

Leicestershire Highways Design Guide
Strategic Environmental Assessment
Environmental Report
June 2024



Prepared for: Leicestershire County Council

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Contents

1	Introduction	1
	1.1 Overview	1
	1.2 Structure and Purpose of this Report	2
	1.3 Topics covered in the SEA	3
2	Leicestershire Highways Design Guide	6
	2.1 Overview and Purpose of the Leicestershire Highways Design Guide	6
	2.2 Change in Context Since Previous LHDG Iteration	8
3	The SEA Process and Methodology	10
	3.1 Overview of the SEA process	10
	3.2 Stages of the SEA Process	12
	3.3 Stage A – Setting the Context and Objectives, Establishing the Baseline, and Deciding on the Scope	13
	3.4 SEA Assessment Stage Proposed Methodology (Stage B)	24
	3.5 The Environmental Report (Stage C)	30
	3.6 Consulting on the Environmental Report and the Draft SEA (Stage D)	30
	3.7 Adoption of the LHDG and SEA Monitoring (Stage E)	31
4	Reviews of other Plans, Programmes and Environmental Objectives	32
5	Establishing the Environmental and Social Baseline and Identifying Key Issues	33
6	Assessment of the Draft LHDG and Reasonable Alternatives	39
	6.1 Introduction	39
	6.2 Assessment of Part 1: LHDG Principles	39
	6.3 Assessment of Part 2: Highways Development Management	41
	6.4 Assessment of Part 3: Design Layouts	42
	6.5 Assessment of Part 4: Materials and Construction	44
	6.6 Assessment of Reasonable Alternatives	45
	6.7 Cumulative Effects Assessment	55
7	SEA Monitoring Framework	72
8	Consultation and Next Steps	76

Appendix A: Environmental and Social Baseline and Identifying Key Issues

Appendix B: Relevant Plans, Programmes and Policies

Appendix C: Assessment Matrices

Appendix D: Outline of Leicestershire Highways Design Guide and Scope of Assessment

Appendix E: Scoping Consultation Responses

Abbreviations

ALC	Agricultural Land Classification
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
BMV	Best and Most Versatile
BNG	Biodiversity Net Gain
CaWS	Cycling and Walking Strategy
CO ₂	Carbon Dioxide
CRow	Countryside and Rights of Way
DAERA	Department of Agriculture, Environment and Rural Affairs
DEFRA	Department for Environment Food and Rural Affairs
DfT	Department for Transport
EV	Electric Vehicle
GI	Green Infrastructure
HDM	Highways Development Management
HGV	Heavy Goods Vehicle
IMD	Index of Multiple Deprivation
LCC	Leicestershire County Council
LCWIP	Local Cycling and Walking Infrastructure Plan
LHA	Local Highway Authority
LHDG	Leicestershire Highways Design Guide
LLFA	Lead Local Flood Authority
LLRBAP	Leicester, Leicestershire and Rutland Biodiversity Action Plan
LRWT	Leicestershire and Rutland Wildlife Trust
LSOAs	Lower Super Output Areas
LPA	Local Planning Authority
LTN	Local Transport Note
LTP	Local Transport Plan
MWLP	Minerals and Waste Local Plan
NCA	National Character Area
NERC	Natural Environment & Rural Communities
NHS	National Health Service
NMDC	National Model Design Code
NO ₂	Nitrogen Dioxide
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NPS	National Policy Statements
PDP	Preparing Development Proposals
PM ₁₀ / PM _{2.5}	Particulate Matter
PPG	Planning Practice Guidance
PRoW	Public Right of Way
RIGS	Regionally Important Geological Sites

SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SINC	Site of Importance for Nature Conservation
SLINC	Site of Local Importance for Nature Conservation
SNCI	Sites of Nature Conservation Importance
SPA	Special Protection Area
SRN	Strategic Road Network
SSSI	Sites of Special Scientific Interest
SuDS	Sustainable Drainage Systems
UNESCO	United Nations Educational, Scientific and Cultural Organization
VoT	Value of Trees
WCHAR	Walking, Cycling & Horse-Riding Assessment & Review
WFD	Water Framework Directive

1 Introduction

1.1 Overview

- 1.1.1 Leicestershire County Council (LCC) as Local Highway Authority (LHA) has a duty of care to maintain the safety and functionality of the roads at public expense through highway development management. As part of the early stages of the planning process, before the submission of any formal application is made, applicants are advised to discuss any highways and transportation issues with the LHA. The Local Planning Authority (LPA) (each of the district councils within Leicestershire) will formally seek the views of statutory consultees on development proposals within their district, one of which is the LHA. The LHA will assess the development proposal against relevant highway policies and standards and advice on the impact of the development on highways. This helps the LPA make an informed decision about the development.
- 1.1.2 In designing highways, it is essential that context, place, and factors influencing design are fully understood through collaborative approaches. The role of the Leicestershire Highways Design Guide (LHDG) is to provide clear and consistent guidance regarding the highway aspect of new development in the county, whilst allowing flexibility to meet local needs. It should promote the highest standard of highway design in regard to how developments, spaces and routes relate to each other. The LHDG also has an expanding role in responding to issues faced relating to the requirements of growth that supports economic stability, health and wellbeing of communities and climate change. It assists in the delivery of housing and economic growth, encourages sustainable development, while minimising the impact of development on the highway network.
- 1.1.3 Following a screening assessment, the Statutory Environmental Bodies¹ were consulted on and concurred with LCC's recommendation that a Strategic Environmental Assessment (SEA) of the LHDG should be undertaken. The SEA, as it is undertaken, will provide an analysis of the LHDG and the options for delivery of the policies, guidance and processes, considered against agreed sustainability objectives and criteria.
- 1.1.4 An SEA Scoping Report was produced to consult upon and agree the scope of the SEA for the LHDG. Comments from Statutory Environmental Bodies and other stakeholders were considered in the development of the SEA Methodology.

¹ Natural England, Historic England, Environment Agency

- 1.1.5 This document, the Environmental Report, reports the findings of the SEA of the LHDG and will be shared with the Statutory Environmental Bodies and other stakeholders during consultation. Any significant changes made to the LHDG as a result of consultation will be subject to further SEA.

1.2 Structure and Purpose of this Report

- 1.2.1 This Environmental Report documents the SEA of the LHDG. The purpose of carrying out the SEA is to assist the public and statutory bodies in better understanding the environmental effects of the LHDG and to identify opportunities for aligning the policies, guidance and processes within the LHDG to wider environmental objectives set by LCC, in addition to national objectives.

- 1.2.2 The subsequent sections of this report will be structured as follows:

Section 1

- Introduction describing the structure and purpose of the Environmental Report and topics covered in the SEA;

Section 2

- Describes the current status and scope of the LHDG;
- Identifies overall objectives of the LHDG and assesses how these align with the objectives of SEA;

Section 3

- Outlines the SEA process and methodology;

Sections 4 & 5

- Introduces relevant strategies, plans, policies, and programmes that influence the LHDG and SEA from an environmental perspective;
- Summarises and describes the baseline environmental and social context relevant to the LHDG and SEA;
- Identifies existing environmental/social problems associated with the area relevant to the LHDG;
- Further details are presented in Appendices A and B.

Section 6

- Presents the summary findings of the assessment of the LHDG against the SEA objectives;
- Describes how Reasonable Alternatives to the selected core policies have been considered and how the findings of the assessment may have differed had they been adopted;

- Identifies and describes proposed mitigation and enhancement measures;
- Further details are presented in Appendix C.

Section 7

- Describes the proposed approach for monitoring the implementation of the LHDG against the SEA objectives.

Section 8

- Describes the approach to consultation on the Environmental Report and Draft SEA.

1.2.3 The primary role of the SEA is to provide a high level of protection to the environment, to contribute to the integration of environmental considerations, and promoting sustainable development throughout the preparation and adoption of the LHDG. The SEA can provide a powerful tool to ensure that the environment is fully considered and integrated into the development of the LHDG to help deliver more sustainable highways infrastructure in the County.

1.3 Topics covered in the SEA

1.3.1 A proportionate approach has been adopted towards establishing the scope of the SEA. The environmental baseline presented in **Appendix A** reflects the topics presented in the SEA Regulations, which have been confirmed as appropriate for this type of plan/programme. These are outlined in Table 1-1.

- Biodiversity;
- Population and Human Health;
- Geology and Soils;
- Water Environment;
- Air Quality;
- Climatic Factors;
- Waste and Material Assets;
- Cultural Heritage; and
- Landscape, Townscape and Visual Amenity.

Table 1-1: Overview of topics considered in this SEA

Topics suggested in the SEA Regulations	Where covered in the Environmental Report	Summary Definition in the context of the LHDG
Biodiversity (including flora and fauna)	Biodiversity	How the LHDG considers: designated nature conservation sites; protected and notable species and habitats; trends in condition and status; biodiversity net gain; native species ecological networks and limiting wildlife collision risk; and, spread of non-native species.
Population	Population and Human Health	How the LHDG considers: vulnerable communities; physical and mental health; road users; safety, recreation, and amenity; accessibility and connectivity; the businesses that communities use and rely upon such as for employment; and sustainable transport.
Soil (including geology)	Geology and Soils	How the LHDG considers: the 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; and land contamination.
Water	Water Environment	How the LHDG considers: flood risk; surface and groundwater resources; chemical and biological water quality; aquatic ecology; surface and groundwater resource; water body hydromorphology/ geomorphology.
Air	Air Quality	How the LHDG considers potentially harmful substances within the air and the effects on human health and designated habitats.
Climatic factors	Climate Change	How the LHDG considers the emission of greenhouse gases (GHG) and measures to mitigate this.
		How the LHDG considers Climate Resilience of transport developments to future climate conditions, such as increased risk and severity of flooding, drought, heatwaves, intense rainfall events and other extreme weather events.

Topics suggested in the SEA Regulations	Where covered in the Environmental Report	Summary Definition in the context of the LHDG
Material Assets	Material Assets	How the LHDG considers the critical infrastructure assets, including: public utilities, power, gas, communications, water supply, and wastewater treatment and other forms of transport.
	Waste	How the LHDG considers the generation of waste and embeds the waste hierarchy.
Cultural Heritage	Historic Environment	How the LHDG considers: protected and notable heritage features; pressures on heritage features (including changes to setting and archaeology); and historic landscape/townscapes.
Landscape, Townscape and Visual Amenity	Landscape, Townscape (including visual amenity)	How the LHDG considers: national and local landscape/townscape and settlement character distinctiveness; protected and notable landscapes; key local and landscape features; and visual amenity.
The interrelationship between issues	Throughout the Environmental Report	The relationship between environmental features and issues.

2 Leicestershire Highways Design Guide

2.1 Overview and Purpose of the Leicestershire Highways Design Guide

- 2.1.1 As outlined above, LCC as the LHA has a duty of care to maintain the safety and functionality of all publicly maintained highways in Leicestershire, with the exception of the M1, M6, M42, M62 motorways, and the A1, A5, A42, A46 and A50 west of M1 Junction 24 which are the responsibility of National Highways.
- 2.1.2 The LHDG provides guidance regarding highways infrastructure for new developments in areas for which LCC is the LHA.
- 2.1.3 The principal intention of having the LHDG is to have a consistent approach to highways development across Leicestershire. The LHDG provides the basis for which LCC provides its observations on the highway aspects of planning applications to the district councils as local planning authority.
- 2.1.4 The LHDG has been identified as requiring an update as a result of the highways context the guide addresses having changed significantly since its prior review. An interim guide was published in 2022, which contains minor amendments and updates to references to standards and guidance. A full refresh project is now underway, prompted by changes in national and local policy and guidance that aim to increase the emphasis towards sustainable development, which will be subject to consultation. It is this updated LHDG that is the subject of this SEA.
- 2.1.5 A full outline of the LHDG, including detail of those elements scoped in for assessment, is provided in Appendix D. A key summary of the LHDG is provided below:

Part 1: Introduction

- 2.1.6 Part 1 provides a general foreword to the LHDG, as well as outlining its structure and purpose. It sets out how LCC and the district council highways teams are structured, as well as providing the key factors to help developer's submissions progress through the planning consultation and approval processes. A brief overview of the LHDG is outlined before a list of amendments from the guide's previous iteration are provided.

Part 2: Highway Development Management

- 2.1.7 Part 2 provides the following seven key principles of the LHDG:
- Working Collaboratively;
 - Facilitating Safe and Effective Highway;
 - Promoting Road Types for All Users;

- Creating Durable and Easily Maintained Placed;
- Encouraging Active and Sustainable Travel;
- Supporting Inclusive Highway; and
- Tackling Climate Change and Protecting the Environment.

2.1.8 Alongside advice on what should be included within applications, Part 2 outlines the Highways Development Management Policy, including the four key policies against which proposals will be assessed as follows:

- **Policy 1: Sustainable Access for All**
Development must be accessible for all highway users and maximise the uptake of sustainable travel choices.
- **Policy 2: Access to the Highway Network**
LCC will apply a risk-based assessment of proposals for new access onto the existing highway network and alternations to existing accesses so that the do not result in unacceptable road safety and operational concerns.
- **Policy 3: Highway Safety**
LCC will review relevant road safety information, to ensure the scheme and development proposals do not raise unacceptable safety concerns, and the Road Safety Audit process has been satisfactorily undertaken.
- **Policy 4: Development Impact**
Significant operational and road safety impacts of development on the transport network must be mitigated to an acceptable degree.

Part 3: Design Layouts

2.1.9 Part 3 includes details on road types and hierarchy, developments served by private drives, active and sustainable travel, speed control, signing and lining and Traffic Regulation Orders (TROs), street lighting, utilities, drainage, the natural environment and green infrastructure, parking and electric vehicle charging, and marking the highway boundary.

Part 4: Materials and Construction

2.1.10 Part 4 includes information on approved materials, detailed specifications and standard drawings, site surveys, tests and investigations, sampling and testing goods and materials, carriageways, highway structures, active travel assets, road markings and studs and street lighting.

Part 5: Approvals and Highway Adoption

2.1.11 Part 5 covers information on approvals, adoption and commuted sums, including in relation to adopting new roads, working on the existing highway, section 184 guidance for developers, commuted sums and health and safety.

Part 6: Network Management

- 2.1.12 Part 6 provides detail on network management (including during construction), coordination and the role of the highways network management team, the role of a Construction Traffic Management Plan (CTMP), Temporary Traffic Regulation Orders (TTROs), TROs, and the LCC highway permit scheme.

Part 7: Helpful Information

- 2.1.13 Part 7 provides guidance on fees and charges, communication, feedback and surveys, a glossary as well as information in relation to national policy, standards and guidance.

2.2 Change in Context Since Previous LHDG Iteration

- 2.2.1 Since the last full review of the LHDG, there have been significant changes in context relating to priorities emerging from national and local policy and the challenging financial climate.
- 2.2.2 A change in emphasis in the latest National Planning Policy Framework (NPPF), requires that all planning authorities create design guides consistent with the National Design Guide and National Model Design Code, that reflect an aspiration for places to be 'beautiful, healthy, greener, enduring and successful' and deliver streets where trees are a prominent feature. Additionally, Local Transport Note 1/20 presents the need for prioritising the movement of active travel modes of transport over motor vehicles.
- 2.2.3 LCC has developed a Net Zero Strategy and Action Plan that identifies targets for meeting net zero and the need for the LHDG to contribute in this regard. In the light of Local Transport Note (LTN) 1/20 and the Government's "Gear Change" document, LCC has also published a Cycling and Walking Strategy. The LHDG will also be a key supporting document of the Local Transport Plan 4 (currently under development), which sets out how LCC will manage and develop the county's transport system.
- 2.2.4 Accordingly, during the review there has been a particular focus on LCC's approach to facilitating the active travel and environmental sustainability elements of highway the LHA adopts. LCC is supportive of this change in emphasis but must also consider how the potential to worsen the already significant pressures on maintenance budgets, putting into question the future affordability of maintaining ever more highway assets, can be mitigated.
- 2.2.5 LCC is in the process of developing its Local Nature Recovery Strategy that will establish priorities and map proposals for specific actions to drive nature's recovery in the county and provide wider environmental benefits as established in the Environment Act 2021.

- 2.2.6 The first stage of the LHDG Refresh (LHDGR) has primarily focused on reviewing the policy and principles approved at Cabinet on 24th October 2023, including the proposed approach towards reviewing the commuted sums schedule.
- 2.2.7 As a general principle, any revised policy proposals for inclusion within the LHDG that relate to highway observations the LHA makes to the local planning authority on planning applications, will reflect the latest NPPF.

3 The SEA Process and Methodology

3.1 Overview of the SEA process

- 3.1.1 The SEA is a legally required process under the SEA Regulations². It informs the decision-making process through the identification and assessment of both the significant and cumulative environmental effects from a strategy, plan, policy or programme, and its reasonable alternatives (i.e., a different way of fulfilling the objectives of the strategy or programme). Significant effects are defined as those that may cause potentially substantial, adverse, or beneficial changes to the baseline.
- 3.1.2 In this case, it involves assessing the relevant components of the LHDG using the SEA Framework - a series of SEA Objectives. A bespoke set of SEA Objectives has been drafted based on obtaining an understanding of the environmental policy context, baseline, and current issues (outlined in Section 4). The SEA Objectives are presented in Section 5.
- 3.1.3 The SEA process is undertaken in accordance with the requirements of the SEA Regulations, as outlined in Table 3-1 below, the Government's Planning Practice Guidance (PPG), and the UK's official SEA guidance³. This Environmental Report has been prepared in compliance with these regulations and guidance.

Table 3-1 Requirements of the SEA Process as identified within Schedule 2 of the SEA Regulations

SEA Regulations Requirements	Location in the SEA
*Note the below is direct text from the SEA Regulations. Where there is reference to 'the plan' or 'programme' this is also relevant to the LHDG	
1. An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.	Environmental Report (Section 4; Appendix B)
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the strategy or programmes.	Environmental Report (Section 5; Appendix A)
3. The environmental characteristics of areas likely to be significantly affected.	Environmental Report (Section 5; Appendix A)

² Environmental Assessment of Plans and Programmes Regulations, 2004

³ A Practical Guide to the SEA Directive, ODPM 2005

SEA Regulations Requirements <small>*Note the below is direct text from the SEA Regulations. Where there is reference to 'the plan' or 'programme' this is also relevant to the LHDG</small>	Location in the SEA
<p>4. Any existing environmental problems which are relevant to the strategy or programme including those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds(a) and the Habitats Directive.</p>	<p>Environmental Report (Section 5; Appendix A)</p>
<p>5. The environmental protection objectives, established at international, Community or Member State level, which are relevant to the strategy or programme and the way those objectives and any environmental considerations have been considered during its preparation.</p>	<p>Scoping Report (Appendix B)</p>
<p>6. The likely significant effects on the environment, including short, medium, and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative, and synergistic effects, on issues such as</p> <ul style="list-style-type: none"> (a) biodiversity (b) population (c) human health (d) fauna (e) flora (f) soil (g) water (h) air (i) climatic factors (j) material assets (k) cultural heritage, including architectural and archaeological heritage (l) landscape (m) the inter-relationship between the issues referred to in sub-paragraphs (a) to (l). 	<p>Environmental Report (Section 6)</p>
<p>7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the strategy or programme.</p>	<p>Environmental Report (Section 6)</p>
<p>8. 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.</p>	<p>Environmental Report (Section 6)</p>

SEA Regulations Requirements	Location in the SEA
*Note the below is direct text from the SEA Regulations. Where there is reference to 'the plan' or 'programme' this is also relevant to the LHDG	
9. A description of the measures envisaged concerning monitoring in accordance with regulation 17.	Environmental Report (Section 7)
10. A non-technical summary of the information provided under paragraphs 1 to 9.	Non-Technical Summary

3.2 Stages of the SEA Process

3.2.1 The SEA guidance³ sets out a five-stage process (A to E) to be followed (outlined in Table 3-2). The SEA Scoping Report addressed Stage A of the process, wherein the context and objectives of the SEA are identified, and the scope of the assessment were determined. The key elements are reiterated in this Environmental Report in the sections outlined in Table 3-2.

Table 3-2 Stages in the SEA Process

SEA stages and tasks	Purpose	Location in the SEA
Stage A: Setting the context and objectives, establishing the baseline, and deciding on the scope	Set out the context, objectives, and approach of the assessment; and identify relevant environmental, economic, and social issues and objectives.	Environmental Report (Section 1-5; Appendix A)
(A1) Identifying other relevant plans, programmes, and environmental protection objectives	To establish how the strategy or programme is affected by outside factors, to suggest ideas for how any constraints can be addressed and to help identify SEA Objectives.	Environmental Report (Section 4; Appendix B)
(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.	Environmental Report (Section 5; Appendix A)

SEA stages and tasks	Purpose	Location in the SEA
(A3) Identifying environmental problems	To help focus the SEA and streamline the subsequent stages, including baseline information analysis, setting of the SEA objectives, prediction of effects and monitoring.	Environmental Report (Section 1-5; Appendix A)
(A4) Developing SEA objectives	To provide a means by which the environmental performance of the strategy or programme alternatives can be assessed.	Environmental Report (Section 3)
(A5) Consulting on the scope of SEA	To ensure that the SEA covers the likely significant environmental effects of the strategy or programme.	Environmental Report (Section 3)
Stage B	Developing and refining options and assessing effects.	Environmental Report (Section 6)
Stage C	Preparing the Environmental Report.	This Environmental Report
Stage D	Consulting on the draft strategy or programme and the Environmental Report and then assessing significant changes.	To be undertaken as part of the consultation on the LHDG. Environmental Report to be updated following this.
Stage E	Monitoring the significant effects of implementing the strategy or programme on the environment.	Future stage using the proposed monitoring framework (Section 7).

3.3 Stage A – Setting the Context and Objectives, Establishing the Baseline, and Deciding on the Scope

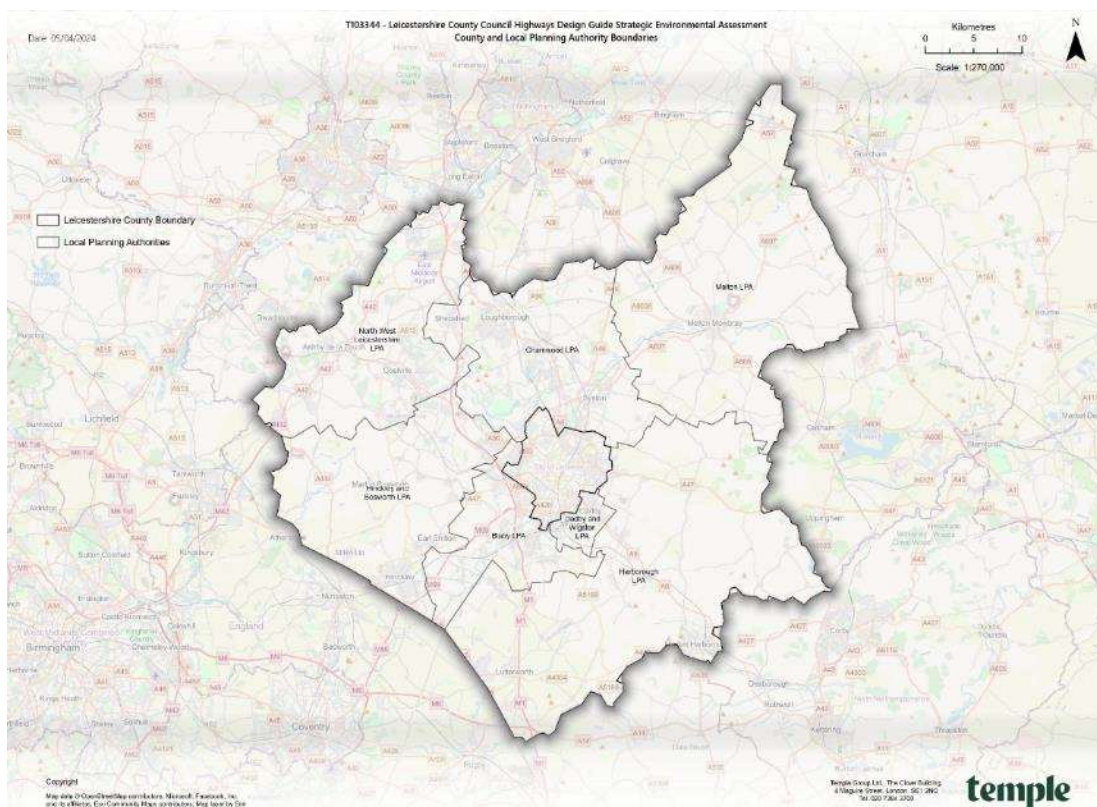
3.3.1 SEA Stage A, known as the Scoping stage, concerned a desk-based study to assemble information on the baseline and context to help inform the assessment of the LHDG. This first comprised of a review of other plans, programmes, and objectives to inform the development of a baseline review, identify key issues, and identify any inconsistencies, constraints or any potential major sources of tension that could hinder the achievement of the objectives of the LHDG. Findings are detailed within Appendix B.

- 3.3.2 Baseline information (i.e. current environmental and social conditions in the County), along with the identification of environmental issues was collected in relation to the topics of biodiversity, population and human health, material assets, geology and soils, the water environment, air quality, climate change, waste and minerals, cultural heritage and landscape, townscape and visual amenity.
- 3.3.3 This information was then used to inform the identification of key environmental issues, trends, and opportunities to form a suite of SEA Objectives as detailed in Table 3-4. These Objectives were used to form the scope of assessment. This was formally compiled within a Scoping Report issued to statutory consultees, including Natural England, Historic England, and the Environment Agency for consultation in April 2024 for a five-week period.
- 3.3.4 We received feedback from statutory consultees on the baseline, plans and scope including recommendations for broadening the scope of the baseline under certain environmental topics, referencing additional legislation and incorporating further considerations during the assessment process. Full details are presented in Appendix E. This was updated and presented in this Environmental Report.

Establishing the Geographical and Temporal Scope of the SEA

- 3.3.5 The geographical scope of the SEA considers highways and transportation infrastructure for new developments in areas for which LCC is the LHA (see Figure 6.1), which includes all publicly maintained highways in Leicestershire, with the exception of the M1, M6, M42, M62 motorways, and the A1, A5, A42, A46 and A50 west of M1 Junction 24 which are the responsibility of National Highways.

Figure 3-1 Leicestershire County Council area



- 3.3.6 Temporally, the SEA will consider effects of any highway interventions arising from the LHDG in line with the adoption timescales of the LHDG. These effects will also be considered over short-, medium- and long-term durations, which will be defined at Stage B of the SEA.

The SEA Framework

- 3.3.7 The SEA Framework was also consulted upon at the Scoping Stage. It is used to identify and evaluate the potential positive and negative effects associated with the implementation of relevant aspects of the LHDG. The framework comprises a set of SEA Objectives that have been developed to reflect the key environmental, social, and economic issues identified through the baseline information review.
- 3.3.8 The LHDG has been tested against the SEA Framework to identify whether it would contribute to or conflict with the achievement of each objective. During this

process, mitigation and enhancement measures were identified to improve positive scores and reduce negative scores.

- 3.3.9 The SEA Framework comprises a series of SEA Objectives. These are methodological yardsticks against which to assess the relevant sections of the LHDG – they relate directly to the baseline environmental context and identified issues.
- 3.3.10 The SEA Objectives have been informed by the scope and purpose of the LHDG, as well as being informed by the baseline topics (Appendix A), key issues and problems identified from that and a review of other plan and programmes (Appendix B).
- 3.3.11 The SEA Framework has been used to assess the components of the LHDG and its reasonable alternatives (versions of the guidance) (see Table 3-3).

Table 3-3 Overview of the purpose and requirements of the SEA Framework

Item	Purpose
Objective	Provide a benchmark 'intention' against which the environmental effects of the LHDG can be tested. The need to be fit-for-purpose and represent the key issues of relevance to the LHDG assessment against the objectives will draw heavily on how we consider the baseline to be affected.
Guide Questions	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 SEA objectives over time. They need to be measurable and relevant and ideally rely on existing monitoring networks.

3.3.12 REMOVE

3.3.13 Table 3- below presents the SEA Framework which guides the assessment stage of the SEA, as presented Section 6 of this Environmental Report.

3.3.14 The following objectives were established within the Scoping Report and served as the SEA methodological framework to guide the assessment undertaken and presented in this Environmental Report.

Table 3-4 SEA Framework of Objectives Guide Questions and Draft Indicators

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
Biodiversity	1) To protect and enhance biodiversity	Does the LHDG seek to avoid adverse effects on designated and undesignated habitats and species (including LBAP habitats such as mature woodland) during operation, maintenance, and development of highways infrastructure?	<ul style="list-style-type: none"> • Condition of designated habitats • Development within designated habitats • Condition of undesignated habitats • Change in percent of woodland coverage • Wildlife casualties
		Does the LHDG seek to preserve and deliver wildlife connectivity, ecological networks, avoid habitat fragmentation and minimise wildlife casualties?	
		Does the LHDG seek to preserve and promote native species and non-invasive species?	
		Does the LHDG seek to promote the management and elimination of Invasive and Non-Native Species (INNS)?	
		Does the LHDG seek to deliver and/or maximise biodiversity net gain opportunities?	
Population and Human Health	2) To protect and enhance human health and wellbeing	Does the LHDG seek to avoid air/noise/light pollution near to sensitive and vulnerable human receptors (residential, schools, hospitals, more deprived areas etc)?	<ul style="list-style-type: none"> • Population count and density per hectare • Household count

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
		Does the LHDG seek to promote active travel, recreation, physical activity, and access to open/green space?	<ul style="list-style-type: none"> • Notional housing need • Age structure • Ethnicity breakdown • Deprivation and disability rank • Indices of deprivation county/district ranking • Mode of transport to work • Percentage of physically active adults • Percentage of adults classed as overweight • Life expectancy at birth • Number of road casualties killed or seriously injured
		Does the LHDG seek to manage and reduce user stress?	
		Does the LHDG seek to meet the needs of specific groups e.g. elderly, disabled, young etc?	
		Does the LHDG seek to meet the needs of specific transport users e.g. pedestrians, cyclists, equestrians etc.?	
		Does the LHDG seek to improve levels of transport user safety and minimise accidents?	
		Does the LHDG seek to support a reduction in rural isolation?	
	3) To reduce levels of crime and fear of crime associated with the transport network	Does the LHDG seek to ensure transport and associated infrastructure is safe and discourages crime and anti-social behaviour?	<ul style="list-style-type: none"> • Crime rate per 1000 • Number of traffic-related offences
		Does the LHDG seek to discourage aggressive or dangerous driver behaviour?	
		Does the LHDG seek to promote safe and inclusive pedestrian, cyclist and equestrian facilities?	
	4) To protect and enhance	Does the LHDG seek to enable access to key community facilities for all, including natural green	<ul style="list-style-type: none"> • Percentage of physically active adults

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
	accessibility and connectivity	space, recreational and children’s play space, shops, GP Surgeries and Post Offices etc?	<ul style="list-style-type: none"> Percentage of adults classed as overweight Life expectancy at birth Indices of deprivation county/district ranking
		Does the LHDG seek to enable sustainable transport access to new residential development?	<ul style="list-style-type: none"> Household count Notional housing need Mode of Transport to Work Percentage of physically active adults
		Does the LHDG seek to encourage transport access to places of work, especially through a sustainable means?	
	5) To promote alternative modes of travel, including active travel	Does the LHDG seek to promote, enable and enhance the network of walking, cycling and equestrian routes?	<ul style="list-style-type: none"> Mode of Transport to Work Percentage of physically active adults2.
		Does the LHDG seek to promote, enable and enhance the provision of and access to sustainable public transport networks?	
	Geology and Soils	6) To protect and enhance geodiversity and soil quality	Does the LHDG seek to avoid adverse effects on designated geological sites?
Does the LHDG seek to avoid soil/land contamination and encourage remediation where appropriate?			
Does the LHDG seek to promote the use of brownfield land?			

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
		Does the LHDG seek to avoid the loss of best and most versatile (BMV) agricultural land?	<ul style="list-style-type: none"> • Condition of Sites of Special Scientific Interest (SSSI) designated due to geological importance
		Does the LHDG seek to avoid the sterilisation of minerals/resource safeguarding areas?	
Water Environment	7) To protect and enhance the water environment and reduce risk of flooding	Does the LHDG seek to encourage measures to reduce surface water run-off and manage polluted run-off risk?	<ul style="list-style-type: none"> • New local highways development in flood risk zones 2 and 3 • Number of flood risk assessments undertaken
		Does the LHDG seek to encourage measures to protect water courses from accidents and spillage risks?	
		Does the LHDG to encourage measures to reduce and avoid flood risk?	
		Does the LHDG seek to encourage the design and maintenance of blue/green infrastructure in transport developments?	
		Does the LHDG seek to promote the natural functioning and geomorphology of water courses?	
		Does the LHDG seek to protect and enhance aquatic ecology?	
Air Quality	8) To protect and enhance air quality	Does the LHDG seek to reduce air pollution from highways sources, especially in sensitive areas (e.g. AQMAs, near to sensitive/vulnerable receptors (human and ecological)?	<ul style="list-style-type: none"> • Number of Air Quality Management Areas (AQMAs) designated for highways emissions

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
		Does the LHDG seek to reduce construction dust effects?	
Climate Change	9) To minimise carbon emissions associated with the transport network	Does the LHDG seek to promote alternative low-carbon modes of transport?	<ul style="list-style-type: none"> • Transport Sector Carbon Dioxide (CO₂) Emissions • Materials used during maintenance and new highways development • Number of electric vehicles charging points
		Does the LHDG seek to enable EV charging infrastructure?	
		Does the LHDG seek to promote alternative low-carbon construction materials (including recycled/re-used/locally sourced materials)?	
	10) To ensure resilience to climate change	Does the LHDG seek to promote highways infrastructure development and maintenance that is resilient to fluvial and surface-water flood risk, heat stress, storm events and extreme weather?	
		Does the LHDG seek to promote, enable and enhance associated green infrastructure that is climate resilient (e.g. drought tolerant plant species)?	
		Does the LHDG seek to integrate adaptation measures (e.g. appropriate shade and shelter) against climate hazards for non-motorised users?	
Waste and Material Assets	11) To minimise waste generation and support re-use and recycling	Does the LHDG seek to minimise the generation of waste in transport networks?	<ul style="list-style-type: none"> • Tonnes of mineral provided within Leicestershire per annum • Volume of waste produced by transport sector
		Does the LHDG seek to encourage measures to prevent, reuse, recycle and reduce waste to landfill in line with the waste hierarchy?	

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
	12) To protect function and usage of material assets	Does the LHDG seek to protect and enhance the condition and function of the highway infrastructure network?	<ul style="list-style-type: none"> • New highways development
		Does the LHDG seek to reduce traffic congestions and the free flow of movement?	
		Does the LHDG seek to avoid conflict with highways infrastructure and other utilities (e.g. water, energy, telecoms) and other forms of transport (e.g. rail, navigation, interface with Strategic Road Network)?	
Cultural Heritage	13) To conserve and enhance the historic and cultural environment	Does the LHDG seek to avoid adverse effects on designated and non-designated heritage assets and their settings?	<ul style="list-style-type: none"> • Heritage at risk register • Instances of planting/screening alongside new highways development
		Does the LHDG seek to avoid adverse effects on buried archaeology?	
		Does the LHDG seek to conserve historic landscapes?	
		Does the LHDG seek to take opportunities to improve access to and understanding of cultural heritage where appropriate?	
Landscape, townscape and visual amenity	14) To protect and enhance landscape, townscape, and visual amenity	Does the LHDG seek to avoid impacts on protected and sensitive landscapes, townscapes, and local distinctiveness?	<ul style="list-style-type: none"> • Highways development within conservation areas • Highways development within design code area
		Does the LHDG seek to avoid and/or mitigate significant visual amenity effects?	

SEA Topic	SEA Objective	Guide Questions	Potential Indicators
		Does the LHDG seek to protect and enhance local landscape character and settlement distinctiveness?	<ul style="list-style-type: none"> • Instances of planting/screening alongside highways development • New highways development within country parks
		Does the LHDG seek to enhance the visual amenity of settlements through appropriate management schemes?	
		Does the LHDG seek to promote enhanced soft estate associated with highways infrastructure through considerate planting and landscape design?	

3.4 SEA Assessment Stage Proposed Methodology (Stage B)

- 3.4.1 The LHDG has been tested against the SEA Framework to identify whether it would contribute to or conflict with the achievement of each objective. The performance of the LHDG against the SEA Objectives in the short term (5 years), medium term (5-10 years), and long term (10+ years) was assessed. During this process, mitigation and enhancement measures have been identified to improve positive scores and reduce negative scores.
- 3.4.2 As outlined above, SEA is not typically completed on Highways Design Guides, with the primary objective of its application against the LHDG as agreed with the relevant statutory consultees to enhance guidance so it is more closely aligned with sustainable development. So that assessment remained proportionate, each section of the LHDG was screened in relation to its likelihood of having a material impact on SEA Objectives and/or if it would result in significant effects. Through this process, each section of the LHDG was scoped either in or out of detailed assessment through the matrices provided in Appendix C. A full outline of the LHDG in relation to this process is included within Appendix D, as well as a summary provided below in Table 3.5.

Table 3 5 Contents of LHDG of aspects scoped in for detailed assessment

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Detailed Assessment?	Assessment Location within Environmental Report	
Part 1: Introduction				No	Out	N/A	
Part 2: Highways Development Management	LHDG Principles			Yes	In	Matrix 1: Section 6.2; Appendix C	
	Highways Development Management (HDM)	HDM Policy		Yes	In	Matrix 2: Section 6.3; Appendix C	
		Preparing Development Proposals	Preparing Development Proposals		Yes	In	Matrix 2: Section 6.3; Appendix C
			Data Collection		No	Out	N/A
			Traffic Modelling		No	Out	
			Road Safety Audits		Yes	In	Matrix 2: Section 6.3; Appendix C
Part 3: Design Layouts	Design Layouts	Introduction		No	Out	N/A	
		Road Types/Hierarchy	Road Typologies		Yes	In	Matrix 3: Section 6.4; Appendix C
			Geometry and layouts				
			Vehicle tracking		No	Out	N/A
			Vertical curves				
			Visibility splays				
			Junction design				
			Turning heads				
Mixed use developments		Yes	In	Matrix 3: Section 6.4; Appendix C			

200

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Detailed Assessment?	Assessment Location within Environmental Report
		Developments Served by private drives		No	Out	N/A
		Active & Sustainable Travel		Yes	In	Matrix 3: Section 6.4; Appendix C
		Speed Control				
		Signing & Lining and TROs				
		Street Lighting				
		Utilities				
		Drainage				
		The Natural Environment and Green Infrastructure				
		Parking and Electric Vehicle Charging				
Part 4: Materials and Construction	Materials and Construction	Introduction		Yes	In	Matrix 4: Section 6.5; Appendix C
		Materials		Yes	In	
		Specification and Standard Drawings		No	Out	N/A
		Site Surveys, Tests and Investigations		Yes	In	Matrix 4: Section 6.5; Appendix C
		Sampling and Testing Goods and Materials		No	Out	N/A
		Carriageway		Yes	In	Matrix 4: Section 6.5; Appendix C
		Highway Structures				
		Active travel assets and other paved areas		Yes	In	Matrix 4: Section 6.5; Appendix C
		Traffic signs and signals, road markings and studs				
		Street lighting				
Street Furniture and Street Art						

201

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Detailed Assessment?	Assessment Location within Environmental Report
		Drainage				
		The Natural Environment and Green Infrastructure				
		Safety Fencing and Barriers				
		Noise Barriers and Screening				
		Earthworks				
Part 5: Approvals and Highway Adoption				No	Out	N/A
Part 6: Network Management				No	Out	N/A
Part 7: Helpful Information				No	Out	N/A

3.4.3 Those elements of the LHDG determined to be assessed were then subject to an assessment matrix. An example extract is provided in Figure 3.2 below.

Figure 3-2 Assessment Matrix Example

Part 3 - Design and Layout									
SEA Topic	SEA Objective	Guide Questions	Met in this section?	Agreed?	Met elsewhere in LHDG?	Effect	Level of certainty	Summary and Recommendations	
Biodiversity	1) To protect and enhance biodiversity	Does the LHDG seek to avoid adverse effects on designated and undesignated habitats and species (including LBAP habitats such as mature woodland) through the development of Highways infrastructure?	Yes - green infrastructure	✓		ST++ MT++ LT++ D/I, R	Medium	New Highways have the potential to result in harm to biodiversity through habitat loss, fragmentation or pollution. They also have potential to provide important infrastructure to improve connectivity for wildlife through the provision of green infrastructure that delivers biodiversity benefits. LCC has a duty of care through the Natural Environment and Rural Communities Act 2006 (NERC Act) and the Environment Act (2021) to provide for the enhancement and improvement of biodiversity. Under the Protecting Wildlife and the Environment section of the Green Infrastructure and the Natural Environment guidance, the Environment Act 2021 and its provisions for the protection and improvement of the environment, including introducing mandatory BNG are referenced. By following this guidance and in accordance with national legislation, new highways infrastructure should help to contribute to an overall improvement in biodiversity through the implementation of green infrastructure to help facilitate and maximise BNG. Furthermore, it is noted in the introductory section of this guidance that by considering green infrastructure in the design process this can also contribute in delivering important opportunities to improve the connectivity of sites of value for wildlife whilst also supporting the development of Local Nature Recovery Strategy. This is assessed as a major benefit effect. Additionally, within Protecting Wildlife and the Environment, LCC recognise that transport infrastructure can have negative impacts on wildlife populations, either through habitat loss, fragmentation or pollution and that roads can also create barriers to the movement of wildlife, resulting in animals becoming trapped in traditional highway assets. Therefore, implementing mitigation measures to prevent habitat fragmentation and enable wildlife to navigate highways should be discussed at an early stage during the design, and specialist advice should be sought to meet principles of good asset management. Seeking specialist advice is also recommended within the Retaining Existing Trees and other Natural Assets guidance when retaining trees as trees help to retain	
		Does the LHDG seek to deliver wildlife connectivity, ecological networks, avoid habitat fragmentation and minimise wildlife casualties?	Yes - green infrastructure	✓					
		Does the LHDG seek to promote native species and non-invasive species?	Yes - green infrastructure	✓					
		Does the LHDG seek to manage and eliminate (Invasive and Non-Native Species) INNS?	Yes - green infrastructure / rights of way	x					

3.4.4 The significance of effects was scored using the five-point scale summarised in Table 3-6. The scoring criteria underpin what is considered as an effect's significance, for example, what is scored as a major negative (--) or major positive (++) and will help to steer and document the assessment.

3.4.5 The level of uncertainty regarding the likelihood and potential significance of an impact (either positive or negative) has been assessed separately on a scale from "high", "medium" to "low". Where certainty is lower, the 'worst case' impact has been assessed and illustrated, with commentary how the effect may be better or improved through action.

Table 3-6 SEA Assessment Criteria

Impact Significance	Description	Impact Symbol
Significant positive impact	The guidance strongly contributes to the achievement of the SEA Objective and may also deliver enhancements.	++
Minor positive impact	The guidance contributes partly to the achievement of the SEA Objective, but not entirely.	+
Neutral impact	There is no clear relationship between the guidance and/or the achievement of the SEA Objective or the relationship is negligible.	0
Minor negative impact	The guidance partially detracts from the achievement of some elements of the SEA Objective.	-
Significant negative impact	The guidance strongly detracts from the achievement of the SEA Objective.	--

Impact Significance	Description	Impact Symbol
Not Applicable	The section of guidance has no material relevance to the SEA objective/ topic	N/A

3.4.6 Where an element of the LHDG was shown to have opportunity for improvement against applicable SEA Objectives, the matrix includes recommendations for significant opportunities and benefits and advise on appropriate action to ensure these are realised and maximised. Any recommended mitigation/ improvements take the form of changes to wording/ specific requirements, deletion, or addition of specific guidance.

3.4.7 It is envisioned this process helps inform decision-making to ensure the best performing environmental/ social version of the guidance is taken forward to the adoption of the LHDG. This process is documented in Section 6, with detailed appraisal findings in Appendix C.

3.4.8 The SEA Regulations require an assessment of the plan or programme and its 'reasonable alternatives'. In developing the LHDG, LCC have considered alternative options for the following:

- Update and publish a new LHDG
- Alternative drainage
- Adopting Local Transport Note 1/20
- Developing Sustainable Access for All Policy
- Alternative palette of materials
- Green infrastructure within adopted highway

3.4.9 Each of the alternatives were assessed at an appropriate level of detail, against the SEA Objectives and are documented in Section 6 and Appendix C of this Environmental Report. A justification for the choice of preferred option will be provided by LCC.

Assessing In-Combination and Cumulative Effects

3.4.10 The SEA has assessed the potential in-combination and cumulative effects of the LHDG. In-combination effects occur because of interrelationships between different SEA topics on the same aspects of the environment/ society likely to be affected by the LHDG. Cumulative effects may occur due to potential impacts on aspects of the environment/ society because of the LHDG interacting with the impacts on the same receptors as a result of other strategies, plans, programmes, or policies, this could be cumulative pressures arising from other types of

development/ infrastructure, for example housing policy. This has been undertaken and is documented in Section 6 of this Environmental Report.

3.5 The Environmental Report (Stage C)

3.5.1 The Environmental Report (this report) is a legally required document which sets out the results of the SEA assessment. Contents of the Environment Report are set out in Table 3-1 and Table 3-2. It:

- Provides information on the current condition of the environmental/social topics that the LHDG could affect;
- Outlines how the strategies, plans, policies, and programmes which have been reviewed could affect the LHDG;
- Provides a commentary on how the SEA has informed the development of the LHDG and how it has influenced it;
- Sets out the aspects of the guidance which have been evaluated, and the reasons for the selection of the proposed approach; including a summary of consultation undertaken;
- Sets out the environmental effects of the draft LHDG and any reasonable alternatives considered prior to its finalisation;
- Suggests additional mitigation or management actions to further improve the environmental outcomes for guidance; and
- Provides a description of the monitoring framework proposed.

3.5.2 A Non-Technical Summary of the information listed above has also been produced alongside the Environmental Report.

3.6 Consulting on the Environmental Report and the Draft SEA (Stage D)

3.6.1 A six-week public consultation exercise on the LHDG is scheduled for summer 2024. This consultation will be accompanied by this draft Environmental Report, which includes the SEA appraisal findings.

3.6.2 Following the consultation, if the LHDG is updated, any significant changes that are made will also be re-assessed in the SEA and the Environmental Report updated.

3.6.3 The finalised Environmental Report will be published alongside the final LHDG and will be presented to the Cabinet to highlight the outcomes of consultation, present the draft guidance for adoption, and seek approval to publish.

3.7 Adoption of the LHDG and SEA Monitoring (Stage E)

- 3.7.1 Now the LHDG has been assessed, the suggested indicators presented in the SEA Framework in Table 3-4 have been reviewed to identify appropriate, proportionate, and relevant statutory SEA monitoring for the LHDG. They seek to be measurable and ideally rely on existing monitoring networks relevant to the baseline in this SEA.

4 Reviews of other Plans, Programmes and Environmental Objectives

- 4.1.1 The SEA Regulations requires a review of other plans, programmes and policies and their environmental protection and objectives, to identify how these strategic objectives may influence the LHDG.
- 4.1.2 Identifying these relationships enables potential synergies to be determined, strengthening the benefits that can be gained from implementation of the LHDG. This information is also used to inform the development of the baseline review and the identification of key issues. In addition, any inconsistencies, constraints, or potential sources of tension, can be identified, which could hinder the achievement of the objectives of the Plan, and therefore, provide a broad appraisal of the LHDG's compliance with international, national, and local considerations.
- 4.1.3 Existing plans and strategies were reviewed within the context of this Environmental Report and detailed within Appendix B. This included reviewing relevant international, national, regional, and local plans, programmes, and strategies. In accordance with the UK official SEA guidance³ (updated 2020) (paragraph 009) which provides an overview of the level of detail required, no list of plans or programmes can be definitive. See Appendix B for the list of Other Plans, Programmes and Environmental objectives in relation to the LHDG.

5 Establishing the Environmental and Social Baseline and Identifying Key Issues

5.1.1 The SEA Regulations state that the SEA must assess the likely significant effects of the plan/programme (in this case the LHDG) on specific suggested environmental topics.

5.1.2 Schedule 2 of the SEA Regulations lists the environmental factors that should be considered within the SEA process:

“The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects 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 these issues”.

5.1.3 The SEA guidance requires the collection of baseline information to provide an evidence base for environmental problems and the prediction of effects. Through the environmental baseline, existing environmental problems can be identified to help streamline the SEA. The term ‘*baseline information*’ refers to the existing environmental, economic, and social characteristics of an area likely to be affected by the plan.

5.1.4 A desk study was undertaken to identify baseline information, which was used to determine key issues for each of the topics identified as relevant to the LHDG (see Table 5-1). The information search included, but was not limited to, information from a range of desk-based sources including the following:

- Natural England
- Environment Agency
- Department for Environment Food and Rural Affairs (DEFRA)
- Canal and River Trust
- Historic England
- Department for Transport
- National Health Service
- Leicestershire County Council

5.1.5 Where information was available, key environmental and social targets and objectives have been identified; established and predicted trends in the status or condition of environmental features have been described; and significant environmental issues have been highlighted. Trends evident in the baseline

information have been used to predict the future baseline, which has assumed a continuation of the existing trends in some cases.

- 5.1.6 The baseline information is presented in Appendix A in both tabular form and, where data can be displayed at a county-level scale, in figures separated by topic as part of Appendix A. This also includes a summary of key trends and environmental/sustainability or social issues facing the County which are relevant to the LHDG in Appendix B. A summary of the key issues is also presented in Table 5-1 below.

Table 5-1 Overview of Key Issues categorised by topic

Topic	Key Issues
Biodiversity	<p>Leicestershire contains relatively few internationally and nationally designated nature conservation areas by area. There is one internationally designated site, a Special Area of Conservation (SAC), the River Mease, which at present is termed as being in an 'unfavourable condition' due to the phosphate levels in the river. There are 77 SSSIs (Sites of Special Scientific Interest) and three National Nature Reserves. There are 20 Local Nature Reserves. There is scope to improve the status of these sites as encouraged in the County's Nature Recovery Plan.</p> <p>Despite being a largely rural county, it is relatively poor in terms of biodiversity and conservation value when compared to national averages (2% of SSSI land coverage comparing to the 6% average across England). Around 5.4% of the county contains priority habitat types. When combined with the increased policy presumption towards net-biodiversity gain, the protection and enhancement of biodiversity will present a key issue. While the county contains no Green Belt, there is approximately 4.4% of woodland coverage, including Charnwood Forest Regional Park which includes the county's largest National Nature Reserve, Charnwood Lodge. The quality of roadside verges was previously identified as being in declining quality in the most recent Biodiversity Action Plan. Through an Urban Verge Biodiversity project, 69 wildlife verges, up 14 since 2021, are managed by a network of over 60 parish councils. This presents an opportunity for the LHDG.</p>
Population and Human Health	<p>As of the 2021 Census, Leicestershire has a total population of 712,200 (rounded to the nearest 100). Charnwood is the most populated district with 183,900 residents, with Melton the smallest with 51,800. Population is increasing across every district and is above regional and national levels. The county's 294,400 households projected to grow by 20% by 2041 alongside a rise in employment need by 15%. Growth will increase pressure for housing development, with more highways access infrastructure likely need.</p> <p>A large proportion of Leicestershire's population is aged over 60, rates within the county higher than the national average. The older population is more likely to live within rural areas of the county, an increase in proportion risking an increase in rural isolation. Those over 60 are more likely to have age-related</p>

Topic	Key Issues
	<p>health conditions or disability meaning the need for access to medical facilities and the maintenance and preservation of access are more significant.</p> <p>The county benefits from its close proximity to Leicester, one of those most culturally diverse cities in the UK. The county ranks within the top 30% to 40% for average deprivation and disability rank and deprivation and has 11 of its Lower Super Output Areas (LSOAs) within the 20% most income deprived nationally. Deprivation is generally experienced in pockets, namely Loughborough, Coalville, Hickley and South Wigston. This is an important consideration in developing accessible public transport and ensuring access to new housing and employment is provided.</p> <p>There is a reliance within Leicestershire on travel by car or van to work. The county has one of the lowest levels of public transport patronage in the region while only 7.9% of the adult population cycle. By 2041 it is predicted there will be significant increases in road vehicle kilometres travelled alongside a rise in freight demand. Though the rate of physically active adults in Leicestershire is higher than the national average, the county has a higher rate of adults classed as overweight or obese, with 26% of the population identifying as inactive.</p> <p>Violent and sexual offenses have remained the highest crime type for over 10 years. Public order crime, including anti-social behaviour is at 144% of the national average, Leicestershire the 9th highest of the 52 counties in England and Wales. Speeding offences were reported to have increased by 92% between 2021-22, highways design needing to ensure it contributes to a reduction.</p> <p>While road casualties in the county are comparatively low in comparison to the wider East Midlands region, the rate at which pedestrians are killed or seriously injured is higher than national averages.</p>
Material Assets	<p>Leicestershire is located within the heart of the country's strategic road network including the M1, M69, M42 and M6 motorways. While LCC as LHA only maintains those roads within its jurisdiction, this still amounts to 4,686km of roads and 3,081km of public rights of way. 5.06 billion vehicle miles were travelled on roads in Leicestershire in 2022. While there are multiple north-south connections, the county suffers from poor east-west connectivity in relation to the road and rail network.</p> <p>Despite having one of the highest rates of satisfaction with the condition of highways nationally, data between 2014-20 shows that assets where structural maintenance should be considered has increase across all road types. Those that increased the most were carriageways (unclassified roads) which doubled from 8% to 16%, and footways which saw an increase from 8.6% to 29.4%. Given the projected increase in road traffic, there is a need to continue to address the condition and function of highways infrastructure. This should also consider active travel routes and the needs of the population.</p>

Topic	Key Issues
Geology and Soils	<p>Provisional ALC (Agricultural Land Classification) data shows Leicestershire has a high proportion of best and most versatile agricultural land. The growing demand for housing (and associated access infrastructure) means there is potential for loss of best and versatile agricultural land due to competition from development.</p> <p>There are 236 brownfield land sites and 145 recorded category 1 & 2 pollution incidents across Leicestershire, the majority of which for both within Charnwood district. These should be considered when developing new highways infrastructure. There is also potential for localised impacts from transport related pollution incidents, most significantly in and around urban centres.</p> <p>There are a number of sites designated for their geological importance across Leicestershire, including 17 of the county's SSSIs, 8 RIGS (Regionally Important Geological Sites), and 48 Locally Important Geological Sites. New highways development or maintenance should consider the potential effects on geology and soil, including the potential to expose rock deposits which could have value for educational/scientific understanding.</p> <p>There is an intention to seek United Nations Educational, Scientific and Cultural Organization (UNESCO) geopark status for Charnwood Forest Geopark which will need to be recognised by any new development.</p>
Water Environment	<p>Leicestershire is subject to large areas of flood risk from fluvial sources and surface water, the county experiencing over 1,300 local flood events between 1996 and 2011. Market Harborough, Loughborough and Hinckley and Burbage have been identified as 'nationally significant' surface water flood risk areas. Flood risk has the potential to affect the existing and future highways network. Surface drainage from the highways network has potential to exacerbate flooding. Effective drainage measures should be included in all new road infrastructure and flood risk areas should be avoided where possible. Flood risk will continue to increase with climate change, in May 2019 LCC declared a climate emergency in recognition of local and wider impacts. Though LCC also has a role as Lead Local Flood Authority, they do not necessarily have the powers or responsibilities to physically implement measures to address all flooding related matters.</p> <p>LCC maintains 4,686km of roads and, as the LHA, is responsible for watercourses running under highway and managing risk of highway flooding. In 2021, an internal Climate Change Risk and Resilience Review by LCC founded there to be 'good co-operation' between Flood Risk Management and Highways on mapping small drainage. 136,000 drains and gullies were identified over 2,575 miles of road. In spite of this, there remains an 'unknown' small drainage network which is identified as presenting a high risk for flooding.</p>

Topic	Key Issues
Air Quality	<p>There are 11 total AQMAs (Air Quality Management Areas) across Leicestershire, the majority of which in relation to road traffic emissions. Given the projected increase in vehicle traffic, there is likely also to be an increase in particulate matter emissions. This may be offset by modal shift and an increased move to electric vehicle use. By 2041, LCC predicts a 29% growth in vehicle kilometres travelled across the county, a 69% rise in delays and a 7% decrease in speeds across the network, increasing the need for highways infrastructure to contribute to the improvement of air quality.</p>
Climate Change	<p>Transport sector emissions are proportionally high when compared with other counties. 38% of Leicestershire's emissions came from the transport section in 2021, 23% from either motorways or A roads and 11% from minor roads. The larger share of emissions is partly due to the presence of the strategic road network in the county. However, the LHA road network is also a source and projected traffic growth is anticipated to exacerbate this in the future. This may be offset by modal shift and an increased move to electric vehicle use.</p> <p>Even within best case scenarios, climate change and average conditions are projected to change in terms of a rise in average temperatures, wetter winters, and drier summers. With this comes an increase in the frequency and intensity of major weather events, including extreme rainfall and flooding, and the number and severity of heatwaves. Leicestershire is already experiencing extreme weather events which will increase as further changes in weather will happen. Long-term risks to infrastructure, highways one of the primary asset types, have been identified as presenting 'a huge challenge', with 'less evidence' risk is being managed systematically. The highway network will need to prepare for this through resilience measures in design and management. Durable materials and design should be considered to accommodate this. An increased use of nature-based solution should also be considered. Highway networks are also vulnerable to 'cascading events' where interruptions to services such as fuel or power supplies as a result of climate change presents a significant risk.</p> <p>There is a need for additional Electric Vehicle (EV) infrastructure to support the transition from petrol and diesel vehicles in order to ensure the highways network facilitates sustainable modes of transport. In recognition of this, LCC are currently working with district councils, businesses and other parties to help develop a countywide EV infrastructure strategy.</p> <p>While the growth rate of EV charging points is above than the national average (2020-23) the current rate per 100,000 population is below.</p>
Waste	<p>When constructing and maintaining highway infrastructure, mineral sites where production capacity is currently inactive should be utilised in order to maintain the level of provision from quarries within Leicestershire given the potential for shortfall of reserves over the period to 2031.</p>

Topic	Key Issues
	<p>Sustainable resource use should also be a consideration in the design and construction of new highways infrastructure including the use of recycled, re-used and low carbon materials.</p> <p>A number of sites across the county are allocated for minerals extraction and there are numerous Minerals Safeguarding Areas (MSA). The road network should seek to avoid the sterilisation of any such resources and also help to maintain adequate assess, including for heavy goods vehicles, to meet county and country mineral need.</p>
Cultural Heritage	<p>Leicestershire has a wide and varied heritage including many protected assets. There is one registered battlefield, Battle of Bosworth (Field) 1485, 179 scheduled monuments. Of the 4034 listed buildings, 79 are Grade I, 296 Grade II* and 3659 Grade II. There are 50 heritage assets currently designated as 'at risk', including 4 Scheduled Monuments, 9 listed buildings, 5 conservation areas, 1 registered park and garden, and 26 places of worship (all churches). There is potential for heritage assets to be affected directly or indirectly (e.g. through setting) by highways development (particularly where there is development pressure and further highways infrastructure is required).</p>
Landscape, Townscape and Visual Amenity	<p>Leicestershire is a predominantly rural county which encompasses a wide variety of landscapes. Whilst there are no National Parks or National Landscapes within Leicestershire, it has a distinct and locally important landscape and townscape character. The county contains a total of 12 distinct National Character Areas (NCAs) and 18 local landscape character areas. There are 140 Conservation Areas, 18 Country Parks and a design code area across the North West Leicestershire district. New highways development should seek to minimise impacts on landscape/ townscape and visual amenity and, where appropriate incorporate enhancement measures and appropriate planting and screening.</p> <p>Built up areas and roads are significant sources of light pollution in the county. There are few darker areas, concentrated more towards the rural areas to the south and east. Road noise is a significant and growing issue with more areas of the county being identified as Noise Important Areas. New roads are a notable source of new noise pollution.</p>

6 Assessment of the Draft LHDG and Reasonable Alternatives

6.1 Introduction

- 6.1.1 This section provides a summary of the findings of the SEA on those elements of the LHDG scoped in for further assessment as shown in Table 3-5 and Appendix D. It also includes a summary of the proposed mitigation/enhancement measures and a summary appraisal of reasonable alternatives.
- 6.1.2 The detailed appraisal matrices through which the assessment has been conducted are presented in Appendix C.

6.2 Assessment of Part 1: LHDG Principles

Summary

- 6.2.1 LCC has seven principles that form the basis for the LHDG policy and guidance. These were assessed against the SEA objectives and subsequent guide questions. New highway's infrastructure has the potential to result in adverse effects on the natural, built and human environments if inappropriately developed. Similarly, they can also deliver benefits if developed well. This assessment has focussed on how the principals seek to avoid adverse effects and deliver benefits. The principles are wide ranging, covering, Collaborative Working; Safety; Application to All Users; Maintainability; Active and Sustainable Travel, Access for all; and Climate Change and the Environment.
- 6.2.2 After assessing the principles, the effect for many of the SEA objectives scored either minor or majorly positive so it is considered that if these principles are followed when developing new highways, largely positive outcomes should be delivered. This includes, for example, the promotion of Biodiversity Net Gain, wildlife connectivity, green infrastructure and resilient drainage systems.
- 6.2.3 Objectives relating to population and human health were, on the whole, strongly supported across the LHDG principles, particularly with respect to promoting active travel and providing for safety and access for all. Principles referred to the County's Cycling and Walking Strategy (CaWS) and Local Cycling and Walking Infrastructure Plan (LCWIP) which outline the vision of '*creating convenient, accessible and practical cycling, walking and wheeling networks to help and encourage people to travel more sustainably*'. Additionally, the 'Designing out Crime' and 'Safer Parks - Improving access for women and girls' guidance was included to discourage crime and promote a safer environment for all users across the network.

- 6.2.4 For those SEA Topics and the associated Objectives which relate to Climate Change, the 'preparing for climate change on the strategic road network' national highways document underpins the approach of the core principles to contribute to a climate resilient highway for the future. This is supported by the provisions to encourage active and sustainable travel which includes low carbon transport alternatives. Additionally, the materials chosen for new highway construction will be based on the carbon generated throughout its life cycle. Objectives in relation to the built environment achieved positive alignment across the short, medium, and long-term in efforts to conserve and respect the heritage and local distinctiveness whilst also enhancing the landscape and visual amenity by incorporating green infrastructure into designs.
- 6.2.5 However, the SEA has identified a number of areas where the principles could be improved. In particular, there was a limitation in achieving a higher grade of alignment, this has generally been in relation to a lack of specific information such as reference to 'enhancement', particularly 'Geology and Soils' and 'minimising waste generation and support re-use and recycling'. Recommendations are summarised below.

Proposed Mitigation / Enhancement Recommendations

- 6.2.6 Principle 7 'Tackling Climate Change and Protecting the Environment' details national guidance in relation to green infrastructure and how it seeks to minimise carbon and help deliver Biodiversity Net Gain (BNG) targets. However, considering this principle is aimed at protecting the environment, there was a relatively narrow in focus regarding the natural and water environment and promoting blue infrastructure. Therefore, the principle can be improved by broadening out the principle to incorporate these environmental issues within it. Additional enhancements could be achieved by broadening the principles out even further by recognising the value of a sustainable use of land and protection of soil quality, geological diversity and minerals safeguarding is made in either principle 7 or principle 4 'Creating Durable and Easily Maintained Placed' which have been omitted from the LHDG principles.
- 6.2.7 Objectives in relation to air quality may deliver a minor negative impact in the short term in through the construction phase and dust that results from this. Although the principles within the LHDG recognises air quality is likely to improve from the uptake of more active and sustainable travel, these can be further improved by identifying sensitive receptors across the new highways network and particularly within AQMAs to deliver positive impacts over the short, medium and long-term. Further improvements include a recommendation to avoid adverse effects on the SEA natural and built environment during the planning stage.

6.3 Assessment of Part 2: Highways Development Management

Summary

- 6.3.1 LCC has set out four overarching policies relating to Highways Development Management. As with the Principles, these seek to encourage new highways to be developed in a positive way to help avoid adverse effects on the human environment in particular. There is less focus in this section on the natural environment. The four HDM Policies relate to: Sustainable Access; Access to the Highway Network; Safety; and Development Impact.
- 6.3.2 The 'Preparing Development Proposals' section underpins the policies and spans across various SEA objectives under this section of the LHDG. The NPPF acts as a key reference for the policies in the LHDG and are in accordance with national policy and guidance include Manual for Streets, Local Transport Note 1/20 and National Design Code. The vision is to deliver a highways network that is attractive, accessible and sustainable, offering benefits to both the environment and human health and wellbeing. The majority of Objectives achieve minor positive scores, with four achieving major positive in the long term, and two assigned neutral alignment in the short-term. Where there has been limitation in achieving a higher grade of alignment, this has generally been in relation to a lack of specific reference to 'enhancement'.
- 6.3.3 Objectives in relation to population and human health were scored either minor or majorly positive alignments. National policies such as Cabe's "Creating safe places to live through design" and the Landscape Institute's "Creating Safer Spaces White Paper" provide guidance for LCC to design out crime and create a safer and more inclusive environment. Additional guidance including Local Transport Note 1/20 "Cycle infrastructure design" and schemes "priority first", Road Safety Audit policy and supports the movement for the promotes opportunities for safer and sustainable highways network for all types of road users. Policy 1 seeks to promote the use of alternative modes of travel to cars and maximise the uptake of active travel that are genuine and attractive alternatives through the "priority first" scheme for cyclists and pedestrians. Incorporating existing or planned routes for cyclists and pedestrians into the new highways infrastructure is assessed as a major positive alignment. Additionally, by following the guidance related to travel plans and assessments can indirectly result in a reduction in air pollution in sensitive areas and receptors during the design process and traffic congestion can be mitigated. These factors all scored positively in the assessment for human health and wellbeing and air quality. Furthermore, cars are inevitable on a highway, and following NPPF 16 (e) guidance developments should "be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations". Electric Vehicles (EV) offer a genuine and

attractive alternative (Policy 1) and EV cables will not be trailing across any part of the highway, thus ensuring safety of all highway users (Policy 3).

- 6.3.4 For objectives in relation to biodiversity; geology and soils; water environment; climate change resilience; and cultural heritage were all assigned N/A alignment as this specific section of the LHDG guidance had no material relevance to the SEA objectives, so could only be inferred during the assessment.

Proposed Mitigation / Enhancement Recommendations

- 6.3.5 It is understood that the Highways Development Management Policies may not have capacity to address every environmental issue in detail, especially when sections have been accounted for other sections of the LHDG. However, feedback from the Environment Agency at the SEA Scoping Stage, suggested that blue infrastructure should also be considered under enhancing 'Wildlife connectivity and Green Infrastructure' for example all assets which cross a watercourse should be reviewed for their impact to migratory fish species and opportunities to remove weirs would be encouraged'. Like the principles there is no mention of blue infrastructure and therefore policies can be further improved considering blue infrastructure options and how marine and aquatic life is to be protected.
- 6.3.6 It is assumed that policies like policy 1, the uptake of active travel can deliver indirect benefits to air quality and carbon if there is a modal shift away from oil burning vehicles. However, to further enhance the policies, it is recommended that details are provided to demonstrate how the LHDG seeks to promote alternative modes of travel and that AQMAs, human receptors and ecological receptors are identified, providing guidance of how air quality can be minimised during the new highways infrastructures lifecycle.
- 6.3.7 Other general recommendations would be to enhance those objectives that scored a N/A alignment, by providing details on these environmental issues to demonstrate commitments to achieving the SEA Objectives by protecting and enhancing the natural, cultural and water environments.

6.4 Assessment of Part 3: Design Layouts

Summary

- 6.4.1 The Design Layouts section of the LHDG provides guidance on road types and hierarchy, developments served by private drives, active and sustainable travel, speed control, signing and lining and Traffic Regulation Orders (TROs), street lighting, utilities, drainage, the natural environment and green infrastructure, parking and electric vehicle charging, and marking the highway boundary. Setting out these requirements will help ensure that the new highways infrastructure

provides safe and free movement for all road users and play a wider role in contributing to delivering LCC's wider strategic objectives.

- 6.4.2 Significant positive alignment is assigned to the SEA Objective in relation to the protection and enhancement of biodiversity, notably through specific reference to the implementation of green infrastructure to maximise BNG, and mitigation to prevent habitat fragmentation. Reference to the importance of lighting and safety, as well as the discouragement of aggressive and dangerous driving mean there is significant positive alignment with the SEA Objective in relation to the reduction of crime and fear of crime. This is similarly the case in relation to the protection and enhancement of accessibility and connectivity, as a result of guidance detailing how to provide for active travel and how highways can contribute to the delivery of a well-connected transport network. For those SEA Objectives in relation to the built environment, guidance is broadly focused on protection or the avoidance of adverse effects rather than enhancement, and as a result, direct and indirect minor positive alignments are assigned. There is neutral alignment with those SEA Objectives associated with Waste and Material Assets, Air Quality, and Geology and Soils.
- 6.4.3 For those SEA Topics and the associated Objectives which relate to the Water Environment, National Planning policy sets out expectations for the adoption of Sustainable Drainage systems (SuDS) that deliver direct and indirect benefits to water quality, flood risk, biodiversity and amenity. Although there is no obligation to implement SuDS, doing so would demonstrate ambitions with the drainage plans and achieve positive alignment across the short, medium and long-term. Additionally, implementing green infrastructure in the designs for the new highways infrastructure can help mitigate impacts of climate change through its ability to absorb carbon, manage flood water, reduce air and water pollution, cool the environment by providing shade and moisture to the air providing opportunities for wildlife; and controlling soil erosion. Green infrastructure can impact the character and surrounding area, so needs to be carefully considered ensuring the heritage and character is maintained throughout. Overall, it is anticipated that green infrastructure will, on the whole, positively support SEA Topics and Objectives.

Proposed Mitigation / Enhancement Recommendations

- 6.4.4 To increase alignment with SEA Objectives that relate to the natural environment, in particular the water environment, explicit reference to blue infrastructure could be added alongside green infrastructure. To improve performance against the Objectives in relation to Population and Human Health, the design layouts section could employ a greater emphasis on reducing rural isolation. While there is a good coverage of measures to protect geodiversity and soil quality, there could be a greater focus on enhancement. Additional guidance as to how highways design

may seek to avoid adverse impacts to geological sites or soil contamination could also be considered. While this section provides guidance on the resilience of material assets, explicit reference in relation to climate change could be added. For those SEA Objectives that relate to the built environment, guidance is primarily focused on protection. For greater alignment with SEA Objectives, guidance could include measures for enhancements, all while considering local context.

6.5 Assessment of Part 4: Materials and Construction

Summary

- 6.5.1 Part 4 of the LHDG addressed Materials and Construction and includes information on approved materials, detailed specifications and standard drawings, site surveys, tests and investigations, sampling and testing goods and materials, carriageways, highway structures, active travel assets, road markings and studs, street lighting.
- 6.5.2 After assessing the materials and construction section of the LHDG, the effect for many of the SEA objectives scored either minor or majorly positive so it is considered that the development of a standard materials palette and methods defined by LCC for the development and construction of the new highways should largely deliver positive outcomes. SEA Objectives in relation to biodiversity and air quality were assigned neutral alignment.
- 6.5.3 For the SEA Objective that relates to Landscape, Townscape and Visual Amenity, significant positive alignment is assigned due to emphasis included on protection and enhancement. LCC has developed a palette of locally sourced materials that balances the desire for sustainability whilst taking aesthetic considerations and the local character and distinctiveness of the County into account. Additionally, the choice of local sourced and sustainable materials that have lower levels of carbon dioxide over their life cycle and lower environmental impacts compared to imported materials positively contributes to SEA objectives relating to climate change and material assets. The further use of 100% recyclable materials like precast concrete slabs is assessed as a major positive alignment. The materials selected must also be durable and suitable for the hierarchy of roads, footways and the anticipated traffic and pedestrian flow. The use of coloured materials for lane markings and to segregate parts of the highways through tactile flooring should indirectly contribute to a safer highways network for all road users whilst meeting the needs for visually impaired and disabled users and discourage dangerous or aggressive driving and minimise any potential conflicts.
- 6.5.4 For the SEA and the associated Objectives which relate to the Water Environment, the guidance provided in the LHDG in accordance with LCC standards for pipe system discharge should help reduce the impacts of scouring arising in the

County's river banks, ditches and watercourses. The new highways infrastructure should be designed in a way that means no water from the highways should escape the highway, preventing the likelihood of flooding or any accidental spillages into nearby watercourses. By meeting the requirements of the 'Sewer's for Adoption' in accordance with the Water Industry Act 1991, the new highways structure should be implemented into a system that will not be flooded in a 1% (1/100 year return period) improving the climate resilience of the highway and achieving positive alignment across the short, medium and long-term. Implementing green infrastructure and using the Value of Trees toolkit, especially the Tree Matrix can assist with selecting appropriate tree species to help with reducing flooding and carbon sequestration and improve the climate resilience of the new highways infrastructure over its lifetime.

- 6.5.5 With regards to the natural environment, the LCC has also committed to avoiding sites that obtain invasive or harmful plant species where they are likely to cause problems to the environment. Additionally, British Standards, the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites guidance and compliance with the Manual of Contract Documents for Highway Works (MCHW) should minimise the adverse effects of geology and soils.

Proposed Mitigation / Enhancement Recommendations

- 6.5.6 The Materials and Construction performs well in its function and only marginal changes are suggested. Lower performance against SEA Objectives can largely be attributed to the section's specific focus. To improve performance against SEA Objectives that relate to the built environment additional guidance could be included how material considerations may differ within Conservation Areas, Design Areas, and where in close proximity to designated and non-designated heritage assets. In relation to Climate resilience, a broader inclusion for other road users such as cyclists and pedestrians could be added. Additional guidance on how waste might be minimised during the construction of new highways infrastructure would improve performance against Waste Objectives. In terms of Water Environment, blue infrastructure should be considered alongside green infrastructure to safeguard and enhance aquatic habitats.

6.6 Assessment of Reasonable Alternatives

- 6.6.1 Table 6-1 below details the key alternative options considered during the development of the LHDG, with the decision made and rationale behind each choice provided. A summary of the appraisal findings for each alternative is also outlined.

Table 6-1 Overview of Key Issues categorised by topic

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
Do not publish a new LHDG	To update and publish a new LHDG	<p>Reviewing the LHDG can be resource intensive, and an alternative would be to signpost enquiries to national policy, standards and guidance. However, the LHDG benefits LCC by allowing the opportunity to present elements of national policy, guidance and standards that are considered particularly important to emphasise in the Leicestershire context. The LHDG provides LCC with the opportunity to present expected standards in highway design that we expect to be adhered to in the county.</p> <p>There are several 'hurdles' for developers to overcome regarding the design and adoption of highway in new development. The LHDG sets out LCC's position regarding how observations on planning applications, in our role as LHA, are managed and relating to our technical approval and adoption processes where highway adoption is sought. This enables clarity of process for the benefit of developers and LCC staff alike.</p> <p>The review of the LHDG provides the opportunity to ensure guidance accords with LCC's carbon Net Zero Strategy and Action Plan, which states that the LHDG should be revised 'to incorporate environmental and net zero carbon objectives.'; it allows for a step change in guidance so that there are positive impacts for our health and wellbeing and the environment. The review has resulted in the development of key principles, particularly those relating to active travel and environmental impacts, which support this ambition.</p>	<p>The key difference between the No Update alternative and the preferred option (Update the LHDG) is that the new LHDG has the benefit of being underpinned by the latest national guidance and policies which provides LCC with the opportunity to contribute to wider strategies such as meeting net zero targets. The current LHDG is over 20 years old and outdated. The updated LHDG sets out LCC's policies, principles and technical guidance relating to the delivery an attractive, accessible, safe and sustainable highways network in Leicestershire that seeks to protect and enhance the natural and built environment whilst also safeguarding the health and wellbeing of the communities. As such, the alternative to Update the LDHG performs more strongly against many of the SEA Objectives, particularly relating to the environment, carbon and population and human health compared to an option not to update the guidance.</p> <p>Ultimately, having a new LHDG provides greater certainty that LCC can deliver these benefits and show ambition on meeting new aspirations such as BNG and green infrastructure identified in national policies and legislation whilst contributing to wider local schemes and</p>

221

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
			strategies such as ‘priority first’ ensuring a safe and resilient highways that meets the needs of all road users in Leicestershire.
<p>LCC will consider adoption of SuDS that are risk rated green or amber and accept highway run-off only.</p> <p>A commuted sum contribution should also be paid for future maintenance.</p>	<p>The council will adopt Sustainable Drainage Systems (SuDS) for the purposes of highway drainage.</p>	<p>SuDS should be encouraged as they deliver multiple benefits for managing water pollution, biodiversity and enhancing landscaping character in accordance with LCC’s public duty under the Environment Act 2021 and LHDG Principle 7 Tackling climate change and protecting the environment.</p> <p>Accordance with LCC’s carbon Net Zero Strategy and Action Plan, which states that the LHDG should be revised ‘to incorporate environmental and net zero carbon objectives.’</p>	<p>The key difference between these alternatives relates to the level of confidence that the delivery and benefits of SuDS are achieved. In the options where SuDS are adopted by the Council, there is a greater likelihood that the schemes will be delivered and maintained in order to achieve the drainage and environmental objectives that are possible (including for example wider biodiversity and landscaping benefits as well as reducing flood risk and water pollution).</p> <p>Those options which also include a commuted sum provides greater certainty that the funding will be available to maintain SuDS features and therefore deliver their benefits. In terms of the SEA Objectives, there are limited differences between the two commuted sum alternatives at the scale of the assessment.</p> <p>The option not to adopt SuDS provides lower certainty of their successful implementation and maintenance over time.</p>
<p>LCC will consider adoption of SuDS that are risk rated green or amber and accept highway run-off only.</p> <p>A commuted sum will be recovered for the maintenance of features that do not perform a primarily highway drainage function (grass cutting, tree work, shrub and other vegetation management). A commuted sum will also be recovered for maintenance costs in excess of those required for the</p>		<p>Some SuDS require what would be considered “extra over” maintenance activities that are not related to a primarily drainage function, such as grass cutting and tree works. Taking a commuted sum gives greater certainty to availability of funding for future maintenance of drainage.</p> <p>Uncertainty remains as to the comparable whole-life costs between traditional drainage and SuDS.</p> <p>Simplifies guidance regarding application of commuted sum to all SuDS interventions.</p>	

222

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
<p>equivalent traditional drainage intervention. A costed maintenance plan will be required from developers to assess acceptability of the intervention.</p>			<p>Whilst a commuted sum gives greater certainty on the availability of funding for future maintenance and should be paid, LCC intend to use SuDS for the purpose of highways drainage which is not deemed as an “extra over” maintenance. Likewise, there is simplified guidance regarding application of commuted sum to all SuDS interventions.</p>
<p>LCC will not adopt SuDS but agrees to their use for managing highway run-off (maintained by management company) further to assessment and where no liability is transferred to the authority. A maintenance plan would be required from the developer to ensure interventions do not negatively impact on features LCC maintains.</p>			
<p>Adopt SuDS with no commuted sum attracted for their future maintenance</p>			
<p>To partly accord with guidance, defining specific</p>	<p>Adoption of Local Transport Note 1/20</p>	<p>Accordance best practice and LCC’s adopted Cycling and Walking Strategy which aligns itself with LTN 1/20.</p>	<p>The key difference between this alternative and the preferred option is that the CaWS aligns with the LTN 1/20 and broadens the opportunity for LCC to achieve wider strategic targets such as</p>

223

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
<p>areas of guidance for adoption by LCC.</p>	<p>“Cycle infrastructure design” (LTN 1/20) guidance within the new LHDG</p>	<p>Accordance with LCC’s carbon Net Zero Strategy and Action Plan, which states that the LHDG should be revised ‘to incorporate environmental and net zero carbon objectives.’</p> <p>Enabling successful planning applications that meet the criteria for assessment by Active Travel England.</p> <p>Meeting environmental sustainability requirements of highway funding streams.</p> <p>Provision of healthy, multi-functional environments for residents in accordance with LCC’s Health and Wellbeing Strategy.</p>	<p>Net Zero and enhance the health and wellbeing of all road users which can be made bespoke benefits to the County. Whilst concerns have been raised in relation to the affordability of maintenance of future adopted highways in the LTN 1/20, maintenance burdens will be minimised by providing clear guidance for developers on design and materials that ensures performance and durability of the asset in accordance with LCC’s Asset Management Policy and Strategy.</p> <p>Ultimately, by only partly complying the guidance LCC risks failing to meet local and national objectives and targets. At this level, there is no detail on which aspects of the guidance would be adopted or not.</p>
<p>To develop an independent set of “Leicestershire” guidance</p>			<p>The key difference between this alternative and the preferred option is the LHDG guidance is underpinned by a vast array of national legislation, guidance and policy that need to be complied with. Whilst it is appreciated that concerns raised in the LTN 1/20 may warrant a set of independent Leicestershire guidance to make it more bespoke to the county, developing a set of “Leicestershire” guidance that does not necessarily meet national policy s not deemed a</p>

224

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
			<p>reasonable alternative. At this level of assessment, the content of a potential Leicestershire only guidance is not known and therefore its potential impacts cannot easily be determined.</p>
<p>Do not adopt a sustainable access policy</p>	<p>The development of a Highway Development Management 'Sustainable Access for All' Policy</p>	<p>Accordance best practice and LCC's adopted Cycling and Walking Strategy which aligns itself with LTN 1/20.</p> <p>Accordance with LCC's carbon Net Zero Strategy and Action Plan, which states that the LHDG should be revised 'to incorporate environmental and net zero carbon objectives.'</p> <p>Aligns with NPPF's requirement for sustainable development that meets the needs of all users.</p> <p>Enabling successful planning applications that meet the criteria for assessment by Active Travel England.</p> <p>Provision of healthy, multi-functional environments for residents in accordance with LCC's Health and Wellbeing Strategy.</p>	<p>The key difference between this alternative and the preferred option is that by not having a sustainable access for all policy, then certain SEA Topics and Objectives are not met, and the LHDG will not align with NPPF requirements. Additionally, an effective and safe transport network enables communities to make active travel choices that are beneficial for health and wellbeing. The uptake of active and sustainable travel can be discouraged where real or perceived threats to the safety or efficiency of those choices result from severe impacts on the road network. The Sustainable Access for All Policy states that 'development must be accessible for all highway users and maximise the uptake of sustainable travel choices'. Ultimately, by adopting the sustainable access policy within the LHDG provides greater certainty to the council that these benefits will occur and be made bespoke to the county.</p>

225

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
<p>Do not adopt palettes of materials</p>	<p>To develop palettes of standard and enhanced materials for use in the construction of new highway.</p>	<p>The use of alternative materials can help support local distinctiveness in new development. However, the inclusion of these materials within new development can also be the cause of future maintenance issues. Problems regarding availability of like-for-like materials during future maintenance activities or statutory undertaker works can result in a patchwork appearance that undermines the original intention of their use. Bespoke materials proposed for new highway can have unknown properties in terms of performance and durability due to their limited use. To continue without defining palettes of acceptable materials would mean prolonging these issues.</p> <p>The current guidance makes it difficult to assess the suitability of bespoke materials proposed for use within highway. A new process will be established that will allow the use of new and innovative materials to be assessed to ensure they meet the materials palettes criteria.</p> <p>The Department for Transport’s Manual for Streets advocates that:</p> <p>“One way of enabling designers to achieve local distinctiveness without causing excessive maintenance costs will be for highway authorities to develop a limited palette of special materials and street furniture. Such materials and components, and their typical application, could, for example, be set out in local design guidance and be adopted as a Supplementary Planning Document.”</p> <p>In line with this guidance an enhanced palette of materials has been developed to better balance the desire for local</p>	<p>The key difference between this alternative and the preferred option is that the palette of materials has been chosen specifically focusing on sustainability attributes including durability, low CO2e over its life-cycle, maintainability and its appearance. Additionally, having a set of enhanced materials that includes more bespoke materials requiring a commuted sum to be paid can secure funding for future highways and contribute to delivering bespoke benefits across the County. Additionally, incorporating the use of coloured materials can enhance the highways network particularly when used for segregating road and cycle lanes to create a safe and sustainable network for all road users and meeting the needs of specific groups of people such as tactile flooring for visually impaired members of the community.</p> <p>Ultimately, by not adopting a suitable palette of materials that historically have been used successfully within Leicestershire and that are not in-keeping with local distinctiveness, LCC would struggle to balance the desire for local distinctiveness with sustainability, performance and on-going maintenance over the short, medium and long-term.</p>

226

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
<p>Develop palettes that encompass a broader range of material types in addition to surfacing</p>		<p>distinctiveness with sustainability, performance and on-going maintenance.</p> <p>The palettes have created an opportunity for LCC to review what materials are acceptable within new highway and consider carbon impacts. For example, the palettes include the use of warm mix asphalt as a surface material, which has lower carbon impact compared to hot mix.</p> <p>For the purposes of a pilot, a decision was taken that, as a material with the greatest potential to provide benefits in terms of minimising burden on future maintenance and carbon impacts, the palettes should contain surfacing materials only.</p> <p>The palettes help the LHDG accord with LCC’s carbon Net Zero Strategy and Action Plan, which states that the LHDG should be revised ‘to incorporate environmental and net zero carbon objectives.’</p>	<p>The key difference between this alternative and the preferred option is because certain like-for-like materials may not be readily available during future maintenance of the highways network, therefore resulting in an unattractive highways network that is not in keeping with local distinctiveness and character of the County’s local surroundings. Additionally, the materials that have been selected are based on what can be locally sourced, that are sustainable with reduced carbon production over its lifetime as opposed to broadening out the palette to include imported materials that do not deliver the same environmental recognition or benefits.</p> <p>Ultimately, developing palettes that encompass a broader range of materials brings doubt and uncertainty on LCC to deliver a highways network that balance the desire for local distinctiveness with sustainability, performance and on-going maintenance over the short, medium and long-term.</p>
<p>To refuse to adopt or be more restrictive on the provision of green infrastructure</p>	<p>To facilitate the provision of green infrastructure within</p>	<p>Supporting green infrastructure within the highway that can deliver wider benefits for communities for health and wellbeing and provide enhancements for wildlife and the environment.</p> <p>A more facilitative approach and the use of the Value of Trees (VoT) toolkit to ensure trees thrive, will:</p>	<p>Green infrastructure delivers a range of ecosystem benefits for biodiversity. It can help enhance the landscape and visual amenity of the county by using a VoT toolkit and tree matrix that provides best practice guidance. It can</p>

227

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
	<p>adopted highways</p>	<ul style="list-style-type: none"> • Ensure that the LHDG accords with LCC’s carbon Net Zero Strategy and Action Plan, which states that the LHDG should be revised ‘to incorporate environmental and net zero carbon objectives.’ • Contribute to LCC’s compliance with legislation such as the Environment Act and Natural Environment and Rural Communities Act. • Protect of biodiversity in the county and the resulting financial value of green infrastructure. • Ensure guidance is appropriate within the context of Leicestershire. • Help to Meet environmental sustainability requirements of highway funding streams. • Minimise maintenance burden by giving clear guidance and ensuring developers provide appropriate information on regimes and costs. • Provision of healthy, multi-functional environments for residents. <p>To minimise the burden on maintenance budgets highlighted above. LCC will:</p> <ul style="list-style-type: none"> • Review the commuted sum attracted for green infrastructure; • Require a full, costed maintenance plan; 	<p>contribute towards creating more climate resilient highways and further maximise and enhance BNG and help achieve net zero ambitions and wider strategic targets. It is, however, recognised that green infrastructure and tree roots can cause conflicts with underground utilities and damage adjacent infrastructure such as the carriageway surface if inappropriate species are selected. Through careful consideration and early stage engagement with key parties any potential conflicts can be mitigated. Ultimately, implementing green infrastructure in the LHDG will provide greater certainty that LCC targets can be delivered whilst also complying with national legislation. By refusing to adopt Green Infrastructure or by being more restrictive, this greatly reduces the potential benefits and would result in poorer scoring against a number of the SEA Objectives.</p>

228

Alternative Option Considered	Decision Made	LCC Rationale for Decision	Appraisal Findings
		<ul style="list-style-type: none"> • Be stricter on specifications; • Dedicate resource for the technical approval of green infrastructure; • Investigating the opportunity for pre-submission requirements related to green infrastructure for the inclusion in Section 38 agreements. 	

6.7 Cumulative Effects Assessment

6.7.1 Table 6-2 below provides an account of the predicted effects of the Core Document policies and vision as a whole. Whilst many of the potential impacts will be subject to implementation and in turn the specific impacts of new transport development, it is possible to identify how the general messages of applying the Core Document as a whole could affect the environment. These are in-combination effects.

6.7.2 The analysis below includes a summary overview of potential impacts on each SEA Objective. It also includes reference to other key plans and programmes that could result in cumulative effects with the LHDG. The following strategic plans for the county have been identified as sources of proposed development and/or potential impact both adverse and beneficial:

- Local Plans for each of the districts in Leicestershire and Leicester City
- The Leicestershire County Council Local Transport Plan
- Our Communities Approach 2022 – 2026
- Leicestershire Joint Health and Wellbeing Strategy 2022 – 2032
- Environment Strategy 2018 – 2030
- Nature Recovery Plan
- Net Zero Leicestershire Strategy 2023 – 2045
- Leicester & Leicestershire 2050: Our Vision for Growth
- Leicester & Leicestershire Economic Growth Strategy 2021 – 2030
- National Planning guidance including:
 - National Planning Policy Framework (NPPF)
 - National Planning Policy Guidance (NPPG)
 - National Policy Statements (NPSs)
- National and international legislation and law governing environmental protection (see Appendix B) and the regulatory and advisory role of England's statutory environmental bodies in the planning process, namely Natural England, Historic England and the Environment Agency.

Table 6-2 Cumulative and In-Combination Effects

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
Biodiversity	<p>Biodiversity in the County is in decline. There is scope to improve its designated sites and habitats as encouraged in the Nature Recovery Plan.</p> <p>New highways infrastructure has potential to damage biodiversity directly and indirectly through land take, disturbance, and pollution if not well planned. It can also give rise to benefits, for example, through improved wildlife connectivity.</p> <p>Travel demand (freight and passenger) is anticipated to increase by roughly a third by 2041. In the absence of controls proposed in the LHDG, this may exacerbate the trends in biodiversity decline relevant to the growing transport network. Note, however, that there are numerous other controls in place through the planning and regulatory system that seek to</p>	<p>In addition to highways infrastructure growth and patronage, there are numerous other factors and proposals which may adversely affect biodiversity from housing and commercial development pressure, population growth, wider energy and utilities infrastructure development, farming, and climate change. Some of these originate from within the county (e.g. Local Plans, Economic growth Strategy etc) whilst others may be developments of national significance or cross-boundary projects or impacts (e.g. relating to meeting development demands from Leicester City).</p>	<p>Whilst highways and wider development proposals are encouraged in a range of strategic plans (e.g. Local Plans, the Economic Growth Strategy, nationally significant infrastructure), many of these plans also contain positive interventions and/or policy that help to encourage biodiversity improvements as part of development, e.g. through biodiversity net gain requirements or as part of specific re-wilding of nature enhancement proposals.</p> <p>A suite of strategic plans also exists to help promote biodiversity specifically (e.g. the Environment Strategy and the Nature Recovery Plan). Similarly local and national planning guidance also seeks to control environmental impacts and promote benefits in some cases</p>	<p>The LHDG promotes the delivery of a connected and well-maintained highways network. In addition to other development proposals and pressures in the county this has potential to cause adverse impacts on biodiversity. However, across the LHDG, provisions are in place which include reiteration of national guidance, legislation and strategies to benefit the natural environment with a focus on implementing green infrastructure referenced across the LHDG to facilitate and maximise BNG (Principle 7), deliver wildlife connectivity (Principle 4 & 7), promote native species and seek to avoid adverse effects on biodiversity (design layout).</p> <p>The LHDG guidance positively aligns with the Biodiversity SEA Objective and help to ensure that highway proposals do not impact</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>protect and enhance this outside an LHDG.</p>		<p>where appropriate (e.g. NPPF, NPPG, NPSs).</p> <p>The role of statutory and non-statutory nature conservation bodies together with county and local council officers is also important in controlling biodiversity decline in new development.</p>	<p>on biodiversity. Together with wider cumulative controls, the policy framework is in place to manage the wider extent of cumulative growth in the County.</p>
<p>Population and Human Health</p>	<p>Within all districts across Leicestershire, population count, and density is increasing. Corresponding housing demand will only increase development pressure within rural areas where access improvements will be required.</p> <p>The fact a large proportion of Leicestershire’s population is aged over 60, combined with the majority of the County’s population living within rural parishes means there is an increased risk of rural isolation.</p> <p>Public transport patronage is one of the lowest in the region, with</p>	<p>There are numerous factors and proposals which may adversely affect population and human health, namely in relation to from increased housing and commercial development pressure, environmental factors including air quality, visual amenity, noise, pollution and climate change, relative access to green space, poor diet and a growing array of stress and mental health detractors.</p>	<p>A suite of national planning policy and guidance encourages the protection and enhancement of human health and wellbeing in new development, namely NPSs, NPPF and NPPG. Specific statutory and non-statutory guidance, plans and programmes exist to support health and wellbeing, for example in relation to active travel (e.g. LCC Cycling and Walking Strategy Action Plan and Leicester and Leicestershire Strategic Transport Priorities), and public health (e.g. LCC Public Health Strategy 2022-27 and Leicestershire Healthy Schools Programme). These non-</p>	<p>The Principles and Policies include provisions to protect and enhance health and wellbeing. Policy 1 & Principle 5 supports meeting the needs for road users and promoting active travel. Principle 2 and Policies 2 & 3 seek to improve levels of road safety. References to rural isolation are made in Principle 5 and the Preparing Development Proposals (PDP).</p> <p>The LHDG, positively aligns with the SEA Objective, helping to provide the groundwork for highway networks to contribute to the protection and</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>car ownership increasing. There is a high reliance on travel by car or van to work, only 7.9% of the population cycling.</p> <p>The percentage of adults classed as overweight or obese in Leicestershire is significantly worse than the national average.</p> <p>There are pockets of high deprivation, measured using the Index of Multiple Deprivation (IMD) in areas of Loughborough, North West Leicestershire and Hinckley and Bosworth.</p> <p>While road casualties in the County are comparatively low in comparison to the wider East Midlands region, the rate at which pedestrians are killed or seriously injured is higher than national averages.</p> <p>In the absence of the controls proposed in the LHDG Core Document, trends in relation to population and human health relevant to the transport network</p>		<p>statutory and statutory bodies extend their role alongside local council officers in controlling and impact in relation to health and wellbeing during the planning consent processes.</p>	<p>enhancement of human health and wellbeing alongside existing policy frameworks.</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>are likely to be exacerbated. There are however numerous planning and regulatory controls in place beyond the remit of an LHDG that protect and enhance human health and wellbeing.</p>			
<p>Geology and Soils</p>	<p>Due to the rural nature of Leicestershire, there is a high proportion of best and most versatile agricultural land. Demand for housing development and associated transport infrastructure, means pressure will increase to build on such land. With new transport development also comes the opportunity for beneficial impacts, namely in the regeneration and repurposing of brownfield land sites.</p> <p>In the absence of the controls proposed in the LHDG Core Document, the transport network would likely have an increased impact on trends in relation to geology and soils, notably during development of required</p>	<p>In addition to transport infrastructure growth and patronage, there are numerous other factors and proposals which may adversely affect geology and soils from housing and commercial development pressure, population growth, wider energy and utilities infrastructure development, farming, and climate change. Some of these originate from within the county (e.g. Local Plans, Economic growth Strategy etc) whilst others may be developments of national significance or cross-boundary projects or impacts (e.g. relating to meeting development demands from Leicester City).</p>	<p>Where development is encouraged through strategic plans (including County level and district level Local Plans, Strategic Growth Plan), many contain provisions to protect and enhance geology and soils. This might include the presumption for development on land of poorer quality.</p> <p>Dedicated national, regional, and local planning policy and guidance support the role of Local council officers and statutory and non-statutory bodies such as Natural England in controlling the impact of development on geology and soils.</p>	<p>The LHDG supports the delivery of new highways infrastructure. This, when considering the cumulative impact from other development proposals and pressures, could have an adverse effect on geology and soils. The LHDG makes reference to LA 117 of the Design Manual for Roads and Bridges (DMRB) and British Standard guidance. Listed within materials and construction is also a Construction Code of Practice for the Sustainable Use of Soils on Construction Sites listed.</p> <p>The LHDG neutrally aligns with the SEA Objectives. The LHDG provides limited County-specific guidance and instead relies on</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>transport infrastructure. There are however controls in place beyond the remit of an LHDG to address protection and enhancement within the planning and regulatory system.</p>			<p>national guidance in relation to geology and soils.</p>
<p>Water Environment</p>	<p>Leicestershire is subject to large areas of flood risk from fluvial sources and surface water. Even in best case scenarios, climate change is projected to increase this risk, with impacts likely to be felt more widely. Housing demand has the potential to increase development pressure (including for associated transport infrastructure) to build on flood plains.</p> <p>The County suffers with water quality issues, the ecological status/ potential predominantly assigned moderate, with no water bodies meeting the criteria for achieving good chemical status. The County's sole Special Area of Conservation (SAC), the River Mease, is failing to meet</p>	<p>In addition to transport infrastructure growth and patronage, there are numerous other factors and proposals which may adversely affect the Water Environment within Leicestershire. This ranges between housing and commercial development pressure, population growth, wider energy and utilities infrastructure development, farming, and climate change. Some of these originate from within the county (e.g. Local Plans, Economic growth Strategy etc) whilst others may be developments of national significance or cross-boundary projects or impacts (e.g. relating</p>	<p>Though development proposal which have direct and indirect impact are proposed in strategic plans such as Local Plans (County and district scale), many also include controls to protect and enhance the water environment as part of development.</p> <p>National planning policy and guidance, including NPPF, NPPG and NPSs, seeks to control environmental impacts and introduce enhancement where possible, including in relation to flood risk and water quality. Controls are also detailed within various management plans at regional level, (e.g., Humber River Basin Management Plan (RBMP)), county level (Local Flood Risk Management Strategy for</p>	<p>The LHDG directly promotes the development of new highways infrastructure. This has the potential to cause adverse effects on the water environment. Despite this, the LHDG includes reference to green infrastructure (Principle 7; Design Layout; Materials and Construction), and measures to reduce flood risk (Principle 7; Design Layout; Materials and Construction). Materials and Construction includes the Value of Trees toolkit, and the 'Tree Matrix' can assist in achieving specific ecosystem objectives such as reducing flooding. The Design Layout section also includes drainage options to reduce the</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>water quality targets necessary to achieve favourable condition and conservation status.</p> <p>Where not effectively planned, new transport infrastructure has the potential to increase flood risk and damage water quality directly and indirectly. Existing networks, during either operation and maintenance, can also have direct or indirect impacts. Overflows from the transport network can have a significant impact on water quality.</p> <p>In the absence of the controls within the LHDG, when considering the projected increase in travel demand the trends in relation to flood risk and water quality are likely to exacerbated. There are however other controls in place through the planning and regulatory systems which seek to protect and enhance the water environment and reduce risk of</p>	<p>to meeting development demands from Leicester City).</p>	<p>Leicestershire), and district level (e.g. Melton Borough Council Strategic Flood Risk Assessment). There may also be strategies for individual watercourses (e.g. River Soar & Grand Union Canal Partnership Strategy).</p> <p>LCC as Lead Local Flood Authority have produced a suite of reports, as required by the Formal Flood Investigations Policy, which assesses issues found, necessary actions, and potential mitigation in response to flooding incidents across the County. The Asset Register and Record Policy and Ordinary Watercourse Regulation and Culvert Policy further support the duties of Lead Local Flood Authority.</p> <p>Where there is new development, statutory and non-statutory bodies work alongside specialist local council officers in controlling impact on flood risk and water quality and resources.</p>	<p>risk of spillages and pollution running off into watercourses.</p> <p>The LHDG positively aligns with the Water Environment SEA Objective, supporting the existing policy framework to address the increasing risk of flood risk and poor water quality. At this phase of LHDG's development, the guide provides the grounds from which to prevent the highways network having an adverse impact on the water environment. The LHDG does not provide detail on blue infrastructure and should be incorporated within the water environment especially when reviewing, enhancing and protecting aquatic life.</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	flooding outside of the remit of the LHDG.			
Air Quality	<p>Transport emissions are cited as the reason for the introduction of the majority of Leicestershire’s 11 AQMAs (Air Quality Management Areas). Given the projected growth in travel demand, including the increase of vehicular traffic, there is likely to be an increase in particulate matter emissions from transport network operation.</p> <p>The construction of new transport infrastructure has the potential to have an adverse impact on air quality if protection and / or mitigation is not effectively planned. Equally development can provide benefits, for example, through traffic calming measures or the prioritisation of walking, cycling and other low carbon transport modes.</p>	<p>In addition to infrastructure growth and patronage, there are numerous other factors and proposals in relation to transport which may adversely affect air quality. This ranges between housing and commercial development pressure, population growth, wider energy and utilities infrastructure development and farming. Some of these originate from within the county (e.g. Local Plans, Economic Growth Strategy etc) whilst others may be developments of national significance or cross-boundary projects or impacts (e.g. namely in relation to Leicester City).</p>	<p>A suite of national legislation and guidance exists in relation to air quality, namely the air quality Strategy Framework for local authority delivery, UK plan for tackling roadside nitrogen dioxide (NO₂) concentrations and Public Health England’s review of interventions to improve outdoor air quality and public health.</p> <p>For each local authority district within the LCC administrative boundary, air quality strategies are to be produced. These are to be used in conjunction with corresponding district Local Plans. Council officers and non-statutory and statutory bodies further control and protect air quality when assessing new development.</p>	<p>The LHDG directly promotes the development of new highways infrastructure which has the potential to cause adverse effects on air quality. However, the principles recognise air quality improvements from active and sustainable transport (5 & 7) and acknowledgement is made under the PDP for the range of transport assessments that may be required to satisfy LHA in AQMAs. Air quality is also indirectly addressed through reference to human health and wellbeing. Implementing green infrastructure into the new highways infrastructure can also support the reduction of air pollution in Leicestershire.</p> <p>The LHDG overall positively aligns with the SEA Objective, particularly in the medium and long-term in relation to Air Quality, together with the existing</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>In the absence of controls set out in the LHDG Core Document, there is the potential for those trends in relation to air quality to worsen. It should be noted however that there are numerous other planning and regulatory controls in place to protect and enhance air quality beyond the remit of an LHDG.</p>			<p>policy framework, contributing to its promotion and enhancement. Despite this, the LHDG does not provide enough detail on how to reduce air pollution in AQMAs nor does it identify human and ecological receptors that may be sensitive to the impacts and effects of air quality.</p>
<p>Climate Change</p>	<p>Carbon emissions are proportionally high when compared with other counties, 38% of Leicestershire’s emissions coming from the sector in 2021. If not addressed, emissions are anticipated to increase given the projected increase of travel demand (freight and passenger) by roughly a third by 2041.</p> <p>Even within best case scenarios, climate change and average conditions are projected to change in terms of a rise in average temperatures, wetter winters, and drier summers. With this comes an increase in the</p>	<p>In addition to infrastructure growth and patronage, there are numerous other factors and proposals in relation to transport which may adversely affect climate change. This ranges between housing and commercial development pressure, population growth, wider energy and utilities infrastructure development and farming. Some of these originate from within the county (e.g. Local Plans, Economic Growth Strategy etc) whilst others may be developments of national significance or cross-boundary</p>	<p>As well as national legislation and controls, since declaring a climate emergency in 2021, LCC has produced a suite of climate change policy and guidance. This includes, the Net Zero Leicestershire Strategy 2023-2045 and the Net Zero Action Plan 2023-2027, as well as the Leicestershire Climate and Nature Pact. These seek to support LCC in achieving the targets to be a net zero council by 2030 and to become a net zero county by 2045 or before.</p>	<p>The LHDG promotes the delivery of a connected and well-maintained transport network. In addition to other development proposals and pressures in the County this has the potential to exacerbate adverse impacts as a result of climate change. Principle 7 seeks to ensure resilience to climate change by implementing green infrastructure along the new highways infrastructure and adopting the 'preparing for climate change on the strategic road network' national highways document considering how the</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>frequency and intensity of major weather events, including extreme rainfall and flood, as well as the frequency and severity of heatwaves. As a rural county, Leicestershire’s emissions and vulnerability to climate change are heightened, for example by greater need for travel and high levels of agricultural land use. There comes a requirement for the transport network to prepare through resilience measures in design and management, as well as through the use of nature-based solutions.</p> <p>There is a need for additional Electric Vehicle (EV) infrastructure to support the transition from petrol and diesel vehicles to ensure the transport network facilitates sustainable modes of travel. While the growth rate of individual EV charging points is above the national rate, the rate below the current rate per 100,000 population is below.</p>	<p>projects or impacts (e.g. namely in relation to Leicester City).</p>		<p>core principles are met in terms of resilience to climate change.</p> <p>The LHDG provides provision for the decarbonisation of transport and associated infrastructure through the embrace of collaboration and innovation (Principle 1 & Policy 1). Given the proportion of County emissions from the transport sector, as well as the need for additional EV infrastructure, alongside wider cumulate controls the LHDG has a significant role to play within the policy framework to decarbonise the County and contribute to net zero ambitions. Additionally, the LHDG outlines the palette of materials to be used on the highways infrastructure and have been chosen based on sustainability and carbon output over its lifecycle.</p> <p>The LHDG overall positively aligns with the SEA Objective in relation to Climate Change, together with</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>Without those controls to underpin strategy in relation to transport within the LHDG, impacts from climate change are likely to be more substantial. It should be noted that numerous other controls are in place through the planning and regulatory system that seek to ensure resilient and minimise impact to climate change outside an LHDG.</p>			<p>the existing policy framework, contributing to its promotion and enhancement.</p>
Waste	<p>There is an ongoing need to consider the use of sustainable resource when constructing and maintaining new and existing transport infrastructure, including the use of recycled, re-used and low carbon materials.</p> <p>Where not planned for mineral use could contribute to the potential shortfall of sand and gravel reserves over the period to 2031. This is of particular importance in respect of the projected increase in travel demand which will likely</p>	<p>There are a range of factors and proposals which may contribute to an adverse impact in relation to waste and minerals, namely rising development pressure, increase in population, the profile of local industries, and climate change. At local scale, this might include County and district Local Plans, with nationally significant infrastructure and cross-boundary projects and impacts contributing at national and regional levels.</p>	<p>Some of the strategic plans that might be considered cumulative detractors due to the promotion of development which could impact waste and minerals may also contain provisions for waste minimisation and support of re-use and recycling. This could include support of the national recycling target of 65% by 2035.</p> <p>County and district Local Plans, and the Leicestershire Minerals and Waste Local Plan provide the</p>	<p>The LHDG supports the delivery of new highways infrastructure and there are provisions included to minimise waste generation and support re-use and recycling (Policy 3) by considering recycled materials during construction. Principle 6 refers to the need for space to be provided for waste collection, thereby facilitating waste collection in associated development. However, reference to minimising waste generation and use of sustainable materials in</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>necessitate new transport development.</p>		<p>primary means to manage and minimise waste.</p>	<p>construction could also be included in Principle 4.</p> <p>Overall, the LHDG positively aligns with the SEA Objective for waste and minerals, supporting the existing policy framework utilised by the transport network. However, the LHDG Principles, do not provide a great deal of guidance.</p>
<p>Material Assets</p>	<p>While Leicestershire benefits from strong north-south connectivity, there is less of an emphasis on east-west movement. This is identified in the Strategic Growth Plan for Leicester and Leicestershire.</p> <p>The projected increase in road traffic means there is a continued need to address the condition and functions of highways infrastructure. LCC data between 2014-20 shows that assets where structural maintenance should be considered has increase across all road types. Those that</p>	<p>In addition to the projected increase of travel demand, numerous other factors and proposals may adversely affect material assets, namely population growth, usage of heavier EV vehicles on highways and climate change.</p>	<p>Strategic plans (including county level and district level local plans) include provisions in relation to the protection of the function and usage of material assets, so transport networks maintain connectivity and efficiency.</p> <p>The Leicestershire County Council Highways Asset Management Strategy sets out the primary targets, methodology, budget and resources, performance management, and identification of stakeholders in relation to the assessment of highways</p>	<p>The LHDG provides for a connected, efficient, resilient, and well-maintained highway infrastructure.</p> <p>Working collaboratively (Principle 1) in early design stage engagement can avoid potential conflicts with highways and other utilities. Additionally, the production of effective travel plans and transport assessments during the design stage will contribute to effective traffic management and should keep congestion and road user conflict to a minimum by detailing</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>increased the most were carriageways (unclassified roads) which doubled from 8% to 16%, and footways which saw an increase from 8.6% to 29.4%.</p> <p>Leicestershire currently has no electrified railway. While there is scope for small section to receive upgrade, this would only provide electrified services to one of the County's stations (Market Harborough).</p> <p>in the absence of controls proposed in the LHDG, trends in relation to highways condition are likely to worsen given the project increase in travel demand. It should be noted, however, that there are numerous other controls in place through the planning and regulatory system that seek to protect and enhance this outside an LHDG.</p>		<p>conditions. This is supported by local council officers, statutory and non-statutory bodies such as National Highways which are responsible for the strategic road network, that support the control of development impact on the function of material assets.</p>	<p>alternative routes during construction of the new highways infrastructure.</p> <p>The LHDG positively aligns with the SEA Objective, helping to provide the groundwork for transport networks to contribute to the protection of the function and usage of material assets alongside existing policy frameworks.</p>
Cultural Heritage	The projected increase in travel demand will require new	In addition to transport infrastructure growth and	Whilst transport and wider development proposals are	The LHDG promotes the delivery of a connected and well-

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>transport infrastructure. This has the potential to increase conflict between development pressure and ensuring the significance of the Leicestershire's wide and varied heritage is preserved and enhanced. This includes the County's large number of protected assets where impact of likely to be of higher significance where receptors are more sensitive.</p> <p>In the absence of the controls within the LHDG, the impact to cultural heritage in relation to transport is likely to be exacerbated. There are however numerous other controls in place through the planning and regulatory system which seek to protect and enhance cultural heritage outside of an LHDG.</p>	<p>patronage, there are numerous other factors and proposals which may adversely affect cultural heritage. This ranges between housing and commercial development pressure, population growth, wider energy and utilities infrastructure development, and climate change. Some of these originate from within the county (e.g. Local Plans, Economic growth Strategy etc) whilst others may be developments of national significance or cross-boundary projects or impacts (e.g. relating to meeting development demands from Leicester City).</p>	<p>encouraged in a range of strategic plans (e.g. Local Plans, the Economic Growth Strategy, nationally significant infrastructure), many of these plans also contain positive interventions and/or policy that help to encourage mitigation and enhancement to cultural heritage.</p> <p>A suite of strategic plans also exists to help protect heritage assets, namely the Hinckley & Bosworth Borough Council Heritage Strategy. The Local Plans, including for Leicestershire, Leicester, and each of the districts within the LCC administrative area, as well as local and national planning guidance further seeks to control impacts to the built environment, also promoting benefits where appropriate.</p> <p>The role of statutory and non-statutory conservation bodies together with county and local</p>	<p>maintained transport network. In addition to other development proposals and pressures in the County, this has potential to cause adverse impacts on cultural heritage. However, the careful consideration of the materials used in the highways infrastructure and implementing green infrastructure can enhance whilst also respect the diversity of settlements, layouts and landscape (Principle 4). Implementing green infrastructure can also indirectly enhance human health and wellbeing of communities. Heritage assets offer great value to communities and contribute to the understanding of a place.</p> <p>The LHDG positively aligns with the built environment SEA Objectives and help to ensure that new highways infrastructure proposals do not impact on cultural heritage. Together with wider cumulative controls, the</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
			<p>council officers (including the County Archaeology Service) are also important in managing the protection and enhancement of the built environment in respect of new development. The Historic Environment Record (HER) and County Archaeology Service provides a reference point for local heritage data to be used for local plans, policies, and community interest.</p>	<p>policy framework is in place to manage the wider extent of protection and enhancement in the County.</p>
<p>Landscape, Townscape and Visual Amenity</p>	<p>The projected increase in travel demand will require new transport infrastructure. This has the potential to impact Leicestershire’s distinct and locally important landscape and townscape character if appropriate enhancement and mitigation measures are not incorporated. This includes for an increase in light and noise pollution from said development. The potential impact will be of higher significant where receptors are more sensitive,</p>	<p>In addition to transport infrastructure growth and patronage, there are numerous other factors and proposals which may adversely affect Landscape, Townscape and Visual Amenity. This ranges between housing and commercial development pressure, population growth, wider energy and utilities infrastructure development and climate change. Some of these originate from within the county (e.g. Local Plans, Economic</p>	<p>Whilst transport and wider development proposals are encouraged in a range of strategic plans (e.g. Local Plans, the Economic Growth Strategy, nationally significant infrastructure), many of these plans also contain positive interventions and/or policy that help to encourage mitigation and enhancement to landscape, townscape and visual amenity part of development, e.g. compliance with design code area requirements.</p>	<p>The LHDG promotes the delivery of a connected and well-maintained transport network. In addition to other development proposals and pressures in the County this has potential to cause adverse impacts on landscape, townscape, and visual amenity. The LHDG Principles include specific provisions for such a network to avoid impacts on local distinctiveness (principle 4), enhance local landscape character (principle 3), enhance visual amenity (principle 2) and</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
	<p>including within the County's 130 Conservation Areas and 18 Country Parks.</p> <p>Seminatural habitats such as woodlands, wetlands and semi-natural grasslands which provide natural screening are often fragmented and limited in extent. This is likely to worsen given the decline in biodiversity in the County and the impact of climate change.</p> <p>In the absence of controls within the LHDG Core Document, the impact to landscape, townscape, and visual amenity in relation to the transport is likely to be exacerbated. There are however numerous other controls in place through the planning and regulatory system which seek to protect and enhance landscape, townscape, and visual amenity outside of an LHDG.</p>	<p>growth Strategy etc) whilst others may be developments of national significance or cross-boundary projects or impacts (e.g. relating to meeting development demands from Leicester City).</p>	<p>A suite of strategic plans also exists to help protect landscape, townscape, and visual amenity, namely the Leicestershire & Rutland Landscape and Woodland Strategy (2001, updated 2006), Tree Management Strategy 2019-2025, and the Country Parks and Open Spaces Strategy 2019-2029. These are underpinned by the Environment Strategy which sets out the high-level objectives for the County. The Local Plans, including for Leicestershire, Leicester, and each of the districts within the LCC administrative area, as well as local and national planning guidance further seeks to control impacts to the built environment, also promoting benefits where appropriate.</p> <p>The role of statutory and non-statutory conservation bodies together with county and local council officers are also</p>	<p>enhance highways through considerate planting (principle 7).</p> <p>The LHDG also seeks to protect, and where feasible, enhance the environment and local distinctiveness by following the guidance provided by British Standard and the Department for Transport.</p> <p>These policy measures positively align with the built environment SEA Objectives and help to ensure that highway infrastructure proposals do not impact on landscape, townscape, and visual amenity. Together with wider cumulative controls, the policy framework is in place to manage the wider extent of protection and enhancement in the County.</p>

SEA Topics	Trend including Absence of LHDG	Other Cumulative Detractors	Other Cumulative Controls	Cumulative Impact of LHDG
			important in managing the protection and enhancement of the built environment in respect of new development.	

7 SEA Monitoring Framework

- 7.1.1 The SEA has identified the likely effects of the LHDG on the SEA Objectives over the short, medium and long term. An indication of the certainty of these effects was also provided. However, there is a risk that the effects of the LHDG, including the effects of specific policies or the cumulative effects of policies in-combination, are different to those anticipated, such as due to unforeseen circumstances. It is, therefore, an essential component of delivering sustainable development to monitor the effects of the LHDG in relation to the predicted effects. Regular monitoring then enables the relevant authorities to alter plans as necessary should unexpected negative effects arise or expected positive effects not arise.
- 7.1.2 It is anticipated that LCC will be monitoring the implementation and effects of the LHDG post-adoption to feed into future plan review and revision. Table 7-1 proposes a Monitoring Framework to keep track of the sustainability effects of the LHDG. This is a draft and will be subject to discussion and refining with LCC and stakeholders.
- 7.1.3 Over the lifetime of the LHDG new information will be added to the Monitoring Framework. Some indicators currently used by LCC and partners may be amended or replaced by new indicators. Other indicators are likely to remain constant where they can successfully inform the long term outcomes of the LHDG.

Table 7-1 Outline Monitoring Framework

SEA Topic	Summary of Potential Effect to Monitor	Potential Indicators to Monitor
Biodiversity	Although the LHDG supports the development of new highways infrastructure, guidance seeks to ensure BNG is facilitated and maximised, wildlife connectivity is delivered, and native species are promoted.	<ul style="list-style-type: none"> • Recorded impacts on designated and priority habitats as a result of new transport infrastructure development. • Amount of biodiversity net gain delivered through transport schemes. • Wildlife casualties on the transport network
Population and Human Health	Although the LHDG supports the development of new highways infrastructure, guidance seeks to protect and enhance health and wellbeing by supporting and meeting the needs for all road users, while reducing rural isolation and maximise the uptake of and promotion of active and sustainable travel.	<ul style="list-style-type: none"> • Mode of transport to work • Mode of transport to school • Number of noise complaints received in relation to the transport network • Percentage of physically active adults • Percentage of adults classed as overweight • Length of new access to green space • Length of cycling facilities • Number of road casualties killed or seriously injured • Number of child road casualties killed or seriously injured
Geology and Soils	Although the LHDG supports the development of new highways infrastructure, guidance refers to relevant legalisation and local, regional or national guidance to ensure geology and soils is enhanced and protected. The limited County-specific guidance means the LHDG is likely to have a limited effect in relation to Geology and Soils.	<ul style="list-style-type: none"> • Area of Best and Most Versatile (BMV) Agricultural Land used by the highways system • Areas of brownfield land used by the highways system • Number of category 1 & 2 pollution incidents (highways related)

SEA Topic	Summary of Potential Effect to Monitor	Potential Indicators to Monitor
Water Environment	Although the LHDG supports the development of new highways infrastructure, guidance seeks to reduce impact to, protect, and benefit the environment, including in relation to the water environment.	<ul style="list-style-type: none"> • New local highways development in flood risk zones 2 and 3 • Number of flood risk assessments undertaken for highways schemes • Capital cost to resolve flooding events to the highways network • Number of highways projects incorporating SuDS • Quality of waterbodies adjacent to transport or associated infrastructure
Air Quality	Although the LHDG supports the development of new highways infrastructure, guidance seeks to reduce impact to, protect, and benefit the environment, including in relation to air quality. This is further supported by the LHDG's promotion of human health and wellbeing.	<ul style="list-style-type: none"> • Number of AQMAs as a result of highways emissions • Proportion of County emissions from transport sector • CO₂ emissions per capita
Climate Change	Although the LHDG supports the development of new highways infrastructure, guidance largely seeks to minimise carbon emissions while seeking to reduce impact to, protect, and benefit the environment, decarbonise highways infrastructure, and delivery a resilient network.	<ul style="list-style-type: none"> • Number of days transport network disrupted by extreme weather events • Transport Sector Carbon Dioxide (CO₂) Emissions • Materials used during maintenance and new highways development • Number of electric vehicles charging points • Number of Schemes utilising Nature-Based Solutions
Waste and Material Assets	Although the LHDG supports the development of new highways infrastructure, guidance seeks to reduce impact to, protect, and benefit the	<ul style="list-style-type: none"> • Tonnes of mineral provided within Leicestershire per annum • Volume of waste produced by transport sector

SEA Topic	Summary of Potential Effect to Monitor	Potential Indicators to Monitor
	environment, including in relation to the waste and material assets.	<ul style="list-style-type: none"> • Proportion of recycled aggregates used during construction and / or maintenance of highways infrastructure
Cultural Heritage	Although the LHDG supports the development of new highways infrastructure, guidance seeks to protect and enhance the built environment through emphasising the need for careful consideration of materials and planting in order to enhance and respect the heritage assets and maintain local distinctiveness and layout of settlements.	<ul style="list-style-type: none"> • Number of heritage assets adversely affected by the highways network • Number of heritage assets beneficially affected by the highways network • Instances of planting/screening alongside new highways development
Landscape, Townscape, and Visual Amenity	Although the LHDG supports the development of new highways infrastructure, guidance emphasises the need to avoid impacts on local distinctiveness, while enhancing local landscape character and visual amenity.	<ul style="list-style-type: none"> • Highways development within Conservation Areas • Highways development within Design Code Areas • Instances of planting/screening alongside highways development • Length of country roads with low intrusion lighting • New highways development within Country Parks

8 Consultation and Next Steps

- 8.1.1 A key aspect of the SEA process is consultation. The SEA process provides a mechanism to ensure that stakeholder engagement requirements are achieved by providing interested parties/organisations and the public an opportunity to inform the process and comment on decisions taken. Stakeholder engagement also ensures that environmental and social issues, constraints, and opportunities are identified and assessed at an early stage of LHDG development.
- 8.1.2 This Environmental Report will be subject to consultation alongside the draft LHDG. Following the results of the consultation on this document, we will review any significant changes made to the LHDG and undertake further SEA of those changes.

Appendix A: Environmental and Social Baseline and Identifying Key Issues

Baseline data, Indicators, and trends

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
Population and Human Health				
Population Count and Density	<p>2021 Census data shows an increase in population in all districts. Current population (and density per hectare) is as follows (rounded to the nearest 100):</p> <p>Leicestershire: 712,200 (3.42)</p> <p>Charnwood: 183,900 (6.59)</p> <p>Hinckley & Bosworth: 113,600 (3.82)</p> <p>North West Leicestershire: 104,700 (3.75)</p> <p>Blaby: 102,900 (7.89)</p> <p>Harborough: 97,600 (1.65)</p> <p>Oadby & Wigston: 57,700 (24.53)</p>	<p>“Notional needs indicate the requirement for an additional 90,516 dwellings in the County between 2031-2050.”</p> <p>(Strategic Growth Plan Leicester and Leicestershire, Leicester & Leicestershire 2050: Our Vision for Growth, 2018⁵)</p>	<p>2021 Census data shows an increase in population density since 2011 in all districts as follows:</p> <p>Leicestershire: 9.5%</p> <p>Harborough: 14.3%</p> <p>NW Leicestershire: 12%</p> <p>Charnwood: 10.7%</p> <p>Blaby: 9.6%</p> <p>Hinckley & Bosworth: 8.1%</p> <p>Melton: 2.8%</p> <p>Oadby & Wigston: 2.7%</p> <p>The 9.5% county population increase compares to an average of 6.6% across England. There is growth in all county districts, though at</p>	<p>The County is largely rural in nature with several district centres and settlements. Rural isolation is a key connectivity issue.</p> <p>Population count and density is increasing across every district and is above regional and national levels. 14% population growth is expected by 2041.</p> <p>Housing and employment demand will increase with a 20% increase in households expected by 2041 and a 15% increase in employment (LCC data).</p> <p>This will put pressure on transport services and infrastructure, with systems requiring resilience to</p>

⁵ [Strategic Growth Plan Leicester and Leicestershire, Leicester & Leicestershire 2050: Our Vision for Growth, 2018](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>Melton: 51,800 (1.08)</p> <p>The number of households in the County is 294,400 as of the 2021 census (rounded to the nearest 100).</p> <p>(Census data, 2021⁴)</p>		<p>varying levels, with as much of a 14.3% increase in Harborough compared to 2.8% in Melton.</p> <p>The number of households in the County has increased by 11% from 267,434 in 2011 (rounded to the nearest 100).</p>	<p>support increased demand. Housing need may warrant expansion of transport networks in areas where new development is planned.</p>
Housing need/requirement	<p>Housing need across Leicester and Leicestershire:</p> <p>2011-31: 96,580 2031-50: 90,516 Total (2011-50): 187,096</p> <p>(Leicester & Leicestershire Authorities and the Leicester and Leicestershire Enterprise Partnership, Housing and Economic</p>		<p>Housing need will reflect economic forecasts and population growth or household change. Although figure is slightly lower between 2031-50, any unmet needs from previous periods will need to be satisfied.</p> <p>Authoritative boundary of Leicester City Council within the centre of Leicestershire County Council catchment indicate they will not be able</p>	

⁴ [Census Data, 2021](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<i>Development Needs Assessment, 2017⁶.</i>		<i>to meet housing need within their area. Oadby & Wigston Borough Council have declared that it may be unable to meet housing needs for 2031-36.</i>	
<i>Age Structure</i>	<p><i>The age structure of the County's 712,200 people (rounded to the nearest hundred) is broken down into the following increments:</i></p> <p><i>Aged 0-9: 76,100 (10.7%)</i> <i>10-19: 83,100 (11.7%)</i> <i>20-29: 81,900 (11.5%)</i> <i>30-39: 88,600 (12.4%)</i> <i>40-49: 87,900 (12.3%)</i> <i>50-59: 102,400 (14.38%)</i> <i>60-69: 82,600 (11.6%)</i> <i>70-79: 70,600 (9.9%)</i></p>	<p><i>Strategic Outcomes: Safe and Well: 'People enjoy long lives in good health'. 'Carers and people with care needs are supported to live active, independent, and fulfilling lives'.</i></p> <p><i>(Leicestershire County Council, Strategic Plan 2022-2026, 2022⁷)</i></p>	<p><i>Percentage of population per age category (20-year increments) In comparison to 2011 census:</i></p> <p><i>0-19: 23% to 22%</i> <i>20-39: 23% to 24%</i> <i>40-59: 29% to 27%</i> <i>60-79: 20% to 22%</i> <i>80 plus: remained at 5%.</i></p> <p><i>There is little variation in terms of age structure between 2011 and 2021, with 40-59 the largest group despite 2% decrease.</i></p> <p><i>England 24.2% over 60</i></p>	<p><i>The County has a large proportion of people aged over 60 (higher than national average). This figure is projected to increase dramatically.</i></p> <p><i>Many older people also live in more rural areas and may suffer social isolation.</i></p> <p><i>Older populations are more likely to have an age-related health condition or disability meaning access to emergency services and the maintenance and preservation of access</i></p>

⁶ [Leicester & Leicestershire Authorities and the Leicester and Leicestershire Enterprise Partnership, Housing and Economic Development Needs Assessment, 2017](#)

⁷ [Leicestershire County Council, Strategic Plan 2022-2026, 2022](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>80 and over: 38,900 (5.5%)</p> <p>(Census data, 2021⁴)</p>		<p>Leicestershire: 27% over 60</p> <p>All districts within the County have a greater percentage of over 60s than national average, Melton as high as 30.1%.</p> <p>(Census data, 2021⁴; Census data 2011⁸)</p> <p>Population of those aged 75+ is projected to more than double between 2006 and 2031.</p> <p>(Office for National Statistics), Revised annual mid-year population estimates, UK: 2001 to 2010, 2013⁹)</p> <p>Previous consultation has raised general concerns that rural areas which have an older age profile, were going</p>	<p>routes to medical facilities and amenities via the local transport network could be more significant.</p>

⁸ [Census data, 2011](#)

⁹ [ONS, Revised annual mid-year population estimates, UK: 2001 to 2010, 2013](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
			<p><i>to be neglected as a result of cutbacks.</i></p> <p><i>(Leicestershire County Council, Equalities and Human Rights Impact Assessment: Review of Highway Asset Management Policy and Strategy, 2017¹⁰)</i></p>	
<p><i>Inclusive Transport</i></p>	<p><i>Women account for 50.6% and men 49.4% of the County by sex.</i></p> <p><i>Identify as white: 87.5%</i> <i>Identify as non-white: 12.5%</i> <i>"Asian" largest non-white ethnic group (8.2%).</i></p> <p><i>(Census data, 2021⁴)</i></p> <p><i>Average deprivation and disability rank: 10608.02 making LCC in the top 30% to 40% nationally.</i></p>	<p><i>Leicester and Leicestershire Strategic Transport Priorities, Theme 3: Travel Around Leicestershire identifies the aim to "improve safety for all users of the transport network".</i></p> <p><i>(Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020¹²)</i></p>	<p><i>The ethnic demographic of the County is predominantly white.</i></p> <p><i>The County benefits from close proximity to the city of Leicester of which it surrounds, one of the most culturally diverse cities in the UK with approximately 42% of the city's population identified as non-white British.</i></p> <p><i>(Leicester and Leicestershire</i></p>	<p><i>Leicestershire ranks within the top 30% to 40% for health and deprivation/disability.</i></p> <p><i>There is a need for social inclusion through the retention and creation of equal access to new and existing transport systems.</i></p>

¹⁰ [Leicestershire County Council, Equalities and Human Rights Impact Assessment: Review of Highway Asset Management Policy and Strategy, 2017](#)

¹² [Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	(Leicestershire County Council, Public Health Strategy 2022-27 ¹¹)		Economic Assessment, 2010 ¹³)	
Economic Deprivation	<p>Rate of income deprivation per district:</p> <p>Blaby: 6.9%</p> <p>Charnwood: 8.4%</p> <p>Harborough: 5.6%</p> <p>Hinckley & Bosworth: 8.2%</p> <p>Melton: 7.2%</p> <p>Northwest Leicestershire: 9%</p> <p>Oadby & Wigston: 8.6%</p> <p>(Office for National Statistics (ONS), Exploring local income deprivation, 2021¹⁴)</p>	<p>'Priority 3: Support families to be self-sufficient and resilient'</p> <p>(Leicestershire Children and Families Partnership Plan 2021-23¹⁵)</p>	<p>There are 32,844 Lower-layer Super Output Areas (LSOAs) in England. Of 396 county LSOAs, 11 are within national 20% most income deprived, with 123 within national 20% least income deprived.</p> <p>Leicestershire generally experiences deprivation in pocketed areas, namely Loughborough, Coalville, Hinckley and South Wigston.</p> <p>There is an increased risk of fuel poverty within deprived areas.</p>	<p>Leicestershire has 11 LSOAs within the national 20% most income deprived. These are largely located in pockets including e.g. Loughborough, Coalville, Hinckley and South Wigston. This is an important consideration in developing and maintaining accessible public transport systems and ensuring public access to new housing and employment is provided.</p>

¹¹ [Leicestershire County Council, Public Health Strategy 2022-27](#)

¹³ [Leicester and Leicestershire Economic Assessment, 2010](#)

¹⁴ [Office for National Statistics \(ONS\), Exploring local income deprivation, 2021](#)

¹⁵ [Leicestershire Children and Families Partnership Plan 2021-23](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
<p><i>Mode of Transport to Work and Public Transport Patronage</i></p>	<p><i>Mode of transport to work across the County is as follows:</i></p> <p><i>Work from home: 104,917</i></p> <p><i>Underground, metro, light rail, tram: 179</i></p> <p><i>Train: 1,260</i></p> <p><i>Bus, minibus, coach: 5,726</i></p> <p><i>Taxi: 969</i></p> <p><i>Motorcycle, scooter or moped: 1,234</i></p> <p><i>Driving a car or van: 187,514</i></p> <p><i>Passenger in a car or van: 12,357</i></p> <p><i>Bicycle: 5,688</i></p> <p><i>On foot: 21,786</i></p> <p><i>Other method: 2,688</i></p> <p><i>Not in employment: 368,049</i></p> <p><i>Note the 2021 census was completed during the covid 19 pandemic, with work</i></p>	<p><i>Leicester and Leicestershire Strategic Transport Priorities, Theme 3: Travel Around Leicestershire identifies the aim to "encourage travel by sustainable and active modes, where it is practicable".</i></p> <p><i>(Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020¹⁶)</i></p>	<p><i>Excluding those not in employment, the majority of people travel to work drive via car or van. A significant amount work from home, though results may be skewed as a result of the covid 19 pandemic.</i></p> <p><i>When compared across the region, Leicestershire has the one of lowest rates of passenger journeys. 7.6 million within the County compares to 17.7 million in Leicester alone.</i></p> <p><i>Bus miles, including the level of commercial service provision is lower than neighbouring counties.</i></p>	<p><i>Within Leicestershire there is a reliance on travel by car or van to work. Nearly 70% of the adult population does not walk at least five times per week and only 7.9% of adults cycle. The County has one of the lowest levels of public transport patronage in the region and one of the lowest levels of commercial service provision.</i></p> <p><i>In contrast, demand for road-based travel has now been predicted to return to pre Covid levels. 63% of this is on the strategic road network and 37% on the local road network.</i></p> <p><i>By 2041 it is predicted that there will be significant increases in road vehicle Km travelled, increased delays and an increase in freight demand. (LCC data).</i></p>

¹⁶ [Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>from home numbers likely inflated.</i></p> <p><i>(Census data, 2021⁴)</i></p> <p><i>7.6 million passenger journeys by public transport were undertaken across Leicestershire.</i></p> <p><i>Six million bus miles, 4.8 million commercial and 1.2 million supported.</i></p> <p><i>(LCC Data)</i></p>			<p><i>There can be improvement in terms of utilisation rates of sustainable modes of transport to work and public transport patronage.</i></p>
<p><i>Health and Well-Being</i></p>	<p><i>Physically active adults: 77.3%</i></p> <p><i>Adults classed as overweight or obese: 64.1%</i></p> <p><i>Life expectancy at birth 86.3 for females and 82.5 for men.</i></p> <p><i>(NHS Fingertips Tool, 2024; Census data, 2021¹⁷).</i></p>	<p><i>Need identified to address deficiency in accessible natural green space.</i></p> <p><i>(Spaces for Wildlife 2016-2026, Leicester, Leicestershire, and Rutland Biodiversity Action Plan¹⁸)</i></p>	<p><i>Physically active adults in Leicestershire totals 77.3% compared to the UK average of 63.8%</i></p> <p><i>Life expectancy compared between county and national average is 86.3 compared to 82.8 for females, and 82.5 compared to 78.9 for men.</i></p>	<p><i>Whilst physical activity in the County is higher than the national average, Leicestershire has a higher rate of adults classed as overweight or obese than the UK average. 26% of the population are identified as inactive.</i></p> <p><i>A need exists for transport</i></p>

¹⁷ [NHS Fingertips Tool, 2024; Census Data, 2021](#)

¹⁸ [Spaces for Wildlife 2016-2026, Leicester, Leicestershire and Rutland Biodiversity Action Plan](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
			<p><i>Rate of adults classed as overweight or obese is higher than UK average, 63.8% compared to 64.1%.</i></p> <p><i>Increased evidence that providing access to natural green space has benefits including improved health and well-being. A study by Natural England cited within the most recent Leicestershire Biodiversity Action Plan proposed the following minimum access standards:</i></p> <ul style="list-style-type: none"> <i>No more than 300m from accessible natural green space of at least 2ha;</i> <i>At least one 20ha site within 2km of a dwelling;</i> <i>One 100ha site within 5km of a dwelling; and</i> <i>One 500ha site within 10km of a dwelling.</i> <p><i>In accessing these areas public access should be 'in a greater form than a public</i></p>	<p><i>systems to retain, enhance, and contribute to improved access to public health and recreational facilities, including green spaces. Walking and cycling provision would also provide benefits.</i></p>

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
			<p><i>right of way' crossing the land.</i></p> <p><i>(Analysis of Accessible Natural Greenspace for Leicestershire and Rutland, 2022¹⁹)</i></p>	
<p><i>Crime</i></p>	<p><i>Violent and sexual offences the highest crime type. Leicestershire is within the top 30-40% decile for crime nationally with 90 crimes per 1000 in 2022.</i></p> <p><i>Crime category ranking per 52 England and Wales ranking:</i></p> <p><i>Violent crime: 19 highest</i> <i>Public order crime: 9 highest</i> <i>Criminal damage and arson: 11 highest</i> <i>other theft: 6 highest</i> <i>antisocial behaviour: 4 lowest</i> <i>Vehicle crime: 14 highest</i></p>	<p><i>'Road safety and speeding began to dominate many conversations at town and parish council meetings. I will give support to the Road Safety Partnership and Community Speed Watch groups seeking to improve safety in towns and villages' – Police and Crime Commissioner</i></p> <p><i>(Leicester, Leicestershire & Rutland Police and Crime Plan 2021-2024)</i></p> <p><i>County wide priority: 'Reduce incidence and impact of ASB'</i></p> <p><i>(Leicestershire County Council Community Safety</i></p>	<p><i>Violent and sexual offences have remained the highest crime type across the County for over 10 years, though in the last year have seen a 5.5% decrease. Shoplifting crime has seen a 45.6% increase in the last year while the majority of other crime types have seen reduction.</i></p> <p><i>Public order crime is at 144% of the national average, with Leicestershire 9th highest of 52 counties in this crime category. Has decreased 13.3% in last year.</i></p>	<p><i>Within Leicestershire, Violence and sexual offences remain the highest crime type. There is a need for transport systems to facilitate safe pedestrian and cycling spaces during public transit.</i></p> <p><i>A County priority is to reduce the incidence and impact of anti-social behaviour, the rate of public order offences within Leicestershire at 144% of the national average.</i></p>

¹⁹ [Analysis of Accessible Natural Greenspace for Leicestershire and Rutland, 2022](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>Shoplifting crime: 16 lowest</i> <i>Burglary crime: 9 highest</i> <i>Drugs crime: 5 highest</i> <i>Bicycle theft: 9 highest</i> <i>Robbery crime: 13 highest</i></p> <p><i>Traffic Offenses:</i></p> <p>2524 in 2021 4855 in 2022</p> <p><i>(Leicestershire Police, Crime Maps, 2024²⁰)</i></p>	<p><i>Strategy 2022-2026²¹)</i></p>	<p><i>Rural policing concerns entirely different matters to those in urban areas and is subject to its own policing plan.</i></p>	
<p><i>Road Safety</i></p>	<p><i>There were 203 road casualties killed or seriously injured across the County in 2021, 9% fewer than the 2009-13 average, and 54% fewer overall casualties.</i></p> <p><i>2021:</i></p>	<p><i>Road Safety targets and strategy in relation to cycling set out in Local Cycling and Walking Infrastructure Plans (LCWIPs).</i></p> <p><i>Description of Leicestershire Road Safety Initiatives included as part of Casualty Reduction 2020-21 annual</i></p>	<p><i>When comparing the 2017-21 average, Leicestershire has the lowest casualty rate per million people within the East Midlands. It ranks 2nd lowest compared to other counties in England when comparing casualty rate per billion vehicle kilometres across a 2017-21 average.</i></p>	<p><i>Road casualties in the County are comparatively low compared to the wider region. However, the rate at which pedestrians are killed or seriously injured is higher than national averages.</i></p>

²⁰ [Leicestershire Police, Crime Maps, 2024](#)

²¹ [Leicestershire County Council Community Safety Strategy 2022-2026](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>Car: 599 casualties up 3%, with 90 killed or seriously injured down 10%.</p> <p>Pedal Cyclists: 82 casualties up 15%, 24 killed or seriously injured down 14%.</p> <p>Pedestrians: 92 casualties up 2%, with 40 killed or seriously injured up 33%.</p> <p>(Road Casualty Reduction in Leicestershire, 2021²²)</p>	<p>report²³.</p>	<p>Increase in rate of pedestrians killed or seriously injured between 2020-21 nearly double national average.</p>	
Biodiversity				
Designated Habitats	<p>1 SAC River Mease, no RAMSAR or Special Protection Area (SPA) within County. 77 SSSIs.</p> <p>NE data for all (to be informed by LCC), SACs,</p>	<p>Strategic Outcomes: Clean and Green 'People act now to tackle climate change'. (Leicestershire County Council, Strategic Plan 2022-2026²⁶)</p>	<p>Land-based nationally and internationally protected areas increased by 3.2% nationally between 2013-2023. Within Leicestershire: River Mease SAC water quality levels are not currently meeting conservation targets,</p>	<p>Despite its rural nature, Leicestershire is one of the poorest counties for biodiversity and conservation value when compared to the national average. Whilst the County contains a number of designated nature</p>

²² [Road Casualty Reduction in Leicestershire, 2021](#)

²³ [Leicestershire County Council, Road Casualty Reduction in Leicestershire, 2022](#)

²⁶ [Leicestershire County Council, Strategic Plan 2022-2026](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>RAMSAR, SPA, 3 National Nature Reserves.</p> <p>20 Local Nature Reserves located within the county, 8 of surround the Leicester City Council catchment, with 3 sited between both authority areas.</p> <p>Leicestershire and Rutland Wildlife Trust (LRWT) has 33 nature reserves, 20 of which are SSSIs.</p> <p>(Natural England, open data geoportal, 2024²⁴)</p> <p>Leicestershire and Rutland have 1,000 Local Wildlife Sites (Sites of Importance for Nature Conservation (SINCs), Sites of Nature Conservation Importance (SNICs) and RIGS) covering</p>	<p><i>Biodiversity, Habitats and Local Environment</i></p> <p>'G4: Work with partners to support wider biodiversity and natural capital feature improvements across Leicestershire.'</p> <p>(Leicestershire County Council, Environment Strategy 2018 – 2030: delivering a better future²⁷)</p>	<p>termed as in 'unfavourable condition'.</p> <p>SSSI coverage represents only 2% of land coverage compared to the national average of 6%.</p> <p>Assessment by Natural England in 2019 found 52.38% of Leicestershire's SSSIs were in Unfavourable recovering condition compared to national average of 49%.</p> <p>7.3% were in an unfavourable no change condition, compared to 7% nationally, with 6.7% unfavourable declining condition compared to 7%.</p> <p>(Leicestershire County Council, Action for Nature: A Strategic Approach to Biodiversity, Habitat, and the Local Environment for</p>	<p>conservation sites, coverage by areas is relatively small. There is space for improvement concerning the condition of SSSIs, though similar to the national baseline, should be prioritised.</p> <p>Water quality in the River Mease SAC is below target with the SAC being in unfavourable condition. New development and maintenance of transport systems has the potential to contribute to poor water quality in the County's water bodies.</p> <p>Both existing and new transport systems and associated infrastructure has the opportunity to contribute to the enhancement of designated</p>

²⁴ [Natural England, open data geoportal, 2024](#)

²⁷ [Leicestershire County Council, Environment Strategy 2018 – 2030: delivering a better future](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	over 3,000 ha ²⁵ . These are non-statutory designations.		Leicestershire County Council, 2021 ²⁸)	habitats where development is sited nearby.
Priority Habitats	<p>11305ha of Priority Habitat Areas within the County, representing 5.4% of land coverage. 19 Priority habitat types.</p> <p>6 areas of peatland, 4 within Harborough, 1 within Blaby and another on the boundary between Hinckley and Bosworth and Blaby.</p> <p>(Natural England, open data geoportal, 2024²⁹)</p>	(Spaces for Wildlife 2016-2026, Leicester, Leicestershire, and Rutland Biodiversity Action Plan ³⁰)	<p>2019 data found that within Leicestershire there were 1,113 candidate sites and 1,1189 potential Local Wildlife Sites.</p> <p>(Leicestershire County Council, Action for Nature: A Strategic Approach to Biodiversity, Habitat and the Local Environment for Leicestershire County Council, 2021²⁸)</p>	Transport systems, including the development of new infrastructure and maintenance of existing systems has a responsibility to protect and enhance those locally important habitats with lower protection status.
Woodland, Forest, and Orchards	No Ancient Woodland within the County boundary. Approximately 6% of tree coverage, including	'A woodland creation target of 33% and require a further 12% of the National Forest area to be planted to meet	Mature trees are decreasing, with many in the wider countryside unprotected. There is very little survey	Woodland coverage is relatively small for a rural county with the number of mature trees decreasing.

²⁵ [Local Wildlife Sites | Leicestershire and Rutland Wildlife Trust \(lrwt.org.uk\)](https://www.lrwt.org.uk/)

²⁸ [Leicestershire County Council, Action for Nature: A Strategic Approach to Biodiversity, Habitat and the Local Environment for Leicestershire County Council, 2021](#)

²⁹ [Natural England, open data geoportal, 2024](#)

³⁰ [Spaces for Wildlife 2016-2026, Leicester, Leicestershire and Rutland Biodiversity Action Plan](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>Charnwood Forest Regional Park which includes the count's largest National Nature Reserve, Charnwood Lodge</i></p> <p><i>236 traditional orchards covering a total of 43ha.</i></p> <p><i>(Natural England, open data geoportal, 2024²⁴)</i></p> <p><i>The Woodland Trust manages 20 sites across Leicestershire and Rutland totalling approximately 315ha.</i></p>	<p><i>this target'</i></p> <p><i>(National Forest: A Greenprint, 2019³¹)</i></p>	<p><i>data on lowland wood-pasture and parkland.</i></p> <p><i>6% of County tree coverages compares to UK average of 13%.</i></p> <p><i>Biodiversity Action Plan 2016 identifies active schemes within National Forest and Charnwood Forest, and scheme under development in Leighfield Forest.</i></p>	<p><i>Transport system development and maintenance should seek to avoid adverse effects on woodland, particularly in regard to those mature tree in the wider countryside.</i></p>
<p><i>Wildlife Connectivity and Green Infrastructure</i></p>	<p><i>"There are areas with sparse coverage of green infrastructure, particularly in the north-east, east, and south-eastern parts of the study area. This may be linked to the intensively farmed nature of large parts</i></p>	<p><i>For corridors:</i></p> <p><i>'Natural corridors are better than human designed corridors; use linear landscape features; ensure corridor habitat matches that in core sites; minimum width of corridors = 100m, preferably wider.'</i></p>	<p><i>Within the BAP 2016, the need has been identified for the protection and enhancement of greenways and river and canal corridors in terms of water quality and as a corridor for biodiversity</i></p>	<p><i>There is scope to significantly increase wildlife connectivity, and blue and green infrastructure in the county. Transport system development and maintenance has the potential to cause severance to wildlife connectivity but</i></p>

³¹ [National Forest: A Greenprint, 2019](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>of Leicestershire, particularly for cereal cultivation.</i></p> <p><i>(Leicestershire County Council, Strategic Plan 2022-2026²⁶)</i></p>	<p><i>General principles used by Leicestershire County Council for increasing the resilience of biodiversity as set out in Natural England Research Report NERR082-- Nature Networks: A Summary for Practitioners (2020).</i></p> <p><i>River Catchment Plans: River Soar Catchment Plan, March 2018</i></p> <p><i>River Soar & Grand Union Canal Partnership Strategy 2009 and Strategy Addendum 2020</i></p>		<p><i>also to provide new opportunities if well designed. An attempt should be made to avoid impacting river corridors, by considering all options, before 'potentially causing severance to wildlife connectivity.</i></p>
<p><i>Native and Non-Native Species</i></p>	<p><i>2016 Biodiversity Action Plan (BAP) includes 16 Species Action Plans:</i></p> <p><i>Barn Owls;</i></p> <p><i>Bats;</i></p> <p><i>Black Hairstreak butterfly;</i></p> <p><i>Black Poplar;</i></p> <p><i>Dingy and Grizzled Skipper butterflies;</i></p> <p><i>Dormouse;</i></p> <p><i>Nightingale;</i></p>	<p><i>'The whole thrust of Space for Wildlife, the latest revision of the Leicester, Leicestershire and Rutland Biodiversity Action Plan (LLRBAP), is to increase the amount of habitat available for wildlife across the wider countryside irrespective of its exact nature. This will benefit not only BAP species but also a wide variety of</i></p>	<p><i>Swifts, Swallows and House Martins added in most recent BAP edition.</i></p>	<p><i>New and existing transport system development and maintenance have the potential to adversely impact habitats and species. There are also opportunities for enhancement. Through eradication of invasive and non-native species and the planting of appropriate native species as part of landscaping schemes.</i></p>

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>Otter; Purple Small-reed; Redstart; Sand Martin; Violet Helleborine; Water vole; White-clawed Crayfish; Wood Vetch; and</p> <p>Swifts, Swallows and House Martins.</p> <p>There are two non-native crayfish species that occur in Leicestershire and Rutland which will provide direct competition for food and habitat to White-clawed Crayfish.</p> <p>Across Neutral Grassland (UKBAP - Lowland Meadows), 'much time and effort needs to be put into site preparation where invasive weeds such as</p>	<p>other wildlife.'</p> <p>(Spaces for Wildlife 2016-2026, Leicester, Leicestershire and Rutland Biodiversity Action Plan¹⁸)</p>		

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>thistles and docks are present.</i></p> <p><i>(Spaces for Wildlife 2016-2026, Leicester, Leicestershire and Rutland Biodiversity Action Plan³²)</i></p>			
<p><i>Wildlife Casualties</i></p>	<p><i>Roadkill data collected by The Road Lab in 2020 indicate wildlife fatalities by district as the following:</i></p> <p><i>County: 1209</i></p> <p><i>Melton: 501 (41.4%)</i></p> <p><i>Charnwood: 287 (23.7%)</i></p> <p><i>North West Leicestershire: 148 (12.2%)</i></p> <p><i>Harborough: 117 (9.7%)</i></p> <p><i>Hinckley and Bosworth: 92 (7.6%)</i></p> <p><i>Blaby: 57 (4.7%)</i></p> <p><i>Oadby & Wigston: 7 (0.6%)</i></p> <p><i>(The Road Lab, National</i></p>		<p><i>64 distinct species recorded among those wildlife fatalities recorded. Most common were Eurasian Badger (354), Pheasant (147), West European Hedgehog (140) and Red Fox (96).</i></p> <p><i>The vast majority of incidents recorded were on either motorways, A roads or B roads.</i></p>	<p><i>Wildlife casualties are a relatively common occurrence on rural roads in the County. Opportunities exist for appropriate management and wildlife crossings to be incorporated into the design and maintenance of transport systems including roads and railways.</i></p>

³² [Spaces for Wildlife 2016-2026, Leicester, Leicestershire and Rutland Biodiversity Action Plan](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<i>Biodiversity Network Atlas, 2020³³</i>			
Material Assets				
<i>Highways Network</i>	<p><i>Ordnance Survey Data indicates 2% Motorway, 7.7% A road, 3.8% B road, and 86.5% unclassified.</i></p> <p><i>Motorways include the M1, M69, M42 and M6.</i></p> <p><i>Ordnance Survey Open Zoomstack, 2024³⁴</i></p> <p><i>The County is located at the heart of the strategic road network. However, 4,686km of roads are maintained by LCC.</i></p> <p><i>LCC also maintains 3,081km of public rights of way.</i></p> <p><i>80% of bus network operate on a commercial basis.</i></p>		<p><i>5.06 billion vehicle miles were travelled on roads in Leicestershire in 2022.</i></p> <p><i>Nationally, The Strategic Road Network (SRN) carries, on average, four times as many vehicles a day per mile of road than locally managed major roads.</i></p> <p><i>Distribution of roads is similar to national averages.</i></p> <p><i>The County is among the highest rated for satisfaction with condition of highways in the NHT Public Satisfaction Survey in 2020. 37% satisfaction put the County in the top performing quartile.</i></p>	<p><i>The County lies at the heart of the country's strategic road network. While there is strong north-south connectivity across Leicestershire, there is less emphasis on east-west movement.</i></p> <p><i>The County has a relatively high satisfaction rate for the condition of highways.</i></p>

³³ [The Road Lab, National Biodiversity Network Atlas, 2020](#)

³⁴ [Ordnance Survey Open Zoomstack, 2024](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>Mainline rail stations are located at Leicester, Loughborough, Hinckley, Melton and East Midlands Parkway.</p> <p>The Nuneaton to Felixstowe rail freight route passes through the County.</p>		<p>In terms of new highways development, the LHA provided 2380 minor responses to consultations on planning applications in 2021. 1134 major responses were provided for those larger schemes.</p> <p>(Leicestershire County Council, Casualty Reduction 2020-21³⁵)</p>	
<p>Rail Network</p>	<p>Across the approximately 175km of railway in Leicestershire, there are 15 stations including:</p> <p>Barrow-upon-Soar Bottesford Hinckley Loughborough Loughborough Central Market Harborough Melton Mowbray</p>	<p>Priority 3 – Transport Rail electrification identified as a means to ensure carbon emissions from transport do not exceed current levels over the life of the strategy, irrespective of growth in net travel – by the following method.</p> <p>(Leicestershire County Council, Carbon Reduction</p>	<p>No track within Leicestershire is currently electrified. Construction of a 20km section between Market Harborough and South Wigston is due to commence as part of plans for a route upgrade between London and Sheffield.</p> <p>Leicester, not within Leicestershire but having</p>	<p>Whilst there are numerous strategic rail connections, there is significantly less infrastructure to support east-west movement than north-south.</p> <p>Leicestershire currently has no electrified railway. A small section is in the pipeline for upgrade, but this would only provide</p>

³⁵ [Leicestershire County Council, Casualty Reduction 2020-21](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>Mountsorrel Narborough Nunckley Hill Quorn and Woodhouse Rothley Sileby South Wigston System</p> <p>A further three stations form part of the approximate 7.6km of heritage railway network including: Shenton Market Shackerstone</p>	<p>Strategy for Leicestershire 2013 - 2020, 2013)</p> <p>Strategic Growth Plan identified the need for improved railway lines and services from Leicester to Coventry and Birmingham, as well as improvements to the Midland Mainline (electrification).</p> <p>(Strategic Growth Plan Leicester and Leicestershire, Leicester & Leicestershire 2050: Our Vision for Growth, 2018)</p> <p>“Seek to increase the amount of freight moved by rail”</p> <p>(Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050,</p>	<p>major strategic ties with the county due to its geography, has the poorest rail connections of the 12 largest cities outside of London.</p>	<p>electrified services to one of the County’s stations (Market Harborough).</p> <p>There is a policy aim to increase the amount of freight moved by rail.</p>

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
		2020 ³⁶⁾		
Airports / Airfields	<p>There are 16 Airports and Airfields across Leicestershire, including:</p> <ul style="list-style-type: none"> Leicester Airport East Midlands Airport Bruntingthorpe Proving Ground Claybrooke Farm Twycross (Gopsall House) Wharf Farm Eye Kettleby Airstrip Horse Leys Farm Airstrip Wymeswold Airstrip Lodge Farm Airstrip Buckminster Gliding Club Stoke Golding Manor Farm Airstrip Cottage Farm Airstrip Bitteswell Farm Airstrip Husbands Bosworth Airfield 		<p>East Midlands Airport is the largest employment site in Leicestershire outside of the city of Leicester owing to the logistics and distribution capacity of the area. The airport is the busiest in terms of dedicated cargo aircraft movements in the UK, and second to Heathrow in terms of metric tons of freight handled per annum. There is in the region of 500 Heavy Goods Vehicle (HGV) movements to and from the airport per weekday. North West Leicestershire, the district the airport is located in, has 25% of its workforce employed in distribution, transport and logistics. This is a substantial local strength compared with the national average of 9%.</p>	<p>East Midlands Airport is one of the most significant contributors to the Leicestershire economy. In the North West Leicestershire district where it is located, 25% of working residents are employed in distribution, transport and logistics.</p> <p>There is a need to consider the noise pollution and carbon emissions of airport operation and development.</p>

³⁶ [Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
			<p><i>There is currently no direct rail link to the East Midlands Airport.</i></p> <p><i>(North West Leicestershire, Local Plan: Background Paper 7, 2016³⁷)</i></p>	
<p><i>Road Asset Condition</i></p>	<p><i>Figures presented in the County's 2020 Highways Review Strategy show the percentage of assets where structural maintenance should be considered:</i></p> <p><i>Carriageways (all): 3%</i></p> <p><i>A Roads: 2%</i></p> <p><i>B Roads: 2%</i></p> <p><i>C Roads: 2%</i></p> <p><i>Unclassified Roads: 16%</i></p> <p><i>Footways: 29.4%</i></p> <p><i>Street Lighting Columns: 10%</i></p> <p><i>Traffic Signals: 5.81%</i></p>	<p><i>Leicestershire County Council Highways Asset Management Strategy sets out targets for methodology, budget and resources, performance management and identification of stakeholders in relation to the assessment of highways conditions.</i></p> <p><i>(Leicestershire County Council, Highways Asset Management Strategy, 2021³⁹)</i></p>	<p><i>Data between 2014-20 shows percentage of those assets where structural maintenance should be considered increased most significantly for Carriageways (Unclassified Roads) doubled from 8% to 16%, Footways increased from 8.6% to 29.4%.</i></p>	<p><i>Given the projected increase in road traffic, there is a need to continue to address the condition and function of highways infrastructure as a vital part of the transport network.</i></p> <p><i>This should also consider active travel routes and the needs of the population.</i></p>

³⁷ [North West Leicestershire, Local Plan: Background Paper 7, 2016](#)

³⁹ [Leicestershire County Council, Highways Asset Management Strategy, 2021](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>Bridge Spans: 11%</i></p> <p><i>(Leicestershire County Council, Highways Asset Management Strategy, 2021³⁸)</i></p>			
Air Quality				
<i>Air Quality Management Areas (AQMA)</i>	<p><i>11 total AQMAs across the County.</i></p> <p><i>Blaby: 5</i></p> <p><i>Charnwood: 4</i></p> <p><i>Harborough: 2</i></p> <p><i>Hinckley & Bosworth: none</i></p> <p><i>Melton: none</i></p> <p><i>North West Leicestershire: 2</i></p> <p><i>Oadby & Wigston: none</i></p>	<p><i>Leicester and Leicestershire Strategic Transport Priorities, Theme 3: Travel Around Leicestershire identifies the aim to make a “commitment to play an active role with partners to inform local decision making to improve air quality”.</i></p> <p><i>(Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020⁴¹)</i></p>	<p><i>Blaby: 2 AQMAs revoked 2015-16, an additional added 2018</i></p> <p><i>Charnwood: 3 of the AQMAs over 20 years old.</i></p> <p><i>Harborough: most recent addition in 2017</i></p> <p><i>Hinckley & Bosworth: none, 2 were revoked in 2004.</i></p> <p><i>Melton: none, one revoked 2002</i></p> <p><i>North West Leicestershire: 3 revoked since 2020</i></p> <p><i>Oadby & Wigston: 4 revoked in 2008.</i></p>	<p><i>The majority of the 11 AQMAs in the County are due to road traffic emissions.</i></p> <p><i>Given the projected increase in vehicle traffic, there is likely also to be an increase in particulate matter emissions. This may be offset by modal shift and an increased move to the use of electric vehicles, public transport, and active travel alternatives.</i></p>

³⁸ [Leicestershire County Council, Highways Asset Management Strategy, 2021](#)

⁴¹ [Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<i>(Defra, List of Local Authorities with AQMAs, 2024⁴⁰)</i>			
Traffic Volumes and Congestion	<p>2-way traffic also increased in all market towns between 2011 and 2016 in the AM PEAK, with the exception of Colville, Lutterworth and Oadby & Wigston. The highest increases were observed in Market Harborough (19.71), Melton Mowbray (15.76%) and Loughborough (11.49%).</p> <p><i>(Leicestershire County Council, Transport Trends in Leicestershire, 2016⁴²)</i></p>	<p>Leicester and Leicestershire Strategic Transport Priorities, Theme 3: Travel Around Leicestershire identifies the aims to “encourage travel by sustainable and active modes, where it is practicable” and to commit to “manage the network to ensure the smooth and efficient flow of traffic, in line with the Network Management Duty.”.</p> <p><i>(Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020⁴³)</i></p>	<p>By 2041, LCC predicts a 29% increase in vehicle kilometres travelled across the County, a 69% increase in delays and a 7% decrease in speeds across the network.</p>	<p>Road traffic volumes are predicted to increase by nearly a third by 2041 with an increase in delays by over two-thirds (LCC data).</p>
Geology and Soils				

⁴⁰ [Defra, List of Local Authorities with AQMAs, 2024](#)

⁴² [Leicestershire County Council, Transport Trends in Leicestershire, 2016](#)

⁴³ [Leicestershire County Council and Leicester City Council, Strategic Transport Priorities: 2020-2050, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
<i>Agricultural Land Classification (ALC)</i>	<p>Provisional ALC data shows the following percentage per grade across Leicestershire:</p> <p>Grade 1: 0.03%</p> <p>Grade 2: 10.73%</p> <p>Grade 3: 75.84%</p> <p>Grade 4: 6.49%</p> <p>Non Agricultural: 0.57%</p> <p>Urban: 6.33%</p> <p>(Provisional Agricultural Land Classification, Natural England⁴⁴)</p>	<p>'Where significant development of agricultural land is unavoidable use of poorer quality land should be sought in preference to that of higher quality, except where this would be inconsistent with other sustainability considerations.'</p> <p>(Leicestershire County Council, Leicestershire Minerals and Waste Local Plan up to 2031⁴⁵)</p>	<p>With additional housing need, pressure will increase for development (including associated highways infrastructure) on agricultural land.</p>	<p>Leicestershire has a high proportion of best and most versatile agricultural land. The growing demand for housing (and associated transport infrastructure) means there is potential for loss of best and versatile agricultural land due to competition from development.</p>
<i>Contaminated Land</i>	<p>236 brownfield land sites across County totalling 245ha.</p> <p>145 Category 1 & 2 Pollution Incident entries within the County.</p>	<p>I: Reduce pollution and contaminated.</p> <p>(Leicestershire County Council, Environment Strategy 2018-2030: delivering a better future⁴⁶)</p>	<p>Brownfield land sites and category 1 & 2 pollution events per district are as follows:</p> <p>Blaby: 1 brownfield land site, 20 category 1 & 2 pollution incidents.</p> <p>Charnwood: 107 brownfield land sites, 31 category 1 & 2</p>	<p>There are numerous isolated records of land contamination across the County. These should be considered when developing new transport infrastructure.</p> <p>There is also potential for localised impacts from</p>

⁴⁴ [Provisional Agricultural Land Classification, Natural England](#)

⁴⁵ [Leicestershire County Council, Leicestershire Minerals and Waste Local Plan up to 2031](#)

⁴⁶ [Leicestershire County Council, Environment Strategy 2018-2030: delivering a better future](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
			<p><i>pollution incidents.</i></p> <p><i>Harborough: 27 brownfield land sites, 16 category 1 & 2 pollution incidents.</i></p> <p><i>Hinckley & Bosworth: 10 brownfield land sites, 25 category 1 & 2 pollution incidents.</i></p> <p><i>Melton: 49 brownfield land sites, 24 category 1 & 2 pollution incidents.</i></p> <p><i>North West Leicestershire: 18 brownfield land sites, 29 category 1 & 2 pollution incidents.</i></p> <p><i>Oadby & Wigston: no brownfield land sites or category 1 & 2 pollution incidents.</i></p>	<p><i>transport related pollution incidents, most significantly in and around urban centres.</i></p>
<p><i>Geodiversity and Soilscape</i></p>	<p><i>17 of the County's SSSI have been designated due to their geological importance. Regionally Important Geological Sites (RIGS).</i></p> <p><i>48 Locally Important Geological Sites.</i></p>	<p><i>Leicestershire County Council Minerals and Waste Plan</i></p>	<p><i>Exposures of rocks and superficial deposits which provide an important resource for education occur naturally in Leicestershire, as well as being revealed in cuttings and quarries. These are protected by SSSI or RIGS designation.</i></p>	<p><i>A number of designated sites for geodiversity exist within the County.</i></p> <p><i>New transport system development or maintenance should consider the potential effects on geology and soils. New development has potential to expose rock deposits</i></p>

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p><i>Richest soils are located within the north east, associated with the underlying limestone. Within the north west area of the County there are acidic soils over mudstones and sandstones, including within coalfield areas. The rest of the County soils are mostly neutral and variable, dependent on the local drift geology, which are mostly associated with arable farming.</i></p> <p><i>(Leicestershire County Council, Action for Nature: A Strategic Approach to Biodiversity, Habitat and the Local Environment for Leicestershire County Council, 2021⁴⁷)</i></p>			<p><i>which could have value for educational/scientific understanding.</i></p>

⁴⁷ [Leicestershire County Council, Action for Nature: A Strategic Approach to Biodiversity, Habitat and the Local Environment for Leicestershire County Council, 2021](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
Water Environment				
<p><i>Flood Risk</i></p>	<p><i>Historic flooding and risk from reservoirs largely correlates to routes along rivers, namely the River Soar, River Wreake, River Sence, and River Mease. Over 1,300 local flood events in the County between 1996 and 2011. The most significant of these occurred in 2012, 2013, 2016, 2019 and 2020.</i></p> <p><i>Market Harborough, Loughborough and Hinckley and Burbage have been identified as 'nationally significant' surface water flood risk areas.</i></p> <p><i>(Assessment of Local Flood Risk, Leicestershire County Council, 2024⁴⁸)</i></p>	<p><i>The Local Flood Risk Management Strategy objectives are:</i></p> <p><i>To manage local flood risk through the effective management of flood risk assets, watercourses, and catchments.</i></p> <p><i>To manage local flood risk through encouraging sustainable development.</i></p> <p><i>To manage local flood risk through effective preparedness, response to, and recovery from flood events.</i></p> <p><i>To better understand local flood risk and impacts, informing approaches to managing this risk.</i></p> <p><i>To manage local flood risk through developing and or managing local projects for at-risk communities.</i></p>	<p><i>The majority of the County is in very low flood risk areas. High flood risk is mostly along banks of major rivers and in lowest topographic areas.</i></p> <p><i>Significant flood incidents witnessed in recent history, 500 homes and businesses damaged in January 2024.</i></p> <p><i>LCC can only provide advice to planning authorities as the lead local flood authority.</i></p>	<p><i>The County is subject to large areas of flood risk from fluvial sources and surface water.</i></p> <p><i>This has potential to affect the existing and future highways network. Surface drainage from the highways network has potential to exacerbate flooding. Effective drainage measures should be included in all new road infrastructure and flood risk areas should be avoided where possible.</i></p> <p><i>Flood risk will continue to increase with climate change. In May 2019 LCC declared a climate emergency in recognition of local and wider impacts.</i></p> <p><i>Although LCC is Lead Local</i></p>

⁴⁸ [Assessment of Local Flood Risk, Leicestershire County Council, 2024](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>Flood zoning reflects increased risk along routes of rivers named above. Flood zone 3 is the area of highest fluvial (river) flood risk, followed by flood zone 2. Flood zone 1 is the lowest risk and would not expect to be affected, if any, by fluvial flooding.</p> <p>(Flood Plan Explorer, Environment Agency⁴⁹)</p>	<p>(Leicestershire County Council, Local Flood Risk Management Strategy Action Plan, 2024⁵⁰)</p>		<p>Flood Authority, they do not necessarily have the powers or responsibilities to physically implement measures to address all flooding related matters. Partner organisations such as Environment Agency, water companies including Anglian Water, and District and Borough Councils and Internal Drainage Boards have individual roles.</p>
<p>Drainage Utility</p>	<p>An internal Climate Change Risk and Resilience Review in 2021 identified 'good co-operation' between Flood Risk Management and Highways on mapping small drainage. 136,000 drains and gullies were identified over 2,575 miles of road. In spite of this, there remains</p>	<p>Highway drainage maintenance - 'The Local Highway Authority will continue to maintain highway drainage assets in accordance with the Leicestershire Highway Infrastructure Asset Management Plan'</p> <p>(Leicestershire County</p>		<p>Forming part of the transport network, LCC maintains 4,686km of roads and, as the LHA, is responsible for watercourses running under highway and managing risk of highway flooding.</p>

⁴⁹ [Flood Plan Explorer, Environment Agency, 2024](#)

⁵⁰ [Leicestershire County Council, Local Flood Risk Management Strategy Action Plan, 2024](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<i>an 'unknown' small drainage network which is considered a high risk for flooding.</i>	<i>Council, Local Flood Risk Management Strategy Action Plan, 2024⁵¹)</i>		
Waste and Minerals				
<i>Minerals</i>	<i>17,485,153 tonnes of mineral provided within Leicestershire per annum as per last Minerals and Waste Local Plan (MWLP). Aggregate minerals include igneous rock, sand and gravel, and limestone. Energy materials include oil and coal, while construction materials consist of clay (brickclay, fireclay), building stone and gypsum.</i> <i>(Leicestershire County Council, Leicestershire</i>	<i>Look to make use of production capacity at sites that are currently inactive in order to maintain the level of provision from quarries within Leicestershire.</i> <i>(Leicestershire County Council, Local Aggregate Assessment, 2022⁵³)</i>	<i>There will be a potential shortfall of sand and gravel reserves within Leicestershire over the period to 2031 of some 7.67 million tonnes based on current production guidelines.</i> <i>(Leicestershire County Council, Local Aggregate Assessment, 2022⁵⁴)</i>	<i>A number of sites across the County are allocated for minerals extraction and there are numerous Minerals Safeguarding Areas (MSA). The transport network should seek to avoid the sterilisation of any such resources and also help to maintain adequate assess, including for heavy goods vehicles, to meet county and country mineral need. When constructing and maintaining transport infrastructure, mineral sites where production capacity is</i>

⁵¹ [Leicestershire County Council, Local Flood Risk Management Strategy Action Plan, 2024](#)

⁵³ [Leicestershire County Council, Local Aggregate Assessment, 2022](#)

⁵⁴ [Leicestershire County Council, Local Aggregate Assessment, 2022](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<i>Minerals and Waste Local Plan up to 2031⁵²</i>			<i>currently inactive should be utilised in order to maintain the level of provision from quarries within Leicestershire given the potential for shortfall of reserves over the period to 2031.</i>
<i>Waste</i>	<p><i>There are approximately 46 primary waste transfer stations within Leicestershire.</i></p> <p><i>(Leicestershire County Council, Map Waste Recycling and Waste Transfer Stations within Leicestershire, 2019⁵⁵)</i></p> <p><i>Waste facilities also include 14 Recycling and Household Waste Sites, 9 active landfill sites, 8 composting sites across the County.</i></p>	<p><i>Enhance Leicestershire's performance to support the delivery of the national recycling target of 65% by 2035.</i></p> <p><i>(DEFRA and DAERA, Circular Economy Package Policy Statement, 2020⁵⁸)</i></p>	<p><i>There is a cluster of waste transfer and recycling sites to the southwest of Leicester, though beyond this, sites and generally located within the north east of Leicester Principal Urban Area and in and around Hinckley and Loughborough.</i></p>	<p><i>The transport network should seek to maximum the possible reuse, recycling, composting and recovery of value from waste during maintenance or new development.</i></p> <p><i>Provision of waste facilities within the county should be made as to reduce the distance untreated waste is transported.</i></p>

⁵² [Leicestershire County Council, Leicestershire Minerals and Waste Local Plan up to 2031](#)

⁵⁵ [Leicestershire County Council, Map Waste Recycling and Waste Transfer Stations within Leicestershire, 2019](#)

⁵⁸ [DEFRA and DAERA, Circular Economy Package Policy Statement, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>(Leicestershire County Council, Map of Other Waste Operations within Leicestershire, 2019⁵⁶)</p> <p>There are approximately 57 sewage treatment works within Leicestershire.</p> <p>(Leicestershire County Council, Map of Sewage Treatment Works within Leicestershire, 2019⁵⁷)</p>			
Cultural Heritage				
Heritage Assets	<p>1 registered battlefield, Battle of Bosworth (Field) 1485.</p> <p>179 Scheduled Monuments within County.</p> <p>4034 Listed buildings within Leicestershire, 79 Grade I,</p>	<p>Strategic Outcomes: Great Communities 'Cultural and historical heritage are enjoyed and conserved.'</p> <p>(Leicestershire County Council, Strategic Plan 2022-2026⁵⁹)</p>	<p>50 heritage assets designated as 'heritage at risk', including:</p> <p>4 Scheduled Monuments 9 Listed Buildings 5 Conservation Areas 1 Registered Park & Garden 26 Places of Worship (all</p>	<p>The County has a wide and varied heritage including a large number of protected assets in addition to archaeological potential. Some of these are designated as heritage at risk.</p> <p>There is potential for heritage assets to be</p>

⁵⁶ [Leicestershire County Council, Map of Other Waste Operations within Leicestershire, 2019](#)

⁵⁷ [Leicestershire County Council, Map of Sewage Treatment Works within Leicestershire, 2019](#)

⁵⁹ [Leicestershire County Council, Strategic Plan 2022-2026](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	296 Grade II* and 3659 Grade II. <i>(Historic England, 2024)</i>		churches) <i>(Historic England, Heritage at Risk Register 2022 - Midlands, 2022⁶⁰)</i>	<i>affected directly or indirectly (e.g. through setting) by transport development.</i>
Landscape and Townscape				
<i>Landscape Designation</i>	<p>140 conservation areas within Leicestershire, including the Grand Union Canal and the Ashby-de-la-Zouch Canal. No conservation areas are within Charnwood or Melton.</p> <p>1 design code area, North West Leicestershire District Design Code Area.</p> <p>18 Country Parks within County covering a total of 1318 ha.</p> <p>13 distinct National Character Areas within</p>	<p><i>J: Conserve and enhance the character, diversity and local distinctiveness of Leicestershire landscapes and towns, and provide opportunities for public access and enjoyment of green spaces.</i></p> <p><i>(Leicestershire County Council Environment Strategy 2018-2030⁶¹)</i></p>	<p><i>As part of National Model Design Code (NMDC) - 14 councils across England given £50,000 each to develop new design codes to raise the design bar with regard to outlining what the council want.</i></p>	<p><i>Whilst there are no National Parks or National Landscapes within Leicestershire, it has a distinct and locally important landscape and townscape character. There are numerous Conservation Areas, Country Parks and Design Code areas.</i></p> <p><i>New transport development should seek to minimise impacts on landscape/ townscape and visual amenity and, where appropriate incorporate enhancement measures and</i></p>

⁶⁰ [Historic England, Heritage at Risk Register 2022 – Midlands, 2022](#)

⁶¹ [Leicestershire County Council Environment Strategy 2018-2030, 2020](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<i>Leicestershire and 18 local landscape character areas. (Natural England, 2024)</i>			<i>appropriate planting/screening.</i>
<i>Light Pollution</i>	<i>The amount light pollution largely correlates to built up areas where it is at its highest concentrations. It is most significant within the suburbs Leicester as well as Loughborough, Hinckley, and East Midlands Airport. Levels of light pollution are much lower in the rural areas of the county to the south and east.</i>	<i>N/A</i>	<i>Light pollution has increased significantly over time as a consequence of both new residential/commercial development and associated transport infrastructure.</i>	<i>Built up areas and roads are significant sources of light pollution in the County. This also includes freight interchanges and airports. There are few darker areas, concentrated more towards the rural areas to the south and east.</i>
<i>Noise Pollution</i>	<i>Roads, railways, and airports are a significant source of noise pollution in the County.</i>		<i>Road traffic noise has increased steadily with a growth in traffic levels over time increasing the exposure to existing residents and for new developments.</i>	<i>As part of the transport network, road noise is a significant and growing issue with more areas of the County being identified as Noise Important Areas. New roads and railway are a notable source of new noise pollution.</i>
Climate Change and Carbon				

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
<p><i>Transport Sector Carbon Dioxide (CO₂) Emissions</i></p>	<p><i>In 2021, 38% of Leicestershire's carbon emissions (1,597.5 ktCO₂e) came from the transport sector.</i></p> <p><i>23% of this comes from either motorways or A roads. Minor roads represent 11% of transport sector emissions.</i></p> <p><i>Emissions have seen a total reduction of 28% between 2005 and 2021.</i></p> <p><i>Hinckley and Bosworth: HVO biodiesel fuel for council HGV fleet, emitting 90% fewer emissions.</i></p>	<p><i>Strategic Outcomes: Clean and Green</i></p> <p><i>'Resources are used in an environmentally sustainable way'</i></p> <p><i>The economy and infrastructure are low carbon and environmentally friendly'</i></p> <p><i>(Leicestershire County Council, Strategic Plan 2022-2026⁶²)</i></p>	<p><i>The County's transport emissions are above average when compared with the UK. By 2041, carbon emissions from the transport network are predicted to increase by over 5% (LCC data).</i></p>	<p><i>Carbon emissions from the transport sector are proportionally high compared with other counties. This is partly due to the presence of the strategic road network in the County. However, the LHA road network is also a source and projected traffic growth is anticipated to exacerbate this in the future. This may be offset by modal shift and an increased move to the use of electric vehicles, public transport, and active travel alternatives.</i></p>
<p><i>Local Climate Projections</i></p>	<p><i>By the 2050s, it is projected there is a 50% change that Leicestershire will experience summers that are on average over 2°C</i></p>	<p><i>Strategic Outcomes: Great Communities</i></p> <p><i>'Communities are prepared for and resilient to emergencies'</i></p>	<p><i>Even within best case scenarios, climate change and average conditions are projected to change in terms of a rise in average temperatures, wetter</i></p>	<p><i>Climate change is predicted to result in a significant increase in storm frequency and intensity and summer heatwaves. The transport network needs to prepare</i></p>

⁶² [Leicestershire County Council, Strategic Plan 2022-2026](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
	<p>warmer than the 1990s, with a hottest day that is also over 2°C warmer than the previous maximum;</p> <p>There is a 10% risk that Leicestershire will experience summers in the 2050s that are on average 3°C warmer than the 1990s, with a hottest day that is over 4°C warmer than before;</p> <p>Winter rainfall in the County is most likely to increase by less than 10% by the 2050s, but there is a 10% chance that the increase could be over 30%.</p> <p>(Leicestershire County Council, Climate Change Risk and Resilience Review and Assessment, 2021⁶³)</p>	<p>Clean and Green ‘People act now to tackle climate change’ (Leicestershire County Council, Strategic Plan 2022-2026⁶⁴)</p>	<p>winters, and drier summers.</p> <p>With this comes an increase in the frequency and intensity of major weather events, including extreme rainfall and flooding, and the number and severity of heatwaves.</p>	<p>for this through resilience measures in design and management.</p> <p>Durable materials and design should be considered to accommodate this. An increased use of nature-based solutions should also be considered.</p> <p>Transport networks are also vulnerable to ‘cascading events’ where interruptions to services such as fuel or power supplies as a result of climate change presents a significant risk.</p>

⁶³ Leicestershire County Council, Climate Change Risk and Resilience Review and Assessment, 2021

⁶⁴ [Leicestershire County Council, Strategic Plan 2022-2026](#)

General Indicator	Quantified Data and Source	Targets (if applicable)	Trends	Key Issues
<p><i>EV Infrastructure</i></p>	<p><i>EV Infrastructure data as of January 2023:</i></p> <p><i>County Total: 286</i></p> <p><i>Blaby: 57</i></p> <p><i>Charnwood: 43</i></p> <p><i>Harborough: 52</i></p> <p><i>Hinckley & Bosworth: 51</i></p> <p><i>Melton: 8</i></p> <p><i>North West Leicestershire: 35</i></p> <p><i>Oadby and Wigston: 40</i></p> <p><i>(Department for Transport, EV Charging Device Statistics, 2024⁶⁵)</i></p>	<p><i>Climate Emergency declared in 2019 with zero carbon target for Leicestershire County Council operations set for 2030 ahead of national targets, and at county-level by 2045 ahead of the government target of 2050.</i></p> <p><i>(Leicestershire County Council, 2030 Net Zero Council Action Plan, 2022⁶⁶)</i></p>	<p><i>Increased number of EV charging points, national rate per 100,00 55.7 as of January 2023 compared to County rate of 40.1.</i></p> <p><i>County growth rate of EV charging points is higher than national average between 2020-23 (155% increase vs 129% increase).</i></p>	<p><i>There is a need for additional Electric Vehicle (EV) infrastructure to support the transition from petrol and diesel vehicles in order to ensure the transport network facilitates sustainable modes of travel.</i></p> <p><i>While the growth rate of EV charging points is above than the national average (2020-23) the current rate per 100,000 population is below.</i></p>

⁶⁵ [Department for Transport, EV Charging Device Statistics, 2024](#)

⁶⁶ [Leicestershire County Council, 2030 Net Zero Council Action Plan, 2022](#)

Figure A-1 Biodiversity baseline data

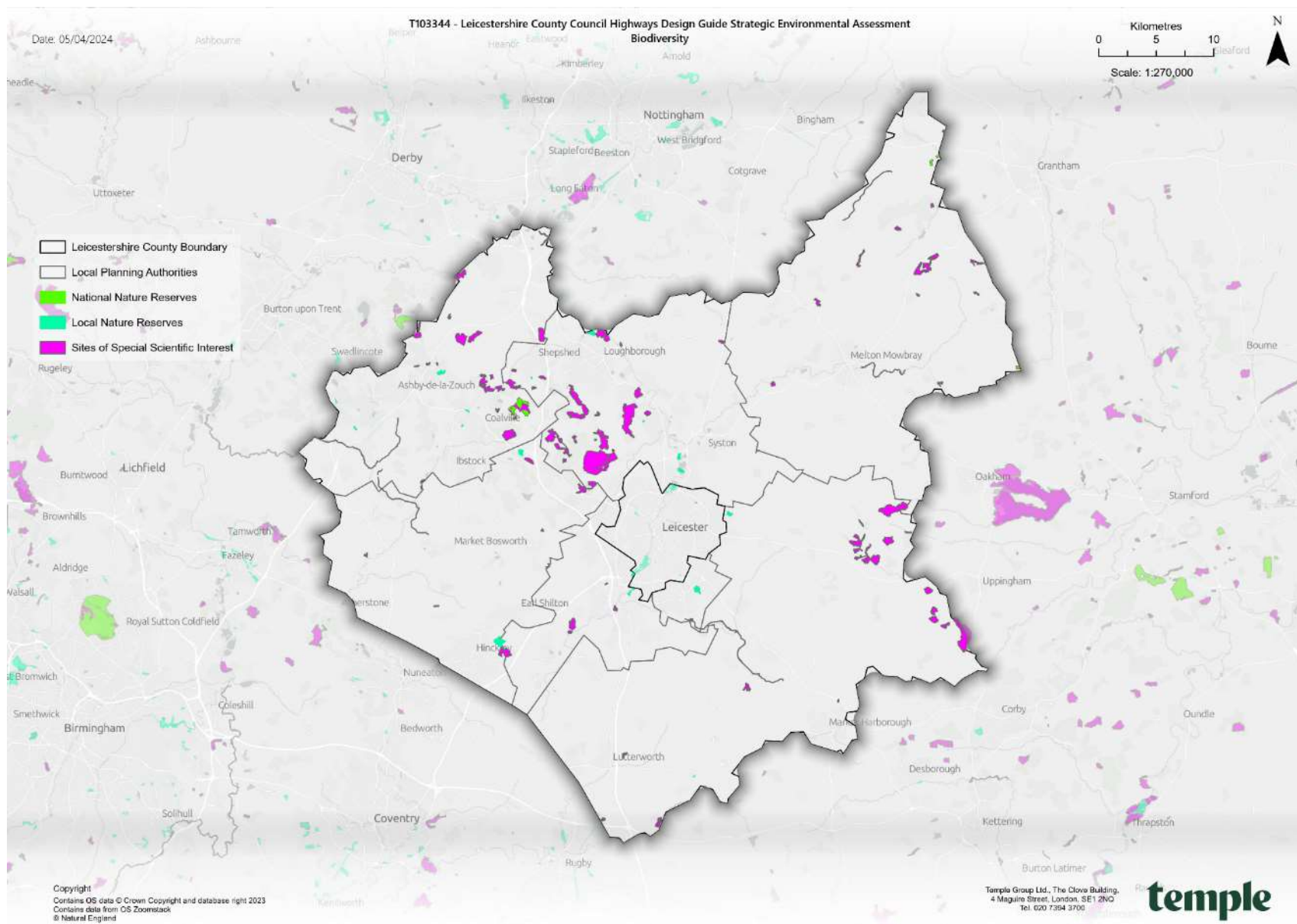


Figure A-2 Material Assets baseline

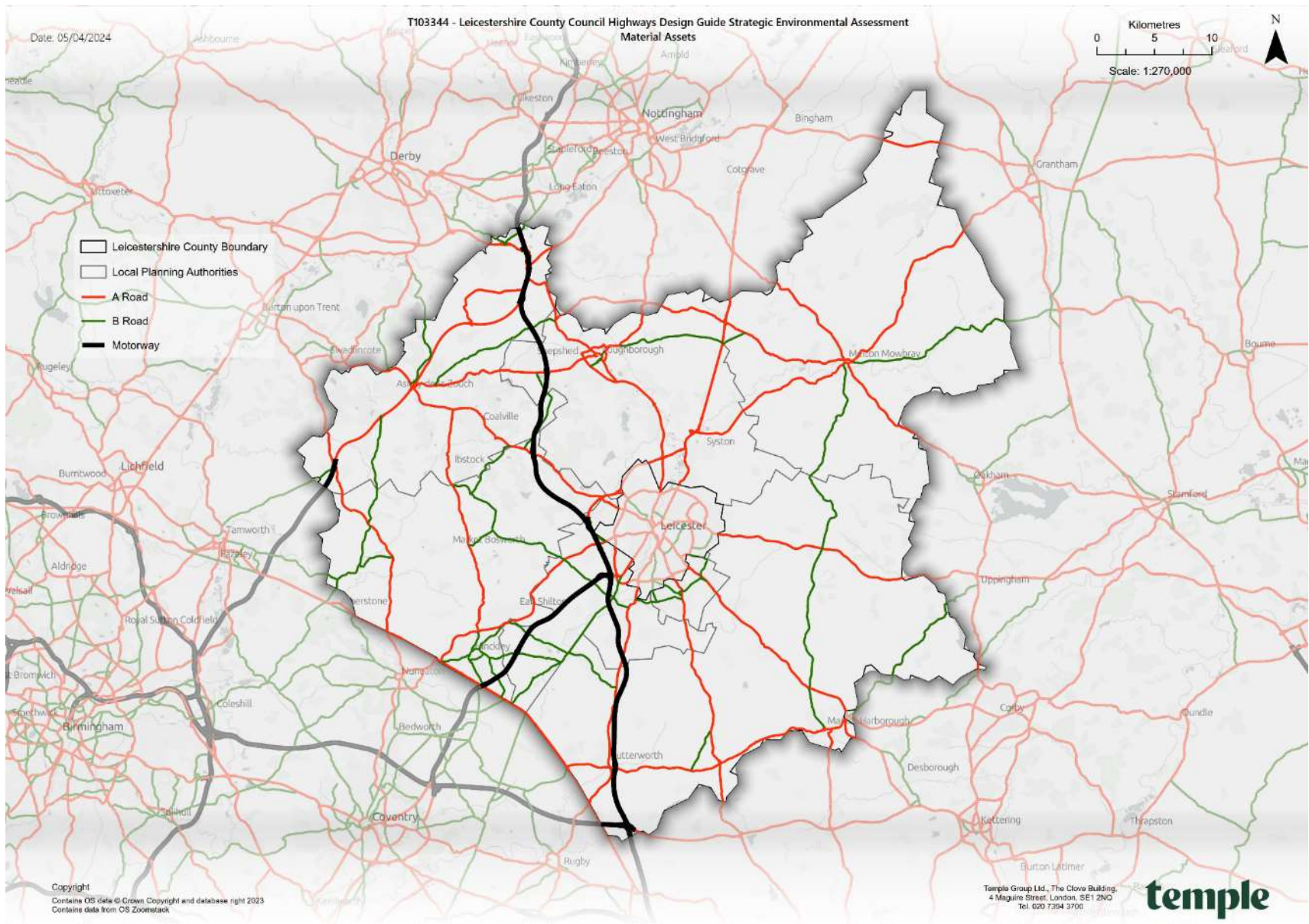


Figure A-3 Geology and Soils provisional Agricultural Land Classification (ALC) baseline data

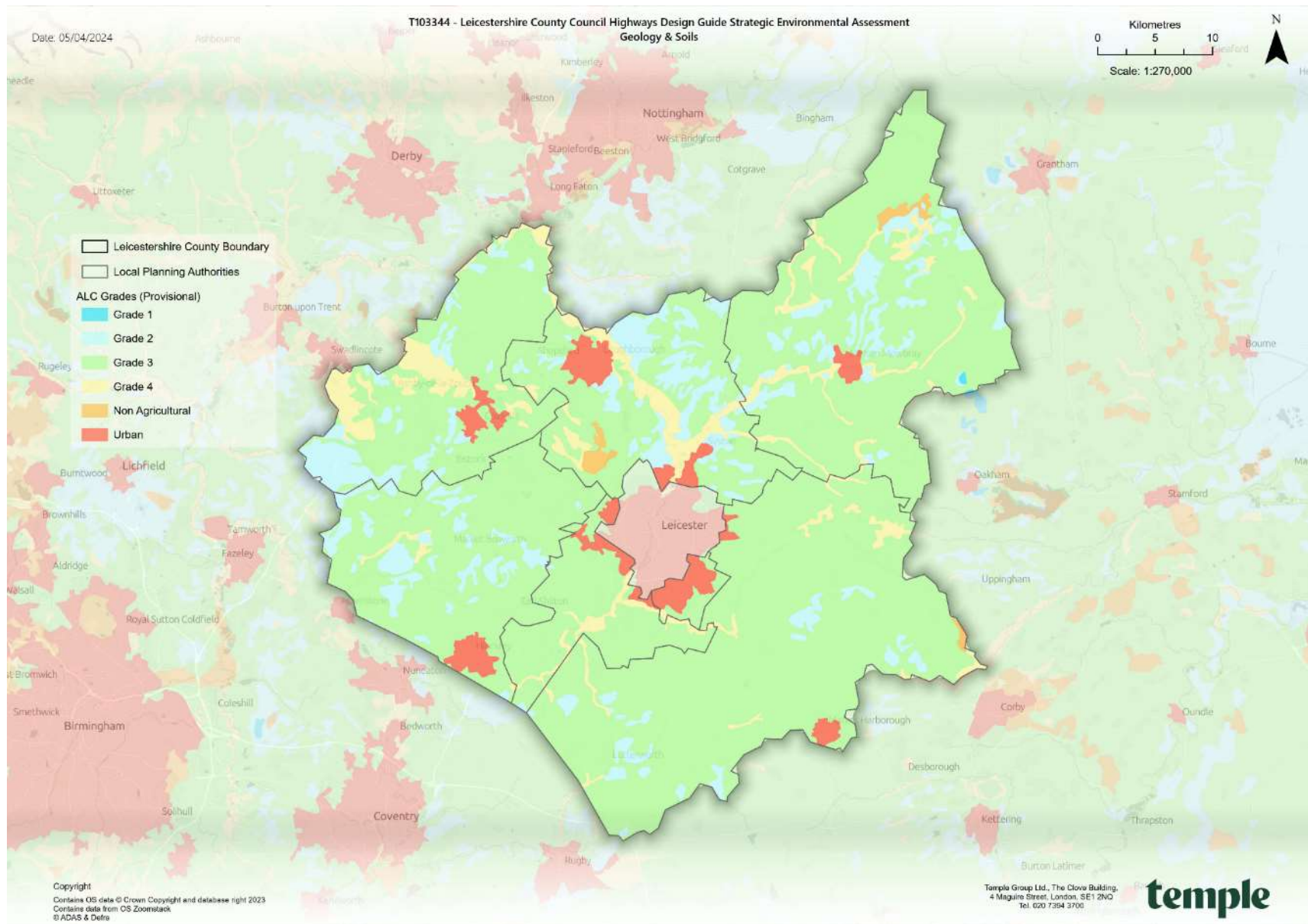


Figure A-4 Geology and Soils contaminated land baseline data

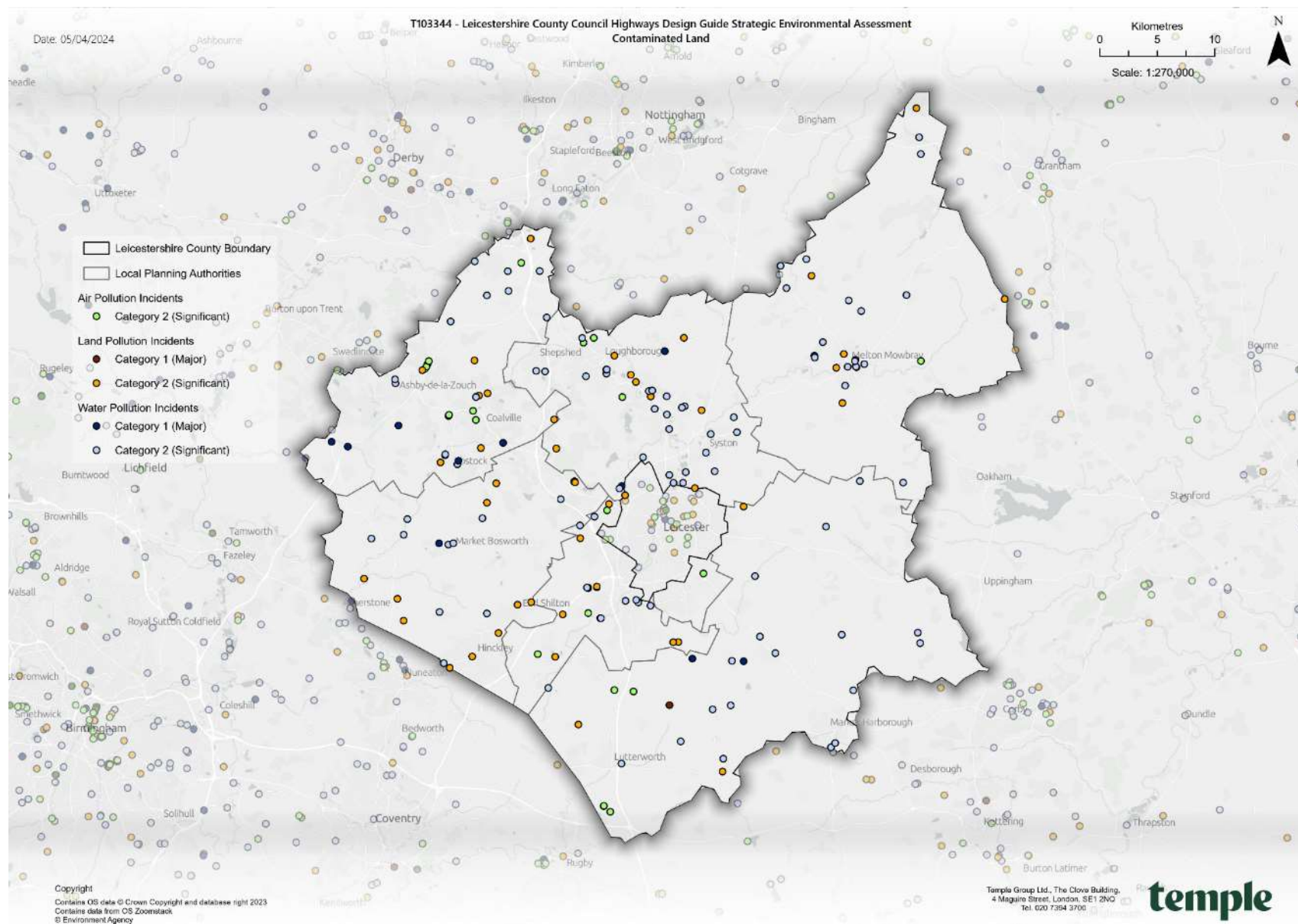


Figure A-5 Water Environment baseline data

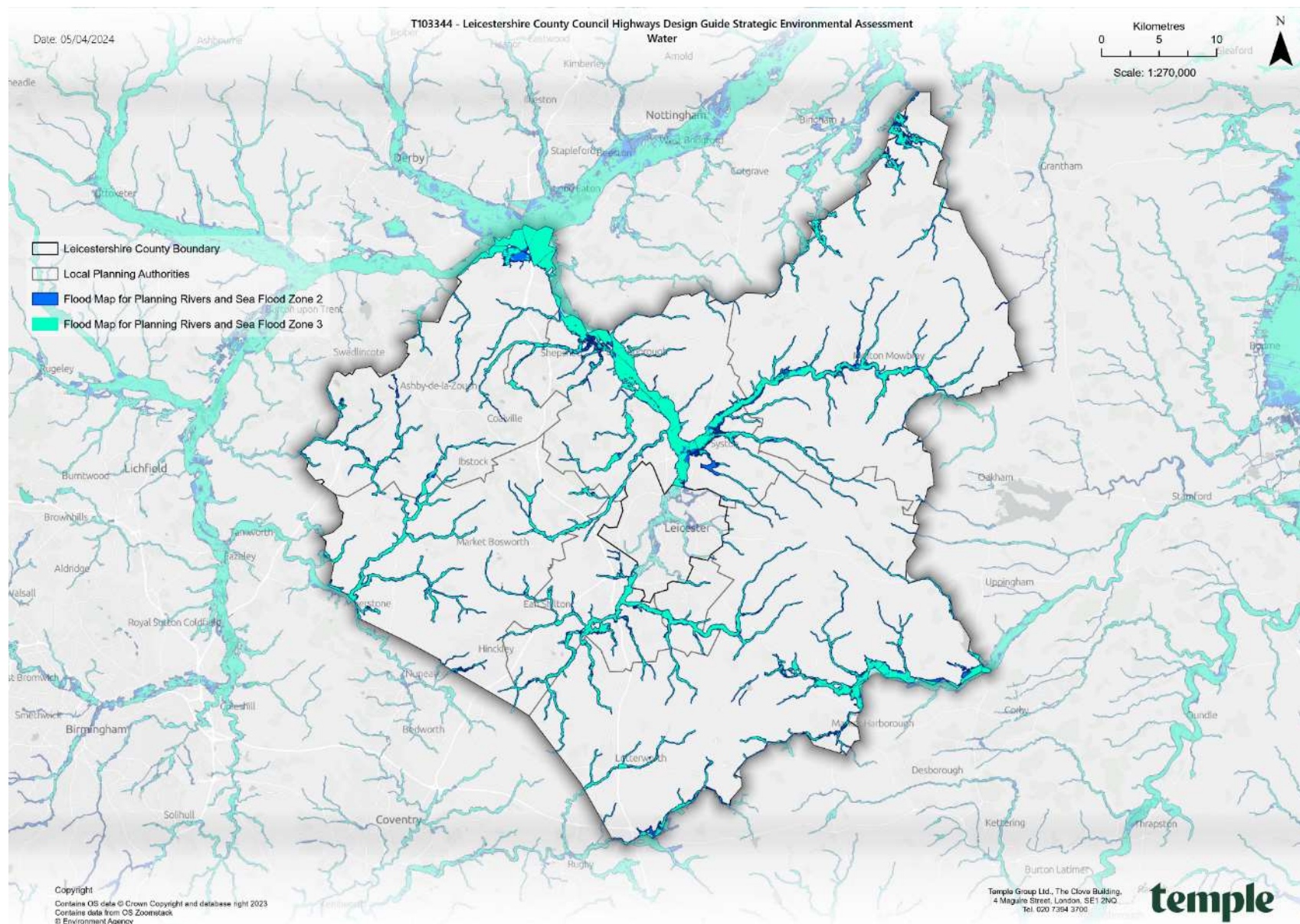


Figure A-6 Cultural Heritage baseline data

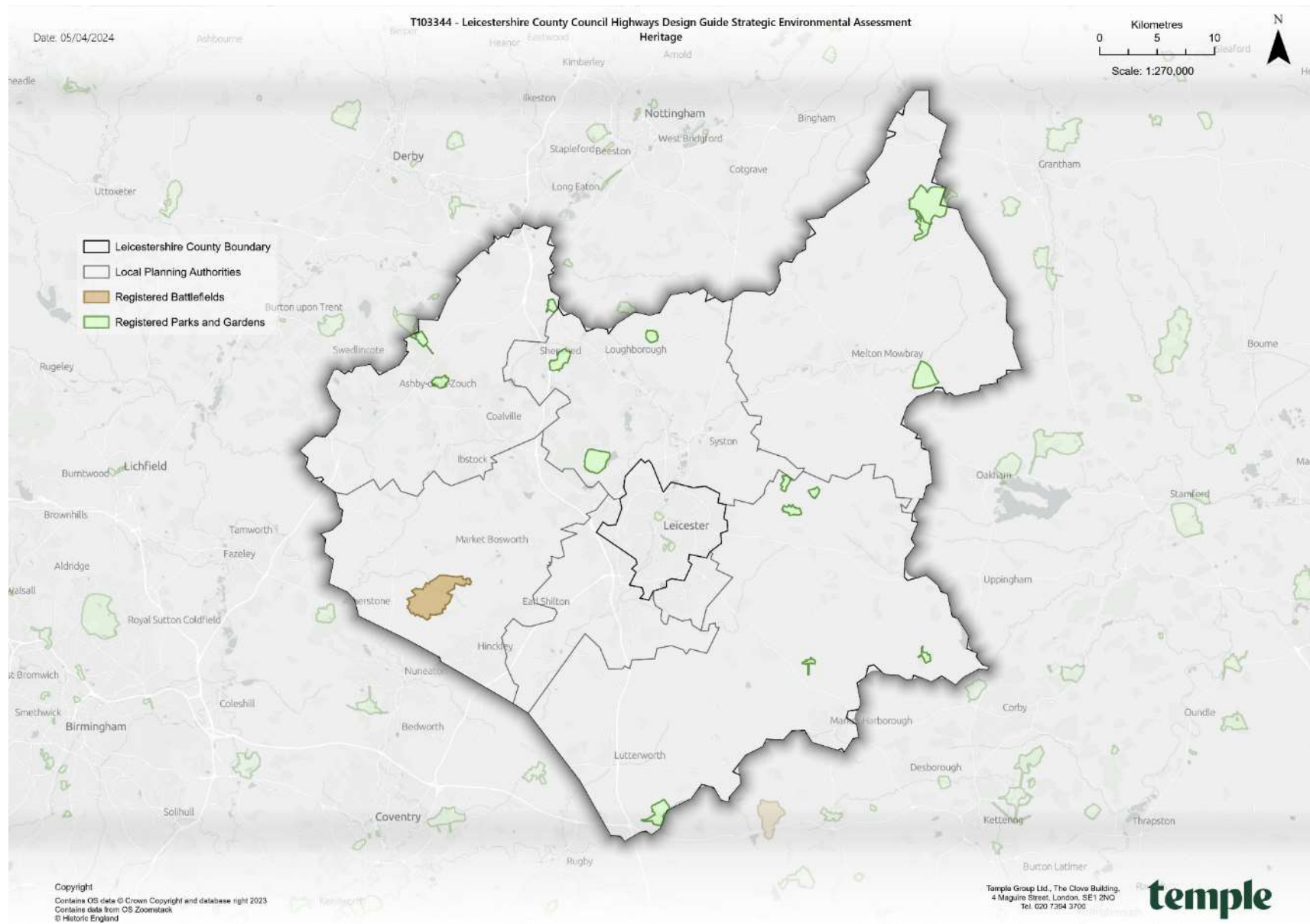
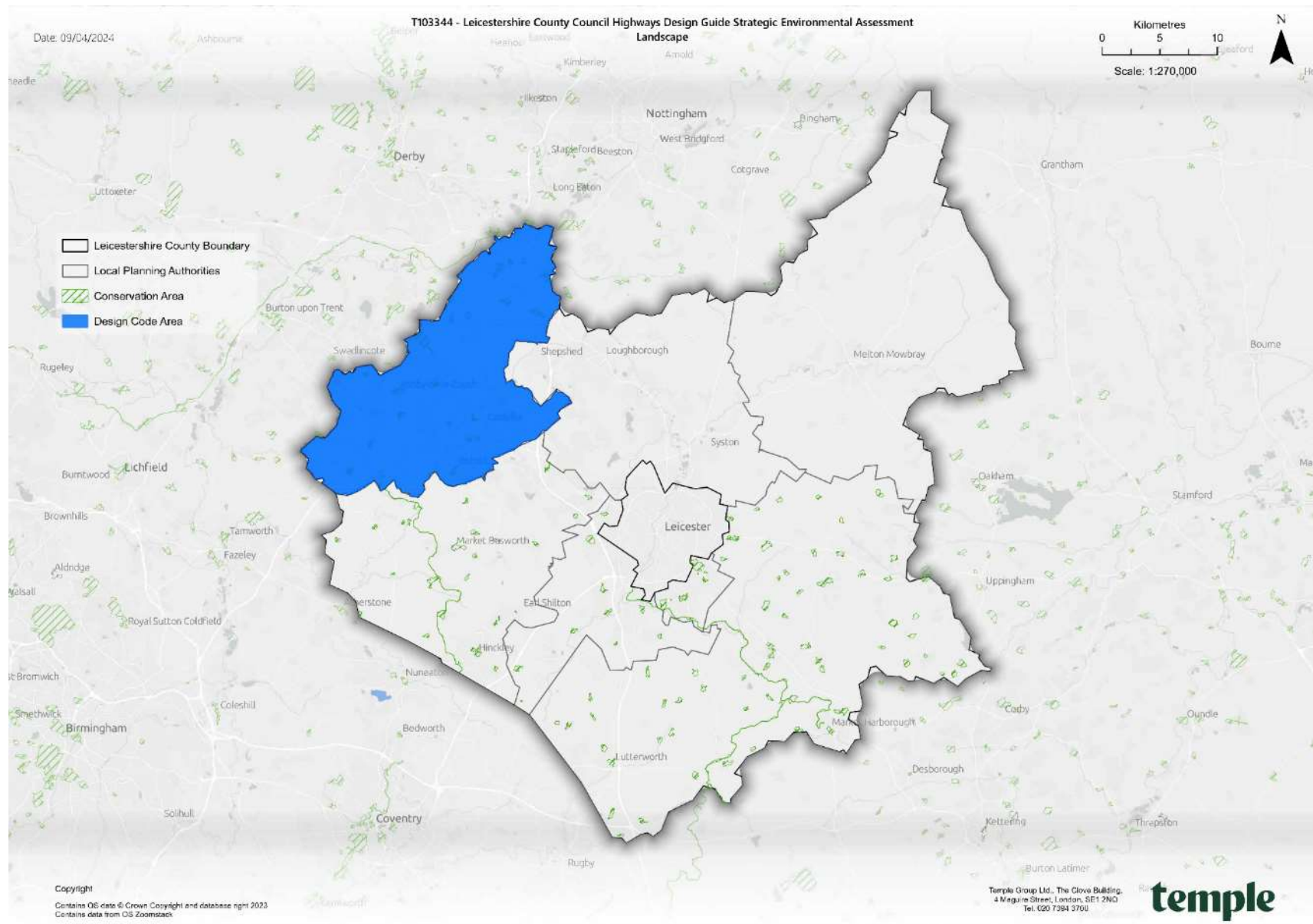


Figure A-7 Landscape and Townscape baseline data



Appendix B: Relevant Plans, Programmes and Policies

International, National and Local Environmental Protection Policies, Plans and Programmes

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
Biodiversity	
<p>National Planning Policy Framework, The Conservation of Habitat and Species Regulations 2017; Environment Act 2021; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council); Natural Environment & Rural Communities Act (NERC) 2006; Leicestershire County Council's Strategic Plan 2022-2026; Leicestershire Climate and Nature Pact; LCC Environment Strategy 2018 – 2030: delivering a better future; LCC Strategic Growth Plan (2018); Leicester, Leicestershire & Rutland Biodiversity Action Plan; Spaces for Wildlife 2016-2026; Leicestershire County Council, Action for Nature: A Strategic Approach to Biodiversity, Habitat and the Local Environment for Leicestershire County Council (2021); Our 25 year vision for the National Forest a green print for the nation; Analysis of Accessible Natural Greenspace for Leicestershire and Rutland (2022); Leicester and Leicestershire Strategic Transport Priorities 2020-2050; The Wildlife and Countryside Act 1981.</p>	<p>Priorities</p> <ul style="list-style-type: none"> • Protection and enhancement of biodiversity, including national conservation sites, local nature reserves, local wildlife sites and irreplaceable habitats, and the natural environment - The ambition is to not only avoid, mitigate and compensate for the loss in habitats and species within Leicestershire, but to enhance and create space for nature. • (Measurable) Biodiversity Net Gain (of at least) 10% • Promotion of nature-based solutions and working with nature to achieve multiple benefits (air quality, carbon removal, soils and flooding). • Emphasis on increased woodland cover in the National Forest. • ~82% of land across the area is managed for agriculture. • Developing a Local Nature Recovery Strategy - ensuring that opportunities to recover nature are joined-up. • Landscape scale approach - approaches focused on preserving, conserving and enhancing nature and meeting other environmental objectives such as climate change, flood mitigation and improved air and water quality. • Biodiversity also has an important role in climate change adaptation and mitigation. • Expanding and creating new accessible natural greenspace should be explored through agri-environment, biodiversity net gain and green infrastructure associated with new development. • Expanding on existing areas of good access to nature.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<ul style="list-style-type: none"> • GI should maintain and enhance biodiversity to deliver a net gain for biodiversity and provide connectivity to provide ecological resilience in the face of climate change. <p>Issues</p> <ul style="list-style-type: none"> • Across the Leicestershire, Leicester, and Rutland local nature recovery strategy area, less than 1% of the area has a high biodiversity score. Also approximately only 6% of the area is covered by woodland, compared to the national average of 13% - • Biodiversity Decline in Leicestershire, Leicester & Rutland • Leicestershire is one of the least wooded counties - Tree cover is less than 6% compared with 13% in UK overall. • The quality of roadside verges was previously identified as being in declining quality in the most recent Biodiversity Action Plan. • Invasive species of plant and animal are often now naturalised into our landscape but in some cases where they ‘crowd’ out our vulnerable natives.
Population and Human Health	
<p>National Planning Policy Framework; Environment Act 2021; Gear Change (2020); Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); The Government Cycling and Walking Plan for England (2020); Active Travel England (2020); walking and cycling plan for England, Gear Change (2020) Decarbonising transport: setting the challenge (2020) A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and</p>	<p>Priorities</p> <ul style="list-style-type: none"> • Support people to make healthier choices. • Sustainable travel hierarchy which prioritises active travel and promotes cycling and walking in preference to single occupancy car use for movement of people. • Increasing the use of green spaces for active recreation, making streets safer, improving air quality. • GI should include linear features and high-quality off-road access routes for pedestrians and cyclists. • Encouraging active and sustainable travel and promote sustainable access to jobs and training.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
<p>City Council); Leicestershire County Council's Strategic Plan 2022-2026; Countryside & Rights of Way Act 2000 (CRoW); Planning Practice guidance: Healthy and Safe Communities (2014); Natural Environment & Rural Communities Act (NERC) 2006; Open Space, Sports and Recreation Facilities, Public Rights of Way and Local Greenspace (2014); Equality Act (2010); Health and Social Care Act (2012); Healthy Lives, Healthy People strategy (DHSC, 2013); LCC Cycling and Walking Strategy Action Plan - 2023; Leicester and Leicestershire Strategic Transport Priorities 2020-2050; Local Transport Plan (LTP3) 2011-2026; Leicestershire County Council's Strategic Plan 2022-2026; LCC Annual Report of the Director of Public Health (2019); LCC Public Health Strategy 2022-2027; Joint Health and Wellbeing Strategy 2022-32; Leicestershire Healthy Schools Programme.</p>	<ul style="list-style-type: none"> • Helping people to improve their health through physical activity. • Promotion of road safety initiatives, safe infrastructure, and the protection of vulnerable road user. • Placing cycling at the heart of planning for maintenance and development of transport infrastructure. • The need for social inclusion through the retention and creation of equal access when building or maintaining transport infrastructure. • Deliver social benefits to the local population, supporting their mental and physical health, providing shelter and shading for people, ameliorating poor air quality, and providing a focus for social inclusion, community development and lifelong learning. <p>Issues</p> <ul style="list-style-type: none"> • The percentage of physically active adults in Leicestershire is significantly worse than the national average. • There are pockets of high deprivation, measured using the Index of Multiple Deprivation (IMD) in areas of Loughborough, Northwest Leicestershire and Hinckley & Bosworth. • Population count and density is increasing across every district. Housing demand will increase pressure on development within rural areas where access improvements will be required. • Rural areas with increasing older age profiles and reliance on driving a car or van to work. • Melton and Harborough communities have the least access to nature. Often these deprivations occur in rural areas which are surrounded by green space which is often not accessible and or natural. • Natural England's Accessible Natural Green Space Standards has indicated there are deficiencies within the county in the settlements of Leicester,

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<p>Coalville, Hinckley (including Barwell and Earl Shilton), Loughborough (including Shepshed), Market Harborough and Melton Mowbray.</p> <ul style="list-style-type: none"> • Good variety of transport links are evident across the County – road, rail, bus, air, while cycle and footway usage should be promoted. However, rural areas may benefit from improved public transport links. • Car ownership has also increased across the County from the period of 2001-2011 - overall bus patronage in the region has fallen – other transport modes such as cycling have seen double-digit increases (16% from 2009-2010). • Broadband connectivity is expected to be in continued demand throughout Leicestershire.
Climate Change	
<p>Climate Change Act 2008 (2050 Target Amendment) Order 2019; National Planning Policy Framework, Environment Act 2021; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council); Clean Growth Strategy: Leading the way to a low carbon future 2017; Net Zero Leicestershire Strategy 2023-2045; Net Zero Leicestershire Action Plan 2023-2027; UK Climate Change Risk Assessment 2022; ;Third National Adaptation Programme (NAP3) 2023 to 2028; Decarbonising transport: a better,</p>	<p>Priorities</p> <ul style="list-style-type: none"> • A net zero council by 2030 and to become a net zero county by 2045 or before. • The use of nature-based solutions and working with nature to promote climate resilience. • Net zero should be progressed within the context of other environment objectives e.g. biodiversity, air quality, health. • Promotion of nature-based solutions and working with nature to achieve multiple benefits. • To deliver low-carbon, affordable transport choices for all. • Ensure that action taken to cut greenhouse gas emissions is just - tackling inequality and injustice. • The need for durable materials and design considering the increasing number of assets at risk to climate change.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
<p>greener Britain (2021); Leicestershire Strategic Transport Priorities 2020-2050; Leicestershire Climate and Nature Pact.</p>	<ul style="list-style-type: none"> • The need for additional EV infrastructure in support of transition from petrol and diesel vehicle to ensure the transport network facilitates sustainable modes of transport. • Climate change needs to be considered when planning habitat creation and restoration. <p>Issues</p> <ul style="list-style-type: none"> • As a rural county, Leicestershire’s emissions and vulnerability to climate change are heightened, for example by greater need for travel and high levels of agricultural land use. • Since 2005, greenhouse gas emissions across Leicestershire have reduced however, there has been a much slower pace of transport decarbonisation. • There are individual sites and species which are particularly vulnerable to climate change impacts, including extreme weather events such as drought, flooding, and storms. • North West Leicestershire and Charnwood have the greatest emissions in the County, primarily driven by greater emissions in transport (both), domestic (Charnwood) and industry (NW Leicestershire) sectors, compared to other local authorities. • Climate change will cause more extreme heatwaves, droughts, intense rainfall, and other extreme weather. These impacts will increase the likelihood and severity of a variety of risks including flooding, damage to infrastructure and loss of biodiversity. • Heavy rain/high winds leading to more accidents, treefalls, road closures and delays and damage to infrastructure e.g. roads softening in the heat. • Disrupted access to services and facilities from extreme weather events.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<ul style="list-style-type: none"> Ash Dieback Disease is an example of where additional stress is placed upon our native ash trees, already trying to cope with drought, too much water, extreme wind, and damage from human activity.
Air Quality	
<p>National Planning Policy Framework, Environment Act 2021; Air Quality Standards Regulations (2010) Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); Air quality strategy: framework for local authority delivery (August 2023) 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council); Clean Air Strategy (2019); UK Plan for Tackling Roadside Nitrogen Dioxide (NO₂) Concentrations (UK Government, 2017); Cleaner Road Transport Vehicle Regulations 2011; Public Health England (2019) Review of interventions to improve outdoor air quality and public health; Blaby District Council Air Quality Strategy July 2018 - July 20215.</p>	<p>Priorities</p> <ul style="list-style-type: none"> Protection of human health by setting objectives and targets for key pollutants - achieve compliance in NO₂ limits. Tackling nitrogen dioxide (NO₂) concentration and fine particulates (PM₁₀ and PM_{2.5})- which is associated with the highways network. Embedding benefits of physical (re)design to calm traffic for air quality an seek to implement a hierarchy of sustainable travel which prioritises walking and cycling above other forms of transport. Reducing emissions from existing vehicles: planning for active travel and public transport. Promoting the uptake of low emission vehicles and reducing demand for more polluting forms of transport. Implement no-idling zones outside schools, make it easy for children to walk or cycle to school and increase public awareness in relation to air pollution and children.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<p>Issues</p> <ul style="list-style-type: none"> • There are higher levels of PM_{2.5}, PM₁₀, Nitrous Oxide (NO₂) around the main road routes in the County. These include the M69, A42, A46, A6 and the M1. • DEFRA estimates that 80% of NOx emissions in areas where the UK is exceeding NO2 limits are due to transport, with the largest source being emissions from diesel light duty vehicles (cars and vans). • There are several risk factors and health conditions that are known to have a relationship with exposure to poor air quality. • Climate risks exacerbating air quality impacts. • The impact of poor air quality, not only on life expectancy but also in terms of wider health, productivity and wellbeing and the wider environment
Water Environment	
<p>National Planning Policy Framework, Water Environment (Water Framework Directive) (England & Wales) Regulations 2017; Environment Act 2021; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council);; Local Flood Risk Management Strategy for Leicestershire (2024); The Flood and Water Management Act, 2010; The National Flood Emergency Framework for England, 2011 (as amended); Water for Life, Water White Paper, 2011; Future Water: The Government's water</p>	<p>Priorities</p> <ul style="list-style-type: none"> • Take WFD elements into consideration and help achieve specific catchment WFD objectives. • Many river corridors within Leicestershire have potential to be enhanced in terms of their capacity to retain water, and support biodiversity through restoration of appropriate wetland habitats. • improve the management of the wider environment including: Wildlife and habitat, Flooding, Greening the grey. • Integrate with natural processes and systems, ensuring flood plains are restored where possible, and contributing to climate adaptation – 'living water' initiative to treat water it collects from drains. • Canals, such as the Grand Union Canal in the southwest of Leicester and the Grantham Canal on the northern fringe of the County, offer linear corridors for

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
<p>strategy for England, 2011; Water for People and the Environment, Water Resources Strategy for England and Wales, 2009; Soar Catchment Management Plan, 2018; River Mease SSSI/SAC Restoration Plan, 2012; River Welland Catchment Flood Management Plan, 2009; Charnwood Borough Council Level 2 Strategic Flood Risk Assessment (2021); Hinckley and to flooding. Bosworth Borough Council Strategic Flood Risk Assessment (2020); Hinckley and Bosworth Borough Council, Blaby District Council and Oadby & Wigston Borough Council Strategic Risk Assessment (2014); Melton Borough Council Strategic Flood Risk Assessment (2015); North West Leicestershire District Council Strategic Flood Risk Assessment (2015); Salmon and freshwater fisheries act 1975; The Eels (England and Wales) Regulations 2009.</p>	<p>walking, cycling, and boating, as well as providing valuable habitats and wildlife corridors.</p> <ul style="list-style-type: none"> • Multiple benefit opportunities such as environmental enhancements, sustainable growth, and climate change mitigation. • Manage local flood risk through encouraging sustainable development working to ensure development is resilient to flooding and does not increase risk of flooding elsewhere. Any new schemes should be in line with the National Planning Policy Framework (NPPF), and any Strategic Flood Risk Assessment (SFRA) for that area. • Sustainably manage risks from flooding and coastal erosion, with greater understanding and more effective management of surface water. <p>Issues</p> <ul style="list-style-type: none"> • The area suffers from surface water flooding - Climate change is predicted to increase the risk of local flooding and the impacts will be felt more widely. • 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. • Development pressures may lead to increased pressure to build on floodplains. • Water quality problems from overflows from the highways network. • Leicestershire's water resources are not classified as 'water stressed' although action is likely to be required to increase capacity to address future deficits driven by climate change and population growth. <p>In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.</p>

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<p>In Flood Zone 3b (functional floodplain) essential infrastructure that has passed the Exception Test, and water-compatible uses, should be designed and constructed to:</p> <ul style="list-style-type: none"> • Remain operational and safe for users in times of flood; • Result in no net loss of floodplain storage; • Not impede water flows and not increase flood risk elsewhere.
Cultural Heritage	
<p>National Planning Policy Framework, Environment Act 2021; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); Ancient Monuments and Archaeological Areas Act, 1979 (as amended) 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Planning (Listed Buildings and Conservation Areas) Act 1990; Local Plans (all District and Borough Councils and City Council); Leicestershire County Council's Strategic Plan 2022-2026; Hinckley & Bosworth Borough Council Heritage Strategy; LCC Environment Strategy 2018 – 2030: delivering a better future; LCC Strategic Growth Plan (2018); Historic England Historic Landscape Characterisation; Historic England Heritage Counts.</p>	<p>Priorities</p> <ul style="list-style-type: none"> • Cultural and historical heritage are enjoyed and conserved. • Preserve and make accessible our local cultural and historic heritage to enhance the wellbeing of local residents - increase in the number of Leicestershire residents and visitors engaging in cultural and heritage activities. • Fine archaeological resource providing information about past activity. • Celebrate and promote LCC's heritage and identity. • Maintain the County's natural history, artefacts, specimens, information, and objects. • Preserve and provide access to resources which can be used to research Leicestershire's history. • Preserving designated/non-designated heritage assets or their setting or any features of special architectural or historic interest which it possesses. • Opportunities should be sought to conserve or enhance, better reveal, and/or appreciate cultural heritage elements. <p>Issues</p> <ul style="list-style-type: none"> • From 2018/19-2019/20, there was an 8% reduction in visits to heritage sites between 2018/19 and 2019/20 - Covid-19 has had a significant impact, with the County's heritage sites and libraries having closed during the restrictions.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<ul style="list-style-type: none"> • Potential conflict between development pressure and ensuring the significance of the historic environment is preserved and enhanced. • Threat of heritage being lost because of neglect, decay, or inappropriate development.
Geology and Soils	
<p>National Planning Policy Framework, Environment Act 2021; Environmental Protection Act 1990; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council); Leicestershire Minerals and Waste Local Plan Up to 2031 (2019); Safeguarding our Soils – A strategy for England, 2009; LCC Environment Strategy 2018 – 2030: delivering a better future; LCC Strategic Growth Plan (2018).</p>	<p>Priorities</p> <ul style="list-style-type: none"> • Prevent the 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. • Protect and enhance valued soils and prevent the adverse effects of unacceptable levels of pollution. • Government vision that by 2030 - all England's soils will be managed sustainably, and degradation threats tackled successfully. • Improve the quality of England's soils and safeguard their ability to provide essential services for future generations. • Where contamination is found to be significant, the Local Authority must actively take steps to remove or reduce the risk to people and the environment. • Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality to avoid the use of Best and Most Versatile land. • The availability of agricultural land used for food production should be considered when deciding what sites are most appropriate for development. <p>Issues</p> <ul style="list-style-type: none"> • Leicestershire has a long history of industrial production. There are many sites where land has become contaminated by human activities such as mining, industrial processes, chemical and oil spills, and waste disposal.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<ul style="list-style-type: none"> Leicestershire has a high proportion of best and most versatile agricultural land. The growing demand for housing (and associated access infrastructure) means there is potential for loss of best and versatile agricultural land due to competition from development. Increases in biodiversity loss resulting in reduced crop yields and increased soil erosion. Local flood risk may result in contaminants leaching into surface water, increasing levels of pollution, and threatening human health and the environment.
Landscape and Visual	
<p>National Planning Policy Framework, Environment Act 2021; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council); Landscape Sensitivity and Green Infrastructure Study for Leicester & Leicestershire (October 2017), Charnwood Forest Landscape Character Assessment (2008) and National Forest Strategy 2014 - 2024 ; Leicester, Leicestershire & Rutland Landscape and Woodland Strategy (2001, updated 2006); Tree Management Strategy 2019-2025; Country Parks and Open Spaces Strategy 2019-2029</p>	<p>Priorities</p> <ul style="list-style-type: none"> The need to recognise the importance of “the intrinsic character and beauty of the countryside” LCC offers a relatively diverse range of landscapes, from the well-wooded and newly planted woodland landscapes associated with the National Forest, to more distinctive rugged upland landscape associated with Charnwood Forest and areas of large scale intensive arable farming. The landscape also forms an integral part of the County’s economy. Future change needs to be managed in a way that is sympathetic to the landscape character and visual amenity of LCC. Securing growth and meeting current and future housing demands in a way that conserves and enhances landscape, biodiversity, and green infrastructure (GI). GI should contribute to the management, conservation, and enhancement of the local landscape, with new development respecting (and where possible enhancing) landscape character and quality.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<ul style="list-style-type: none"> • Maintaining the essential qualities of Leicester & Leicestershire and delivering high quality development. • Local planning designation - Green Wedges - These areas are protected from development by the relevant Local Plan, to deliver several functions including preventing the merging of settlements. • landscapes that are valued for attracting visitors such as the National Forest, Charnwood Forest Regional Park and the Vale of Belvoir. • improving the public realm as well as improving the design of non-designated space through development. • the importance of hedgerows and linear habitats to connect habitats such as woodland sites particularly in areas where intensive agriculture is dominant in the landscape with few woodland connections.
	<p>Issues</p> <ul style="list-style-type: none"> • Fragmented nature and often limited extent of areas of seminatural habitat such as woodlands, wetlands, and semi-natural grasslands. • There are areas with sparse coverage of Green Infrastructure, particularly in the north-east, east, and south-eastern parts of LCC. • Lack of woodland, fragmented habitats, such as through the enhancement of fragmented hedgerow, addressing access to the countryside and publicly accessible open spaces. • The need to adapt to changes in our climate is one that can be supported by the National Forest plans to increase urban tree cover by 20%. • Pressure from development.
Waste and Material Assets	
	Priorities

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
<p>National Planning Policy Framework, Environment Act 2021; Environmental Improvement Plan: First Revision of the 25 Year Environment Plan (2023); 'A Green Future: Our 25 Year Plan to Improve the Environment; Securing the Future: Delivering UK Sustainable Development Strategy (2005); Local Plans (all District and Borough Councils and City Council); Leicester and Leicestershire Economic Growth Plan 2012-2020; Leicestershire County Council Review of the Leicestershire Minerals and Waste Local Plan 2019-2031; Waste Management Plan for England 2021;; Resources and Waste Strategy for England (2018); Net Zero Strategy: Build Back Greener (2021); Leicestershire Resources and Waste Strategy 2022 – 2050; Enterprise partnership delivery plan (2021 – 2022).</p>	<ul style="list-style-type: none"> • Establish waste facilities in proximity to arisings so that the needs of communities are met, and the distance untreated waste is transported is minimised. • Enhance Leicestershire’s performance to support the delivery of the national recycling target of 65% by 2035. • Important to safeguard waste sites and ensure that development for sensitive non-waste uses does not prejudice the continued use of waste facilities and therefore the waste strategy for Leicestershire. • Continued provision of sustainable minerals and waste development which meets the County’s (and national in some cases) needs. • Continue movement away from landfill as a solution for waste management. • Attain the maximum possible reuse, recycling, composting and recovery of value from waste within the County of Leicestershire and thereby minimising the disposal of waste. • Make sufficient provision of waste facilities in the County of Leicestershire with capacity equal to the waste generated within the County of Leicestershire. • Make sufficient provision of minerals in the County of Leicestershire to meet national and local requirements. • Look to make use of production capacity at sites that are currently inactive to maintain the level of provision from quarries within Leicestershire. • Work towards a circular economy and contribute to achieving net zero carbon. <p>Issues</p> <ul style="list-style-type: none"> • The options for future sand and gravel extraction and associated development are limited largely by the geological distribution of resources within Leicestershire.

Name	Key Sustainability Priorities and Issues Derived from Relevant Policies, Plans, Programmes, and Strategies
	<ul style="list-style-type: none"> • There will be a potential shortfall of sand and gravel reserves within Leicestershire over the period to 2031 of some 7.67 million tonnes based on the production guideline. • Concerns have been raised that exports of crushed rock from Leicestershire to London and the south-east which are nationally significant could rise over the next five years. • Lack of sites in the eastern part of the County reflects the general paucity of potential reserves and the low demand in these predominantly rural areas.

Appendix C: Assessment Matrices

Assessment Matrices of LHDG policies, guidance and procedures

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
Biodiversity	1) To protect and enhance biodiversity	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways have the potential to result in harm to biodiversity and the County's natural environment if developed poorly. It also has potential to provide important infrastructure to improve connectivity for wildlife. LCC recognises the serious decline in nature and are developing a Local Nature Recovery Strategy as referenced in Principle 7 of the LDHG. Principle 7 includes specific focus on Biodiversity Net Gain and wildlife connectivity. This is reiterated in Principle 4.</p> <p>By adopting this guidance, new highways infrastructure is likely to contribute to an overall improvement in biodiversity on balance and through the implementation of green infrastructure within the highway will help to facilitate and maximise biodiversity net gain.</p> <p>However, the Principles are relatively narrow in focus with regard to the natural environment. They could be enhanced by also referencing the need for new highways to avoid harm to the natural environment through their design and implementation as well as then seeking net gains. Reference could also be added to the eradication of INNS and a preference to promoting native and non-invasive species as part of planting schemes. The reference to Green Infrastructure could be improved by broadening this to Blue/Green infrastructure to cover the interaction with the water environment where relevant. Additionally, Natural England's Green Infrastructure Framework: Principles & Standards should also be referenced within the LHDG as it provides evidence based practical guidance to help planners and designers</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
						on how to plan and design good green infrastructure. The LHDG principles may also want to consider whether for highways schemes, LCC wish to go above and beyond the statutory minimum 10% BNG. Wider encouragement of nature-based solutions is also recommended.
Population and Human Health	2) To protect and enhance human health and wellbeing	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has the potential to adversely affect human health and wellbeing if delivered poorly. It may also have positive benefits through following the principles outlined in the LHDG. These specifically pick up on aspects such as reducing poor air quality, promoting active travel and its health and wellbeing benefits, reducing congestion (which may indirectly benefit user stress), supporting inclusivity, improving safety and recognising the role of passenger transport in reducing rural isolation. Reference is also made to supporting documents including CaWS and the LCWIP. On balance it is considered that the LDHG supports the SEA Objectives and that benefits are expected to increase over time.</p> <p>Whilst user stress is not directly mentioned, working collaboratively with all stakeholders is essential and engagement work on developments such as new highway infrastructure will be delivered through the LHDG to meet the needs of occupants and users thus reducing future issues and any stress associated.</p> <p>Despite this, further enhancements could be made by including how the LHDG seeks to avoid noise and light pollution near to sensitive and vulnerable human receptors.</p>

312

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
	3) To reduce levels of crime and fear of crime associated with the road network	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to reduce levels of crime and fear of crime associated with the road network if well designed, it also has the potential to result in more accidents if poorly designed. By following the guidance outlined in the HGDG principles, such as “Designing out Crime” and “Safer Parks - Improving access for women and girls”, it should be possible to minimise these impacts and create a safer and more inclusive environment for all.</p> <p>In Principle 2, the proposed risk-based approach to assessment covers the need to consider traffic volumes, accident rates and vulnerability of highway users. This may indirectly help to reduce dangerous driving behaviour through design.</p>
	4) To protect and enhance accessibility and connectivity	I, R +	I, R +	I, R +	Medium	<p>New highways have the potential to positively protect and enhance accessibility and connectivity for users in Leicestershire. By following guidance in accordance with the NPPF, new highway infrastructures should contribute to the creation of attractive, safe and sustainable places that promotes opportunities to be accessed by a range of sustainable transport modes. This is assessed as a major positive effect.</p> <p>Whilst enabling access to a range of facilities is not explicit in the LHDG principles, it is indirectly inferred in Principle 4 with respect to Place-making. It is also indirectly inferred in Principles 5 and 6.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
	5) To promote alternative modes of travel including active travel	D/I, R ++	D/I, R ++	D/I, R ++	Medium	<p>New highways have the potential to positively alternative modes of travel including active travel. The guidance detailed in the LHDG principles clearly seeks to achieve this through the CaWS and LCWIP vision of 'creating convenient, accessible and practical cycling, walking and wheeling networks to help and encourage people to travel more sustainably'. This is assessed as a major positive effect.</p> <p>However, further enhancements can be made by incorporating equestrian routes into the network and all areas that have the potential to deliver active travel networks are explored.</p>
Geology and Soils	6) To protect and enhance geodiversity and soil quality	0	0	0	Medium	<p>New highways infrastructure has potential to adversely impact geodiversity and soil quality if developed inappropriately. The LHDG Principles do not reference how they would seek to avoid adverse impacts to geological sites, soil contamination and the loss of agricultural land through the LHDG. In the absence of such controls, there is potential for adverse effects to occur.</p> <p>There are 236 brownfield land sites across Leicestershire that can be valuable for wildlife. However, there is no mention of promoting brownfield sites for the new highways infrastructure within the LHDG Principles.</p> <p>It is recognised that the overarching LDHG Principles may not wish to address every environmental issue in detail. However, it is recommended that reference to the value of a sustainable use of land and protection of soil quality, geological diversity and minerals safeguarding is made, potentially in Principle 4 or as part of a wider natural environment statement in Principle 7.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
Water Environment	7) To protect and enhance the water environment and reduce risk of flooding	D/I, R +	D/I, R +	D/I, R +	Low	<p>New highways infrastructure has potential to adversely impact the water environment and increase risk of flooding across Leicestershire if developed inappropriately. By following the guidance and considering how drainage systems can cope with extreme rainfall, improving the resilience of the highways and implementing green infrastructure within the new highway developments, it should be possible to reduce the risk and impact of flooding for communities. Principle 7 includes reference to the role of green infrastructure in reducing flood risk although there is scope to expand on this. On balance, the LHDG principles go some way to seeking to control flood risk in relation to highways although there are other areas which could go further.</p> <p>Further enhancements that could be made include referencing the impacts of surface runoff from rainfall into nearby watercourses as well as an accidents or spillages in watercourses and the impacts on aquatic life. However, information has been provided elsewhere in the LHDG, particularly under drainage sections of Part 3 Design Layout and Part 4 Materials and Construction and additional research conducted on SuDS. The reference to Green Infrastructure could be improved by broadening this to Blue/Green infrastructure to cover the interaction with the water environment where relevant.</p>
Air Quality	8) To protect and enhance air quality	I, R +	I, R +	I, R +	Medium	<p>"New highways infrastructure has potential to adversely impact the air quality for human and ecological receptors. It can also facilitate improvements through provisions for electric vehicles and sustainable travel. The LHDG principles recognises an improvement in air quality resulting from active and sustainable travel but does not recognise the fact that certain</p>

315

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
						<p>areas/communities are more vulnerable to these effects than others - this may factor in to where and how new highways are constructed.</p> <p>Therefore, it is recommended that AQMAs, human receptors and ecological receptors are identified and guidance of how air quality can be improved over the short, medium and long term with the new highways infrastructure is provided.</p> <p>Construction activity is another phase of highways development which can result in air quality emissions in the form of construction dust. This is not referenced in the principles although we recommend consideration is given to seeking air quality benefits throughout the whole lifecycle of highways development.</p>
Climate Change	9) To minimise carbon emissions associated with the highway network	D/I, R +	D/I, R +	D/I, R ++	Medium	<p>New highways infrastructure has potential to contribute to carbon emissions through facilitating road traffic and through its materials use. By following the guidance within the LHDG principles, it should be possible to minimise carbon emissions associated with the highway network. By adopting this guidance, new highways infrastructure is likely to contribute to LCC's net zero ambitions through the promotion of alternative low-carbon modes of transport and electrical vehicles in the new developments. Additionally, in line with LCC's net zero commitments, consideration of the materials chosen for highway construction activities will be based on the carbon generated throughout its lifecycle.</p>

316

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
	10) To ensure resilience to climate change	D/I, R +	D/I, R ++	D/I, R ++	Medium	New highways infrastructure has potential to adversely suffer from the impacts of climate change if developed inappropriately. By following the guidance within the LHDG principles, it should be possible to ensure climate resilience. By adopting this guidance provided in the national highways document 'preparing for climate change on the strategic road network' and considering how the core principles are met in terms of resilience to climate change, flooding, heat damage, the new highways infrastructure is likely to contribute to a resilient highway for the future. Additionally, by incorporating green infrastructure into the new highway can further enhance climate resilience as it can provide shade, reduce flooding, act as a carbon sink and provide valuable corridors for wildlife.
Waste	11) To minimise waste generation and support re-use and recycling	0	0	0	Low	<p>It is noted that Principle 6 makes reference to the need for space to be provided for waste collection, thereby facilitating waste collection in associated development.</p> <p>New highways infrastructure has potential to create waste, primarily through the construction process. Through good design and planning it can also minimise this and support re-use and recycling. These issues are not identified in the LHDG principles. Enhancements could be made by including guidance on, or reference to minimising waste generation and use of sustainable materials in construction, perhaps in Principle 4.</p>
Material Assets	12) To protect function and usage of material assets	D/I, R +	D/I, R +	D/I, R +	Medium	"New highways infrastructure has potential to protect or impact the function and usage of material assets, notably through interactions with other transport networks of utilities.

317

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
						<p>The LHDG is clear on the need to protect the functionality and operation of the highway network. By adopting this guidance in the LHDG policy and assessing the adverse effects associated with new infrastructure highways during both the construction and long term can be mitigated.</p> <p>However, further enhancements could be made by including outlining how conflict can be avoided with other utilities and other forms of transport. It is recommended that engagement with utilities and other transport is held as outlined in Principle 1 working collaboratively."</p>
Cultural Heritage	13) To conserve and enhance the historic and cultural environment	I, R +	I, R +	I, R +	Medium	<p>New highways infrastructure has potential to adversely impact cultural heritage if developed inappropriately. By following this guidance, it should be possible to conserve and enhance the historic and cultural environment. Through the consideration of materials used and the adoption of green infrastructure, the new highways can help to reinforce the character and historic context of a place, whilst also respecting the diversity of settlements, layout and landscape (Principle 4). By adopting this guidance, new highways should be designed in a way that respects the context and adaptable to prevent them being unused in the future.</p> <p>However, further enhancements could be made by referencing the need to avoid damage to and, where appropriate, enhance the historic environment insofar as it is relevant to new highways development. This would inherently include built heritage, the historic landscape and archaeology.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 1: LHDG Principles						
Landscape, Townscape and Visual Amenity	14) To protect and enhance landscape, townscape and visual amenity	D/I, R +	D/I, R +	D/I, R +	Medium	<p>"New highways infrastructure has potential to adversely impact Landscape, townscape and visual amenity if developed inappropriately. By following this guidance, it should be possible to protect and enhance landscape, townscape and visual amenity through good design. By adopting this guidance, the new highways should incorporate green infrastructure and be developed in a way that respects the diversity of settlements and landscape whilst also enhancing its visual amenity.</p> <p>However, the LHDG focusses mainly on using design to enhance the landscape/townscape. This is positive although consideration should also be given to design seeking to avoid adverse effects on visual amenity in the first place, and then look to enhance it through good design.</p>

319

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
Biodiversity	1) To protect and enhance biodiversity	0	0	0	Low	<p>"New highways infrastructure has potential to result in harm to biodiversity and the County's natural environment if developed poorly. It also has potential to provide important infrastructure to improve connectivity for wildlife.</p> <p>The LHDG HDM Policies do not reference how they would seek to avoid adverse impacts on designated and undesignated habitats and species or how it seeks to deliver wildlife connectivity and BNG opportunities. In the absence of such strategies, there is potential for adverse effects to occur on biodiversity and the natural environment. However, the LHDG principles, in</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						<p>particular principle 7 includes detail on how the LHDG seeks to deliver wildlife connectivity, ecological networks, avoid habitat fragmentation and minimise wildlife casualties and maximising BNG.</p> <p>It is recognised that the HDM Policies may not wish to address every environmental issue in detail. However, under the HDM Policies it states that LCC's commitment to sustainability is further demonstrated through the production of wide-reaching policy and strategy documents, such as the Environmental Strategy and the Tree Charter and Tree Management Strategy. Therefore it is recommended that some level of detail from these strategies are included to demonstrate the LHDG commitments to enhancing and protecting biodiversity and the natural environment.</p>
Population and Human Health	2) To protect and enhance human health and wellbeing	D/I, R	D/I, R	D/I, R ++	Medium	<p>New highways infrastructure has the potential to adversely affect human health and wellbeing if delivered poorly. It may also have positive benefits through following the policies outlined in the LHDG. Policy 1 specifically picks up on developing a highway that is accessible for all users and promotes the uptake of active and sustainable travel choices and reduce congestion. By following policies outlined in the HDM in accordance with the National Planning Policy Framework (NPPF) and Road Safety Audit Policy, new highways should contribute to the designing of active and sustainable transport that gives priority first to pedestrians and cyclists and create an attractive and safer environment that benefits and promotes health and well being for all users. Furthermore, the Preparing Development Proposals (PDP) section provides guidance on transport assessments and travel plans. By adopting this guidance in accordance with the NPPF 117, the impacts of traffic and congestion on sensitive areas where vulnerable groups are</p>

320

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						<p>placed in and receptors like schools should be kept to a minimum, and course of action should be considered and decided during the pre-application stage. Therefore transport plans and assessments will likely indirectly minimise air pollution in sensitive areas.</p> <p>Additionally, plans outlined in the PDP pick up on reducing rural isolation through the Leicester and Leicestershire Strategic Growth Plan (SGP) setting out spatial vision for the area up to 2050 with a focus on future development in existing towns and rural areas. New infrastructure will be required to open up sites for development in these locations and the likelihood to change the economic and social roles of existing settlement, which should bring benefits to the area over time.</p> <p>The PDP recognises that details of any residential properties likely to result in Part 1 claims or noise insulation as part of Land Compensation Act are general requirements needed at the Preliminary Design Stage. Therefore, it is recommended that the LHDG provides details on how it seeks to avoid air/noise/light pollution impacting the value of properties in the area from the new highways infrastructure.</p>
	3) To reduce levels of crime and fear of crime associated with the road network	D/I, R +	D/I, R ++	D/I, R ++	Medium	<p>New highways infrastructure has potential to reduce levels of crime and fear of crime associated with the road network if well designed, it also has the potential to result in more accidents if poorly designed. By following the policies in accordance with national guidance such as Cabe's "Creating safe places to live through design" and the Landscape Institute's "Creating Safer Spaces White Paper" it should be possible to design out crime and create a safer and more inclusive environment for all.</p>

321

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						<p>In the HDM Policies, the new highways infrastructure is to be designed to give "priority first" to pedestrian and cycle movements, both within the scheme and with neighbouring areas. This may indirectly minimise conflicts between active travel modes and motor vehicle. Furthermore, the PDP makes reference to discourage conflicts and dangerous driver behaviour by regulating vehicle speeds which should influence how drivers regard their surroundings.</p> <p>Additionally, the Road Safety Audit Policy details key guidance, legislation and stages to follow to successfully identify aspects of the development that could increase the chances of road safety issues and recommend mitigation measures to minimise this and improve the safety of the roads for all users.</p>
	4) To protect and enhance accessibility and connectivity	D/I, R +	D/I, R ++	D/I, R ++	Medium	<p>New highways have the potential to positively protect and enhance accessibility and connectivity for users in Leicestershire. By following the guidance set out in the LHDG and the Local Transport Note 1/20 "Cycle infrastructure design" and considering the distance and routes to recreational, educational and community facilities as well as assessing the frequency and accessibility of public transport, the new highways can contribute positively to the delivery of a connected community in a safe and sustainable manner.</p>
	5) To promote alternative modes of travel including active travel	D/I, R ++	D/I, R ++	D/I, R ++	Medium	<p>The new highways infrastructure has potential to positively promote alternative modes of travel including active travel. The guidance, in particular Policy 1 seeks to maximise the uptake of active travel with genuine and attractive alternatives to cars that protects the environment including its "priority first" scheme for pedestrians and cycle movements. It is also highlighted in the PDP that consideration for new highways infrastructure</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						<p>should be given to sites well located in existing or planned pedestrian and cycle routes; any public footpaths or public rights of way (PRoW) which may be affected and how well the site is served by public transport. This is assessed as a major positive effect.</p> <p>Additionally, where access it to be determined it is recognised in the PDP that the LHA is likely to require the submission of site access proposals and design which cater for all users. It is recommended that this detail is provided to demonstrate how the LHDG seeks to promote alternative modes of travel including active travel.</p>
Geology and Soils	6) To protect and enhance geodiversity and soil quality	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact geodiversity and soil quality if developed inappropriately. The LHDG HDM Policies do not reference how they would seek to avoid adverse impacts to geological sites, soil contamination and the loss of agricultural land through the LHDG. In the absence of such controls, there is potential for adverse effects to occur.</p> <p>Section one of the PDP includes a table with the types of development needed to support development and transport statement/ plan and assessment. This includes land use such as industrial, however there is no detail on how industrial (brownfield sites) will be used.</p> <p>It is recognised that the HDM Policies may not wish to address every environmental issue in detail. However, the PDP recognises and lists that details of borrow pits and or temporary storage areas and ground investigation reports and identification of any special features or geotechnical aspects as requirements under earthworks at the Preliminary Design Stage. Therefore, it is recommended that the LHDG provides details</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						on it seeks to avoid adverse impacts on soil, agricultural land and the geology of the area from the development.
Water Environment	7) To protect and enhance the water environment and reduce risk of flooding	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact the water environment if developed inappropriately. The HDM Policies does not reference on how to protect and enhance the water environment and reduce the risk of flooding in Leicestershire nor how they seek to encourage green/ blue infrastructure. However, details on how the LHDG can reduce the risk of run off, spillages of pollutants into water courses, reducing the risk of flooding and the promotion of green infrastructure is detailed elsewhere in the LHDG, particularly Principle 7 and Part 4: Materials and Construction.</p> <p>It is recognised that the HDM Policies may not wish to address every environmental issue in detail. However, the PDP recognises and lists key information and requirements under drainage at the Preliminary Design Stage which includes the EA's approval for discharge of drainage. One of the EA's comments after reviewing the scoping report was that Blue infrastructure should also be considered under enhancing 'Wildlife connectivity and Green Infrastructure' for example all assets which cross a watercourse should be reviewed for their impact to migratory fish species and opportunities to remove weirs would be encouraged'. It would be recommended that this action is considered as there currently is no mention</p>

324

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						in the LHDG of blue infrastructure or how marine and aquatic life is to be protected.
Air Quality	8) To protect and enhance air quality	I, R +	I, R +	I, R +	Low	<p>New highways infrastructure has potential to adversely impact the air quality for human and ecological receptors. It can also facilitate improvements through provisions for electric vehicles and sustainable travel. Under the PDP there is acknowledgement of different levels of transport assessments that may be required by the Local Highways authority if the development is located within or adjacent to an AQMA. Although it does not explicitly state how it seeks to reduce air pollution by following and adopting the guidance in the travel plans and assessments, it is likely that air pollution can be minimised by carefully considering and identifying sensitive receptors during the highway design process.</p> <p>Therefore, it is recommended that AQMAs, human receptors and ecological receptors are identified and guidance of how air quality can be minimised during the construction phases and improved over the short, medium and long term with the new highways infrastructure is provided.</p> <p>Furthermore, through the maximisation of active travel stated in Policy 1 may also deliver indirect benefits to AQ (and carbon) if it results in a modal shift away from oil burning vehicles.</p>
Climate Change	9) To minimise carbon emissions associated	D/I, R +	D/I, R +	D/I, R +	Medium	New highways infrastructure has potential to contribute to carbon emissions through facilitating road traffic and through its materials use. By following the guidance in accordance with NPPF 116 (e), development

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
	with the highway network					<p>should “be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations”. For the safety of all highway users, LCC does not permit the trailing of cables from private residences across any part of the highway; development must be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations. Furthermore, Policy 1 of the HDM Policies strongly promotes the use of active travel through genuine and attractive alternatives that protect the environment. Therefore the use of EV is assessed as a positive effect.</p> <p>The policies do not mention how it will seek to promote alternative low-carbon construction materials, but does list sources of imported material as key information required at preliminary design stage in the PDP. The Highways Asset Management under Part 4: Materials and Construction of the LHDG lists that all materials have been chosen with the aim of being sustainable in how they are sourced and have a lower carbon life cycle.</p>
	10) To ensure resilience to climate change	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact the resilience to climate change if developed inappropriately. The LHDG HDM Policies makes no reference on how it seeks to promote highways infrastructure development that is resilient to fluvial and surface-water flood risk, heat stress, storm events and extreme weather. Nor does it seek to promote associated green infrastructure that is climate resilient or how it will integrate adaption measures. These have however, all been addressed elsewhere in the LHDG, particular under Principle 7 and in the Hydraulic Design of Part 4: Materials and Construction.</p>

326

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
Waste	11) To minimise waste generation and support re-use and recycling	D/I, R +	D/I, R +	0	Low	<p>It is noted that Policy 3 makes reference that street layouts must be designed to ensure the needs of emergency and waste collection services are accommodated.</p> <p>New highways infrastructure has potential to create waste, primarily through the construction process. Through good design and planning it can also minimise this and support re-use and recycling. These issues are not identified in the HDM Policies.</p> <p>Enhancements could be made by including guidance on, or reference to minimising waste generation and use of sustainable materials in construction, perhaps in PDP where recycling has been listed as key information in the design stage for earthworks.</p>
Material Assets	12) To protect function and usage of material assets	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to protect or impact the function and usage of material assets, notably through interactions with other transport networks of utilities. Under the Sites in Strategic Locations section of the PDP, it is noted that the new highways infrastructure is required to open up sites for development, which will have implications on travel patterns and connectivity. However, this can open up more economic and social opportunities which can bring neighbouring communities to Leicestershire. This is assessed as a positive effect.</p> <p>By following the guidance, potential conflicts can be minimised through the production of a travel plan and transport statement/ assessment it should be possible to ensure that suitable mitigation is proposed where there are significant impacts on capacity, congestion and/or highway safety. These mitigation measures to fall in line with Para.115 of the NPPF and reduce the</p>

527

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						<p>impact on road network and has been acknowledged in both the HDM Policies and PDP.</p> <p>Further enhancements can be made during the design and layout stage by justifying highway cross section for appropriate traffic flows where these have not been previously agreed by LCC or the LPA as laid out in Section 278 Agreements of PDP6.</p>
Cultural Heritage	13) To conserve and enhance the historic and cultural environment	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact cultural heritage if developed inappropriately. The HDM Policies and PDP makes no reference on how to conserve and enhance the historic and cultural environment. However, the HDM does recognise that the LHDG needs to have a wider role in delivering attractive, accessible places that offer benefits to the environment and our health and wellbeing. Therefore careful consideration needs to be actioned to conserve heritage assets and those that possess historic value when developing the new highways infrastructure. Elements of the guide questions under cultural heritage have been recognised elsewhere in the LHDG, particularly in the principles and materials and construction.</p> <p>Ground investigation reports and identification of any special features or geotechnical aspects are requirements under earthworks at the Preliminary Design Stage laid out in Section 278 Agreements of PDP6 and can be conducted to assess the suitability of sites for construction, taking into account historic, geological and archaeological value into consideration.</p>

328

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
Landscape, Townscape and Visual Amenity	14) To protect and enhance landscape, townscape and visual amenity	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to adversely impact landscape, townscape and visual amenity if developed inappropriately. By following this guidance, it should be possible to protect and enhance landscape, townscape and visual amenity by identifying areas for landscaping and provisional proposals through good design. By adopting this guidance, the new highways should avoid impacts on sensitive areas by assessing HGVs impact on residential areas and traffic levels on schools and areas with vulnerable people. Further enhancements on the current guidance, particularly the introductory information of the HDM could be through making the text more active or included within a Policy and phrased in a way that acknowledges that the 'LCC actively encourages developers to accord with national guidance and policy to use highways proposals to help deliver benefits to place-making, the natural and built environment and our health and wellbeing'.</p> <p>Additionally, the PDP lists out additional details required to support development proposals for Land Class E - Commercial, Business and Service ""E(g) Uses which can be carried out in a residential area without detriment to its amenity"" in a table.</p> <p>However, the policies do not mention how it will seek to promote enhanced soft estate associated with highways infrastructure through considerate planting and landscape design or how it seeks to protect and enhance local landscape character and settlement distinctiveness. Although these have been mentioned under Principle 7.10 and 3.1 of the LHDG principles retrospectively. Further enhancements required from the guidance includes details on how to mitigate significant visual amenity effects to achieve the</p>

529

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 2: Highways Development Management						
						SEA objectives, although this has been recognised under Part 4 Materials and Construction.

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
Biodiversity	1) To protect and enhance biodiversity	D/I, R ++	D/I, R ++	D/I, R ++	Medium	New highways have the potential to result in harm to biodiversity through habitat loss, fragmentation or pollution. They also have potential to provide important infrastructure to improve connectivity for wildlife through the provision of green infrastructure that delivers biodiversity benefits. LCC has a duty of care through the Natural Environment and Rural Communities Act 2006 (NERC Act) and the Environment Act (2021) to provide for the enhancement and improvement of biodiversity. Under the Protecting Wildlife and the Environment section of the Green Infrastructure and the Natural Environment guidance, the Environment Act 2021 and its provisions for the protection and improvement of the environment, including introducing mandatory BNG are referenced. By following this guidance and in accordance with national legislation, new highways infrastructure should help to contribute to an overall improvement in biodiversity through the implementation of green infrastructure to help facilitate and maximise BNG. Furthermore, it is noted in the introductory section of this guidance that by considering green infrastructure in the design process this can also

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						<p>contribute in delivering important opportunities to improve the connectivity of sites of value for wildlife whilst also supporting the development of Local Nature Recovery Strategy. This is assessed as a major benefit effect.</p> <p>Additionally, within Protecting Wildlife and the Environment, LCC recognise that transport infrastructure can have negative impacts on wildlife populations, either through habitat loss, fragmentation or pollution and that roads can also create barriers to the movement of wildlife, resulting in animals becoming trapped in traditional highway assets. Therefore, implementing mitigation measures to prevent habitat fragmentation and enable wildlife to navigate highways should be discussed at an early stage during the design, and specialist advice should be sought to meet principles of good asset management. Seeking specialist advice is also recommended within the Retaining Existing Trees and other Natural Assets guidance when retaining trees as trees help to retain the connectivity of habitats for wildlife in the natural environment whilst provides physical and mental wellbeing support to people.</p> <p>Further enhancements could be improved by incorporating Blue infrastructure to cover the interaction with the water environment where relevant. Additionally, the guidance suggests that developers should be encouraged to consider the use of grass mixes that include native or wildlife friendly species. Furthermore, when planning out routes and paths to open spaces such as PRowS the planting of fast growing, invasive species must be avoided. Additional guidance and reference to managing invasive species is provided in Part 4 Green Infrastructure Materials and Construction guidance. It has also been recommended by the EA that the enhancement</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						of roadside verges should be included to enable wildlife connectivity and reduce habitat fragmentation. Similarly, where new highways development is proposed adjacent to designated sites or priority habitats, opportunities should be sought to enhance the areas surrounding them. Additionally, EA recognise there are a large number of otter casualties recorded in the County and opportunities for wildlife crossings should include reviewing watercourse crossings and screen spacings on culverts, to improve mammal passage such as installation of ledges with guidance fencing such as a 150mm fence spacing will allow passage of adult otters.
Population and Human Health	2) To protect and enhance human health and wellbeing	D/I +	D/I +	D/I +	Medium	New highways infrastructure has the potential to adversely affect human health and wellbeing if delivered poorly. It may also have positive benefits through following the guidance during the design and layout process. By following this guidance in accordance with Principle 6 of the LHDG ""Supporting Inclusive Highway"", Equality Act 2010, the Department for Transport's ""Inclusive Mobility"" and Royal National Institute of Blind People (RNIB) Key Principles of Inclusive Street Design, designers are able to meet the needs of all road users including specific groups (visually impaired, other disabilities) such as shared surfaces that are designed to be safe and provide an alternative means to navigate by in conjunction with accommodating the needs of all road users in the new highways design layout. Additionally, the guidance states that horse riders are entitled to use bridleways and carriageways, all-purpose roads and byways open to all traffic. Furthermore, bridleways can also be used by cyclists and pedestrians and consideration should be given for all of these road user groups.

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						<p>The LHDG details speed control measures and interventions to improve levels of safety in the roads, and where changes are required on the existing highway network will seek public consultation, which should directly benefit road users and may also indirectly benefit user stress. Additionally, in relation to schools the general layout and geometry guidance details that new highways located adjacent to new and existing school must provide safe routes to schools and minimise the risk of on-street which has been recognised as being a safety hazard and causes traffic congestion. Consultation with the LPA will be required at the masterplanning stages to improve levels of road user safety and minimise accidents in the future. Reducing traffic congestion will indirectly improve the air quality of the area.</p> <p>The LHDG seeks to promote active travel through the CaWS and the LCWIP strategies that are referenced It also seeks to avoid pollution, particularly light pollution, when referring to PRow. By following the guidance and taking care to reduce illumination where lighting has been agreed, light pollution should be avoided - so long as such routes remain safe. Additionally, trees provide physical and mental wellbeing support to people and should be included within the design. However, care must be taken if planting trees, that it does not obstruct lighting of PRow and other routes which hinders its use to specific users when promoting active travel, such as from a safety/fear of crime perspective. The quantity and angle of lighting can also indirectly impact sensitive receptors such as watercourses and woodlands and should be designed to minimise impacts to commuting animals such as bats and otters.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						The guidance is relatively narrow in focus with regard to rural isolation. There is recognition and consideration that improvements to public transport are required including a more frequent service and Real Time Passenger Information System (RTPI) so passengers are aware of upcoming departures as well as enhancing existing services by improving footway links to the bus stops. All of these measures can all contribute in reducing rural isolation, however these can be further enhanced by providing clearer details public transport provision specifically in rural areas.
	3) To reduce levels of crime and fear of crime associated with the road network	D/I, R ++	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to reduce levels of crime and fear of crime associated with the road network if well designed, it also has the potential to result in more accidents if poorly designed. New routes must be designed to minimise the opportunities for crime and the guidance makes reference to using Emergency Accesses as a last resort if required to design out crime and anti-social behaviour and ensuring personal safety through working with the police DOCO and emergency services. Additionally, the guidance includes criteria that active travel routes should meet which includes having routes that are well lit and any planting, particularly trees, should not reduce illumination from the lighting, which should improve the safety for all users. Furthermore, the importance of lighting and safety is reiterated in the street lighting design layout guidance and that the lighting layout should be considered at the same time as the street layout to ensure lighting levels are maintained along a route so that pedestrians feel safe and are encouraged to continue using these routes.</p> <p>Implementing speed controls, through traffic calming measures listed in Department for Transport's (DfT's) Local Transport Note 1/07 and even</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						considering low speed single carriages for horse traffic (equestrian routes) should indirectly discourage aggressive and dangerous driving and promote safe and inclusive facilities. Furthermore, establishing a well-connected street network also promotes active travel, improved personal security and road safety for users, and it is also recognised that the presence of pedestrian streets cause drivers to reduce their speeds.
	4) To protect and enhance accessibility and connectivity	D/I, R ++	D/I, R ++	D/I, R ++	Medium	<p>New highways have the potential to positively protect and enhance accessibility and connectivity for users in Leicestershire. LCC has recognised that new residential streets should be designed to form part of a well-connected street network. By following guidance in accordance with the NPPF, new highway infrastructures should facilitate “access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use”. Additionally, LCC's revised Passenger Transport Policy and Strategy (PTPS) that was approved by Cabinet in December 2023 outlines how the council intends to support commercial operators, including the provision of infrastructure and other related schemes delivered through the Leicestershire Enhanced Partnership. Furthermore, Principle 6 of the LHDG also sets out LCC's vision for delivering an accessible highway to all road users including employment and commercial properties. This is assessed as a major positive effect.</p> <p>The PTPS reflects that Leicestershire's bus network is predominantly operated on a commercial basis, with the council considering the travel needs of residents where those needs are not otherwise met by the commercial sector. The guidance outlines ways the bus service can be</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						<p>improved and enhanced to promote a sustainable alternative to cars, that pedestrians can access.</p> <p>Additionally, the guidance outlines active travel links displaying what good pedestrian and mixed provision links can look like and what poor links look like. By adopting this guidance, new highways infrastructure should be able to contribute to a network that is well-connected and delivers a range of benefits including but not limited to encouraging active travel.</p>
	5) To promote alternative modes of travel including active travel	D/I +	D/I +	D/I +	Medium	<p>New highways have the potential to positively promote alternative modes of travel including active travel. The Active Travel Design Layouts clearly seeks to achieve this in through the CaWS and LCWIP, Walking, Cycling & Horse-Riding Assessment & Review (WCHAR) and adopting the principles of Local Transport Note 1/20 'Cycle Infrastructure Design' (LTN 1/20) and Manual for Streets. The document also refers to other sections of the LHDG such as Principle 5 - Encouraging Active and Sustainable Travel; Active Travel Assets and Other Paved Areas (Materials and Construction) and Parking and Electric Vehicle Charging.</p> <p>As included above, the PTPS reflects that Leicestershire's bus network and outlines ways the bus service can be improved and enhanced to promote a sustainable alternative to cars, that pedestrians and other road users can use and access too, thus promoting active and sustainable transport links.</p> <p>Furthermore, by adopting the guidance and implementing good pedestrian and mixed provision links into the network, it is likely the new highways infrastructure can enhance and encourage a well-connected system, that delivers a range of benefits in an active and sustainable manner.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
Geology and Soils	6) To protect and enhance geodiversity and soil quality	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact geodiversity and soil quality if developed inappropriately. While the guidance does not explicitly makes reference to LA 117 of the Design Manual for Roads and Bridges (DMRB) which provides guidance on areas that need to careful environmental consideration. By following the guidance under the DMRB, it should be possible to avoid the loss of best and most versatile agricultural land.</p> <p>Under the SuDS suitability checklist a factor to consider is soils and geology. Additionally, the drainage systems guidance recognises that infiltration into the ground needs to be done in a safe and sustainable manner. However, the guidance does not reference how they would seek to avoid adverse impacts to geological sites or soil contamination and therefore it would be recommended to further enhance the guidance that clear details on how this would be avoided is provided.</p>
Water Environment	7) To protect and enhance the water environment and reduce risk of flooding	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to adversely impact the water environment and increase risk of flooding across Leicestershire if developed inappropriately. National planning policy and guidance sets a clear expectation for developers to provide SuDS which include benefits to water quality, flood risk, biodiversity and amenity. There is no obligation to adopt SuDS, however the EA who is responsible for flood and erosion risk management of rivers stated, in their SEA scoping opinion that LCC should be more ambitious with their drainage utility plan by incorporating SuDS and swales in their comments to the scoping report, reiterating its benefits. The guidance includes a SuDS suitability checklist which should be considered when picking the suitability of a site to implement SuDS. Flood</p>

537

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						<p>plain, groundwater and maintenance are all referenced and further enhancements would include providing detail on SuDS impact (positive/negative) on their use to the highways, drainage and water environment.</p> <p>The guidance lists specifications on drainage systems and the adoption of drainage and by following this guidance in accordance with relevant legislation referenced (Section 38 or 278 agreement of Highways Act 1980 and Water Industry Act 1991) measures would be in place to manage water run-off and discharges into watercourses.</p> <p>However, the guidance does not reference how it seeks to promote natural functioning of watercourses, blue infrastructure or enhance and protect aquatic ecology. In accordance with the comments from the EA and NE, it would be recommended that blue infrastructure is considered especially reviewing the impact on aquatic life (e.g. migratory fish).</p>
Air Quality	8) To protect and enhance air quality	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact the air quality for human and ecological receptors. It can also facilitate improvements through provisions for electric vehicles and sustainable travel. Green infrastructure can reduce air pollution and careful consideration should be given to sensitive receptors like schools when designing the new highways infrastructure to keep the impacts of air quality and construction dust to a minimum.</p> <p>Therefore, it is recommended that AQMAs, human receptors and ecological receptors are identified and guidance on how air quality can be improved over the short, medium and long term with the new highways infrastructure is provided. Additionally, maximising the uptake of active travel and</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						transitioning to low-carbon transport modes such as EVs should also contribute with reductions in air pollution, particularly in AQMAs and support LCC's wider targets of achieving net zero.
Climate Change	9) To minimise carbon emissions associated with the highway network	D/I, R +	D/I, R +	D/I, R +	Low	<p>New highways infrastructure has potential to contribute to carbon emissions through facilitating road traffic and through its material use. By following the guidance in accordance with NPPF (107) and building regulations, LCC should encourage developers to consider opportunities for future proofing EV infrastructure within new development sites, including new technologies and changes in driving habits. By adopting this guidance, the new highways infrastructure is likely to contribute to LCC's net zero ambitions through the decarbonisation of the transport system and promotion of alternative low-carbon modes of transport and EV.</p> <p>This section of the LHDG does not refer to seeking to promote alternative low-carbon construction materials, however this has been covered in detail in the palette of materials guidance under Part 4 - materials and Construction of the LHDG. The active travel design guidance does acknowledge, however, that the location of important community facilities (schools, health centres etc.) within development may influence decisions regarding the suitability of different road types for active travel movements, and subsequently may indirectly influence the choice of materials used to accommodate all users.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
	10) To ensure resilience to climate change	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to adversely suffer from the impacts of climate change if developed inappropriately. By following the LHDG design and layout guidance, it should be possible to ensure climate resilience. By incorporating green infrastructure into the design of the new highways infrastructure, this can help to mitigate the impacts of climate change because of its ability to absorb carbon, manage flood water, reduce air and water pollution, cool the environment by providing shade and moisture to the air providing opportunities for wildlife; and controlling soil erosion. This is assessed as a minor positive effect.</p> <p>Under the Well-connected street networks section of the general design layout guidance, it states that traffic can be routed around a point of closure if it is necessary to excavate the carriageway for maintenance. This can be further enhanced by broadening the scope to account for mitigation measures in the event of climate change impacts.</p> <p>Given, this section focuses on the design and layout, it would be useful, and is therefore recommended, that guidance on design with respect to climate resilience is included in this section of the LHDG, alongside referencing relevant legislation within other areas of the LHDG such as in the hydraulic design section in Part 4 - materials and construction.</p>
Waste	11) To minimise waste generation and support re-use and recycling	0	0	0	Low	<p>New highways infrastructure has potential to create waste, primarily through the construction process. Through good design and planning it can also minimise this and support re-use and recycling. These issues are not identified in the design layout. Enhancements could be made by including</p>

340

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
						guidance on how this will be managed, although considerations have been recognised in other sections of the design guide.
Material Assets	12) To protect function and usage of material assets	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to protect or impact the function and usage of material assets, notably through interactions with other transport networks of utilities. The guidance makes reference to landscaping proposals to be prepared at the pre-planning stage so that utility providers can be consulted. By following this, it should help reduce any potential conflicts that may arise from not involving respective parties in the consultation at pre-app.</p> <p>The LHDG recognises that materials and construction methods used for a road must be based on the largest vehicle expected to use it. Thus seeking to protect and enhance the new highways resilience for the future.</p> <p>The guidance provides details on road speeds and traffic flows and recognises that active travel interventions will depend on these factors. During the design, effective traffic management should be deployed through a travel and transport plans/ assessments, identifying alternative routes so that traffic congestion and disruption is kept to a minimum. Additionally, the guide provides Traffic Regulation Orders guidance to follow and details on traffic calming techniques and signage.</p>

341

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
Cultural Heritage	13) To conserve and enhance the historic and cultural environment	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to adversely impact cultural heritage if developed inappropriately. By following this guidance, it should be possible to conserve and enhance the historic and cultural environment. The design utilities guidance also seeks to protect and avoid any adverse impacts by avoiding placing equipment within areas where pre-construction surveys have identified archaeological features, including foundations to listed buildings, or putting appropriate mitigation in place in line with planning conditions.</p> <p>Furthermore, the green infrastructure design principles recognises that the natural environment such as trees and hedgerows may have an intrinsic part of the wider historic landscape. Heritage assets are of great value to communities for their contribution to the character and understanding of a place. Therefore, it is recommended that the historic, architectural, artistic and archaeological interests are conserved and enhanced when designing and implementing the new highways infrastructure.</p> <p>Regarding the built environment references within the guidance, these are limited in relation to respecting the local context and its surroundings. It is acknowledged, for example, under the active travel guidance that new active travel proposals should offer high quality designs that fully considers the local context including the existing local network and nearby services such as transport hubs, health centres/doctors' surgeries, schools and other care establishments. However, this can be further enhanced by including some more detailed guidance throughout this section of the LHDG in relation to conserving and enhancing the built environment and its setting.</p>

342

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 3: Design and Layout						
Landscape, Townscape and Visual Amenity	14) To protect and enhance landscape, townscape and visual amenity	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to adversely impact landscape, townscape and visual amenity if developed inappropriately. By following this guidance, it should be possible to protect and enhance landscape, townscape and visual amenity through good design. Green infrastructure within highway areas can be as important in determining the character of the development and integrating it into its surroundings as landscaping elsewhere within the site. Therefore, it is important to understand and consider the local context, character and constraints of the settlement when designing any planting and associated infrastructure.</p> <p>Additionally, in keeping with the local distinctiveness of an area, existing trees and landscaping should be retained wherever possible and protected during construction activities in accordance with the British Standard 'BS5837:2012 (referenced within the Green Infrastructure Design Principles) thus keeping potential impacts to a minimum. The location and installation of utility equipment above ground must not negatively impact the visual amenity of the area by obstructing the views from the houses, intruding into areas of open-plan front gardens or disrupting the line of low boundary walls as laid out in the design utilities guidance of the LHDG.</p> <p>Further enhancements would include details on how they seek to enhance the visual amenity of settlements through appropriate traffic management schemes.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
Biodiversity	1) To protect and enhance biodiversity	0	0	0	Low	<p>New highways have the potential to result in harm to biodiversity and the County's natural environment if developed poorly. It also has potential to provide important infrastructure to improve connectivity for wildlife. LCC recognises the serious decline in nature and are developing a Local Nature Recovery Strategy as referenced in Principle 7 of the LDHG. Principle 7 includes specific focus on Biodiversity Net Gain and wildlife connectivity. This is reiterated in Principle 4.</p> <p>By adopting this guidance, new highways infrastructure is likely to contribute to an overall improvement in biodiversity on balance and through the implementation of green infrastructure within the highway will help to facilitate and maximise biodiversity net gain.</p> <p>However, the Principles are relatively narrow in focus with regard to the natural environment. They could be enhanced by also referencing the need for new highways to avoid harm to the natural environment through their design and implementation as well as then seeking net gains. Reference could also be added to the eradication of INNS and a preference to promoting native and non-invasive species as part of planting schemes. The reference to Green Infrastructure could be improved by broadening this to Blue/Green infrastructure to cover the interaction with the water environment where relevant. The LHDG principles may also want to consider whether for highways schemes, LCC wish to go above and beyond the statutory minimum 10% BNG.</p>

344

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
Population and Human Health	2) To protect and enhance human health and wellbeing	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has the potential to adversely affect human health and wellbeing if delivered poorly. It may also have positive benefits through following the principles and other parts outlined in the LHDG.</p> <p>The use of coloured materials can be useful for emphasising cycle lane markings and reminding other road users or pedestrians that the surface is either primarily or exclusively for the use of cyclists and to look out for cyclists at conflict points. This should indirectly improve the levels of road safety and hopefully minimise accidents with clear cycle markings, whilst also meeting the needs for cyclists on the roads. Additionally, having tactile flooring can be used to segregate carriage ways as well as meeting the needs of disabled and visually impaired users of the highways at crossing points. This will ensure safety and reduce user stresses for all road users.</p> <p>Where required, appropriate noise barriers should be designed and implemented in accordance with DMRB LD 119 -Roadside environmental mitigation and enhancement. This can indirectly result in reduced noise near sensitive receptors like residential properties that have been identified along the route of the new highways infrastructure.</p>
	3) To reduce levels of crime and fear of crime associated with the road network	D/I, R +	0	0	Low	<p>New highways infrastructure has potential to reduce levels of crime and fear of crime associated with the road network if well designed, it also has the potential to result in more accidents if poorly designed. The use of coloured materials can be useful for emphasising cycle lane markings and reminding other road users or pedestrians that the surface is either primarily or exclusively for the use of cyclists and to look out for cyclists at</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						<p>conflict points. This should directly and indirectly result in discouraging dangerous driving behaviour.</p> <p>Reducing levels of crime and fear of crime associated with the road network is not applicable to this section of the LHDG, but this has been addressed in principle 6 and policy 1 of the LHDG.</p>
	4) To protect and enhance accessibility and connectivity	0	0	0	Low	<p>New highways have the potential to positively protect and enhance accessibility and connectivity for users in Leicestershire. This part of the LHDG does not reference how it seeks to enable sustainable access and connectivity to residential developments, green spaces, or community facilities. These elements have been covered in other sections of the LHDG.</p> <p>It is recognised that the materials and construction guidance may not explicitly address every environmental issue in detail. The use of coloured materials within the palettes and segregating carriageways for cyclists and other road users can indirectly promote the use of sustainable travel to places like work. Additionally, it is important when delivering green infrastructure that there is enough space for planting so that this does not directly impact the accessibility to roads or residential properties and ultimately limit the uptake of sustainable and active travel.</p>
	5) To promote alternative modes of travel including active travel	0	0	0	Low	<p>New highways infrastructure has the potential to promote alternative modes of travel including active travel. By following the guidance and choice of materials selected these can enhance existing footpaths and cycle routes through the use of suitable materials and palettes.</p>

346

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						This part of the LHDG does not reference how they seek to enable the provision of and access to sustainable public transport networks. However, this has been covered in the design layout section of the LHDG (part 3).
Geology and Soils	6) To protect and enhance geodiversity and soil quality	D/I, R +	D/I, R +	D/I, R +	Low	<p>New highways infrastructure has the potential to adversely impact the geodiversity and soil quality if developed inappropriately.</p> <p>The guidance makes reference to BS 5930:2015+A1:2020 under site surveys and investigations. This provides guidance for highway works considering ground investigation and assess the suitability of sites for construction and should include both underlying geology, and ground and hydro-geological properties and providing soil parameters for design and construction. There is also a Construction Code of Practice for the Sustainable Use of Soils on Construction Sites listed. By following and adopting the guidance and conducting appropriate site investigations it should be possible to minimise adverse effects on the geology and soil when designing and constructing new highways infrastructure. Additionally, all earthworks must comply with Series 600 and Appendix 6 of the MCHW.</p> <p>The materials and construction of highways drainage document lists out the requirements needed to satisfy LCC when constructing sub-soil drainage. In addition to this, it is</p>

347

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						recommended that reference to the value of a sustainable use of land and protection of soil quality, geological diversity and minerals safeguarding is made.
Water Environment	7) To protect and enhance the water environment and reduce risk of flooding	D/I, R +	D/I, R +	D/I, R ++	Medium	<p>New highways infrastructure has potential to adversely impact the water environment if developed inappropriately. By following and adopting the guidance set out in the LHDG M&C Drainage in accordance with LCC standards for pipe system discharges this should help minimise the impacts of scouring occurring in river banks, ditches and watercourses.</p> <p>Appropriate land drainage measures have been considered which provide intercepting drains and ditches with satisfactory outfall where there is or is likely to be run-off from landscaped areas, open spaces and adjoining land. Furthermore, where surface water would discharge onto property or cause flooding to footpaths, carriageways gullies should be provided.</p> <p>Additionally, the new infrastructure should be designed in a way that means no water from the highway should leave the highway at any time, which should prevent the risk of flooding and for any accidents or spillages to enter watercourses.</p> <p>Additionally, by adopting the Value of Trees toolkit, and in particular the "Tree Matrix", this can assist with the selection of the appropriate tree species within the new highways and assist in achieving specific ecosystem service objectives, such as reducing the risk of flooding.</p>

348

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						<p>However, further enhancements could be made by including the design of blue infrastructure in the highways development or how it seeks to protect and enhance aquatic ecology. In accordance with the comments from the EA, it would be recommended that blue infrastructure is considered especially reviewing the impact on aquatic life (e.g. migratory fish).</p> <p>The LHDG provides guidance on new culvert sizing. Note that the EA do not generally support new culverts and therefore consultation should be recommended in these instances.</p>
Air Quality	8) To protect and enhance air quality	0	0	0	Low	<p>New highways infrastructure has potential to adversely impact the air quality for human and ecological receptors. The guidance does not reference how they seek to reduce air pollution or dust from the construction of the highway. Therefore, it is recommended that AQMAs, human receptors and ecological receptors are identified and guidance of how air quality can be minimised during the construction phases and improved over the short, medium and long term with the new highways infrastructure is provided. Review by the LCC is underway.</p> <p>Additionally, the use of warm mix in surface courses results in reduced fumes during the laying process due to lower temp (50% for each 10°C reduction in temp).which improves working conditions for the workforce and may limit the impact of air pollution on the environment. Therefore, is recommended that warm mix of surfaces are included within the materials palette.</p>

349

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
Climate Change	9) To minimise carbon emissions associated with the highway network	I, R +	I, R +	I, R +	Medium	<p>"New highways infrastructure has potential to adversely suffer from the impacts of climate change if developed inappropriately.</p> <p>All materials listed in section 3 of the Highways Asset Management have been chosen with the aim of being sustainable in how they are sourced, have lower initial and life cycle embodied CO2e, have a record of longevity in service and the ease of ongoing maintenance. Therefore, by adopting this guidance, new highways infrastructure is likely to contribute to the minimisation of carbon emissions associated with the highway network.</p> <p>Additionally, under sustainability considerations for the palette of materials, there is reference to transport. Further references have been made around creating and enhancing cycle pathways that should indirectly result in an uptake of sustainable low carbon transport modes. However, this can be further enhanced by providing clear guidance on how the LHDG seek to promote alternative low-carbon modes of transport, particularly through EV charging infrastructure.</p>
	10) To ensure resilience to climate change	D/I, R +	D/I, R +	D/I, R +	Medium	<p>New highways infrastructure has potential to adversely impact the developments climate resilience if developed inappropriately. By following this guidance, it should be possible to minimise these impacts and ensure resilience to climate change.</p> <p>By meeting the requirements of the 'Sewers for Adoption' published by Water UK/WRC plc in accordance with section 104 of the Water Industry Act 1991 referenced in the LHDG the new highways infrastructure should be implemented into a system that will not be flooded in a 1% (1/100 year return period) thus improving its climate resilience. Additionally, green</p>

350

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						<p>infrastructure can help reduce the impacts of climate change. By adopting the Value of Trees toolkit, and in particular the "Tree Matrix" listed within the Green Infrastructure Materials and Construction Guidance, appropriate species can be selected to help with reducing flooding and carbon sequestration and improve the climate resilience of the new highways infrastructure over its lifetime.</p> <p>Further enhancements could include providing details on climate adaptation measures for other road users (cyclists/ pedestrians) also using the highways over the short, medium and long-term in the event of climate change.</p>
Waste	11) To minimise waste generation and support re-use and recycling	D/I, R ++	D/I, R ++	D/I, R +	Low	<p>New highways infrastructure has potential to create waste, primarily through the construction process. Through good design and planning it can also minimise this and support re-use and recycling. Under the Materials and Construction Introductory document, it is recognised that the use of recycled materials must be considered, where they meet the requirements of good asset management. Additionally, the materials that are chosen should be durable and suitable for the hierarchy of the road/ footway section and the anticipated traffic/pedestrian flow. These materials generally have lower environmental impact in when compared with imported materials and materials like precast concrete slabs are also 100% recyclable. This is assessed as a major positive effect.</p> <p>Further enhancements could include detailing how waste of these materials will be minimised during the construction of the new highways infrastructure.</p>

351

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
Material Assets	12) To protect function and usage of material assets	D/I, R ++	D/I, R ++	D/I, R +	Medium	<p>New highways infrastructure has the potential to protect function and usage of material assets. By following the guidance and not positioning gullies within pedestrian crossing points or where traffic would be prevented from passing while they are being emptied, would likely result in reduced traffic congestions and a free flow of movement.</p> <p>It is recognised that the LHDG may not wish to address every environmental issue in detail. However, where SuDS has been proposed for highway drainage it has been made clear that roads will not be adopted unless LCC are satisfied with the design of the system and that satisfactory arrangements are in place to cover its future maintenance. Additionally, early stage engagement is required with all parties to agree ownership and responsibility for the facility. This is assessed as a major positive effect especially when seeking to avoid any potential conflicts with highway infrastructure and other utilities, particularly water. Furthermore, any potential conflicts with green infrastructure and tree roots with underground utilities which is recognised as a common issue in the Green Infrastructure Materials and Construction Guidance can be mitigated through good design and construction practices.</p>
Cultural Heritage	13) To conserve and enhance the historic and cultural environment	I, R +	I, R +	I, R +	Medium	<p>New highways infrastructure has the potential to adversely impact cultural heritage if developed inappropriately. The LHDG recognises the characteristic of many villages is the informal appearance of highway edge which consist of grass verges without kerbs. Therefore, in these areas standard pre-cast concrete kerbs may not be appropriate and natural stone or riven or exposed aggregate kerbs might be used to prevent overriding.</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						Site investigations seek to assess the suitability of sites for construction and historic use and archaeological have been listed under site surveys, tests and investigations. However, further enhancements would be to provide detail on the materials and palettes considered in Conversation Areas or where the settings of heritage assets such as listed buildings are concerned, so that any potential adverse effects on these landscapes that possess historic value are avoided.
Landscape, Townscape and Visual Amenity	14) To protect and enhance landscape, townscape and visual amenity	D/I, R +	D/I, R +	D/I, R +	Medium	<p>The new highways infrastructure has the potential adversely impact landscape, townscape and visual amenity if developed inappropriately.</p> <p>By following the guidance in line with the Department for Transport, LCC have developed a palette of materials that balances the desire for sustainability and remaining appropriate to the local character and distinctiveness. The materials selected are also familiar to the area and easily acquired through the Leicestershire supply chain. Furthermore, aesthetic considerations for each material have been accounted for and any deviation from the permitted colours, to match the existing requires agreement with LCC and needs to be submitted to the Highways Asset Management Team for review.</p> <p>By adopting this guidance, new highways infrastructure is likely to contribute to enhancing and protecting local landscape, character and distinctiveness of the area whilst also avoiding impacts on the visual amenity of the area. Additionally, the Green Infrastructure Design Principles details how planting (e.g., trees hedges and shrubs) on infrastructure should be designed with this knowledge and planted in the</p>

SEA Topic	SEA Objective	How does the ... with the SEA Objective?				
		S-T	M-T	L-T	Certainty	Summary and Recommendations
Matrix 4: Materials and Construction						
						right places that with enough space to secure long-term maintenance in accordance with the NPPF.

Appendix D: Outline of Leicestershire Highways Design Guide and Scope of Assessment

Assessment Matrices of LHDG policies, guidance and processes

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
Part 1: Introduction	About	Foreword			No	Out	N/A
		About the LHDG			No	Out	
		Roles and Responsibilities			No	Out	
		Helping the LHA help you			No	Out	
		Quick Guide to the LHDG			No	Out	
		Table of Amendments			No	Out	
Part 2: Highways Development Management	LHDG Principles	1 Working Collaboratively			Yes	In	Matrix 1: Section 6.2; Appendix C
		2 Facilitating Safe and Effective Highway					
		3 Promoting Road Types for All Users					
		4 Creating Durable and Easily Maintained Placed					
		5 Encouraging Active and Sustainable Travel					
		6 Supporting Inclusive Highway					
		7 Tackling Climate Change and Protecting the Environment					
			HDM Policy			Yes	In

355

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
	Highways Development Management	Preparing Development Proposals	Preparing Development Proposals		Yes	In	Matrix 2: Section 6.3; Appendix C
			Data Collection		No	Out	N/A
			Traffic Modelling		No	Out	
			Road Safety Audits		Yes	In	Matrix 2: Section 6.3; Appendix C
Part 3: Design Layouts	Design Layouts	Introduction			No	Out	N/A
		Road Types/Hierarchy	Road Typologies	Major Residential Access Road	No	Out	
				Residential Access Road			
				Shared Surface Residential Access			
				Major and minor industrial access road			
Geometry and Layouts		Yes	In	Matrix 3: Section 6.4; Appendix C			

356

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
			Vehicle tracking		No	Out	N/A
			Vertical curves		No	Out	
			Visibility splays		No	Out	
			Junction design		No	Out	
			Turning heads		No	Out	
			Mixed use developments		Yes	In	Matrix 3: Section 6.4; Appendix C
		Developments Served by Private Drives	Residential developments served by private drives and areas		No	Out	N/A
			Employment and commercial developments served by private drives and areas		No	Out	
		Active & Sustainable Travel	Active Travel	Active Travel front page	Yes	In	Matrix 3: Section 6.4; Appendix C
				Active Travel Guidance			
			Public Rights of Way				
			Passenger Transport				
		Speed Control			Yes	In	

357

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report	
		Signing & Lining and TROs			Yes	In		
		Street Lighting			Yes	In		
		Utilities			Yes	In		
		Drainage			Yes	In		
		The Natural Environment and Green Infrastructure	Green Infrastructure Design Principles and Layout Guidance			Yes		In
			Preserving existing trees and the natural environment					
		Parking and Electric Vehicle Charging	Motorised Vehicle Parking			Yes		In
			Cycle Parking			Yes		In
			Electric Vehicle Charging			Yes		In
		Marking the Highway Boundary			No	Out		N/A
Part 4: Materials and Construction	Materials and Construction	Introduction			Yes	In	Matrix 4: Section 6.5; Appendix C	
		Materials	Application for approval of new material		Yes	In		
			Standard Palette of Materials					
			Enhanced Palette of Materials					

358

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
		Specification and Standard Drawings	Specification for Highway Works		No	Out	N/A
			Standard Drawings				
		Site Surveys, Tests and Investigations			Yes	In	Matrix 4: Section 6.5; Appendix C
		Sampling and Testing Goods and Materials			No	Out	N/A
		Carriageway	Carriageway construction		No	Out	N/A
			Speed control features				
		Highway Structures			No	Out	
		Active travel assets and other paved areas	Active Travel				
			Public Rights of Way				
		Traffic signs and signals, road markings and studs					
		Street lighting					
		Street Furniture and Street Art					
		Drainage			Yes	In	
			New Green Infrastructure		Yes	In	

359

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
		The Natural Environment and Green Infrastructure	Protecting Existing Green Infrastructure				Matrix 4: Section 6.5; Appendix C
		Safety Fencing and Barriers			Yes	In	
		Noise Barriers and Screening			Yes	In	
		Earthworks			Yes	In	
Part 5: Approvals and Highway Adoption	Approvals, Adoption and Commuted Sums	Adopting New Roads (S38s)	Road Adoption Policy		No	Out	N/A
		Introduction	Preliminary requirements for preparing a Section 38 agreement				
			The Advanced Payment Code				
			Designing your Road Works and CDM				
			Road Safety				
			Obtaining Approvals for Road Works				
			Completing a Section 38 Agreement				
			Constructing S38 Roadworks				

360

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
			Technical approval of roads to remain private				
			Provisional and Final Certification				
			Checklists	LCC S38 application form			
				Inspection Checklist Section APC			
				Key Construction S38 Inspection Stages Checklist			
		Working on the Existing Highway – Section 278			No	Out	
		Introduction	Completing a Section 278 Agreement				
			The Design Stage				
			Approval of Highway Works				
			Constructing 278 works				
			Maintaining and Adopting the Highway Works				
			The Land Compensation Act and Noise Regulations				

361

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
			Applications, Guides and Checklists	S278 submission requirements (application) Guide AP1 - Approval of consultants Guide FS1 - Section 278 Agreements - feasibility stage Guide AP3 - Required contractor information Pre-start meeting as-built drawing requirements Inspection Checklist Section			
		Section 184 Advice for Developers	Section 184 guidance for developers s184-Application-for-permit-to-work-in-the-highway s184-Vehicular-access-application		No	Out	

362

LHDG Part	Subsection 1	Subsection 2	Subsection 3	Subsection 4	Likely to have Material Impact on SEA Objective and/ or Result in Significant Effects?	Scope In / Out of Further Assessment?	Assessment Location within Environmental Report
			s184-nrswa-form				
			Inspection Checklist Section 184				
		Commuted Sums	Commuted Sums Policy		No	Out	
			Calculating Commuted Sums				
			Commuted Sums Schedule (90% complete)				
		Health and Safety			No	Out	
Part 6: Network Management	Network Management	Network Management			No	Out	N/A
		Traffic Regulation Orders					
		Standard Conditions					
Part 7: Helpful Information	Fees, Charges and Other Helpful Information	Fees and Charges			No	Out	N/A
		Templates and Checklists					
		Forms					
	Communication, Feedback and Surveys			No	Out		
	Glossary			No	Out		
	National Policy, Standards and Guidance			No	Out		

363

Appendix E: Scoping Consultation Responses

Reponses from Scoping Report Statutory Consultees

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
Environment Agency	The proposed scope of the SEA as it relates to how the LHDG will be appraised	With reference to the topics listed on page 2 we support the proposed scope of the SEA. (On first inspection we expected to see 'flood risk' as a separately identified topic but accept that this issue is covered under the topic heading 'Water Environment').	Noted – no further action.
	The approach taken; and details of the baseline data analysis; and plans review	We agree with the approach taken.	Noted – no further action.
	Appendix A: Establishing the Environmental and Social Baseline and Identifying Key Issues	<p>We note that a Guide Question under SEA Topic Water Environment includes encouraging the design of blue/green infrastructure; however we consider the wording under this section could be amended to read: <i>"There is scope to significantly increase wildlife connectivity, and blue and green infrastructure in the county"</i>.</p> <p>We are pleased to see that rivers and canals have been acknowledged as natural corridors for wildlife.</p> <p>We would recommend that a statement is included in this section regarding the mitigation hierarchy, such as <i>"An attempt should be made to avoid impacting river corridors, by considering all options, before potentially causing severance to wildlife connectivity"</i>.</p>	Noted – wording amended within Environmental Report to reflect recommended change. Statement related to the mitigation hierarchy also added.
		(P61) <i>"Flood zoning reflects increased risk along routes of rivers named above, if any, majority flood zone 1 with smaller concentrations of zone 2 and 3 along routes of rivers named above"</i> . We are unsure of the meaning of the above sentence. Flood zone 3 is the area of highest fluvial (river) flood risk, followed by flood zone 2. Flood zone 1 is the lowest risk, and an area which we would not expect to be affected by fluvial flooding."	Noted – sentence amended and detailed amended within Environmental Report to make the definition of each flood zone clear.

364

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
		<p>The list of baseline habitats identified within the table for Appendix A should also include any additional areas identified within the Local Nature Recovery Strategy which have local importance for nature, Site of Local Importance for Nature Conservation (SLINC) and Site of Importance for Nature Conservation (SINC).</p>	<p>Noted –In Leicestershire SLINCs and SINCs are covered under Local Wildlife Sites. This has been clarified in Appendix A.</p>
		<p>Opportunities to enhance areas surrounding designated and priority habitats should also be included in order to expand the habitats and provide more resilience to external impacts.</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
		<p>In order to improve ‘Wildlife Connectivity and Green Infrastructure’, opportunities should be sought to improve highways drainage in the form of swales and SuDS to deliver multiple benefits.</p> <p>In addition, the enhancement of roadside verges should be included to enable wildlife connectivity and reduce habitat fragmentation. "</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
		<p>Blue infrastructure should also be considered under enhancing ‘Wildlife connectivity and Green Infrastructure’ for example all assets which cross a watercourse should be reviewed for their impact to migratory fish species and opportunities to remove weirs would be encouraged.</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
		<p>Within the ‘Native and Non-Native Species’ section it only lists native BAP species, are there any Non-Native Species which are of particular concern in the County, or which have been identified in any plans?</p>	<p>Noted – This has been discussed with the Councils Ecology Team. In particular the presence of non-native crayfish has been identified as a concern.</p>

365

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
		<p>There are also a large number of otter casualties recording in the county. Therefore, any opportunities for wildlife crossings should also include the review of watercourse crossings and screen spacings on culverts, to improve mammal passage such as installation of ledges with guidance fencing. A screen or fence spacing of 150mm or more allows passage of adult otters.</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
		<p>Leicestershire County Council should be more ambitious with their drainage utility plan through incorporating enhancements such as swales and SuDs as opposed to drains and gullies. The use of swales and SuDS would provide multiple benefits such as flood risk, water quality improvements and habitat connectivity.</p>	<p>Noted - we will consider this as part of the recommendation process of the LHDG.</p>
		<p>Within the 'Light Pollution' section another key issue is the design of lighting on roads near sensitive receptors such as watercourses and woodlands. The quantity and angle of lighting etc. should be designed to minimise the impact to commuting animals such as bats and otters.</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
	<p>Appendix C: Relevant Plans, Programmes and Policies</p>	<p>Regarding "Biodiversity Net Gain of 10%", we suggest an alternative wording could be: <i>"Measurable Biodiversity Net Gain of at least 10%"</i>.</p>	<p>Noted – wording amended within Environmental Report to (Measurable) Biodiversity Net Gain (of at least) 10%</p>
		<p>We acknowledge that the Design Guide is separate to and provides a different purpose to other supplementary planning documents, however we wish to highlight and advise as follows:</p> <p>The following guidance regarding essential infrastructure should be referred to: Flood risk and coastal change and flood risk assessments climate change allowances. Essential infrastructure such as highways should be located in areas of the lowest flood risk possible. However highways may need to cross watercourses, and will therefore be located in areas of flood risk,</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>

366

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
		<p>with the possibility of the highway increasing flood risk elsewhere by diverting flood water and taking up floodplain storage.</p> <p>(p85) It may be considering after “Manage local flood risk through encouraging sustainable development working to ensure development is resilient to flooding, and does not increase risk of flooding elsewhere” it may be worth including a sentence/statement that any new schemes should be in line with the National Planning Policy Framework (NPPF), and any Strategic Flood Risk Assessment (SFRA) for that area.</p>	
		<p>Legislation covered under the ‘Biodiversity’ section should also include ‘The Wildlife and Countryside Act 1981’.</p> <p>I would encourage LCC to be more ambitious that 10% with their BNG plans and set a target for infrastructure where baseline units are zero e.g. a minimum number of units to be created.</p> <p>Within the ‘Biodiversity’ section under the priority ‘Expanding and creating new accessible natural greenspace’, opportunities should also be explored through blue infrastructure.”</p>	<p>Noted – legislation added to Relevant Plans, Programmes and Policies section.</p>
		<p>Legislation covered under the ‘Water Environment’ section should also include the ‘Salmon and freshwater fisheries act 1975’ and ‘The Eels (England and Wales) Regulations 2009’.</p> <p>Another two priorities which should be included under the ‘Water Environment’ section is that</p> <ol style="list-style-type: none"> 1. All assets which cross a watercourse should be reviewed for their impact to migratory fish species and opportunities to remove weirs would be encouraged. 2. Existing and new drainage systems should deliver multiple benefits such as through swales and SuDS which would improve water quality, floodplain connection for fish refuge and flood risk benefits. 	<p>Noted – legislation added to Relevant Plans, Programmes and Policies section.</p>
	<p>The identified key issues within ‘Table 5-1</p>	<p>A figure of the number of local flood events is provided for the period 1996 – 2011. We would advise that the period under review is brought more up-to-date and the figure amended as necessary.</p>	<p>Noted - we will consult with LCC and only include if we</p>

367

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
	<p>Overview of Key Issues' categorised by topic</p> <p>Water Environment</p>	<p>We acknowledge that the Design Guide is separate to and provides a different purpose to other supplementary planning documents, however we wish to highlight and advise as follows:</p> <p>It is imperative that existing and new highways are themselves safe from flooding, and also do not increase flood risk elsewhere.</p> <p>Highways can form part of evacuation routes for settlements within the floodplain, and they should therefore be raised above flood heights, including severe floods.</p> <p>The climate change guidance at the Gov.uk website quoted above gives guidance about the flood events which should be considered when designing highways which are defined as "essential infrastructure".</p> <p>The Environment Agency hold a large amount of model data on the potential climate change flood heights for main rivers within Leicestershire. However we do not hold data for all watercourses, and if model data is not available, the team designing the highway may need to commission their own modelling to understand the potential flood heights at their project site. The Environment Agency can provide pre-application advice.</p>	<p>can find more up to date flooding data.</p> <p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
		<p>"The following text is quoted from the PPG:</p> <p>In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.</p> <p>In Flood Zone 3b (functional floodplain) essential infrastructure that has passed the Exception Test, and water-compatible uses, should be designed and constructed to:</p> <ul style="list-style-type: none"> • Remain operational and safe for users in times of flood; • Result in no net loss of floodplain storage; 	<p>Noted – Relevant Plans, Programmes and Policies section amended.</p>

368

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
		<ul style="list-style-type: none"> Not impede water flows and not increase flood risk elsewhere. <p>Paragraph: 079. Revision date: 25 08 2022, Flood risk and coastal change."</p>	
		<p>Where highways have to cross watercourses, the most effective way of ensuring that the bridge footings do not obstruct flood flows, and take up floodplain storage, is for the highway to fully span the floodplain of the watercourse, for example with a clear span bridge. Where this is not possible, hydraulic modelling may be required to understand whether the bridge design will increase flood risk elsewhere. Soffit levels for the bridge should be raised above the relevant flood heights for the watercourse, with the correct allowance for climate change from the Gov.uk guidance.</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
		<p>Culverts are not normally supported by the Environment Agency. We are opposed to culverting watercourses because of the adverse ecological, flood risk, geomorphological, human safety and aesthetic impacts. Watercourses are important linear features of the landscape and should be maintained as continuous corridors to maximise their benefits to society. We will normally object to proposals to build over existing culverts because of health and safety considerations, increased maintenance costs and complexities and because future options to restore the watercourse may be precluded. We will, where we deem appropriate, take possible cumulative impacts into account when making decisions. We will actively pursue the restoration of culverted watercourses to open channels.</p>	<p>Noted - we will consider this as part of the assessment and recommendation process of the LHDG.</p>
	<p>The approach proposed to assess reasonable alternatives</p>	<p>We have no adverse comments to make on the proposed approach.</p>	<p>Noted – no further action.</p>
	<p>The proposed SEA Framework</p>	<p>We agree with and support the proposed Framework</p>	<p>Noted – no further action.</p>
		<p>Within Table 6-2 SEA Framework of Objectives Guide Questions and Draft Indicators, we commend the scope and range of the Guide Questions.</p>	<p>Noted – no further action.</p>

369

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
		<p>Climate Change – 10) To ensure resilience to climate change</p> <p>Consideration should be given to including the Question, “Does the LHDG seek to promote nature-based solutions (NBS)” in this section. A Potential Indicator here could be “Number of NBS schemes.” An excellent example of NBS is SuDS. When used appropriately, SuDS can help address climate change by reducing flood risk and enhancing biodiversity. SuDS also have a lower embodied carbon than conventional drainage systems and can sequester carbon throughout their lives.</p>	<p>Noted – indicator to be added to the Monitoring Framework. A new guide question was not added as we had already discussed SuDS. However, these are recommended in our assessment.</p>
Historic England	Throughout the Scoping Report	<p>Overall we welcome the inclusion of cultural heritage along with landscape, townscape and visual as objectives for assessment work, and the references to these which run through the document.</p>	<p>Noted – no further action taken.</p>
	Appendix C: Relevant Plans, Programmes and Policies	<p>"We would recommend that Historic Landscape Characterisation information is considered in addition to our Heritage Counts information:</p> <p><https://historicengland.org.uk/research/methods/characterisation/historic-landscape-characterisation/></p> <p><https://historicengland.org.uk/research/heritage-counts/> "</p>	<p>Noted – to be incorporated into the relevant plans and programmes.</p>
		<p>In addition, it is not clear why Appendix C (cultural heritage section) only refers to Listed Buildings and setting and no other heritage assets. The other heritage assets should also be included in the list, or all grouped together under a ‘designated/non-designated heritage assets’ encompassing term.</p>	<p>Noted – Relevant Plans, Programmes and Policies section amended.</p>
	<p>Furthermore, in Appendix C cultural heritage ‘issues’ section only potential conflict is identified. We recommend that the scope of the Plan be widened to allow consideration of opportunities to conserve or enhance, better reveal, and/or appreciate cultural heritage elements.</p>	<p>Noted – Relevant Plans, Programmes and Policies section amended.</p>	

370

Consultee	Corresponding Section of the Scoping Report	Consultee Comments	Action Taken
	Table 6-2 SEA Framework of objectives guide questions and draft indicators	<p>"Historic England's Heritage Counts information may offer ideas around identifying further potential indicators in respect of the cultural heritage and landscape, townscape and visual amenity sections:</p> <p><https://historicengland.org.uk/research/heritage-counts/> "</p>	Noted - we have reviewed and considered the guide questions appropriate as they stand.
Natural England	Throughout the Scoping Report	<p>We are pleased to note that the LHDG seeks to encourage the design of blue/green infrastructure in highways developments. We suggest you may want to reference Natural England's Green Infrastructure Framework: Principles & Standards (Green Infrastructure Home (naturalengland.org.uk)). The Framework includes the Natural England Green Infrastructure Planning and Design Guide 2023 which provides evidence based practical guidance on how to plan and design good green infrastructure. It complements the National Model Design Code and National Design Guide and can be used to help planners and designers develop local design guides and codes with multifunctional green infrastructure at the heart.</p>	Noted - we will consider this as part of the assessment and recommendation process of the LHDG.
		<p>We are pleased to note that the LHDG seeks to maximise biodiversity net gain and opportunities for connectivity of natural habitats and to reduce severance of habitats by transport infrastructure</p>	Noted – no further action.
		<p>We welcome the inclusion of the priority to use nature-based solutions to promote climate resilience.</p>	Noted – no further action.

371

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