

A14 Cambridge to Huntingdon improvement

One-year post-opening project evaluation



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Foreword

National Highways is the government-owned company that operates, maintains, and improves England's motorways and major A roads. Our roads help our customers get to their destination safely – and in the time they expect to. Safety is our top priority, and we are committed to reducing the number of road users killed or seriously injured on the strategic road network by 50% (from the 2005-2009 baseline) by the end of 2025.

As Chief Customer and Strategy Officer, I want to know that developments on our network are meeting their objectives and are putting the needs of drivers first. Post Opening Project Evaluations (POPEs) are a vital part of that assessment. POPEs are undertaken for all our major projects to understand how traffic changes, due to a project being in place, the environmental and safety impacts and how a project supports the economy.

We work to a five-year funding cycle, a radical new approach to road investment first introduced in 2015 which saw the government committing £15.2 billion in the period from 2015 to 2021. The A14 Cambridge to Huntingdon improvement scheme was officially opened during this period, in May 2020, just 6 weeks after the first Covid-19 lockdown had started. The scheme was the first scheme of its size to be delivered since National Highways was created in 2015 (formerly Highways England).

Before the improvements, congestion on the A14 through Huntingdon resulted in delays and poor journey time reliability. Two of our main objectives were to ease congestion by providing an alternative dual carriageway bypassing Huntingdon and to improve safety by separating strategic road traffic from local traffic.

The new A14 provides 21 miles of best-in-class A-road. A new local road, the A1307, was built alongside the new A14 to allow local journeys. We have added 126 new lane miles to the network and improved several junctions, including Bar Hill and Swavesey, to provide better capacity at these locations. Improvements at Girton and Brampton Hut have also helped to improve capacity by allowing free-flow movements to existing roads.

The A14 also includes the latest safety features, such as: incident management equipment including electronic messaging signs and CCTV; emergency refuge areas for those with urgent vehicle problems; variable speed limits to steady the flow of traffic and reduce 'stop-start' traffic jams; and red X signs to manage traffic during vehicle incidents and roadworks.

Our findings show that the scheme has resulted in a significant shift in traffic from Huntingdon to the new bypass, with faster and more reliable journeys as a result. Our customers have been positive about journey times and reliability. Early indications are that the scheme is having a positive safety impact, with a decrease in the rate of collisions resulting in injury, but we will need data over the longer term to assess this, as safety trends can vary each year. Our customers have stated they feel safe on the A14 bypass and the A1307.

There has been significant investment in environmental assets. At this early stage, the indications are that key impacts around air quality and noise are as expected, but more work is needed on mitigation related to, for example, landscape and biodiversity. Lessons have been learned regarding the initial difficulties faced in our tree planting programme, and we have completed a new replanting programme.

Our investment in the scheme, including £120m worth of goods and services sourced locally, and through the additional £450k A14 Community Fund has had significant positive social value impacts. We employed over 14,000 people, including over 250 archaeologists who discovered 15,000 artefacts. We improved local walk, cycle, and bridleway routes. We funded local community organisations, which resulted in a range of benefits, including helping develop skills for adults with learning disabilities.

Elliot Shaw

Chief Customer and Strategy Officer

September 2024

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1. Executive summary

Background

The A14 is a key transportation link connecting major cities, towns, and regions in the UK. It plays a crucial role in facilitating trade and logistics, particularly as it connects the Port of Felixstowe, one of the country's busiest ports, to the Midlands and other inland areas.

This specific stretch of the A14 route serves as a vital link between Huntingdon and Cambridge, carrying a substantial volume of both commuter and long-distance traffic, and a high proportion of heavy goods vehicles (HGVs). Additionally, it provides a crucial strategic connection between the A1 and M11 motorways.

The old route was frequently congested, journey times were unreliable and forecast increases in traffic and HGVs indicated conditions would worsen. The A14 Cambridge to Huntingdon improvement scheme was developed to combat congestion, improve safety, unlock local growth, connect people, and leave a positive legacy.

Construction commenced in November 2016, and was completed ahead of schedule, opening to traffic in May 2020. The scheme encompassed the development of a two-lane dual carriageway between Ellington and the A1 at Brampton and a three-lane dual carriageway between Brampton and Swavesey, the demolition of the Huntingdon viaduct, along with enhancements to 21 miles of the old A14 (now the A1307), including widening over approximately five and a half miles to provide three lanes in each direction between Swavesey and Bar Hill. The scheme widened one and a half miles of the Cambridge Northern Bypass between Histon and Milton.

The most significant element of the scheme fully opened in May 2020. There were some ongoing works, for example at Huntingdon rail station, up to 2023, although these were not expected to have had a material impact on the evaluation.

Covid-19 and associated lockdowns and restrictions from 2020 to 2021 did have a direct impact on traffic volumes and trip patterns. As a result, this one year after (OYA) evaluation was delayed until 2022, when traffic data collection was undertaken (November 2022) and road safety data obtained (calendar year 2022). Site visits for the environmental evaluation were undertaken in May 2023, so the findings are based on environmental conditions 3 years after opening, in effect a three year after (environmental) evaluation.

In addition to the standard datasets and approaches used in undertaking a Post Opening Project Evaluation (POPE), to understand people's views, in 2023/24 this evaluation undertook: surveys of through traffic users (using the new A14) and residents (likely to be impacted by the scheme); and interviews with businesses, community organisations and stakeholders. Care is needed in drawing firm conclusions on people's perceptions of change as a result of the scheme, as recall is likely to have been affected by the elapsed time since construction started in 2016, Covid lockdowns, and the impact of the A14 scheme construction works themselves.

Evaluation findings

Customer journeys

The scheme has supported a significant shift in traffic from Huntingdon and the A1307 (the old A14), to the new A14 Huntingdon bypass, more than anticipated. There were almost 55,000 fewer daily vehicle movements through Huntingdon as a result of the scheme (2022 compared to 2016), and the new bypass was carrying more traffic than the old A14 (with a greater number and proportion of HGVs). There were therefore more journeys in total across the A14 corridor (including both the A14 and A1307) and these were generally faster and more reliable than before the scheme was built. Customers also gave the new scheme positive ratings on journeys times and reliability, and a positive view on how these have changed with the scheme in place:

- Over three quarters (79%) of residents were satisfied with the new road layout, with just 7% dissatisfied.
- The new A14 bypass carried an average of 74,100 vehicles per day between Junctions 22 and 23. The A14 section that was widened between Swavesey and Bar Hill carried an average of 86,200 vehicles per day (Junctions 24-25).
- The A1307 carried on average only 17,100 vehicles per day in 2022, compared to 71,600 when it was the old A14 in 2016.
- 76% of residents agreed the scheme had separated local and strategic traffic, with the right traffic now using the right roads.
- The proportion of HGVs observed along the A1307 in Huntingdon decreased from 25% in 2016 to 2% in 2022, while along the new A14 bypass (Junctions 22-23) the proportion of HGVs was 29% in 2022.
- The scheme reduced average journey times between Ellington (to the west of Huntingdon) and Fen Ditton (to the north of Cambridge), with savings of approximately 9-10 minutes in the peaks using the new A14 bypass.
- Nearly all residents (91%) rated journey times as good, with three quarters of residents stating that journey times had improved with the scheme in place; nearly 90% of through traffic rated journey times as good, with 85% stating there had been an improvement since the scheme.
- Journey times have become more reliable, ranging from 19 to 41 minutes between Ellington and Fen Ditton using the new A14 bypass in 2022, compared to between 21 minutes to one hour and 40 minutes in 2016 using the old A14.
- In terms of reliability, 90% of residents rated the reliability of their journey times as good, with three quarters stating that reliability had improved with the scheme in place; 87% of through traffic rated reliability as good, with the same proportion stating that reliability had improved with the scheme in place.

Safety

Early indications suggest there has been a positive safety impact on most measures related to collisions involving an injury, but it is too early to draw conclusions on whether these form part of an ongoing trend and whether they are different to what might have been expected without the scheme in place, given wider regional trends:

- The average annual number of collisions involving an injury decreased from 86 for the period 2012-2016 to 42 in 2022, although this is in line with what might have been expected without the scheme in place.
- The rate of collisions involving an injury has however decreased, from 31 per hundred million vehicle miles (equivalent to travelling three million vehicle miles before a collision occurs) to 6 (equivalent to travelling 16 million vehicle miles before a collision occurs). This was a greater improvement than what would have expected without the scheme.
- The number of killed and seriously injured (KSI) casualties has remained stable at 17 per year on average, in spite of the increase in traffic, and the KSI per hundred million vehicle miles has decreased from 7 to 4.
- Further analysis over a longer time period, for example as part of a five years after evaluation, will be necessary to draw firmer conclusions on trends.
- Both residents and through traffic stated they felt safe driving on the new A14 (86% and 92% respectively) and residents also indicated they felt safe driving on the A1307 (87%). For those who had also travelled on the old A14, 79% of residents and 85% of through traffic felt safety had improved, and only 4% and 3% respectively felt it was worse.

Environment

Any major construction project is likely to have an impact on the local environment. At the appraisal stage, impacts (with appropriate mitigation where possible and if relevant) are quantified / monetised or identified as beneficial / adverse (and differentiated as slight / moderate / large) or neutral. The environmental evaluation assesses whether the impacts are in line with, better than or worse than expected at the appraisal stage. As the site visits were undertaken in May 2023, this is considered to be a three year after evaluation.

The impact on greenhouse gases was better than expected, primarily due to lower observed traffic flows than modelled (emissions are still likely to go up, but not as much as expected). It should be noted this conclusion only applies to the links that could be assessed on the basis of having traffic data available.

The environmental impacts on noise, air quality, townscape, physical activity, severance, and journey quality were as expected:

- Noise (a net benefit was predicted): for those links that could be assessed in terms of changes in traffic flow and mitigation in place (e.g. low noise surfacing), impacts were in line with expectation.
- Air quality (a net benefit was expected): The analysis of traffic data indicated there would be no material impact on the appraisal assumptions.
- Townscape (moderate adverse impact was predicted): Impacts were as expected, with benefits from the removal of the old A14 viaduct, and disbenefits from the loss of privately owned green space and mature trees.
- Physical activity (slight beneficial impact was predicted): overall, the delivery of non-motorised unit (NMU) facilities and public rights of way (PROWs) were as expected.

- Severance (a neutral impact was predicted): The areas that were predicted to be impacted by severance including farmland, community access and residential receptors were as expected. NMUs and PROWs were as expected.
- Journey quality (large beneficial impact was predicted): Impacts were as predicted, based on provision of overhead gantries and variable speed limit signs, and bus stop relocations.

The impacts on landscape, biodiversity, historic environment, and water environment were worse than expected:

- Landscape (moderate adverse impact was predicted): Mitigation planting was undertaken but was yet to succeed by the time of the evaluation and site visit. It was considered worse than expected based on three years of growth. Lessons have been learned regarding the initial difficulties faced in the tree planting programme, with further remedial works undertaken. This will need review at the next evaluation stage.
- Biodiversity (moderate adverse impact was predicted): mitigation was in place (e.g. attenuation areas, bird and bat boxes, and noise barriers), but it is possible that terrestrial invertebrates, great crested newts, and other species are experiencing worse than expected effects due to the poor condition of some attenuation ponds and culverts. There were benefits to biodiversity expected from the tree planting, but these may be worse than expected at this stage as the planting was not as established as expected. Impacts overall at this stage were worse than expected. However, this will need review at the next evaluation stage.
- Historic environment (moderate adverse impact was predicted): The majority of impacts were as expected, but there was temporary fencing in place at one of the Borrow Pits for safety reasons. Also, historic buildings outside of Huntingdon were experiencing worse impacts due to the tree planting (which would help screen the scheme) not being as established as expected. Overall, impacts were worse than expected.
- Water environment (slight adverse impact was predicted): two of five water courses were as expected, but three were worse, requiring for example maintenance of vegetation. Some of the attenuation ponds will require maintenance to manage reeds, algae growth, silt, and mud. Impacts overall at this stage were worse than expected.

National Highways have already implemented remedial measures to start addressing some of the issues with the mitigation implemented, including a new Replanting Strategy which was published in March 2023, and replanting having taken place (the last of which was in November 2023 – April 2024, after this evaluation took place). National Highways have reported that there is some good recovery of the planting. When improvements and remedial works are completed, then it is possible the design year outcomes will still be met for those impacts considered as worse than expected. As such, impacts should be reviewed again in the five years after evaluation to assess progress.

Social value

Social value is the benefit that National Highways and its supply chain delivers for people, the environment and the economy through the development and the

operation of the Strategic Road Network The scheme and the associated £450,000 Community Fund resulted in a number of wider impacts:

- Economic prosperity:
 - Over 14,000 people were employed on the scheme, and £120m worth of goods and services were sourced locally.
 - The improved journeys times and reliability were recognised by businesses and residents, who noted that this allowed them to access customers, employees, or jobs from a wider catchment.
- Improving the environment:
 - Investment in new habitats and environmental mitigation was recognised by stakeholders, but there were mixed views on the impacts. Businesses perceived there had been improvements in noise and air quality, but residents were split almost evenly on whether air quality and noise had improved or got worse.
 - Issues around tree planting and the number of trees that died were raised. National Highways have since implemented a new programme of tree planting.
- Community wellbeing:
 - 29% of residents felt that more leisure and entertainment opportunities were available to them, and 24% reported they were able to access more education facilities as a result of the scheme.
 - 15,000 artefacts were found during construction, and Cambridgeshire County Council is aiming to exhibit these at local venues.
 - The scheme delivered new and improved walk, cycle, and bridleway routes, although there was feedback that these could have been better connected and linked. Of the residents who cycled in the area, almost a third felt the scheme had contributed to them cycling more often than before the scheme.
 - The scheme helped unlock new homes, and in particular allowed developments in Northstowe, which were dependent on sufficient highway capacity being provided in the A14 corridor, to proceed.
- Equality, diversity, and inclusion
 - Community organisations noted that beneficiaries of the A14 Community Fund included children, young people, adults with learning disabilities and older people.
 - With two new bridges delivered for non-motorised traffic, one national charity noted this had improved accessibility for wheelchair users and people with mobility issues.

2. Introduction

What is the project and what was it designed to achieve?

Project context

The A14 Cambridge to Huntingdon Improvement Scheme is a National Highways major project, the main element of which was completed in May 2020 (the opening of the new A14 Huntingdon bypass and widening to three lanes in each direction between Swavesey and Bar Hill).¹

This report presents a One Year After (OYA) opening evaluation of this scheme and has been prepared as part of the National Highways Post Opening Project Evaluation (POPE) programme. Alongside the analysis and reporting of traffic, safety and environmental outcomes that form part of a standard OYA POPE report, this evaluation also includes the results from surveys of residents, through traffic and local businesses, as part of a programme of work to assess customer experience and social value as a result of this scheme. This report has therefore been termed POPE+. It is the first such evaluation by National Highways to take this approach.

The delay in undertaking the OYA evaluation from 2021 to 2022/23 was due to the impact of Covid. Traffic flows were significantly affected by the coronavirus pandemic and associated lockdowns during 2020 and 2021, and some elements of the scheme, specifically the removal of the A14 viaduct through Huntingdon and its replacement with at grade roads connecting to the local road network, were completed in 2022.

A Five Years After (FYA) opening evaluation of this scheme will also be undertaken to present the impacts of the scheme during the opening five-year period.

History

Construction of the A14 Cambridge to Huntingdon improvement scheme commenced in November² 2016, with the new A14 bypass completed ahead of schedule, opening to traffic in May 2020.

The scheme encompassed the development of a two-lane dual carriageway between Ellington and the A1 at Brampton and a three-lane dual carriageway between Brampton and Swavesey, along with enhancements to 21 miles of the then A14 roadway (now the A1307)³, including widening over approximately five and a half miles to provide three lanes in each direction between Swavesey and

¹ Further information can be found in the brochure *Delivering the benefits: A14 Cambridge to Huntingdon improvement scheme* (Highways England, 2020) https://assets.highwaysengland.co.uk/roads/road-projects/a14-cambridge-to-huntingdon-improvement/BED20_0026+A14+end+of+scheme+brochure+FINAL.pdf

² As this was late 2016, data from 2016 (pre-November) has been used to inform the pre-construction baseline used for this evaluation.

³ The intention was for the 'old' A14 to be 'de-trunked' between Huntingdon and Swavesey and between Alconbury and Spittals interchange, with responsibility for the road passing to the local authority (Cambridgeshire County Council), but this process was still ongoing in 2022. It does not affect the data collected or the evaluation results.

Bar Hill. The scheme also widened one and a half miles of the Cambridge Northern Bypass between Histon and Milton.

This section of the A14 suffered from congestion and unpredictable journey times, which led to delays for both local and long-distance travellers, with traffic merging/diverging with the A14 carriageway from important routes including the A1(M) and M11. By improving this section of the A14, the scheme aimed to improve journey time reliability and contribute towards the region’s local economy.

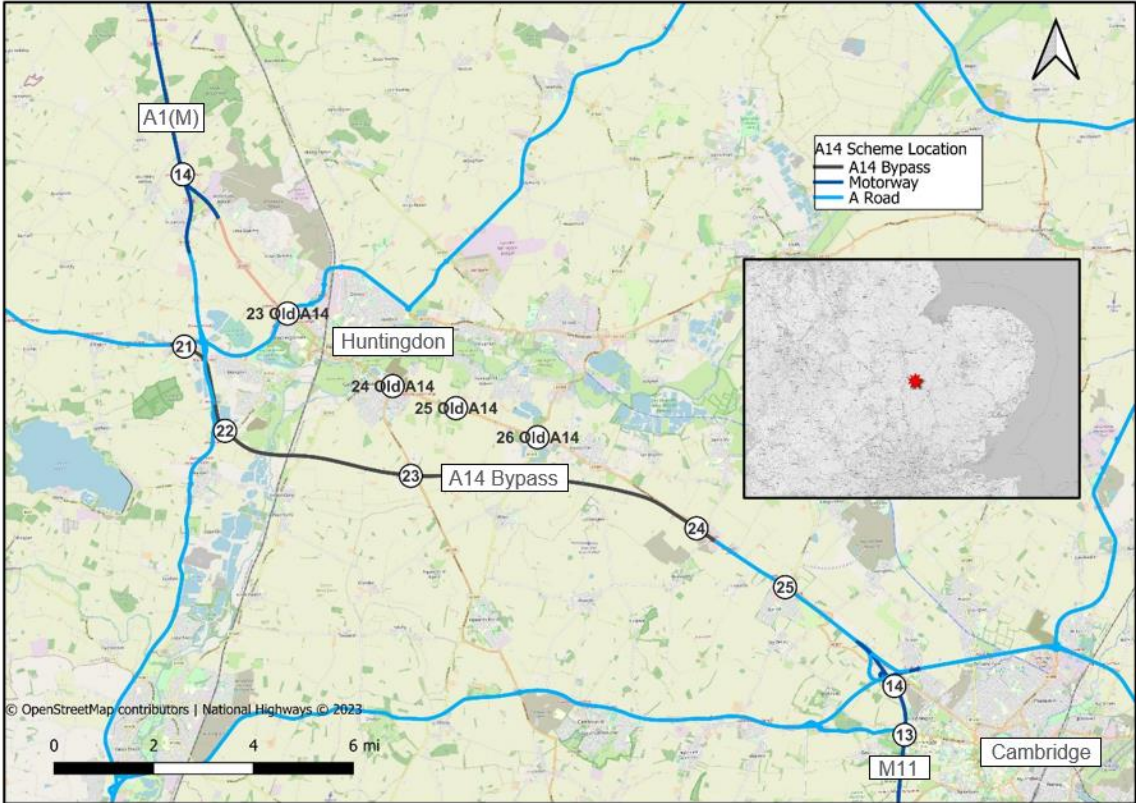
The scheme aimed to address issues related to congestion, safety, and capacity as well as reducing through traffic in Huntingdon.

There were two bridges included in the scheme designed for non-motorised transport. These bridges, located to the east of the new A14 in South Cambridgeshire, can be used by walkers, cyclists, horse riders and any other non-motorised transport.

Project location

The A14 Cambridge to Huntingdon improvement scheme lies from Junction 21 to the west of Huntingdon to Junction 14 to the north west of Cambridge (see Figure 1). The scheme links the A1, A1(M) and A141 at the western end of the route to the M11 and A428 at the eastern end. The old A14 route through Huntingdon is now the A1307.

Figure 1 A14 Cambridge to Huntingdon improvement scheme location



Source: © OpenStreetMap contributors | National Highways © 2023

How has the project been evaluated?

Post-opening project evaluations are carried out for major projects to validate the accuracy of expected project impacts which were agreed as part of the business

case for investment. They seek to determine whether the expected project benefits are likely to be realised and are important for providing transparency and accountability for public expenditure, by assessing whether projects are on track to deliver value for money. They also provide opportunities to learn and improve future project appraisals and business cases.

A post-opening project evaluation compares changes in key impact areas⁴ by observing trends on a route before a project is constructed (baseline) and tracking these after it has opened to traffic. The outturn impacts are evaluated against the expected impacts (presented in the forecasts made during the appraisal) to review the project's performance. For more details of the post-opening project evaluation (POPE) methods please refer to the POPE methodology manual on the National Highways website.⁵

This section summarises the approach to POPE+, encompassing customer experience and social value. The approach to obtaining additional information and insights, through surveys and interviews, can be found in Appendix A.

Customer experience

The objective of the customer experience workstream was to understand the impacts of the scheme from a customer perspective, either directly as a road user or indirectly as a resident or business. The main purpose was to evaluate any improvement in customer experience in terms of their journeys (such as travel times, reliability, and safety), but also understand perceptions related to other impacts, such as improving the quality of life for communities, enhancing the environment, and supporting the economy.

As this is a new approach within the context of POPE, a baseline survey had not taken place before construction work began on the new A14 in 2016. This approach will obviously be subject to change for future schemes that may implement the POPE+ approach and undertake a baseline survey. For the A14 scheme, to measure how customer experience had changed, the only option was to ask customers for their perception of their experience improving or becoming worse. In addition, only those who had used the old A14 before work on the new A14 began were able to give a view.⁶ Recall and comparison of before (2016) and after (2023) conditions are likely to have been affected by both the elapsed time and Covid lockdowns in the intervening period (mainly 2020 and 2021).

Surveys of residents and through traffic took place between April and June 2023, and in-depth interviews with businesses took place in November 2023.

A 20-minute survey was completed with a representative sample of 1,609 residents at their homes who lived within 5km of the A14 across the three districts in the scheme area (Huntingdonshire, South Cambridgeshire, and Cambridge). An additional 10-minute survey was completed with 802 drivers who used the A14 as a through route (through traffic), of which 313 were Heavy Goods Vehicle (HGV) drivers.

Ten senior managers of medium and large businesses (50 or more employees) completed an in-depth interview lasting up to 60 minutes. Ten more in-depth

⁴ These include safety, journey reliability and environmental impacts.

⁵ <https://nationalhighways.co.uk/publications/>

⁶ There was a gap of approximately six years from the work on the new A14 beginning and the customer experience interviews taking place. Therefore, recall is likely to have been diminished and potentially overstated.

interviews were completed with stakeholders such as elected representatives, and representatives for the police, landowners, cyclists, and horse riders. The interviews were intended to enhance development of the residents and through-traffic questionnaires and/ or provide additional detail and examples of the impacts of the scheme. The interviews do not necessarily represent the views of all stakeholders, customers, and residents.

The results from the customer experience work have been incorporated into the main findings that form part of this OYA POPE report (traffic, safety, and environment) as well as into a new chapter on wider benefits.

Social value

National Highways defines social value as ‘the benefits that we and our supply chain deliver for people, the environment and the economy’. National Highways is developing and piloting a social value evaluation framework for the monitoring and evaluation of major projects. The intention is to provide a mechanism for the measurement and reporting of the wider social value beyond project delivery, evaluating the wider community outcomes and impacts.

The overarching high level National Highways social value pillars and outcomes are set out in *Our social value plan: 2022-2024* (National Highways, 2022)⁷ and centre around: economic prosperity; improving the environment; community wellbeing; and equality, diversity, and inclusion.

The A14 scheme has been used as a case study for the development of indicators and piloting of data collection using the emerging evaluation framework. This has drawn upon available secondary data as presented in the A14 end-of-scheme brochure⁸, data collected through the POPE OYA process and additional primary data collected through the customer experience surveys. As such, some of the results obtained from the customer experience workstream have fed directly into the analysis and the indicators used to measure social value.

Additional primary research was undertaken in January and February 2024 comprising in-depth interviews with recipients of the A14 Community Fund⁹, as well as small enterprises located in the scheme area. The interviews were intended to provide additional detail and examples of the social impacts of the scheme. They do not necessarily represent the views of all stakeholders, customers, and residents.

The results from the social value work have been incorporated into the main findings that form part of this one year post opening evaluation (traffic, safety, and environment) as well as into a new chapter on wider benefits.

⁷ https://nationalhighways.co.uk/media/tdog2fma/ccs0622297296-003_social-value-strategy-report_final.pdf

⁸ *Delivering the benefits: A14 Cambridge to Huntingdon improvement scheme* (National Highways, 2020) https://assets.highwaysengland.co.uk/roads/road-projects/a14-cambridge-to-huntingdon-improvement/BED20_0026+A14+end+of+scheme+brochure+FINAL.pdf

⁹ A Community pub; an arts and wellbeing charity; an arts charity for adults with learning disabilities; and an environmental charity

3. Delivering against objectives

How has the project performed against objectives?

All our major projects have specific objectives which are defined early in the business case when project options are being identified. The project had five key objectives¹⁰, as listed in Table 1, which summarises the project’s performance against each of these, using evidence gathered for this study.

These objectives were appraised to be realised over 60 years.¹¹ The evaluation provides an early indication if the project is on track to deliver the benefits.

Table 1 Objectives and Evaluation summary

Objective	One-year evaluation	Customer experience and social value impacts
<p>Combating congestion: to combat traffic congestion throughout the corridor, providing a high-standard strategic route linking the Midlands and North East with East Anglia and South East England</p>	<p>Customers have experienced quicker and more reliable journeys. Residents of Huntingdon have experienced a considerable reduction in traffic going through the town on the old A14, including nearly all HGVs.</p>	<p>Nearly all residents (91%) and through traffic (90%) rated journey times as good, and similar proportions for reliability. Most felt these had improved with the scheme now in place.</p>
<p>Improving safety: to enhance road safety and make driving a less stressful experience</p>	<p>Early indications are that the safety objective is being met, but a longer time period will be required to determine if these initial positive findings are a real trend or natural fluctuation.</p>	<p>86% of residents and 92% of through traffic felt safe travelling on the new A14. Most felt safety had improved with the scheme in place.</p>
<p>Unlocking growth: to unlock local growth and support national economic growth by improving access to labour markets and by eliminating traffic delays</p>	<p>The scheme has added capacity and improved journey times between Huntingdon and Cambridge, increasing the size of the labour catchments that can access these destinations within a given time. The number and % of HGVs have increased, underlining the route’s strategic importance to freight.</p>	<p>Businesses and residents noted that the improved journey times and reliability had allowed them to access customers, employees, or jobs from a wider catchment. The scheme helped unlock housing developments, in particular in Northstowe.</p>

¹⁰ A14 IDT Business Case, SGAR 5, National Highways, June 2016

¹¹ Projects are typically appraised over a 60-year period.

Objective	One-year evaluation	Customer experience and social value impacts
<p>Connecting people: to improve local connectivity, by directing the right traffic onto the right roads, enabling major new residential developments to proceed</p>	<p>The scheme has diverted most traffic going through Huntingdon on the A1307 to the A14 bypass, and decreased and diverted traffic away from local roads in Huntingdon and Cambridge, providing the opportunity to unlock local development</p>	<p>79% of residents were satisfied with the new road layout, and that the right traffic was on the right roads. The scheme delivered new and improved walk, cycle, and bridleway routes, benefitting local connectivity and people with mobility issues.</p>
<p>Building a legacy: to identify a range of legacy outcomes that offer sustainable socio-economic, environmental and workforce benefits that are enabled by the scheme</p>	<p>£120m worth of goods and services were sourced locally to deliver the scheme. 149 apprentices were supported during scheme delivery. 270 hectares of new habitats were created for local wildlife.</p>	<p>15,000 artefacts were found. The intention is to display these at local venues. National Highways undertook a new programme of tree planting.</p>

4. Customer journeys

Summary

The scheme was intended to combat congestion and reduce traffic on the A14 through Huntingdon by building the A14 bypass to the south of Huntingdon together with other related improvements on the A1, the old A14 (now A1307), local access roads and Huntingdon town centre.

Compared to the forecasts made at the appraisal stage, the scheme has supported a more significant than expected redistribution of traffic from Huntingdon and the A1307 (the old A14) to the new A14 Huntingdon bypass. Daily traffic flows on the A1307 decreased from 71,600 in 2016 to 17,100 in 2022. On the new A14, flows ranged from between 74,100 (junctions 22 and 23) and 86,200 vehicles (junctions 24 and 25). HGVs on the A1307 in Huntingdon decreased by 98% from 2016 to only 300 vehicles in 2022, while the number carried on the new A14 bypass in 2022 was more than had been forecast (21,300 between junctions 22 and 23 in 2022, compared to 18,800 modelled). The traffic from HGVs made up 29% of total flows in 2022 between junctions 22 and 23, and 25% between junctions 24 and 25.

Customers have noticed these changes too, with 76% of residents agreeing the scheme had separated local and strategic traffic, with the right traffic now using the right roads.

The scheme has reduced average journey times between Ellington (to the west of Huntingdon) and Fen Ditton (to the north of Cambridge) in both directions in all time periods, with savings of approximately 9-10 minutes in the peaks using the new A14 bypass. Journey times have become more reliable, ranging from 19 to 41 minutes between Ellington and Fen Ditton in 2022, compared to between 21 minutes and one hour 40 minutes in 2016.

Nearly all residents (91%) rated journey times as good, with three quarters of residents stating that journey times had improved with the scheme in place. Nearly 90% of through traffic rated journey times as good, with 85% stating there had been an improvement since the scheme. There were similar views on the reliability of journey times now and whether these had improved since the scheme had been introduced.

Interviews with businesses, community organisations and stakeholders backed up these findings, notwithstanding some concerns about the limited number of junctions and local access to the new A14, such as St. Ives.

How have traffic levels changed?

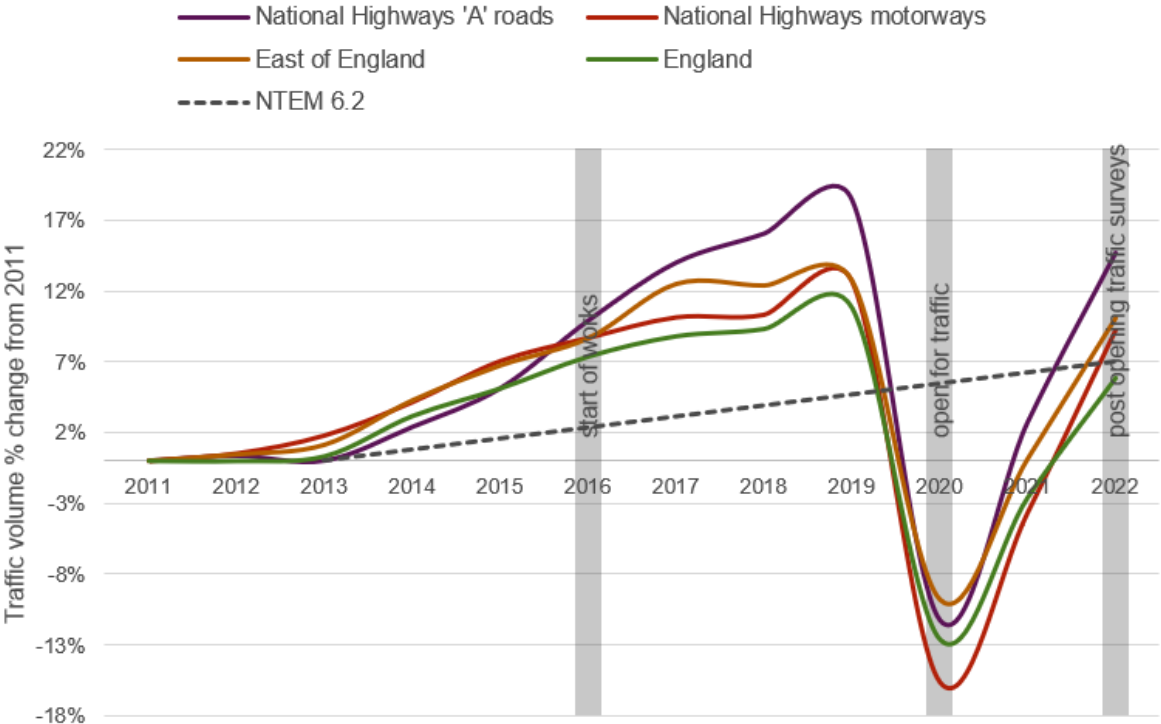
This section examines the changes in traffic flow along the project extent and on roads in its vicinity. We have compared these with observed national and regional trends. We have also compared observed and forecast traffic flows to understand to what extent the forecast flows were realised.

National and regional traffic

To assess the impact of the project on traffic levels, it is useful to understand the changes within the context of national and regional traffic (see Figure 2). To do

this, we use annual statistics¹² from the Department for Transport (DfT). The data is reported by local authority and road type, recording the total number of million vehicle kilometres travelled.

Figure 2 National and regional trend



Source: Department for Transport road traffic statistics (2023) <https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra>

The NTEM¹³ 6.2 growth rate, which informed the forecasting of background traffic at the business case stage for this scheme, anticipated an increase in traffic of around 5% between 2016 and 2022. This is notably more than the outturn growth across the East of England of 1.3%, although only slightly more than the 4.3% for National Highways ‘A’ Roads. Lower levels of outturn growth are partly attributable to the impact of Covid and associated lockdowns in 2020 and 2021, which can be clearly seen in Figure 2. This outturn data is used as a baseline, and we attribute any growth observed on roads in the project area which is above national and regional trends to the project.¹⁴ As the Business Case was based on higher growth rates than have occurred, it might be expected that the forecast flows were higher than observed for the scheme links themselves, and this is also explored later in this chapter.

The impact of Covid within the context of longer-term trends in the scheme area, and the rationale for delaying this one year after evaluation, can be seen in Figure 3. This shows average weekday traffic flows on the A1(M) between Junctions 14 to 15 and on the A1 between the A141 and A1(M). Flows were relatively stable from 2016 to 2019. There is less difference in flows between the A1(M) and the A1 after the A14 bypass opened, due to rerouting of trips through the scheme and therefore the A1. The flows show the impact caused by Covid after March 2020 with flows on the A1(M) at the start of lockdown only a third of those in 2019. The spikes in the

¹² Motor vehicle traffic (vehicle kilometres) by region in Great Britain, annual from 1993 to 2022, Table TRA 8901, Department for Transport

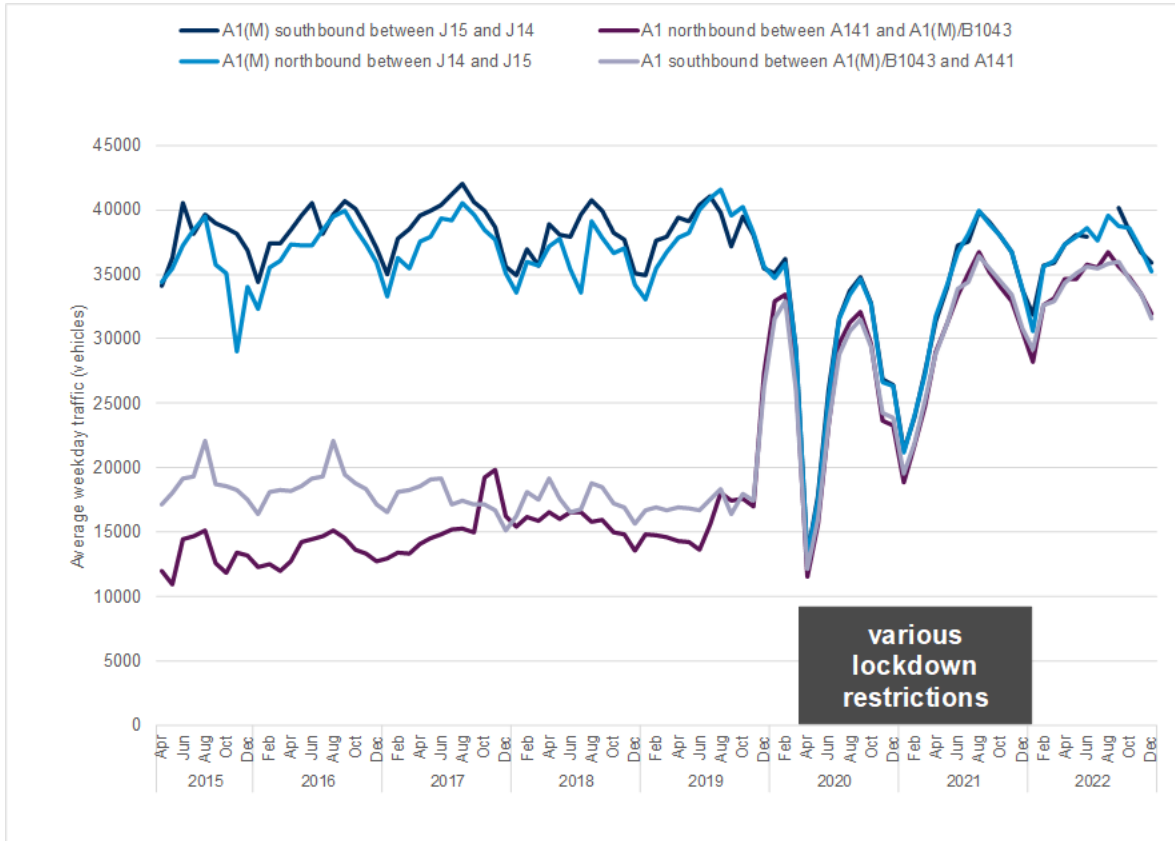
¹³ DfT’s National Trip End Model

¹⁴ Given the uncertainties in the figures, we view the measure as qualitative.

2020 and 2021 summer months reflect the temporary relaxation in some lockdown restrictions.

By mid-2022 traffic flows were reaching or broadly matching pre-pandemic levels, indicating slightly higher levels of recovery than for National Highways ‘A’ roads and motorways as a whole.

Figure 3 Long term traffic trends around the scheme



How did traffic volumes change?

The A14 Cambridge to Huntingdon bypass was constructed to provide a better alternative for road users to the A1307 (the old A14). The main expectation was that traffic would divert to the new route and that there would be some redistribution of traffic on local roads, in particular in and around Huntingdon.

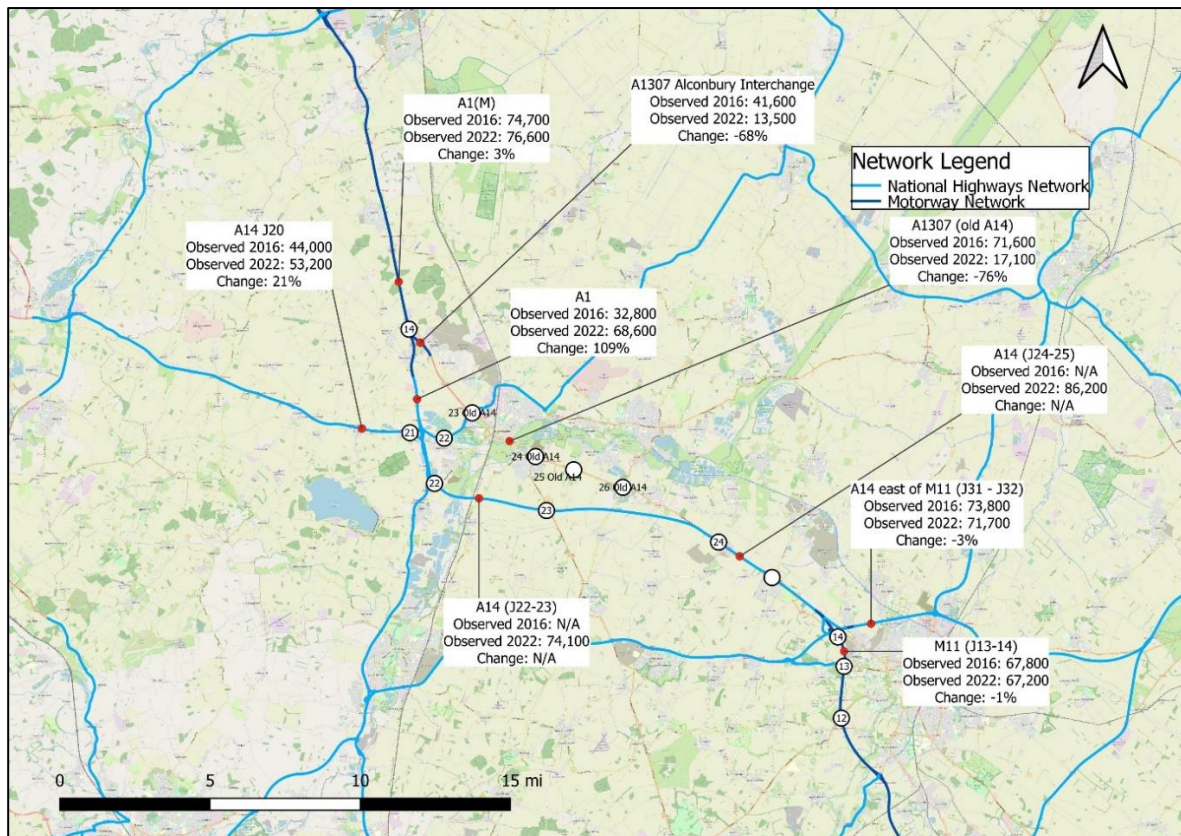
The evidence indicates that traffic has been redistributed onto the new route, as shown in Figure 4 which compares two-way average annual daily traffic (AADT) levels in 2016 and 2022 on the key strategic routes. The key findings are:

- There have been large reductions in traffic flow on the A1307 east of Alconbury (68%) and A1307 Huntingdon (76%), due to rerouting to the new A14 bypass. This rerouting can be seen in the large increase in traffic flow (109%) on the A1 south of Alconbury, which provides access/ egress to the new A14.
- The observed flow on the new A14 (J22-23) was 74,100 in 2022 (2,500 more than the 71,600 recorded on the old A14 in 2016 - now the A1307).
- On the A14 at Ellington (Junction 20) traffic flows have increased by 21% as a result of the scheme providing additional capacity east of Huntingdon and between Huntingdon and Cambridge. Without the scheme, it is unlikely that

traffic flows would have increased at this location due to congestion on the old A14.

There have also been large decreases in HGV volumes on the A1307, with an 84% reduction east of Alconbury and a 98% reduction through Huntingdon. That leaves HGV flows at about only 300 vehicles a day on the A1307 through Huntingdon, compared to 18,200 in 2016, and 21,300 (between Junctions 22 and 25) on the A14 bypass in 2022. HGVs decreased from 25% of traffic on the A14 in 2016 to 2% in 2016 (on the A1307) and constituted 29% of traffic on the new A14 (Junctions 22-23) in 2022, underlining the route's importance to strategic freight movements.

Figure 4 Observed AADT at strategic locations 2016 & 2022



Source: © OpenStreetMap contributors | National Highways © 2023

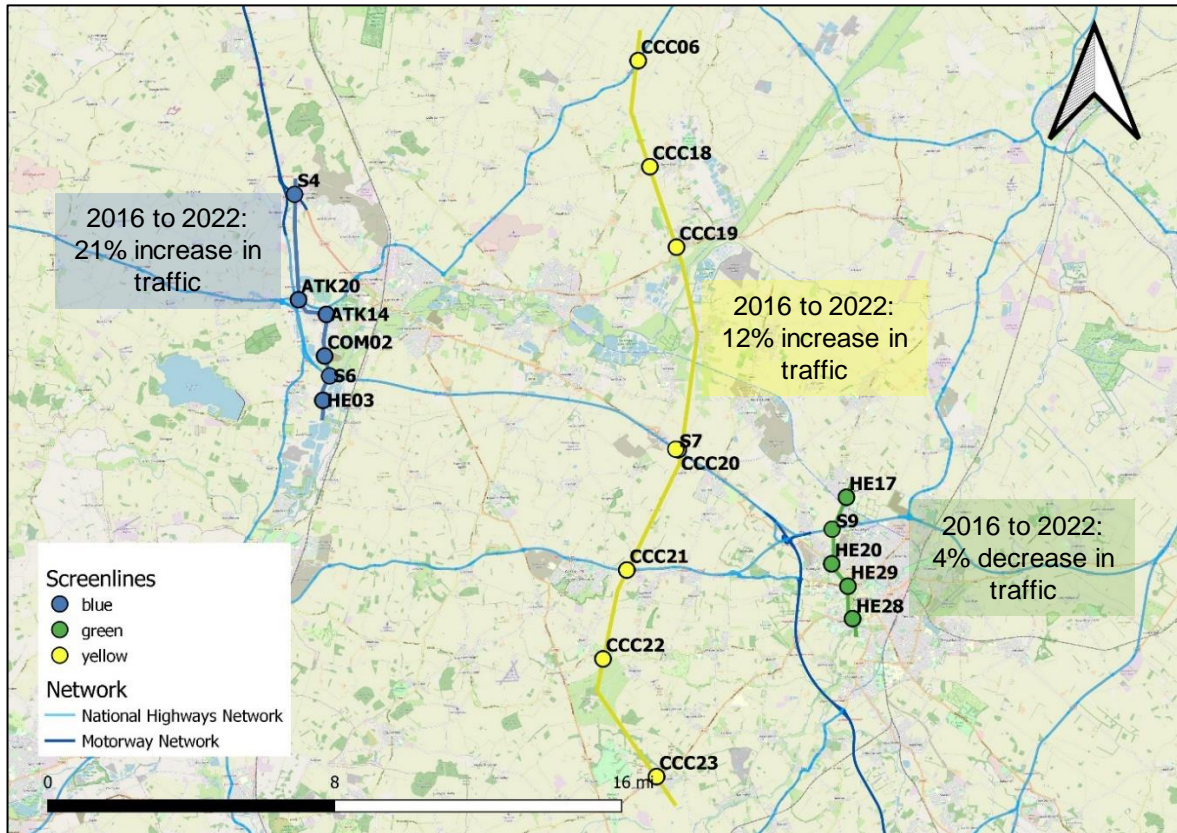
An analysis of traffic crossing 'screenlines' (Figure 5) was undertaken to enable an understanding of how total vehicle movements across the wider corridor had changed between 2016 and 2022. The key findings were:

- On the West of Huntingdon screenline from the A1307 to Mill Road in Buckden (Blue), total traffic increased by 21% (21,300 vehicles)
- On the Central screenline, east of Huntingdon from the A141 to the A603 (Yellow), total traffic increased by 12% (16,800 vehicles)
- On the Cambridge screenline, west of Cambridge from the B1049 to the A603 (Green), total traffic decreased by 4% (5,000 vehicles)

Traffic flows crossing both the blue and yellow screenlines have increased due to the scheme providing additional capacity between Huntingdon and Cambridge. Traffic impacted by the scheme is likely to make up a smaller proportion of traffic on the Cambridge screenline, although flows did increase by 10% on the A1307

Huntingdon Road on this screenline, reflecting the improvements at the junction between the M11, the A428 and Huntingdon Road near Girton, and the improvement of the junctions at Swavesey and Bar Hill.

Figure 5 Traffic count locations on the screenlines and % change in traffic by screenline 2016 - 2022



Source: © OpenStreetMap contributors | National Highways © 2023

An analysis of traffic flows on local roads indicated that there was an overall reduction of 4% on roads in Huntingdon but a 3% increase just outside / around Huntingdon and Cambridge. This reflects that traffic is generally rerouting from local roads to more strategic routes to access the new A14 or rerouting within Huntingdon due to the removal of the old A14 viaduct.

Customer experience of traffic flows

The redistribution of traffic has been noticed by customers, in terms of splitting local and strategic traffic onto the A1307 and new A14 respectively. The customer experience surveys showed that 76% of residents agreed the scheme had separated traffic (19% strongly agreed, 57% agreed), although 8% disagreed.

“Retaining the old A14 as the A1307 alongside the new A14 has been a success in separating local from through traffic” (Resident)

The police traffic officer interviewed for this study, reflecting on the new A14, summarised:

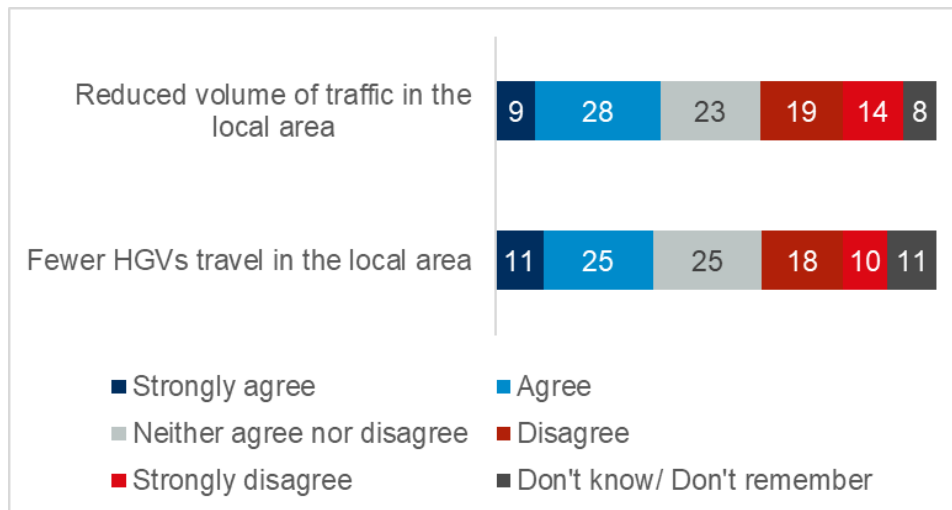
“Flow is up, traffic is not contesting with a vulnerable road user or ultra slow-moving vehicles, like agricultural tractors, especially in harvest time... I think overall good job well done” (Police Traffic Officer)

There were mixed opinions on whether overall traffic volumes or the number of HGVs had reduced in residents’ local areas since the scheme was implemented

(see Figure 6), with just over one-third stating they had (37% and 36% respectively) and approximately one-third or less stating that they had not (33% and 28% respectively).

“We have more lorries coming through here and we are getting more potholes, the roads are getting exceptionally bad now. I think Hilton has more traffic using it as a cut through” (Resident)

Figure 6 Resident views on whether traffic volumes have reduced (%)



Q: To what extent do you agree or disagree with the following statements: The volume of traffic in my local area has reduced; there are fewer HGVs traveling through my local area. Sample size: 1,609

It should be noted that these survey results reflect views on changes since the scheme was implemented in 2020, and as such perceptions will be impacted by the increase in traffic levels since the end of the Covid lockdowns.

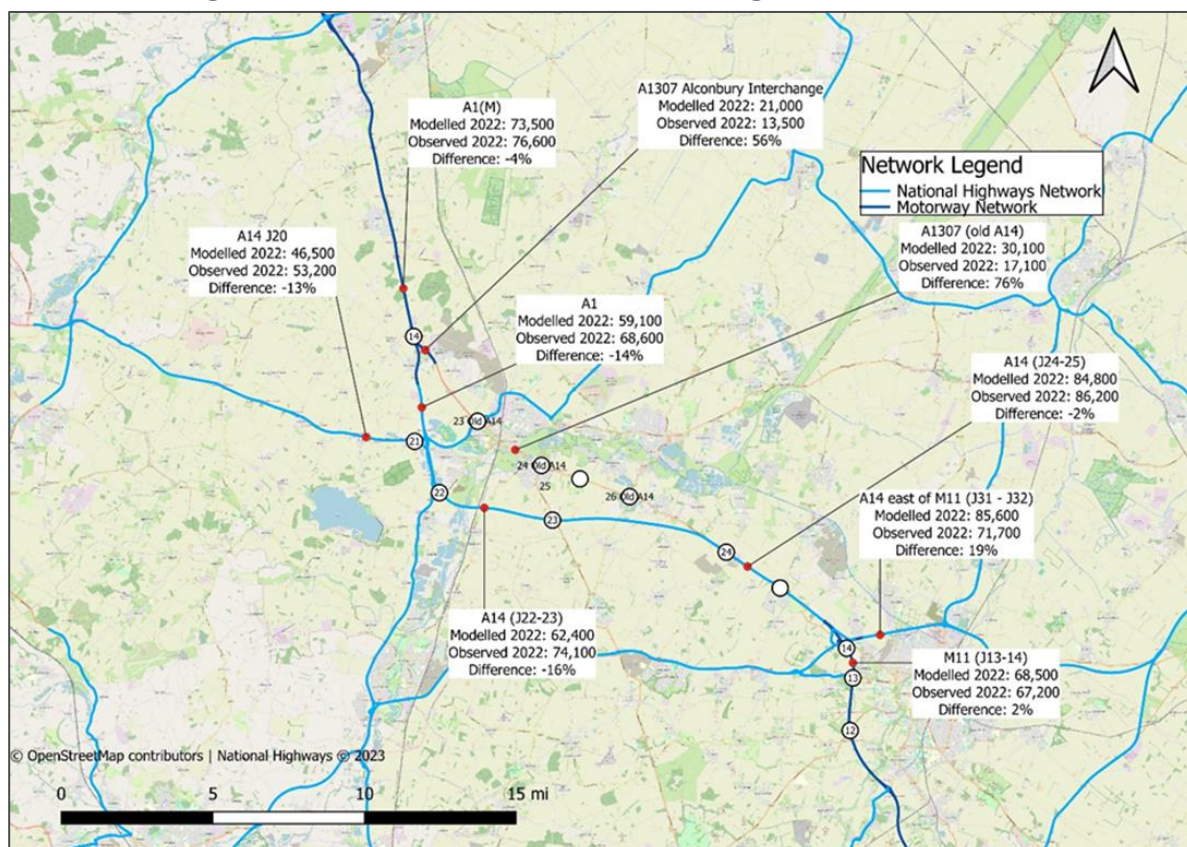
Was traffic growth as expected?

To understand more about the accuracy of the traffic model and its forecasts, we compared the amounts of change the appraisal expected with the amounts observed at several locations. This section compares the expected and observed changes at the strategic locations and across the screenlines.

The differences in traffic volumes between the 2022 modelled and 2022 observed flows at the strategic locations are shown in Figure 7. Modelled flows on the new A14 (Junctions 22 – 23) were 16% lower than observed, while modelled flows on the A1307 were 56% (east of Alconbury) to 76% (Huntingdon) higher, indicating that rerouting to the new bypass was greater than expected.

With the exception of the M11 Junctions 13 to 14, modelled HGV flows were all lower than observed. There were notably more HGVs on the A1 (21%), A1(M) (27%) and the new A14 (12%) than forecast. There were 21,300 HGVs between Junctions 22 and 23 in 2022 (compared to 18,800 modelled). On the A1307 in Huntingdon, the observed and forecast differences in absolute terms were much smaller with the modelling correctly forecasting there would be far fewer HGV movements (200 expected versus 300 observed) on this route following the opening of the A14 bypass.

Figure 7 Forecast & observed AADT at strategic locations in 2022



Source: © OpenStreetMap contributors | National Highways © 2023

At the screenline level, the model provided a relatively more accurate assessment of traffic at the western (Huntingdon) end of the scheme than the eastern (Cambridge) end:

- There was minimal difference (400 vehicles, which is less than 0.5% of total two-way flow) between forecast and observed traffic on the West of Huntingdon (Blue) screenline.
- The 2022 forecast flows were 14% (21,300 vehicles) higher than observed on the Cambridge central (Yellow) screenline.
- On the Cambridge (Green) screenline, forecast flows were 26% (31,500 vehicles) higher than observed. As noted in section 0, the observed traffic levels in 2022 were themselves 4% lower than the observed flows in 2016 (compared to 1.3% growth for the East of England as a whole over the same period. See section 0 for more information).

Relieving congestion and making journeys more reliable

The purpose of a bypass is to redirect traffic away from congested urban areas, to ease congestion and ensure journey times are more predictable. Analysis of journey times and speeds can indicate the impact of the bypass. The extent to which journey times vary from the expected average journey time indicates how reliable a journey is¹⁵.

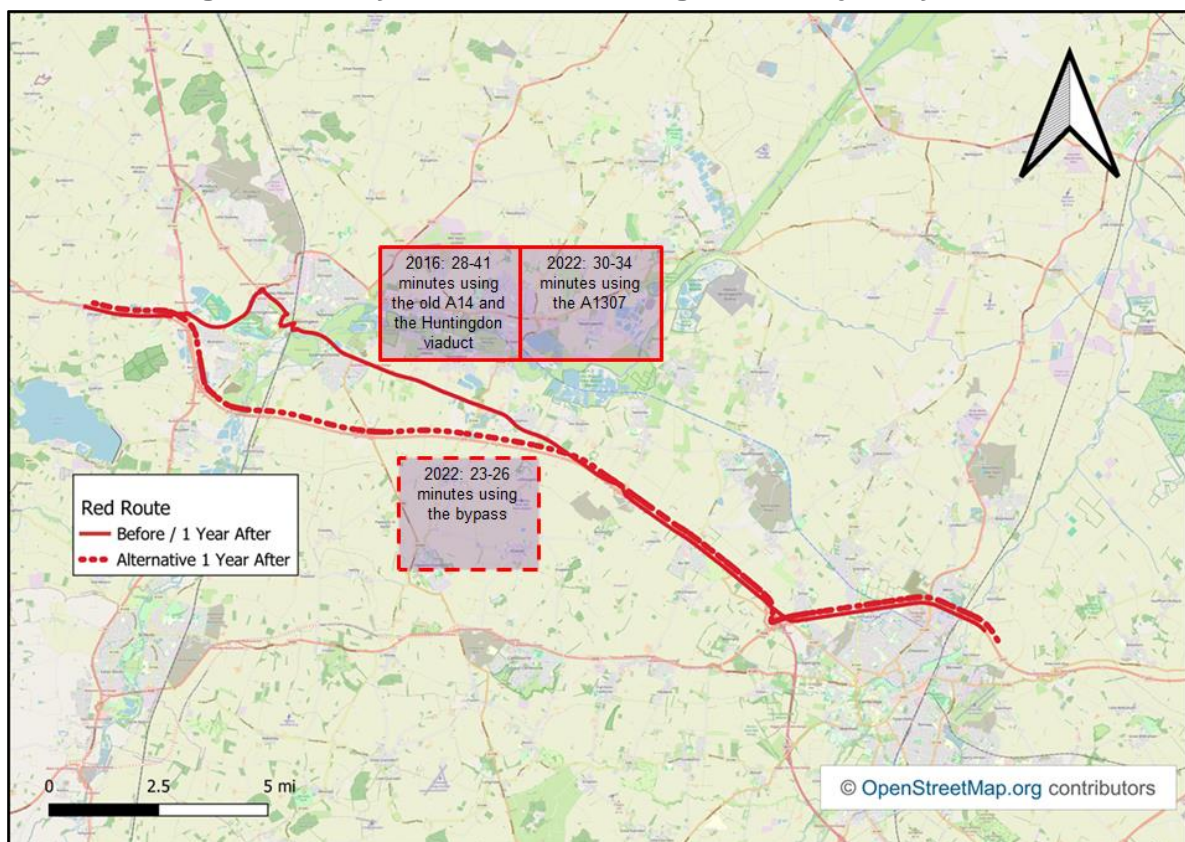
¹⁵ GPS data obtained from TomTom was used for this analysis.

Assessment was undertaken by direction and time period for the routes running between the A14 west of Huntingdon (at Ellington) and the A14 north of Cambridge (at Fen Ditton):

- via Huntingdon (the route over the viaduct is not shown on the map) using the old A14 (now A1307) before construction started on the new scheme (2016) – 23.6 miles eastbound/ 23.9 miles westbound;
- via Huntingdon using the A1307 after construction of the new scheme (2022) – 24.2 miles eastbound/ 25.1 miles westbound; and
- via the new A14 Huntingdon bypass (2022) – 23.4 miles eastbound/ 24.1 miles westbound.

The routes are shown in red in Figure 8, together with a summary of the observed average journey times, which are discussed below.

Figure 8 Journey time routes and average observed journey times



Source: © OpenStreetMap contributors | National Highways © 2023

Did the project deliver journey time savings?

As shown in Figure 9, there were some variations in journey times on the Huntingdon route before and after (labelled '1YA' in the figure) scheme opening, but these were generally minimal with the exception of eastbound 7-10am (where journey times decreased by around seven minutes post-construction) and westbound 7-10am (where journey times increased by four minutes post-construction). The A1307 route is slightly longer following scheme completion as a result of the removal of the Huntingdon viaduct, and hence the need to use Views Common Road and Brampton Road in Huntingdon. This can be seen in Figure 10, with the A1307 in 2022 providing a quicker route than the A14 in 2016 except through Huntingdon town centre.

Journey times on the new (1YA_Alt) A14 route are all less than the old A14/ A1307 Huntingdon routes both before and after the opening of the bypass, by as much as 14 minutes in the morning peak period eastbound, and almost 10 minutes in the evening peak period westbound.

Figure 9 Comparison of observed average journey times before (2016) and after (2022) scheme opening

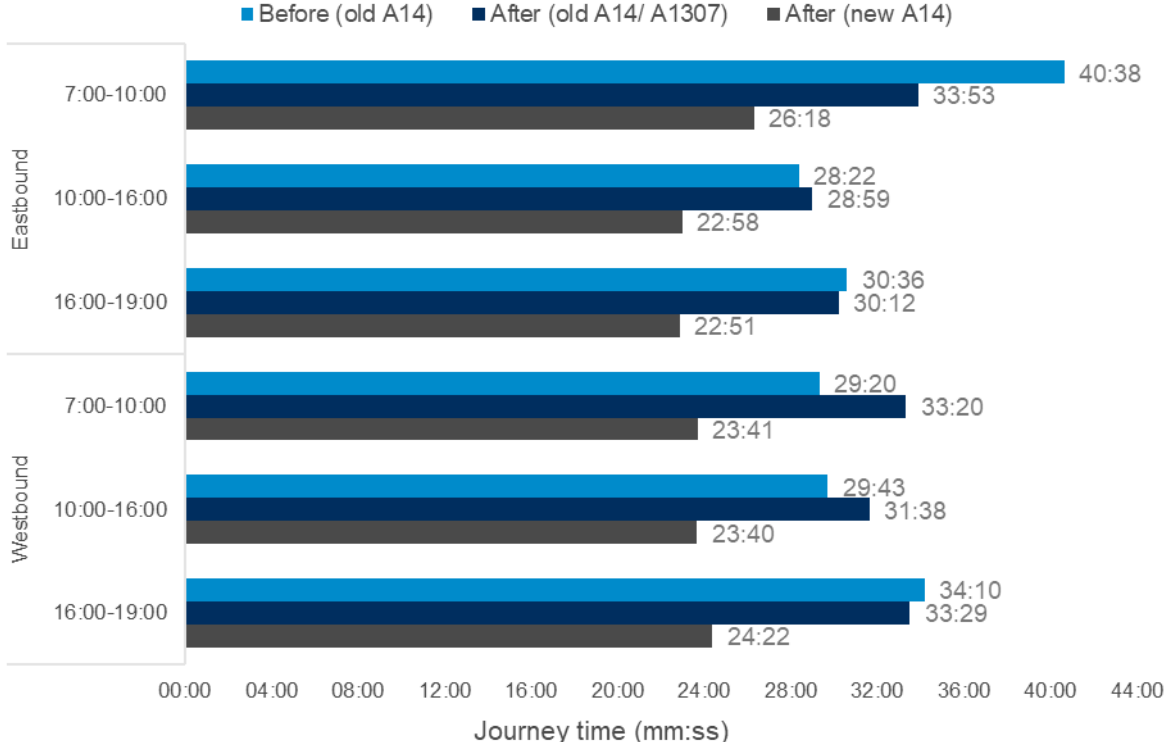
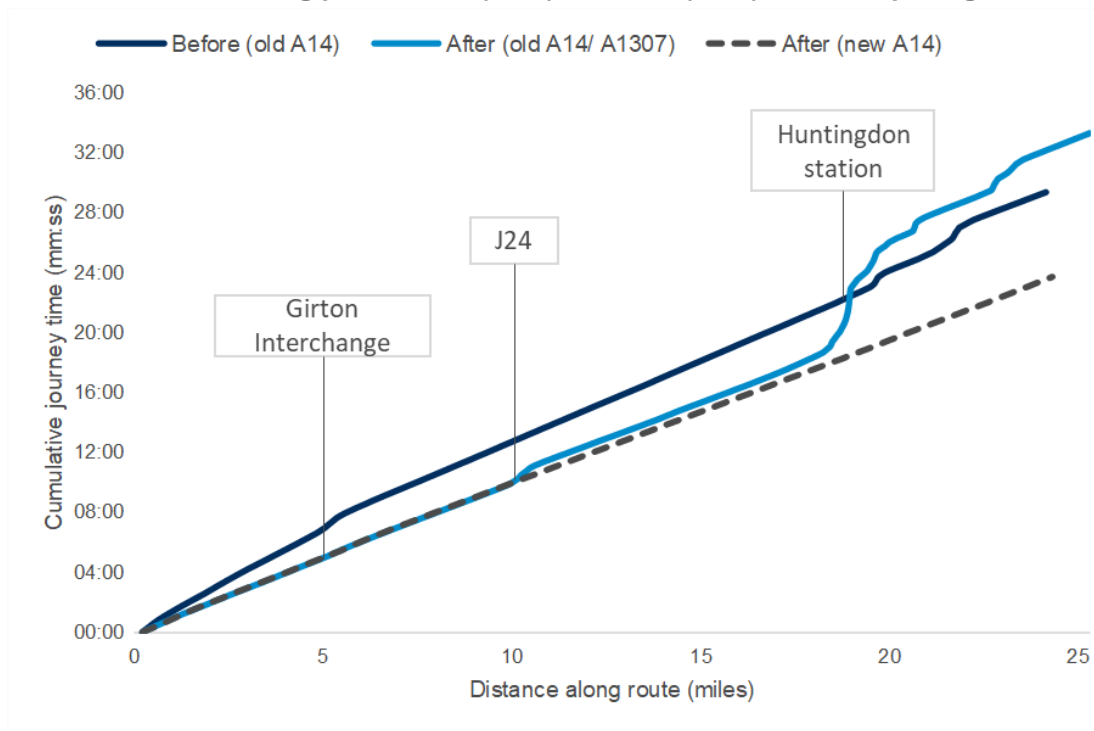


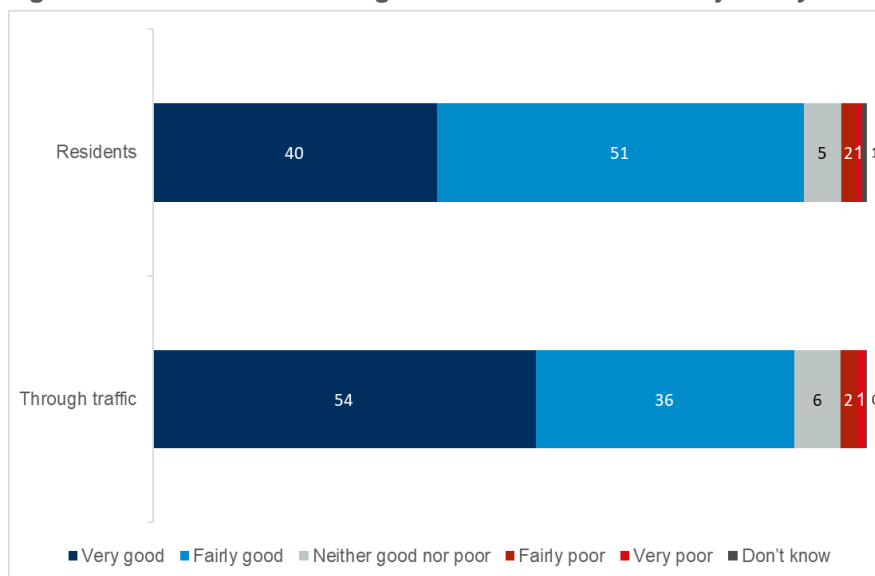
Figure 10 Comparison of cumulative journey time by distance from Fen Ditton to Ellington in the morning peak before (2016) and after (2022) scheme opening



Customer experience of journey times

Nearly all residents (91%) rated journey times as good (Figure 11). A similar proportion of through-traffic respondents agreed their journey time along the new A14 took as long as they expected.

Figure 11 Resident and through traffic views on current journey times



Q: Thinking about the last 12 months, from very good to very poor how would you rate your experience for the length of time to make a journey? Sample size: residents 1,563; through traffic 802

Although respondents were also asked about their views on whether journey times had improved since the implementation of the new A14, care is needed in drawing a firm conclusion on people’s perceptions of the change, as recall is likely to have been affected by the elapsed time, Covid lockdowns, and the impact of the construction works themselves.

Nevertheless, of those who had travelled on the old and new routes, three-quarters of residents (75%) felt journey times had improved and only 5% that they had worsened, with 18% stating that there had been no change (2% did not know). For through traffic, 85% felt there had been an improvement and 7% felt there was no change, with only 5% stating it had worsened (1% did not know).

The data showed journey times improved as a result of the scheme, although they increased specifically around Huntington station due to the removal of the viaduct (see Figure 10 above). There were nevertheless a number of positive comments received in the interviews and from stakeholders, including:

“People were concerned that the viaduct was coming down and what impact that would have on traffic into and out of Huntington, but the little link road that’s been opened now and that access into the station has been a big benefit” (Councillor)

There were however opposing views:

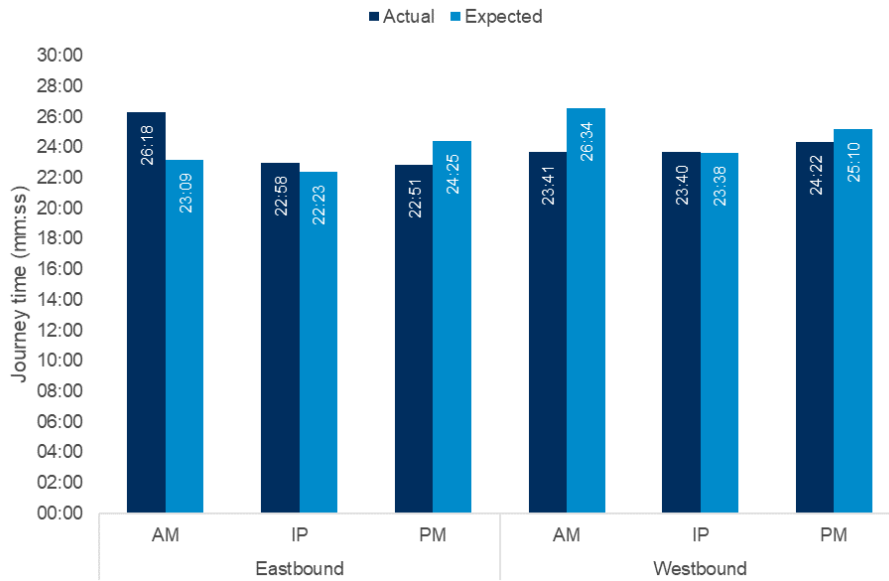
“Local traffic cannot use the new road, there are no usable junctions to access the road, going to Cambridge is worse... Traffic on the ring road in Huntington is worse, we avoid the town now” (Resident)

The majority of the businesses interviewed noted that the A14 scheme had improved journey times, with improved travel times to and from Cambridge noted in particular.

Were journey time savings in line with forecast?

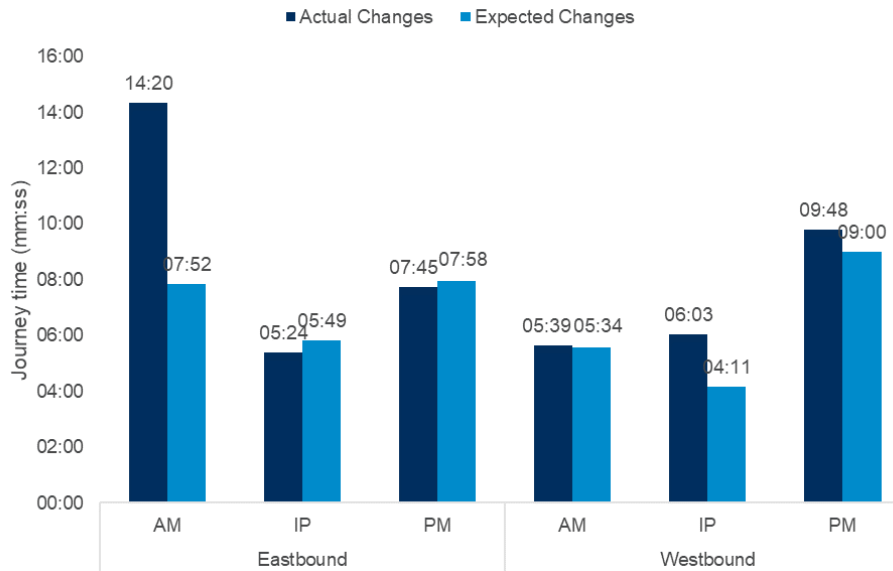
The time it takes to drive through the new A14 bypass was relatively similar to the forecasts made across most time periods in both the eastbound and westbound directions with two exceptions, both in the AM peak (Figure 12). The eastbound AM peak period shows that the actual journey time was greater than the expected journey time by around three minutes. The westbound AM peak period shows that the actual journey time was less than the expected journey time by around three minutes. The comparison indicates that actual journey times took longer than forecast in the Cambridge-bound direction in the morning rush hour.

Figure 12 Comparison of actual and expected journey times between the A14 at Ellington and Fen Ditton via the new A14 bypass



This presents a slightly different picture to the journey time *savings*¹⁶ forecast in the eastbound AM peak period, where the actual journey time saving was over six minutes more than the forecast saving (Figure 13). The forecast time savings in all other time periods and directions were however broadly in line with the actual time savings.

Figure 13 Comparison of actual and expected journey time savings between the A14 at Ellington and Fen Ditton via the new A14 bypass



¹⁶ The *actual* change in journey times is based on the difference between observed journey times in 2016 (on the old A14) and 2022 (on the new A14 bypass). The *expected* change in journey times is based on the difference between the model forecast assuming there was no scheme in place (a forecast journey time, using the old A14) with the model forecast assuming the scheme was in place (a forecast journey time, using the A14 bypass). The forecasts were available for 2020, as this was the year that was modelled at the appraisal stage to assess the opening year impacts of the scheme.

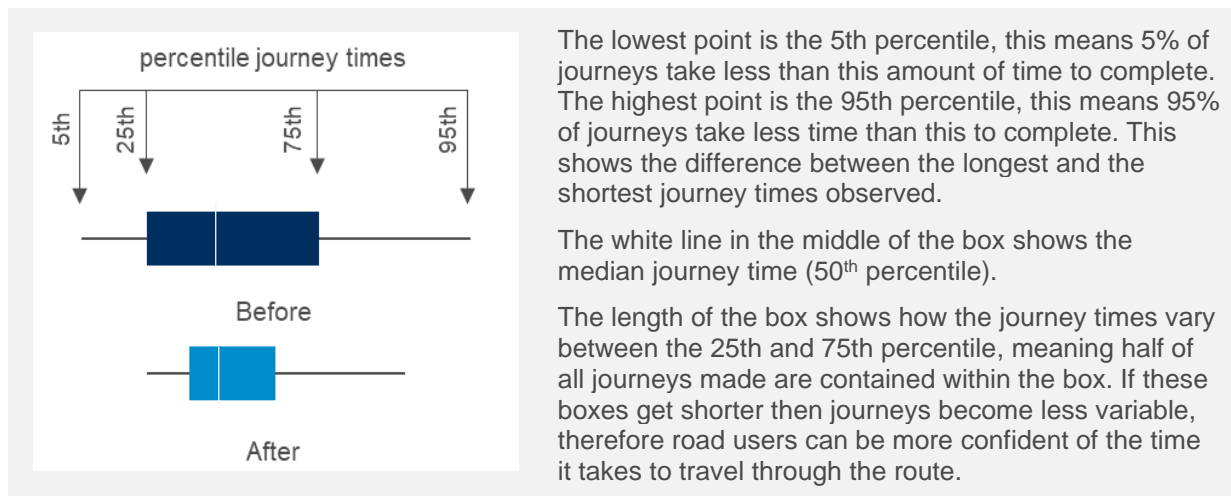
Did the scheme make journeys more reliable?

Congestion can make journey times unreliable. If the time taken to travel the same journey each day varies, journey times are unreliable, and the road user is less confident in planning how long their journey will take them. If journey times do not vary, the road user can be more confident in the time their journey will take and allow a smaller window of time to make that journey.

The analysis presented here compares journey time reliability (see Figure 14) between the A14 west of Huntingdon (at Ellington) and the A14 north of Cambridge (at Fen Ditton) via Huntingdon using the then A14 (now A1307) in 2016 and 2022 and the new A14 Huntingdon bypass (2022), in the eastbound (

Figure 15) and westbound (Figure 16) directions.

Figure 14 What does a box plot show?

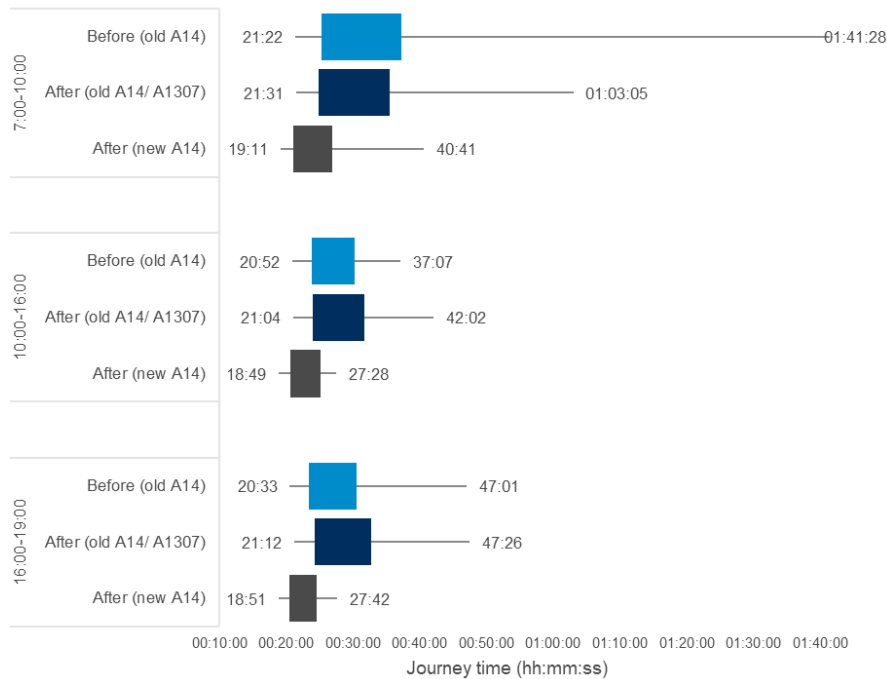


In the eastbound direction, reliability improved noticeably in all time periods as a result of the scheme, with journey times on the A14 Huntingdon bypass in 2022 ranging from about 19 minutes to around 27-28 minutes in the interpeak and evening peak periods and 41 minutes in the morning peak period.

This can be compared to the old A14 before scheme opening where journey times ranged from about 21 minutes to 37 and 47 minutes in the interpeak and evening peak periods respectively, and up to one hour and 40 minutes in the morning peak (however the majority of journeys were between 21 and 37 minutes). Median journey times were about 5 minutes less on the A14 bypass in all time periods compared to the old A14.

The A1307 (old A14) in 2022 was less reliable than using the A14 bypass. The median journey times on the A1307 in 2022 were similar to those on the old A14 in 2016.

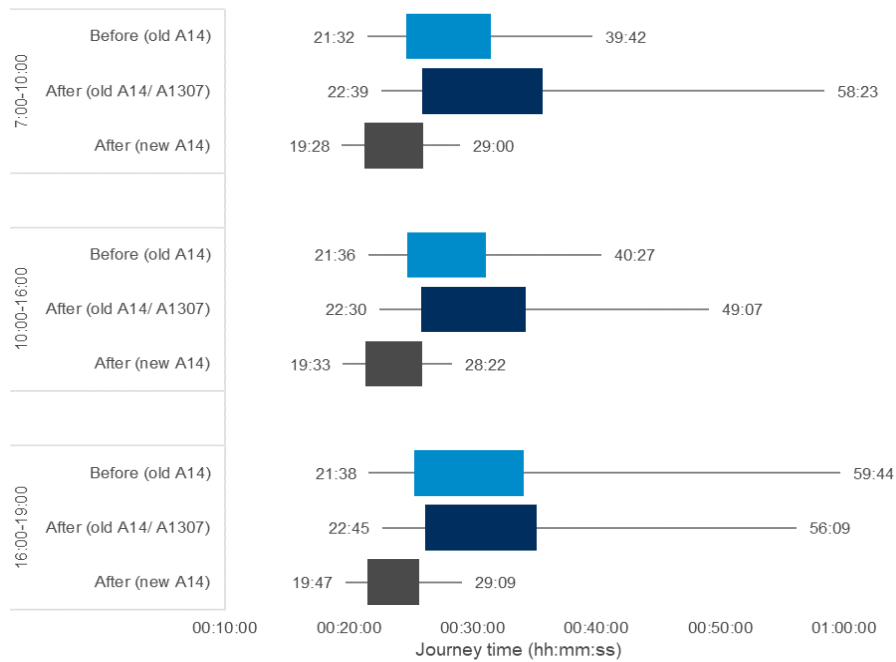
Figure 15: Journey time reliability (eastbound) before (2016) and after (2022) scheme opening



In the westbound direction, route reliability in all time periods improved as a result of the scheme, with journey times of about 19 to 29 minutes on the A14 bypass. This can be compared to the old A14 in 2016 where journey times ranged from about 22 minutes to 40 minutes in the morning and inter peak periods and up to one hour in the evening peak period. Median journey times were about 5-6 minutes less on the A14 bypass than the old A14.

The A1307 (old A14) in 2022 had a greater range in journey times in the morning and interpeak periods than in 2016, although relatively similar in the evening peak. The median journey times on the A1307 in 2022 were similar to those on the old A14 in 2016, with no more than about 1 minute's difference.

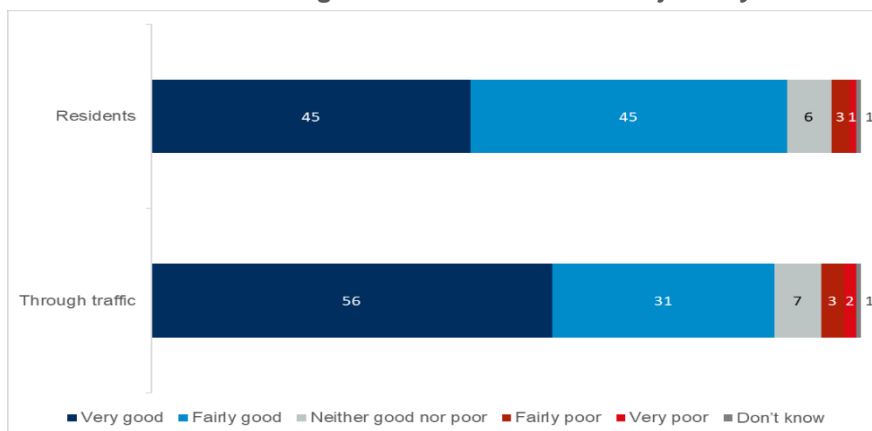
Figure 16 Journey time reliability (westbound) before (2016) and after (2022) scheme opening



Customer experience of journey time reliability

Nearly all residents and through-traffic drivers rated the reliability of their journey times as good (Figure 17).

Figure 17 Resident and through traffic views on current journey time reliability



Base: All who made a journey in a motorised vehicle. Sample size: residents 1,563; through traffic 802

Drivers were also asked whether they felt that journey times on the new A14 were more reliable now than before the scheme was completed. As stated above on journey times, but equally valid for reliability, care is needed in drawing a firm conclusion on people’s perceptions of this change, as recall is likely to have been affected by the elapsed time, Covid lockdowns, and the impact of the construction works themselves.

About three quarters of residents felt that journey times on the new A14 were more reliable now than before the scheme was completed, and only 4% felt it had become worse (18% felt there had been no change and 2% did not know). For through traffic 87% felt that reliability had improved, and only 3% that it was worse (10% felt there had been no change and 1% did not know).

There were positive comments from residents on reliability, including a view on the benefits to public transport:

“Bus journeys are now better and more reliable” (Resident)

Journey times and the associated reliability improvements on the A14, as well as the local road network, were also identified as key positive impacts by the businesses and stakeholders interviewed:

“The journey is so much quicker in a car, you don’t see the long tailbacks of motorised traffic that you did before and suddenly car drivers, local car drivers commuting to work has a known journey time and it just takes a huge stress out of your life when you’ve got to go to work every day” (Councillor)

How do customers feel overall about the new layout?

A little over three quarters (79%) of residents were satisfied with the new road layout, with just 7% dissatisfied.

However, the new layout and limited number of junctions on the new A14 did receive some criticism. One interviewee noted that St Ives is not served by a direct exit from the A14 and the new layout:

“makes it a lot harder to get to St Ives and it has made the traffic in the town far, far worse” (Business interview)

Nevertheless, overall, the comments received were positive, with one stakeholder noting:

“If you ask people what it’s like now.... they all agree it’s a great improvement getting into Cambridge.... and the bit that gets you into Huntingdon railway station where you go up to the A14 and in, is very good as well..... I think they would in general agree that it improves transport east [to] west” (Councillor)

5. Safety evaluation

Summary

The safety objective for this road widening and new road link project is to enhance road safety and make driving a less stressful experience.

The business case noted the potential to achieve a 9% improvement in safety performance and forecast a saving of 781 collisions over the scheme's 60-year appraisal period, as well as a casualty reduction for the wider area of nine fatal, 119 serious and 2,907 slight injuries.

The average annual number of collisions involving an injury (personal injury collisions) before scheme construction started was 86, reducing to 42 in 2022, the one year after period assessed for this scheme.¹⁷ This reduction is however also in line with what would have been expected without the project, based on an assessment of regional trends. As these are the first evaluation year's results, we are not yet confident that these initial indications are enough to form a trend. An evaluation will be conducted at five-years after opening to establish if these early positive findings have continued.

The personal injury collision rate per hundred million vehicle miles (hmvm) has however reduced from 31 (equivalent to travelling three million vehicle miles before a collision occurs) to 6 (equivalent to travelling 16 million vehicle miles before a collision occurs). This reduction is more than would have been expected without the scheme, although the trend will need to be assessed in the longer term to establish if this early positive finding has continued.

The number of killed and seriously injured (KSI) casualties has remained stable, although the KSI per hmvm has reduced from 7 to 4.

At this one-year evaluation point the project is on track to meet its objective to reduce the number and rate of collisions. However, at this early stage we cannot be confident that this is because of the project itself and not part of observed wider regional trends for a reduction in collisions and rates.

It should be noted that the data used to assess collisions only includes those that involved an injury. Damage only collisions are not included. Customer perception of safety may however be influenced by their views on or experience of damage only collisions, and may also have been influenced by Covid lockdowns, and the impact of the construction works themselves.

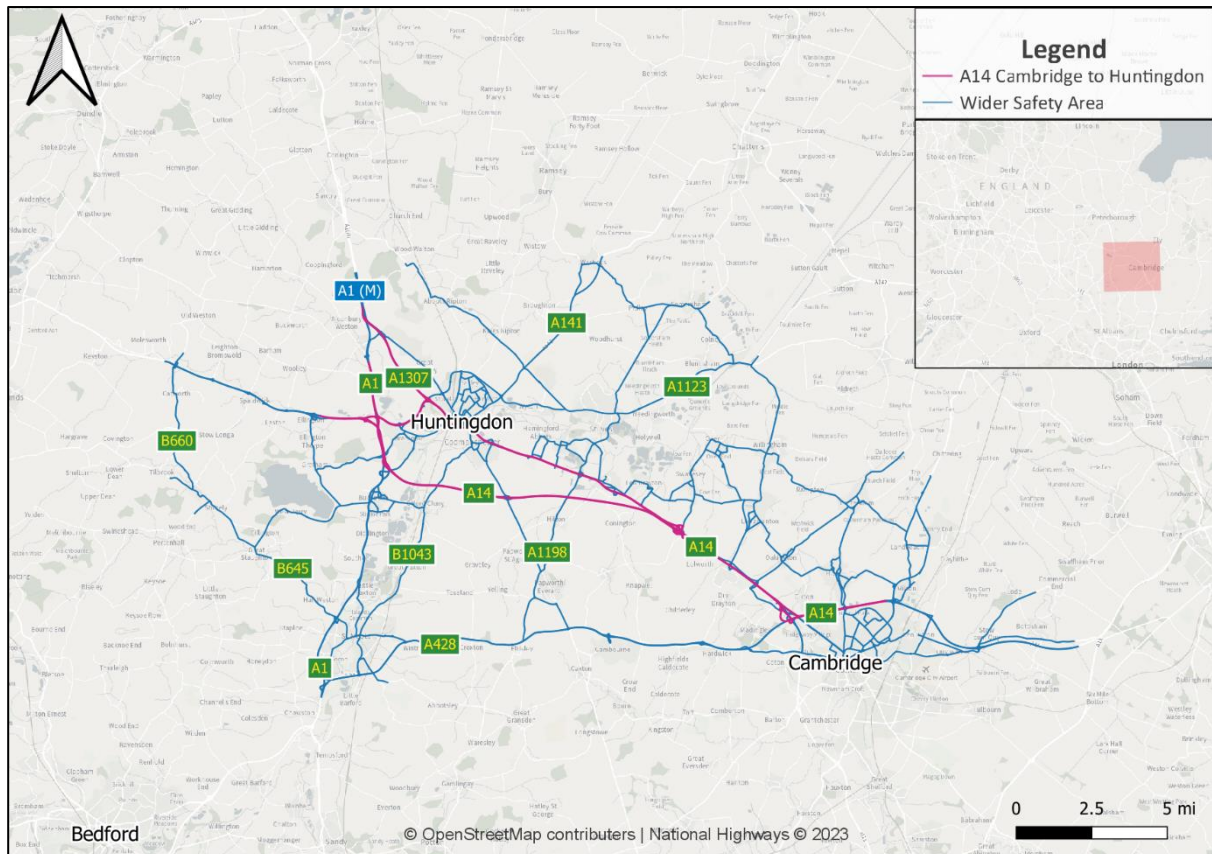
Both residents and through traffic stated they felt safe driving on the new A14 (86% and 92% respectively) and residents also indicated they felt safe driving on the A1307 (87%). For those who had also travelled on the old A14, 79% of residents and 85% of through traffic felt safety had improved, and only 4% and 3% respectively felt it was worse.

¹⁷ There was a 20-month gap between construction completing and the one-year evaluation point used in this study. The original one-year evaluation point (starting May 2020) fell over the Covid lockdown period. A decision was made to use 2022 data to provide a more realistic representation of usage by avoiding the Covid years. This aligns with the approach used for the traffic analysis presented in the previous chapter on customer journeys.

Safety study area

The safety study area is shown in Figure 18. This area was assessed in the appraisal supporting the business case for the project. The analysis presented here focuses on the A14 Cambridge to Huntingdon routes marked on the map (the 'project extent' in terms of the safety evaluation). Appendix B provides a summary of impacts over the wider area.

Figure 18 Safety study area



Source: National Highways and OpenStreetMap contributors

What were the emerging safety trends?

The Department for Transport release road safety data¹⁸ that records incidents on public roads that are reported to the police. This evaluation considers only collisions that resulted in personal injury.

The safety analysis assessed changes over time by looking at the trends in the five years before the project was constructed to provide a pre-scheme annual average. Safety data for the year 2022 was assessed to provide the post scheme opening annual average. This provides an early indication of safety trends, but this will be monitored over a longer timeframe before conclusions can be drawn about the safety impact of the project across the following time periods:

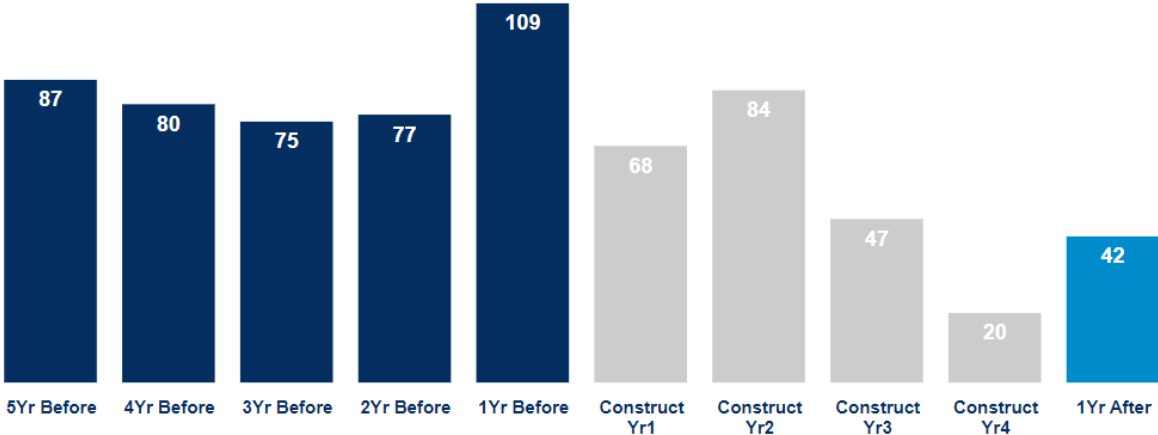
- Pre-construction: 1 October 2011 – 30 September 2016;
- Construction: 1 October 2016 – 30 April 2020; and
- Post-opening: 1 January 2022 – 31 December 2022.

¹⁸ <https://data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-safety-data>

The evaluation found the number of personal injury collisions (PIC) on the project extent had decreased. During 2022 there were on average 42 personal injury collisions per year, 44 fewer than the average 86 per year over the five years before the project was constructed (Figure 19).

Safety trends can vary each year and we will monitor this trend over a longer timeframe before drawing conclusions about the safety impact of the scheme.

Figure 19 Annual Personal Injury Collisions



Source: STATS19: 1st October 2011 – 31st December 2022

As part of the safety evaluation, we look to assess what changes in personal injury collisions might have occurred due to factors external to the scheme over this timeframe. To do this we estimated the trend in personal injury collisions which might have occurred if the A14 scheme had not gone ahead (this is referred to as a counterfactual). This was based on changes in regional safety trends for dual carriageways on the strategic road network with a high volume of road users.

This helped us to estimate how the pre-construction safety levels would have changed over the evaluation period without the A14 scheme. Based on this assessment we estimated that if the scheme had not been delivered the trend in the number of personal injury collisions would likely have reduced to between 25 and 61 over the evaluation time period¹⁹.

Collision numbers have reduced with the scheme in place but follow a similar trend to what would have been expected without the project. As these are the first evaluation year’s results, we are not yet confident that these initial indications are enough to form a trend. An evaluation will be conducted at five-years after opening to establish if the early positive findings have continued.

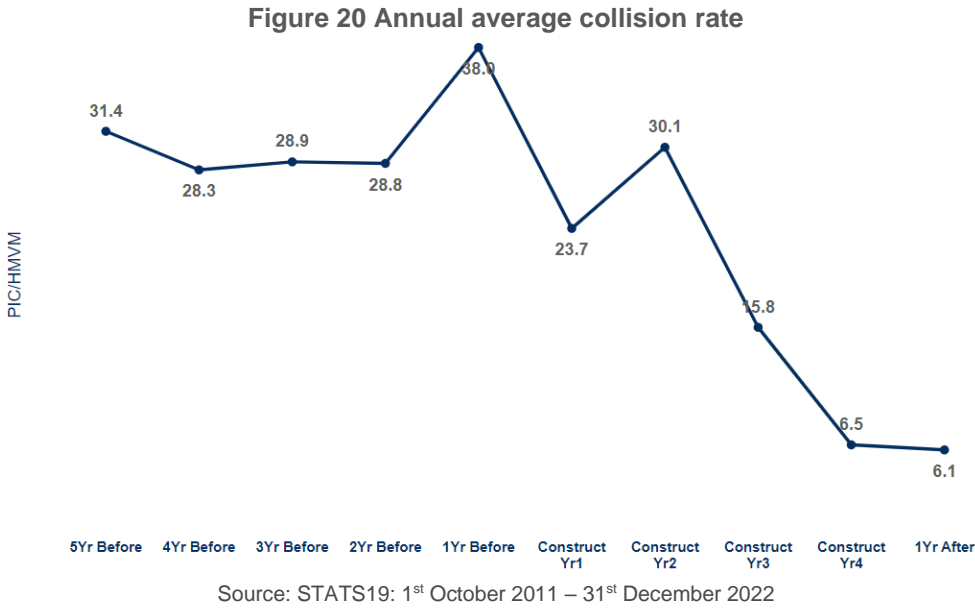
How has traffic flow impacted collision rates?

It is important to contextualise any incidents with the volume of traffic. To do so a collision rate is calculated: the number of personal injury collisions per annual hundred million vehicle miles (hmvm).

The average collision rate had decreased to 6 personal injury collisions per hmvm in 2022, equivalent to travelling 16 million vehicle miles before a collision occurs. Five years before the scheme, the average collision rate was 31 personal injury

¹⁹ We have tested the results at the 95% confidence interval. The critical value at the 95% confidence interval is 41 (the observed collision number in 2022 was 42).

collisions per hmvm, equivalent to travelling three million vehicle miles before a collision occurs (Figure 20).



As with the number of personal injury collisions, a counterfactual test has also been performed on personal injury collision rates. This estimated the collision rate would likely have reduced to 16 personal injury collisions per hmvm, equivalent to travelling six million vehicle miles before a collision occurs. This is lower than the 31 personal injury collisions per hmvm in the five years before scheme construction commenced, but higher than the 6 personal injury collisions per hmvm with the scheme in place i.e. the actual annual average collision rate in 2022 is lower than what would have been expected had it not gone ahead²⁰.

An evaluation will be conducted at five-years after opening, allowing for a longer and more representative time period to determine if this early positive result has continued.

What changes in the severity of collisions did we see?

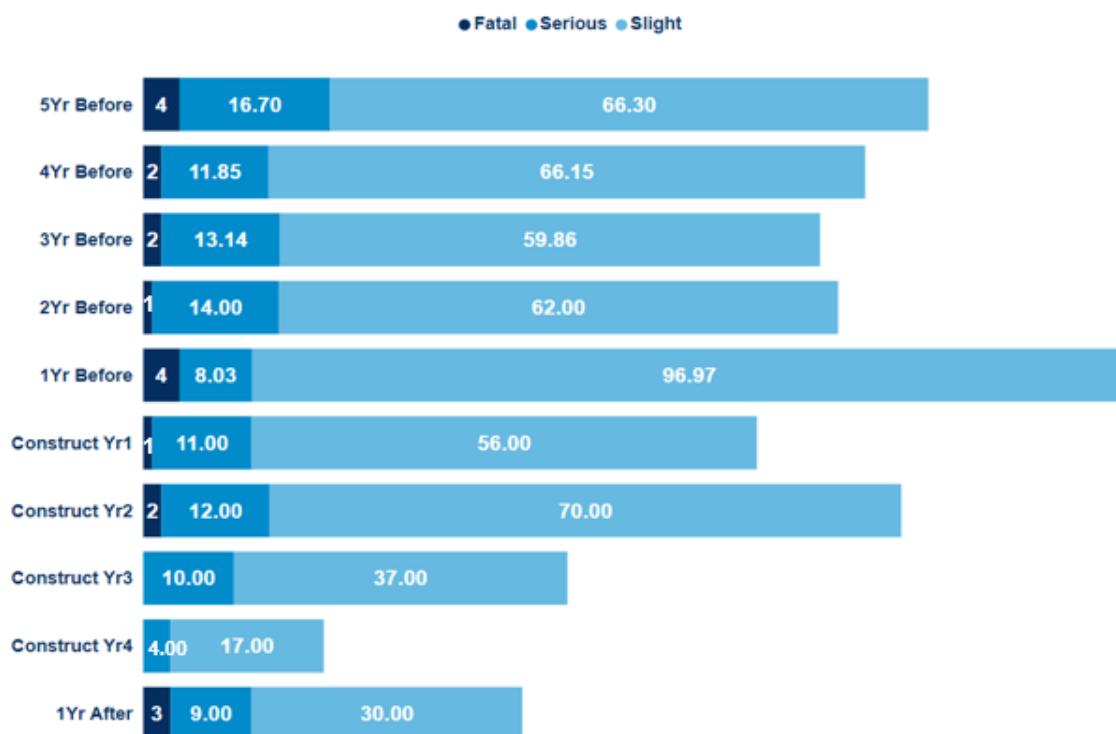
Collisions which result in injury are recorded by severity as either fatal, serious, or slight. The way the police record the severity of road safety collisions changed within the timeframes of the evaluation (the Cambridgeshire police constabulary transferred from Stats19 to CRaSH in May 2016). This has led to some disparity when comparing trends, requiring application of a severity adjustment methodology developed by the Department for Transport and Office for National Statistics, to enable robust comparisons to be made. Further information can be found in Appendix C.

In this assessment the pre-conversion collision severity has been adjusted to enable comparability with the post-conversion safety trends.

Figure 21 shows the full breakdown of severity of personal injury collisions by individual year.

²⁰ The estimated counterfactual collision rate of 16 personal injury collisions per hmvm falls within a range of 10 to 23 PIC per hmvm (at a 95% confidence interval). The actual observed rate of 6 PIC per hmvm still falls below this range; statistical testing indicates the reduction in the collision rate is significant, suggesting that it is likely we can attribute these impacts to the scheme itself.

Figure 21 Severity of personal injury collisions within the project extent



Source: STATS19: 1st October 2011 – 31st December 2022

What impact did the project have on casualty severity?

We assessed the impact the project had on casualties using one key measure, Killed or Seriously Injured (KSI)²¹, and considered changes in traffic by calculating an average rate for every hundred million vehicles miles (hmvm) travelled.

There was no change observed for annual KSI. KSI remained stable at an average of 17 KSI before to 17 KSI after. However, the rate of KSI per hmvm reduced from an average of seven to four for every hmvm travelled.

The observations for KSI suggests that the project is having a neutral safety impact on the severity of casualties within the project extent.

How is the project performing against its safety objectives?

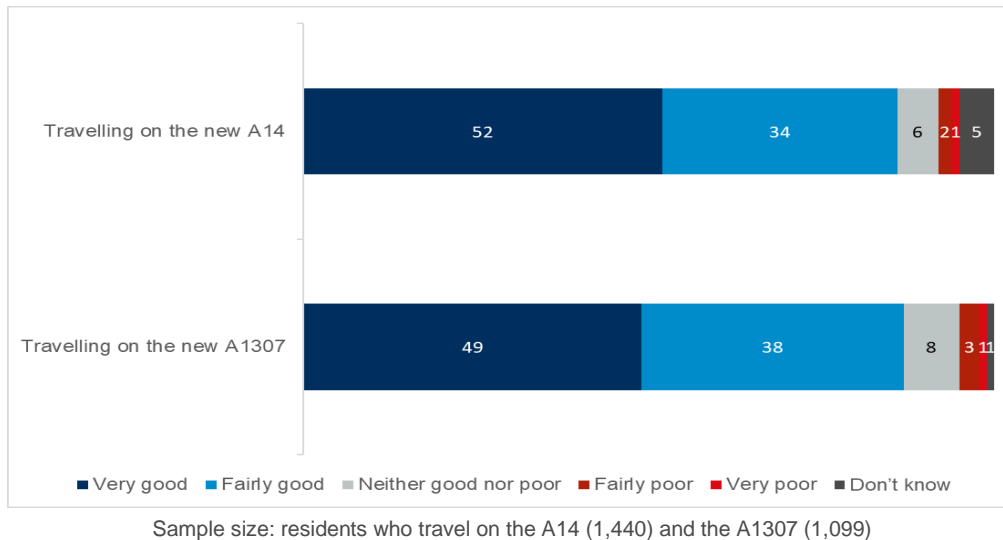
The safety objective was to improve safety for all and the business case suggested the potential for a 9% improvement in safety performance as a result of the scheme, with a saving of over 3,000 collisions over the 60-year appraisal period. Early findings suggest a positive result in this direction, but further analysis is required over the next few years to confirm whether this trend will continue, and how this compares to what might have happened without the scheme in place.

²¹ The number of people killed or seriously injured in road traffic collisions. This metric is non-weighted but does not pick up all injuries (slight casualties). KSI per hmvm is the rate calculated using the number of people who are killed or seriously injured, and the total miles travelled on a road section or type.

Customer views on road safety

Most residents rated their feeling of safety travelling on the new A14 (86%) and the new A1307 (87%) as good (Figure 22). Through-traffic drivers also agreed that they felt safe when driving along the new A14 (92%), with only 2% disagreeing.

Figure 22 Residents' feeling of safety travelling on the A14 and A1307



For those who had travelled on the old and new A14, when asked whether they felt their own feeling of safety had improved with the scheme in place, 79% of residents and 85% of through traffic felt it had improved, and only 4% and 3% respectively felt it was worse. Others felt there had been no change or did not know/ remember. As set out in the previous chapter on customer journeys, care is needed in drawing a firm conclusion on people's perceptions of this change, as recall is likely to have been affected by the elapsed time, Covid lockdowns, and the impact of the construction works themselves.

Stakeholders generally agreed safety had improved:

"I don't have the stats to hand, but I think the number of collisions has come down and certainly the number of incidents and collisions, both injury and damage only has fallen and it's a much more free running network.....the 1307 has become much, much, much quieter" (Police Traffic Officer)

As noted at the start of this chapter, the collision data does not include information on damage only collisions.

An example of how residents felt with the new A1307 and A14 bypass is provided in the following quote:

"When driving on the old A14 [A1307] I do not feel like I am being bombarded with all the traffic and I feel safer as it feels like there's more space. The new A14 with its three lanes makes you feel much safer" (Resident)

Whilst the new A14 bypass may be safer and an improvement on the old A14 route, there may have been an expectation for further safety measures, as indicated in the following view:

"It needs more laybys for safety, sometimes I feel like I could be squashed or shoot off into a ditch as it gets very busy towards Cambridge" (Through traffic car driver)

6. Environmental evaluation

Summary

The evaluation of environmental impacts uses information on the predicted impacts gathered from the DfT's Transport Analysis Guidance (TAG) environmental appraisal, as set out in the Appraisal Summary Table (AST) and the Environmental Statement (ES) and compares them with findings obtained after the project opened for traffic, based on site visits and desktop research. The main part of the scheme (the new A14 Huntingdon bypass) opened in May 2020, and site visits were undertaken three years later, in May 2023.

Customer views on the environment are set out in the following chapter on social value.

The results of the evaluation were recorded against each of the TAG environmental sub-objectives and are summarised in the following sections. These initial findings are based on whether, 3 years since opening, conditions are: better than; worse than; or as expected. These do not necessarily mean that the overall impact as set out at the appraisal stage will change if the conditions are not as expected, but further mitigation or maintenance may be required, and conditions reviewed again as part of the 5 years after evaluation. This assessment is a snapshot in time based on desktop reviews and site visits and reflects early progress observed at that time, and the effectiveness of any mitigation measures towards achieving the desired design year (15 years after opening i.e. 2035) outcomes.

The evaluation highlighted that:

- Noise (predicted net benefit at appraisal): Traffic flows were generally in line with forecasts, and only 10% of assessed links had noise levels that were worse than expected. Noise barriers had been implemented as intended. These suggested that the effects on the noise climate from traffic were as expected.
- Air quality (predicted net benefit at appraisal): Traffic flows were generally lower or in line with the predictions, and where they were higher, this was in areas where pollutant concentrations were below the relevant Government objective values. The effects on air quality were therefore as expected.
- Greenhouse gases (predicted net disbenefit at appraisal): Based on observed traffic flows on the assessed links being lower than those assumed in the modelling, the impacts were better than expected for those links.
- Townscape (predicted moderate adverse impact at appraisal): Beneficial effects from the removal of the A14 viaduct and adverse effects from the loss of privately owned green space and mature trees were as expected.
- Landscape (predicted moderate adverse impact at appraisal): The landscape planting intended to help integrate the infrastructure into the existing landscape was often immature or unsuccessful. Overall landscape impact was deemed worse than expected.
- Historic environment (predicted moderate adverse impact at appraisal): The removal of the A14 viaduct benefitted Huntingdon train station and the Huntingdon Conservation Area as expected. Historic buildings outside of Huntingdon were experiencing worse impacts due to the tree planting (which

would help screen the scheme) not being as established as expected. Impacts to heritage assets were largely as expected, but there was an area of Historic Landscape Character and one Borrow Pit which were still surrounded by temporary fencing for safety reasons, as the landowners had requested that the compound not be returned to farmland. Overall impacts were worse than expected.

- Biodiversity (predicted moderate adverse impact at appraisal): Mitigation set out in the Environmental Statement was largely as expected, including for example attenuation areas, bird and bat boxes, and artificial badger setts. Some species may be experiencing worse than expected effects due to the poor condition of some attenuation ponds and culverts, and issues with the success of the original tree planting. Overall impacts were therefore worse than expected.
- Water environment (predicted slight adverse impact at appraisal): Some water courses, and the majority of the attenuation ponds visited (with some needing maintenance to address reeds and algae growth), were worse than expected.
- Physical activity (predicted slight beneficial impact at appraisal): The implementation of Public Rights of Way (PROWs) and the provision for Non-Motorised Users was as expected.
- Severance (predicted neutral impact at appraisal): Impacts on severance and the mitigation for Non-Motorised Users and the provision of PROWs was as expected.
- Journey quality (predicted large beneficial impact at appraisal): The relocation of bus stops, decrease in traffic on the A1307, and provision of information to drivers on the new A14, including electronic messaging signs, and provision of emergency refuge areas, were as expected.

The planting mitigation would be expected to take approximately 15 years to establish and would for example provide effective screening from the scheme. The planting has not established as expected. However since this evaluation was undertaken, National Highways have reported some recovery of the planting and has undertaken replanting. It is possible the design year outcomes will still be met for those impacts considered as worse than expected. As such, impacts should be reviewed again in the five years after evaluation to assess progress.

Noise

There was a forecast net benefit with the scheme in place. At the appraisal stage, the modelling forecast a decrease in traffic on the old A14 (A1307) as a result of the scheme. The environmental appraisal predicted that increases in noise during the day and night would nevertheless be experienced by some households due to the new A14 bypass and its alignment now passing closer to households that were previously exposed to low levels of noise.

The project included mitigation measures that proposed to reduce the impacts with noise barriers, low noise road surfacing, and insulation. A number of noise barriers were observed on the site visit undertaken in May 2023 and appeared to have been implemented as prescribed.

Noise monitoring is not undertaken as part of the POPE assessment. The POPE methodology assesses whether noise levels were as predicted based on comparing modelled and observed traffic flows on road links for which the data is

available. If there is a large enough difference between these, based on defined thresholds²², then the noise impact will be assessed as worse or better than expected as appropriate. Based on the links assessed, almost half had noise levels that were to be expected and almost 40% were better than expected in comparison to what was predicted. Less than 10% of assessed links had noise levels that were worse than expected. Based on this analysis, it is likely that the effects of the project on noise are as expected.

Air Quality

There was a forecast net benefit with the scheme in place. The environmental appraisal and local air quality assessment score indicated an overall improvement in local air quality with the scheme in place, due to the rerouting of traffic onto the new A14 away from urban areas. The scheme was anticipated to result in an increase in regional nitrogen oxides (NO_x) emissions due to an increase in traffic capacity and flows overall. Predicted concentrations of both nitrogen dioxide (NO₂) and particulate matter (PM₁₀) were assessed to be below objective values²³ in all assessment years (2020 and 2035), and therefore these changes were not expected to be significant. The maximum predicted NO₂ concentration at the appraisal stage was 38.3 µg/m³ which is below the relevant Government objective value (40 µg/m³).

As the Environmental Statement (ES) did not find any significant effects, no mitigation was proposed.

As with noise, the evaluation was based on a comparison of available observed traffic data to modelled flows for links with data available. For most links, the differences were within or below the defined thresholds. Where there were differences between the modelled and observed traffic data, pollutant concentrations were below the relevant Government objective values in those areas. This was further evidenced by recent local authority monitoring reports²⁴. Therefore, the outcome was as expected.

Greenhouse Gases

The TAG appraisal predicted that the project would result in an increase in carbon dioxide (CO₂) emissions over the 60-year appraisal period, given forecast increases in traffic on a network with a higher level of capacity to carry traffic and on a faster but longer route. There would be a net disbenefit over the 60-year appraisal period. The likely magnitude of change to greenhouse gas emissions on a regional scale was stated as negligible in the Environmental Statement (paragraph 8.5.57), and no mitigation was proposed at the appraisal stage.

Only a partial evaluation was possible, calculating CO₂ emissions from available observed traffic data to compare with a calculation of CO₂ emissions from modelled traffic data²⁵. A direct comparison with the original assessment was not

²² Traffic flows increase by 25% or decrease by 20% and are over 1,000; speeds differ by at least 10 kilometres per hour; the percentage of Heavy-Duty Vehicles (HDV) differs by at least 10%.

²³ NO₂ objective value is 40 µg/m³, PM₁₀ objective value is 40 µg/m³. https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update_20230403.pdf

²⁴ Cambridge City Council Annual Status Report (ASR) 2022, Huntingdonshire District Council ASR 2022 and South Cambridgeshire District Council ASR 2022

²⁵ Using the Department for Environment, Food & Rural Affairs (Defra) Emissions Factors Toolkit (EFT).

possible, and the assessment of greenhouse gas emissions is only applicable to the links assessed within the project extent.

The modelled traffic flows were higher than the observed traffic flows on 65% of the road traffic links assessed, which was the main driving force behind calculating lower emissions based on observed flows. This evaluation therefore indicated that the scheme has led to lower CO₂ emissions than predicted in the ES and therefore is better than expected.

Landscape and Townscape

The environmental appraisal predicted a moderate adverse effect for each of landscape and townscape. Elements of the scheme would be visually intrusive and not in keeping with the landscape pattern. The scheme was also expected to cause permanent effects across a large area. Mitigation included planting in the scheme area of mainly native hedgerows, trees, and shrubs to visually screen road infrastructure. Huntingdon, an area of recognised townscape character, was expected to be affected by the loss of some privately owned green space and the removal of some mature trees. Some aspects of townscape were expected to experience beneficial effects, as a result of the removal of the A14 viaduct and reducing traffic.

During the site visit the predicted disruption to the landscape due to the project was observed. The landscape planting which was intended to help integrate the infrastructure into the existing landscape was often immature or unsuccessful so was deemed worse than expected at three years after scheme opening. The areas where planting appeared to have thrived included the planting at Cambridge Crematorium and native species hedgerow planting at Grafham Road and Hackers Fruit Farm.

In Huntingdon, beneficial effects arose as predicted due to the removal of the A14 viaduct. The predicted adverse effects relating to the loss of privately owned green space and mature trees were also sustained. This was due to the inclusion of the Pathfinder Link Road, Views Common Link Road, and changes in road layout at the Edison Bell Way junction.

Overall, townscape was as expected given that it was predicted to sustain both beneficial and adverse effects but should still be reviewed at 5 years after.

Overall, landscape was worse than expected as planting for screening was not as established as expected. National Highways confirmed that remedial planting had been completed since this evaluation was undertaken, most recently between November 2023 and April 2024. As the impact was assessed based on predicted planting maturity after 15 years from opening, the effects on landscape should be reviewed again as part of the 5 years after evaluation. If the new planting establishes, the scheme may still achieve the design year outcomes.

Historic Environment

The appraisal predicted that the scheme would likely result in both adverse and beneficial impacts on the setting of 48 Listed Buildings and 90 archaeological assets. The Environmental Statement predicted impacts to eight historic landscapes, mainly due to excavation of borrow pits, permanent land-take, and

road infrastructure. The overall expectation was that there would be a moderate adverse impact on cultural heritage assets.

The site visit confirmed impacts to heritage assets were largely consistent with the environmental assessment predictions, with the exception of an area of Historic Landscape Character and one Borrow Pit which were still surrounded by construction fencing in May 2023. National Highways confirmed that the landowners had requested that the compound is not returned to farmland. There was one area of Historic Landscape Character that was worse than expected around the River Great Ouse as this area was impacted more by the viaduct than predicted within the environmental assessment.

For Huntingdon Castle Scheduled Monument, the impact of the scheme in terms of visibility and noise was less than predicted in the Environmental Statement, and therefore the impact was better than expected. The slight beneficial impacts associated with the removal of the A14 viaduct were considered as expected (beneficially impacting Huntingdon train station and the Huntingdon Conservation Area). The setting of historic buildings outside Huntingdon and their views were affected due to the introduction of the A14 bypass. The tree planting, which would provide some visual screening, was not as established as predicted at three years after scheme opening, and so impacts were worse than expected.

Overall, the impacts to the historic assets as predicted by the Environmental Statement were worse than expected. Effects on the historic environment should be reviewed again as part of the 5 years after evaluation and progress in achieving the design year outcomes.

Biodiversity

The environmental appraisal predicted an impact score of moderate adverse for biodiversity. The Environmental Statement predicted that the scheme would have a moderate adverse effect on breeding birds, loss of foraging habitats for bats and disturbance and mortality to bats. However, the Environmental Statement also predicted that the scheme would largely have neutral impacts on designated sites and species.

Impacts were anticipated to be offset by mitigation and in some cases designated sites were anticipated to benefit. The effect on habitats was anticipated to be slight beneficial as a result of a permanent net gain in semi-natural habitats of 271 hectares.

The site visit observed that mitigation had generally been implemented as proposed in the Environmental Statement. For instance, the kestrel boxes had been constructed as expected and were in use. Other species mitigation measures observed included attenuation areas, bird and bat boxes, landscape planting, great crested newt habitat, artificial badger setts, and noise barriers. Additionally, due to the poor condition of some of the culverts, the impacts on great crested newts (GCN), water voles and otters may be worse than expected. The overall impact on receptors as a result of some mitigation being in poor condition may not have a significant impact on the overall effectiveness of mitigation. As identified by National Highways and confirmed through the site visit, planting was not as established as expected and so worse than expected.

As remedial works have been undertaken by National Highways, with the last wave of replanting occurring between November 2023 and April 2024, it may still be

possible to achieve the outcomes predicted in the Environmental Statement. Effects on biodiversity should be reviewed again as part of the 5 years after evaluation, to assess the progress in mitigation achieving the design year outcomes. Maintenance regimes should be reviewed to ensure that design year outcomes are met.

Water Environment

The environmental appraisal predicted a slight adverse impact overall on the water environment.

The appraisal predicted that the impact on the water quality of the Great Ouse Catchment would be slight beneficial, as there would be fewer vehicles travelling on the old A14 (the new A1307), with a resultant reduction in untreated and unattenuated discharge and an improvement in the pre-existing conditions for water quality. Any new discharges produced by the scheme would be mitigated in terms of pollution risk. Conversely, with the construction of the new scheme the Flood Risk Assessment predicted a loss of floodplain area and potential reduction in the available floodwater storage capacity. A total of 16 watercourses were assessed by the Environmental Statement, and only two did not require mitigation. Proposed mitigation to address the increased flood risk included level-for-level flood compensation areas (including some borrow pits post-construction) and attenuation ponds. Water quality impacts such as changes to river flows and river erosion were to be minimised by directing outfalls downstream and away from riverbanks. To protect groundwater, attenuation ponds and flood compensation areas were to be lined to trap any sediment.

The condition of the accessible watercourses was as expected at Ellington Brook, Brampton Brook, Longstanton Brook, Covell's Drain and River Great Ouse, but worse than expected at Washpit Brook, West Brook and Swavesey Drains 1-3. For example Swavesey Drain 2 was part of proposed mitigation to treat road runoff, but the site visit indicated general vegetation overgrowth at the inlet. Of the attenuation ponds that were visited, nine required maintenance mainly in relation to reeds and algae growth for them to perform their intended drainage functions. Most of the ponds visited were worse than expected, although the conclusions from the site visit may not reflect the average condition of all ponds.

Overall, based on observations during the site visit, it was considered that the impacts to the watercourses and the wider water environment were worse than expected and should be reviewed at 5 years after. Effects on the water environment should be reviewed again as part of the 5 years after evaluation, to assess the progress in mitigation achieving the design year outcomes. Maintenance regimes could be reviewed to ensure that design year outcomes are met.

Physical Activity

The appraisal predicted a slight beneficial impact on physical activity as a result of the scheme.

Without provision for Non-Motorised Users it was deemed that there was a lack of connectivity between Public Rights of Way (PRoWs) before the scheme was constructed. It was predicted with the scheme that some Public Rights of Way would require permanent closure or re-routing, in some cases lengthening

journeys. The amenity of the Public Rights of Way was also predicted to be impacted. Mitigation included the provision of new routes, footbridges, and footways.

In order to evaluate the impact on physical activity, 16 Public Rights of Way were visited during the site visit: 12 were considered as expected and four worse than expected. For a large amount of the Public Rights of Way where some had to be permanently closed, the alternative provision of footpaths and/or shared use paths provided better accessibility. Overall, in relation to Non-Motorised User facilities and access to physical activity it was generally considered that across the scheme impacts were as expected.

Severance

The scheme was expected to have beneficial impacts to Non-Motorised Users due to the inclusion of new routes, footbridges, footways, and safe road crossings, but the appraisal reported neutral overall.

Public Rights of Way were visited during the site visit, and evidence of reduced severance effects was observed. The areas that were predicted to be impacted by severance including farmland, community access and residential receptors were largely as expected. Only severance relating to farmland at a borrow pit was deemed as too early to say, but this was due to external factors outside of National Highways' control. Therefore, severance overall was as expected.

Journey Quality

The environmental appraisal stated that the scheme would have a large beneficial impact on journey quality.

The scheme was intended to redistribute traffic from the old A14 (A1307), which would improve journey quality on that route, as well as for NMUs crossing it, and on the new route provide incident management equipment including electronic messaging signs and emergency refuge areas.

Generally, in terms of reducing drivers stress, the scheme appeared to have achieved this. The overhead gantries and variable speed limit signs at the major junction slip roads were viewed during the site visit. These were considered to reduce the fear of accidents and improve motorised travellers' decision-making in relation to the correct routes to use. Traveller care has been maintained with the continued access for vehicles to Brampton Hut and Cambridge (Boxworth) services; or improved due to permanent bus stop relocations to local access roads in relation to Cambridge Crematorium and Robin's Lane to avoid users needing to cross the A14, and relocation to new local access roads on the west side of Buckingham Business Park to avoid users needing to cross the A14 to access westbound services.

Mitigation for traveller views was worse than expected due to the issues related to tree planting mentioned under landscape and biodiversity impacts. Additionally, traveller views are currently still very open and visible. Nevertheless, the landscape planting would be unlikely to have been fully established until the 2030s.

Generally, it was considered that conditions were as expected.

Summary

The results of the evaluation are summarised against each of the Transport Appraisal Guidance (TAG) environmental sub-objectives and presented in Table 2. We report the evaluation as expected if we believe that the observed impacts were as predicted in the appraisal. We report them as better or worse than expected if we feel the observed impacts were better or worse than expected.

Table 2 Summary of environmental findings

Sub Objective	AST Score	Evaluation Outcome	Evaluation Summary
Noise	Net Benefit	As expected	Almost half the assessed links had noise levels that were as expected, almost 40% were better than expected, and less than 10% were worse than expected. The site visit confirmed that noise barriers were implemented as prescribed.
Air quality	Net benefit	As expected	There were some differences between the modelled and the observed traffic data across the study area (both positive and negative). However, it is not anticipated that these differences would cause changes in pollutant concentrations that would affect the overall evaluation of significance for air quality.
Greenhouse gases	Net disbenefit Increase in non-traded carbon over 60 years of +2,540 (ktCO ₂ e)	Better than expected	Emissions calculated on the basis of observed traffic data were lower for the majority of road links, and in terms of total emissions, than those calculated on the basis of modelled traffic data. This is primarily due to lower observed traffic flows than modelled.
Landscape	Moderate Adverse	Worse than expected	It was considered worse than expected based on three years of growth. Further remedial works (new planting) have been undertaken. Impacts should be reviewed again as part of the 5 years after evaluation and assessing progress in achieving the design year outcomes.
Townscape	Moderate Adverse	As expected	Beneficial effects were sustained as predicted due to the removal of the A14 viaduct however, predicted adverse effects relating to the loss of privately owned green space and mature trees were also sustained.
Historic environment	Moderate Adverse	Worse than expected	The observed impacts on the majority of the Historic Landscapes were largely consistent with the ES, with the exception of Historic Landscape Character 4 with Borrow Pit 5, which was still surrounded by construction fencing. The removal of the A14 viaduct beneficially impacted Huntingdon Station and the Huntingdon Conservation Area. The setting of historic buildings outside Huntingdon was experiencing impacts worse

Sub Objective	AST Score	Evaluation Outcome	Evaluation Summary
			<p>than expected (in terms of progress towards achieving the design year outcomes) as the tree planting, which would provide some visual screening, was more immature or unsuccessful than expected at three years after scheme opening.</p> <p>Impacts should be reviewed again as part of the 5 years after evaluation and assessing progress in achieving the design year outcomes.</p>
Biodiversity	Moderate Adverse	Worse than expected	<p>The site visit determined that the mitigation prescribed within the ES was largely implemented as expected. Successful mitigation included attenuation areas, bird and bat boxes, landscape planning, great crested newt habitat, artificial badger setts, and noise barriers. It is possible that terrestrial invertebrates, GCN, breeding birds, wintering birds, barn owls, bats and otters are experiencing worse than expected effects due to the poor condition of some attenuation ponds and culverts, and issues with the success of the original tree planting.</p> <p>Impacts should be reviewed again as part of the 5 years after evaluation and assessing progress in achieving the design year outcomes.</p>
Water Environment	Slight Adverse	Worse than expected	<p>For the two of the five watercourses observed during the site visit, their condition appeared to be as expected. For the remaining observed three, they were considered worse than expected, for example due to vegetation overgrowth. It was considered that the majority of the attenuation ponds visited were worse than expected. Overall, based on the site visit, it was considered that the impacts to watercourses and the wider water environment were worse than expected.</p> <p>Impacts should be reviewed again as part of the 5 years after evaluation and assessing progress in achieving the design year outcomes.</p>
Physical activity	Slight Beneficial	As expected	<p>During the site visit, the impacts of scheme on 12 PRoWs were considered as expected and worse than expected on four PROWs. For most of the PRoWs which were permanently closed, the alternative provision of footpaths and/or shared use paths provided better accessibility. Overall, impacts related to NMU facilities and access for physical fitness across the new A14</p>

Sub Objective	AST Score	Evaluation Outcome	Evaluation Summary
			were as predicted in the environmental appraisal.
Severance	Neutral	As expected	The areas that were predicted to be impacted by severance including farmland, community access and residential receptors were largely as expected. Only severance relating to farmland at one of the borrow pits was deemed as too early to say but, this was due to external factors outside of National Highways' control. Therefore, severance overall was as expected.
Journey Quality	Large Beneficial	As expected	The scheme appeared to have achieved a reduction in driver stress. The overhead gantries and variable speed limit signs at the major junction slip roads were considered to reduce fear of accidents and improve motorised travellers' decision-making. Traveller care was neutral or beneficial due to permanent bus stop relocations and the continued provision of services. Traveller views were still very open and visible. Overall, it was considered that observations were as expected.

7. Social value - wider impacts

Summary

Through delivery of the A14 scheme and the linked A14 Community Fund, there have been a number of wider social value impacts that have benefitted residents, community organisations and businesses. The impacts have been discerned from the data collected and reported in the preceding chapters, the information collated and reported in the scheme brochure *Delivering the benefits: A14 Cambridge to Huntingdon improvement scheme* (Highways England, 2020), and / or the additional primary research and surveys undertaken with residents, through-traffic, businesses, community organisations and stakeholders.

Metrics and indicators were developed for the A14 to assess its social value impacts, using the National Highways social value framework and its four pillars focused on: economic prosperity; improving the environment; community wellbeing; and equality, diversity, and inclusion.

The scheme employed over 14,000 people; and £120m worth of goods and services were sourced locally. Businesses and residents identified the positive journey time and reliability benefits, allowing them to access customers, employees, or jobs from a wider catchment.

The scheme created new habitats and invested in environmental mitigation. There were mixed opinions on the scheme's environmental outcomes. Businesses perceived there had been improvements in noise and air quality, but residents in almost equal measure perceived air quality and noise to have improved or got worse. Issues around the failure rate of planting new trees were raised in the interviews, whilst almost equal numbers of residents agreed as disagreed on whether trees and shrubbery planted as part of the scheme had improved the local area.

Businesses and community organisations recognised the positive impact of the scheme on community wellbeing, with no negative impacts being raised. From the resident interviews, 29% felt that more leisure and entertainment opportunities were available to them, and 24% reported they were able to access more education facilities as a result of the scheme.

The archaeologists employed on the scheme discovered 15,000 artefacts. The aim is to exhibit these at local venues linked to the areas where they may have originated.

Whilst there was feedback that more could have been done to better link up and develop walk and cycle networks, there were positive comments on the new infrastructure and how well they are used, especially by cyclists, and the improved accessibility for people with mobility issues for the two new bridges designed for non-motorised traffic. Of the residents who cycled in the area, almost a third felt the scheme had contributed to them cycling more often than before the scheme.

The community organisations interviewed noted that beneficiaries of the A14 Community Fund included children, young people, adults with learning disabilities and older people.

The Grafham Trout village pub provides a case study of the benefits arising from the Community Fund, with a £10k grant helping it open in 2018. It employs local

residents and serves as a community venue for people of all ages, hosting quiz nights and children’s discos, and acting as a meeting place for cycling groups, located as it is near a national cycling route (Route 12).

Overview

Social value is the benefit that National Highways and its supply chain delivers for people, the environment and the economy through the development and the operation of the Strategic Road Network. The existing National Highways social value framework pillars and outcomes is shown in Figure 23.

Figure 23 National Highways social value pillars and outcomes



Source: *Our social value plan: 2022-2024* (National Highways, 2022)

Using the A14 as a case study, indicators and metrics were developed using these pillars and outcomes to create a social value evaluation framework for major projects. This framework aims to provide a mechanism for the measurement and reporting of the wider social value beyond project delivery, evaluating the wider community outcomes and impacts as a result of the overall investment of a major project. A retrospective evaluation of the A14 scheme was undertaken drawing upon data collected through the POPE process, data as presented in the A14 end-of-scheme brochure²⁶, and additional primary data collected through the customer experience research surveys in 2023 and additional interviews with recipients of the A14 Community Fund²⁷ in 2024.

Appendix D summarises the key findings of the social value evaluation using the shortlisted proxy indicators and measures included within the emerging National Highways social value evaluation framework. These are categorised as inputs (e.g. funding for the scheme), outputs (i.e. what was delivered, such as new roads), and

²⁶ *Delivering the benefits: A14 Cambridge to Huntingdon improvement scheme* (National Highways, 2020) https://assets.highwaysengland.co.uk/roads/road-projects/a14-cambridge-to-huntingdon-improvement/BED20_0026+A14+end+of+scheme+brochure+FINAL.pdf

²⁷ The A14 Community Fund allocated £450,000 to 55 organisations for wider community and environmental projects. This funding was additional to that allocated for delivery of the A14 scheme.

outcomes (impacts such as changed perceptions on safety, noise, and traffic levels).

The following sections summarise the key findings from the social value workstream by each of the four social value pillars set out in Figure 23 above. A case study demonstrating social value created through the A14 Community Fund has also been included focusing on the Grafham Trout village pub.

Economic prosperity

During the delivery of the scheme the following activities supported local economic prosperity.

- Employment: 14,127 people worked on the delivery of the scheme; 14m hours were worked by National Highways and supply chain staff; 50 local businesses provided goods and services; and goods and services worth £120m were sourced locally.
- Investment into initiatives and activities to promote STEM jobs: 260 events were held at local schools to talk about careers in construction.
- Training and skills development: 450 people took part in training programmes, including apprenticeships; 149 apprentices were supported through the delivery of the scheme and 75 work placements.

Since the scheme opened:

- Primary research has identified that the scheme has supported local businesses including small enterprises to widen their customer catchment by improving journey times and reliability along the A14 and Cambridge to Huntingdon corridor. In recent years this has helped due to a reported downturn in work in the area.
- Local businesses engaged during primary research also highlighted traffic improvements caused by the scheme have had a positive impact on their productivity.

Over half of residents between 16 and 34 years old felt they were now willing to travel further for job opportunities since the scheme had been completed (54%), and over a third of residents aged 35 to 64 also felt this (36%).

Interviewees noted that increased reliability and faster journey times along the A14 had contributed to the widening of the customer catchment area for small businesses, increasing confidence about achieving time-critical deliveries, and in some cases being able to access areas which were previously not commercially viable. This has been helpful at a time of a general economic downturn:

"New inquiries are down, but it means that because we can further our radius a little bit, it means we've been able to keep busy" (Business interview)

Businesses not only reported that the A14 scheme had increased access to work opportunities further afield, but also the positive impact attracting new employees, expanding the area from which they can reasonably look to hire people, given they would be able to commute more easily and more reliably.

"The A14 scheme] has had a positive impact on business productivity. Can be confident that when using the road you won't be held up in traffic which enables, for example, extra site visits" (Business interview)

There was however some recognition of the more negative impacts of construction:

“There was a lot of construction work going on... they were struggling to sell a lot of the houses... as anyone who was coming to look to buy the house had a negative experience on the way to the property” (Business interview)

Improving the environment

The main findings related to environment were:

- According to the A14 end-of-year brochure, 270 hectares of new habitats were created for local wildlife and 40 new species planted.
- 33% of people reported lower noise levels in their local area and 23% of people reported improved air quality in their local area.
- During primary research a local business stated that noise levels have ‘really improved’ since the scheme opened, however during construction there was disruptive noise caused by construction vehicle movements.
- Primary research with an environmental charity revealed that the location of the new A14 had resulted in a displacement of deer and an increase in deer numbers in protected areas which has led to ecological damage.

Positive environmental impacts highlighted by businesses included perceived improvements to air quality and noise reductions, with better fuel consumption cited as a direct effect of the new A14. Moreover, the remaining businesses all acknowledged that there had likely been an improvement to environmental conditions as a result of the scheme – particularly in relation to air quality improvements and noise reductions. One business located in a town near the old A14 stated that they assumed there had been a negative environmental impact in terms of carbon emissions and air quality in their area because of an increase in through traffic, but they had no evidence to support this.

Residents had mixed views on noise and air quality, with 32% agreeing that noise levels had reduced, compared to 32% disagreeing (28% felt there had been no change, and 8% did not know); and 29% agreeing that air quality had improved, compared to 32% disagreeing (38% felt there had been no change).

A local creative charity’s initiatives funded by the A14 grant were directly related to the environment. They stated that their project had fostered a good deal of contact with the A14 ecology team who played a crucial role in delivering their initiative.

An environmental charity highlighted the positive impact of the scheme in creating a new field of approximately 60 acres, where borrow pits had been created during construction, and subsequent tree planting undertaken. This space is reportedly now popular with the public and dog walkers.

“We’ve got wildlife, ducks and we’ve always had voles, but there are lots of animals on the balancing ponds and there are several balancing ponds around now, so yeah, it is good for wildlife, I think the wildlife has really picked up” (Councillor)

Local views from residents on tree planting were mixed. One-third (33%) agreed trees and shrubbery planted as part of the scheme had improved the local area. However almost as many (31%) disagreed. Views and perceptions on this may have been impacted by press reports on the planting of trees at a suboptimal time in the spring, and subsequent statements from National Highways in early 2023

that work to replant the dead trees was starting. Nevertheless, a local stakeholder also raised this issue regarding the initial planting:

“The trees that the A14 planted, that were not successful, I think that was really really bad, because they should have been advised on what type of tree to plant and when to plant it and not waste all those striplings” (Councillor)

National Highways is aware of the issues and designed and implemented a revised replanting strategy, including a new preparation and planting aftercare programme.

Community wellbeing

The main findings relevant to community wellbeing were:

- £450,000 was allocated through 55 initiatives as part of the A14 Community Fund to support local initiatives focusing on leisure, skills, safety improvements, flood alleviation, and communal facilities.
- Twenty-four miles of new routes for cycling, walking, and horse riding were created as a result of the scheme.
- 29% of local residents responded that more leisure and entertainment opportunities were available to them.
- 24% of local residents reported they were able to access more education facilities as a result of the scheme.
- A community organisation contacted during the primary research revealed that the A14 Community Fund enabled the launch of their organisation, which now acts as a ‘hub for people to get together’, particularly local married couples who are near retirement age. This is included as a case study at the end of this chapter.
- There were over 250 archaeologists working on the scheme, who discovered 15,000 artefacts including coins, broaches, and ironwork. As of late 2023, Cambridgeshire County Council were looking at finding venues to deliver an exhibition and considering different accessible venues to display the finds in parts of the county linked to the areas where the artefacts may have originated.
- It helped unlock development of new homes by providing additional highways capacity; in particular providing capacity for developments proposed in Northstowe to go ahead²⁸.

A positive impact of the A14 scheme on community wellbeing was recognised by some of the businesses interviewed as part of this evaluation, with none of them stating that any negative impacts had occurred.

Almost one-third of residents agreed there were more opportunities for leisure, entertainment and socialising since the scheme was completed, which was more

²⁸ The *Local Development Framework: Northstowe Area Action Plan* (July 2007) Development Plan Document stated that “*Planning permission for Northstowe will be subject to conditions requiring that sufficient highway capacity is available in the A14 corridor between Bar Hill and Cambridge throughout the development of Northstowe for the traffic forecast to be generated by each phase of new town development and ultimately for up to 10,000 dwellings*” (Policy NS/10.2). The *Northstowe Phase 2 Planning Application* (August 2014 Planning Statement) referred to the A14 Cambridge to Huntingdon Improvement Scheme, stating “*These improvements will deliver additional capacity to the A14 corridor, thus satisfying the requirements of NAAP Policy NS/10.2.*”

than those who disagreed (17%). However, another one-third (35%) held a neutral view.

One of the businesses interviewed noted the benefit of the scheme in terms of both work and pleasure:

"It's made a very good impact on my quality of life in terms of our work, but also leisure because we've got a caravan in the Peak District... so we use the A14 and it used to take us a lot longer" (Business interview)

An arts and wellbeing charity highlighted that their initiatives, funded through the Community Fund, simultaneously benefited the environment whilst fostering wellbeing:

"What our work did... is highlighted... how the natural world on your doorstep is a place for exploration and discovery that's good for your wellbeing" (Community organisation)

They also stated that National Highways and its contractors voluntarily provided expert time to support projects.

Of the 1,609 residents interviewed in this evaluation, 383 (24%) cycled in the area. There were 244 who had cycled before the scheme and 50% of these felt their journeys had improved, with 37% who felt no change and 8% who felt their journeys had become worse (5% could not remember).

Of the 383 who cycled, 30% felt the scheme had contributed to them cycling more often than before the scheme.

There were however criticisms that the connections to cycle routes in villages such as Dry Drayton, Oakington and Longstanton had been overlooked and that other routes could have been developed further.

Landowners noted that the bridleways were being used more often, but this also had a perceived negative impact:

"We've seen a lot more people using it and we've had more litter, more vandalism and cows being let out, the gates not shut or the fencing's been taken down because the project's not finished and the public are frustrated" (Landowner representative)

Nevertheless, with respect to the two new bridges implemented for non-motorised traffic introduced as part of the A14 scheme, one interviewee noted:

"They're exceptionally well used by cyclists, they're both very well used by walkers and they are both used by horse riders too, but the main users of them would be cyclists as expected" (Representative from a national charity)

Equality, Diversity, and Inclusion

The main findings relevant to equality, diversity and inclusion were:

- The A14 Community Fund has directly and indirectly benefitted a diverse range of groups across the area. For example, from the four community organisations interviewed, beneficiaries included children, young people, adults with learning disabilities and older people.
- Over 70 face-to-face engagement events were held at National Highways' mobile visitor centre, attracting almost 7,000 visitors.

The arts charity interviewed as part of this evaluation drew on the A14 Community Fund to help develop skills further for adults with learning disabilities and to help with the ongoing running of the charity. The funding created opportunities for them to volunteer and teach members of the public:

“The students were upskilled to deliver public workshops, and to support the public in doing tasks for the project... they’re learning some office space skills, learning to use the phone or it means that when we have events here, they can support staff in the voluntary role in the shop or serving drinks” (Community organisation)

The arts and wellbeing charity used their funding to work with children and young people in schools and delivered two separate creative health initiatives focusing on nature art projects for children and young people.

The community pub is a resource used by people of all ages including activities aimed at families with children on the weekend and groups of older people for socialising with other local residents. This is the subject of the case study in the next section.

With respect to the two new bridges for non-motorised traffic, one interviewee noted:

“...the ease of use of the bridges and the concrete mountain blocks at either end make it far more accessible for wheelchair users and people with mobility issues to get out, go for a walk, use a recumbent or hand cycle, using walking poles”
(Representative from a national charity)

Case study

The Grafham Trout community pub was built as a result of receiving £10,000 from the A14 Community Fund. Although the total funds required for opening exceeded this amount, the contribution enabled them to raise the overall finances to set it up.

The Grafham Trout was brought to life by a group of driven individuals from the village of Grafham, built from scratch, using local contractors and in keeping with this drive to use local, it also sources everything it can locally to invest back into the community.



The pub was funded through a variety of donations from Grafham residents, the Parish Council, and local businesses. In 2017 it received £10k from the A14 Community Fund which enabled the directors to start building and open the community pub in 2018. The pub is open on Thursdays to Sundays and has provided a place for local residents to meet, which is a benefit to the village as opportunities for community gatherings are scarce. Since opening the pub has:

- Contributed to economic prosperity for the village by:
 - Providing employment opportunities for local residents, including students during term times.
 - Supporting other local businesses. For example, by allowing customers to bring in their own food, many of whom purchase this from the village shop next door. Visitors staying at the local campsite often frequent the pub as well as it is providing them with a place for entertainment in the evenings.
 - Providing other businesses with opportunities to grow, for example by inviting food vans to park outside the pub for use by the pub's customers.
- Increased community wellbeing by:
 - Creating a community venue where people of all ages are made to feel welcome. The pub is often visited by older members of the community and also hosts children's discos on Saturday afternoons allowing whole families to visit the pub together and socialise with other members of the community.
 - Providing a venue and meeting place for those taking part in sports and recreational activities. For example, the pub is used as a meeting place for cycling groups every Thursday night (it is located near Route 12 of the National Cycle Network) and offers a warm space for parents to wait for children playing football and the floodlit astroturf next door.

Appendix A

Customer Experience and Social Value

Table 3 POPE+ customer experience and social value approach

Workshop and scoping	Stakeholders	Residents, and Through Traffic Interviews	Business and Social Value interviews
Workshops	Stakeholder selection workshop	Resident interviews	Medium / large business interviews
<p>Workshop to identify and agree:</p> <ul style="list-style-type: none"> Who are considered customers How to reach customers The size of the boundary in kilometres to define where these customers are based Research questions to answer 	<p>A broad list of the types of stakeholders who could add value to the research was produced, validated and expanded after a workshop</p> <p>Stakeholder interviews</p> <p>Invite stakeholders such as Councillors, representatives of active travel, emergency services, bus operators and landowners to complete an interview up to one hour</p>	<ul style="list-style-type: none"> Areas for interview selected using district, urban/rural and proximity of the resident's home to the old A14 1609 interviews, with quotas set for age groups, gender and employment status 20 minute interviews completed by interviewers at the household Accompaniments and verification of interviews by survey contractor 	<ul style="list-style-type: none"> Learn about positive and negative impacts on businesses, their employees, and customers 10 in-depth interviews with medium and large business leaders (50+ employees)
Scoping and sampling	Analysis and outcomes	Through traffic	Small business and community organisation interviews
<p>A scoping report was produced to detail the approach agreed in the workshop</p> <p>A sampling plan, including initial analysis planning, was produced to identify how residents and through traffic respondents would be selected</p>	<p>10 stakeholder interviews undertaken.</p> <p>Interviews had two purposes:</p> <ol style="list-style-type: none"> 1. Inform the questionnaires; and/ or 2. Collect specific and detailed feedback about the impact of the scheme for the local area 	<ul style="list-style-type: none"> Through traffic respondents interviewed at services 802 interviews, with a spread of drivers using the A14 for business/commute, leisure and as professional drivers (mainly HGV) 10 minute interviews self-completed by drivers once they had completed their journey on the A14 on the day Accompaniments and verification of interviews by survey contractor 	<ul style="list-style-type: none"> Focus on wider social value on the local economy and communities beyond supply chain 5 in-depth interviews with small businesses 4 in-depth interviews with community organisations that received A14 Community Fund allocations
Scope and sample approved	Build on findings for the next stages of research / interviews	Quantitative and qualitative data for analysis and reporting	Qualitative data for analysis and reporting

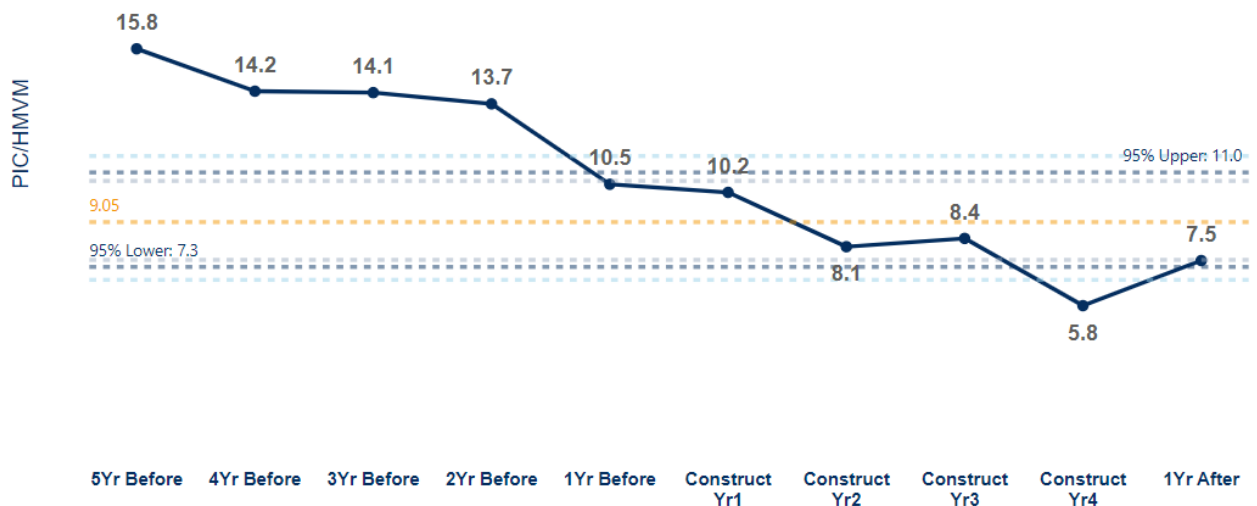
Appendix B

Road user safety in the wider area

How had traffic flows impacted collision rates in the wider area?

The evaluation has identified a decrease in the rate of collisions per hundred million vehicle miles (hmvm). Five years before there was an annual average of 14 personal injury collisions per hmvm. At this evaluation point (year of 2022), there was a reduction to eight personal injury collisions per hmvm (Figure 24). The counterfactual test undertaken found that the collision rate would likely have been 14 personal injury collisions per hmvm. The after annual average collision rate falls just inside the counterfactual range of 7-11 collisions per hmvm.

Figure 24 Annual average number of collision rate with counterfactual scenario ranges



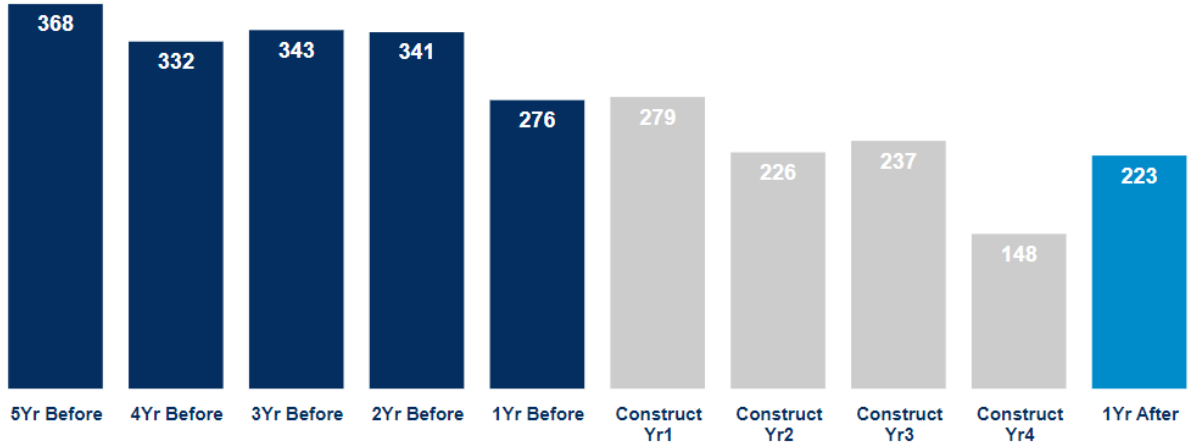
Source: STATS19: 1st October 2011 – 31st December 2022

This indicates we have observed a similar reduction in the rate of personal injury collisions that was predicted.

What impact did the project have on safety for the wider area?

Before the project an annual average of 332 collisions were observed. After the project, this had fallen to 223, a decrease of 109 (Figure 25).

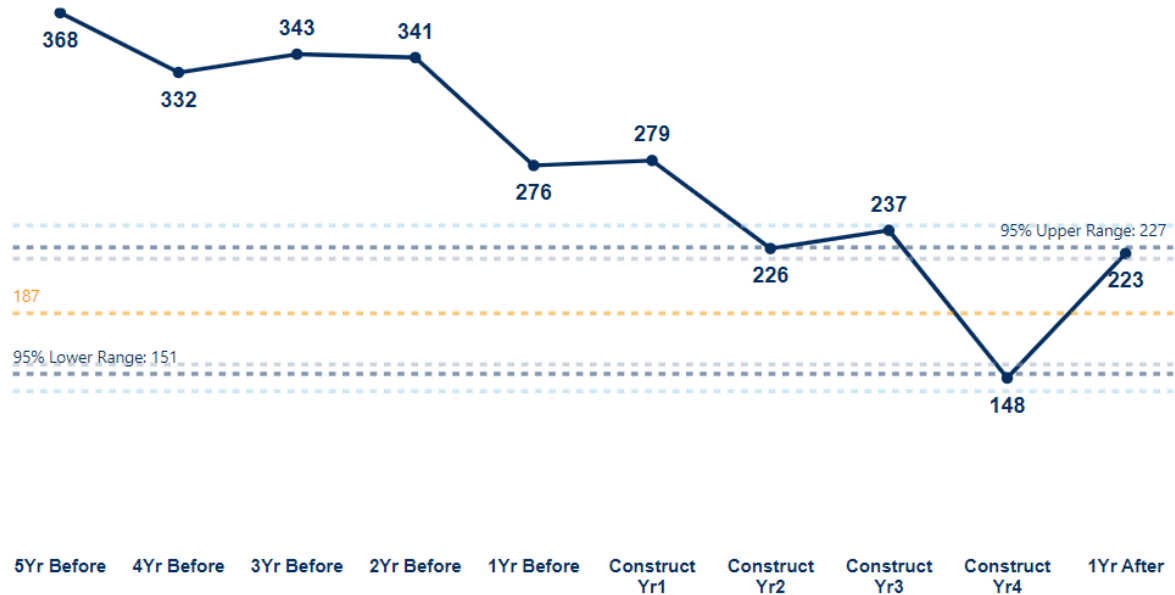
Figure 25 Annual personal injury collisions in wider area



Source: STATS19: 1st October 2011 – 31st December 2022

The after one-year annual average falls within the counterfactual range of between 151-227 personal injury collisions per year (Figure 26).²⁹

Figure 26 Observed and expected range of personal injury collisions in wider area (annual average)



Source: STATS19: 1st October 2011 – 31st December 2022

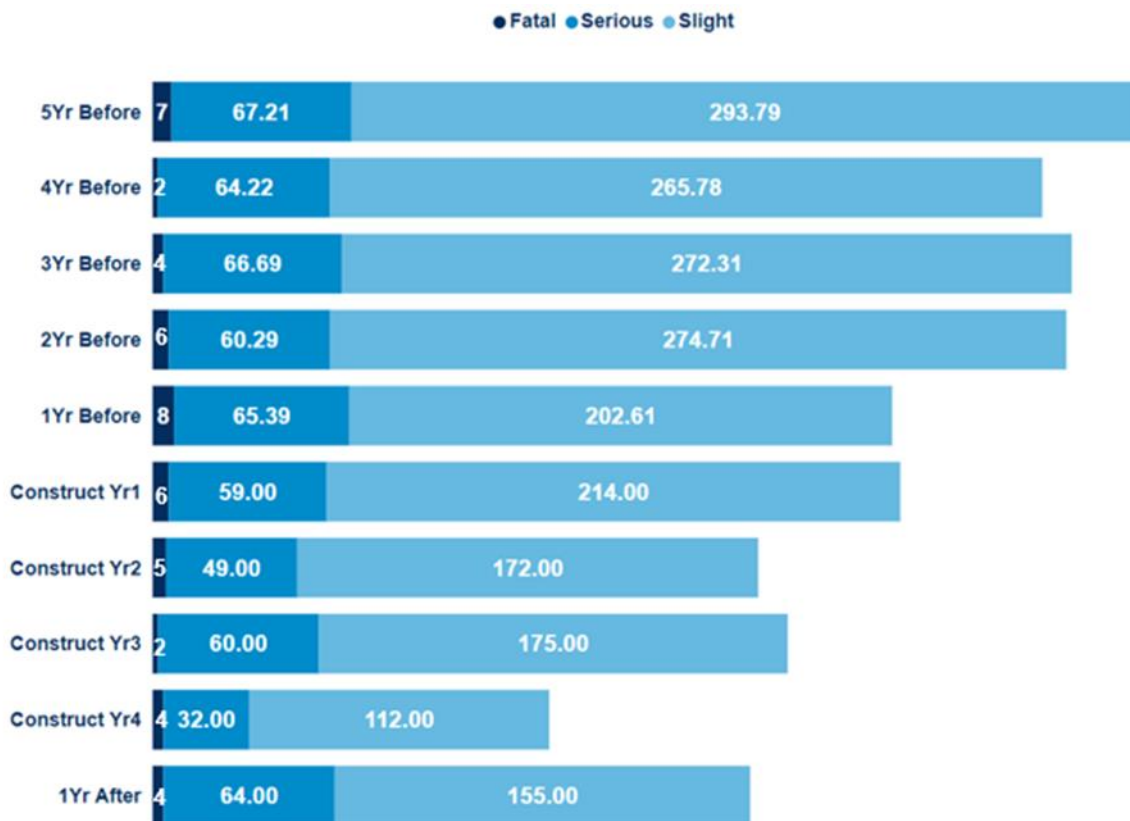
²⁹ We have tested the results at 95% confidence interval. The critical value at the 95% confidence interval is 187; the observed collision savings for the wider area are above this value of 187. We believe that the collisions savings observed for the wider safety area ensure that the project is on track to meet its safety objective.

What changes in the severity of collisions did we see?

Appendix C provides information on when police forces transitioned to a new method in how severity of incidents is recorded.

There has been a reduction in fatal and slight severity categories between the five-year pre-scheme construction period and 2022, but serious severity has remained stable with no change. The predicted accident reduction for the wider area was nine fewer fatal collisions over the 60-year appraisal period. If the scheme continues to perform at the current level, it will more than achieve the predicted reduction. Figure 27 shows the full breakdown of severity of personal injury collisions by project year.

Figure 27 Severity of personal injury collisions within the wider area



Source: STATS19: 1st October 2011 – 31st December 2022

What impact did the project have on casualties?

A reduction of one KSI has been observed annually, decreasing from an average of 67 KSI in the five years before scheme construction started to 66 KSI in 2022. The rate of KSI per hmvm has decreased slightly, from an average of 3.2 to 2.5 for every hmvm travelled.

The observations for KSI suggests that the project is having a neutral safety impact on the severity of casualties within the wider area.

Appendix C

Incident reporting mechanisms

Since 2012, many police forces have changed the way they collect STATS19 data. These changes mean casualty severity is now categorised automatically based on the most severe injury, rather than the judgement of an attending police officer.

Police forces using the new systems, called injury-based severity reporting systems (also known as CRaSH and COPA), report more seriously injured casualties than those which do not. These changes make it particularly difficult to monitor trends in the number of killed and seriously injured casualties over time, or between different police forces. In response to these challenges, DfT and the Office for National Statistics (ONS) have developed an approach to adjust the data collected from those police forces not currently using injury-based reporting systems.³⁰

These adjustments are estimates for how casualty severity may have been recorded had the new injury-based reporting system been used. These adjusted estimates apply retrospectively from 2004 and adjust historical data to show casualty severity 'as if' this was recorded under the new injury-based system. Until all police forces have started using the new systems, these historical adjustments will continue to be updated every year. Using these adjusted totals allows for more consistent and comparable reporting when tracking casualty severity over time, across a region, or nationally. While there is no impact on total casualties or collisions, and no impact on total fatalities, these adjustments do impact serious and slight casualties and collisions.

Collision severities within this POPE report use the 2022 adjustment factor i.e. pre-conversion collision severity has been adjusted to enable comparability with post-conversion safety trends.

Unadjusted collision severity

The project extent is covered by Cambridgeshire police constabulary which transferred from Stats19 to CRASH in May 2016.

Table 4 shows the unadjusted collision severities on the project extent:

³⁰ See

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/820588/severity-reporting-methodology-final-report.odt

and

<https://www.gov.uk/government/publications/guide-to-severity-adjustments-for-reported-road-casualty-statistics/guide-to-severity-adjustments-for-reported-road-casualties-great-britain#guidance-on-severity-adjustment-use>

Table 4 Unadjusted collisions by severity for project extent

Observation Year	Fatal	Serious	Slight
5Yr Before	4	14	69
4Yr Before	2	9	69
3Yr Before	2	11	62
2Yr Before	1	11	65
1Yr Before	4	6	99
Construct Yr1	1	11	56
Construct Yr2	2	12	70
Construct Yr3	0	10	37
Construct Yr4	0	3	17
1Yr After	3	9	30

Source: STATS19: 1st October 2011 – 31st December 2022

The wider safety area of the A14 Cambridge to Huntingdon project is covered by two police constabularies who transferred from Stats19 to CRASH. Bedfordshire and Cambridge constabularies transferred in April 2016 and May 2016.

Table 5 shows the unadjusted collision severities on the wider safety area:

Table 5 Unadjusted collisions by severity for wider area

Observation Year	Fatal	Serious	Slight
5Yr Before	7	54	307
4Yr Before	2	52	278
3Yr Before	4	54	285
2Yr Before	6	48	287
1Yr Before	8	60	208
Construct Yr1	6	59	214
Construct Yr2	5	49	172
Construct Yr3	2	60	175
Construct Yr4	4	32	112
1Yr After	4	64	155

Source: STATS19: 1st October 2011 – 31st December 2022

Appendix D

A14 social value related indicators and measures

Table 6 A14 social value related indicators and measures

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
All	Input	The total scheme cost is the key input and relevant to all outputs and outcomes.	Total costs of the A14 Cambridge to Huntingdon scheme	£	1.5bn	All	End of scheme brochure
All	Input	Wider community and environmental initiatives funded additional to the scheme.	Budget of A14 Community Fund to support local initiatives focusing on leisure, skills, safety improvements, flood alleviation and communal facilities supported through the A14 Community Fund.	£	450,000	All	End of scheme brochure
All	Output	A key output of the scheme is the addition of new local road infrastructure.	Number of new local roads	Miles of new local roads	5	All	End of scheme brochure
Community Wellbeing	Output	More support for community organisations as a result of the wider community and environmental funding as part of the scheme.	Number of local initiatives focusing on leisure, skills, safety improvements, flood alleviation and communal facilities supported through A14 Community Fund	No. initiatives	55	Local communities	End of scheme brochure
Community Wellbeing	Output	More stakeholder engagement to raise awareness and acceptance for scheme is one of the outputs resulting from the investment into staffing and resources from National Highways and the supply chain. This can be measured as the number of events held.	Number of events held at Highways England mobile visitor centre to engage with the public	No. events	70	Road users	End of scheme brochure

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
Community Wellbeing	Output	More stakeholder engagement to raise awareness and acceptance of the scheme is one of the outputs resulting from the investment into staffing and resources from National Highways and the supply chain. This can be measured as the number of visitors to visitor centres.	Number of visitors welcomed at Highways England mobile visitor centre to engage with the public	No. visitors	7,000	Road users	End of scheme brochure
Community Wellbeing; Equality, Diversity, and Inclusion	Outcome	Better routes for active travel as a result of improved road networks and new routes established for active travel.	Share of people reporting more routes for cycling (A14 example: <i>Since the scheme was completed at the end of 2020: I am able to travel to areas and places I would not have done before by bike</i>)	%	48	Road users, local communities	Customer Experience Surveys
Community Wellbeing	Outcome	Better community facilities as a result of investments into wider community benefits such as through dedicated funds.	Number of new houses projected to be developed	No. houses planned	23,000	Local communities	End of scheme brochure
Community Wellbeing	Output	Improved access by all modes to local community facilities as a result of investments into wider community benefits to improve access, and improved road network.	Number of new bridges and structures connecting villages	No. bridges and structures	34	Local communities	End of scheme brochure
Community Wellbeing; Equality, Diversity, and Inclusion	Outcome	Improved perception of safety of travelling as a result of fewer personal collisions, improved road network and better traffic flow.	Share of adults who feel safer/ very safe travelling on the new A14	%	86	Local communities	Customer Experience Surveys

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
Community Wellbeing; Equality, Diversity, and Inclusion	Outcome	Improved perception of active travel safety (walking) as a result of fewer personal collisions, improved road network and better traffic flow.	Share of adults who feel safer/ very safe when walking in their local area	%	37	Local communities	Customer Experience Surveys
Community Wellbeing; Equality, Diversity, and Inclusion	Outcome	Improved perception of active travel safety (cycling) as a result of fewer personal collisions and better active travel network.	Share of adults who feel safer/ very safe when cycling in their area	%	38	Local communities	Customer Experience Surveys
Community Wellbeing; Improving the Environment ; Equality, Diversity, and Inclusion	Output	New active travel routes created as a result of the scheme.	Length of new routes for cycling, walking and horse riding	Miles	24 miles	Wider society	End of scheme brochure
Improving the Environment	Input	Artefacts preserved as a result of wider investment into the community, culture, and heritage during construction of the scheme.	Number of artefacts found such as coins, broaches, and ironwork	No. artefacts	15,000	Wider society	End of scheme brochure
Improving the Environment	Input	Resources to preserve heritage as a result of wider investment into the community, culture, and heritage during construction of the scheme.	Number of archaeologists at peak	No. archaeologists	250	Wider society	End of scheme brochure
Improving the Environment	Output	Creation of new habitats as a result of wider investment into the environment.	New habitats created for local wildlife	Hectares	270	Local communities	End of scheme brochure

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
Improving the Environment	Output	Improving natural environment as a result of wider investment into the environment.	New species planted	No. species	40	Local communities	End of scheme brochure
Improving the Environment	Outcome	Perceived reduction of noise levels as a result of actual reduction of noise.	% of people reporting lower noise levels in their local area	%	33	Local communities	Customer Experience Surveys
Improving the Environment	Outcome	Perceived improvement of air quality as a result of actual reduction of air pollution due to better traffic efficiency.	% of people reporting improved air quality in their local area	%	23	Local communities	Customer Experience Surveys
Improving the Environment	Outcome	Perceived reduction of traffic levels due to improved road network and better traffic efficiency.	% of people reporting reduction in traffic in their local area	%	37	Local communities	Customer Experience Surveys
Improving the Environment	Outcome	Perceived reduction of HGV traffic due to improved road network and better traffic efficiency.	% of people reporting reduction in HGV traffic in their local area	%	36	Local communities	Customer Experience Surveys
Supporting Economic Prosperity	Output	Apprentices supported through delivery of the scheme.	Number of apprentices	No. apprentices	149	Businesses, wider society	End of scheme brochure
Supporting Economic Prosperity	Output	Work placements supported through delivery of the scheme.	Number of work experience placements	No. work placements	75	Businesses, wider society	End of scheme brochure
Supporting Economic Prosperity	Output	Work created through the delivery of the scheme.	Number of people working on the delivery of the scheme	No. staff	14,127	Businesses, wider society	End of scheme brochure
Supporting Economic Prosperity	Output	Contribution to economic growth including suppliers, local spend, new businesses, small-to-medium-size enterprises, micro, voluntary, charitable, and social enterprises/mutuals.	Hours worked of NH and supply chain staff	No. hours	14,000,000	Businesses, local communities	End of scheme brochure

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
Supporting Economic Prosperity	Output	More direct local spend with new businesses, small-to-medium-size enterprises, micro, voluntary, charitable, and social enterprises/mutuals through delivery of the scheme.	Value of goods and services for the scheme sourced locally	£	120m	Businesses, local communities	End of scheme brochure
Supporting Economic Prosperity	Output	More direct local spend with new businesses, small-to-medium-size enterprises, micro, voluntary, charitable, and social enterprises/mutuals through operation/asset management/maintenance of the scheme.	Number of local businesses providing goods and services for the scheme	No. businesses	50	Businesses, local communities	End of scheme brochure
Supporting Economic Prosperity	Output	More training and skills development as a direct result of the scheme such as through NH and its supply chain.	Overall number of people on training programmes, including apprentices	No. people	450	Businesses	End of scheme brochure
Supporting Economic Prosperity	Outcome	Wider economic benefits as a result of the scheme and investments into the supply chain.	Benefits to the UK economy	£	2.5bn	Businesses	End of scheme brochure
Supporting Economic Prosperity	Outcome	Higher customer satisfaction with business services as a result of the improved road network and traffic efficiency.	Share of adults reporting services provided by local businesses have improved since scheme opening, such as timely arrival, timely deliveries	%	37	Businesses, local communities	Customer Experience Surveys
Supporting Economic Prosperity	Outcome	Higher productivity of wider economy as a result of the improved road network and traffic efficiency.	Savings to the UK economy due to more efficient transportation of goods	£/year	70m	Businesses	End of scheme brochure

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
Supporting Economic Prosperity; Equality, Diversity, and Inclusion	Output	Investment from NH and supply chain into initiatives and activities to promote STEM.	Number of events at local schools to talk about careers in construction	No. event	260	Local communities	End of scheme brochure
Supporting Economic Prosperity; Equality, Diversity, and Inclusion	Outcome	Better access to colleges and education facilities as a result of improved road networks and better traffic efficiency.	Share of local residents able to access more education opportunities	%	24	Local communities	Customer Experience Surveys
Supporting Economic Prosperity; Equality, Diversity, and Inclusion	Outcome	Better access to job opportunities as a result of improved road networks and better traffic efficiency.	Share of local residents able to access more job opportunities	%	34	Businesses, local communities	Customer Experience Surveys
Equality, Diversity, and Inclusion	Outcome	Reported increase of journeys by active travel as a result of more active travel routes and improved safety.	Share of adults who use more non-motorised transport since scheme completion (A14 example: <i>Since the scheme was completed at the end of 2020: There is a safe route to cycle to Cambridge from where I live</i>)	%	70	Local communities	Customer Experience Surveys
Community Wellbeing	Outcome	More places to meet up and socialise as a result of investments into wider community benefits and better road networks helping to connect communities.	Share of people reporting more leisure and entertainment opportunities available	%	29	Local communities	Customer Experience Surveys

Social value Framework Pillar	Input/ Output/ Outcome/ Impact	Proxy indicator/measure		Unit	A14 data value	Beneficiaries	Source of information
		What does the proxy measure?	How is the proxy measured?				
Community Wellbeing	Outcome	Better quality of life in communities as a result of various factors such as investments into community, improved road and active travel network, better air quality and noise reduction.	Share of people reporting their community benefitted from development	%	49	Local communities	Customer Experience Surveys
Community Wellbeing	Outcome	More people moving to the area as a result of various factors such as better access to employment and education opportunities, active travel network, reduced commuting time and better quality of life.	Share of people reporting the changes to the A14 formed part of their decision-making process for moving into the area.	%	17	Local communities	Customer Experience Surveys
Equality, Diversity, and Inclusion	Outcome	More disabled and people with health impairments using the SRN as a result of improved road safety and initiatives to improve accessibility.	Share of people with a health problem/ disability accessing the new road more/a lot more	%	30	Road users	Customer Experience Surveys
Equality, Diversity, and Inclusion	Outcome	Better quality of life in communities for disabled and people with health impairments. This can be as a result of investments into community facilities, safer road, improved air quality and reduced noise levels.	Share of people with a health problem/ disability agreeing or strongly agreeing that their community benefitted from development	%	46%	Local communities	Customer Experience Surveys

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Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ

National Highways Limited registered in England and Wales number 09346363