 [Online]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment __data/file/1120221/Humber-FRMP-2021-2027.pdf

Environment Agency (2022c) Anglian River Basin District Flood Risk Management Plan 2021 to 2027 [Online]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment __data/file/1118190/Anglian-FRMP-2021-2027.pdf

Environment Agency (2022d) Severn River Basin District Flood Risk Management Plan 2021 to 2027 [Online]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment __data/file/1118308/Severn-FRMP-2021-2027.pdf

European Parliament (2001) "Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment"

Flood and water management act 2010: section 19 (2010). Available at: https://www.legislation.gov.uk/ukpga/2010/29/section/19

Fowler, H.J. *et al.* (2021) "Anthropogenic intensification of short-duration rainfall extremes," *Nature Reviews Earth & Environment*, 2(2), pp. 107–122. Available at: https://doi.org/10.1038/s43017-020-00128-6.

JBA (2017). Leicester City and Leicestershire Strategic Water Cycle Study. [Online] Available at:

https://www.llstrategicgrowthplan.org.uk/download/pdf_document/2017s5956-Leicester-City-and-Leicestershire-Water-Cycle-Study-Final-v5.0.pdf

Leicestershire and Rutland Environment Records Centre (2022). Regionally Important Geological Site (RIGS) boundaries [Online] Available at:

https://www.leicestershire.gov.uk/environment-and-planning/planning/leicestershire-and-rutland-environment-records-centre-lrerc

Leicestershire County Council (2011). Leicestershire Local Transport Plan 3. [Online] Available at:

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2017/1/9/Local_transport_p lan.pdf





Leicestershire County Council (2014a) Loughborough Cothelstone Avenue. Flood Report. [Online]

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2019/2/11/cothelstoneavenue-loughborough-final-report.pdf

Leicestershire County Council (2014b) Market Harborough, Town Centre. Flood Report [Online]

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2016/9/19/market harboro ugh tc detailed flood investigation final.pdf

Leicestershire County Council (2015). Leicestershire Local Flood Risk Management Strategy. [Online] Available at:

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2015/12/8/flooding_strateg y plan.pdf

Leicestershire County Council (2017). Leicester Preliminary Flood Risk Assessment Update. [Online] Available at: https://www.leicester.gov.uk/your-environment/flooding-andwatercourses/flood-risk-studies/

Leicestershire County Council (2018) Breedon on the Hill Flood Investigation Report [Online]

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2019/3/12/breedon-on-thehill-flood-report.pdf

Leicestershire County Council (2019) "Leicestershire County Council's Highway Infrastructure Asset Management Plan – Review." Available at:

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2019/11/14/Highways-Infrastructure-Asset-Management-Plan-HIAMP-Review.pdf

Leicestershire County Council (2020) Market Harborough Surface Water Management Plan. WSP

Leicestershire County Council (2021a) Flood Investigation Report: Whitwick [Online] https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2021/2/23/Whitwick-finalreport-February-2021.pdf

Leicestershire County Council (2021b) Flood Investigation Report: Appleby Magna. [Online] Available at:

https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2021/11/9/appleby-magnafinal-flood-report-november-2021.pdf

LRWT (2016). Leicester, Leicestershire and Rutland Biodiversity Action Plan. [Online] Available at: https://www.lrwt.org.uk/about-us/caring-wild-places/biodiversity-action-plan

Met Office (2022) BBC: What will climate change look like near me? [Online]. Available at: What will climate change look like in your area? - BBC News [Accessed: 22/03/2022].

OPDM (2005). A practical quide to the Strategic Environmental Assessment Directive. Online. Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/pra cticalguidesea.pdf

Severn Trent (2018) "A9: Drainage and Wastewater Management Plan 2018." Available at: https://www.stwater.co.uk/content/dam/stw/about us/pr19-

documents/sve appendix a9 drainage and wastewater management plan.pdf



Appendices

A Maps

A.1 Key receptors relating to strategy actions within the settlement of Cossington









A.2 Key receptors relating to strategy actions within the settlement of Diseworth



A.3 Key receptors relating to strategy actions within the settlement of Long Whatton





JBA

😑 Grade I

0

-

Grade II

Grade II*



A.4

A

Glebe Farm

Nuttingore Farm

0

250

500 m

٦



A.5 Key receptors relating to strategy actions within the settlement of Oadby

JBA



0

Key receptors relating to strategy actions within the settlement of Loughborough A.6

JBA



A.7 Key receptors relating to strategy actions within the settlement of Great Easton



A.8 Key receptors relating to strategy actions within the settlement of Breedon on the Hill

JBA



A.9 Key receptors relating to strategy actions within the settlement of Hinkley and Burbage





B Policy and Strategic Context

Source	Key objectives or requirements relevant to the SEA/LFRMS	Implications for SEA/the LFRMS
International		
EU Groundwater Directive	This Directive establishes specific measures as provided for in Article 17(1) and (2) of Directive 2000/60/EC (Water Framework Directive) in order to prevent and control groundwater pollution. This Directive is designed to prevent and combat groundwater pollution.	The SEA should take account of the need to maintain, protect and improve water quality across the LFRMS area.
EU Water Framework Directive	This Directive establishes a framework for the protection of inland surface waters, transitional waters, coastal water and groundwater. It also encourages the sustainable use of water resources. Key objectives are general protection of the aquatic ecology, specific protection of unique and valuable habitats, protection of drinking water resources, and protection of bathing water.	The SEA should seek to promote the protection and enhancement of all water resources.
European Commission, Nitrates Directive 91/676/EEC, 1991	The Nitrates Directive is designed to reduce water pollution caused by nitrate from agriculture. The directive requires Defra and the Welsh Assembly Government to identify surface or groundwaters that are, or could be, high in nitrate from agricultural sources. Once a water body is identified as being high in nitrate all land draining to that water is designated a Nitrate Vulnerable Zone. Within these zones, farmers must observe an action programme of measures which include restricting the timing and application of fertilisers and manure and keeping accurate records.	The SEA assessment framework should include water quality.



Salmon and	The Act lays down the present basic legal	The Act Provides
Freshwater	framework within which salmon and	statutory requirements
Fisheries Act	freshwater fisheries in	for maintaining
1975	England are regulated.	fish passage. The
	Proposals have been made to extend the	address any potential
	legislation to apply to more fish species	issues or effects on
	e.g., coarse fish, eel and	existing measures to
	lamprey species.	address fish passage
	The Act covers legislation on fishing	
	methods and related offences, obstructions	
	to fish passage, salmon	
	and freshwater fisheries administration and	
	law enforcement.	
	Proposed extensions to the legislation	
	include the provision of fish passes and	
	screening of water abstraction and discharge points for coarse fish gel and	
	lamprev species	
National		
A Green Future:	The 25-Year Environment Plan sets out	The SEA should help
Our 25 Year Plan	planned government action to deliver	achieve targets set out
Environment	including climate change mitigation and	including reducing risk
(2018)	adaptation, on which it outlines plans to	harm environmental
()	continue to reduce greenhouse gas	hazards and mitigating
	emissions, incorporate climate change in	and adapting to climate
	all policy, programme and investment	change.
	decisions and implement an effective	
	National Adaptation Programme.	The SEA should
	The Plan should bein achieve targets set	upon clean air, clean
	out in the plan including reducing risk	and plentiful water.
	harm environmental hazards and	thriving plants and
	mitigating and adapting to climate change.	wildlife, using resources
		from nature more
	The plan impacts upon clean air, clean and	sustainably and
	plentiful water, thriving plants and wildlife,	efficiently and
	sustainably and efficiently and enhancing	beritage and
	beauty, heritage and engagement with the	engagement with the
	natural	natural environment.
Air Quality	The aim of this regulation is to designate	The SEA should seek to
(Amendment of	zones in which ambient air will be	ensure that the region's
Domestic Pequilations) (FU	pollutants within them	or enhanced and that
Exit) Regulations		emissions of air
2019		pollutants are kept to a
		minimum.



Ancient Monuments and Archaeological Areas Act, 1979 (as amended)	Under this legislation scheduled monuments are protected based on their archaeological or historical interest.	The SEA should consider how the proposed works could negatively impact Schedules Monuments and seek to mitigate or minimise these impacts.
Biodiversity 2020: A Strategy for England's Wildlife and Ecosystems, 2011	The objective of this strategy is to stop biodiversity loss, support the establishment of healthy ecosystems and create/improve nature spaces in order to benefit both people and wildlife. As well as strategising a more integrated approach to conservation, reducing environmental pressures and improving our knowledge.	The SEA could impact upon the objectives of the biodiversity strategy. This impact could be either positive or negative. Important opportunities to create or improve nature spaces should be taken where possible.
Clean Air Strategy, 2019	The Clean Air Strategy provides a way in which the UK will tackle all sources of air pollution with the main aims of making UK air healthier to breathe, protecting nature and boosting the economy.	The SEA should consider the impact it may have on air quality.
Climate Change Act, 2008	The act established a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% in 2050 from 1990 levels. The act also requirements for the government which are fulfilled by the UK climate change risk assessment and the national adaption programme report	To comply with UK legislation, the Strategy's SEA objectives should consider how to minimise greenhouse gas emissions.
Conservation of Habitats and Species Regulations (amendment- EU Exit), 2019	To ensure the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) were operable after the end of the EU transition period, changes were made by the Conservation (Natural Habitats, etc.) (Amendment) (Northern Ireland) (EU Exit) Regulations 2019.	The impacts on biodiversity and protected species and sites must be considered as part of the SEA.
Contaminated Land (England) Regulations, 2006 (as amended)	These Regulations, which apply to England only, also set out provisions relating to the identification and remediation of contaminated land under Part 2A of the Environmental Protection Act 1990.	The SEA should Include objectives relating to the identification of possible sources, pathways and receptors of contamination.



Water Act, 2014	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 SEA should take account of emerging neighbouring plans where appropriate.
England Biodiversity Framework, 2008	Government strategy presenting five principles that are fundamental to conserving biodiversity during climate change. The precautionary principle underlies all the principles.	The SEA must consider the impacts on biodiversity whilst also taking into account the potential for future climate change.
Environment Act, 1995 (as amended)	The Environment Act 1995 led to the creation of a number of government agencies, including: - The Environment Agency - The Scottish Environment Protection Agency (SEPA) - The National Park authorities The Act also brought in requirements for the government to prepare strategies on air quality, national waste and hedgerow protection.	The SEA must promote the sustainable management of natural resources.
Floods and Water (Amendment- EU Exit) Regulations, 2019	These regulations aim to ensure that, following the withdrawal of the UK from the EU, legislation concerning floods and water continues to operate correctly.	The SEA should seek to ensure that flood risk in the region is not adversely affected. The SEA assessment framework should include flood risk.



Flood Risk Regulations, 2009	The Flood Risk Regulations 2009 implement the EU Flood Directive in England. They provide a framework for managing flood risk over a 6 year cycle, and require: Production of a Preliminary Flood Risk Assessment (PFRA); Identification of potential significant risk, referred to as flood risk areas (FRAs); Mapping of flood hazard and risk; and Flood Risk Management Plans, setting out measures and actions to reduce the risk. The Regulations require that each of the four elements above to be reviewed and updated where necessary, at minimum every six years.	The LFRMS needs to take local flood management strategy and the production of flood materials into consideration.
Future Water: The Government's water strategy for England, 2011	This strategy is the high level Government document which outlines how the Government wants the water sector to look by 2030, considering issues of water demand, water supply, water quality in the natural environment, surface water drainage, river and coastal flooding, greenhouse gas emissions and charging. It states that "by 2030 at the latest, we have: Improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from our taps Sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water Ensured a sustainable use of water resources, and implemented fair, affordable and cost-reflective charges.	The SEA should seek to ensure that the themes included in the strategy objectives are also reflected in the SEA objectives; particularly around water quality in the region, the quality of aquatic ecology, drinking water quality, resource use, energy use and greenhouse gas emissions, and adaptation to climate change.



Heritage Protection for the 21st Century, White Paper, 2007	The proposals in this White Paper reflect the importance of the heritage protection system in preserving our heritage for people to enjoy now and in the future. They are based around three core principles: Developing a unified approach to the historic environment;	The SEA should reflect the broad objectives of this white paper.
	Maximising opportunities for inclusion and involvement; and Supporting sustainable communities by putting the historic environment at the heart of an effective planning system.	
Land Drainage Act 1991 (as amended)	The Land Drainage Act 1991 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.	The SEA/LFRMS should seek to ensure that these legislative principles are reflected.
Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network, 2010	This independent review of England's wildlife sites, networks and the connections between them sets objectives and recommendations to help achieve a healthy natural environment, to allow our plants and animals to thrive.	The SEA should seek to maintain or enhance the quality of habitats and biodiversity
Making Space for Water – taking forward a new Government strategy for flood and coastal erosion risk management in England, 2005	This strategy outlines how to manage the risks from flooding and coastal erosion in the UK. Moreover, the strategy aims to reduce the threat of flooding to people and their property, and to deliver the greatest environmental, social and economic benefit, consistent with the Government's sustainable development principles.	The SEA should seek to ensure that flood risk in the region is not adversely affected.



	-	
National Planning Policy Framework (2021)	Sets the Government's planning policies for England and how they should be applied, providing a framework within which locally prepared plans for housing and other development can be produced. This framework must be taken into account when preparing the development plan alongside international obligations and statutory requirements.	The SEA should consider the planning policies contained within the NPPF and take them, and their objectives, into account in identifying a preferred option.
Natural Environment and Rural Communities (NERC) Act, 2006	The Act establishes an independent body – Natural England – responsible for conserving, enhancing and managing England's natural environment for the benefit of current and future generations. The Act makes provision in respect of biodiversity, pesticides harmful to wildlife and the protection of birds, and in respect of invasive non- native species. It alters enforcement powers in connection with wildlife protection and extends time limits for prosecuting certain wildlife offences.	The SEA should Include objectives relating to increased access to rural areas and to the minimisation of impacts to the environment.
Planning (Listed Buildings and Conservation Areas) Act 1990	This document ensures that when making a decision on a planning application for development that affects a listed building or its setting, a local planning authority must have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.	The SEA objectives should seek to mitigate to minimise impacts to listed buildings.



Safeguarding our Soils – A strategy for England, 2009	The strategy outlines the Government's approach to safeguarding our soils for the long term. It provides a clear vision to guide future policy development across a range of areas and sets out the practical steps that we need to take to prevent further degradation of our soils, enhance, restore and ensure their resilience, and improve our understanding of the threats to soil and best practice in responding to them. The Governments vision is that: By 2030, all England's soils will be managed sustainably, and degradation threats tackled successfully. This will, therefore, improve the quality of England's soils and safeguard their ability to provide essential services for future generations.	The SEA should seek to ensure that the quality of the regions soils and their management is protected or enhanced.
Securing the Future – the UK Government Sustainable Development Strategy, 2005	This strategy for sustainable development aims to enable all people to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations. Also, this strategy places a focus on protecting natural resources and enhancing the environment.	The SEA must seek to ensure that objectives relating to sustainable development, sustainable resource use and protecting the natural environment, are considered when assessing the potential impacts of the LFRMS.
The Carbon Plan, 2011	The Carbon Plan is a Government wide plan of action on climate change, including domestic and international activity. It sets out department by department actions and deadlines for the next five years. The plan represents on-going and planned cross-Government action on climate change with specific deadlines providing for both internal accountability and public transparency. The three main objectives are: Transforming the generation of energy by moving towards low carbon alternatives Changing the way how buildings are heated by better insulation the use of low carbon energy alternatives Changing the transportation sector by means of better public transport, reducing emissions from petrol and diesel engines and moving towards alternative technologies such as electric vehicles.	The SEA should include objectives that would promote the reduction of emissions from National Networks and transformation to a low carbon economy; The SEA should include objectives for reducing the generation of waste; Finally, the SEA should include objectives for protecting the natural environment.



The Environment Act, 2021	The Environment Act has been implemented with the intention of protecting and enhancing the environment for future generations. The act brings many of the objectives in the 25-year environment plan into UK law, setting legal targets to halt species declines and implementing laws to ensure water companies deliver reductions in the frequency of sewerage discharges. Under the Environment Act, local nature recovery strategies for areas in England are to be implemented. These are to be prepared by the responsible authority to include a statement of biodiversity priorities for the strategy area. This includes a description of the opportunities for recovering or enhancing biodiversity in terms of habitats and species in the strategy area, and the priorities, in terms of habitats and species, for recovering or enhancing biodiversity.	The act's aim of halting nature decline is particularly relevant to the Plan which has the potential to impact upon nature either positively or negatively depending upon the options chosen. The integration of 'softer' solutions that look to work with nature where possible could see the study contribute towards nature recovery and enhancement, as required under Local Nature Recovery Strategies, such as providing insight as to the potential of natural flood management, green/blue infrastructure SuDS and nature-based solutions.
The National Flood and Coastal Erosion Risk Management Strategy for England, 2020	This strategy's long-term vision is 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.	The LFRMS is being updated in accordance with this strategy, and the SEA should consider how the LFRMS may affect flood risk across the region.



The Flood and Water Management Act, 2010	The Flood and Water Management Act 2010 requires flood and coastal erosion risk management authorities to aim to contribute towards the achievement of sustainable development when exercising their flood and coastal erosion risk management functions. A review was recently undertaken for the implementation of Schedule 3 of the Flood and Water Management Act. This review included identification of the benefits and impacts of making SUDs mandatory for new development to ensure that its implementation will help address the pressures of climate change, increasing population and urbanisation whilst achieving multiple benefits, such as reducing surface and sewer flood risk, improving water quality and harvesting rainwater to meet current and future needs.	The requirement for the LFFA to produce an LFRMS is stipulated by the Flood and Water Management Act. Under the recently approved Schedule 3, once implemented, it will be a requirement for the LLFA to include SuDs. The SEA should take account of this requirement in assessment of the LFRMS.
	The conclusion of the review recommended that Schedule 3 be implemented subject to final decisions on scope, thresholds and process, which the government accepted.	



Emergency Framework for England, 2011 (as amended)	This Framework sets out the government's strategic approach to achieving the aims set out below and is intended for use by all those involved in planning for and responding to flooding from: • The sea • Rivers • Surface water • Groundwater and • Reservoirs The purpose of this Framework is to: Ensure delivery bodies understand their respective roles and responsibilities Give all players in an emergency flooding situation a common point of reference - bringing together information, guidance and key policies in a single planning document Establish clear thresholds for emergency response arrangements Place proper emphasis on the multi-agency approach to managing flooding events provide clarity on the means of improving resilience and minimising the impact of flooding events provide a basis for individual responders to develop and review their own plans and be a long-term asset that will provide the basis for continuous improvement in flood emergency management.	The LFRMS and SEA should take of account of the need to respond to flooding from all listed sources. The LFRMS and SEA should ensure that the responsibilities of LCC are reflected.
Water for Life, Water White Paper, 2011	This sets out market reform in the water sector.	The SEA should take into account the contents of this paper.
Water for People and the Environment, Water Resources Strategy for England and Wales, 2009	This strategy covers the actions that the Environment Agency believes need to be taken to ensure that there is enough water for people and wildlife in the face of future pressures. These include: • climate change • population growth • diffuse pollution • water for wildlife and wetlands	The SEA should seek to ensure that strategy objectives are also reflected in the SEA objectives, particularly around water resource use and availability in the Leicestershire region.



Wildlife and Countryside Act 1981 (as amended)	The Act is the principal mechanism for providing legislative protection of wildlife in Great Britain. Species listed in Schedule 5 of the Act are protected from disturbance, injury, intentional destruction or sale. Other provisions outlaw certain methods of taking or killing listed species. This Act is brought up to date regularly to ensure the most endangered animals are on the schedule. The Act also improved protection for the most important wildlife habitats.	Some aspects of the LFRMS may have effects on habitats and species. The SEA should seek to maintain or enhance the quality of habitats and biodiversity and take regard of protected species and habitats.
Regional	I	
Anglian Water: Draft Drainage and Wastewater Management Plan, (DWMP) 2022	The draft Anglian DWMP Outlines the regions adaptive plan to meet the challenges we face over the next 25 years. It is anticipated that publication of the DWMP will be in March 2023.	The LFRMS should reflect the broad objectives of these plans.
	It sets out a strategic direction for their approach to minimise and to minimise risks.	The SEA objectives should reflect the need to manage water resources on a catchment basis in a sustainable manner.
	Take a catchment-based approach to these risks and challenges faced.	
	Promote the use of nature-based solutions, especially when it comes to surface water removal.	
	Protect the environment through improvements to our discharges.	
	Demonstrate how they will serve our growing population over the next 25 years.	
	Show what's needed to protect assets and customers from the impacts of heavy rainfall caused by climate change.	
	Identify opportunities for partnership working to release benefits and resolve risks through matched funding.	
	Align with our other strategic plans, such as the Long Term Delivery Strategy (LTDS), Water Resources Management Plan (WRMP), Water Resources East (WRE) Regional Plan, Flood Risk Management	



	 Plans (FRMPs), River Basin Management Plans (RBMP) and Local Plans. Include all water recycling customers, regardless of who serves their water. Exclude upstream water supply and downstream resources, which will be reviewed separately through the business 	
Severn Trent: final Drainage and Wastewater Management Plans, 2023	 The strategic direction statement contained within the draft plan has set out eight priorities: Guarantee future water supplies Ensure water is used wisely Deliver a high quality, affordable service Lower the risk of flooding and pollution Protect and enhance our environment Support a more circular economy Make a positive social difference Maintain a safe, inclusive, and fair workplace. As well as three key strategic outcomes (and associated targets) in summary these are: Lower the risk of flooding and pollution Protect and enhance the environment 	
Humber River Basin District River Basin Management Plan, 2022 Anglian River Basin District River Basin Management Plan, 2022	The purpose of a river basin management plan is to provide a framework for protecting and enhancing the benefits provided by the water environment.	The LFRMS should consider baseline classification of water bodies and statutory objectives for protected areas. The SEA



Severn River Basin District River Basin Management Plan 2022	To achieve this, and because water and land resources are closely linked, it also informs decisions on land-use planning. This plan contains 4 sets of information that groups who manage land and water should pay particular attention to: Baseline classification of water bodies - One of the main purposes of this plan is to prevent water bodies deteriorating. Statutory objectives for protected areas - This plan highlights the areas of land and bodies of water that have specific uses that need special protection Statutory objectives for water bodies - This plan sets out legally binding objectives for each quality element in every water body, including an objective for the water body as a whole. Summary programme of measures to achieve statutory objectives - This plan provides a framework for action and future regulation.	objectives should should consider these objectives.
Severn Trent: Water Resources Management Plan, 2019	This WRMP explains technical assessments and modelling used to explore the future potential risks to the water supply / demand balance. The plan sets out how Severn Trent Water will meet these future challenges, and what steps we believe are needed over the coming years to maintain security of water supplies for our current and future customer In broad terms, the plan aims to respond to these challenges by: Preserving current level of resilience against droughts; Tackling unsustainable abstraction and prevent future environmental deterioration; Appropriately planning for climate change; Meeting future population growth; Improving resilience of customers' supplies; Meeting customers' and stakeholders' needs and expectations; Meeting wider regulatory obligations; and Understanding and allowing for future uncertainty	The LFRMS should reflect the broad objectives of these plans. The SEA objectives should reflect the need to manage water resources on a catchment basis in a sustainable manner.



Soar Catchment Management Plan, 2018	The Soar catchment partnership outlined several key objectives: Enhance Biodiversity and Natural Processes Support Sustainable Flood Risk Management Work with Disadvantaged Communities Promote Rural Livelihoods Strengthen Community Involvement and Recreation Improve Water quality	
Tame, Anker and Mease Catchment Plan 2020	Catchment objectives are provided under the overall vision 'To protect and improve the quality, diversity, and resilience of the water environment within the Tame Anker and Mease catchment for the benefit of people and wildlife' The overall objective of the plan is to improve WFD elements to help achieve specific catchment WFD objectives Also, to improve the management of the wider environment including: Wildlife and habitat Flooding Greening the grey Deliver the River Mease Restoration Plan	
Welland Catchment 5 Year Plan, 2020	The aims for this plan are: 1. To develop a direction for the WVP over the next five years 2. To ensure the WVP is best placed to win funding for future projects	



River Mease SSSI/SAC Restoration Plan, 2012	The aim of this restoration plan is to identify river restoration or enhancement actions that can address physical modifications to the River Mease SSSI/SAC which contribute to unfavourable condition. This includes the following objectives: 1. Determine the impact of physical modification. 2. Provide an outline restoration plan for the river on a reach-by-reach basis. 3. Identify potential delivery mechanisms.	The LFRMS should reflect the broad objectives of these Plans – particularly where it pertains to wider water quality issues.
River Welland Catchment Flood Management Plan, 2009	The Catchment Flood Management Plan aims to aim to promote more sustainable approaches to managing flood risk. The policies identified in the Catchment Flood Management Plan will be delivered through a combination of different approaches	The LFRMS should reflect the broad policy approach of these Plans.
Local		
Charnwood Borough Council Level 2 Strategic Flood Risk Assessment (2021) Hinckley and Bosworth Borough Council Strategic Flood Risk Assessment (2020) Hinckley and Bosworth Borough	The purpose of the Strategic Flood Risk Assessment is to provide additional flood risk analysis for site options, assisting the preparation of the Local Plan. The Level 2 LFRMS considers potential sites to determine which sites are at highest risk of flooding and consider the cumulative impact of development. The purpose of this document is to provide a detailed assessment of any flood hazard	Strategic policies should consider the cumulative impacts in, or affecting, local areas susceptible to flooding.
Council, Blaby District Council and Oadby & Wigston Borough Council Strategic Risk Assessment (2014)	within the Flood Zones, and provide information on existing defences and flood risk management measures.	
Melton Borough Council Strategic Flood Risk Assessment (2015)	The purpose of the SFRA is to provide evidence to inform the Council's choice of allocations and policies. The SFRA will be used in decision making on planning applications.	



North West Leicestershire District Council Strategic Flood Risk Assessment (2015)	The objective of the assessment is to inform the Local Planning Authority to prepare appropriate policies for the management of flood risk, and identify the detail needed for site-specific flood risk assessments and consider emergency planning capability.	
Leicestershire County Council's Strategic Plan 2022-2026	Leicestershire County Council has developed strategic outcomes essential for a good quality of life in Leicestershire. These are: Great Communities – Leicestershire's communities are prepared for and resilient to emergencies, diversity is celebrated, people support each other through volunteering, and cultural and historical heritage are enjoyed and conserved.	The SEA/LFRMS should reflect the broad outcomes of the strategic plan.
	Safe and Well – People are safe in their daily lives, enjoy long lives in good health and those at most risk are protected from harm.	
	Strong Economy, Transport and Infrastructure – Leicestershire has the infrastructure for sustainable economic housing and growth, it is an attractive place where businesses invest and flourish, economic growth delivers increased prosperity for all, and there is close alignment between skill supply and demand.	
	Improved Opportunities – Young people and adults are able to aim high and reach their full potential, families are self- sufficient and enabled to be resilient, and every child has access to good quality education.	
	Clean and Green – Nature and the local environment are valued, protected and enhanced, resources are used in an environmentally sustainable way, people act now to tackle climate change, and the economy and infrastructure are low carbon and environmentally friendly.	


Leicester and Leicestershire Strategic Growth Plan 2018-2050	The Strategic Growth Plan has been prepared by ten partner organisations in Leicester & Leicestershire. The plan sets out how the area is planning to accommodate future growth and the proposed areas for growth. Coalville has been identified as an area of managed growth. The Leicestershire International Gateway in the North of the District, has also been identified as a secondary growth area.	The SEA should consider and incorporate the strategic direction and principles of the growth plan. The LFRMS should consider where future growth and proposed areas for growth are affected.
Landscape Sensitivity and Green Infrastructure Study for Leicester and Leicestershire, 2017	The Landscape Sensitivity and Green Infrastructure (GI) Study provides evidence to help ensure that locations identified for economic and housing development conserves and enhances landscape, biodiversity and green infrastructure. To take this work forward several objectives are suggested: Embed GI in Local Plans in a coordinated way Use the mapped GI assets and opportunities to guide future development Explore funding options and payments for ecosystem services The report identifies areas of North West Leicestershire have generally poorer living environment than other areas, and the delivery of high quality green infrastructure alongside new development has the greatest potential impact on health and well-being in these areas.	The SEA should reflect these broad components of the study.
The Space for Wildlife: Leicester, Leicestershire and Rutland Biodiversity Action Plan (LLRBAP), 2016	 'Space for Wildlife' has three components: 1. To promote the restoration, management and creation of BAP Priority Habitats 2. To promote the creation of new wildlife habitat in the wider countryside 3. To survey, monitor and promote favourable management of existing good sites through the Local Wildlife Sites system. 	The SEA should reflect these broad components of the biodiversity action plan.



Loughborough Surface Water Management Plan, 2013	This SWMP outlines the preferred strategy (or strategies) for the coordinated management of surface water flood risk within Loughborough.	The SEA/LFRMS should reflect on the rationale for this SWMP and the detailed need to understand and address surface water flooding issues in the wider study area.
Market Harborough Surface Water Management Plan, 2020	The key objectives of this SWMP, relevant to the LFRMS are: Enhance the understanding of local flood risk; Establish the areas at significant risk of flooding; Aid in understanding flood mechanisms – ascertain interconnectivity Identify mitigation options (including taking account of climate change)	The SEA/LFRMS should reflect on the rationale for this SWMP and the detailed need to understand and address surface water flooding issues in the wider study area.
Appleby Magna Natural Flood Management Scoping Study, 2021	The study revealed that wider benefits such as water quality improvement and habitat gains can be achieved if NFM measures are implemented in combination across the catchment (River Mease SSSI/SAC).	The SEA/LFRMS should reflect NfM application across the study area's catchments.
High-level Strategic Natural Capital Study of Leicester and Leicestershire, 2021	A key recommendation(s) aligned with policy analysis: Identify areas where there are opportunities to improve the condition of habitats or change habitat types so that natural capital can assist with addressing existing environmental issues (such as air pollution or flood risk);	The SEA/LFRMS could reflect on natural capital approaches for flood risk.
Leicestershire Equality Strategy (2020)	The council's Equality Strategy sits alongside the council's strategic plan five outcomes in ensuring equality via: A strong economy Wellbeing and opportunity Keeping people safe Great communities Affordable and quality homes	The SEA/LFRMS should seek to align with the councils five strategic equality outcomes where relevant.



Leicestershire's Joint Health and Wellbeing Strategy, 2019	A key theme of the strategy is the commitment of access to green space 'We will work with partners to ensure high quality new and current housing that has access to green space and supports good health and wellbeing' 'We will collaborate with the Leicestershire planning system and developers to explore a new approach to the design of our residential, employment and town centre environments to increases active travel, green infrastructure'	The SEA should aim to include objectives that complement the priorities and principles of this strategy.
Leicestershire Environment Strategy, 2018- 2030	Out of the five desired outcomes aligned with wider Leicestershire strategy there is one interrelated area where the strategy contributes (and is relevant to the LFRMS/SEA). By taking action to mitigate and adapt to climate change and therefore contribute to reducing the risk of harm to people from climate change for example flooding and heatwaves. For wider environmental issues: Climate change - Support our responsibilities as the Lead Local Flood Authority.	The strategy understands flooding and climate change to be priority strategic areas. The SEA/LFRMS needs to take account of the proposed
Improving Air Quality and Health across Leicestershire, 2020- 2023	The Air Quality action plan acknowledges one particular priority – with relevance to the LFRMS/SEA: Guidance and frameworks should be developed with and for planners to support measures to improve air quality and identify and address developments which may worsen air quality.	The SEA/LFRMS should consider the impact that it will have on air quality.



Nutrient Neutrality Advice 2022 (Defra, Department for Levelling Up, Housing and Communities, Natural England)	The government issued a ministerial statement by George Eustice (Secretary of State for Environment, Food and Rural Affairs) on 20 th July 2022. It sets out that the government will: Place a legal duty on water companies to upgrade wastewater treatment works by 2030 in nutrient neutrality areas Require Natural England to establish and deliver a Nutrient Mitigation Scheme	The SEA should account for how this advice impacts future plans and projects within the River Mease catchment area.
Net Zero Leicestershire Strategy 2023 – 2045 (Leicestershire County Council)	Leciestershire's Net Zero Strategy outlines an action plan to help Leicestershire realise their net zero ambitions and a series of goals to achieve.	The SEA should consider how measures proposed in the LFRMS will contribute to the achievement of carbon reduction goals.



Offices at

Coleshill Doncaster Dublin Edinburgh Exeter Haywards Heath Isle of Man Limerick Newcastle upon Tyne Newport Peterborough Saltaire Skipton Tadcaster Thirsk Wallingford Warrington

Registered Office 1 Broughton Park Old Lane North Broughton SKIPTON North Yorkshire BD23 3FD United Kingdom

+44(0)1756 799919 info@jbaconsulting.com www.jbaconsulting.com Follow us: 🎔 in

Jeremy Benn Associates Limited

Registered in England 3246693

JBA Group Ltd is certified to: ISO 9001:2015 ISO 14001:2015 ISO 27001:2013 ISO 45001:2018 This page is intentionally left blank

Appendix J



Leicestershire Local Flood Risk Management Strategy

Habitats Regulations Assessment

Final Report

April 2023

www.jbaconsulting.com





JBA Project Manager

Harriet Thomlinson Salts Mill Victoria Road Shipley BD18 3LF

Revision History

Revision Ref/Date	Amendments	Issued to
P01.01 December	Draft Report	Leicestershire County Council
P02 December	Draft Report for consultation	Leicestershire County Council
P03 April	Final Report for public consultation	Leicestershire County Council

Contract

This report describes work commissioned by Leicestershire County Council. Catherine Porter and Jen Jones of JBA Consulting carried out this work.

Prepared by	Jen Jones MSc, BSC (Hons)
	Assistant Ecologist
	Catherine Porter BSc MSc MCIEEM
	Ecologist
Reviewed by	Rachael Brady BSc MSc PGCert CEcol MCIEEM

Technical Director

Purpose

This document has been prepared as a Final Report for Leicestershire County Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to Leicestershire County Council.

Copyright

© Jeremy Benn Associates Limited 2023.

Carbon Footprint

JBA is aiming to reduce its per capita carbon emissions.



Executive summary

This report contributes to Leicestershire County Council's legal obligation under the Conservation of Habitats and Species Regulations 2010 (as amended) to carry out a Habitat Regulations Assessment (HRA) of its plans for effects on European Sites.

Leicestershire County Council (LCC) has developed a Local Flood Risk Management Strategy (LFRMS) for the County. As Lead Local Flood Authority (LLFA) under the Flood and Water Management Act 2010 they are responsible for the management of local flood risk, including from surface runoff, ground water and flooding from ordinary watercourses (smaller rivers and streams). Several European Sites are located within or adjacent to the LCC boundary and it is a requirement that LFRMS is assessed under these regulations.

Before a plan can be adopted, the 'competent authority' (LCC) needs to demonstrate that the plan would have no significant effects on European Sites' integrity to the satisfaction of Natural England. An uncertain result is not acceptable and is treated as adverse until proven otherwise.

European Sites consist of Special Areas of Conservation (SAC) designated for habitats and animal species, and Special Protection Areas (SPA) designated for bird species. Ramsar sites designated under the Ramsar Convention on Wetlands 1971 are also included following Government policy.

Due to the high-level and strategic nature of the objectives and measures proposed, and the lack of proposals for physical works on the ground in the vicinity of European Sites, all of the LFRMS objectives and measures have been screened out.

Therefore, the screening assessment can conclude that the Leicestershire LFRMS will not have significant effects, either alone or in-combination with other plans/strategies, on the following European sites:

- River Mease SAC
- Ensor's Pool SAC
- Grimsthorpe SAC
- Rutland Water SPA and Ramsar

As no likely significant effects have been identified, there is no need for Appropriate Assessment.

It is therefore concluded that the Leicestershire LFRMS can be adopted with no adverse impact on the integrity of European Sites.

It should be noted that if the LFRMS objectives and measures are amended, or additional objectives and measures are included, then further HRA screening should be undertaken.

JBA consulting

Contents

1	Introduction	1
1.1	The Local Flood Risk Management Strategy	1
1.2	Habitats Regulations Assessment	1
1.2.1	Legislative Context	1
2	HRA Methodology	3
2.1	Introduction	3
2.2	HRA Process	3
2.3	HRA Stage 1: Screening Methodology	4
2.3.1	The Precautionary Principle	5
2.3.2	Mitigation, Avoidance and Protective Measures	5
2.4	HRA Stage 2: Appropriate Assessment Methodology	5
2.4.1	Appropriate Assessment and Mitigation – HRA Tasks 2 and 3	5
2.5	Consultation	6
3	European Sites	7
3.1	Introduction	7
3.2	European Sites in and Around Leicestershire	7
3.3	Potential Hazards to European Sites	8
3.3.1	Introduction	8
3.3.2	Hazards to Sites	8
3.3.3	Qualifying Features and Sensitivity to Hazards	9
4	Screening Assessment	11
4.1	Introduction	11
4.2	In-combination Effects	15
5	Screening Assessment Conclusion	16
5.1	Conclusion	16
А	European Sites within and adjacent to the County of Leicestershire	
B Lei	Details of European Sites within and adjacent to the County of cestershire	

Ι

JBA consulting

Ι

List of Figures

Figure A-1: Relevant European Sites

List of Tables

Table 2-1: The HRA Process	3
Table 3-1: European Sites Within and Adjacent to the County of Leicestershire	8
Table 3-2: Potential Hazards to European sites	8
Table 3-3: Sensitivity of Qualifying Features to Potential Hazards	10
Table 4-1: Screening of LFRMS Objectives and Measures	11

Abbreviations

GIA	Grant in Aid
HIAMP	Highway Infrastructure Asset Management Plan
HRA	Habitats Regulations Assessment
LCC	Leicestershire County Council
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
LLR	Leicester, Leicestershire, and Rutland
NFM	Natural Flood Management
SAC	Special Area of Conservation
SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SWMP	Surface Water Management Plan



1 Introduction

This report details the Habitats Regulations Assessment of the Local Flood Risk Management Strategy (LFRMS) that has been developed by Leicestershire County Council (LCC), as part of their responsibility as a Lead Local Flood Authority (LLFA). It is intended to identify, describe and assess the likely significant effects of implementing the strategy on European designated sites (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)) and also Ramsar sites within and around Leicestershire.

1.1 The Local Flood Risk Management Strategy

The Flood and Water Management Act 2010 determined the need for flood risk to be managed within the framework of National Strategies for England and Wales and within Local Strategies for each Local Flood Authority Area. The national strategy for England sets out the principles for flood risk management and which organisations are responsible for implementation.

In accordance with the national strategy for England, LLFAs have been allocated responsibility for developing independent LFRMSs to address sources of local flooding. Each LFRMS identifies which local organisation is accountable for managing flood risk and establishes partnership agreements, as well as undertaking an assessment of flood risk and developing plans / actions, for tackling these risks.

LCC as a LLFA has a responsibility to produce a LFRMS to manage water within the County to address local flooding issues. The LCC LFRMS sets out the overall objectives to manage flooding within the County, prepared in accordance with the Flood Risk Regulations (2009). The purpose of the Strategy is to define and monitor local flood risk management in Leicestershire, and in doing so fulfils the duty required in Section 9 of the Flood and Water Management Act 2010 for the LLFA. It identifies five objectives that outline the strategy to manage local flood risk, and puts forward associated actions/measures that will promote the successful delivery of the strategy.

1.2 Habitats Regulations Assessment

1.2.1 Legislative Context

The Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019), also known as the 'Habitats Regulations', provide legal protection to habitats and species of national importance. The regulations also secure an ecological network of protected sites, consisting of SACs and SPAs. Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance [Ramsar Convention]) are given the same level of protection as SACs and SPAs.

Prior to the UK's withdrawal from the EU, SACs were designated and protected under domestic legislation transposed from European Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive), and SPAs under European Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive). Together these sites formed a European-wide Natura 2000 network of protected sites. Since 31 December 2020, SACs and SPAs within the UK no longer fall within the Natura 2000 network, and instead form a National Site Network. SPAs and SACs continue to be referred to collectively as 'European



sites' within the context of the Habitats Regulations, reflecting their international importance for the conservation of biodiversity.

SACs and SPAs within the National Site Network are also still designated for habitats listed on Annex I and for species listed on Annex II of the Habitats Directive, and criteria listed under the Birds Directive, and it is these Annex I habitats, Annex II species and Birds Directive Criteria against which assessments under the Habitats Regulations are still made.

It is a requirement of Regulation 105 of the Habitats Regulations that where a plan is likely to have a significant effect on a European site, either alone or incombination with other plans or projects, and where it is not directly connected with or necessary to the management of the site "the plan-making authority for that plan must, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site's conservation objectives".

Therefore, for all plans that are not wholly directly connected with, or necessary to, the conservation management of the site's qualifying features, a formal Screening for any Likely Significant Effects (either alone or in-combination with other plans or projects) on a European site is required. This Screening Assessment is based on available ecological information on the designated site(s), other plans, projects and policies relevant to the area and details of the proposed plan.

If the Screening Assessment concludes that the plan is likely to have a significant effect on the conservation objectives of the site(s), or that such an effect cannot be ruled out (adopting a precautionary approach) an Appropriate Assessment must be carried out. An Appropriate Assessment involves an assessment of the potential effects of the plan on the conservation objectives of the site(s). If significant effects are identified, avoidance measures or mitigation to reduce impacts can be applied.

If it cannot be concluded that the plan will not adversely impact upon the integrity of the site(s), the development will not be able to proceed without further conditions and/or assessment. The plan will need to prove that all alternatives have been considered and that there are imperative reasons of overriding public interest (IROPI) that outweigh the potentially damaging impacts that the plan may have before it can proceed. In this case compensatory, measures will be required.

Plans, such as the Leicestershire County Council LFRMS, are required to undergo HRA if there is the potential for significant impacts, and they are not directly connected with or necessary to the management of a European site. As the Plan is not connected with or necessary to the management of SACs, SPAs or Ramsar sites, it is necessary to undertake a HRA of the Plan.



2 HRA Methodology

2.1 Introduction

It is accepted best-practice for the HRA of plans/strategies to be run as an iterative process alongside the plan/strategy development, with the emerging objectives, measures/actions continually assessed for their possible effects on European sites and modified or abandoned (as necessary) to ensure that the subsequently adopted plan/strategy is not likely to result in significant effects on any European sites, either alone or 'in-combination' with other plans. This is usually undertaken in consultation with Natural England and other appropriate consultees.

2.2 HRA Process

The HRA will follow a four-stage process, based on that detailed in the Department for Communities and Local Government (DCLG) guidance Planning for the Protection of European sites: Appropriate Assessment (2006) and subsequent Government Guidance on the Use of Habitats Regulations Assessment (2019). These stages are described in Table 2-1.

Table 2-1: The HRA Process

Stage/Task	Description
HRA Stage 1: Screening	This process identifies the likely impacts upon a European site of a project or plan, either alone or in-combination with other projects or plans, and determines whether these impacts are likely to be significant. If no likely significant effect is determined, the project or plan can proceed. If a likely significant effect is identified, stage 2 is commenced. Following the People over Wind & Sweetman v Coillte Teoranta Case C- 323/17, the assessment does not consider protective, avoidance or mitigation measures for stage 1 Screening. These measures are carried forward and considered as part of stage 2. However, any changes to early drafts of a plan, for example the removal of a policy with likely significant effects, are considered as pre-screening decisions. The HRA formal Screening is undertaken prior to the adoption of the Plan. Therefore, any changes on earlier iterations of the draft plan are in effect changes to the essential features or characteristics of the plan itself and are therefore (usually) not considered to be avoidance measures requiring consideration at Stage 2.
HRA Stage 2: Appropriate Assessment	This assessment determines whether a project or plan would have an adverse impact on the integrity of a European site, either alone or in- combination with other projects or plans. This assessment is confined to the effects on the important habitats and species for which the site is designated (i.e. the qualifying interests of the site). Appropriate Assessments, in line with CJEU: Case C-461/17 Holohan v An Bord Pleanála, must also consider impacts upon habitats and species within or outside of a site boundary if they support a qualifying feature and could impact upon the conservation objectives of the site. If no adverse impact is determined, the project or plan can proceed. If an adverse impact is identified, Task 3 is commenced.
HRA Stage 3: Assessment where no	Where a plan or project has been found to have adverse impacts on the integrity of a European site, potential avoidance/mitigation measures or

Stage/Task	Description
alternatives and adverse impacts remain (Mitigation and Alternatives)	alternative options should be identified. If suitable avoidance/mitigation or alternative options are identified, that result in there being no adverse effects from the project or plan on European sites, the project or plan can proceed. If no suitable avoidance/mitigation or alternative options are identified, as a rule the project or plan should not proceed. However, in exceptional circumstances, if there is an 'imperative reason of overriding public interest' for the implementation of the project or plan, consideration can be given to proceeding in the absence of alternative solutions. In this case, compensatory measures must have to be put in place to offset negative impacts (stage 4).
HRA Stage 4: Compensatory measures	Stage 4 comprises an assessment of the compensatory measures where, in light of an assessment of imperative reasons of overriding public interest, it is deemed that the project should proceed.

Other guidance documents have been used to help inform the methodology of this assessment, including:

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission 2002)
- The Habitats Regulations Assessment Handbook. DTA Publications
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Communities, 2018)
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (European Communities, 2007)
- The National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG)
- The Planning Inspectorate PINS Note 05/ 2018: Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman, v Coillte Teoranta (The Planning Inspectorate, 2018)
- UK Government Guidance on the use of Habitats Regulations Assessment (July 2019) [https://www.gov.uk/guidance/appropriate-assessment]

2.3 HRA Stage 1: Screening Methodology

The principles of 'screening' are applied to a plan or its components to allow the assessment stage to focus on those aspects that are most likely to have potentially significant or adverse effects on European sites, as well as shape the emerging strategy. Screening aims to determine whether the plan will have any 'likely significant effects' on any European site as a result of its implementation. It is intended to be a coarse filter for identifying effects (positive and negative) that may occur, to allow the assessment stage to focus on the most important aspects. A plan should be considered 'likely' to have an effect if it is not possible (on the basis of objective information) to exclude the likelihood that the plan could have significant effects on any European site, either alone or in-combination with other plans or projects; an effect will be 'significant' if it could undermine the site's conservation objectives.

Screening can be used to 'screen-out' European sites and plan components from further assessment, if it is possible to determine that significant effects are unlikely (e.g. if sites or interest features are clearly not vulnerable (exposed

JBA



and/or sensitive) to the outcomes of a plan due to the absence of any reasonable impact pathways).

In order to undertake screening of the LFRMS, it is necessary to:

- Identify the European sites within and outside the strategy area likely to be affected, reasons for their designation and their conservation objectives
- Describe the strategy and its aims and objectives and also those of other plans or projects that in-combination have the potential to impact upon the European sites
- Identify the potential effects on the European sites
- Assess the significance of these potential effects on the European sites.

2.3.1 The Precautionary Principle

If there is uncertainty, and it is not possible, based on the information available, to confidently determine no significant effects on a site then the precautionary principle will be applied, and the plan will be subject to an appropriate assessment (HRA Task 2).

2.3.2 Mitigation, Avoidance and Protective Measures

Following the People over Wind & Sweetman v Coillte Teoranta Case C-323/17, the assessment does not consider protective, avoidance or mitigation measures for stage 1 Screening. These measures are carried forward and considered as part of the stage 2 Appropriate Assessment.

2.4 HRA Stage 2: Appropriate Assessment Methodology

2.4.1 Appropriate Assessment and Mitigation – HRA Tasks 2 and 3

For those European sites screened into the HRA, it is necessary to undertake an Appropriate Assessment to explore the potential adverse effects on their integrity and develop measures to avoid these effects entirely, or if not possible, to mitigate the impacts sufficiently that effects on the European sites are rendered effectively insignificant.

The stages involved in the Appropriate Assessment are to:

- Explore the reasons for the European designation of the "screened in" European sites
- Explore the environmental conditions required to maintain the integrity of the "scoped in" European sites and become familiar with the current trends in these environmental processes
- Gain a full understanding of the LFRMS and consider each measure within the context of the environmental processes would the measures lead to an impact on any identified process?
- Decide whether the identified impact will lead to an adverse effect on the integrity of the European site
- In reference to ECJ case C-462/17 (Nov 18) Holohan v An Bord Pleanala, the Appropriate Assessment needs to include all typical habitats and species present within and outside of the boundaries of the European site, if they are necessary for the conservation of the habitats and species listed for the protected area.
- Identify other plans that might affect these European sites in combination with the LFRMS and decide whether there are any adverse effects that might not result from the strategy in isolation will do so in-combination.



• Develop measures to avoid the effect entirely, or if not possible, to mitigate the impact sufficiently such that its effect on the European site is rendered effectively insignificant.

In evaluating significance, JBA Consulting has relied on its professional judgement, which will be further reinforced through consultation with Natural England, through the development of the LFRMS.

2.5 Consultation

It is a requirement of the Habitat Regulations to consult the appropriate nature conservation statutory body (i.e. Natural England). This HRA has been subject to consultation with Natural England, alongside the draft LFRMS.



3 European Sites

3.1 Introduction

As discussed in section 1.2, European sites collectively form the National Site Network. The objectives of the National Site Network are to:

a) maintain at, or where appropriate restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status in their natural range (so far as it lies in the United Kingdom's territory, and so far as is proportionate).

b) contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds listed in Annex I to the new Wild Birds Directive which naturally occur in the United Kingdom's territory and regularly occurring migratory species of birds not listed in that Annex which naturally occur in the United Kingdom's territory, and so securing compliance with the overarching aims of the Wild Birds Directive.

The National Site Network consists of:

- Special Areas of Conservation (SACs) these are designated to protect those habitat types and species that are considered to be most in need of conservation (excluding birds).
- Special Protection Areas (SPAs) these are designated to protect rare and vulnerable birds, and also regularly occurring migratory species.

Although not included in the legislation, as a matter of policy, Ramsar sites in England and Wales are protected in the same way as European sites, and therefore considered in the HRA process. The vast majority are also classified as SPAs and Sites of Special Scientific Interest (SSSIs). All SPAs and terrestrial SACs in England and Wales are also designated as SSSIs under the Wildlife and Countryside Act (1981) as amended.

For simplicity in this report, SACs, SPAs and Ramsar sites are collectively referred to as European sites.

3.2 European Sites in and Around Leicestershire

Best practice guidance suggests that sites occurring within a wider area of approximately 10km to 15km from the boundary of the area directly affected by a plan should be identified and assessed as part of the HRA screening process, in addition to those sites located within the plan area. However, it is important to consider the possibility of impacts for any European site which might be affected, whatever their location, given the activities included in the plan and their range of influence. This may extend some distance from the area within the immediate influence of a plan. For this LFRMS a buffer of 15km has been applied as it is considered that no pathways, including hydrological connections, exist that would impact upon any European sites beyond this extent.

There is one SAC located within Leicestershire. There are a further two SACs, one SPA and one Ramsar site located within 15km of the Leicestershire County boundary. These sites are listed in Table 3-1 below and the locations shown in Appendix A Figure A-1.

JDA
consulting

Designation	Within Leicestershire	Adjacent to Leicestershire (within 15km)
SAC	River Mease	Ensor's Pool Grimsthorpe
SPA	None	Rutland Water
Ramsar	None	Rutland Water

Table 3-1: European Sites Within and Adjacent to the County of Leicestershire

Detailed information on these sites, including their qualifying features and conservation objectives are provided in Appendix B Table B-1: Relevant European Site Details (Information from JNCC and Natural England).

3.3 Potential Hazards to European Sites

3.3.1 Introduction

Flood risk management (including the construction of flood defences and maintenance works) can potentially have adverse impacts on the habitats and species for which European sites are designated. These impacts can be direct such as habitat loss, fragmentation or degradation, or indirect such as disturbance or pollution from construction and transportation.

This section identifies the potential hazards to European sites within and adjacent to the County of Leicestershire which may arise as a result of the implementation of the LFRMS, and then goes on to identify the types of hazards to which the qualifying features present within the sites are particularly sensitive.

3.3.2 Hazards to Sites

The European sites within and adjacent to Leicestershire are mostly comprised of river and other wetland sites and therefore the potential hazards identified in Table 3-2 are based on those identified in the Environment Agency's EU Habitats Directive Handbook, however local conditions have also been considered during the hazard identification process.

Potential Hazard	Description
Changes in hydrological regime	These are changes to existing hydrological processes (e.g. changes to flow rates) that may alter the present characteristics of the European site.
Changes in water levels or tables	Flooding, or altered water levels, may have adverse impacts on water dependant habitats and species, through drying out of water dependent habitats or by making water levels higher than the species present can tolerate. Additionally, changes to groundwater may adversely impact on these habitats.
Changes in water quality	Activities which may impact upon water quality, such as accidental pollution spills as a result of flood risk management activities, may adversely affect wetland habitats and species.
Changes to surface water flooding	Activities which may result in a reduction or increase in the frequency and extent of surface water flooding which may affect riverine, floodplain and other habitats. For example, ponding, intense rainfall or summer storms, or risks increased

Table 3-2: Potential Hazards to European sites

	BΔ	
CO	nsultin	Ģ

Potential Hazard	Description
	by impermeable surfaces.
Competition from invasive non-native species	Hydrological impacts as a result of flood risk management measures may cause introduction or spread of invasive non- native species, particularly plants, which could result in changes to community composition and even the complete loss of native communities.
Disturbance	Activities (construction or maintenance) which can adversely impact on the qualifying features of the site directly (physical disturbance) or indirectly (visual or noise), causing sensitive birds and other fauna to deviate from their normal, preferred behaviour.
Habitat fragmentation	Flood events, or flood risk management measures such as defence construction, result in the separation of available habitats or split extensive areas of suitable habitat.
Habitat loss	Loss of habitat within the designated boundaries of a European site, for example, as a result of defence construction.
Habitat/community simplification	Changes to environmental conditions as a result of flood risk management measures may result in a reduction and fragmentation of habitats that will reduce biodiversity.
Turbidity and siltation	Construction activities or changed flooding/hydrological regimes may increase turbidity within water environments and can impact upon aquatic plants, fish and wildfowl due to sedimentation and reduction in penetrable light.

3.3.3 Qualifying Features and Sensitivity to Hazards

Table 3-3 shows the qualifying features of the European sites within and adjacent to Leicestershire and identifies the hazards to which they are most sensitive. Their qualifying features have been grouped based on guidance from the Environment Agency (2013) to facilitate the sensitivity assessment. It must be noted that during the assessment of the potential impacts of the LFRMS on a European site, all of the potential hazards will be considered.



	Potential Hazards									
	Changes in hydrological regime	Changes in water levels or table	Changes in water quality	Changes to surface water flooding	Competition from non- native species	Disturbance	Habitat fragmentation	Habitat loss	Habitat/ community simplification	Turbidity and siltation
Riverine habitats and running water	\checkmark	~	~	~	~	~	~	~	~	~
Dry grassland				\checkmark	✓			\checkmark	\checkmark	
Vascular plants of grassland				~	~			~	~	
Non-migratory fish and invertebrates of rivers	~	~	~	~	~	~	~	~	~	~
Mammals of riverine habitats	\checkmark	~	~	~	~	~	~	~	~	~
Birds of lowland freshwaters and their margins	✓	~	~	~	~	~	~	~	~	~

Table 3-3: Sensitivity of Qualifying Features to Potential Hazards



4 Screening Assessment

4.1 Introduction

This section considers the objectives and measures in the Leicestershire LFRMS and identifies whether or not they have the potential for likely significant effects on the integrity of European sites, either alone or in-combination with other plans. The results of the screening are given in Table 4-1 below.

Table 4-1: Screening of LFRMS Objectives and Measures

LFRMS objectives	LFRMS Measures	Potential for Likely Significant Effect on European Sites
All	The LLFA will continue to coordinate and chair the Leicestershire Flood Risk Management Board.	No – this measure relates to LLFA's role on the Flood Risk Management Board.
Objective 1 - Manage local flood risk through the effective management of flood risk assets, watercourses, and catchments.	The LLFA will signpost and make available guidance for riparian landowners, and proactively disseminate this in locations of identified priority.	No - this measure relates to the provision of guidance for landowners.
	The LLFA will regulate ordinary watercourses in accordance with the Leicestershire Ordinary Watercourse Regulation and Culvert Policy, and supporting guidance.	No – this measure sets out how ordinary watercourses will be regulated in accordance with existing policies and guidance
	The LLFA will continue to maintain the Leicestershire Flood Risk Asset Register and Record in accordance with Leicestershire's Asset Register and Record Policy.	No – this relates to maintenance of a register and records
	The Local Highway Authority will continue to maintain highway drainage assets in accordance with the Leicestershire Highway Infrastructure Asset Management Plan.	No – this does not lead to any change; maintenance will be in accordance with existing plan
	The LLFA will work with catchment partnerships and landowners to integrate environmental and flood risk management workstreams.	No – this measure relates to partnership working and sharing information
	The LLFA with support from catchment partnerships will seek to maximise opportunities for natural flood management across Leicestershire.	No - this measure relates to partnership working and sharing information.



LFRMS objectives	LFRMS Measures	Potential for Likely Significant Effect on European Sites
Objective 2 - Manage local flood risk through promoting sustainable development.	The LLFA will continue to fulfil its role as statutory consultee for surface water drainage matters on all major planning applications, in accordance with national and local policies and guidance.	No – this relates to on-going duties as statutory consultee
	The LLFA will review all options for implementing a chargeable service for planning pre- application advice and other service delivery.	No – this relates to pre- application arrangements
	The LLFA and other RMAs will prepare for implementation of Schedule 3 of the Flood and Water Management Act 2010 and if required revise the Strategy Action Plan if implemented.	No – this relates to implications of flood legislation change
	Risk management authorities and those involved in development approvals will continue to work together to ensure coordinated local standards and developer guidance, from pre-application to completion.	No – this relates to standards and guidance
	Risk management authorities will support the development and review of local planning policy affecting local flood risk management. This includes local development plans, infrastructure development plans, strategic flood risk assessments, and neighbourhood plans.	No – this relates to support as part of planning policy review
Objective 3 - Manage local flood risk through effective preparedness,	LLR Prepared will continue to maintain the Multi-Agency Flood Plan for Leicestershire, Leicester City and Rutland.	No – this relates to on-going flood warning coordination
response to, and recovery from flood events.	LLR prepared and risk management authorities will continue to assist local communities in producing and maintaining community flood action plans.	No – this relates to on-going assistance with regards to flood response
	LLR Prepared and risk management authorities will continue to plan and support flood exercises as and when required and resources allow, implementing lessons learnt.	No – this relates to on-going support of flood exercises

J	BA
	nsulting

LFRMS objectives	LFRMS Measures	Potential for Likely Significant Effect on European Sites
	Risk Management Authorities will continue to promote the Environment Agency's flood warning service where it is available in Leicestershire.	No – this relates to on-going promotion of the EA's flood warning service
	Risk management authorities will work together to develop initiatives and web-based information to enhance community preparedness and resilience to flooding.	No – this relates to development of flood warnings
	Risk Management Authorities will continue to support national recovery schemes following flood events.	No – this relates to on-going support of flood recovery schemes
	The LLFA will continue to complete and publish formal flood investigations in accordance with the Leicestershire Flood Investigations Policy.	No – this relates to on-going flood investigations
Objective 4 - Better understand local flood risk, informing our approaches to managing this risk.	The LLFA will manage the production and maintenance of detailed surface water modelling for Leicestershire.	No – this measure relates to surface water modelling.
	The LLFA will maintain and coordinate the Market Harborough Surface Water Management Plan.	No – this measure relates to coordination of a Plan, which may require a separate HRA.
	The LLFA will continue to investigate flooding mechanisms for the community of Cossington.	No – this measure relates to understanding flood risk
	The LLFA will maintain and coordinate the Loughborough Surface Water Management Plan.	No – this measure relates to coordination of a Plan, which may require a separate HRA
	The LLFA will work with partners to assess the feasibility of natural flood management upstream of Great Easton.	No – Great Easton is located more than 10km from the nearest European site and therefore any NFM measures proposed would have no effect on European sites.
	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Diseworth.	No – Diseworth is located more than 10km from the nearest European site and therefore any local FRM measures proposed would have no effect on European sites.
	The LLFA will continue to investigate the feasibility of flood alleviation for the community of	No – Long Whatton is located more than 10km from the nearest European site and



LFRMS objectives	LFRMS Measures	Potential for Likely
		Significant Effect on European Sites
	Long Whatton.	therefore any local FRM measures proposed would have no effect on European sites.
	The LLFA will continue to investigate the feasibility of flood alleviation for the community of Stoney Stanton.	No – Stoney Stanton is located more than 10km from the nearest European site and therefore any local FRM measures proposed would have no effect on European sites.
	The LLFA and Environment Agency will continue to investigate options for reducing flood risk, including natural flood management in the River Mease Special Area of Conservation.	No – although this measure relates to potential flood risk management measures within the River Mease SAC, it is currently proposing on-going investigation of options only, which would not, at this stage, result in effects on the SAC. Future implementation of any chosen option would require detailed HRA, and the LLFA and EA as competent
		authorities would be required to undertake this.
	The LLFA will coordinate work with relevant risk management authorities to better understand flood risk in Oadby.	No – this measure relates to understanding flood risk
	The LLFA will coordinate work with relevant risk management authorities to better understand flood risk in Hinckley and Burbage.	No – this measure relates to understanding flood risk
Objective 5 - manage local flood risk through planning	Risk management authorities will monitor the benefits of completed flood risk management schemes.	No – this measure relates to monitoring completed flood risk management schemes.
and delivering local flood alleviation and resilience projects for local communities.	The LLFA will manage the delivery of the Breedon-on-the Hill flood alleviation scheme.	No – Breedon-on-the-Hill is located more than 10km from the nearest European site and therefore the scheme would have no effect on European sites.
	The LLFA will maintain a pipeline of local projects.	No – this measure relates to local projects which may require their own environmental assessment.



4.2 In-combination Effects

As it has been assessed that the Leicestershire LFRMS will have no effect on any European site alone, then there is no requirement for an in-combination assessment.



5 Screening Assessment Conclusion

5.1 Conclusion

The LFRMS sets out the overall objectives to manage flooding within Leicestershire (Table 4-1). The purpose of the Strategy is "define and monitor local flood risk management in Leicestershire, and in doing so fulfils the duty required in section 9 of the Flood and Water Management Act 2010 for the LLFA. The five objectives of the Strategy set out a vision as to how local flood risk will be delivered and managed by LCC as LLFA, and all other Risk Management Authorities as well.

Due to the high-level and strategic nature of the objectives and measures proposed, and the lack of proposals for physical works on the ground in the vicinity of European Sites, all of the LFRMS objectives and measures have been screened out.

Therefore, the screening assessment can conclude that the Leicestershire LFRMS will not have significant effects, either alone or in-combination with other plans/strategies, on the following European sites:

- River Mease SAC
- Ensor's Pool SAC
- Grimsthorpe SAC
- Rutland Water SPA and Ramsar

As no likely significant effects have been identified, there is no need for Appropriate Assessment.

It is therefore concluded that the Leicestershire LFRMS can be adopted with no adverse impact on the integrity of European Sites.

It should be noted that if the LFRMS objectives and measures are amended, or additional objectives and measures are included, then further screening should be undertaken.

JBA consulting

Appendices



A European Sites within and adjacent to the County of Leicestershire

Figure A-1: Relevant European Sites

IKH-JBAU-XX-XX-RP-EN-0002-S0-P02-HRA

B Details of European Sites within and adjacent to the County of Leicestershire

Table B-1: Relevant European Site Details (Information from JNCC and NaturalEngland)

European Site	Qualifying Feature (Broad Habitat/ Species Groupings)	Qualifying Feature	Conservation Objectives	Site Vulnerability
Rutland Water SPA Site area 1556ha	Wintering bird populations	Wintering populations of: A005 Podiceps cristatus Great crested grebe (non-breeding) A036 Cygnus olor Mute swan (non- breeding) A050 Anas penelope Eurasian wigeon (non- breeding) A051 Anas strepera Gadwall (non-breeding) A052 Anas crecca Eurasian teal (non- breeding) A056 Anas clypeata Northern shoveler (non- breeding) A061 Aythya fuligula Tufted duck (non- breeding) A067 Bucephala clangula Common goldeneye (non- breeding) A070 Mergus merganser Goosander (non- breeding) A125 Fulica atra Common coot (non-breeding) waterbird assemblage	Subject to natural change, to maintain or restore: - The extent and distribution, and the structure and function of the habitats of the qualifying features and the supporting processes on which the habitats of the qualifying features rely - The populations and the distribution of the qualifying features both within and outside of the site.	The site is vulnerable to: - Pressures from recreation including fishing and water sports. - Nutrient inputs from the River Nene and River Welland, causing algal blooms. - Changes in water level due to a package of habitat creation.



European Site	Qualifying Feature (Broad Habitat/ Species Groupings)	Qualifying Feature	Conservation Objectives	Site Vulnerability
Rutland Water Ramsar Site area 1,360ha	Wintering birds	Ramsar criteria: Criterion 5 - assemblages of international importance Species with peak counts in winter: 19,274 waterfowl (5-year peak mean 1998/99-2002-03) Criterion 6 – species/populations occurring at levels of international importance: Gadwall <i>Anas</i> <i>strepera</i> (1,498) Northern Shoveler <i>Anas clypeata</i> (511)	There are currently no conservation objectives for Ramsar sites. The Rutland Water SPA conservation objectives will be used when the qualifying features are the same, and advice sought from Natural England in other cases if necessary.	 The site is vulnerable to: Disturbance from recreational use of the reservoir. Chemical control of blue-green algae. Changes in coarse fish populations. Outbreaks of fish diseases or parasites.
Ensor's Pool SAC Site area 3.86ha	Invertebrates	Annex II species: S1092 White- clawed Crayfish <i>Austropotamobius</i> <i>pallipes</i>	To maintain or restore: - The extent, distribution, structure and function of the habitats of qualifying species - The supporting processes on which the habitats of qualifying species rely - The populations of qualifying species, and, - The distribution of qualifying species within the site.	The site is vulnerable to: - Changes in biotic conditions



European Site	Qualifying Feature (Broad Habitat/ Species Groupings)	Qualifying Feature	Conservation Objectives	Site Vulnerability
River Mease SAC Site area 23ha	Habitats and freshwater animals (invertebrates, fish, and mammals)	Annex I habitats: 3260 Water courses of plain to montane levels with the <i>Ranunculion</i> <i>fluitantis</i> and <i>Callitricho-</i> <i>Batrachion</i> vegetation Annex II species: 1092 <i>Austropotamobius</i> <i>pallipes</i> White- clawed Crayfish 1149 <i>Cobitis taenia</i> Spined loach 1163 <i>Cottus gobio</i> Bullhead 1355 <i>Lutra lutra</i> European Otter	To maintain or restore: - The extent, distribution, structure and function of the habitats of qualifying species - The structure and function (including typical species) of qualifying natural habitats - The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations, and distribution of qualifying species within the site.	The site is vulnerable to: - H02 Pollution to groundwater (point sources and diffuse sources) - J02 Human induced changes in hydraulic conditions - I01 Invasive non- native species



European Site	Qualifying Feature (Broad Habitat/ Species Groupings)	Qualifying Feature	Conservation Objectives	Site Vulnerability
Grimsthorpe SAC Site area 0.36ha	Grassland habitats and specialist plant species	Annex I habitats: 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco- Brometalia</i>) (* important orchid sites) Annex II species: 1654 <i>Gentianella anglica</i> Early Gentian	To maintain or restore: - The extent, distribution, structure and function of qualifying species and natural habitats - The supporting processes on which qualifying natural habitats and habitats of qualifying species rely - The population and distribution of qualifying species	The site is vulnerable to: - Modification of cultivation practices



References

Department for Communities and Local Government (August 2006) *Planning for the Protection of European Sites: Appropriate Assessment, Guidance for Regional Spatial Strategies and Local Development Documents, Consultation Document*, DCLG Publications

DTA Publications (2019). The Habitats Regulations Handbook. [Online] Available at: https://www.dtapublications.co.uk/handbook/browse. [Accessed:01.04.19].

Environment Agency (2007) *EU Habitats and Birds Directives, Handbook for Agency permissions and activities,* Environment Agency, Bristol, UK.

Environment Agency (2013) *Habitats and Species Protected under the Habitats Regulations. Document number: 1399_12.* Environment Agency, Bristol, UK.

European Commission (2002). Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC

Natural England (2018). *Natural England's approach to advising competent authorities* on the assessment of road traffic emissions under the Habitats Regulations. [Online] Available at: http://publications.naturalengland.org.uk/publication/4720542048845824. [Accessed: 01.04.19].

The Planning Inspectorate (2018). *PINS Note 05 / 2018 Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta*. [Online] Available at: https://pinslibrary.org.uk/vufind/Record/22547 [Accessed: 01.06.18].

Therivel, R. (2009) Appropriate assessment of plans in England. *Environmental Impact Assessment Review*, 29(4), 261-272.

UK Government Guidance on the use of Habitats Regulations Assessment (July 2019) [https://www.gov.uk/guidance/appropriate-assessment]

JBA consulting

Offices at

Coleshill Doncaster Dublin Edinburgh Exeter Haywards Heath Isle of Man Limerick Newcastle upon Tyne Newport Peterborough Saltaire Skipton Tadcaster Thirsk Wallingford Warrington

Registered Office 1 Broughton Park Old Lane North Broughton SKIPTON North Yorkshire BD23 3FD United Kingdom

+44(0)1756 799919 info@jbaconsulting.com www.jbaconsulting.com Follow us: 🏏 in

Jeremy Benn Associates Limited

Registered in England 3246693

JBA Group Ltd is certified to: ISO 9001:2015 ISO 14001:2015 ISO 27001:2013 ISO 45001:2018









Appendix K



Equality & Human Rights Impact Assessment (EHRIA)

This Equality and Human Rights Impact Assessment (EHRIA) will enable you to assess the **new**, **proposed or significantly changed** policy/ practice/ procedure/ function/ service** for equality and human rights implications.

Undertaking this assessment will help you to identify whether or not this policy/ practice/ procedure/ function/ service** may have an adverse impact on a particular community or group of people. It will ultimately ensure that as an Authority we do not discriminate and we are able to promote equality, diversity and human rights.

Before completing this form please refer to the EHRIA <u>guidance</u>, for further information about undertaking and completing the assessment. For further advice and guidance, please contact your <u>Departmental Equalities Group</u> or <u>equality@leics.gov.uk</u>

**Please note: The term 'policy' will be used throughout this assessment as shorthand for policy, practice, procedure, function or service.

Key Details				
Name of policy being assessed:	Local Flood Risk Management Strategy			
Department and section:	Environment and Transport Department			
	Infrastructure Planning, within Highways and Transport Network Management			
Name of lead officer/ job title and others completing this assessment:	Lee Quincey Head of Service Network Management Environment and Transport Department			
Contact telephone numbers:	01163056308			
Name of officer/s responsible for implementing this policy:	Lee Quincey and Flood Risk Management Team			
Date EHRIA assessment started:	08/04/2022			

Date EHRIA assessment completed:

23/02/2023

Section 1: Defining the policy

Section 1: Defining the policy

You should begin this assessment by defining and outlining the scope of this policy. You should consider the impact or likely impact of the policy in relation to all areas of equality, diversity and human rights, as outlined in Leicestershire County Council's Equality Strategy.

1 What is new or changed in this policy? *What has changed and why?*

The current Local Flood Risk Management Strategy (LFRMS) was published in August 2015, following the implementation of the Flood and Water Management Act (2010)

The Strategy coordinates the management of local flood risk from surface water, ground water and ordinary watercourses.

The Strategy has been developed to understand and manage flood risk within the county, by creating better knowledge of our risks, better co-operation between organisations involved in flood risk management and better communication with the public.

Why are changes being made?

A full review and update of the policy is being completed, due to the following triggers:

- 1. LFRMS review timescales
- 2. National strategy consistency
- 3. By recommendation of scrutiny
- 4. Improved Risk Management Authority (RMA) understanding and strategy utility
- 5. Community engagement
- 6. Changes in approach

1. LFRMS Review timescales

- The existing LFRMS was published in August 2015. In section 9 "Monitoring and Review" it is stated: "this strategy will be updated every six years from the date of final approval. This is in accordance with the deadlines for the revised Environment Agency River Basin Management Plans (RBMP's)".
 - We are now over six years from the publication date.
| | The RBMP's and associated Flood Risk Management Plans
(FRMP's) were updated in December 2022. This aligns well with the
suggested dates for the LFRMS update. |
|----|--|
| 2. | National Strategy Consistency |
| | In section 9(5) of the Flood and Water Management Act 2010, it is stated: "The strategy must be consistent with the national flood and coastal erosion risk management strategy (NFCERMS) for England under section 7". A full update to the NFCERMS was published on 14th July 2020. The LFRMS has been reviewed against the strategy and it is clear significant updates were required to ensure consistency. Other national guidance and reviews will also be considered. |
| 3. | By recommendation of Scrutiny |
| | Following significant flooding in October and November 2019, the Council's Environment and Transport Overview and Scrutiny Committee on 16th January 2020 agreed to set up a flooding scrutiny review panel to consider the role of the Council as Lead Local Flood Authority (LLFA), and its links with other flood risk management authorities (RMAs). The review panel published their findings in 2021. Recommendation A was: "The Panel supports a refresh of the Flood Risk Management Strategy in September 2021 and asks that the comments and recommendations of the Panel are taken on board". A full review and update therefore is in line with Scrutiny's recommendations for a refresh |
| 4. | Improved RMA understanding and strategy utility |
| | Whilst roles and responsibilities have not changed significantly, since 2015 both LCC and other Risk Management Authorities (RMA's) have a much-improved knowledge of local flood risk in Leicestershire, and how it is be managed. The updated LFRMS and action plan better reflects what is being done (objectives and measures), and the way in which it is approached (principles). This will make the LFRMS more useful to both RMA's and local communities going forwards. |
| 5. | Community engagement |
| | The Scrutiny Panel's recommendations (see 3) included better communication with the public. Initial reviews of the LFRMS suggest it could be more useful as a community engagement tool, both in terms of content and format, whilst also achieving other requirements. |
| 6. | Changes to policies and approaches |
| 1 | |

Some ways of working have already changed

• Other changes are likely to be proposed, such as changes to the thresholds for section 19 flood investigations.

Other drivers

- In May 2019, Leicestershire County Council declared a climate emergency
- The Council also has a new strategic plan 2022-2026

What is changing?

Principles, objectives and measures have been reworked to improve the document and bring it up to date with current ways of working.

Existing objectives:

Objective 1 Work Collaboratively Objective 2 Improve Understanding and Awareness Objective 3 Enhance the Natural and Historic Environment Objective 4 Improved Resilience Objective 5 Encourage Sustainable Development Objective 6 Use Resources Effectively Objective 7 Promote Riparian Responsibilities

Existing principles:

- Flooding is a natural event that will occur despite all efforts to prevent it. Hence it is important to focus as much on reducing the disruption that flooding causes as on measures to prevent it.
- Flood damage from surface runoff, groundwater and ordinary watercourses creates both public and private costs. Effective flood risk management can reduce both long-term flood damage costs to property and the impacts on human health and well being
- Decisions on where local resources are focused should be evidence-based and made against clear criteria.
- Improving the level of knowledge about flood risk across all stakeholders is a vital process which needs to be improved.
- No organisation is able to ensure that all households and businesses are safe from flooding. Householders and businesses have responsibility for protecting their property, but the County Council and its partners will endeavour to inform households of their risk and advise what steps they can take to make their property more resilient.
- No single organisation can effectively manage flood risk across the whole of Leicestershire, so co-operation among partners is essential for the success of long-term flood risk management.
- New developments should look not only to ensure that there is no increase in flood risk but where possible, seek betterment. National Planning Policy states new development should be directed away from areas of flood risk wherever possible.
- The cumulative impact of small developments on flood risk is as significant as the impact of major developments, and so both must be managed in order to ensure the threat of flood risk does not grow.

New objectives and principles



	•	Highways Asset Management Strategy & Policy									
	•	Network Management Plan Strategy & Policy									
	•	Leicestershire Highways Design Guide Highways Asset Risk Management Strategy									
	•	Highways Asset Risk Management Strategy Highways Infrastructure Asset Management Plan (HIAMP)									
	•	Councils Strategic Plan 2022-26									
	•	Environment Strategy 2018-2030									
	•	Climate change adaptations for highways									
	•	Climate change adaptations for highways Tree Management Strategy 2020-2025									
		Thee Management Oracegy 2020 2020									
	LCC Wid	er Council Plans									
	•	Councils Strategic Plan 2022-26									
	•	Climate Change Risk and Resilience Assessment 2021									
	Districts a	and Boroughs									
	•	Local development plans									
	•	Strategic flood risk assessments									
	•	Operational nood plans									
	<u>Water an</u>	d Sewerage Companies (Anglian Water and Severn Trent Water)									
	•	Drainage and Wastewater Management Plans									
	•	AMP7									
	<u>Regional</u>										
	•	River Basin Management Plans (Environment Agency)									
	•	Flood Risk Management Plans (Environment Agency)									
	National										
	<u>Inational</u>										
	•	National Flood and Coastal Erosion Risk Management Strategy									
		(NFCERMS)									
	•	NFCERMS Roadmap									
	•	Surface Water Management Action Plan (2018)									
	•	25 Year Environment Plan									
2	Who are	the people/ groups (target groups) affected and what is the									
5	intendec	the people/ groups (larger groups) anected and what is the									
	Group 1	- RMA's and other related teams and organisations									
	•	The Environment Agency									
	•	District/ Borough Councils									
	•	Internal Drainage Board									
	•	Water and Sewerage Companies									
	•	Local Highway Authority									
	•	LLR Prepared / Local Resilience Forum									
	Emergency responders										

	Leics CC Climate Resilience Team / Environment Team								
	The strategy details the principles, objectives, and measures by which these organisations will work together to manage flood risk. It better reflects the way in which flood risk is managed by these organisations and provides a plan for the coming years. They will be consulted in detail on the changes made and the action plan.								
	Group 2 - Communities								
	 Members of the public (mainly communities at risk) Flood Groups / Flood Wardens Riparian landowners and other landowners 								
	The strategy details the principles, objectives, and measures by which we will help these communities, and how they can be involved, or receive this support. They will be consulted.								
4	Will this policy med regard to the need	et the Ed to meet	quality any of	Act 2010 requirements to have due the following aspects? (Please tick					
4	Will this policy med regard to the need and explain how)	et the Ed to meet Yes	quality any of	Act 2010 requirements to have due the following aspects? (Please tick How?					
4	Will this policy mee regard to the need and explain how) Eliminate unlawful discrimination, harassment and victimisation	et the Ed to meet Yes YES	quality any of No	Act 2010 requirements to have due the following aspects? (Please tick How? One of the principles is taking a risk based approach, whereby we will look to apply the strategy prioritising based upon the risk to them, rather than other factors.					
4	Support: They will beWill this policy meanregard to the needand explain how)Eliminate unlawfuldiscrimination,harassment andvictimisationAdvance equalityof opportunitybetween differentgroups	et the Ed to meet YES	quality <i>i</i> any of No	Act 2010 requirements to have due the following aspects? (Please tick More of the principles is taking a risk based approach, whereby we will look to apply the strategy prioritising based upon the risk to them, rather than other factors. One of the principles is working with communities. We are seeking to provide the right support for different communities and groups.					

Section 2: Equality and Human Rights Impact Assessment (EHRIA) Screening

Section 2: Equality and Human Rights Impact Assessment Screening The purpose of this section of the assessment is to help you decide if a full EHRIA is

required.

294

If you have already identified that a full EHRIA is needed for this policy/ practice/ procedure/ function/ service, either via service planning processes or other means, then please go straight to <u>Section 3</u> on Page 7 of this document.

Secti	on 2						
A: Re 5.	Have the target groups been consulted about the	Yes	No*				
	following?						
	a) their current needs and aspirations and what is		NO				
	important to them;		NO				
	b) any potential impact of this change on them						
	(positive and negative, intended and unintended);		NO				
	c) potential barriers they may face						
6.	If the target groups have not been consulted directly,						
	have representatives been consulted or research explored (e.g. Equality Mapping)?		NO				
			_				
7.	Have other stakeholder groups/ secondary groups (e.g.		NO				
	carers of service users) been explored in terms of						
	potential unintended impacts?						
8.	*If you answered 'no' to the question above, please use the what consultation you are planning to undertake, or why yo be necessary.	space belov u do not con	w to outline isider it to				
	Group 1 (section $1 - 3$) were consulted during July / August 2022, prior to writing the first draft. They were then consulted in January / February 2023 on the first draft and associated documents. They will also have another opportunity when it goes to public consultation (scheduled for June / July 2023).						
	Group 2 – two community groups were consulted on the first draft in January / February 2023. All will have an opportunity during public consultation (scheduled for June / July 2023).						
	If anything comes up from consultations with regards to EH screening document.	RIA, we will	review this				
	General ongoing consultation						
	RMA's regularly engage communities affected by flooding, and the Local Resilience Forum, and LLF flooding investigat work in partnership to review performance after flood event on how we have supported those identifying with any of the characteristics. Through engagement, the specific needs of details of their demographic are used to inform decisions or and projects.	through LLR ations. RMA's s, including of protected communitie n future inter	Prepared s regularly discussion s and ventions				

	295							
Secti	ion 2							
B: M	onitoring Impact							
9.	Are there systems set up to:				Yes	No		
	a) monitor impact (positive and unintended) for dif	e and neo ferent gro	gative, inte oups;	ended	YES			
	b) enable open feedback different communities	and sugg	estions fr	om	YES			
Note estat	If no to Question 8, you will blished to check for impact o	need to n the pro	ensure th tected cl	nat monitori naracteristic	ng system s.	is are		
Secti	ion 2 otential Impact							
10.	I. Use the table below to specify if any individuals or community groups who identify with any of the 'protected characteristics' may potentially be affected by this policy and describe any positive and negative impacts, including any barriers.							
	Added text:							
	For those which are yes below, through the taking a risk-based approach principle, such persons are prioritised where possible in managing local flood risk (e.g. in flood response, enquiries etc.), and considered in other related plans (e.g. district and borough operational flood plans). Our partners including LLR Prepared have specific mitigation in place to ensure their specific needs are met in an emergency situation.							
	As a result of the strategy update discussions with other risk management authorities, as a measure we are proposing to establish and coordinate a cross organisational community engagement plan for local flood risk management. This would formalise monitoring of engagement of those groups with protected characteristics affected by flooding.							
		Yes	No	(Comments			
	Age	YES		Elderly peo vulnerable	ple can be to flood ha:	more zards.		

Disability	YES		Disabled people can be more vulnerable to flood hazards.
Gender Reassignment		NO	

	Marriage and Civil Partnership		NO					
	Pregnancy and Maternity	YES		Pregnant women or people with young families can be more vulnerable to flood hazards.				
	Race	YES		Language could be a barrier.				
	Religion or Belief	YES		The use of alternative accommodation during flooding may be an issue.				
	Sex		NO					
	Sexual Orientation		NO					
	Other groups e.g. rural isolation, deprivation, health	YES		Access to resources for those in rural locations.				
	inequality, carers, asylum			Access and affordability for				
	communities, looked after children, deprived or disadvantaged communities			disadvantaged communities				
	Community Cohesion	YES		We are seeking to empower communities. For example, the strategy will support the creation of flood groups.				
11.	Are the human rights of individuals <u>potentially</u> affected by this proposal? Could there be an impact on human rights for any of the protected characteristics? (Please tick)							
	Explain why you consider that any particular <u>article in the Human Rights Act</u> may apply to your policy/ practice/ function or procedure and how the human rights of individuals are likely to be affected below: [NB. Include positive and negative impacts as well as barriers in benefiting from the above proposal]							
		Yes	No	Comments				
	Part 1: The Convention- Righ	ts and I	reedo	ms				
	Article 2: Right to life	yes		Article 2 impacts on the work of public authorities in protecting				

Article 3: Right not to be		NO	 people from danger, this would apply during flooding events Article 2 will be relevant because during flooding events there is the possibility that someone's life could be at risk.
inhuman or degrading way			
Article 4: Right not to be subjected to slavery/ forced labour		NO	
Article 5: Right to liberty and security		NO	
Article 6: Right to a fair trial	yes		 Article 6 is relevant because this strategy requires decision- making procedures in the public sector. The strategy is likely to include an enforcement policy, to help us carry out our duties of enforcement,
Article 7: No punishment without law		NO	
Article 8: Right to respect for private and family life	yes		 Article 8 is relevant as entry to properties (including businesses) may be necessary during flooding events, or if Property Flood Resilience is being installed as part of a scheme. Article 8 relates to handling environmental issues, such as waste management or pollution; Flooding is an environmental issue
Article 9: Right to freedom of thought, conscience and religion	Yes		 May not be possible to provide religious facilities in an emergency situation
Article 10: Right to freedom of expression		NO	
Article 11: Right to freedom of assembly and association		NO	
Article 12: Right to marry		NO	
Article 14: Right not to be discriminated against		NO	

	Part 2: The First Protocol							
	Article 1: Protection of property/ peaceful enjoyment	Yes			 Article area th their po During people vacate restricte propert 	1 refe at ca osses seve will b their ed fro ies.	ers to wo n deprive sions or re flood pe require propertion om enter	ork in any e people of property. events ed to es or ing their
	Article 2: Right to education		NC	D				
	Article 3: Right to free elections		NC					
Secti D: De	on 2 ecision		1					
12.	Is there evidence or any other resuggest that:	eason t	0		Yes		No	Unknown
	 a) this policy could have a differer affect or adverse impact on any section of the community; 						x	
	 b) any section of the community r face barriers in benefiting from proposal 						x	
13.	Based on the answers to the questions above, what is the likely impact of this policy							
	No Impact Positive Impact Neutral Impact Negative Impact or Impact Unknown Impact Unknown						npact or	
Note: is rec	: If the decision is 'Negative Im quired.	pact' c	or 'Im	npac	t Not Kn	own'	an EHR	IA Report
14.	Is an EHRIA report required?			Yes			Ν	lo X

Section 2: Completion of EHRIA Screening

Upon completion of the screening section of this assessment, you should have identified whether an EHRIA Report is required for further investigation of the impacts of this policy.

Option 1: If you identified that an EHRIA Report <u>is required</u>, continue to <u>Section 3</u> on Page 7 of this document to complete.

Option 2: If there are <u>no</u> equality, diversity or human rights impacts identified and an EHRIA report <u>is not required</u>, continue to <u>Section 4</u> on Page 14 of this document to complete.

Section 4: Sign off and scrutiny

Upon completion, the Lead Officer completing this assessment is required to sign the document in the section below.

It is required that this Equality and Human Rights Impact Assessment (EHRIA) is scrutinised by your <u>Departmental Equalities Group</u> and signed off by the Chair of the Group.

Once scrutiny and sign off has taken place, a depersonalised version of this EHRIA should be published on Leicestershire County Council's website. Please send a copy of this form to louisa.jordan@leics.gov.uk, Members Secretariat, in the Chief Executive's department for publishing.

Section 4 A: Sign Off and Scrutiny

Confirm, as appropriate, which elements of the EHRIA have been completed and are required for sign off and scrutiny.

Equality and Human Rights Assessment Screening

Equality and Human Rights Assessment Report

1st Authorised Signature (EHRIA Lead Officer): Victoria Coombes

2nd Authorised Signature (DEG Chair): Ann Carruthers 28-02-23



HIGHWAYS AND TRANSPORT OVERVIEW AND SCRUTINY COMMITTEE – 9 NOVEMBER 2023

STREET LIGHTING REVIEW - PROPOSED CHANGES

REPORT OF THE DIRECTOR OF ENVIRONMENT AND TRANSPORT

Purpose of the Report

- 1. The purpose of this report is to:
 - a) Advise the Committee of the outcome of the Street Lighting public consultation and proposed next steps for the Street Lighting review.
 - b) Seek the views of the Committee in shaping the future Street Lighting offer prior to seeking approval from the Cabinet in December 2023.

Policy Framework and Previous Decisions

- The Medium-Term Financial Strategy (MTFS) 2023/24 2026/27, which was agreed by the County Council in February 2023, identified savings of £500,000 to be achieved by 2026/27 from the Street Lighting service.
- 3. A reduction in street lighting will also support a reduction in carbon emissions (CO₂e) contributing to the Council's Strategic Plan 2022/26. Specifically, the Clean and Green strategic outcome and its action to Net Zero Carbon by 2030. This is achieved by reducing the demand for energy as part of the proposal to lower the lighting intensity to 30% from 20:00 hours across the lighting stock will support the reduction of 315 tonnes in CO₂e as previously reported.
- 4. The Cabinet agreed on 23 June 2023 that an engagement/consultation exercise on proposed changes to all streetlights should be conducted. The Cabinet agreed to pursue consultation on dimming all streetlights, including on traffic routes, to 30% from 20:00 hours across the County (currently dimming to 30% takes place at 22:00 hours for most residential streetlights).

Design Standards

5. The design of safe and appropriate street lighting is governed by relevant British Standards, specialist guidance notes and a Code of Practice (Well Managed Highway Infrastructure 2016). The key principle of this Code is that Highway Authorities will develop their own levels of service and the Code therefore provides guidance for authorities to consider when developing their approach in accordance with local needs, priorities, and affordability.

- 6. One of the over-arching principles of the Code of Practice is the establishment of those local levels of service through risk-based assessment. For street lighting, the Code encourages 'the delivery of the right quality and amount of light in the right place and at the right time'.
- 7. The option to dim to 30% intensity from 20:00 hours (currently 22:00 hours) moves away from compliance with current British Standards and is deemed a 'Departure from Standards' and will, therefore, require the Cabinet's approval. Given that there is not a specific legal duty to provide lighting, it is presently considered the risk of a judicial review challenge would be low and in the event of a challenge likely to be unsuccessful.

Background

- 8. The duty to maintain the highway under Section 41 of the Highways Act 1980 does not imply a duty to provide street lighting. Rather, local authorities have a discretion about whether to provide streetlights (see Section 97 of the Highways Act 1980).
- 9. However, once street lighting is provided, the local authority has a duty to maintain the system in a safe condition. This is because local authorities can be held liable if they introduce a danger to the highway and fail to neutralise it (see McCabe v Cheshire West and Chester Council 2014).
- 10. The standards for street lighting are laid down in British Standard: BS.5489 and European Standard BS EN 13201.
- 11. Street lighting touches not only on the issue of preventing road accidents. Section 17 of the Crime and Disorder Act 1998 provides that it shall be the duty of each authority to exercise its responsibilities to do all that it reasonably can to prevent crime and disorder in its area.
- 12. The highway infrastructure asset in Leicestershire is the County Council's greatest asset, valued at just under £10.57 billion, and forms a critical part of the social and economic infrastructure that supports the wellbeing of the County's residents and businesses, as well as those in the wider regions. The asset is large and diverse, and includes carriageways and footways, bridges, street lighting, traffic signals and drainage. Maintaining such an asset requires significant funding and well-managed, co-ordinated operations to extract the greatest value for the funding invested.
- 13. In February 2023, the MTFS 2023/24 to 2026/27 was approved by the County Council. It identified that the Council was required to save £500,000 through street lighting. Any reduction in street lighting energy will also provide a reduction in the Council's carbon emissions therefore contributing to its net zero commitments.

- 14. The Council currently maintains approximately 69,600 street lighting assets. The current street lighting strategy is split between residential routes and traffic routes, as follows:
 - a) Residential routes:
 - i. All-Night Lighting streets with highway hazards (crossings, speed cushions etc) and significant road junctions and town centres are lit all night.
 - ii. Part-Night Lighting streets with low traffic flows have lighting switched off between 00:00 05:30 hours, except where specific All-Night Lighting is required (as above).
 - Dimming all streetlights are lit to a regime of 70%/50%/30%, gradually dimming throughout the night according to reducing traffic flows, all in accordance with current design standards.
 - b) Traffic Routes:
 - i. All-Night Lighting routes with high traffic flows and conflict areas are lit all night.
 - ii. Part-Night Lighting routes with lower traffic flows are switched off between 00:00 05:30 hours.
 - iii. Dimming all streetlights are gradually dimmed according to traffic flows, with differing regimes according to the road category, all in accordance with current design standards.
- 15. Since 2010, the Street Lighting service has implemented significant changes to the lighting regime across the County to optimise, where possible, the amount of energy used and to minimise the amount of CO₂e produced. These measures include:
 - a) Turning off unnecessary lighting.
 - b) Conversion to LED lighting.
 - c) Trimming the switch-on/switch-off times.
 - d) Dimming lighting levels commensurate with traffic flows throughout the hours of darkness.
- 16. As a result of these measures, energy consumption dropped from circa 27 million kWh in 2010/11 to circa 10 million kWh in 2018/19. Measured against a baseline energy usage of 9,217,000 kWh in 2019/20, the service has saved a further 512,000 kWh by implementing incremental changes based on continued compliance with the evolving design standards, including the recent change to reduce switch on/switch off ambient lighting levels to 5 Lux. This can be equated to the amount of light emitted by five candles 1 metre distance away from a squared metered area, where a light reading can be taken.

Public Consultation

17. A public consultation on the proposal to dim to 30% intensity from 20:00 hours commenced on 6 July 2023 and ran for four weeks until 3 August 2023. A

proportionate approach was adopted to consultation in line with proposals being considered and included:

- a) A "Have Your Say" online survey was published for members of the public to complete. Paper copies were available, but none were requested.
- b) Social pinpoint a mapping tool allowing members of the public to identify particular geographic areas of concern.
- c) Engagement with interested stakeholders including the Leicestershire Equalities Challenge Group, Police, and emergency services.
- d) An article in the July edition of the Council's Parish Council Newsletter which is distributed to all town and parish councils.
- e) Feedback from people who live or work in the County was encouraged through the Council's "Have Your Say" webpage.
- f) Engagement with local universities, responding to previous requests to engage for any such future proposals.
- 18. The feedback from the public consultation would support the further refinement of proposed service changes, based on a risk-based approach, and sought feedback on sites for which the proposal may not be suitable and therefore exemptions would be applied.

Public Consultation Findings

- 19. Detailed public consultation findings are available in Appendix A of this report. A total of 706 unique responses were received to the online survey providing 861 reasons for their views. Overall, 53% of respondents were against the proposals. The main reasons included fear of crime and personal safety. 43% of respondents were in favour of the proposals citing the need to support the environment, preventing light pollution and to help the Council to save money.
- 20. Of those who responded, 59% of the respondents identified as female and 39% of respondents identified as male. 48% of men were in favour of the proposals compared to 39% of women. People of non-white heritage were more likely to be against the proposals (though number of non-white heritage respondents were low). People with a long-standing illness or disability were more likely to disagree with the proposals (64%) compared to those not reporting a long-standing illness (50%). Parents or carers of people aged over 18 were more likely to disagree with the proposals (69%).
- Women aged between 45 and 54 made up the highest percentage of respondents followed by women aged 55-64. The greatest number of responses, 28%, were from Charnwood followed by 17% from Harborough. The least number of responses were from Oadby and Wigston (5%). 92% of respondents were from a white background.
- 22. When asked if people would be affected by the proposals, the responses were as following:
 - a) 29% said not at all or not very much.
 - b) 33% felt they would be impacted a great deal.

- c) 37% to some extent.
- d) The main reasons respondents felt that they will be affected by the proposals was concern about lighting levels (20%) and concern about personal safety (19%).
- e) 20% of respondents that strongly disagreed with the proposals cited concerns about personal safety as the primary impact on them of the proposals.
- f) 34% of respondents that strongly agreed with the proposals but also felt reduced lighting levels would be the primary impact for them of the proposals.
- g) 11% of respondents that disagreed with the proposals indicated they would change their behaviour in some way if the proposals were implemented, but only 1% who agreed felt this way.
- h) Younger respondents were more likely to say they would be impacted by the proposals.
- i) It is worth noting that some respondents supported the proposals due to the impression that this would replace the existing policy of turning off lights in certain areas.
- 23. Respondents were invited to use the Social PinPoint to highlight areas of concern on a map which resulted in 61 points being identified through this method from 46 unique respondents. A further 99 physical locations were identified by respondents as areas of concern. Respondents identified specific roads, junctions or in some instances highlighted concerns for a specific town or village.

Feedback from Key Stakeholders

- 24. No objections to the proposal have been raised by the Leicestershire Police, East Midlands Ambulance Service or Leicestershire Fire and Rescue Service.
- 25. Loughborough University has been contacted for its views, but its feedback is still awaited.
- 26. A presentation was delivered to the Leicestershire Equalities Challenge Group on 21 July 2023 with the following feedback being received:
 - a) More consideration needs to be given for people with sight loss, potential hazards differ for different vision impairments.
 - b) Issues in rural areas particularly for people with dementia and mental health issues.
 - c) Safety issues for women, elderly, and vulnerable people.
 - d) More reassurance to reduce negative perceptions/impacts of increased thefts, hate crime and anti-social behaviours.

Summary findings

27. The results to the survey were analysed and the key conclusions were:

- a) There are mixed views on the proposed changes to the street lighting regime. Just over half were not supportive of the proposed changes.
- b) Those not supportive cited a fear of crime and overall personal safety.
- c) Those in agreement were due to the need to think about the environment and impact on the carbon agenda.
- d) Risk of personal safety and a fear of general crime were key themes reported across all cohorts.
- e) The next highest categories for disagreement were that some areas already have poor lighting, where a further reduction would cause more issues (fear of crime, anti-social behaviour, personal safety concern) and people were still out and about walking to and from events at 20:00 hours.
- f) A number of respondents suggested alternative regimes for street lighting (or wider changes to policy and approach).

Risk Assessment Process

- 28. The comments from both the consultation and the Social PinPoint returns directly fed into a risk assessment (detailed in Appendix B of this report) which determines where, if needed, mitigating measures could be applied. The risk assessment considers whether the proposals could worsen the following hazards for each location. The Council will work with the police for these locations and identify if lighting levels need to be amended.
- 29. The below list shows hazards where the proposal would not be suitable:
 - a) Vertical traffic calming features, such as speed tables of bumps. The change in level is the important part;
 - b) Zebra crossings;
 - c) Town centres extent to be determined by the Council;
 - d) Evidenced increases in nighttime vehicular accidents between 20:00 and 22:00 hours, specifically increases in accidents of greater severity at conflict areas, such as roundabouts or key junctions;
 - e) Evidenced increases in nighttime crime/anti-social behaviour between 20:00 and 22:00 hours;
 - f) Currently illuminated steps.
- 30. The following hazards will require ongoing monitoring and review:
 - a) Increased interaction between pedestrians and street furniture;
 - b) Increased conflict between vehicles outside of conflict areas;
 - c) Increased conflict between vehicles, pedestrians, and cyclists outside of conflict areas.

Proposed Pilot Scheme

31. From the work undertaken to date on the risk assessment and consultation, current lighting levels will be retained for zebra crossings, vertical traffic calming features and town centres. The extent of the town centre area will be determined in due course. In addition, there may be further exemptions once comments have been received from the police regarding specific areas raised

as part of the consultation, it is worth noting that the police did not object to the proposals in principle and this relates to implementing the risk-based approach to the assessment. These exemptions would be in the form of reinstating the original lighting levels for a period of three months to aid the police investigation. These would then be reviewed, and if no longer required, dimed back to 30% intensity.

- 32. Initial work on the risk assessment has found that full year savings will be reduced by £120,000 due to initial exemptions to the proposal for town centres, zebra crossings and vertical traffic calming features. Additionally, this reduction will also reduce anticipated energy savings by approximately 238,160 kWh per year and 53.2Tonnes of carbon dioxide (CO₂).
- 33. Therefore, the revised anticipated annual savings will be in the region of £380,000 and 261.8Tonnes of CO₂.
- 34. It is worth noting that actual in-year savings could fluctuate year on year as a result of the risk assessment process and in cases, whereby lighting levels may need to be increased temporarily while the police and emergency services undertake investigations. Similarly, if we identify high severity road traffic accidents are increasing, lighting levels may need to be increased to aid road safety.
- 35. The results from the consultation indicate a perceived increase in crime. Perception of crime is very hard to measure and therefore the service is proposing to trial any changes for an 18-month period, working with the police and emergency services to understand the impact of changes on actual crime statistics. The pilot will also allow the testing of mitigation identified through the risk assessment process.
- 36. The risk assessment will be implemented initially as a desktop exercise using known asset data. It is not intended for risk assessments to be completed on each individual lighting assets. The base assumption is to proceed with the reduced dimming levels and risk assessments used to identify exemptions which would mean lighting levels remain the same as current levels. This will be reviewed periodically as part of the trial using data collected over the trial period and adjustments made accordingly.
- 37. The County Council will work with the Police and emergency services to define the parameters of the pilot and develop clear reporting parameters for the progress of the pilot. Gateways or review meetings will be held every three months to assess impact, and should it be identified that the pilot needs to be paused and changes made from any particular review, it will be done within a 4-week period of that meeting (this is the time taken to re-programme the lighting system). A report will be submitted to the Cabinet at the end of the trial period, to consider results and whether the trial should be made permanent.

Resource Implications

- 38. The street lighting service is required to deliver £500,000 savings by 2024/25, due to exemptions following further detailed works, it is estimated that the anticipated savings will be £380,000. Other service reductions may need to be revisited to manage the savings gap. Year one savings of £150,000 need to be delivered by March 2024, however, following the risk assessment process the exceptions will reduce this to approximately £120,000. Delays to delivery will cost the Council approximately £32,000 per month. There will also be a reduction in the carbon savings that will be achieved.
- 39. Once a decision is made on the future lighting regime, programming of the system takes approximately one calendar month.
- 40. The Director of Law and Governance and the Director of Corporate Resources have been consulted on the content of this report.

Timetable for Decisions

41. The results of the street lighting consultation and risk assessment outcome will be presented to the Cabinet on 19 December 2023.

Conclusions

42. It is recommended that the Committee notes the results of the public consultation as provided above and detailed in Appendix A of this report and provides any final views on the risk assessment process detailed in Appendix B of this report.

Background papers

Energy Reduction for Street Lighting Project – Report to the Cabinet – 15 December 2009 - <u>https://bit.ly/3VSnRDk</u>

Future Provision of Street Lighting – Report to the Cabinet - 9 July 2015 https://bit.ly/42pAdoR

Environment Strategy - Report to the Cabinet - 6 July 2018 - https://bit.ly/3o4cQSU

Strategic Plan (May 2022) - https://bit.ly/3Wggd64

Provisional Medium Term Financial Strategy 2023/24 - 2026/27 – Report to the Cabinet - 10 February 2023 - <u>https://bit.ly/3pCHzXA</u>

Absence of Street Lighting May Prevent Vehicle Crime, but Spatial and Temporal Displacement Remains a Concern (January 2022) - <u>https://bit.ly/3lgwx0W</u>

Street Lighting proposed service changes – Report to Cabinet 23 June 2023 https://politics.leics.gov.uk/ieListDocuments.aspx?Cld=135&MID=7077#AI75374

Circulation under the Local Issues Alert Procedure

43. A copy of this report will be circulated to all members.

Equality Implications

- 44. An Equality Impact Assessment (EIA) was undertaken and found that the proposal may impact several protected characteristics in terms of their ability to navigate the network, their perceived increases in crime and vulnerability and may change their current behaviour.
- 45. Work on the risk assessment is currently being undertaken and will directly feed into the EIA which is being reviewed and will be appended to the Cabinet report in December 2023.

Human Rights Implications

46. There are no human rights implications arising from the recommendations in this report.

Appendices

Appendix A: Consultation Findings Appendix B: Dimming LED streetlights to 30% intensity between 20:00 and 22:00 hours Risk Assessment

Officers to Contact

Ann Carruthers Director of Environment and Transport Email: <u>Ann.Carruthers@leics.gov.uk</u> Tel: 0116 305 7000

Pat Clarke Assistant Director for Highways and Transport Operations Email: <u>Pat.Clarke@leics.gov.uk</u> Tel: 0116 305 4244 This page is intentionally left blank





Transformation Unit Street Lighting Consultation Results

September 2023



Summary Results

Approval

705 unique responses to the consultation providing 861 reasons

- **40%** of respondents **Strongly Disagree** with the proposals
- 13% of respondents Tend to Disagree with the proposals
- 14% of respondents Tend to Agree with the proposals
- **29%** of respondents **Strongly Agree** with the proposals
- 4% of respondents Neither Agree nor Disagree with the proposals, or Don't Know
- Of respondents who disagree with the proposals a Fear of Crime (22%) and General Vulnerability (17%) were the main reasons given
- The main reasons for agreement with the proposals are to **Save Money** (13%) and **Light Pollution** (12%)

Impact

702 unique responses providing 767 reasons

- 33% of respondents felt that they would be impacted by the proposals A Great Deal
- 37% of respondents felt they would be impacted To Some Extent
- 18% of respondents felt they would be impacted Not Very Much
- 11% of respondents felt they would be impacted Not At All
- 1% of respondents felt they Did Not Know how they would be impacted
- The main reasons respondents feel that they will be effected by the proposals is Concern about Lighting Levels (20%) and Concern about Personal Safety (19%)
- 20% of respondents that **Strongly Disagreed** with the proposals listed concerns about **Personal Safety** as the primary impact on them of the proposals.
- 34% of respondents that **Strongly Agreed** with the proposals felt **Lighting Levels** would be the primary impact for them of the proposals.
 - 11% of respondents that **Disagree** with the proposals indicated they would change their behaviour in some way if the proposals are implemented, only 1% who **Agree** felt this way.

*It is worth noting, some respondents supported the proposals due to the impression that this would replace the existing policy of turning off lights in certain areas.

Breakdown of Response by District



Strongly Disagree Tend to Disagree Tend to Agree Strongly Agree Neither / Don't know

The majority of responses were received from people within, or representing, Charnwood (26%).

39% of Charnwood responses agree with the proposals and 56% disagree.

Harborough and Hinkley & Bosworth districts most strongly support the proposals (45% agree) after discounting any districts accounting for less than 5% of overall responses.

The main reasons for supporting the proposals within these districts is inline with the overall response: Light Pollution and Saving.

Similarly, these districts also cited **Fear of Crime** and **General Vulnerability** as the main reasons for disagree.

Of the districts, Melton felt the proposals would have the greatest impact on them. Lighting Levels (for those in support) and Concerns for personal safety (for those not in support) were cited as the main impacts.

Transformation

Discover - Design



Transformation Unit ->

Breakdown of Response by Age



Respondents aged between 45-54 accounted for the highest response rate - 23% of all responses. This age group also had the highest rate of disagreement with the proposals. Fear of Crime and General Vulnerability were the main factors given for this.

Discounting any group accounting for less than 5% of responses, 65-74 year olds had the highest percentage of positive responses (50%). 65-74 year olds cited Light Pollution and Saving Money as their reasons for support.

Over 85s were the least represented group accounting for <0% of responses.

For the 45-54 year old group **Personal Safety** and **Lighting Levels** were cited as the greatest impact of the proposals although only a small percentage (4%) indicated this would lead to behaviour change.



Breakdown of Response by Gender

Change Framework Discover Design Delive

There were more responses from individuals identifying as female than the other groups combined.

38% of female responses were in support of the proposals, compared to 48% of male responses.

Women between 45 and 54 made up the highest percentage of responses (making up 16% of all responses) followed by women aged 55-64 (11%). 59% of 45-54 group and 54% of the 55-64 were in opposition to the proposals.

Both Men and Women in general cited **Fear of Crime** and **General Vulnerability** as main concerns with the proposals, and **Saving Money** and **Light Pollution** as the main reasons for supporting the proposals. Women tended to be more concerned with General Vulnerability than men.

77% of Women, 70% of respondents that preferred not to say or identify differently, and 62% of men felt the proposals would impact them. 19% of Women that would be impacted felt Personal Safety concerns would be the greatest impact and 9% indicated they would change their behaviour due to the proposals. Mal respondents indicated both Fear of Crime (non-personal) and Personal Safety would be the greatest impact.



Responses based on Gender

Strongly Disagree Tend to Disagree Tend to Agree Strongly Agree Neither / Don't know

Breakdown of Response by Ethnicity and Religion



The majority of respondents were White (81%)

Only 4% of respondents were Asian or Asian British

1% were Mixed or other ethnic groups

Black or Black British individuals accounted for less than 1% of responses



Responses based on Ethnicity

Response based on Religion



Response rates and reasons for religion mirrored other groups, with Fear of Crime and General Vulnerability being the primary reason why respondents agreed or disagreed.

Regarding the impact, Lighting Levels and Personal Safety were cited as the having the largest impact on the respondents.

Breakdown based on Disability



Has a long-term illness or disability



General Agreement
General Disagreement
Neither / Don't know

Looking at Age and Disability, The group with the highest approval rate is under 25s with 50% in agreement, but with only 4 responses, this isn't a significant group to look at.

54-65 year olds – 41% percent agree of this group agree with the proposals. The reasons given are Environmental – specifically light & light pollution levels.

Over all, respondents identifying as disabled, cited Environmental factors (light pollution, carbon agenda, save energy) as the reason behind their agreement.

24% of respondents consider themselves to have a long-term illness or disability. Of these responses, 64% disagree with the proposal.

The reasons given for responses did not vary drastically from those provided across the sample as a whole.

15% of respondents considering themselves disabled sited General Vulnerability as the reason, 10% of all respondents sited this.

Fear of crime was similar – 14% of disabled respondents and 13% of all respondents identified this as the reason for their response.



This page is intentionally left blank

Appendix B

Leicestershire Highways	Date: 30.10.23 QM: RN	Leicestershire County Council
Dimming LED street lig between 20:00 and 22:0	INSTRUCTION 20/38 ISSUE 2 1 of 3	

The following are generic Risk Assessments that can be referenced when completing "Site Specific" Risk Assessment when developing areas of carriageway for "Dimming to 30%". **Key:**

Guidance

- 1. A **hazard** is an unsafe situation, act or omission with the potential to cause harm.
- 2. A **risk** is the chance of harm arising from the hazard. The degree of magnitude of the risk is the product of:
 - a. The likelihood of harm arising; and,
 - b. The severity of the outcome.
- 3. The degree of risk is assessed qualitatively as A, B or C using the matrix below. Control measures should be designed to eliminate the hazard where possible or, if hazards remain to reduce the residual risks to low.

		Very High	В	А	A	А
	•	High	В	A	A	A
1000		Medium	С	В	A	А
ikelil		Low	С	В	В	А
		Very Low	С	С	В	В
			Non-injury Accident	Slight Injury	Serious Injury	Fatal Injury
			Severity			→

- Risk Level A would be regarded as intolerable. Situation cannot be justified on any grounds.
- Risk Level B is a region of uncertainty. A Situation may be justified if the risks can be reduced to a level ALARP (as low as reasonably practical) through additional or alternative mitigation measures. Specific monitoring is likely to be required.
- Risk Level C is broadly tolerable. The Situation is likely to be justified but may require specific monitoring.

			e: 30.	10.23				
Leicestershire Highways			RN			Leicestershire County Council		
D betv	imming street lights ween 20:00 and 22:00	to 30% intensity) Risk Assessment				INSTRUCTION 20/38 ISSUE 2 2 of 3		
Ref. №	Hazard & (Risk)	Lil	nitial F Leve Sev	Risk el Risk	Com	ments (Or Mitigation Measures)		
L1	Dimming to 30% intensity from 20:00hrs at vertical traffic calming features (e.g. speed bumps)	М	Si	A	It is impo remain illu	rtant that vertical traffic calming features minated to the appropriate standard.		
L2	Dimming to 30% intensity from 20:00hrs within areas LCC consider to be a town centre causing conflict between pedestrians and/or other vehicles	н	Si	A	It is likely that large numbers of pedestrians of vehicles will be active at certain points during thes hours. Lights to remain lit to standard.			
L3	Dimming to 30% intensity from 20:00hrs causing conflict between pedestrians and vehicles at Zebra Crossing.	М	Si	A	It is important that zebra crossings remain illuminated to the appropriate standard. Undertake design calculations and adjust dimming levels to meet required standard. Ongoing monitoring and assessment.			
L4	Dimming to 30% intensity from 20:00hrs leading to evidenced increases in night time crime/anti-social behaviour	М	Si	A	It is important that lighting levels are not reduced, t support the police with their enquiries an investigations. Ongoing monitoring and assessment required			
L5	Dimming to 30% intensity from 20:00hrs leading to evidenced increases in "KSI" night time vehicular accidents at conflict areas.	М	Si	A	It is important that lighting levels are not reduced a conflict areas should "KSI" night time accident increase. Ongoing monitoring and assessment required.			
L6	Dimming to 30% intensity from 20:00hrs potentially increasing risk of falls on steps	М	Si	A	It is important that lighting levels are not reduced from 20:00 at steps within the public highway which are currently illuminated. Lights to remain on during all hours of darkness.			
L7	Dimming to 30% intensity from 20:00hrs leading to increases in night time pedestrian interactions with lighting columns or street furniture	L	Sli	В	Lighting to remain lit but at reduced level. Requests for banding on street furniture to be considered on a case by case basis. Ongoing monitoring and assessment required			
L8	Dimming to 30% intensity from 20:00hrs leading to increased conflict between vehicles.	М	Sli	в	Lighting to requireme should driv laws and h Ongoing n	o remain lit but at reduced level. No legal nt to provide lighting. Vehicle owners ve for the condition of the road, abide by all have headlights on at night. nonitoring and assessment required.		

Т

Leicestershire Highways	Date: 30.10.23 QM:RN	Leicestershire County Council	
Dimming street lights to 30% intensity between 20:00 and 22:00 Risk Assessment		INSTRUCTION 20/38 ISSUE 2 3 of 3	

Ref.	Hazard & (Risk)	Initial Risk Level		lisk I	Comments (Or Mitigation Measures)
INS		Lil	Sev	Risk	
L9	Dimming to 30% intensity from 20:00hrs leading to increased conflict between vehicles, pedestrians and cyclists	Μ	Sli	В	Lighting to remain lit but at reduced level. No legal requirement to provide lighting. Vehicle owners should drive for the condition of the road, abide by all laws and have headlights on at night. Users of highway responsible for their own safety when navigating the network, dressing accordingly for the conditions and making themselves visible during hours of darkness. Ongoing monitoring and assessment required.

This page is intentionally left blank



Highways and Transport Overview and Scrutiny Committee

Passenger Transport Update

9 November 2023

Department of Environment & Transport Agenda Item 1



The purpose of this presentation is to:

- Provide an update on funding arrangements for public transport services in Leicestershire;
- Provide an update on the work to refresh the Passenger Transport Policy and Strategy (PTPS) to support compliance with national policy;
- Provide an update on related work; and
- Seek views on the proposed approach to inform the Cabinet.


This presentation is given in the context of:

□ <u>The National Bus Strategy</u>

Leicestershire County Council's Bus Service Improvement Plan (BSIP)

Leicestershire County Council's PTPS. Policy document is available <u>here</u> and Strategy document is available <u>here</u>.

Previous Cabinet decisions, including March 2022, are available <u>here</u>.

DfT Funding Update

- □ In June 2023 DfT confirmation of **BSIP+ funding for 2023/24 and 2024/25 at £1.79m respectively** (BSIP+ is the funding offered to LCC to support delivery of BSIP ambitions)
- Several terms and conditions apply to this BSIP+ funding, our understanding is these include:
 - It is revenue funding to be spent on supporting local bus transport (and rural public transport),
 - Commitment to maintain base budgets,
 - Underspends may affect future bids/awards,
 - There may be some flexibility for committed funds (e.g., for contracts let for longer than 12 months but the extent of flexibility is unclear).
- Call with Department for Transport (DfT) on 23 October 2023 confirmed the following:
 - DfT have announced £150m of additional grant for 'buses'.
 - This forms part of the funding packages announced following HS2 cancellation.
 - Leicestershire has been allocated an additional £4.05m revenue funding for the financial year 2024/25. (Terms and conditions as above)
- Informed there is a further £850m allocation to be announced in the coming months.
 - From this 4-year funding packages are expected to be awarded to local authorities.
 - The 4-year funding package will be a mix of capital and revenue funding to allow for improvement schemes too. The exact funding profile and mix is not yet known.
 - The Council is very supportive of the multi year grant proposal which would represent a positive investment in public transport in Leicestershire.





Change in Funding Profile and Potential 'Cliff Edge'



Background and work to date

- The national and local bus markets have faced several challenges including:
 - Reduced patronage (particularly concessionaires) and reputational issues associated with the Covid-19 pandemic;
 - Driver shortages; •
 - Wage rises;
 - Fuel costs; and •
 - Short-term funding arrangements for over previous four years*. ٠

- 328 In light of financial 'cliff edge' beyond 2024/25, officers, following consultation with the Cabinet Lead Member, have been applying a strict interpretation of the Passenger Transport Policy and Strategy (PTPS). This has meant:
 - Contracts have been let on short-term basis;
 - Commercial services have been withdrawn without replacement; and •
 - Current services are due to be reviewed to support long-term financial pressures. •

Although a total of £3.68m grant has been received between March 2020 and 2023, it has been awarded in a patchwork manner with awards being confirmed at short notice for three or six months at a time – this is not enough to grow and stabilize a local bus network.

Impacts on Leicestershire Bus Services



Since 2021:



54% increase in services supported by De Minimis

36% increase in spend on supported services

8 services withdrawn completely



593 registration changes



Resulting Considerations





Recognition that national policy supported by BSIP+ is to prevent further shrinkage of the local bus network and support the recovering bus market after the worst impacts of the Covid-19 pandemic.



The Council has 32 contracts that are due to expire in July 2024.

Service reviews are due to recommence in 2024.



Planned PTPS Refresh is still relevant.



Developing and delivering BSIP+ approach.



Other opportunities – ZEBRA





The Passenger Transport Policy and Strategy Refresh

Context and history of the PTPS















Core and peak times





Overall service score	Case-for-support rating
25 or more	Strong
20-24	Marginal
<20	Weak

Why the PTPS is being refreshed



- To more explicitly reference national guidance published since the PTPS was adopted as set out in:
 - "Bus Back Better National Bus Strategy for England" (National Bus Strategy - NBS);
 - Leicestershire's Bus Service Improvement Plan (BSIP);
 - Leicestershire Enhanced Partnership Plan and Scheme.
- Future funding from the Government for passenger transport is uncertain beyond 2025, and significant challenge to the Council's passenger transport budget.
- The refresh allows for more flexible consideration of services that offer value for money and meet priority journey needs for the people of Leicestershire.

What will a refresh achieve?

- A better reflection of the principles of BSIP and supporting spending of the grant.
- More direct support for borderline or potentially commercial services.
- Allowing the provision of relatively small amounts of subsidy to services that are:
 - Well used, support jobs and economic growth;
 - Viable alternatives to the car;
 - Provide key links in the overall network increasing journey choice;
 - Still value for money and appropriate.
- □ A more stable and secure Leicestershire commercial network.
- A blended approach to service provision better connected places with the right service in the right place.

What will a refresh achieve?

- Leicestershire County Council
- Allow demand responsive options that are more generous than 'lifeline only' in line with national thinking on social value where appropriate and value for money.
- Put Leicestershire in the best place to secure future long-term funding.
- A policy that still allows the Council to scale its level of subsidy to fit available budget.
- The policy change is required to maximise the benefits from available budgets (with or without BSIP).
- As we have paused reviews of contracted services there are currently services that do not provide the best value for money. It is therefore necessary to recommence the reviews of services.

How will we do it? Policy Proposals



- The Council proposes to better reflect national policy by updating the policy document to:
 - □ Reflect the Council's Strategic Plan;
 - Include reference to the BSIP in the document hierarchy;
 - Include and explain the BSIP and national bus strategy; and
 - Include the role of the Enhanced Partnership in delivering the aims of the PTPS.

How will we do it? Strategy Proposals (1)

The Council proposes to better reflect national policy by updating the strategy document to:

- Focus more on connectivity and access to services than nearest local centres;
- Give more weight to employment and training opportunities;
- □ Include and explain the BSIP and NBS;
- Make specific reference to using conditions in addition to contributions to support developers to fund passenger transport.

How will we do it? Strategy Proposals (2)

- Include the possibility of demand led services being offered on a more flexible basis than lifeline Demand Responsive Transport (DRT), building on experience of FoxConnect where:
 - There is available budget;
 - The type of service selected is underpinned by evidence;
 - The market can support the provision of services; and
 - Appropriate ticketing and connections can be made available.
- This will give the opportunity of a blended approach to public transport where commercial services are complimented by demand responsive services.
- Work is currently underway to understand the potential for this in Leicestershire and also to include how performance and value for money could be assessed, linking in with national best practice.

DRT, DDRT and Community Transport



Demand- Responsive Transport (DRT)	 A flexible service that provides shared transport to users who specify their desired location and time of pick-up and drop-off. DRT can complement fixed route public transport services and improve mobility in low-density areas and at low-demand times of day.
Digital	
Responsive Transport (DDRT)	 A demand-responsive service that also makes use of technology, allowing passengers to book by app, and routes to be optimised.
	—
Lifeline DRT	 Taxi / minibus Small number of scheduled journeys available to book in advance to nearest local centre during the week. Provides 'lifeline services'.
Community Transport	 Community-led services in each of the seven districts in Leicestershire. These projects are delivered in partnership with voluntary sector providers as part of a service agreement with Leicestershire County Council.

How will we do it? Strategy Proposals (3) Leicestershire

The Council proposes to adapt the assessment criteria by including a simplified assessment for previously commercial services that would allow financial support to be given if:

- □ There is available budget.
- Operators provide evidence of the viability issues.
- Operators provide evidence that the cost per passenger km of the required subsidy represents good value for money.
- Operators work with the Council towards returning the service to commerciality through agreed targets.
- □ The Council and operator agree to review funding based on those targets.
- The Operator provides the Council with full operational performance data (on a confidential basis).
- There is an understanding that should the service remain unviable after review period a full assessment would be undertaken and options assessed.

How will we do it? Strategy Proposals (4)

The Council proposes to adapt the assessment criteria to replace journey purpose with access to opportunities when assessing supported services as this enables:

- Greater consideration to employment and training opportunities.
- Provides weight to greater connectivity (for example, connecting two town centres – this currently scores poorly when considering access to 'high priority' needs in local centres).
- Simplification of the assessment and data requirements to support efficient processes.
- Greater consistency in assessments as there is less reliance on external data.



Subject to Highways and Transport Overview and Scrutiny Committee and Cabinet input/review next steps will be as following:

ACTIVITY	DATES	
Presentation to the Highways & Transport Overview & Scrutiny Committee	9 November 2023	
Finalise draft PTPS	November 2023	34
Cabinet – approval of PTPS refresh	19 December 2023	J
Review services against refreshed PTPS	January-March 2024	
Engage with communities on outcomes	March-April 2024	
Procurement processes	April 2024 onwards	
Current contract end dates – new contracts in place	July 2024 onwards	

Questions on PTPS







Related Work Brief Update



Additional BSIP+ Programme



- Plans are being made for a deliverable BSIP+ programme.
- Environment & Transport Department is currently working with the following colleagues and stakeholders to develop that programme:
 - Finance
 - Legal
 - Procurement
 - Enhanced Partnership
 - Neighboring authorities
- Programme will build on existing work including consideration of:
 - Youth fares
 - Demand Responsive potential
 - Pinch Points schemes identification and prioritisation
 - Cleaner, greener public transport
 - Potential for behavior change
- Please note that the funding is currently for one year giving rise to a number of risks. It is not intended to reinstate previously withdrawn services but proposals from operators to register new services will be considered under the refreshed policy and strategy.



- £129m is available for local authorities and operators to introduce electric buses and infrastructure. £25m of this money is ringfenced for rural authorities.
- The Council submitted an Expression of Interest to DfT on 17th October 2023.
- ITP consultancy commissioned to support officer resource in preparing a potential bid.
- Through the Enhanced Partnership Local operators were invited to express interest to the Council in bidding.
- Three operators have expressed an interest and have provided additional basic proposal information for consideration to form the basis of Leicestershire's bid.



- Proposals evaluated based on rural criteria and the DfT assessment requirements.
- Those proposals are currently being assessed and the selected operator will work with the Council to develop and, if affordable, submit a bid by the 15 December deadline.
- The Council is also working closely with officers from Leicester City Council who have the experience with ZEBRA funding.
- □ DfT to make funding decisions on bids in March 2024.

Questions and Feedback





This page is intentionally left blank