Norfolk County Council

2022/23 Strategic Environmental Assessment Monitoring Report of Norfolk County Council's Fourth Local Transport Plan

Strategy and Transformation

Norfolk County Council

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Contents

Executive Summary

In July 2004, an assessment of the effects of certain plans and programmes on the environment, known as the Strategic Environmental Assessment, became statutory in accordance with European Directive 2001/42/EC. The objective of the Strategic Environmental Assessment Directive is to provide high level protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development. The Strategic Environmental Assessment also works to inform the decision-making process through the identification and assessment of the cumulative significant effects a plan or programme will have on the environment at the strategic level.

In March 2011, Norfolk County Council adopted the Local Transport Plan for Norfolk 2011-26, on which a Sustainability Appraisal, incorporating Strategic Environmental Assessment had been undertaken in accordance with the Strategic Environmental Assessment Directive. The Local Transport Plan described Norfolk County Council's transport strategy (2011-26) and implementation programme.

In July 2022, Norfolk County Council adopted its fourth Local Transport Plan, replacing the third Local Transport Plan. This monitoring report for the Sustainability Appraisal of the Fourth Local Transport Plan covers the year 2022/23.

The monitoring report highlights changes to the indicators which have occurred between the Fourth Local Transport Plan and the Sustainability Appraisal baseline and the year following adoption of the new LTP4 in July 2022. It is undertaken in accordance with monitoring requirements set out in the Strategic Environmental Assessment Directive, the Environmental Assessment of Plans and Regulations 2004 and the Strategic Environmental Assessment Guidance for Transport Plans and programmes by the Department for Transport. Monitoring the impact on the environment resulting from implementation of the Fourth Local Transport Plan enables the county council to consider if, and how, future implementation might need to be adjusted to result in better outcomes.

The current state of the environment (2022/23) has been compared against the baseline established for the Sustainability Appraisal baseline in June 2021. The majority of the data presented is that which was available up to October 2023 which is when the data was obtained from various sources and analysed to be included in this Sustainability Appraisal Monitoring Report for the period 2022/23. The analysis was undertaken to assess any changes to the environment as a potential result of Fourth Local Transport Plan. The Sustainability Appraisal Post Adoption Statement (July 2022) set out that the county council intended to monitor only those objectives where an adverse effect had been predicted. The Sustainability Appraisal assessment did not conclude any residual significant effects; however, some residual uncertain effects remained which will require monitoring.

The objectives predicted to experience residual uncertain effects are: SA2, potential negative effects on biodiversity and geodiversity, SA3, the overall reduction in carbon emissions, SA4, potential loss of important agricultural land, SA5, adapt to

the effects of climate change, SA9, potential negative effects on the historic environment and SA15, increase in noise in Noise Important Areas (NIAs.

It should be noted that there are some limitations with the datasets used to inform this Monitoring Report. For example, the latest carbon emissions data from the Department for Business, Energy and Industrial Strategy (BEIS) is data from 2021 which is pre-LTP4 adoption.

SA4 is worsening, whilst SA3 and SA9 are improving. For SA2 and SA15 as this is the baseline year, there are currently no comparables, but this will be assessed further in the 2023/24 Monitoring Report as further data becomes available.

Although worse than 2021/22 figures, SA3 is considered to be improving. This is due to the previous year's data being based on 2020 figures, which does not accurately reflect traffic emissions due to the Covid-19 pandemic. Therefore, taking the baseline year which includes 2019 data, carbon emissions have reduced.

Despite the number of scheduled monuments on the Heritage at Risk Register worsening (SA9), the decline is not due to the implementation of the LTP4. Overall improvement has been identified as the number of listed buildings on the English Heritage at-risk register and the number of conservation areas are improving. **Section 4** provides a narrative summarising the effects of the implementation of LTP4.

SA5 is neutral as one of the indicators for this objective showed no change (the number of instances of flooding on the transport network) and the other was not assessed (LTP4 developments that benefit from climate resilient design).

SA Objective	**Potential uncertain effect**	**Assessment**
SA2	Potential negative effects on biodiversity and geodiversity	Not applicable
SA3	The overall reduction in carbon emissions	Improving
SA4	Potential loss of important agricultural land	Worsening
SA5	Adapt to the effects of climate change	No change
SA9	Potential negative effects on the historic environment	Improving
SA15	Increase in noise in NIAs	Not applicable

1.0 Introduction

1.1 Introduction

Norfolk County Council (herein referred to as NCC) adopted its Fourth Local Transport Plan (herein referred to as LTP4) in July 2022. It comprises a long-term strategy from July 2021 to 2036, together with an implementation plan which sets out how the policies will be implemented. Monitoring is important to measure performance and ensure that LTP4 is successfully implemented. The Strategic Environmental Assessment (SEA) / Sustainability Appraisal (SA) process assisted in developing a framework for monitoring.

Post-adoption procedures as set out in Part 4(17) of the Environmental Assessment of Plans and Regulations 2004 requires the responsible authority to monitor the significant effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action.

The county council adopted the LTP4 which included the LTP4 Implementation Plan in July 2022. Both took account of the SEA which was undertaken alongside LTP4 development.

1.2 The SA Monitoring Report for LTP4

This is the SA Monitoring Report for the LTP4. This Monitoring Report establishes the current state of the environment and highlights changes to the indicators that have occurred between the baseline established for the LTP SA in June 2022 and the current state of the environment 2023.

Indicators were developed and used in the development of LTP4 to measure the effects that the LTP4 strategy and implementation plan might have on the environmental, social and economic baselines. Recent data for these indicators has been collected to establish the current state of the environment. This monitoring report describes any changes to the baseline arising from the implementation of LTP4. The report is concentrated around reporting the progress against objectives where adverse effects were predicted as a result of the LTP4 but also covers all other indicators and objectives, and the LTP4 targets themselves in the appendices.

It should be noted that the best available datasets have been used, however, some of these pre-date the adoption of the LTP4 and therefore may not necessary accurately reflect the current situation. These datasets have been highlighted throughout, including when they are next due to be updated.

2.0 Context

2.1 The Fourth Local Transport Plan

The Local Transport Act, 2008, requires all local transport authorities to produce a Local Transport Plan setting out their local plans and policies for transport. The LTP4 sets out a long-term strategy for transport up to 2036.

LTP4 was adopted by NCC in July 2022. LTP4 details how the council will deliver a transport network in Norfolk through identifying the projects and programmes important to it, and in their design and direct delivery. The plan also shows how the council will seek to influence NCC's key partners in government, communities, the commercial sector and the third sector.

The LTP4 objectives are:

- Embracing the Future
- Delivering a Sustainable Norfolk
- Enhancing Connectivity
- Enhancing Norfolk's Quality of Life
- Increasing Accessibility
- Improving Transport Safety
- A Well Managed and Maintained Transport Network

2.2 The Local Transport Plan Strategic Environmental Assessment Sustainability Appraisal (SEA/SA)

The SEA guidance states that only the significant effects need to be monitored. The SA Post Adoption Statement (July 2022) sets out that the county council intends to monitor only those objectives where an adverse effect had been predicted (whether this be significant adverse or marginal adverse). As the assessment of LTP4 policies in the SA did not conclude any residual significant effects, monitoring has not been proposed for significant effects, however, **Table 2.1** below outlines monitoring for some residual impacts that remain uncertain.

Table 2.1: SA Objectives to be monitored (SA Post Adoption Statement July 2022)

SA Objective	Potential Uncertain Effect	Indicator
SA2. To maintain and protect and biodiversity and geodiversity	Potential negative effects on biodiversity and geodiversity	• The number of biodiversity enhancement schemes implemented through LTP4 schemes • Seek the achievement of the biodiversity net gain through application of Natural England's Biodiversity Metric 2.012 (or any updates)
SA3. The overall reduction in carbon emissions	Potential increase in carbon emissions	• Measure carbon emissions from the transport network in NCC annually, to monitor whether the LTP4 is resulting in a net reduction in carbon emissions.
SA4. To maintain and improve water, soil and mineral quality and resources	Potential loss of important agricultural land	• Total area (ha) of permitted loss of best and most versatile (grades 1-3a) agricultural land
SA5. Adapt to the effects of climate change	Potential negative effects of climate change on LTP4 developments	• LTP4 developments that benefit from climate resilient design. • The number of instances of flooding on the transport network.
SA9. To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated	Potential negative effects on the historic environment	• The number of historic assets (statutory and non-statutory) negatively affected by LTP4 schemes. • The number of historic assets (statutory and non-statutory) benefiting from conservation and enhancement measure as a result of LTP4.
SA15. To minimise the effects of noise in the identified NIAs	Increase in noise in NIAs	• The number of developments located within NIAs • Noise assessments submitted with planning applications within NIAs

Table 2.2 lists the remaining SA objectives for LTP4. Although there is no statutory obligation, Norfolk County Council monitors these to ensure there are no unexpected negative impacts from LTP4. These objectives are reported in Appendix 1.

Table 2.2: LTP4 SA Objectives

Ref.	Objective
SA1	To improve air quality, particularly in areas affected by poor air quality
SA6	To improve the quality and safety of where people live
SA7	To reduce poverty and social exclusion, improving access to key services for all sectors of the population
SA8	To improve accessibility and provide an infrastructure which will enable sustained economic growth.
SA10	To encourage indigenous and inward investment, fuelling economic growth in key sectors including agriculture and food processing, tech/digital industries and offshore energy
SA11	To enable access to employment centres, such as town centres, ports and other hubs
SA12	To reduce death and injury
SA13	To encourage healthy lifestyles and wellbeing
SA14	To protect and maintain townscapes and landscapes of visual importance, including the rural environment and town centres.

3.0 Current State of the Environment

3.1 Introduction

As part of the LTP4 SA, a baseline was constructed to assess the effects of the LTP strategy options. The baseline scenario not only provided a basis for the prediction of environmental effects, but also allowed for a comparison between the original baseline (June 2021) and the current state of the environment, providing an insight into the impact LTP4 has had.

3.2 Indicators

The SA Post Adoption Statement (July 2022) included the SA objectives that would be monitored, and the indicators intended to be used to monitor change.

Table 3.1 compares the current state of the environment against the baseline and provides an analysis of changes between 2020/21 and 2022/23. In some instances, this wasn't possible as this is the first-year data has been collected and there are no comparables. **Section 4.2** provides further details on these findings.

Figure 3.1: Current state of the environment compared to baseline for indicators predicted to experience a marginally adverse impact from the LTP4 implementation plan.

SA objective	Indicator	Monitoring	Year 2020/2021 (Baseline)	Year 2021/2022	Year 2022/2023	Performance
SA2. To maintain and protect and biodiversity and geodiversity	The number of biodiversity enhancement schemes implemented through LTP4 schemes	Quality of Roadside Nature Reserves	80 percent	Data not available – see Section 3.3 for further details	Data not available	Not applicable
SA2. To maintain and protect and biodiversity and geodiversity	Seek the achievement of the biodiversity net gain (BNG) through application of Natural England's Biodiversity Metric 2.012 (or any updates)	Number of LTP4 schemes that propose BNG	Data not available	Data not available	3	Not applicable
SA3. The overall reduction in carbon emissions	Measure carbon emissions from the transport network in NCC annually, to monitor whether the LTP4 is resulting in a net reduction in carbon emissions	CO_2 tonnes from road transport (next due to be updated in 2024)	1,793.2 Kilotons (2019)	1,449.3 Kilotons (2020)	1,574.8 Kilotons (2021)	Improving
SA4. To maintain and improve water, soil and mineral quality and resources	Total area (ha) of permitted loss of best and most versatile (grades 1-3a) agricultural land	Change in agricultural land use - data taken from the Department for Levelling Up, Housing and Communities. Land Use Statistics	398,716 hectare (2020)	399,153 hectare (2021)	398,024 hectare (2022)	Worsening
SA5. Adapt to the effects of climate change	LTP4 developments that benefit from climate resilient design	Number of LTP4 Schemes that include climate resilient design	Data not available	Data not available	3	Not applicable
SA5. Adapt to the effects of climate change	The number of instances of flooding on the transport network.	Number of flood investigations undertaken for flood events affecting the road network – data taken from Norfolk County Council. Flood Investigation Reports.	0	0	0	No change
SA9. To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated	The number of historic assets negatively affected by LTP4 schemes.	Number of listed buildings on English Heritage at-risk register	31	29	24	Improving
SA9. To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated	The number of historic assets negatively affected by LTP4 schemes.	Number of monuments on English Heritage at-risk register	28	28	30	Worsening

SA objective	Indicator	Monitoring	Year 2020/2021 (Baseline)	Year 2021/2022	Year 2022/2023	Performance
SA9. To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated	The number of historic assets negatively affected by LTP4 schemes.	Number of designated conservation areas	289	290	291	Improving
SA9. To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated	The number of historic assets (statutory and non-statutory) benefiting from conservation and enhancement measures as a result of LTP4.	LTP4 schemes that include these measures to improve the historic environment	Data not available	Data not available	3	Not applicable
SA15. To minimise the effects of noise in the identified NIAs	The number of developments located within NIAs	The number of developments located within NIAs	Data not available	Data not available	4	Not applicable
SA15. To minimise the effects of noise in the identified NIAs	Noise assessments submitted with planning applications within NIAs	Noise assessments submitted with planning applications within NIAs	Data not available	Data not available	1	Not applicable

3.3 Summary of Impacts

Table 3.2 below shows the overall assessment summary. SA4 is worsening, whilst SA3 and SA9 are improving. For SA2 and SA15 as this is the baseline year, there are currently no comparables, but this will be assessed further in the 2023/24 Monitoring Report as further data becomes available.

Although worse than 2021/22 figures, SA3 is considered to be improving. This is due to the previous year's data being based on 2020 figures, which does not accurately reflect traffic emissions due to the Covid-19 pandemic. Therefore, taking the baseline year which includes 2019 data, carbon emissions have reduced.

SA5 is neutral as one of the indicators for this objective showed no change (the number of instances of flooding on the transport network) and the other was not assessed (LTP4 developments that benefit from climate resilient design).

Although the number of scheduled monuments on the Heritage at Risk Register is worsening (SA9), the decline is not due to the implementation of the LTP4. Ovell improvement has been identified as the number of listed buildings on the English Heritage at-risk register and the number of conservation areas are improving. **Section 4** provides a narrative summarising the effects of the implementation of LTP4.

Table 3.3 Summary of Impacts

Ref	Objective	Assessment
SA2	To maintain and protect and biodiversity and geodiversity	Not applicable
SA3	The overall reduction in carbon emissions	Improving
SA4	To maintain and improve water, soil and mineral quality and resources	Worsening
SA5	Adapt to the effects of climate change	No change
SA9	To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated	Improving
SA15	To minimise the effects of noise in the identified NIAs	Not applicable

4.0 Changes to the Environment

4.1 Introduction

This section summarises the effects of the LTP4 implementation plan on the objectives that were predicted to be adversely affected by the LTP4. Monitoring of the other LTP4 objectives can be found in Appendix 1 and the monitoring of LTP4 targets can be found in Appendix 2.

4.2 Biodiversity and Geodiversity

Objective SA2: To maintain and protect and biodiversity and geodiversity

Indicators:

- The number of biodiversity enhancement schemes implemented through LTP4 schemes
- Seek the achievement of the biodiversity net gain (BNG) through application of Natural England's Biodiversity Metric 2.012 (or any updates)

The first indicator is measured by the Quality of Roadside Nature Reserves. Roadside verges are amongst the few remaining places where plants that were once common can still be seen growing in the wild, due largely to them being less intensively managed than other areas. They are also highly important for pollinators which are key to a healthy environment and also play a vital role in providing the food we eat. However, verges are still at risk and vulnerable to serious damage from traffic pollution, road run-off (which can contain oil and fuel residues, salt, and other pollutants), compaction and disturbance from vehicles, road widening and drainage, and spray drift from nearby fields. A lack of management, or inappropriate management such as cutting at the wrong time and non-removal of cuttings, can also be a risk to the verges.

The Roadside Nature Reserve scheme was launched in the mid-1990s and helps the protection of non-statutory sites of wildlife interest. Norfolk has an established network of 112 Roadside Nature Reserves (as of 2020). The SA2 indicator on the quality of Roadside Nature Reserves is only available for the 2020/2021 Baseline. The quality of Roadside Nature Reserves was not assessed for the period 2021/22 and 2022/2023. This is due to a number of changes to the way Roadside Nature Reserves are monitored and it is under review. The outcome of this review will be considered in future monitoring reports.

The second indicator monitors seeking the achievement of the biodiversity net gain (BNG) through application of Natural England's Biodiversity Metric (was at the time of writing 2.012 but now Metric 4.0 is available. The Environment Bill for England makes provision for planning permissions in England to be subject to a condition requiring the biodiversity gain objective to be met, which secures a BNG of 10 percent above the baseline. There are BNG measures proposed within large scale LTP4 schemes, these include:

- Housing Infrastructure Fund (HIF) Attleborough Link Road, Breckland, the open green space at the location of the scheme is identified as integral to the project

and should offer a net gain in available habitat for several groups of species, including bats, some birds, reptiles, hedgehogs and invertebrates.
- A140 Long Stratton Bypass, South Norfolk, the EIA submitted as part of the planning application in 2021 demonstrated that there would be no net loss of biodiversity, with the aim to be achievement of a net gain.
- Norwich Western Link, Broadland, the biodiversity baseline calculation for this scheme will include all habitats (other than irreplaceable habitats and statutory designated sites) within the Norwich Western Link prior to development. This baseline will be informed with reference to the Biodiversity Metric 4.0.

4.3 Carbon and Climate Change

Objective SA3: The overall reduction in carbon emissions

Indicator:

- Measure carbon emissions from the transport network in NCC annually, to monitor whether the LTP4 is resulting in a net reduction in carbon emissions

This indicator is monitored by the CO_2 tonnes from road transport. Overall, this indicator showed a decline due to the increase in CO_2 emissions from transport compared to the baseline. The impacts of the Covid-19 pandemic can be seen in this monitoring report as shown in the data for the years 2020 and 2021. This likely reflects the impact of the pandemic on travel as it shows a large drop in emissions between 2019 and 2020 although other factors such as uptake in electric vehicles or active travel could also have played a part.

Objective SA5: Adapt to the effects of climate change

Indicators:

- LTP4 developments that benefit from climate resilient design
- The number of instances of flooding on the transport network

The first indicator monitors LTP4 developments that benefit from climate resilient design. The LTP4 schemes that include these measures are:

- HIF Attleborough Link Road, Breckland, mitigation measures are proposed as part of this scheme which include high performance building fabric, achieving BREEAM Infrastructure ratings; and providing 10 percent of energy through renewable technologies.
- A140 Long Stratton Bypass, South Norfolk, a travel plan is proposed as part of this scheme which will provide pedestrian and cycle connections and provision for access to public transport. The scheme will also provide for EV charging (encourage take up in electric cars).
- Norwich Western Link, Broadland, the scheme will provide shorter route options – bringing about shorter journeys by road vehicles and reducing traffic levels on strategic routes such as the A47.

The second indicator is monitored by the number of flood investigations undertaken for flood events affecting the road network. Section 19 of the Flood and Water Management Act 2010 legislation sets out that the County Council, in its role as

Lead Local Flood Authority for Norfolk, should investigate the role and response of organisations to significant flooding incidents. Significant flooding is deemed to be those incidents that impact upon people, property, and infrastructure. In judging the impact or consequence of a flood event Norfolk County Council uses a set of criteria, one of these criteria is '*Any section of a national category 3 road or above made impassable due to flooding and/or flooding to priority 1 and 2 gritting routes'.* From the flood investigations undertaken to date none of the reports concluded that flooding on the transport network had occurred. There have been instances where surface run-off from rainfall made its way onto highway networks and flowed along the road network and onto the accesses of affected properties that were situated lower than these features.

4.4 Agricultural Land

Objective SA4: To maintain and improve water, soil and mineral quality and resources

Indicator:

- Total area (ha) of permitted loss of best and most versatile (grades 1-3a) agricultural land

This indicator is monitored by the change in area of agricultural land use. This indicator showed a slight decline in the area of agricultural land. Although in the period 2021/2022 there was a slight increase, overall, since the baseline year of 2020/2021, there has been a higher level of agricultural land use lost than gained. However, this is not as a result of the implementation of LTP4.

4.5 Historic Environment

Objective SA9: To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their settings where this contributes to their significance, and / or allows their significance to be appreciated.

Indicators:

- The number of historic assets negatively affected by LTP4 schemes
- The number of historic assets (statutory and non-statutory) benefiting from conservation and enhancement measures as a result of LTP4

The first indicator is monitored by the number of listed buildings and number of monuments on the English Heritage at-risk register. The condition of the historic environment has declined since the initial baseline in 2020/2021. The decline has been seen due to the increase in the number of monuments on the English Heritage at risk register. Data is collected from Historic England's Heritage at-risk register East of England which is reported annually. Despite this increase in the number of monuments it was not due to the implementation of LTP4.

There has been an improvement in the number of listed buildings on the English Heritage at risk register. A decline of seven buildings on the register has been seen from the baseline in 2020/2021. This reduction does not appear to have been as a result of the transport schemes coming from the implementation of LTP4. However, it

is possible for transport projects to have an impact on cultural heritage and the at-risk register.

The future impacts of transport on heritage assets should be considered during the design and implementation of transport schemes to ensure there is no transport-related deterioration.

The second indicator monitors historic assets which benefit from conservation and enhancement measures as a result of large scale LTP4 schemes. LTP4 schemes that include these measures include:

- HIF Attleborough Link Road, Breckland, where the schemes has potential to affect the setting of listed buildings and scheduled monuments, mitigation would be proposed in accordance with the nature of the effect i.e. appropriate plant screening and design measures.
- A140 Long Stratton Bypass, South Norfolk, the scheme proposes to avoid direct physical impacts to designated heritage assets through design refinements and construction environmental management.
- Norwich Western Link, Broadland, possible impacts on setting of listed buildings are proposed to be mitigated by design, such as the introduction of screening or an appropriate road lighting scheme.

4.6 Noise

Objective SA15: To minimise the effects of noise in the identified NIAs

Indicators:

- The number of developments located within NIAs
- Noise assessments submitted with planning applications within NIAs

The first indicator monitors the number of LTP4 schemes located within NIAs. LTP4 schemes withing NIAs include:

- A140 Long Stratton Bypass, South Norfolk, located within four NIAs.

The second indicator monitors noise assessments submitted with planning applications within NIAs. LTP4 schemes that include a noise assessment are:

- A140 Long Stratton Bypass, South Norfolk, noise impact assessment undertaken and submitted with planning application.

5.0 Conclusions

5.1 Introduction

The report establishes the current state of the environment and highlights changes to the environmental indicators which have occurred between the original LTP SA baseline up to October 2023. It has been undertaken in accordance with monitoring requirements in the SEA Directive, the *Environmental Assessment of Plans Regulations 2004* and *Strategic Environmental Assessment Guidance for Transport Plans and Programmes* by the Department for Transport.

5.2 Conclusion and Recommendations

The current state of the environment in 2022/23 has been compared against the baseline established for the LTP SA Scoping Report in 2021. This analysis was undertaken to identify any changes to the environment as a potential result of LTP4. The SA assessment did not conclude any residual significant effects; however, some residual uncertain effects remained which have been monitored. The objectives analysed were those where residual uncertain effects remained through the LTP4 period (SA2, SA3, SA4, SA5, SA9 and SA15).

Decline has been seen in just one of the SA objectives, SA4 - to maintain and improve water, soil and mineral quality and resources. This objective showed a slight decline in the area of agricultural land, however, this is not considered to be as a result of the implementation of LTP4.

SA3 is considered to be improving. This is due to the previous year's data being based on 2020 figures, which does not accurately reflect traffic emissions due to the Covid-19 pandemic. Therefore, taking the baseline year which includes 2019 data, carbon emissions have reduced.

Despite the number of scheduled monuments on the Heritage at Risk Register worsening (SA9), the decline is not due to the implementation of the LTP4. Overall improvement has been identified as the number of listed buildings on the English Heritage at-risk register and the number of conservation areas are improving. Section 4 provides a narrative summarising the effects of the implementation of LTP4.

In general, the county council gives consideration to incorporating environmental enhancement schemes into transport improvements wherever possible. This will often provide good value for money and meet both transport and environmental objectives. The 2019 Norfolk County Council Environmental Policy will also help in enhancing the environment through transport schemes for biodiversity net gain and cutting carbon emissions.

Limitations with data collection have made it difficult to ascertain the overall performance of the LTP4 against monitoring indicators. As further monitoring is undertaken annually and more schemes are developed, a better picture of performance will be gauged. The next monitoring report will be undertaken in Summer 2024.

Appendix 1: Monitoring of other SA indicators

A1.1 Introduction

Part 4(17) of the Environmental Assessment of Plans and Regulations 2004 requires that “the responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action.”

The SA Post Adoption Statement (July 2022) set out that the county council intended to monitor only those objectives where an adverse effect had been predicted. The SA assessment did not conclude any residual significant effects; however, some residual uncertain effects remained which will require monitoring. The indicators relating to these objectives are set out in the main body of this report. This Appendix reports the indicators relating to the other SA objectives, i.e. those objectives where the effects of implementation of the plan were predicted to be beneficial, neutral or have no effect.

A1.2 Changes and data availability of indicators

The indicators for monitoring the LTP SA objectives were suggested in Table 5.1 of the SA Report, June 2021.

The Department for Transport is updating the ‘Journey Time’ statistics with a new ‘Model of Connectivity’, it is planned to be updated annually, with a shorter time lag than the Journey Times statistical series. The monitoring indicators for SA10 and SA11 will be amended to the new data once available in future monitoring reports.

The Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government publish data on the Indices of Deprivation every four to five years. They are currently consulting on how best to update the English Indices of Deprivation in the future. The monitoring indicator for SA13 will be amended to the new data once available in future monitoring reports.

The Department for Environment, Food and Rural Affairs publish data on population statistics for rural England. The latest data set available is from 2020, it is unclear when the next set of data will be released. The monitoring indicator for SA14 may need to be amended in future monitoring reports.

Table A1.1: Monitoring of other SA indicators

SA Objective	Indicator	Monitoring Measure	Year 2020/2021 (Baseline)	Year 2021/22	Year 2022/2023	Analysis (baseline to current)
SA1	Reduce congestion and traffic levels particularly in AQMAs and congestion hot-spots	Monitoring of NO2 concentrations at AQMA's - Concentrations of NO2 Breckland (area to the north and south of Swaffham town centre alongside the A1065) Site ID: BRE01	7.00 Micrograms per cubic metre (2020)	7.00 Micrograms per cubic metre (2021)	Data not yet available	No change
SA1	Reduce congestion and traffic levels particularly in AQMAs and congestion hot-spots	Monitoring of NO2 concentrations at AQMA's - Concentrations of NO2 Breckland (area to the north and south of Swaffham town centre alongside the A1065) Site ID: BRE02	19.10 Micrograms per cubic metre (2020)	21.00 Micrograms per cubic metre (2021)	Data not yet available	Worsened
SA1	Reduce congestion and traffic levels particularly in AQMAs and congestion hot-spots	Monitoring of NO2 concentrations at AQMA's - Concentrations of NO2 King's Lynn and West Norfolk (Southgates Park, King's Lynn) Site ID: CM1	14.2 Micrograms per cubic metre (2020)	17.6 Micrograms per cubic metre (2021)	14.0 Micrograms per cubic metre (2022)	Improving
SA1	Reduce congestion and traffic levels particularly in AQMAs and congestion hot-spots	Monitoring of NO2 concentrations at AQMA's - Concentrations of NO2 King's Lynn and West Norfolk (Gaywood, King's Lynn) Site ID: CM2	26.7 Micrograms per cubic metre (2020)	26.4 Micrograms per cubic metre (2021)	24.0 Micrograms per cubic metre (2022)	Improving
SA1	Reduce congestion and traffic levels particularly in AQMAs and congestion hot-spots	Monitoring of NO2 concentrations at AQMA's - Concentrations of NO2 Norwich (Castle Meadow) Site ID: CM1	30.00 Micrograms per cubic metre (2020)	29.90 Micrograms per cubic metre (2021)	Data not yet available	Improving
SA1	Reduce congestion and traffic levels particularly in AQMAs and congestion hot-spots	Monitoring of NO2 concentrations at AQMA's - Concentrations of NO2 Norwich (Norwich Lakenfields) Site ID: CM2	10.00 Micrograms per cubic metre (2020)	10.02 Micrograms per cubic metre (2021)	Data not yet available	Worsened
SA1	Encourage sustainability friendly transport	Monitoring of actions and measures within air quality action plans (where relevant) to encourage sustainable transport modes. (Details of measures are found in Section A1.3 of this Appendix)	Not applicable	Not applicable	Not applicable	Not applicable
SA6	Help improve the quality of urban and rural communities	Percentage of parishes which meet their target level of service (This data is recorded monthly. The most recent data available has been presented in the table, collected July 2022)	73.48 percent	73.85 percent	Data not yet available	Improving
SA7	Create a more accessible transport system for all	Monitoring of measures within LTP4 schemes which promote accessible transport **(**Details of accessible measures proposed within LTP4 schemes are detailed in Section A1.4 of this Appendix)	Not applicable	Not applicable	Not applicable	Not applicable
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds (sourced from ONS Annual Population Survey) - Breckland	77.7	83.7	79.9	Worsened
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds - Breckland	78.8	78.9	77.3	Worsened

SA Objective	Indicator	Monitoring Measure	Year 2020/2021 (Baseline)	Year 2021/22	Year 2022/2023	Analysis (baseline to current)
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds – Great Yarmouth	61.4	67.8	66.8	Worsened
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds – King's Lynn and West Norfolk	78.6	73.9	71.4	Worsened
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds – North Norfolk	73.4	75.1	78.4	Improving
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds – Norwich	81.2	80.4	84.4	Improving
SA8	Provide the infrastructure to enable sustained economic growth	Employment rate of working age population and for 16-64 year-olds – South Norfolk	71.3	77.1	78.7	Improving
SA10	Increase connectivity and help alleviate congestion, reducing journey times	Travel time in minutes to nearest town centre by public transport or walking (information for journey times have been sourced from the Department of Transport)	No data	No data	No Data	Not applicable
SA11	Improve access to employment centres	Travel time in minutes to nearest employment centre with 100 to 499 jobs by public transport or walking (information for journey times have been sourced from the Department of Transport)	No data	No data	No Data	Not applicable
SA12	Improve the safety of the transport system	Number of people killed or seriously injured in road traffic collisions (Taken from the [1] Department for Transport, Provisional in-year statistics on reported road casualties)	386 (2020)	386 (2021)	472 (2022)	Worsened
SA13	Increase walking and cycling	Percentage of adults who do any walking or cycling for any purpose (taken from the Department of Transport's walking and cycling statistics)	70.9 (2020)	73.3 (2021)	73.7 (2022)	Improving
SA13	Improve mental health and wellbeing	IMD Health and disability domain: Number of LSOAs in the 10 percent most deprived areas of England	39 (2019)	No data	No Data	Not applicable
SA14	Cause changes in traffic flows in areas valued for their landscape or visual character	Monitoring of LTP4 schemes which have the potential to change traffic flows in areas of landscape and visual importance	Not applicable	Not applicable	Not applicable	Not applicable
SA14	Cause direct impacts through development or maintenance on any areas valued for their landscape, townscape, intrinsic value or visual character	Number of registered parks and gardens on English Heritage at-risk register	1	1	1	No change
SA14	Consider the setting of the rural environment	Population living in predominantly rural areas (information on rural populations have been taken from the Department for Environment, Farming and Rural Affairs)	141,255	No data	No Data	Not applicable

SA Objective	Indicator	Monitoring Measure	Year 2020/2021 (Baseline)	Year 2021/22	Year 2022/2023	Analysis (baseline to current)
SA14	Consider the setting of the rural environment	Population living in predominantly rural areas - Broadland	131,931	No data	No Data	Not applicable
SA14	Consider the setting of the rural environment	Population living in predominantly rural areas – Great Yarmouth	99,198	No data	No Data	Not applicable
SA14	Consider the setting of the rural environment	Population living in predominantly rural areas – King's Lynn and West Norfolk	151,245	No data	No Data	Not applicable
SA14	Consider the setting of the rural environment	Population living in predominantly rural areas – North Norfolk	105,167	No data	No Data	Not applicable
SA14	Consider the setting of the rural environment	Population living in predominantly rural areas – South Norfolk	143,066	No data	No Data	Not applicable

A1.3 SA1: Monitoring of actions and measures within air quality action plans (where relevant) to encourage sustainable transport modes

There are actions and measures within air quality action plans (where relevant) which encourage sustainable transport modes. These are detailed below. It should be noted that whilst the district councils have produced action plans, it is NCC that have carried out the majority of the actions.

The Borough Council of King's Lynn and West Norfolk has implemented a number of measures that are likely to have reduced concentrations of NO2 and associated PM2.5 in the borough as reported in the Air Quality Annual Status Report 2023. Details of measures include: improvements have been carried out to King's Lynn Transport Interchange (bus-rail) to help incentivise the use of public transport, urban traffic control systems and selective vehicle detection systems have also been implemented in the town centre to help improve traffic flows and securing best practice mitigation wherever possible through Borough Council of King's Lynn and West Norfolk's work on planning applications.

Norwich City Council

Norwich City Council has taken forward a number of direct measures as reported in the Air Quality Annual Status Report 2022. These measures include: traffic management such as reducing levels of cross-city traffic by directing traffic onto the inner ring road, travel alternatives including enabling more direct, connected and safer cycle/pedestrian routes into and across the city and low emission transport by facilitating bus upgrades to cleaner engines (Euro 6 specification/zero emission) and providing bus priority in the form of additional lengths of bus lane and priority for buses through traffic signals.

Breckland District Council

Breckland District Council has proposed and implemented measures to improve air quality within the Air Quality Annual Status Report 2022. These measures include among others: adopting its first sustainability strategy in 2021, including a target of being Net Zero by 2035, have increased the number of Electric Vehicle (EV) charging points across the district, ran a £100K green grants scheme over the summer 2021 to enable the community to act for itself on environmental issues, will be looking at how to reduce staff/member travel and promote active travel when employees do have to do business miles and have provision of green wall/ planters in Swaffham.

A1.4 SA7: Monitoring of measures within LTP4 schemes which promote accessible transport

There are multiple accessible transport measures proposed as part of LTP4 schemes which promote accessible transport. These include:

- Broadland Growth Triangle Link Road, Broadland, would provide faster connections to the A47 and Norwich International Airport.

- A10 West Winch Housing Access Road, King's Lynn and West Norfolk, would provide an alternative route around the village of West Winch. This would result in a reduction in traffic through the village and allow the introduction of measures through the village to improve safety and living conditions for local residents.
- A140 Long Stratton Bypass, South Norfolk, would cut congestion and support the local economy, including opening up opportunities for improvements to cycling and walking.
- Norwich Western Link, Broadland, would provide a higher standard route between the western end of Broadland Northway and the A47 and significantly improve travel between these two major roads.
- Weavers Way, North Norfolk and Great Yarmouth, improvements include the delivery of surface and signage for the route for walking / cycling and disabled use.
- The Green Loop, Broadland, will install better cycling infrastructure (including better signage) to benefit residents, increase participation in active travel and provide a better offer for tourists in areas such as the Broads.
- North West Woodlands Country Park (Now called Broadland Country Park), Broadland, includes surfacing of 1.4km circular all user route, waymarking, seating and family cycle trails.
- A47 Tilney to East Winch Dualling, King's Lynn and West Norfolk, would increase the capacity of the route which will help the network cope with growth and improve access and journey time.
- A47 Acle Straight Dualling, Broadland, would improve journey time and safety.
- Longwater bus access, South Norfolk, improvements would resolve existing issues on the transport network and accommodate additional traffic arising from planned growth.

There are a number of schemes under the Transforming Cities banner completed in 2022/2023 which promote accessible transport. These schemes (all located in Norwich) include:

- St Stephens Street public realm / bus interchange
- Norwich rail station interchange
- Pedestrian / cycle crossing on Norwich Outer Ring Road by B and Q
- King Street pedestrian / cycle improvements
- St Stephens Road pedestrian / cycle improvements

There are also a number of Active Travel schemes being delivered which include:

- King's Lynn, A148 Gaywood Road signalised crossing
- Ipswich Road, Norwich, mandatory cycle lanes
- Heartsease Lane, Norwich, segregated crossing
- St Williams Way, Norwich, mandatory cycle lanes and crossing upgrade
- Cycle parking in market towns and Great Yarmouth and King's Lynn.

A1.5 SA14: Monitoring of LTP4 schemes which have the potential to change traffic flows in areas of landscape and visual importance

There is potential for some LTP4 schemes to change traffic flows in landscape and visual importance areas. These schemes include:

- HIF Attleborough Link Road, Breckland, effect on the landscape at a local and regional scale. However, change would be limited to a relatively small proportion of the character areas and would be perceived within the urban context of Attleborough.
- A140 Long Stratton Bypass, South Norfolk, is anticipated to introduce a new road corridor, highway infrastructure and associated development into a predominantly rural landscape. However, the proposed enhancement to Green Infrastructure would assist integration of the scheme into the local landscape
- Norwich Western Link, Broadland, is anticipated to introduce a major road into the landscape, which would cut through the landscape, disrupting field patterns, removing woodland and changing local land cover.

Appendix 2: Monitoring of LTP4 Indicators and Targets

A2.1 Introduction

As well as the indicators developed to monitor SA objectives, the LTP4 itself contained targets to monitor the outcomes of its implementation plan. Table A2.1 below reports this.

Table A2.1: Monitoring of LTP4 Indicators and Targets

Indicator	Target	Baseline	2022	2023 (Actual)	2024	2025	2026	2027	Current progress (2023)
Public satisfaction with transport and highway services	To maintain current satisfaction levels	56 percent (2021)	50 percent	47 percent	56 percent	56 percent	56 percent	56 percent	This shows that there is a downward trend in satisfaction, reducing by 9 percent since the baseline year (2021). **Worsening** – not currently on track to meet the target of 56 percent.
Developments with good access to sustainable travel with an active Travel Plan in place	94 percent by 2027	90 percent (2022)	90 percent	To be confirmed	92 percent	92 percent	94 percent	94 percent	Data is not currently available for this target This will be updated as part of the next iteration of the LTP4 Monitoring Report (2024).
Journey reliability on the primary and main distributor network (100 percent = consistent journeys)	To improve on current levels	15 percent (2022)	15 percent	To be confirmed	To be confirmed	To be confirmed	To be confirmed	To be confirmed	Data is not currently available in the existing methodology for this target. This will be updated as part of the next iteration of the LTP4 Monitoring Report (2024).
Carbon emissions from transport	To achieve net zero carbon emissions from transport by 2050	1,717.7 kiloton of carbon dioxide (2020)	1657.32 kiloton of carbon dioxide	1636.25 kiloton of carbon dioxide	1616.58 kiloton of carbon dioxide	1591.30 kiloton of carbon dioxide	1522.48 kiloton of carbon dioxide	1453.66 kiloton of carbon dioxide	Data from 2021 (most recent) shows a slight reduction in carbon emissions from transport reducing to 1,714.9 kiloton of carbon dioxide. **Improving** – as the latest data is from 2020 it is not yet clear whether NCC is on track to reach this target.
Grow annual bus patronage in Norfolk	1 percent per annum between 2023 and 2027	18.7 million (2022)	18.7 million	22.6 million	29.2 million	29.4 million	29.7 million	30 million	Numbers are growing steadily after starting from a low base post-pandemic.
Increase rural accessibility	85 percent by 2027	74.4 percent (2022)	74.4 percent	73.5 percent	79 percent	81 percent	83 percent	85 percent	Figure has decreased due to some service changes last year – but with the BSIP funding and new services in place this should start to increase from 2024
Number of people killed or seriously injured (KSI) in road traffic collisions	To reduce current levels	Index of 100	100	100	100	100	100	100	In 2022 (latest available data) 473 people were KSI on Norfolk's roads, an increase of 386 from 2021. **Worsening.**
Percentage of principal roads where maintenance should be considered	Below 5.2 percent by 2027/28	4.30 percent (2022)	4.30 percent	3.58 percent	4.65 percent	4.82 percent	5.00 percent	5.17 percent	In 2023, there was a slight reduction (0.72 percent) in road maintenance to 3.58 percent. **Improving** and on target to the target of below 5.2 percent by 2027/28**.**