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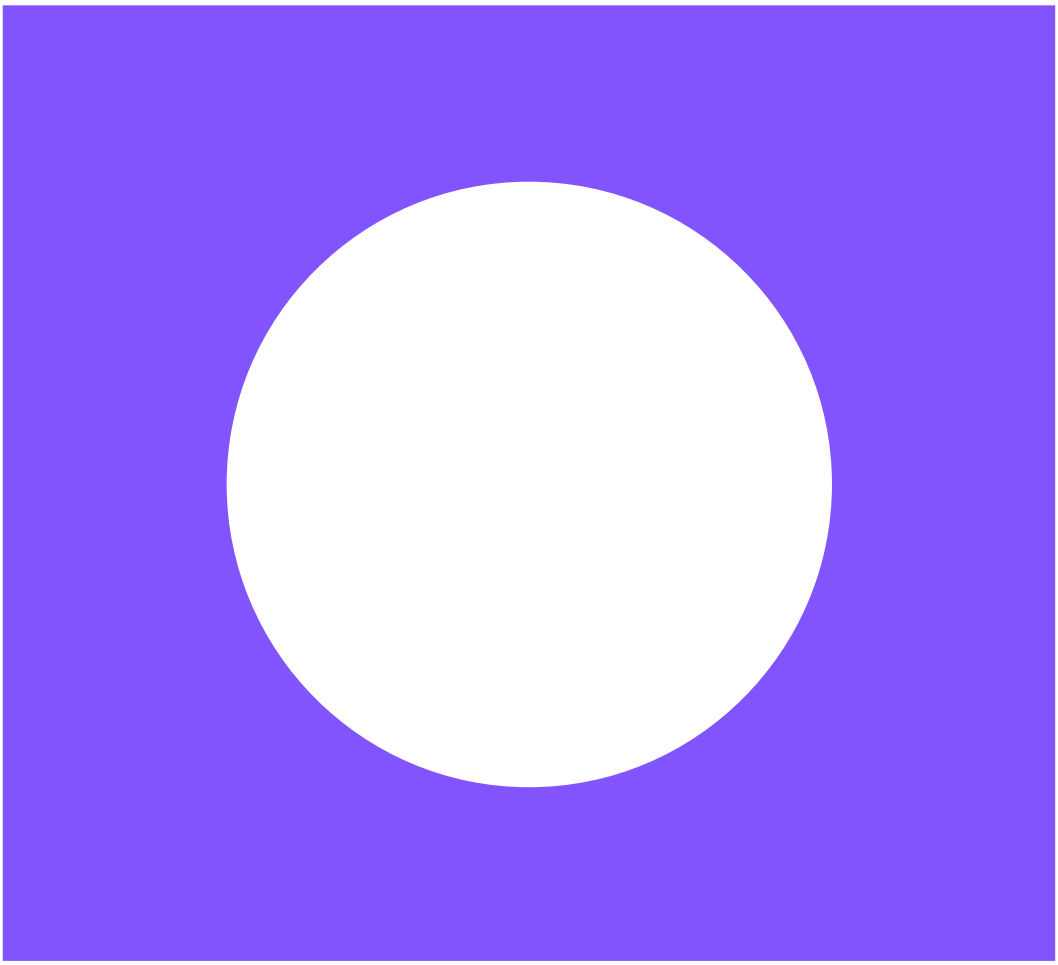

Whittlesey Relief Road

Strategic Outline Case

March 2025

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Whittlesey Relief Road

Strategic Outline Case

March 2025

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
P01	December 2024	Jack Vickers Strutt Steven Adams	Chris Payne	Jon Bunney	Draft for client review
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P03	February 2025	Jack Vickers Strutt	Chris Payne	Jon Bunney	Third draft for client approval
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Executive summary

This Strategic Outline Case (SOC) introduces proposals to improve transport provision, potentially in the form of a new relief road, around the town of Whittlesey in the Fenland District area. The SOC provides the evidence that underpins the case for change for the proposed Scheme, providing justification for further development of the scheme, and demonstrating how a solution could deliver against objectives linked to wider overarching strategic and policy objectives for the area. The SOC also provides supporting narrative and evidence for use in the development of the draft Fenland Local Plan to support the case that there is a need for improvements in the Whittlesey transport network to support the aspirations for continued housing and economic growth.

Scheme Overview

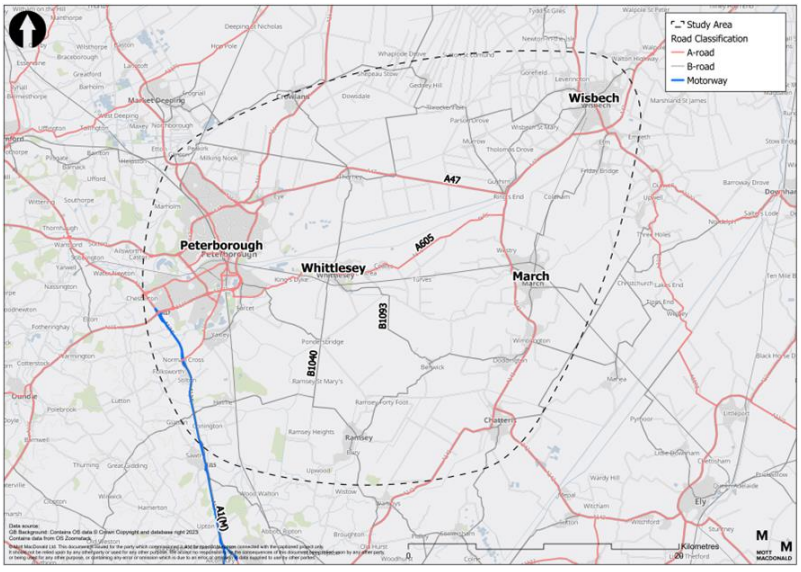
Previous studies examining the issues within the town of Whittlesey have identified growing pressures from the delivery of new housing and employment sites within and around the town. These studies identified issues arising from high volumes of traffic and the presence of Heavy Goods Vehicles (HGVs) on the historic nature of the town its people, and how this is leading to constraints on growth and the associated benefits for residents and businesses.

Ideas to help alleviate traffic in the town, including the concept of a relief road, have been around for a number of years. It has been highlighted by the Cambridgeshire and Peterborough Combined Authority (CPCA), Cambridgeshire County Council (CCC), and the Fenland District Council (FDC) that there is a need to fully explore the issues and opportunities underpinning the concept of a relief road, and to explore more widely if there are other solutions that should be considered before any solution is progressed.

This SOC has been developed to explore the current issues within the town, the future situation if things remain unchanged and the options that could address them, ultimately concluding with recommendations around possible solutions that could be taken forward for further development, and consideration.

Geographic Scope

The location context for this SOC is shown to the right, with the extent of the study area under consideration extending far beyond Whittlesey itself and taking in Peterborough as well as the other Fenland market towns of March, Wisbech and Chatteris. The purpose of including this wider study area is to ensure that there is an understanding of the relationship between the key locations that are linked by the A605, with Whittlesey at the heart.



Purpose of the Strategic Outline Case

This document has been completed in line with the Department for Transport (DfT) 'Transport Business Case Guidance' (2022), following the Five Case Model, which requires Business Cases to:

- Set out a compelling case for change that demonstrates how the proposal has a strong strategic fit with organisational, government and local area priorities – the '**Strategic Dimension**' (Section 2)
- Demonstrate the value for money and the best choice for a solution that maximises the benefits to society through options development and appraisal – the '**Economic Dimension**' (Section 3)
- Illustrate the commercial viability and supply-side capacity for the proposal, including the potential options for procurement – the '**Commercial Dimension**' (Section 4)
- Demonstrate the proposal is financially affordable and fundable over time – the '**Financial Dimension**' (Section 5)
- Set out the Scheme's deliverability through the effective development of plans, management and resources to oversee the project from outputs to outcomes – the '**Management Dimension**' (Section 6)

Strategic Dimension

The Strategic Dimension outlines the need for the Scheme and provides the rationale for investment. It sets out a clear understanding of the current situation within Whittlesey, as well as the future situation, within the context of relevant local, regional and national policies and strategic aims. Drawing this together, the Strategic Dimension concludes with the overall case for change, that includes a clear set of the Scheme objectives.

Context

There is a desire to balance economic growth with the well-being of the residents of Whittlesey. Transport is identified as playing a crucial role in this, as improving the transport offer within the town can enhance access to jobs, education, and services, while also reducing congestion and environmental impacts, including the negative social impacts currently experienced within the town as a result of traffic.

The Current Situation

Whittlesey's location on the road network means that the A605, B1040 and B1093 are the only ways into, or out of the town, and result in traffic focusing through the centre of the town. Whilst the A47 to the north is the main Strategic Road Network route in the region providing east to west connections, the A605 still provides a similar parallel east to west connection, and therefore, when there are issues, such as high congestion or maintenance works on the A47, significant vehicle rerouting can occur through Whittlesey. This contributes to the already persistent **traffic dominance** in the town which sees **19,438 inbound vehicle trips a day**. Whittlesey, and the surrounding area, is dominated by motor vehicles, with high ownership levels (**84% of households have access to a car**) and high usage (**75% of all trips from Whittlesey are by car**). Surveys have shown that in the region of **44% of this traffic is through traffic**, increasing to **over 68% for HGVs**. The

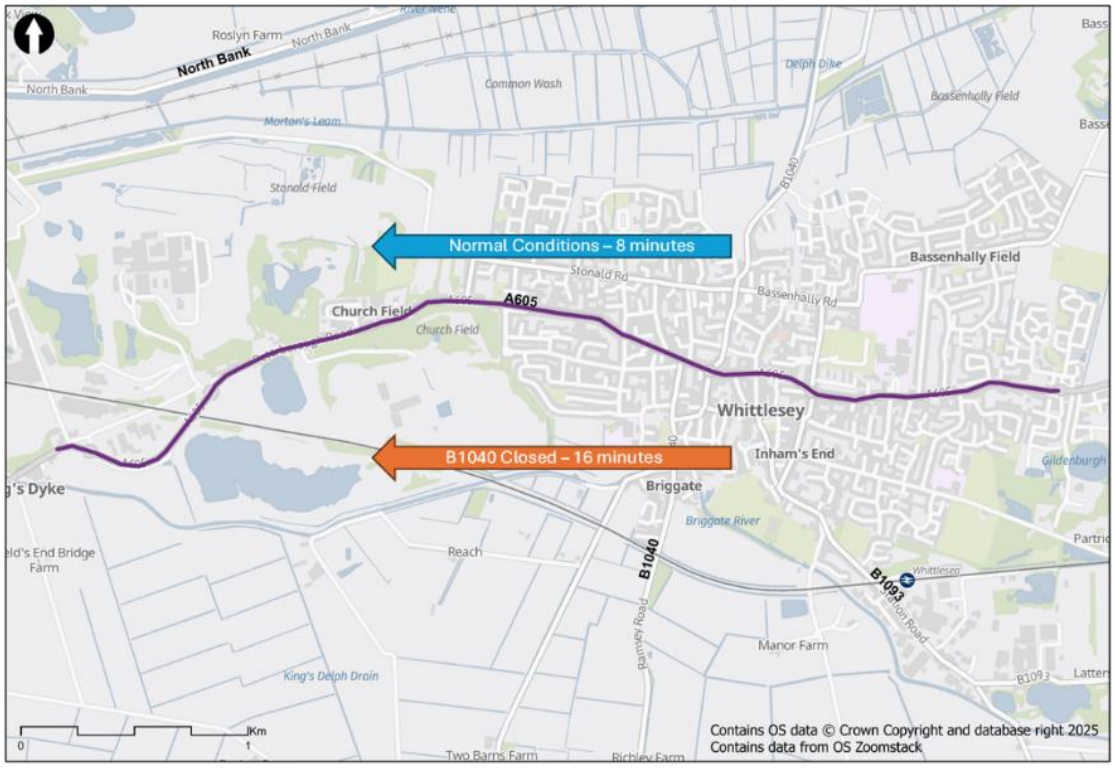
volume of traffic and the size and impact of HGVs harms the sense of place, impacting listed buildings through vibrations, while also posing a serious safety issue for pedestrians and cyclists.

Key junctions in the centre of Whittlesey (A605 / B1040 roundabout and the A605 / Dandelion Drive / Tayberry Way roundabout in particular) are also operating close to, or over, capacity, with this expected to be exacerbated by future growth in the town. These capacity issues cause congestion, which leads to elongated travel times, producing more vehicle emissions and creating a bad environment for both road users and pedestrians.

Whilst there are alternative options to car trips, these are not considered attractive enough to offer drive large mode shift. **Public transport provision is considered poor**, with only **two low frequency bus** services providing connections to surrounding areas, and an in infrequent rail service, within **one train every two hours to Peterborough**.

Similarly, the provision of **active travel infrastructure is also considered poor** with a lack of segregated lanes for cyclists, and signalised crossing points of the A605, which acts as a significant point of severance in the town, resulting in walking and cycling not being attractive modes of transport. The real impact of can be seen in the levels of accidents at key junction such as A605 / B1040 roundabout where over 5-year period there were **2 slight and 3 serious collisions, as well as one fatality.**

The impact of flooding is also a significant issue, which further impacts the local highway network and **network resilience**. On average between 2019 and 2024, **flood warnings were issued within the Whittlesey area between 24 and 30 days of the year**, affecting the B1040.[1] The closure of the B1040 can have a significant impact on the town, as it is the main route to the north and provides links to areas within north east Peterborough. When the road is closed, vehicles have to divert onto longer routes, either to the north via the A47 or through Whittlesey along the A605. When this occurs, it can increase conflicts of movement within



[1] Environment Agency flood warning records 2019-2024.

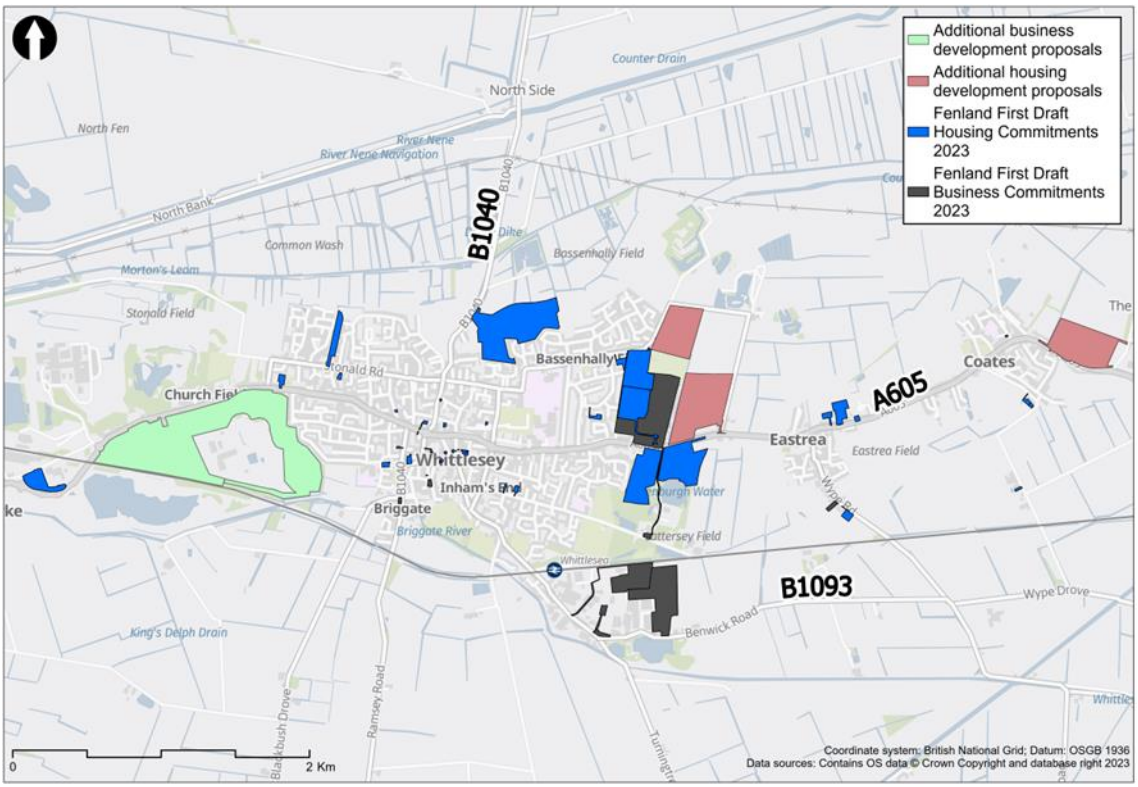
Whittlesey Town Centre, adding to congestion. Average journey times during the morning peak (8am-9am) for those travelling westbound through Whittlesey between the A605/Tayberry Way roundabout and Kings Dyke, can take in the region of 8 minutes on a normal day i.e. no road closures. However, **this can double on a day when the B1040 is closed, with average journey times increasing to 16 minutes**.[2]

The Future Situation

Since the start of the Fenland Local Plan period (2011/12), 1,000 new homes were planned to be built in Whittlesey by 2031; however, as of 2024, **918 new homes have already been built, with permission for an additional 488 homes, and circa 400 homes as part of windfall sites**. This significantly exceeds the original housing commitments. As it is built out, this growth of housing in the town will continue to add to the challenges of managing the already constrained local transport network. The transport network will therefore need to respond to ensure that it can accommodate the growth in demand for local trips.

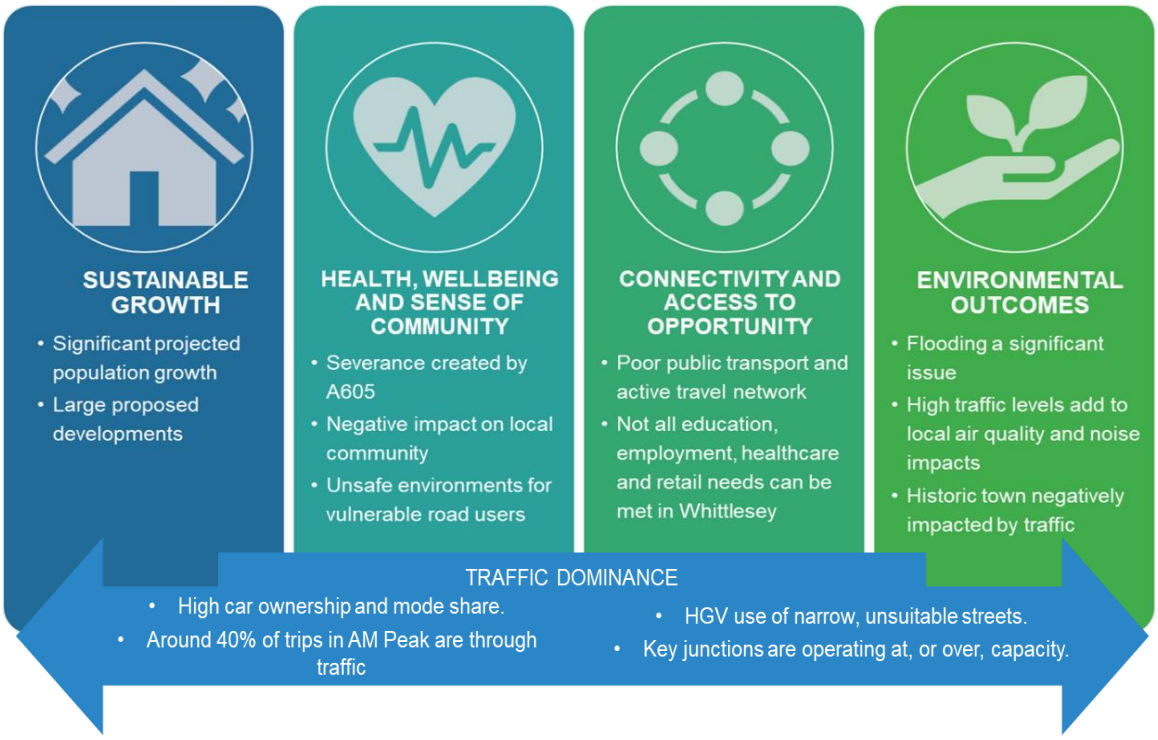
The new draft Local Plan (2022) for Fenland still includes Whittlesey as a key growth location and, therefore, the potential remains for further housing allocations. For this to become the adopted Local Plan appropriate transport interventions will need to be identified to support this growth.

There are also constraints to where this housing can go, due to the risk of flooding which concentrates development to the east of the town, as shown in the figure below. This risks further trips travelling east to west through the town to access the greater number of economic opportunities in Peterborough.



[2] TomTom data

These issues set out above are summarised in the figure below:



Scheme Objectives

The objectives for the scheme have been determined through the analysis undertaken to review policies as well as by understanding the issues and opportunities resulting from the current and future situation. The agreed objectives for the scheme are as follows:

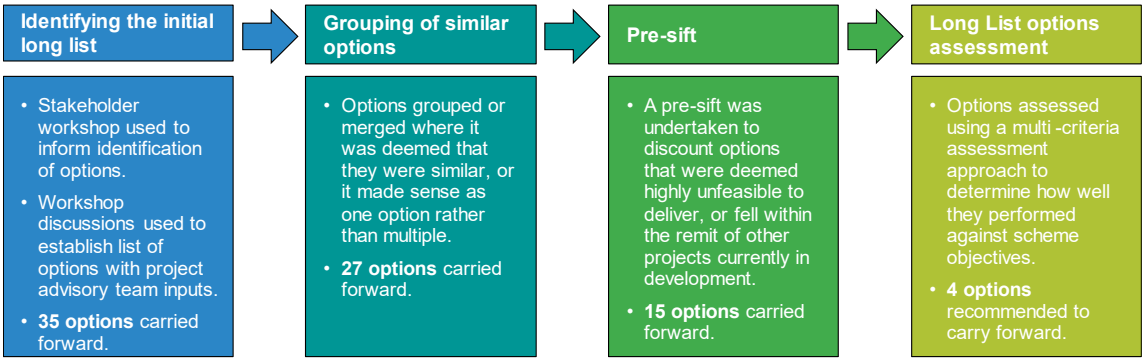
Objective Theme	Main Objective
Sustainable Growth:	Enable the transport network in Whittlesey to have sufficient capacity to support planned economic development and population growth in a sustainable manner.
Connectivity and access to opportunity:	Address the current transport network congestion and service constraints within Whittlesey to improve local and regional connectivity for all.
Health, wellbeing and sense of community:	Improve the health and wellbeing for all social groups along the A605 corridor through Whittlesey by reducing the impacts from poor air quality and poor road safety.
Environment:	Reduce the impact of traffic upon the historic environment of the town and contribute to wider reductions in carbon emissions.

Economic Dimension

The Economic Dimension is set out in two stages, the first presents the longlisting stage where a wide range of possible options have been identified and appraised. The second stage presents the development of the initial shortlisted options which have then been appraised following Transport Appraisal Guidance (TAG) to present a Value for Money assessment of each option. This process enables a recommendation for a preferred way forward for the Scheme.

Long List Options Development

The process for identifying and assessing the longlisted options captures how the project identified a longlist of potential options through stakeholder engagement, and with advisory input. These options were sifted, before an assessment against the sub-objectives was carried out using a multi-criteria scoring approach. This reduced the initial longlist of 35 options down to 4.



The conclusion of the long list options assessment was that no single option delivered strongly against all of the Scheme objectives, with each option having specific areas of strength and weakness. Therefore, a decision was made to package the better performing options together where they complemented each other across the themed objectives. The outcome of this packaging process resulted in four options to be progressed to concept design, more detailed appraisal and consultation:

- **Option 1** - Relief Road with HGV re-routing
- **Option 2** - Relief Road with HGV re-routing and bus priority improvements
- **Option 3** - Relief Road with HGV re-routing and active travel improvements
- **Option 4** - Mobility Hub with active travel improvements

Short List Options Appraisal

These four shortlisted Options have undergone appraisal to assess each of the economic, environmental, social and wider economic impacts, with a Benefit to Cost Ratio (BCR) calculated for each one to inform the Value for Money (VfM) of the scheme options.

Option	Option 1	Option 2	Option 3	Option 4
Present Value of Benefits (PVB)	£23,462	£23,498	£25,596	£10,051
Present Value of Costs (PVC)	£122,988	£123,806	£127,082	£23,492
Net Present Value (NVP)	-£99,526	-£100,308	-£101,486	-£13,441
Benefit to Cost Ratio (BCR)	**0.19**	**0.19**	**0.20**	**0.43**

Note: costs are in £,000, discounted to 2010 prices

The monetised appraisal of benefits, however, does not capture the full value for money position, with a range of potential wider impacts identified that are not directly captured in monetary terms. Furthermore, it is often these wider non-monetised benefits that more closely align with agreed objectives for the Scheme, particularly in terms of social, environmental, and wider economic impacts. The results of the environmental and social appraisals shown below indicate how there are benefits associated with the options, in particular around improvements to air quality and townscape for the options with a relief road paired with interventions within the town centre along the A605. There are also large benefits predicted against physical activity, severance, journey quality and accessibility for those options with a relief road, in particular Option 3.

Environmental Impacts	Option 1	Option 2	Option 3	Option 4
Noise	Slight beneficial	Slight beneficial	Slight beneficial	Neutral
Air Quality	Moderate beneficial	Moderate beneficial	Moderate beneficial	Neutral
Greenhouse gases	Slight beneficial	Slight beneficial	Slight beneficial	Neutral
Landscape	Moderate adverse	Moderate adverse	Moderate adverse	Neutral
Townscape	Slight beneficial	Moderate beneficial	Moderate beneficial	Slight beneficial
Historic Environment	Neutral	Neutral	Neutral	Slight beneficial
Biodiversity	Moderate adverse	Moderate adverse	Moderate adverse	Slight beneficial
Water Environment	Neutral	Neutral	Neutral	Neutral

Social Impacts	Option 1	Option 2	Option 3	Option 4
Accidents	Moderate beneficial	Moderate beneficial	Moderate beneficial	Slight beneficial
Physical Activity	Slight beneficial	Moderate beneficial	Large beneficial	Moderate beneficial
Security	Neutral	Neutral	Slight beneficial	Slight beneficial
Severance	Moderate beneficial	Moderate beneficial	Large beneficial	Slight beneficial
Journey Quality	Moderate beneficial	Large beneficial	Large beneficial	Slight beneficial
Option & non-use values	Neutral	Neutral	Neutral	Slight beneficial
Accessibility	Slight beneficial	Moderate beneficial	Large beneficial	Moderate beneficial
Personal affordability	Neutral	Neutral	Neutral	Neutral

The wider economic impacts for the Scheme are those that are considered additional to the transport user benefits. This includes benefits such as supporting future expansion; improving productivity; and creating healthier streets, as well as disbenefits such as induced demand.

Overall, Option 3 appears to be the best performing option based on offering the greatest level of Value for Money whilst meeting the Scheme objectives, offering both monetary benefits and other non-monetised benefits. This is an important consideration within the overall assessment of Value for Money. It should be recognised that the overarching purpose of the scheme is not about journey time improvements, but on improving the conditions within the town. Option 4 does not address the objective of reducing HGV traffic and therefore the extent of improved conditions within Whittlesey may be more limited than the other three options. In comparison, Options 1, 2 and 3 are all forecast to deliver against this requirement, with Option 3 considered to perform best overall.

Network Resilience Scenario Test

In addition to the Scheme's core benefits, additional scenario tests have examined the potential benefits associated with improving the resilience of the road network in Whittlesey. These consider the B1040 road closure events, and the role of the relief road in helping to alleviate traffic on the A605 thereby improving its capacity to accommodate diverted traffic.

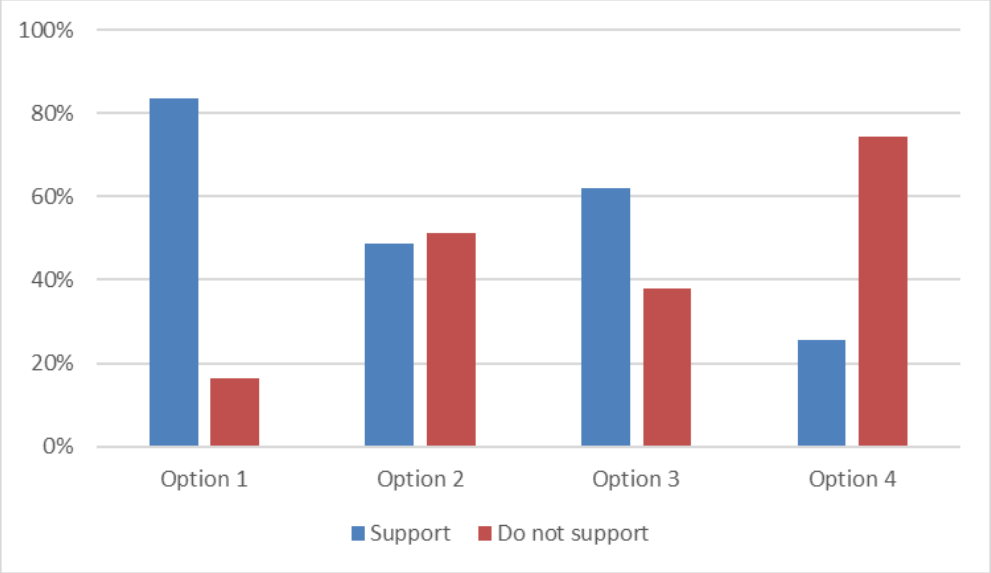
The results of this test indicate that the largest benefits are within the AM peak, with some through trips heading west towards Peterborough anticipated to save around 8 minutes, on average, if they divert to the proposed new relief road. Other movements also benefit from reduced congestion, although the average journey times savings are typically lower.

The average journey time savings have been monetised and projected across the 60-year appraisal period and discounted to produce an estimate of additional Present Value of Benefits (PVB). Based upon the assumed average of 27 days a year when the B1040 is closed this generates a PVB of £4.1m. If a higher number of closure days of 55 is applied[3] the estimated PVB increases to £8.3m. This represents between a 16% and 32% increase in overall benefits for the scheme.

Public Consultation

Public consultation was held between October 23rd – November 24th to gain the views of members of the public and stakeholders on the shortlisted options.

The results showed that 91% of respondents (237 people) were supportive of a relief road in some form. Of the three relief road options, Option 1 was the most popular with 84% (218 people) of respondents in support, followed by Option 3 with 62% support (162 people) and Option 2 with 49% support (127 people). The non-relief road option, Option 4, received the least support with 26% of respondents (67 people) supporting the Option.



The main reasons for support for Option 1 is the potential to effectively reduce traffic through Whittlesey and re-route HGVs away from the town centre, which would in turn improve air quality, reduce noise pollution, and make Whittlesey a nicer place to live. Options 3 also received these comments; and include support for the walking and cycling improvements and the potential to improvements to safety. However, Option 3 received some opposition due to respondents being worried that the active travel improvements would receive priority over funding which would impact the delivery of the relief road, with a consensus that the relief road should be completed first before the active travel improvements. Option 2 received less support due to the current lack of public transport and the doubts the bus priority would be needed after a relief road. Option 4 received the least amount of support due to not addressing the main congestion problems in the town compared to the other Options.

The results of the public consultation show that there is broad support for the scheme, and particularly the proposals for a relief road. The results also support the findings from the economic appraisal which suggests that Option 3 of a relief road with active travel improvements in the town centre would be the best performing option. However, there is a

[3] 2012/13 data recorded 55 days of closure of North Bank

strong preference for the relief road as the priority intervention, with the active travel improvements being introduced after its completion.

Financial Dimension

The Financial Dimension presents the capital costs of the scheme shortlisted options and considers funding opportunities and affordability. The scheme cost estimates include direct and indirect construction costs, and an allowance for inflation, risk, land purchasing and environmental mitigation measures.

Description	Option 1	Option 2	Option 3	Option 4
Base Cost Plan	£174,662	£175,823	£177,816	£8,422
Anticipated Final Cost (Inc. 40% risk)	£274,604	£276,428	£279,563	£13,277
*Higher cost range (+50%)***	*£411,905*	*£414,643*	*£419,344*	*£19,916*
*Lower cost range (-30%)***	*£192,222*	*£193,500*	*£195,694*	*£9,294*

Note: costs are in £,000

The exact required funding for the Scheme is still unknown and may depend on which of the shortlisted options is selected as the preferred option to be developed. Whether the various elements of each option are delivered in a phased approach could also impact upon funding requirement, e.g., if sections of the relief road are delivered in stages or if some active travel elements are delivered in advance of others .

Current development funding for the Scheme, and this SOC, has come from the CPCA. In order to progress the Scheme further (i.e. OBC stage), additional development funding would be required (see the Recommendations below). At the point of developing the SOC any additional funding from CPCA for developing the Scheme to OBC has not been agreed.

Commercial Dimension

The purpose of the Commercial Dimension is to demonstrate that there are viable routes for the procurement of the solution for the Scheme; however, at the SOC stage, the Commercial Dimension simply presents a light touch overview around appropriate ways in which the potential options being presented for the Scheme could be procured.

At this stage of Scheme development for the Whittlesey Relief Road it is not possible or appropriate to consider key contractual arrangements, or other such commercial matters, such as risk allocation with a contractor.

As with similar projects at this stage of development, FDC is expected to continue to act as lead partner and deliver the OBC stage of the project. All the arrangements for governance, procurement and delivery are expected to be the same, or similar, to this SOC stage. However, the Commercial Dimension would require a full review if an alternative lead promoter were to take the Scheme forward, both through its development, and/or its delivery phases.

While it is not possible to fully define the require outputs for the Scheme at this stage, as these will depend on the preferred option that is taken forward at later stages of the business case development process, it is still likely that following works will need to be procured:

- Scheme design and associated preparatory works, including advisory support.
- Physical works to implement a solution, these works may vary by option.

Whilst no decisions have yet been made on the detailed design, Full Business Case (FBC) and build stage of the project, a range of options are available. FDC Transport Team may deliver

these elements in-house, with support from the Engineering Team, or may seek assistance from another organisation. This may be CCC, as the Highway Authority, or a third-party contractor, mostly like through a framework.

In terms of scheme delivery, procuring the design and construction of the works will largely depend upon the type, complexity and estimated cost of the options under consideration. For simple construction works taking place within the existing highway boundary, traditional procurement methods can be adopted however, if a greater level of buildability consideration is required, an Early Contractor Involvement (ECI) arrangement could be considered to 'de-risk' the project and provide a more cost-effective solution.

A more detailed consideration of procurement issues will be provided as part of any future OBC.

Management Dimension

The Management Dimension assesses whether a proposal is deliverable. It looks at the project planning, governance structure, risk management, communications, and stakeholder management to establish if adequate resources are in place to ensure delivery on time, on budget and in accordance with specifications. At SOC stage, the Management Dimension includes an indicative programme and commentary on governance, quality assurance, communications, and risk management.

The current development of the Whittlesey Relief Road Scheme is being overseen by FDC, who are the Scheme promoters. The CPCA, as the Local Transport Authority, are the funders behind the current development of the SOC and are working in partnership with FDC to support the development of the SOC. The development of the Scheme is support by Mott MacDonald as the advisory team.

Programme

The project is progressing towards the SOC completion and sign off (gateway 1) at the time of writing, with the indicative milestones set out below:

Milestone	Est. Start	Est. Completion
Stage 1 - SOC	Jul 2023	Jan 2025
SOC Completion and Sign Off (Gateway 1)	Q1 2025	
Stage 2 - OBC	Q2 2025	Q3 2026
OBC Completion and Sign Off (Gateway 2)	Q3 2026	
Stage 3 - FBC	Q4 2026	Q3 2028
FBC Completion and Sign Off (Gateway 3)	Q3 2028	
Stage 4 – Construction and Delivery	Q4 2028	Q3 2030
Scheme Completion (Gateway 4)	Q4 2030	
Stage 5 – Closure and Monitoring and Evaluation (Post 1 year)	Q4 2030	Q4 2031
Project Closure (Gateway 5)	Q4 2031	

Strategic stakeholder engagement and public consultation has been undertaken through the development of the SOC to ensure that the various aspirations of the public and key stakeholders are considered throughout development and delivery of the project.

The management of risk and uncertainty is key to the successful delivery of the Scheme. The risk management strategy enables the identification of threats (and opportunities) to project delivery and enable effective risk management actions to be assigned. The risk registers are, and will continue to be, reviewed regularly, with the risk management processes being employed through the lifecycle of the project.

A Benefits Realisation Plan has been prepared that sets out how the Scheme benefits will be tracked to ensure successful Scheme outcomes. A plan for the monitoring and evaluation of benefits will be prepared as part of the next stage of work.

Conclusions

At the conclusion of this SOC, the following summary points can be taken:

- That there is a need for investment in a Scheme that addresses the issues Whittlesey is experiencing in relation to traffic along the A605.
- That there is an opportunity to support the growth of the town and the development of the new Fenland Local Plan, in relation to housing and employment opportunities, by providing additional transport network capacity.
- That there is a need to build greater resilience to the road network to support the movement of people across the area, including during the high occurrence of road closures in the area due to flooding.
- That there is an opportunity to develop active travel improvements through the centre of Whittlesey to improve the opportunity for sustainable travel and aid in the sense of place for the town centre.
- That the best performing option to meet the Scheme objectives, is Option 3 – Relief Road with HGV re-routing and active travel improvements.

Recommendations

It is recommended at the conclusion of this SOC that further work should be undertaken to examine the following:

- **The scale and scope of the Scheme:**
  - Assess whether the scale of the scheme can be reduced to lower costs, such as by considering a shorter route for the relief road.
- **Quantitative assessment of a wider range of benefits:**
  - Use the newly available Cambridge and Peterborough Sub-regional Model to capture a broader network-wide assessment of the scheme's benefits and a more detailed assessment of its impact on network resilience.
  - Further appraise non-monetised benefits to identify opportunities to monetise them for inclusion in the Initial Benefit-Cost Ratio (BCR) assessment, thereby strengthening the final Value for Money position of the scheme.

Integration of the Scheme with long-term land-use policies:

- Examine how the scheme could support long-term strategic land use and economic growth across the region.
- Consider the scheme's potential role in unlocking development opportunities along the wider A605 corridor, linking it to the emerging Fenland Local Plan.
- This could allow for any wider economic impacts of the scheme to be explicitly claimed and included in any Indicative BCR assessment, further strengthening the final Value for Money position.

To undertake this additional assessment, the Scheme requests development funding of £220,000. Upon completion of this assessment, the Scheme should be brought back to the CPCA for further consideration, with funding for the Outline Business Case made available to progress the Scheme.

1 Introduction

This Strategic Outline Case (SOC) introduces the proposals to improve transport provision, potentially in the form of a new relief road, around the town of Whittlesey in the Fenland District area. The SOC provides the evidence that underpins the case for change for the proposed Scheme, providing justification for further development of the scheme, and demonstrating how a solution could deliver against objectives linked to wider overarching strategic and policy objectives for the area.

1.1 Scheme overview

Previous studies examining the issues within the town of Whittlesey have identified growing pressures from the delivery of new housing and employment sites within and around the town. In particular, these studies identified issues arising from high volumes of traffic, and in particular the presence of Heavy Goods Vehicles (HGVs) on the historic nature of the town its people, and how this is leading to constraints on growth and the associated benefits of this growth for residents and businesses.

Ideas to help alleviate traffic in the town, have been around for a number of years, including the concept of a relief road. It has been highlighted by the Cambridgeshire and Peterborough Combined Authority (CPCA), Cambridgeshire County Council (CCC), and the Fenland District Council (FDC) that there is a need to fully explore the issues and opportunities underpinning the concept of a relief road, and to explore more widely if there are other solutions that should be considered before any solution is progressed.

As such, this SOC has been developed to explore the current issues within the town, and what is causing them, as well as considering the future situation if things remain unchanged. This SOC identifies and evaluates various options that could address them, ultimately concluding with recommendations around possible solutions that could be taken forward for further development, and consideration.

1.2 Purpose of the Strategic Outline Case

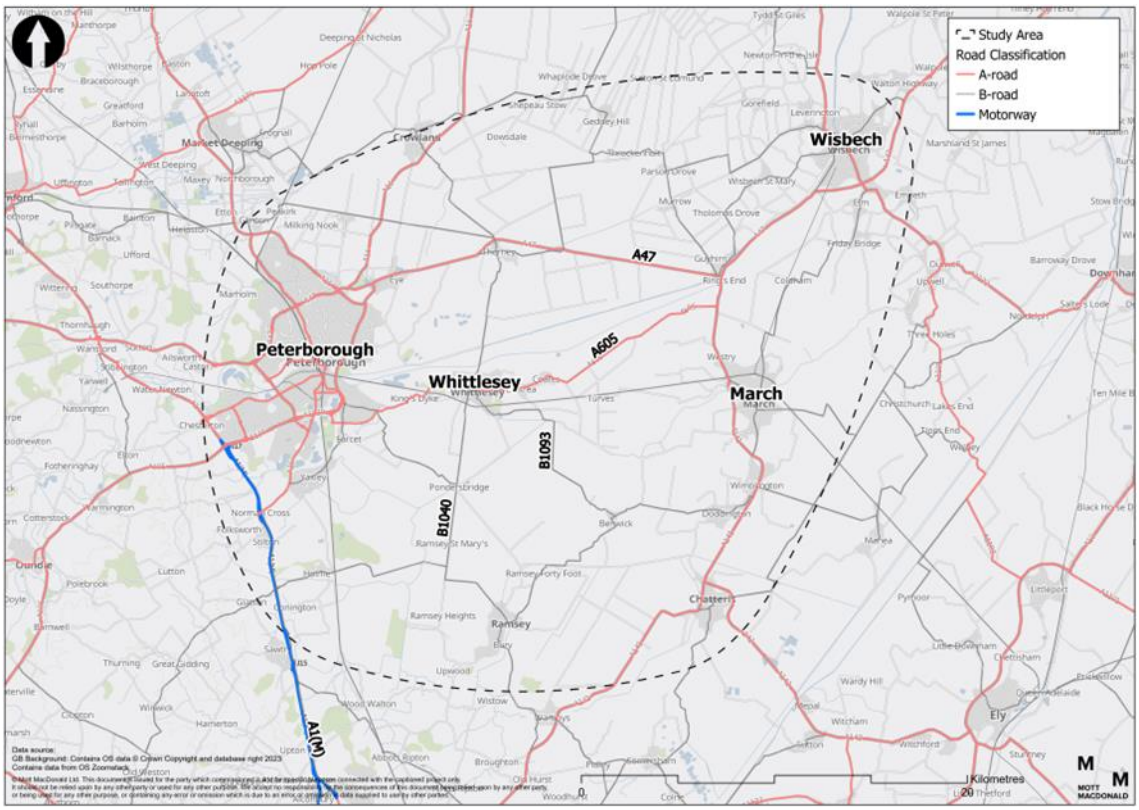
This document has been completed in line with the Department for Transport (DfT) 'Transport Business Case Guidance' (2022), following the Five Case Model, which requires Business Cases to:

- Set out a compelling case for change that demonstrates how the proposal has a strong strategic fit with organisational, government and local area priorities – the '**Strategic Dimension**'
- Demonstrate the value for money and the best choice for a solution that maximises the benefits to society through options development and appraisal – the '**Economic Dimension**'
- Illustrate the commercial viability and supply-side capacity for the proposal, including the potential options for procurement – the '**Commercial Dimension**'
- Demonstrate the proposal is financially affordable and fundable over time – the '**Financial Dimension**'
- Set out the Scheme's deliverability through the effective development of plans, management and resources to oversee the project from outputs to outcomes – the '**Management Dimension**'

1.3 Geographic scope

The location context for this SOC is shown in Figure 1.1 below, with the extent of the corridor under consideration extending far beyond Whittlesey itself and taking in the four Fenland market towns as well as Peterborough. It extends past the A47 to the north; past the town of Ramsey to the south, beyond Wisbech and March in the east, and past Peterborough in the west. The purpose of including this wider study area is to ensure that there is an understanding of the relationship between the key locations that are linked by the A605, with Whittlesey at the heart.

Figure 1.1: Study area



Source: Mott MacDonald

1.4 Document structure

The remainder of this SOC is structured around the five-case model for business cases:

- Section 2 – Strategic Dimension
- Section 3 – Economic Dimension
- Section 4 – Commercial Dimension
- Section 5 – Financial Dimension
- Section 6 – Management Dimension

2 Strategic Dimension

2.1 Strategic context

Whittlesey is a historic market town with an approximate population of 18,000 and is situated in Fenland to the east of Peterborough[4]. The town has a rich heritage and culture, with a long-established history, even being mentioned in Anglo-Saxon documents that precede the Domesday Book. The town has many historical features at its heart, such as the 17th Century Buttercross, and Mud Walls dotted across the town that date back 200 years.

The town has a rich history, characterised by its many historic buildings and narrow streets, boasting 62 listed buildings within the Whittlesey Conservation Area in the town centre. This gives Whittlesey a distinctive and attractive offer to those who live there, and those who choose to travel there for work and leisure opportunities. However, these same features that make the town attractive, also create some impacts that are less conducive with modern day living, particularly in relation to access and transport.

Photo 2.1: Whittlesey town centre

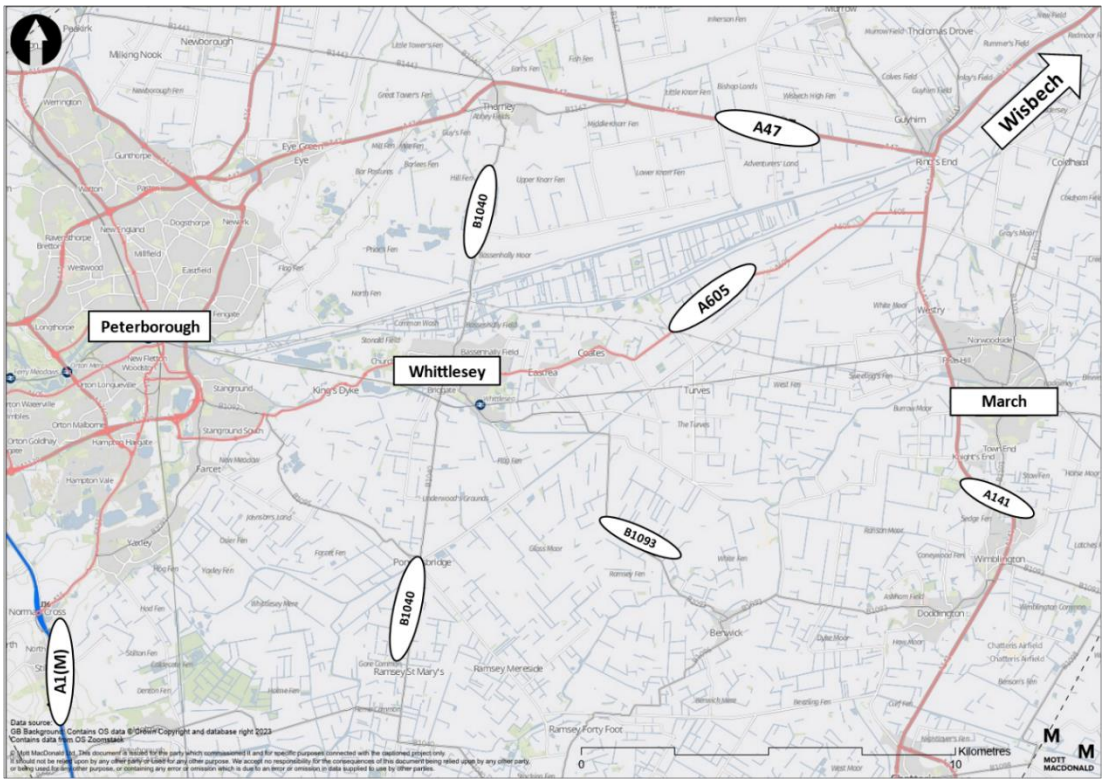
Source: Mott MacDonald – Site visit October 2023

To the east there are the Fenland market towns of March and Wisbech, with the smaller villages of Coates, Eastrea, Pondersbridge and Turves situated in the area immediately surrounding Whittlesey. A lot of the surrounding area to the town is farmland, although closer to the edges of the town are substantial industrial areas. To the north lies the Fenland washes, which act as a natural flood water storage area.

The A47 and A605 are the most significant road links between Peterborough and the Fenlands area, with the latter passing directly through Whittlesey. The B1040 is the main north-south route through the town, connecting to the A605 at one of the key town centre junctions, while the B1093 provides further connections to the southeast.

[4] Cambridgeshire & Peterborough Insight – Population – Census 2021 – Ward Demography Dashboard (cambridgeshireinsight.org.uk)

Figure 2.1: Whittlesey town location



Source: Mott MacDonald

The town benefits from its proximity to Peterborough, which lies approximately 8km to the west. This is reflected in the Cambridgeshire and Peterborough Independent Economic Review (CPIER) 2018, which recognised that Whittlesey is considered much more a part of the Greater Peterborough economic geography, compared to the rest of Fenland.[5] This creates opportunities for residents to work, study, and shop in Peterborough, while still maintaining a proudly independent identity and distinct local culture.

Whittlesey can offer the 'best of both worlds' to current and future residents: the sense of community, calm and proximity to the countryside offered by a market town, alongside the benefits of being situated so close to a bustling and vibrant city, with everything that it has to offer. A key focus for the town is how it can further benefit from that connection, while also offering something distinct as a place to visit and spend time.

2.1.1 Growing Fenland: Whittlesey - A Market Town fit for the Future

As part of the Cambridgeshire & Peterborough Combined Authority's (CPCA) Market Towns Programme, the Growing Fenland project was established. This aims to maximise the regeneration of Fenland's market towns, including March, Wisbech, Chatteris and Whittlesey. From this the CPCA awarded funding to the FDC to create four separate 'Growing Fenland Masterplans for Growth' for each town.

The Growing Fenland Whittlesey report[6] that was produced asked the following question:

[5] CPIER - Final Report 2018: The CPIER is an independent economic review that "evidences the fast rate of economic and employment growth in the region and highlights the importance of planning now to ensure that strong growth will be sustainable and more inclusive."

[6] https://www.fenland.gov.uk/media/16893/Growing-Fenland-Whittlesey-Final-Report/pdf/Growing_Fenland_-_Whittlesey_Final_Report.pdf?m=1591610471707

"How can Whittlesey contribute to the economic growth of the wider region, whilst maintaining its sense of place as a market town, and delivering the best quality of life for those living there?"

The report sets out how Whittlesey can build upon its strengths to make a 'market town fit for the future' by bringing new life to the centre, promote its heritage offer, and increasing skills. Eight proposals for Whittlesey are outlined in the report including enhancing the market, improving access to educational opportunities and a transport improvement package. The report includes recommendations around transport in the 'Transport Improvement Package'.

The Transport Improvement Package sets out 5 transport interventions that could be explored in order to meet this overarching aim for the town, these being:

- More frequent and reliable bus services
- More train services throughout the day and later in the evening
- A new park and ride scheme from the town centre to Peterborough
- New bridge over the railway crossing
- A new relief road from Coates to the Morrisons / Cardea Roundabout

What does this mean for Whittlesey?

The Growing Fenland: Whittlesey – A Market Town fit for the Future report highlights the desire to balance economic growth with the well-being of the residents of Whittlesey. Transport is identified as playing a crucial role in this, as improving the transport offer within the town can enhance access to jobs, education, and services, while also reducing congestion and environmental impacts.

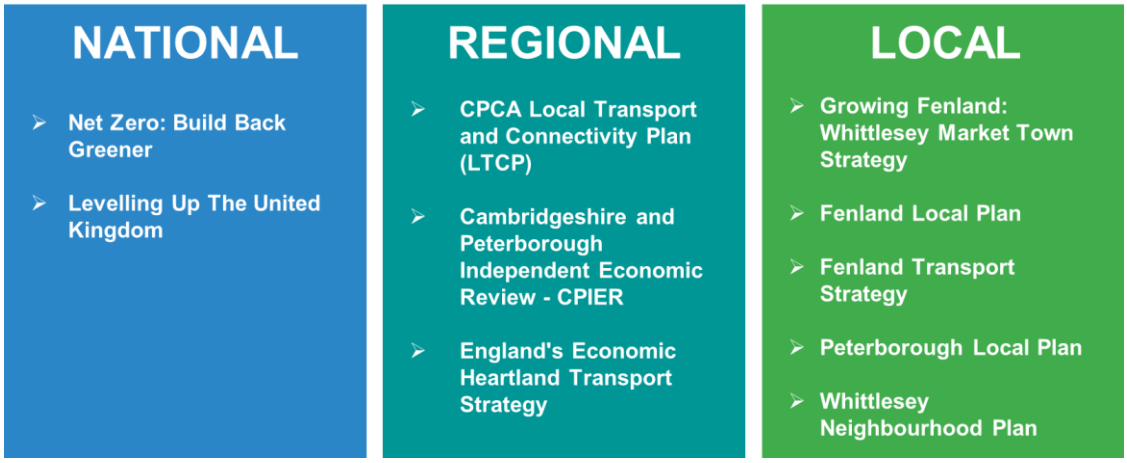
2.1.2 Strategy and policy overview

A review of key policy and strategy documents was undertaken to provide an understanding of the policy landscape within which any investment in new transport interventions for Whittlesey would be undertaken. This review examined the key policy and strategy objectives set out within each document and provides a brief overview on how this Scheme could meet those policy/strategy objectives.

It is important to reiterate that while the background to this Scheme is based on the concept that a relief road might be delivered; this still needs to be explored more widely through an options development and assessment process (set out in Section 3.2 of this SOC). As a result, the strategy and policy documents used to help form the objectives are not specific to any particular transport mode. They have been selected as they represented the key strategies relevant to transport and growth in the study area.

It is important to note that the UK held a general election in June 2024 which resulted in a change of government and will likely result in policy positions changing. This SOC is a point-in-time assessment with the strategy and policy review completed in mid-2024 and, despite the change in government, the impact on the reviewed policies are considered minimal at the point of the SOC submission (March 2025). This section will need reviewing at subsequent stages of the scheme, as the business case develops, to ensure the alignment to strategies and policies is up-to-date.

Figure 2.2: Policy/strategy documents selected for review



2.1.2.1 National strategies/policies

Net Zero Strategy: Build Back Greener (October 2021)	
Description	The UK government's Net Zero Strategy is a plan to decarbonise all sectors of the UK economy by 2050. The strategy includes proposals for reducing emissions, investing in sustainable energy sources, and strengthening energy security. The strategy also targets emission reductions of 68% by 2030 and 77% by 2035 compared to 1990 levels.
Relevance to this Scheme	There is an opportunity to contribute to a modal shift away from private vehicles to more **sustainable** modes of transport for trips in the Whittlesey area, including active travel for short local journeys and public transport for longer journeys, contributing to the **decarbonisation** of transport.

Levelling Up White Paper (February 2022)	
Description	Sets out plan to transform the UK through spreading prosperity and opportunity to all parts. Key objectives by 2030 include: Local public transport connectivity across the country will be significantly closer to the standards of London, with improved services, simpler fares and integrated ticketing. Pay, employment and productivity will have risen in every area of the UK, with each containing a globally competitive city, with the gap between the top performing and other areas closing.
Relevance to this Scheme	While the concept of 'levelling up' is evolving under the new Central Government administration, there remains an opportunity for transport interventions in Whittlesey to improve the transport **connectivity** for the market town and surrounding areas, by both public and private transport, thereby helping to spread **opportunities** for all and boost **productivity**.

National Infrastructure Strategy (2020)	
Description	The National Infrastructure Strategy sets out plans to transform UK infrastructure to level up the country, strengthen the Union and achieve net zero emissions by 2050.
Relevance to this Scheme	This strategy recognises the importance in investing in road infrastructure, from major national projects to local priorities to support economic recovery and boost **growth** and **productivity**.

2.1.2.2 Regional strategies/policies

Cambridgeshire and Peterborough Combined Authority (CPCA) Local Transport and Connectivity Plan (LTCP) (2023)	
Description	The LTCP outlines the vision and goals for improving transport in Cambridgeshire and Peterborough. The LTCP aims to create a transport network that secures a future in which the region and its people can thrive, bringing together a region of cities, market towns and rural areas. The plan aims to make transport faster, greener, and more accessible for everyone, while addressing challenges such as climate change, pollution, inequality, and public health.
Relevance to this Scheme	There is opportunity for the transport interventions in Whittlesey to support a number of the LTCP goals, by improving transport **connectivity**, thereby helping to spread **opportunities** and boost **productivity**, while also protecting the **environment** and improving **health** and **safety** outcomes.

Cambridgeshire and Peterborough Independent Economic Review - CPIER (2018)	
Description	The CPIER sets out a package of 14 recommendations for Cambridgeshire and Peterborough based on improving economic performance, including devolution, housing and skills funding. Recommendation 7 includes 'a package of transport and other infrastructure projects to alleviate the growing pains of Greater Cambridge should be considered the single most important infrastructure priority facing the Combined Authority in the short to medium term.
Relevance to this Scheme	There is opportunity to support the goals of the CPIER in relation to continued **economic growth** and improving **quality of life** through spatial enhancements. In particular, the Scheme can enable greater **connectivity** and boost **productivity**, while allowing the centre of Whittlesey to become more visitor friendly.

England's Economic Heartland Transport Strategy (2021)	
Description	The Transport Strategy sets the policy framework that will deliver England Economic Heartland's ambition. It is guided by four key principles: ● Achieving net zero carbon emissions from transport no later than 2050. ● Improving quality of life and wellbeing through a safe and inclusive transport system. ● Supporting the regional economy by connecting people and businesses. ● Enabling the efficient movement of people and goods through the region.
Relevance to this Scheme	There is opportunity to contribute to delivering local improvements that align with all four key principles including **decarbonisation**, **quality of life**, and transport **connectivity**, thereby contributing to the overall improvement of England's Economic Heartland.

2.1.2.3 Local strategies/policies

Fenland Local Plan (2014)	
Description	The Fenland Local Plan sets out the vision, objectives, policies and proposals for the future development of the Fenland district until 2031. The current adopted Local Plan aims to support sustainable growth; enhance the quality of life, protect and improve the natural and built environment; promote a low-carbon economy and deliver the necessary infrastructure and services to support development.

Relevance to this Scheme	There is opportunity for the transport interventions in Whittlesey to meet several key goals of the Fenland Local Plan, including improvements to **accessibility**, greater **investment in places**, and the preservation of **heritage** assets and their settings.

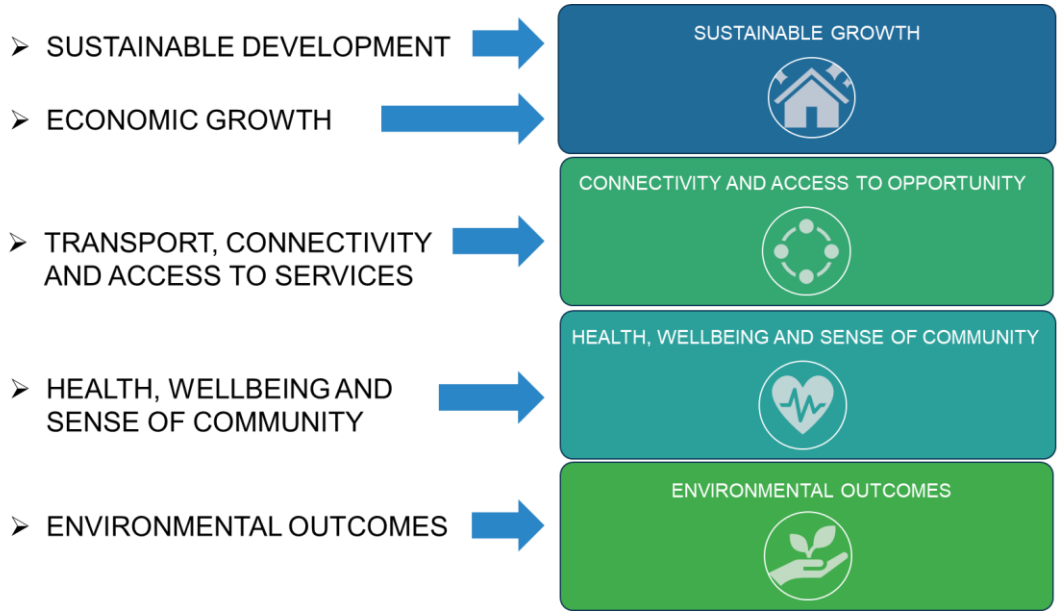
Fenland Transport Strategy (2023)	
Description	The purpose of the Fenland Transport Strategy is to address current and future transport issues in the district while being consistent with the vision and policies set out in the CPCA LTCP. The Strategy sets out four overarching objectives: ● Reduce the impact of rural isolation. ● Support the needs of the local economy by developing better connectivity. ● Enable residents to live fit and healthy lifestyles. ● Meet the challenge of climate change and enhance the natural environment.
Relevance to this Scheme	There is opportunity for the transport interventions to address all four objectives of the Transport Strategy, especially through developing better **connectivity** to education and employment **opportunities** as well as ensuring good access to key services.

Peterborough Local Plan (2019)	
Description	The Peterborough Local Plan outlines the vision and policies for the development of Peterborough and its surrounding villages until 2036. Key objectives include: ● Promote a prosperous and diverse economy. ● Enhance the vitality and attractiveness of the city centre and the rural villages. ● Improve the connectivity and accessibility of the city and the wider region. ● Protect and improve quality of life, health and wellbeing
Relevance to this Scheme	There is opportunity for the transport interventions to address transport **connectivity** and access to services, as well as the protection and enhancement of **townscapes**, which are key goals of the Peterborough Local Plan.

Whittlesey Neighbourhood Plan (2019)	
Description	This Plan sets out the vision and policies for the development and transport of Whittlesey Parish until 2040. The plan aims to: ● Protect and enhance the character and identity of Whittlesey and its villages. ● Support the local economy and services. ● Provide for the housing needs of the population. ● Improve the quality of life and well-being of residents and visitors; and ● Promote a low-carbon and resilient future.
Relevance to this Scheme	There is opportunity to help achieve a number of goals of the Neighbourhood Plan, including the **regeneration** of the town centre, dealing with issues around traffic, and ensuring Whittlesey maintains a vibrant **community**.

The examination of the individual objectives within the ten strategy and policy documents highlights that there are common recurring themes around sustainable development / growth, connectivity and accessibility, community wellbeing and the environment (highlighted in bold in the tables above under Section 2.1.2). These can be grouped into four key themes, outlined in Figure 2.3.

Figure 2.3: Key themes from policy and strategy documents



Source: Mott MacDonald

What does this mean for Whittlesey?

There is a lot of potential for the Scheme to aid national, regional and local bodies to reach the goals they have set out in their relative polices and strategies. The pursuit of enhancements to transport measures, such as those outlined in the Whittlesey Market Town Strategy (be that a relief road or other transport solutions) can help achieve a wide range of strategic priorities.

As an example, improving the transport provision in Whittlesey could facilitate planned development in the area allowing for economic growth. Improving connectivity around Whittlesey, and to surrounding areas, will also expand access to education, employment and health opportunities for residents.

A transport intervention also has the potential to improve air quality for residents and improve the sense of place within the market town.

2.2 Case for change

The case for change for the Whittlesey Relief Road Scheme builds upon the review of overarching strategic and policy context (as set out above) and draws together the known issues and opportunities within the area (summarised below). The purpose of this is to set out a clear rationale for investment, including the drivers that underpin the justification for investment.

This Case for Change leads into the establishment of a set of SMART (Specific, Measurable, Achievable, Realistic, Timebound) Scheme objectives against which any options being considered can be assessed. The detailed process for establishing the Case for Change is set out in Appendix A.

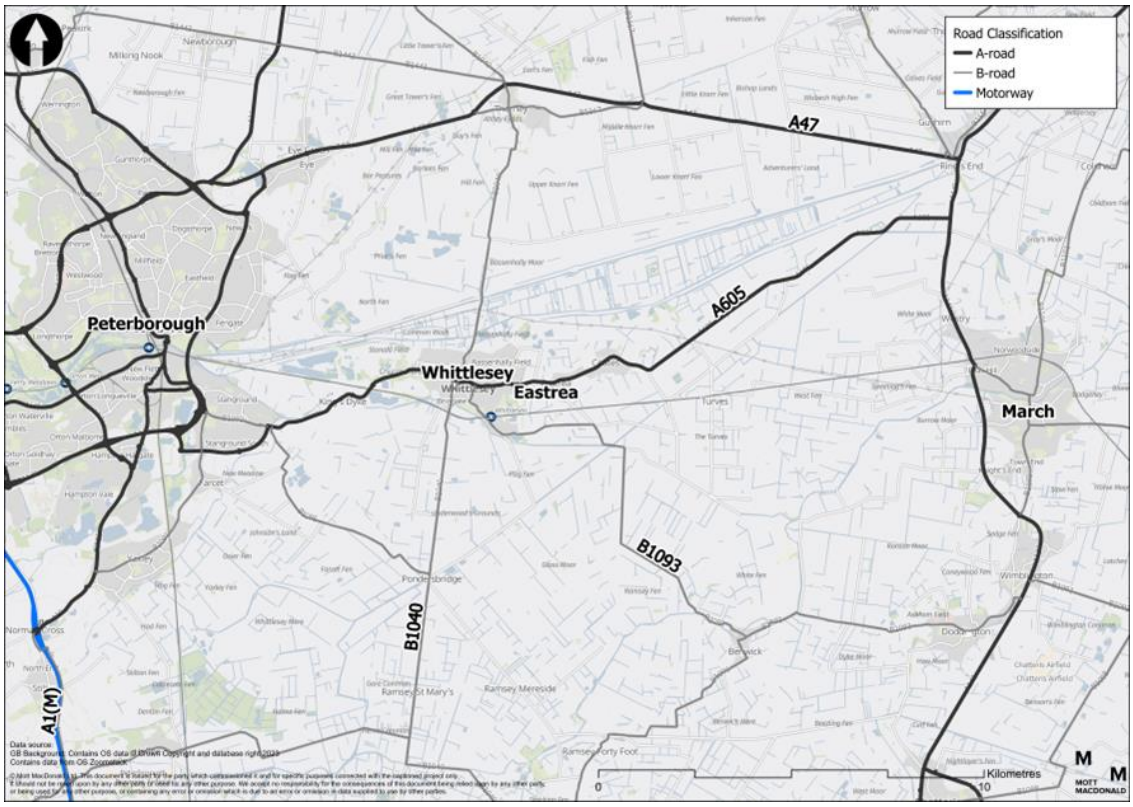
2.2.1 The current situation

To allow for a full understanding of the current issues and opportunities that underpin the need for the Scheme, an extensive review of evidence has been undertaken. This is presented in the Baseline Evidence Review (Appendix B). The key findings from this review are presented within the sections below.

2.2.1.1 Location on the network

The A605 is one of the key routes for all east-west traffic between Peterborough and the Fenland market towns and is the primary road running through Whittlesey. Other notable roads in the town include the B1040 running north-south, and the B1093 running to the southeast. These three primary roads are the only ways into, or out of, Whittlesey by road, and intersect at two roundabouts in the centre of the town. This results in a focus of traffic through the town centre, with the negative impacts of traffic levels felt by residents.

Figure 2.4: Whittlesey town location



Source: Mott MacDonald

The A47 provides a parallel east-west route to the A605 and represents an alternative route for traffic travelling between Peterborough, March and Wisbech that avoids the A605 through Whittlesey. There are, however, challenges with the A47 that impact upon the A605 through Whittlesey.

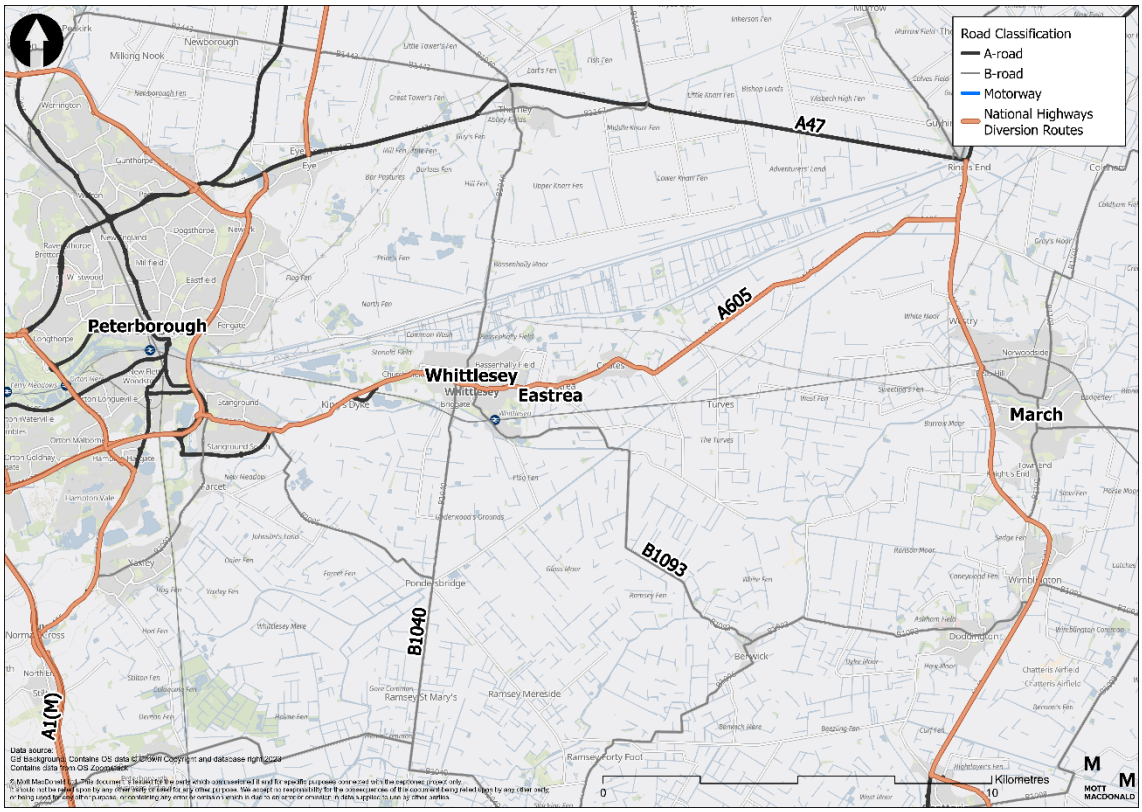
The section of the A47 to the north of Whittlesey has daily flows exceeding 25,000 vehicles[7]. Despite this, the A47 is largely only single carriageway for the 13 miles it runs between Peterborough and the A141, with only a 3-mile stretch of this dual carriageway to the north of Thorney. Whilst there are local wishes to see the A47 duelled in full, there currently no plans to

[7] Road traffic statistics - Manual count point: 94204 (dft.gov.uk)

do so from National Highways. This makes it difficult to increase the resilience of the A47 in the Fenland area and reduce the burden of traffic that diverts onto the A605 through Whittlesey.

In addition, while the A47 is the main Strategic Road Network route across the region, the A605 forms part of National Highways' agreed diversionary routes (as shown in Figure 2.5). Therefore, when the A47 is highly congested, or is closed for maintenance / following road traffic collisions, there is the potential for a significant level of traffic to re-route through Whittlesey.

Figure 2.5: National Highways agreed diversionary routes



Source: National Highways

2.2.1.2 Traffic dominance

High car ownership and use

Whittlesey, and the surrounding area, is dominated by use of motor vehicles, with active modes only accounting for 2% of all traffic.[8] The dominance of private vehicles is further illustrated by car ownership levels, with only 16% of households in Fenland having no access to a car or van, compared to the national average of 24%.[9] The high levels of car ownership in and around Whittlesey contributes to the high number of car trips and high car mode share.

Reported through traffic

The issue of through traffic is something that is widely reported as an issue in Whittlesey. To understand this further, FDC commissioned Automatic Number Plate Recognition (ANPR) surveys to capture vehicles entering the town and determine if they travelled through the town

[8] Cambridgeshire County Council's (CCC) Traffic Monitoring Report (2021)

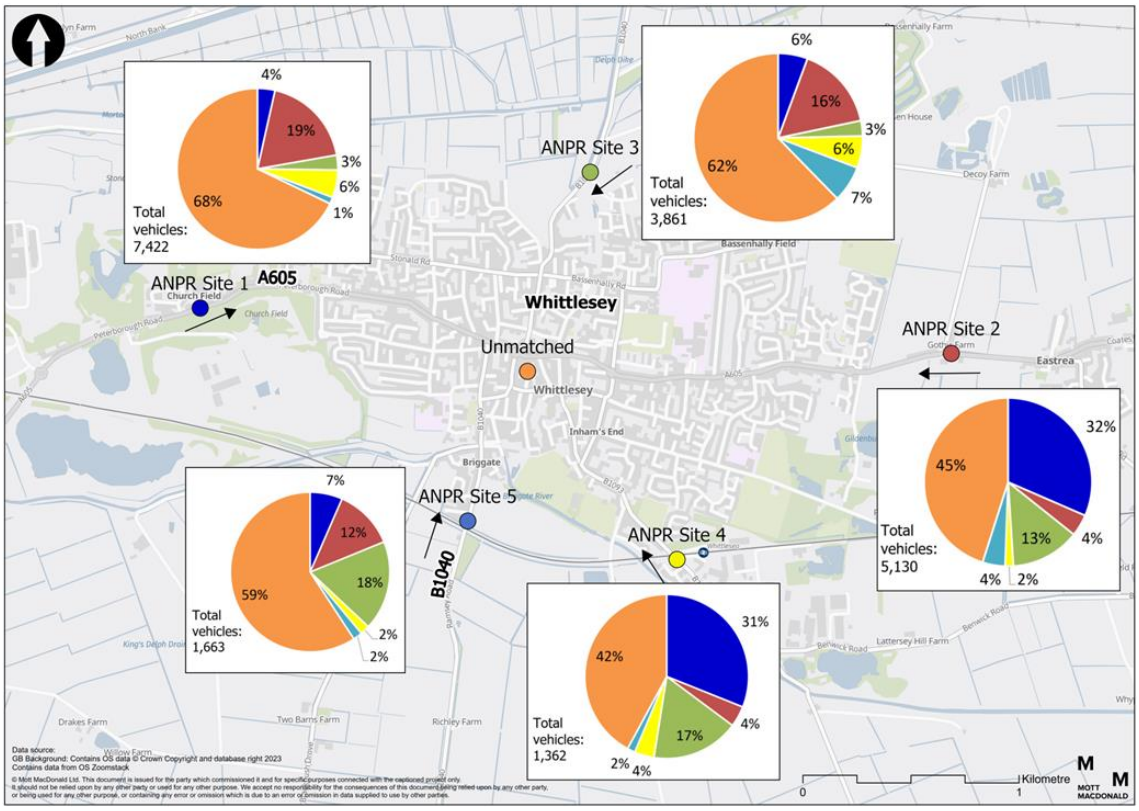
[9] Census 2021 - Car ownership levels

or remained in the town centre.[10] The findings of the surveys are presented in detail in the Baseline Evidence Review report (Appendix B), with an overview of the weekday data presented in Figure 2.6. In summary the surveys recorded:

- A total of **19,438** inbound trips during a standard weekday
- **56% (11,316 veh)** of these vehicles were recorded as not leaving Whittlesey therefore likely having a destination within the town i.e. not through traffic.
- Largest through movements are from east along the A605 (Site 2), **32% (1,616 veh)** travelling through to the west and **13% (682 veh)** travelling through to the north onto the B1040.
- Through movements from Station Road also show a high proportion of through traffic **31% (423 veh)** passing through to the west, and **17% (236 veh)** through to the north.

Whilst the majority of trips (**56%**) were not recorded leaving the town and, therefore, can be assumed to have a trip purpose within Whittlesey, this still leaves around **8,122 vehicle movements** per weekday that pass directly through Whittlesey without stopping. These trips could, theoretically, be redirected via an alternative route, or onto other modes of transport.

Figure 2.6: ANPR – Weekdays (all modes)



Source: Mott MacDonald

Issue of HGVs

There is also the reported issue of HGV traffic in the town. A total of **1,110 HGVs** were recorded by the ANPR cameras travelling into Whittlesey on a weekday. While these absolute numbers

[10] The ANPR surveys were conducted on two weekdays and one day at the weekend in late November and early December 2023. The cameras were operational from 00:00-23:59 on Tuesday 28th and Wednesday 29th November and Saturday 2nd December at five sites on the outskirts of Whittlesey. The locations of the cameras provided a cordon around to capture of all movements in and out of the town.

are not large, Whittlesey is a historic market town with narrow streets and homes and business located close to the carriageways, as seen in Photo 2.2 and Photo 2.3. These streets are not built for this volume of large vehicles, harming the sense of place, impacting listed buildings through vibrations, and posing a serious safety issue for pedestrians and cyclists. Between 2019 and 2023, the highest proportion of fatal collisions involving cyclists or pedestrians were collisions with HGVs[11][12]. This unsafe environment can act as a barrier for people from making journeys by foot or bicycle, contributing to the high traffic levels in Whittlesey.

Photo 2.2: Church Street

Source: Mott MacDonald – Site visit October 2023

Photo 2.3: Cemetery Road

Source: Mott MacDonald – Site visit October 2023

Through HGV traffic also adds to the issue of high overall traffic levels, with **68%** (**755 HGVs**) of the recorded HGVs on a weekday passing through Whittlesey, rather than having a destination in the town. This is despite a relatively large volume of movements to and from the trading estate off Station Road. These movements account for a further **24%** (**108 HGVs**) of HGV movements. In total there are around **863 HGV movements** a day that pass through the centre of Whittlesey that could, theoretically, take alternative routings, if available.

Congestion and key junctions reaching capacity

The A605 within Whittlesey experiences slower vehicle speeds during busier times of the week, with issues exacerbated at roundabouts and junctions, as seen in Figure 2.7.

Figure 2.7: A605 free flow average speeds (Eastbound)

Source: TomTom

[11] Reported road casualties in Great Britain: pedal cycle factsheet, 2023 - GOV.UK (www.gov.uk)

[12] Reported road casualties in Great Britain: pedestrian factsheet, 2023 - GOV.UK (www.gov.uk)

There are slow speeds recorded at peak times around the A605 / B1040 roundabout (Junction A) and the A605 / Dandelion Drive / Tayberry Way roundabout (Junction B), which are already operating close to, or over, capacity.

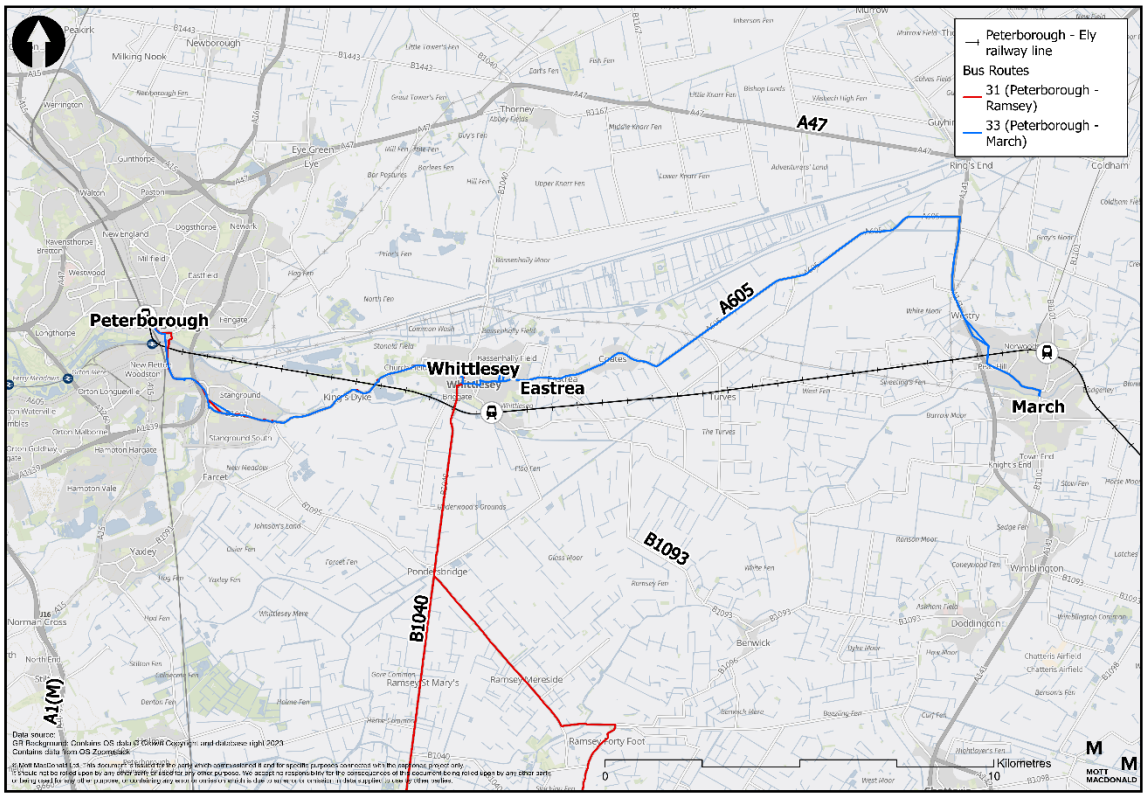
Further to this, a Transport Assessment written to accompany a commercial planning application in 2020 forecasted that the A605 / B1040 roundabout (Junction A) is already over capacity in the 2020 baseline model and would exceed capacity in the 2025 and 2030 future years[13].

These capacity issues cause congestion, which leads to elongated travel times, producing more vehicle emissions and creating a bad environment for both road users and pedestrians. This, in turn, could act as a constraint for new developments in these areas, which has been exacerbated by the level of growth in the town, with Whittlesey exceeding the required supply of housing in the town in recent years.

2.2.1.3 Public transport provision

Public transport in the town also has its own issues. Bus service provision in Whittlesey is poor, with only two low frequency buses serving the town (see Figure 2.8). Although passengers are able to take connecting services from Peterborough, the lack of direct journeys can make bus journeys unattractive compared to private cars. This can cause issues for residents who don't/cannot drive for various reasons, causing a barrier for equal access to employment, education and healthcare, as well as exacerbating congestion issues.

Figure 2.8: Whittlesey public transport network



Source: Mott MacDonald

[13] Fenland District Council Planning Reference F/YR20/0357/O Churchfields Farm Transport Assessment

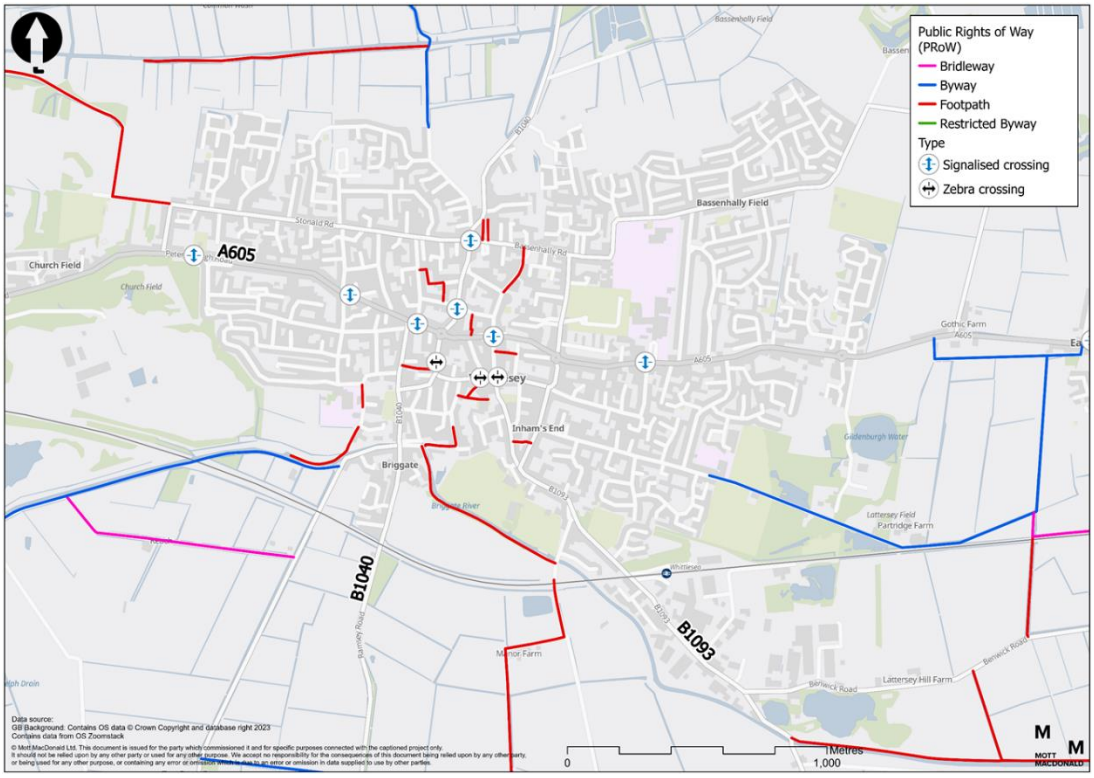
The rail services also face their own issues with poor frequency of trains, particularly for longer commuter journeys such as to Peterborough where there is a two-hourly service. This can result in people deciding to drive to Peterborough instead. Whittlesea station is also located one kilometre to the south-east of the centre of Whittlesey and whilst footways are provided along the route, there is no specific cycling infrastructure. The route between Whittlesey and the station is a vehicle-dominated environment with HGV movements and several wide junctions that may discourage people from walking or cycling to the station. There is also no direct bus link to the railway station, with the nearest bus stops to the station located in the centre of Whittlesey, meaning interchange between the two modes is not easy. In addition to this, whilst access to the station via car may be easier than other modes, the station is poorly located for vehicle access, with the B1093 providing the only access and most Whittlesey residents required to travel through the centre of Whittlesey to reach the station. These difficulties in accessing the Whittlesea station via walking, cycling, public transport and car present a barrier to usage.

Improving connectivity to the station from the town could encourage modal shift from private cars and on to rail, easing traffic flows in and out of Whittlesey. The Ely Area Capacity Enhancement programme provides the potential for more train services to stop at Whittlesea station, providing connections to both local and national destinations; however, this is unlikely to be completed in the near future.

2.2.1.4 Active travel provision

There are also many limitations to the active travel network, such as poor cycling provision and lack of signalised crossing points of the A605 (see Figure 2.9). This causes the A605 to act as a significant point of severance in the town, resulting in walking and cycling not being attractive modes of transport for many residents and employees within Whittlesey. This pushes people towards motorised transport, even for short journeys, unnecessarily contributing to traffic levels.

Figure 2.9: Active travel provision in Whittlesey



Source: Mott MacDonald

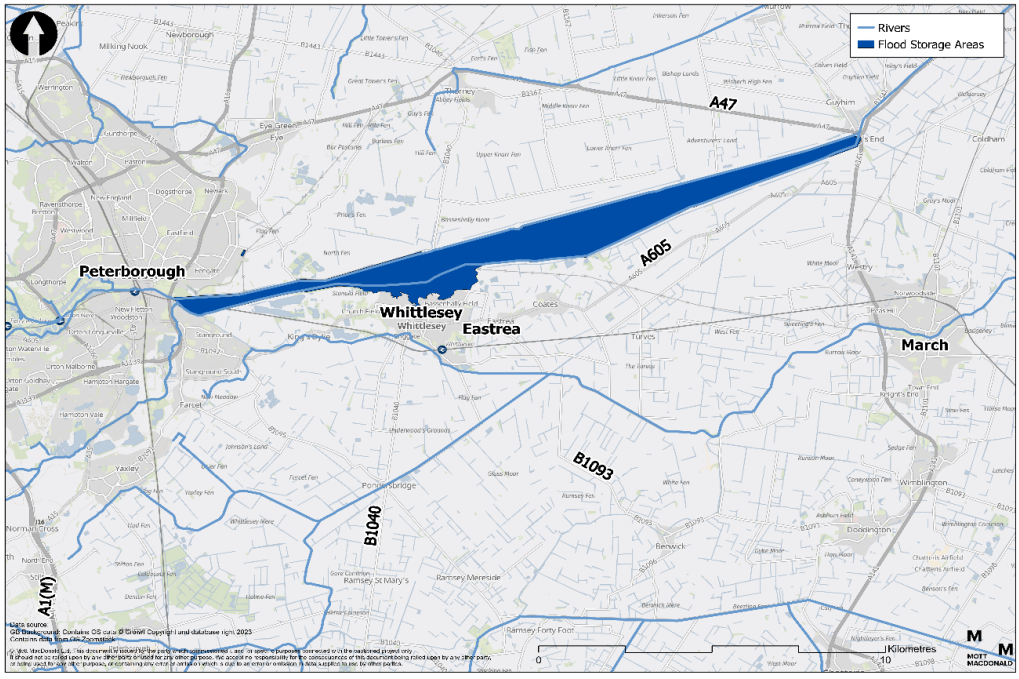
Given its relatively small size, Whittlesey has the potential to have many walkable neighbourhoods that give residents the possibility to access the local services without the need of a car. Improvements to local connectivity by active modes has the potential to boost local businesses, improve community relationships, and improve physical wellbeing. While active travel improvements on their own will not solve the traffic issues within Whittlesey, better provision and greater participation would contribute to reducing car dependency, therefore helping to reduce congestion levels and improving the health of its residents.

2.2.1.5 Environment issues

External factors, such as the impact of flooding, is also a significant issue for Whittlesey and its transport network, in particular the highway network. The area to the north of the town is a significant Flood Storage Area (see Figure 2.10). On average, there are 24-30 instances per year when flood water covers the North Bank Road / B1040, which leads to road closures[14]. In the event that North Bank Road / B1040 are closed, an alternative route between Whittlesey and Peterborough is used via the A605. Some additional 7,900 vehicles a day are displaced by this closure.

Due to the increase in vehicles using the A605 during flooding events and closures of the B1040, journey times within Whittlesey can increase greatly. Average journey times during the morning peak (8am-9am) for those travelling westbound through Whittlesey between the A605/Tayberry Way roundabout and Kings Dyke, can take in the region of 8 minutes on a normal day i.e. no road closures. However, this can double on a day when the B1040 is closed, with average journey times increasing to 16 minutes.[15]

Figure 2.10: Flood storage areas



Source: Mott MacDonald

There is an opportunity to increase the network resilience around Whittlesey by creating alternative diversion routes in the event of flooding to minimise the social and environmental impact of the additional traffic on the Whittlesey local community, as well as disruption to road users.

[14] Environment Agency flood warning records 2019-2024.

[15] TomTom data

Baseline air quality data gathered from air quality monitoring stations show that the levels of air pollution in Whittlesey do not currently exceed the objectives or limits set by the Department for Environment, Food & Rural Affairs. Nonetheless, opportunities to redirect HGVs away from the town centre, and relieve congestion, would encourage more sustainable modes of transport, such as walking and cycling, which would help to improve air quality.

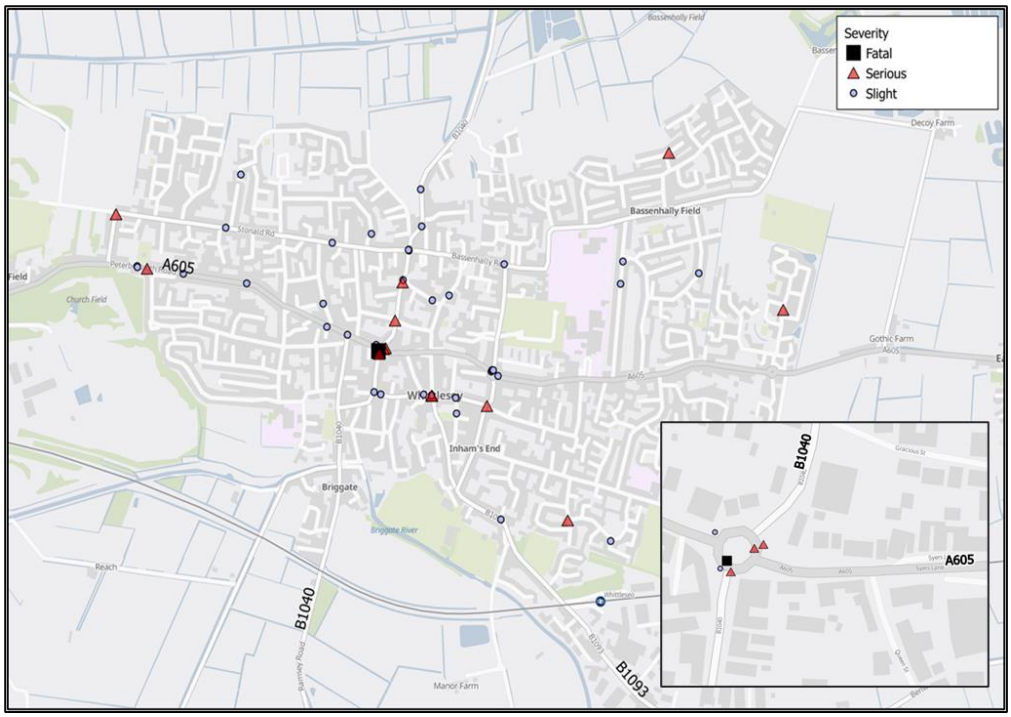
2.2.1.6 Social issues

Safety

The transport network in any town has the potential to either positively or negatively impact its residents, especially concerning safety. The A605 has experienced many slight and serious collisions, as well as one fatality, over a five-year period on the routes entering, exiting, and traveling through Whittlesey (see Figure 2.11).

The main accident cluster is located on the A605 / B1040 roundabout, which has experienced three serious and one fatal collision between January 2017 and August 2023, indicating that safety at the roundabout could be improved. Not only would improvements along the A605 in Whittlesey potentially save lives, it could also help avoid the impact of road closures and diversions on traffic flow.

Figure 2.11: Accident locations in Whittlesey

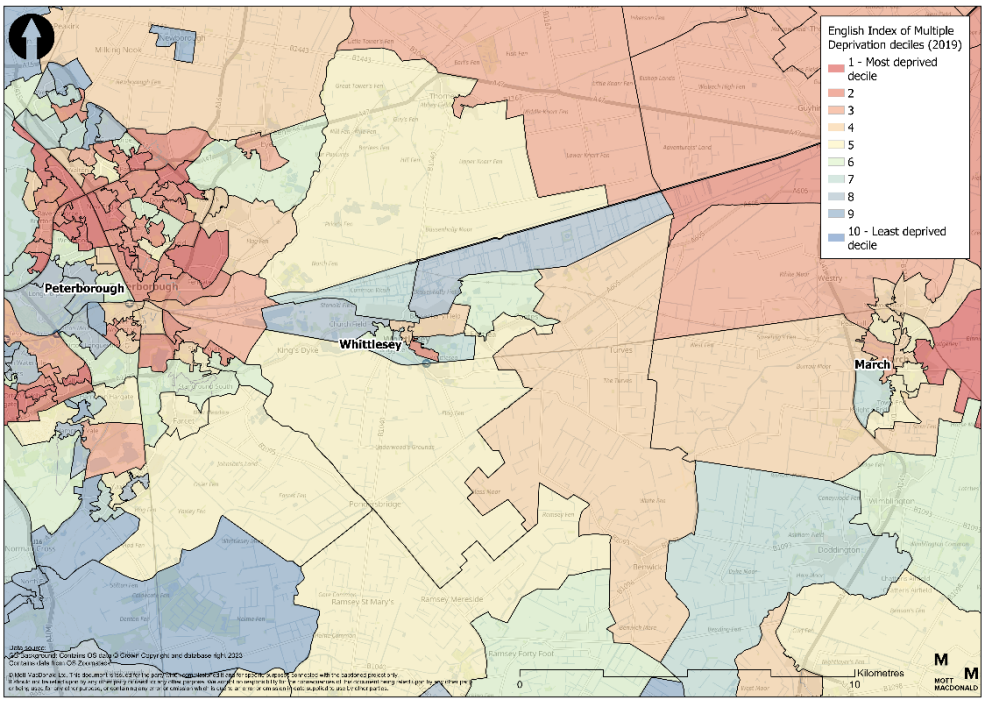


Source: Mott MacDonald

Deprivation

According to the English Index of Multiple Deprivation (IMD) 2019, some areas in Whittlesey, March and Peterborough are within the top 10-30% of most deprived Lower layer Super Output Areas (LSOAs) across England (Figure 2.12).

Figure 2.12: Index of Multiple Deprivation, 2019



Source: Ministry of Housing, Communities & Local Government, 2019

Levels of accessibility can contribute to deprivation levels, therefore improvements in transport provision can have a positive impact by improving access to services including jobs, healthcare and education.

Health

Although there are several small healthcare facilities, such as GP surgeries, located within Whittlesey, people with health issues have to travel outside the town to receive hospital treatment or access an Accident & Emergency department. The reported issues of traffic on the A605 may cause delay to those requiring treatment or getting to appointments on time, in particular if the B1040 is closed due to flooding. There is an opportunity to improve local access to doctors' surgeries for short journeys by improving active travel and improve access to the hospitals through improved public transport.

Employment

Comparisons with regional and national employment levels show that Fenland has a lower proportion of people that are either in employment or unemployed but actively looking for work (economically active) compared to Peterborough and England (Table 2.1).

Table 2.1: Economic activity levels (proportion of residents 16+)

	Fenland	Peterborough	England
Economically active			
In employment	*55%*	*59%*	*56%*
Unemployed	*2%*	*3%*	*3%*
Student	*1%*	*2%*	*2%*
Total	**58%**	**64%**	**61%**
Economically inactive			
Total	**42%**	**36%**	**39%**

Source: Census 2021

Around 40% of Fenland's population occupy employment in managerial, professional or associate professional occupations, which is lower than the regional and national levels of 52%. Fenland's residents are more likely than those in the wider region to occupy administrative, trade, or service roles than those in the wider region and country[16]. The lower-than-average employment levels and lower proportion of employees in professional occupations mean Fenland and Whittlesey are not attaining the same levels of economic success as elsewhere in the region and country. There is a need to increase access to employment in the area through improving the connectivity between population centres, whilst also providing a better quality of life for the economically inactive who travel around Whittlesey for non-commuting purposes.

Education

Examining education levels in Fenland, the proportion of residents who have no qualifications (25.8%) is significantly higher than that seen in Peterborough (22.4%) and England (18.2%). This could be a result of residents of Fenland occupying job roles which do not require higher qualifications. By improving connectivity in the area, accessibility to education opportunities could be enhanced, thereby providing a route for more residents of Whittlesey to obtain qualifications and reducing the qualifications gap between the district and Peterborough.

Visitor economy

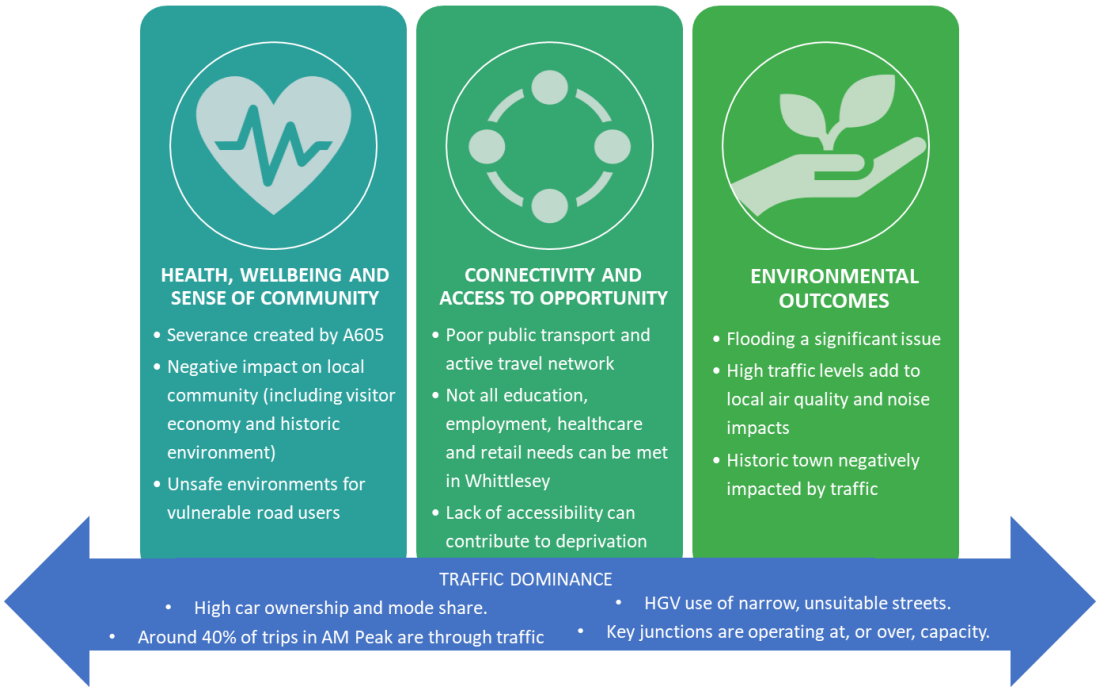
As previously mentioned in Section 2.2.1.2, Whittlesey's historic nature is also being negatively impacted by traffic. Minimising road traffic congestion and HGVs within the centre of Whittlesey would reduce associated noise, air pollution and vibration, and thereby reduce the risk of damage to buildings, helping to preserve the historic market town. The reduction in traffic has the potential to attract more visitors to the town.

2.2.1.7 Summary

The current issues, as outlined above, can be grouped into the themes identified as part of the strategy and policy review in Section 2.1.2. This grouping can be seen in Figure 2.13, with the issue of traffic dominance spanning across the core themes of health, wellbeing and sense of community, connectivity and access to opportunity, and environmental outcomes, with traffic dominance and the impact of this cutting across them.

[16] Labour Market Profile - Nomis - Official Census and Labour Market Statistics (nomisweb.co.uk)

Figure 2.13: Summary of current issues by theme



What does this mean for Whittlesey?

There is an amalgamation of issues in Whittlesey and the surrounding area that have negative impacts on the transport network. By tackling one or more of these issues, there is potential to ease the traffic issues in Whittlesey.

Whittlesey's location on the road network on the A605, B1040 and B1093 results in traffic being focused through the town centre, with the negative impacts of traffic levels felt by residents. This issue is exacerbated when the A47 is highly congested or closed, with a significant level of traffic re-routed through Whittlesey.

Whittlesey and the surrounding area are dominated by use of motor vehicles and high levels of car reliance. This contributes to the A605 / B1040 roundabout and the A605 / Dandelion Drive / Tayberry Way roundabout already operating close to, or over, capacity, which could act as a constraint for new developments in the area. However, if an alternative is provided, there is potential to remove 8,122 vehicle movements (including 863 HGV movements) that are currently passing through Whittlesey, easing issues on the local network.

Both public transport and active travel provision are poor in Whittlesey. As there are only two low frequency buses serving the town and there are difficulties accessing Whittlesea railway station, there are few alternatives to car use for journeys in and out of Whittlesey. Similarly, poor cycling provision and lack of signalised crossing points mean that active modes are not an attractive option for short journeys within the town. There is potential to improve both public transport and active travel to provide a viable alternative to car use for a range of journeys, easing the impact of traffic on the town.

Flooding is significant for the transport network in the area, with the closure of the B1040 adding to the A605 congestion issues. There is an opportunity to increase network resilience by creating alternative diversion routes in the event of flooding to minimise this impact.

There have been multiple collisions around Whittlesey, predominantly on the A605 / B1040 roundabout. Improving road safety offers the potential to save lives, as well as reduce the occurrence of road closures and diversions of traffic.

Through improving connections to healthcare, education and employment opportunities, both within Whittlesey and to other population centres, there is potential to reduce deprivation in the area and improve quality of life.

2.2.2 The future situation

As well as the current issues, it is also important to examine the future situation and determine how changes to the town of Whittlesey may be impact transport requirements. The key points to highlight are set out within the sections below.

2.2.2.1 Land use changes

From the start of the Fenland Local Plan period (2011/12), 1,000 new homes were planned to be built in Whittlesey by 2031. New housing is required to facilitate the expected 16% growth in Fenlands population by 2040; however, as of 2024, 918 new homes have already been built, with permission for an additional 488 homes, and circa 400 homes as part of windfall sites, therefore significantly exceeding original commitments. This growth of housing in the town, above what was originally planned, brings with it the challenge of ensuring that the transport network is growing in unison so that it can accommodate the growth in demand for local trips.

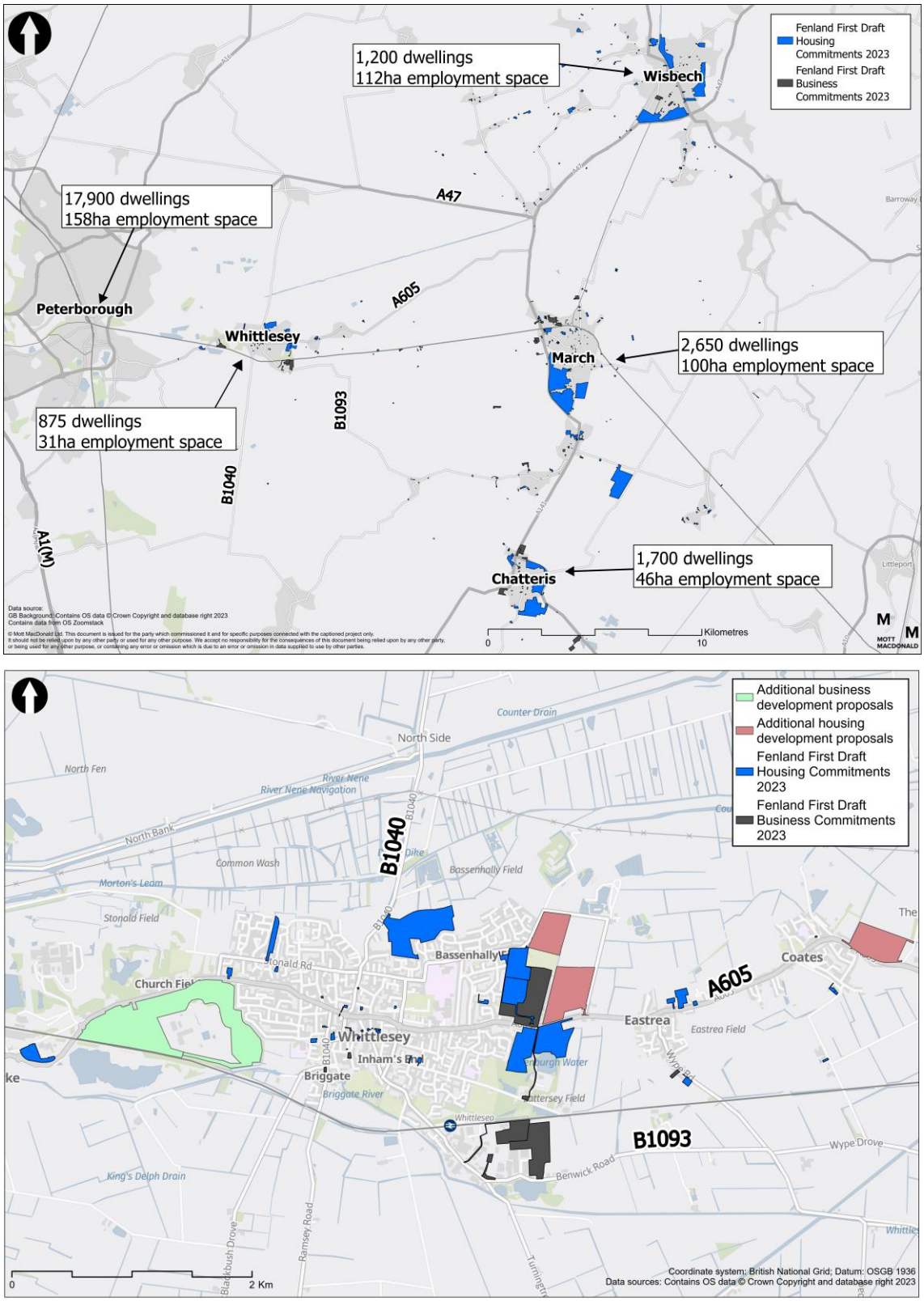
The new draft Local Plan (2022) for Fenland still includes Whittlesey as a key growth location and therefore there remains the potential for allocations to continue to increase, despite exceeding current local growth allocations. Within the draft Local Plan, the largest developments of committed large housing sites was expected to occur in 2022/23 and 2023/24. Across Fenland, the majority of these site allocations are expected to be developed between 2026/27 and 2029/30.

Whilst there is the desire and need to grow Whittlesey, the area is constrained by the local flood zones and a transport network which is not expanding with the developments. The majority of these new homes are planned to the east of Whittlesey, and with Peterborough likely to remain a large employment area, it is likely there will be an increase in traffic passing east to west through Whittlesey.

In addition, the Peterborough Local Plan (2019) and draft Fenland Local Plan (2022) outline significant housing and employment development in the broader region. For example, the planned development in the region includes 5,550 new houses and 212ha of new employment to the east of Whittlesey (see Figure 2.14). The Peterborough Local Plan outlines housing commitments to 2034/35 with the Local Plan having a target of 1,000 houses per year from 2021/22 onwards. Peterborough is currently on target to meet these targets and is expected to deliver its housing allocations by 2034/35.

Whilst the A605 is not the only east-west route in the area, the previously identified constraints on the A47 (see Section 2.2.1.1) mean it has limited capacity to deal with future growth in trips. Therefore, increasing regional housing and employment development, such as in March and Chatteris, could potentially result in even greater traffic levels on the A605, using it as an alternative route to the A47. If improvements are not made to the local transport network, it is unlikely that it will be able to accommodate this increase in demand.

Figure 2.14: Locations of development in Whittlesey and the surrounding area



Source: Mott MacDonald using information from Peterborough Local Plan (2019) and draft Fenland Local Plan (2022)

2.2.2.2 Environment

Environmental factors, such as flooding are likely to become more prevalent, especially in low lying areas such as the Fens, as the impacts of climate change are increasingly felt in the UK. The number of intense rainfall events is predicted to increase, with the East of England seeing a 5% increase in rainfall intensity for each °C of regional warming[17]. This could lead to more frequent and longer closures of roads, as occurred between 1st April 2012 and 1st April 2013 when North Bank was reportedly closed on 11 separate occasions for 55 days[18].

2.2.2.3 Summary

The future issues and opportunities around land use and the need to improve the transport network to serve this growth can be grouped under the Sustainable Growth theme that was identified as part of the strategy and policy review in Section 2.1.2. This is shown in Figure 2.15.

Figure 2.15: Summary of future situation

What does this mean for Whittlesey?

There is a significant amount of development planned for Whittlesey and the surrounding area, bringing the potential for new homes, employment opportunities and economic growth for the residents. However, this will likely put more pressure on to the already congested transport network. There is need for transport interventions to be implemented if sustainable growth is to be realised.

2.2.3 Stakeholder views

To gauge the local perspective of the current situation in Whittlesey, the associated issues and opportunities, as well as what the potential solutions may be, a series of five stakeholder workshops have been conducted. An overview of the stakeholder engagement process and the

[17] https://www.metoffice.gov.uk/about-us/news-and-media/media-centre/weather-and-climate-news/2023/new-research-shows-increasing-frequency-of-extreme-rainfall-events

[18] Major Scheme Business Case Report | Version 1.0 | August 2015 (Skanska)

stakeholder workshops are provided in Section 6.7, and further detail is provided in the Stakeholder Engagement and Communications Plan (Appendix C), which includes the list of who the key stakeholders engaged with were.

Stakeholder Workshops 1 and 2 gathered information on the current issues and opportunities in Whittlesey, which were subsequently used to steer the case for change and the objective setting. The outcomes of these workshop are summarised below.

Workshop 1

The attendees for Workshop 1 were drawn from the CPCA, CCC, FDC and Peterborough City Council (PCC) to gain an understanding from these organisations of the underlying issues and aspirations before engaging with broader group of key stakeholders. Table 2.2 below groups together and summarises some of the responses from the exercise.

Table 2.2: Summary of responses from Workshop 1

Theme	Challenges	Drivers
HGVs	• Some businesses in and around Whittlesey are reliant on HGVs. • There is risk of harming the local economy if HGV access is restricted.	• There may be potential to support local business by improving HGV access.
Transport	• Poor public transport, and a losing battle with bus services, have led to car dominance. • Whittlesey is used as a commuter town for Peterborough. • There are high traffic flows both in and around Whittlesey.	• Ely Capacity Enhancements will improve rail travel once completed. • There is potential for active travel improvements.
Population	• Ageing population. • Pockets of deprivation. • The location of Sir Harry Smith Community College and the impact the local transport network has on children.	• There is potential job growth from the Scheme through construction and improved connections. • There is already potential support for a southern relief road.
Built environment	• Housing growth in the past 10 years has increased car use. • The A605 causes severance in Whittlesey.	• The preservation of Whittlesey as a market town.
Environment	• Flooding and Flood Zone 3 areas. • Poor air quality. • Geological constraints around Fenland.	• Potential for biodiversity net gain.

Many of the challenges emphasised by the stakeholders in Table 2.2 support the findings highlighted in Sections 2.2.1 and 2.2.2, along with the Baseline Evidence Review (Appendix B),

in particular poor public transport provision, recent housing growth, the high levels of traffic flows in and around Whittlesey, and perceptions of poor air quality levels. Similarly, some of the drivers identified, including preserving Whittlesey as a market town, improving active travel and biodiversity net gain, can be geared towards removing traffic from Whittlesey Town Centre.

Workshop 2

Workshop 2 involved a broader set of attendees drawing on key stakeholder representatives from outside the CPCA, CCC and FDC. For example, attendees included Network Rail, Environment Agency, McCain Foods and Stagecoach (full list of attendees can be found in Appendix C). Attendees were asked what they believed to be the economic, social and environmental challenges and opportunities for Whittlesey as a town. Table 2.3 below groups together and summarises some of the responses from the session.

Table 2.3: Summary of responses from Workshop 2

Themes	Challenges	Opportunities
HGVs	• Some roads are unsuitable for HGVs. • There are currently high numbers of HGVs travelling through the town.	• Potential to reduce the number of HGVs by accommodating for larger, but fewer, HGVs. • It would be more feasible to introduce HGV restrictions in Whittlesey if there were alternatives.
Transport	• Whittlesey has limited routes in and out of the town, and limited access to the strategic road network. • The level crossing on Station Road causes traffic. • There is poor active travel and public transport provision, with few alternatives to car use. • Road user charging would be difficult to implement in Whittlesey. • The A605 causes severance in Whittlesey.	• Potential to explore the closure of level crossings in the area. • Parking charges could be introduced as an alternative to road user charging. • Reducing traffic levels would allow for more active travel, while improvements to active travel could reduce traffic levels. • Improvements to bus and rail services could also reduce traffic levels.
Environment	• Flooding is experienced on the B1040 and below the A605. • The flood storage area to the north of Whittlesey poses constraints on infrastructure that could be introduced. • The carbon impact that Schemes could have. • Poor air quality in the town. • Ground contamination and pollution of rivers and lakes.	• Active travel can contribute to Net Zero goals. • Potential to reduce flooding in Whittlesey.

Many of the challenges and opportunities identified in Workshop 2 expand on similar issues that emerged from Workshop 1. In particular, the lack of public transport and active travel provision resulting in fewer alternatives to private car use, amplified by the limited routes in and out of Whittlesey.

In this workshop, emphasis was given to the nature of Whittlesey as a market town, and the unsuitability of HGVs navigating the small streets. Opportunities were identified from reducing both HGV and car use from the town, including making it easier to provide active travel infrastructure, public transport provision, and reach Net Zero targets.

Attendees were also asked what they believed the future could look like for Whittlesey, with the intention to help inspire what potential interventions could be implemented. These responses (shown in Figure 2.16) are similar to the opportunities identified in Table 2.3, including improvements for active travel, supporting local businesses, and changes to motor vehicles in the town.

What does this mean for Whittlesey?

Many of the challenges highlighted by the stakeholders support the conclusions from the evidence review, especially the current levels of traffic through the town and the social and environmental impacts it has. In particular the issue of HGVs through the town.

Stakeholder feedback would also suggest that just one single intervention could tackle these challenges and it is probable that a package of interventions would be needed that should be geared towards finding environmentally sustainable solutions. In particular any solution or solutions need to provide good social value, based around reducing vehicle use within Whittlesey Town Centre. Through providing alternatives to cars and HGVs, it will expand the possibilities of improving active travel and public transport, while preserving the nature of the historic market town.

Figure 2.16: What could Whittlesey look like in the future? Workshop 2 responses

Source: Mott MacDonald

2.2.4 Impact of doing nothing

Without implementing improvements to transport network and addressing the resilience of the road network within Whittlesey, the issues experienced on the A605 are likely to continue to worsen. These include the capacity issues at key junctions within Whittlesey and a high level of through traffic, two issues that are already exacerbated by the A605 being a National Highways diversion route and a key route for freight. The current levels of general traffic and HGVs is already causing wider issues in the town, including negative impacts on the historic nature of Whittlesey, worsening air quality, and acting as a barrier for walking and cycling. When the B1040 road is closed due to flooding, travel times along the A605 through Whittlesey can more than double from 8 to 16 minutes, with diverted vehicles further compounding existing issues associated with the volume of traffic on the A605.

If these transport issues continue to be unaddressed, it may cause a lasting impact on the town. It has the potential to restrict the planned and anticipated growth in Whittlesey and the surrounding area, resulting in not being able to accommodate the growing population in Fenland to its full capability. For example, the new draft Local Plan (2022) for Fenland still includes Whittlesey as a key growth location and therefore housing and employment allocations may continue to increase. The Local Plan, however, is unlikely to be able to deliver more growth without some form of transport intervention to support it.

This issue, along with Whittlesey becoming a less attractive place to live, work or do business may result in a decline or stagnation in local economic growth and an increase in negative social impacts such as worsening air quality, increase in noise pollution, and an increase in accidents.

If the level of HGV traffic remains unrestricted then there is the risk that the historic nature of Whittlesey would continue to be negatively impacted, both in terms of the amenity and the buildings themselves. In turn, this will hinder the progress of goals set out in the local, regional and national strategies (summarised within Section 2.1.2), including those set out in Growing Fenland: Whittlesey – A Market Town for the Future.

It is clear from this analysis that Whittlesey is in need of intervention to help the town and its surrounding area to grow and thrive, while protecting the qualities that make it a unique place to live and work.

2.3 Scheme objectives

The primary purpose of the Scheme objectives is to guide the assessment and selection of options, ensuring that the option shortlist is targeted towards meeting the needs of Whittlesey and the surrounding area.

The process for identifying the most suitable Scheme objectives is shown in Figure 2.17. This illustrates how elements of the Strategic Dimension such as the policy and strategy review; and the case for change have been mapped to themes, with these themes then used to create the overarching objectives of the Scheme.

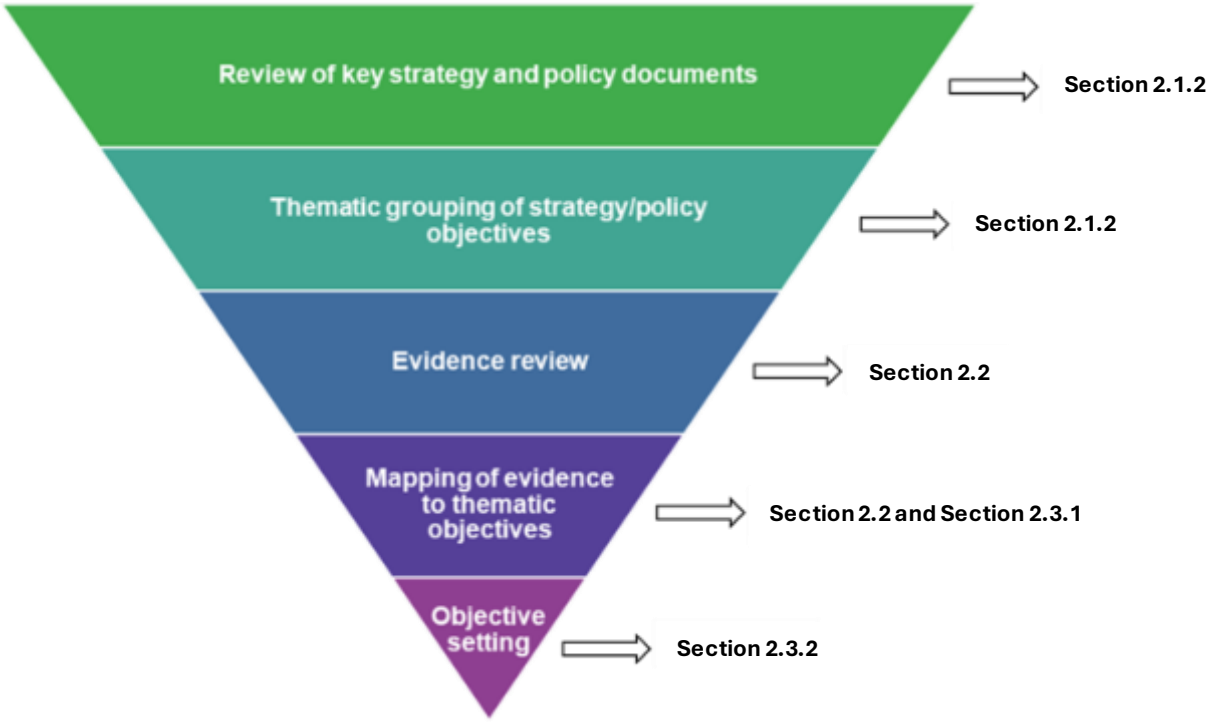
The ***review of key strategic and policy documents*** is set out previously in Section 2.1.2, with this highlighting the recurring ideas around sustainable development and growth; connectivity and accessibility; community wellbeing; and the environment. A ***thematic grouping of the strategy and policy objectives*** was then undertaken, with four overarching themes created:

- Sustainable growth.
- Health, wellbeing and sense of community.
- Connectivity and access to opportunity; and
- Environmental outcomes.

The ***evidence review*** is set out in Section 2.2, identifying current issues such as poor public transport and active travel provision; severance cause by the A605; and flooding, as well as future opportunities such as planned growth and development proposals. A ***mapping of evidence to thematic objectives*** exercise has been undertaken, as shown in Section 2.2 above and Section 2.3.1 below, bringing together the evidence review and previously identified themes, further supporting these themes as being key to meeting the needs of Whittlesey.

Finally, the ***objective setting*** is presented in Section 2.3.2, establishing four overarching objectives based on the previously identified themes, and several SMART sub-objectives that inform the assessment criteria used to test options.

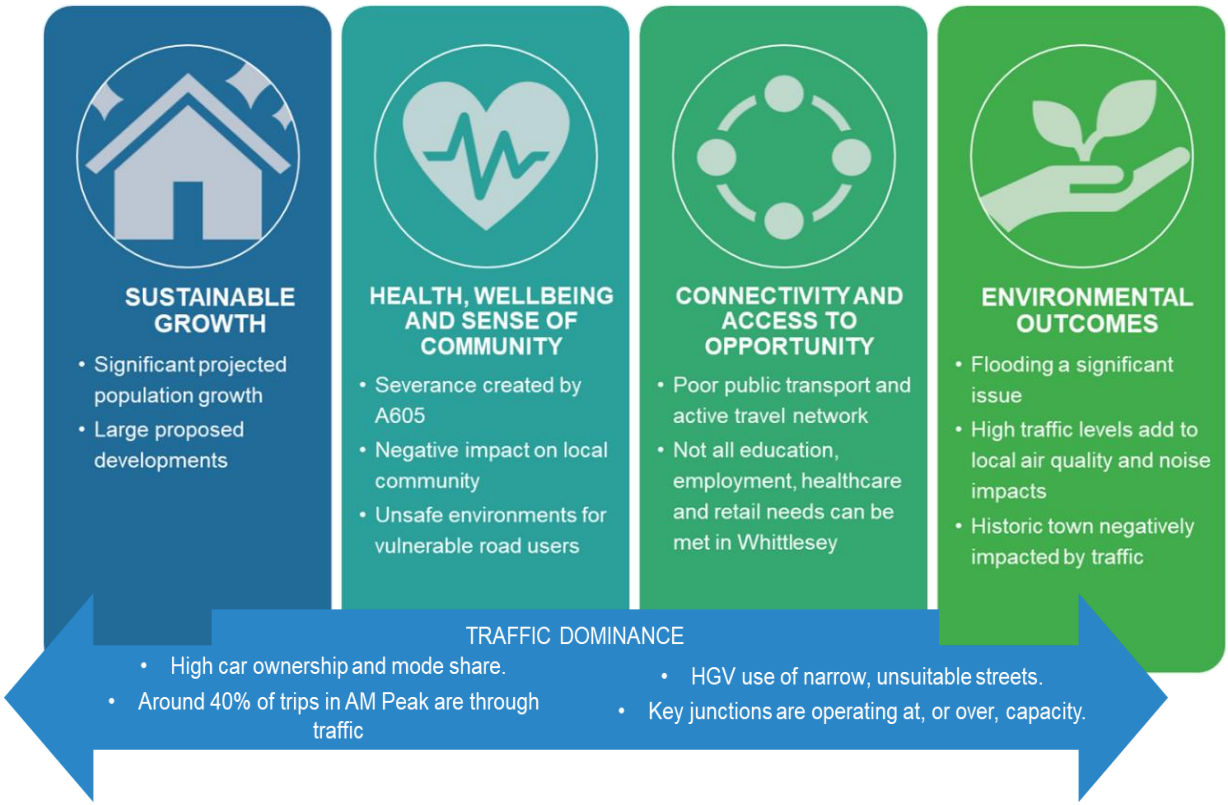
Figure 2.17: Objective setting process



2.3.1 Objective mapping

The issues and opportunities identified within Section 2.2 can be categorised under one of the four themes identified during the thematic grouping of strategy/policy objectives set out in Section 2.1.2. These are summarised in Figure 2.18 below.

Figure 2.18: Summary of issues and opportunities by theme



All four themes can be characterised by their relation to dominance of traffic in Whittlesey, either being caused by or worsening traffic related issues. Therefore, there is potential for all four themes to see improvement through transport intervention(s), meaning the objectives set for this Scheme should reflect these themes.

2.3.2 Objective setting

Following the identification of the themes set out above, four core Scheme objectives have been established that directly address the challenges within each theme. These are set out in Table 2.4 below.

Table 2.4: Scheme objectives

Objective Theme	Main Objective
Sustainable Growth:	Enable the transport network in Whittlesey to have sufficient capacity to support planned economic development and population growth in a sustainable manner.
Connectivity and access to opportunity:	Address the current transport network congestion and service constraints within Whittlesey to improve local and regional connectivity for all.
Health, wellbeing and sense of community:	Improve the health and wellbeing for all social groups along the A605 corridor through Whittlesey by reducing the impacts from poor air quality and poor road safety.
Environment:	Reduce the impact of traffic upon the historic environment of the town and contribute to wider reductions in carbon emissions.

For each Scheme objective a series of measurable sub-objectives have been identified that inform the assessment criteria used to test the options and identify the best performing solution. These are set out in Table 2.5.

Table 2.5: Scheme sub-objectives

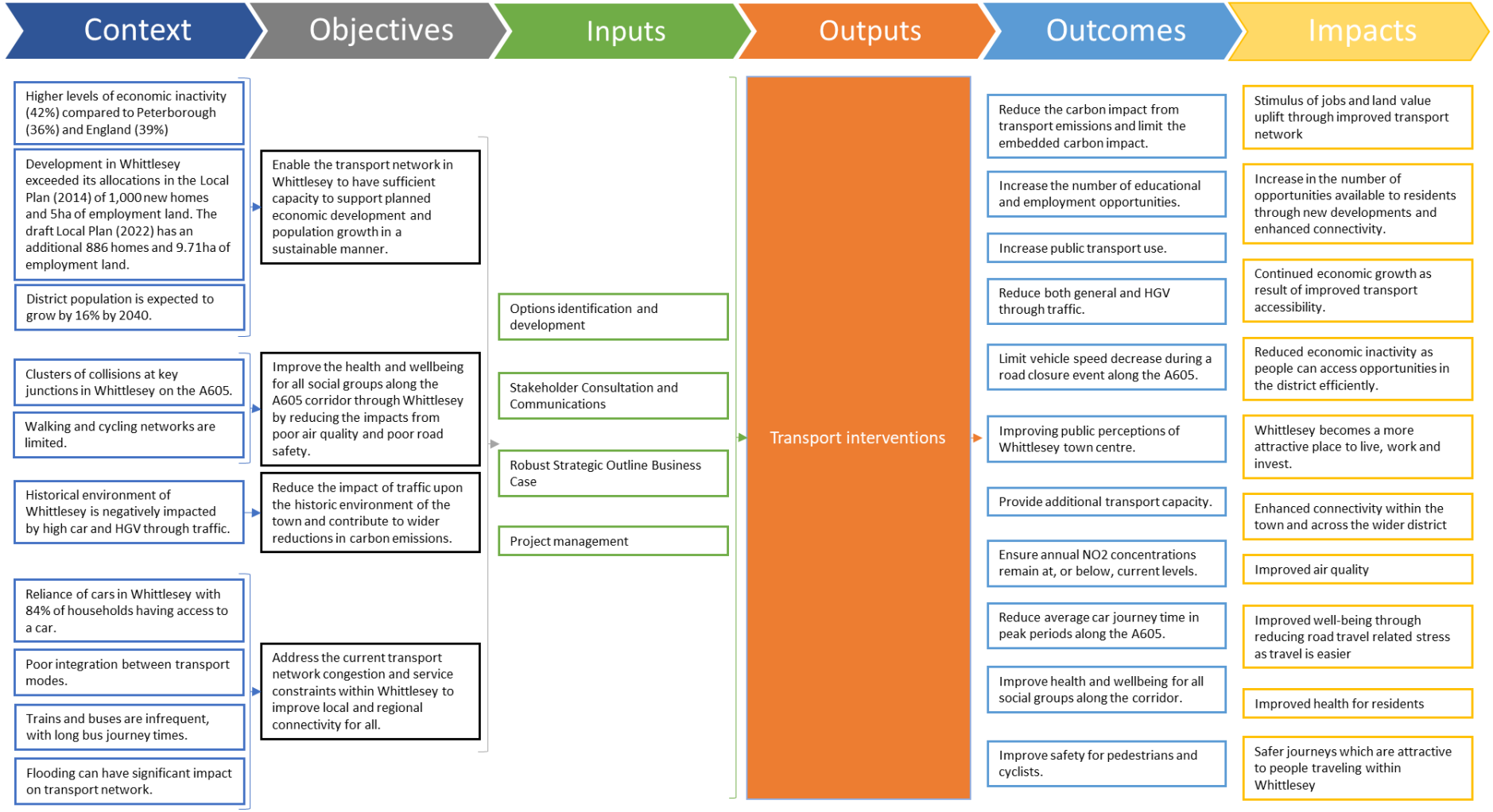
Main objective theme	Sub-objective
Sustainable Growth:	1a. Provide additional transport capacity to accommodate 16% growth in future trips in Whittlesey following the scheme being delivered.
	1b. Reduce the average car journey time in the peak periods by 10% for journeys along the A605 through Whittlesey within the first year of the scheme being delivered.
Connectivity and access to opportunity:	2a. Increase the number of local and regional educational and employment opportunities accessible within 30 minutes for residents in Whittlesey following the scheme being delivered.
	2b. Improve the integration of transport modes to provide viable sustainable travel options for all, leading to a 25% growth in public transport patronage within five years of the scheme being delivered.
	2c. Improve the resilience of the transport network within Whittlesey so that traffic speeds do not decrease by more than 25% during a road closure event along the A605 within the first year of the scheme being delivered.
Health, wellbeing and sense of community:	3a. Improve health and wellbeing for all social groups along the corridor and ensure annual NO2 concentrations remain at, or below, current levels, despite growth in trips within five years of the scheme being delivered.
	3b. Improve the safety for the travelling public, with a 50% reduction in collisions involving pedestrians and cyclists within Whittlesey following the scheme being delivered. .
	3c. Enhance the public realm within Whittlesey so that it puts people first and promotes active lifestyles, improving public perceptions of Whittlesey town centre by 10% within five years of the scheme being delivered.
Environment:	4a. Reduce general through traffic by 15% to ensure the natural, historic and built environment of Whittlesey is protected and enhanced within the first year of the scheme being delivered.
	4b. Reduce HGV through traffic by 15% to ensure the natural, historic and built environment of Whittlesey is protected and enhanced within the first year of the scheme being delivered.
	4c. Reduce the carbon impact from transport emissions within five years of the scheme being delivered, and limit the embedded carbon impact from the delivery of any solution

2.3.3 Logic Map

To map out how the above objectives will, ultimately, link to the desired outcomes of the proposed Scheme, a Logic Map has been produced, presented below in Figure 2.19.

Further detail on how the performance of the Scheme is to be assessed will be provided in a Benefits Realisation Plan at the next business case stage (OBC), should the Scheme be taken further forward for further development.

Figure 2.19: Logic Map



Source: Mott MacDonald

2.4 Constraints

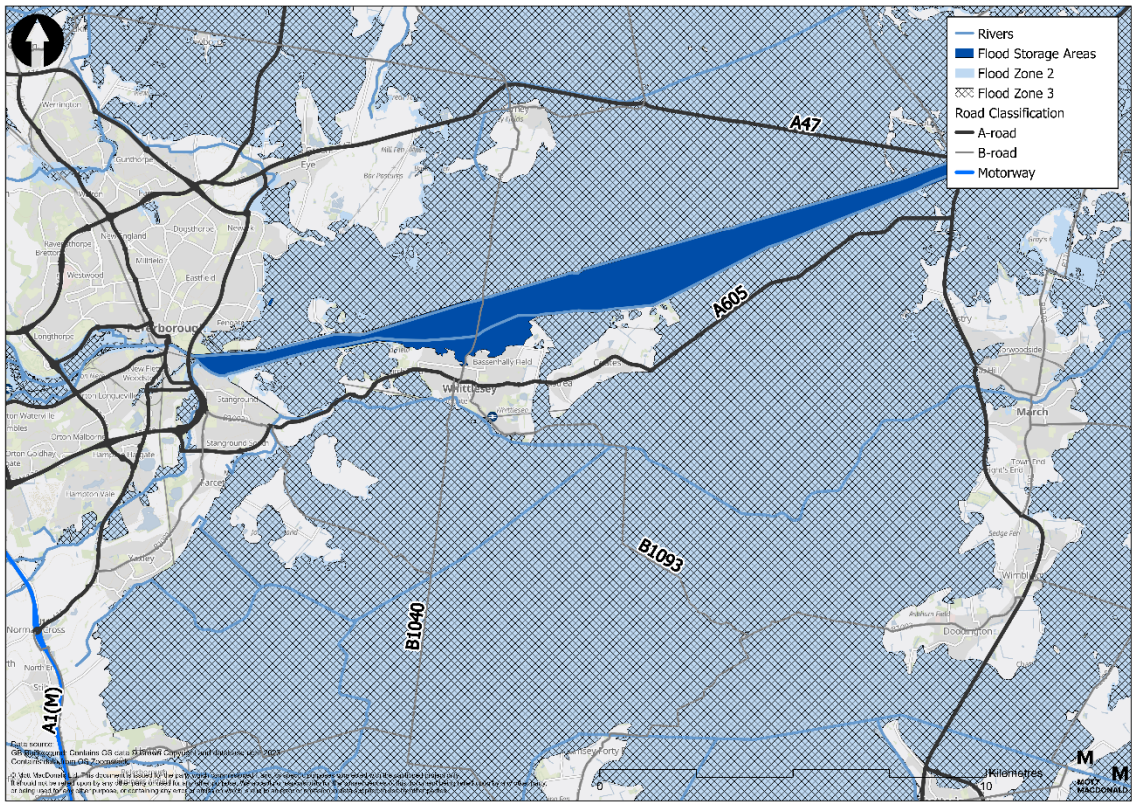
As part of the process to identify the transport interventions needed to meet the Scheme objectives, and for the Scheme to be a success, a high-level review of the possible environmental, historic, and planning constraints has been undertaken. These will influence the option development and refinement process going forward, both to minimise the impact of Scheme and to ensure it can be delivered successfully.

2.4.1 Environment

The Fenland area surrounding Whittlesey is primarily within flood zone 3, as defined by the Environment Agency (EA) to have a high probability of flooding, as shown in Figure 2.20. The Whittlesey (Nene) Washes Flood Storage Reservoir, to the north of Whittlesey is within flood zone 3b as it is classified as a functional floodplain where there is a significant risk of flooding, whereas the south is located predominately within flood zone 3a.

Not only would this area have to be protected to preserve the floodplain, but if any physical infrastructure were to be built in this area, it would have to be resistant to the impact of flooding. Therefore, this area would likely have to be avoided when producing possible transport interventions.

Figure 2.20: Flood storage areas, flood zones and rivers



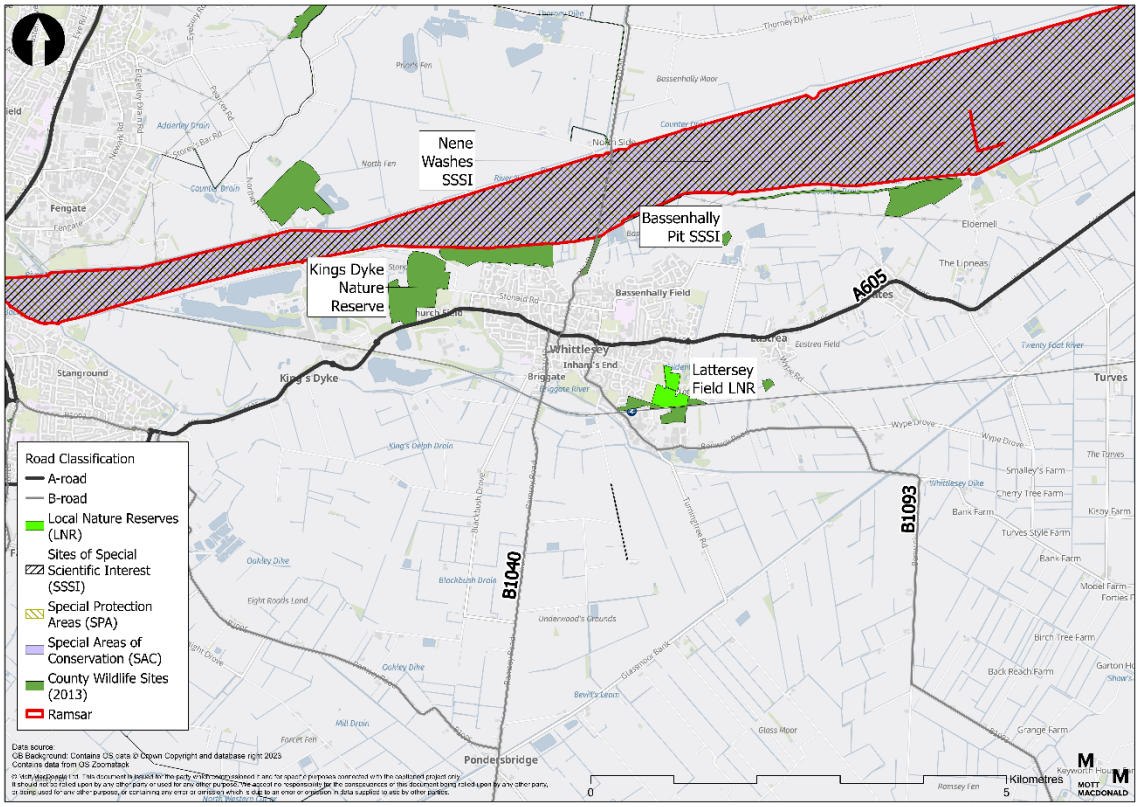
Source: Environment Agency

In addition to this, the Whittlesey (Nene) Washes situated to the north of Whittlesey is also designated as a Ramsar site, Special Area of Conservation (SAC), Special Protection Area (SPA) and as a Site of Special Scientific Interest (SSSI) (shown in Figure 2.21). The Kings Dyke Nature Reserve, a former brick pit located beside the A605 to the northeast of Whittlesey, also

has wildlife recorded including scarce breeding and wintering species and one of the largest populations of great crested newts in the UK.

Similar to the impact that the flood storage areas outlined above, these conservation sites and reserves will also pose a risk to any proposed transport interventions. The construction of physical infrastructure should be avoided in these areas to ensure their protection and prevent any opposition from their protectors.

Figure 2.21: Nature conservation designations



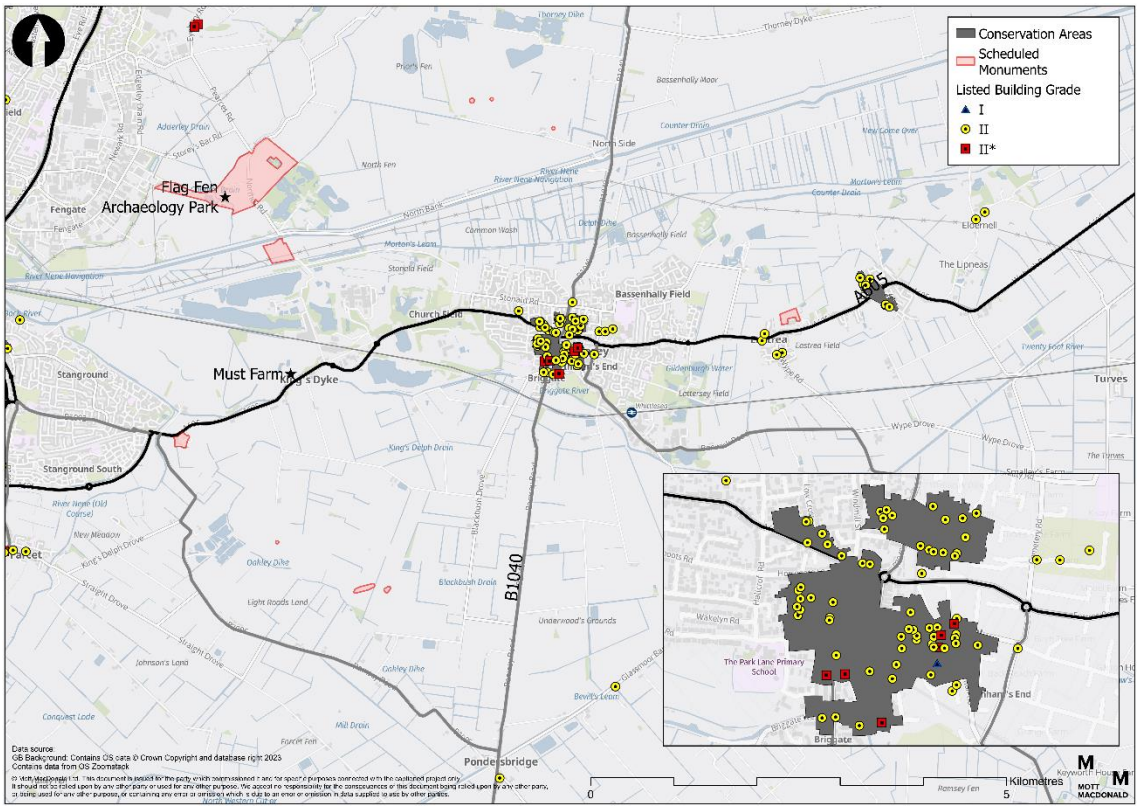
Source: FDC / Mott MacDonald

2.4.2 Historic environment

The Whittlesey area has a rich history with evidence of settlement and activity dating from the Neolithic, Bronze Age, Iron Age and Romano-British periods, while Whittlesey itself appears in Anglo Saxon texts and developed as a Market Town through the medieval period.

The historic centre of the town is designated as Whittlesey Conservation Area, outlined in Figure 2.22. This area includes 62 listed buildings including grade 1, grade 2* and grade 2, and many buildings of local importance. As can be seen below, many of these listed buildings are located near the A605, along with two Scheduled Monuments along the road.

Figure 2.22: Designated heritage assets



Source: Historic England

Due to the rich prehistoric and historic landscape of the Whittlesey area and the wider Fenland region, any proposed intervention on the outskirts of Whittlesey will have to consider the high likelihood of significant archaeological remains in particular, and the associated heritage impacts on the route taken. This has the potential to impact the progress and support of a relief road.

Within Whittlesey, the Conservation Areas and listed buildings may be presented as constraints, as any transport intervention would have to have minimal impact on these areas. However, minimising road traffic congestion and HGVs within the centre of Whittlesey would reduce associated noise, air pollution and vibration, and thereby reduce the risk of damage to buildings, helping to preserve the historic market town.

2.4.3 Planning

Along with environmental and historic constraints, the Fenland Local Plan and the Cambridgeshire and Peterborough Minerals and Waste Plan pose a selection of potential planning constraints for this Scheme. These are summarised below:

The adopted Fenland Local Plan contains:

- Specific sites allocated for development.
- Sensitive areas where the natural environment needs protection; and
- Sensitive areas where the built environment needs protection.

Similarly, the Cambridgeshire and Peterborough Minerals and Waste Plan contains:

- Existing sites for minerals extraction, waste management or transport.

- Minerals extraction and waste management and transport consultation and safeguarding areas.
- Areas of search for waste management; and
- Minerals safeguarding areas of different classes.

It shows extensive past and existing workings to the west of Whittlesey. In addition, there are areas allocated for future mineral extraction and safeguarded sand and gravel extraction to the north, south and east of the town.

2.5 Dependencies

There are currently no known direct inter-dependencies with other major infrastructure commitments within the local area or wider region that would prevent a transport Scheme in Whittlesey being delivered. However, there is a selection of potential dependencies that have been identified concerning the potential Schemes that could be introduced, outlined below.

2.5.1 Potential dependencies

If a new relief road were to be built, then it would have to coincide with the spatial allocations within the Fenland Local Plan to ensure the road would not impact the progression of other developments or the protection of resources. This also includes the flood zones outlined in the plan.

If the intervention chosen were to involve increases in bus frequencies or introducing new bus services, then it would be dependant finding suitable funding and a bus operator for these services to make it viable. In this instance, CPCA's Bus Service Improvement Plan (BSIP) would be a potential dependency.

If the intervention chosen were to include access improvements to Whittlesea railway station, or an increase of train services, then the Whittlesea Station Improvements scheme and Whittlesey Relief Road scheme will be dependent on each other to ensure residents can access the station and there are rail services to use.

2.5.2 Powers and consents

To deliver any solution for Whittlesey, planning powers and consents will likely be required. At this stage of scheme development, it is not possible to specify exactly what will be needed, but it may involve the use of

1. **Town and Country Planning Act 1990**: this act would govern the general planning permissions required for the development of any scheme, ensuring compliance with local and national planning regulations
2. **Permitted Development** - For any option, or elements of an option, that can be delivered within the highway boundary, this may constitute permitted development but could still require Traffic Regulation Orders (TRO).
3. **Highways Act 1980**: this act would provide the legal framework for any potential Compulsory Purchase Order (CPO) that may be required to enable the acquisition of land and the construction of a new road. Land may also be acquired for use in environmental mitigation such as providing new areas of land for biodiversity net gain (note – in the first instance the acquiring of any land would always be done through negotiation with land owners, with the use of CPOs a last resort).
4. **Development Consent Order (DCO):** a DCO is primarily intended for Nationally Significant Infrastructure Projects (NSIPs). However, under certain circumstances, a non-

NSIP project can also be treated as requiring development consent. This can happen if the Secretary of State issues a direction under Section 35 of the Planning Act 2008. This direction allows a project that does not meet the NSIP criteria to be processed through the DCO route, which may be an option for a relief road option, considering the complexities of delivering such a significant piece of new infrastructure.

2.6 Wider schemes being delivered in the area

2.6.1 A605 Cemetery Road Roundabout

An investigation has been undertaken in 2023 into potential active travel improvements on the A605 Cemetery Road Roundabout which has devised three potential options. These include minor island adjustments and dropped crossings, geometry and island widening improvements, and a fully compliant LTN 1/20 signal-controlled junction replacement. If realised, these improvements could aid in meeting the Whittlesey Relief Road Scheme objectives but are not dependant on it.

2.6.2 Whittlesea Station Improvements

Under the CPCA's Fenland Stations Regeneration Project, a high-level masterplan has been produced which set out a range of possible improvements for Whittlesea Station. The current options being considered include:

- Provision of new car parking spaces and improved access for cars.
- Improving access for buses including a bus turning circle.
- Extending platforms to accommodate longer trains in the future.
- Building a new pedestrian footbridge to reduce the need for people to use the level crossing; and
- Providing new station waiting shelters, ticket machine and lighting.

Smaller projects in the masterplan, such as improved platform lighting, new platform waiting shelters, and a second ticket machine have already been completed at Whittlesea station. However, technical challenges identified during feasibility studies meant that additional work is needed for the larger improvement schemes. A further £3 million of CPCA funding has been approved in May 2024 to progress these improvements.

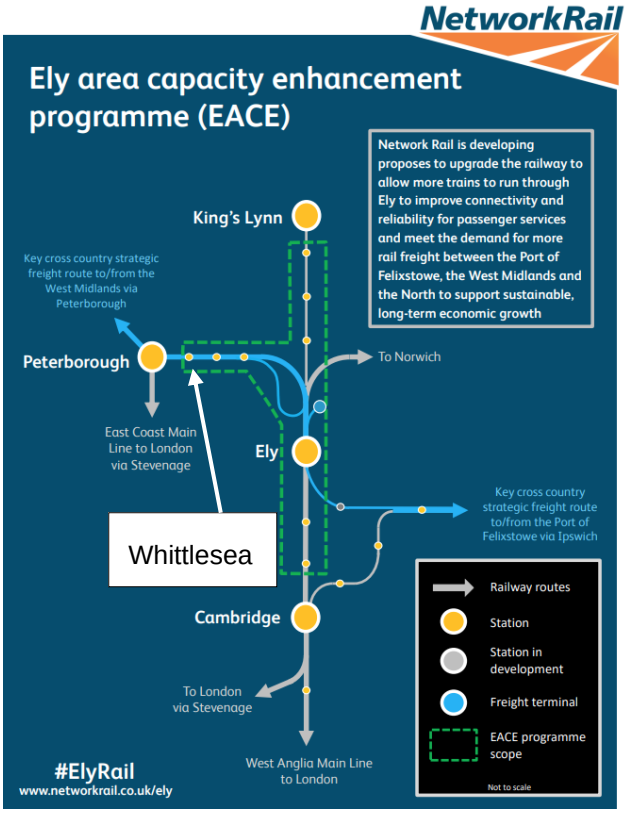
The delivery of these station improvements will result in rail travel to and from Whittlesea becoming an easier and more attractive option, potentially shifting some journeys away from private cars and on to rail. Due to these improvements already being proposed through the Fenland Stations Regeneration Project, station upgrades will not be included in the scope of this Scheme.

However, the current access to Whittlesea station from the town centre by both road and active modes is poor, meaning that if the full potential from these improvements is to be realised then access to the station also needs to be improved.

2.6.3 Ely Area Capacity Enhancements

The Ely Area Capacity Enhancement programme intends to upgrade the railway to allow more trains to run through Ely to improve connectivity and reliability for passenger services and meet the demand for more rail freight between the Port of Felixstowe, the West Midlands and the North. This will be achieved with level crossing upgrades, road reconfigurations, track remodelling and junction modifications.

Figure 2.23: EACE scope



The scope of the programme (Figure 2.23) includes the Ely – Peterborough line, on which Whittlesea station is located, with the level crossing on Ramsay Road (B1040) being assessed as part of the Scheme. The programme aims to double the number of passenger services on the Ipswich-Peterborough route, resulting in an increase of the number of trains that serve Whittlesea. This will, therefore, increase the mode options for those travelling between Whittlesey and Peterborough, March or Ely. This has the potential to then reduce the traffic coming in and out of Whittlesey, easing the traffic and junction issues in the town.

However, as the Scheme is not yet committed, it could be many years before any benefits are realised.

Source: Network Rail

2.6.4 Fenland Cycling, Walking and Mobility Aid Improvement Strategy

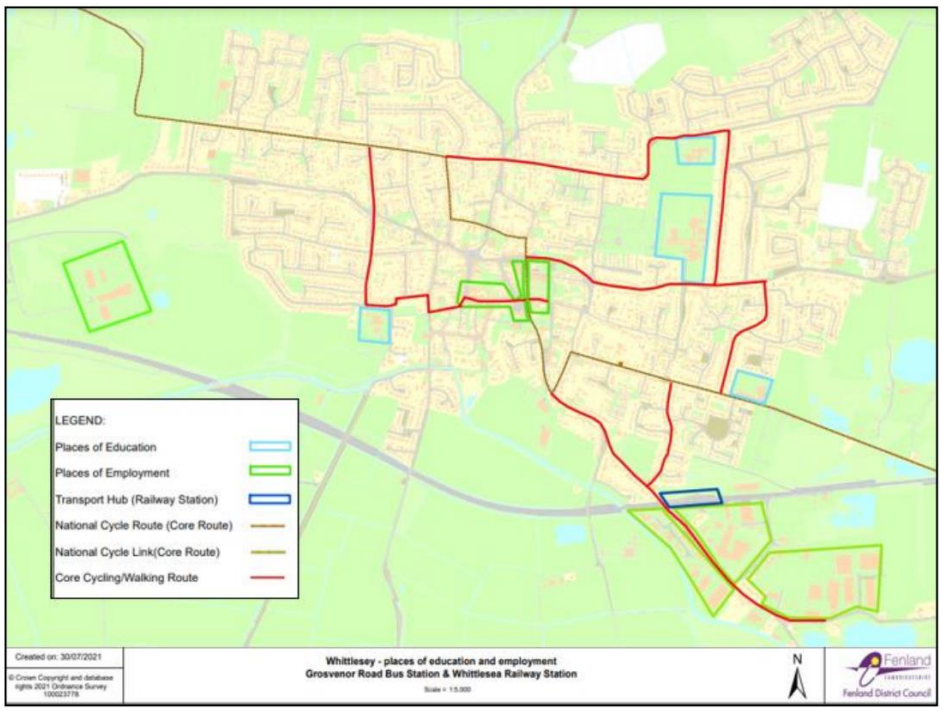
In 2022, Fenland District Council approved the Fenland Cycling, Walking and Mobility Aid Improvement Strategy, a medium to long-term plan to improve cycling, walking and mobility access across the district. The intended outcome of the strategy is to increase the level of walking cycling for people of all ages and abilities across the district, including Whittlesey.

The strategy lays out 50 active travel improvements for Whittlesey, these include but are not limited to:

- Installation of dropped kerbs.
- Introduction of advisory cycle lanes.
- Junction width reviews.
- New pedestrian crossings.
- Signage and wayfinding.

These interventions are located on the core walking and cycling routes identified by Fenland District Council, outlined in Figure 2.24.

Figure 2.24: Core walking and cycling routes in Whittlesey



Source: Fenland District Council

If delivered, these improvements have the potential to induce a modal shift away from cars and towards walking and cycling for short journeys around Whittlesey easing some of the traffic issued faced in the town. The improvements for Station Road include introducing dropped kerbs, junction width reviews and widening existing paths which would make Whittlesea station much more accessible by active modes from the town centre. If delivered along with the Whittlesea station improvements outlined above, it has the potential to encourage a modal shift away from private vehicles and to active travel for journeys to the station, and then on to rail for longer distance journeys.

Although this plan outlines a large number of improvements suggested for Whittlesey, there is no guarantee that funding will be secured to deliver these.

2.6.5 Fens Reservoir

The Fens Reservoir is a proposed reservoir located north of Chatteris, approximately 16km south-east of Whittlesey. The Anglian Water and Cambridge Water proposals have a total water surface area of 5km^2 and will hold up to 55 million cubic metres of water. In addition to this, the plans include landscaping to provide grasslands, woodlands and wetlands, as well as opportunities for recreation. The construction will require significant volumes of material to be delivered to the site and with much of this expected to come from the west, it may therefore have a significant impact on the A605 and A47. With the construction phase expected to last five years, increased traffic volumes may be maintained for some time. Once operational, the recreational aspects of the site are also expected to draw significant visitor traffic, thereby continuing to impact these routes.

2.7 Key project risks

The key potential risks to this project, along with the corresponding mitigation measures are outlined in Table 2.6 below.

Table 2.6: Potential risks and mitigation measures

Risk Description	Result	Total Risk	Risk Mitigation Measure	Total Risk (mitigated)
Affordability of the shortlisted solutions identified as part of the SOBC. Lack of appropriate funding stream for shortlisted options.	Viability of delivering a solution is affected and subsequent stages (OBC) not achievable	25	SOC to explore funding options. Project board meetings used to gain confidence from board about alternative solutions. Continual engagement with the CPCA to assess funding options. Identify options to potentially reduce delivery costs and opportunities to link this project with other schemes in the local area.	25
Shortlisted solutions may have an adverse impact on environmental matters i.e. floodplains, biodiversity, visual, noise etc.	Harder to mitigate the impact of the scheme and deliver a solution.	25	Early engagement with environmental specialists. Prior to further development of scheme, undertake engagement with potential effected landowners. Set out details of the proposed options sensitively in public consultation.	20
A strong economic case is not achievable for an intervention.	Scheme objectives can't be met, funding unable to be secured and Scheme can't be progressed.	25	Identify and highlight wider non-monetised benefits of the scheme to build the case, including environmental, health, placemaking and social benefits.	15
Solutions and proposals for addressing identified issues are not supported by stakeholders.	Solution is not progressed, or preferred option doesn't have public support.	20	Engage with stakeholders from early in the project to understand what they want from a Scheme. Engage throughout the project and on the development and assessment of options.	10
Lack of support from highways authority to deliver scheme beyond SOC.	Project can't be delivered.	20	Discussions with highways authority to be held to discuss and agree ownership of Scheme post SOC.	10

Scoring: Negligible (1-4); Tolerable (5-9); Significant (10-19); and Major (20-25).

2.8 Strategic Dimension summary

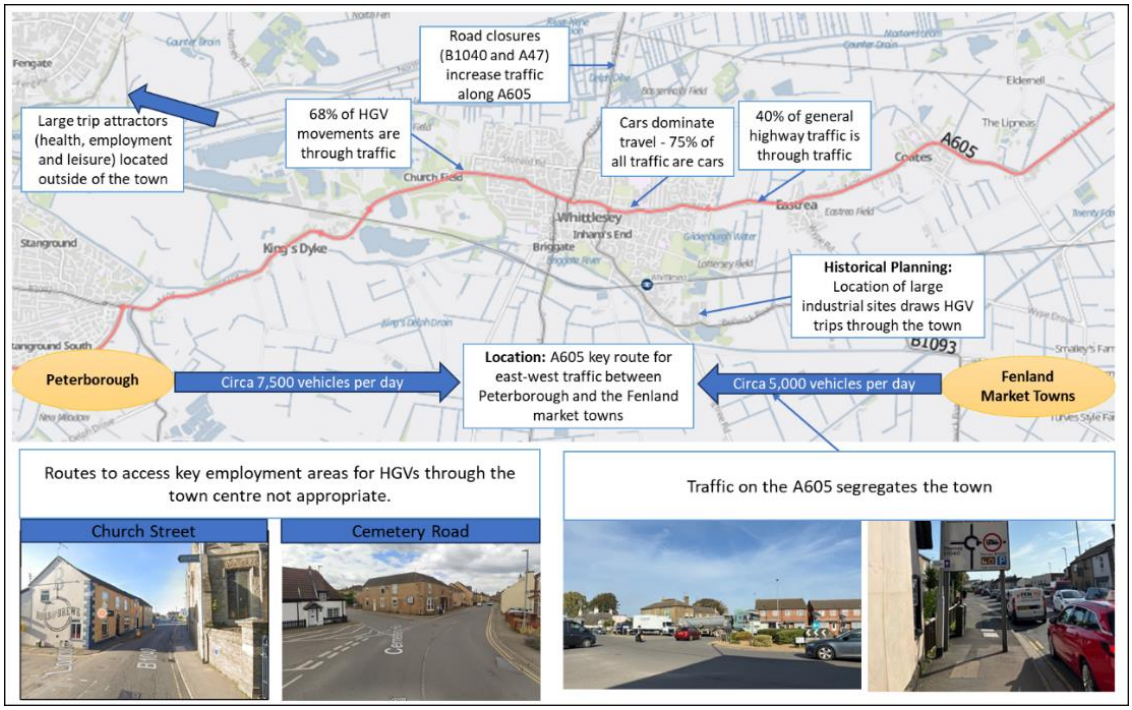
Whittlesey is a historic market town situated in Fenland to the east of Peterborough, with a rich heritage and culture, and a long-established history. Although the historic buildings and narrow streets provide an attractive offer for those who live in and visit the town, it also impacts on local access and transport.

To the east of the town are the market towns of March and Wisbech, the Fenland washes to the north and substantial industrial areas on the edges of the town. The A47 and A604 form the most significant links between Peterborough and the rest of Fenland, with the latter passing directly through Whittlesey.

The town benefits from its proximity to Peterborough, which can offer education, employment and healthcare opportunities. A key focus for the town is how it can further benefit from that connection, while still maintaining a proudly independent identity and distinct local culture

At present, Whittlesey experiences a multitude of transport related issues that is having an impact on the daily activities of the town and could potentially stunt local growth, which is likely to worsen if left unchecked. These issues are summarised in Figure 2.25 below.

Figure 2.25: Summary of key issues in Whittlesey



Source: Mott MacDonald

The transport network in Whittlesey and the surrounding area is dominated by the use of motor vehicles, with active modes only accounting for 2% of all traffic and only 16% of households in Fenland having access to no cars or vans. This likely makes car use the go to method of travel for residents and visitors. Despite this car dominance, there are a limited number of roads into or out of Whittlesey. If these are temporarily closed due to flooding or maintenance work, traffic within the town can be severely impacted.

Through traffic along the A605 through Whittlesey is seen as being an issue, with 36% of vehicles entering the town from the east continuing through to the west towards Peterborough. This issue is amplified for HGVs, with 68% of HGV movements being through traffic.

The location of Whittlesey and its amenities, including Peterborough to the west, Whittlesey Washes to the north, large industrial sites to the south and March to the east all pose their own issues to the transport system in the town. These will all have to be taken into consideration when developing potential options for consideration.

Overall, there is a clear need for intervention in Whittlesey to increase the resilience of the road network, improve sustainable access and reduce HGV and general traffic levels to improve journeys and protect the town's historic nature.

3 Economic Dimension

The purpose of the Economic Dimension is to set out the process for identifying and appraising options that meet the requirements of the Scheme and the Scheme objectives. The Economic Dimension presents the economic, social and environmental benefits and costs that inform the overall Value for Money assessment for each shortlisted Scheme options, which have come through an initial longlist options identification and assessment stage.

3.1 Overview

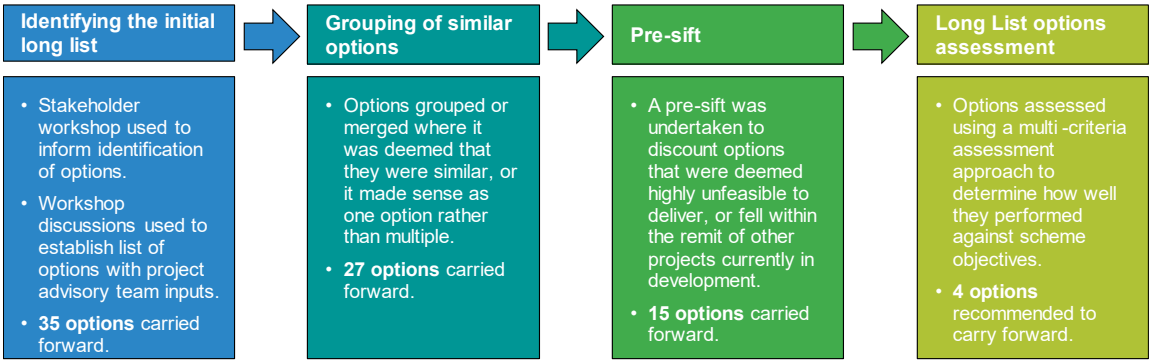
The Economic Dimension is set out in two stages, the first presents the longlisting stage where a wide range of possible options have been identified and appraised. The second stage presents the development of the initial shortlisted options which have then been appraised following Transport Appraisal Guidance (TAG) to present a Value for Money assessment of each option. This process enables a recommendation for a preferred way forward for the Scheme.

3.2 Longlist options assessment

The development of a longlist of options is a crucial step in Scheme development and the business case development process, ensuring that a wide range of options are considered and assessed. The longlist optioneering process thus demonstrates that a robust decision-making process has been carried out in arriving at a longlist of appropriate and suitable options.

The process for identifying and assessing the longlisted options is set out in the Longlist Options Assessment Report (Appendix D) and Options Appraisal Report (Appendix E). In summary this captures how the project identified a longlist of potential options through stakeholder engagement, and with advisory input. These options were sifted, before an assessment against the sub-objectives was carried out using a multi-criteria scoring approach.

Figure 3.1: Longlist options identification and assessment process



3.2.1 Identifying the initial longlist

Building off the Case for Change (presented in Section 2.2), a stakeholder workshop was held to discuss and identify all potential options for the Scheme that could meet the Whittlesey Relief Road Scheme objectives. Stakeholders included representatives from Fenland District Council (FDC), Cambridgeshire & Peterborough Combined Authority (CPCA), Cambridgeshire County Council (CCC) and Peterborough City Council (PCC), Sustrans, Environment Agency, Stagecoach, Network Rail and Greater Anglia.

A total of 35 options were identified, covering a wide range of solutions including relief roads; public transport enhancements; active travel enhancements; parking management; HGV re-routing; and alterations to the A605.

3.2.2 Grouping of similar options

Due to the large number of options, and high similarity between options, a decision was made to consolidate some options in advance of any sifting or assessment. Options were grouped where it was deemed that the sifting process was unlikely to differentiate between options. This included:

- Options related to restricting car use e.g. clean air zone and congestion charging, grouped into Driving disincentives.
- Options related to car parking management e.g. introducing car park charging and reducing car parking spaces grouped into Park & Ride.
- Options related to HGVs e.g. HGV restrictions based on weight or time grouped into HGV re-routing.
- Options related to local bus offer e.g. Demand Responsive Travel and local circular bus service grouped into Localised Public Transport enhancements.
- Various options for active travel enhancements grouped into Active Travel infrastructure improvements.

This resulted in the initial longlist of options being reduced from 35 to 27 options. The full list of initial longlisted options is set out in Appendix D.

3.2.3 Pre-sift

A pre-sift was undertaken to discount options that were out of scope; against policy aspirations; do not sufficiently address Scheme objectives, are highly unfeasible; or fell within the remit of other projects and/or organisations.

Table 3.1: Discounted options

Option name	Rationale for discounting
Northern Relief Road	There are significant environmental constraints to the north of Whittlesey, such as the Whittlesey (Nene) Washes, that would likely result in significant challenges to delivery, including likely significant opposition from key stakeholders such as Environment Agency. The cost of implementing a northern relief road is likely to incur significant costs to mitigate negative environmental impacts. In addition, a northern relief road does not serve the industrial estates to the south of the town, so would fail to address a key issue which is HGV through traffic.
Clean Air Zone / Congestion Charging	These options were considered unlikely to be deliverable on a small scale. Examples of congestion charging in the UK are extremely limited, and no immediate example for a town. Similarly with Clean Air Zones, these are used for large cities where there are issues with air quality exceeding legal limits. In Whittlesey, air quality legal limits are not currently exceeded and, therefore, it is unlikely that a Clean Air Zone would be warranted.
Removing traffic generators	Removing traffic generators from Whittlesey, i.e. not building new housing or employment sites, and moving existing employment sites out of the town, would greatly impact upon the towns economy and housing needs and would be extremely unlikely to be deliverable. This approach is not within the existing Fenland Local Plan and would require significant changes to existing planning policy.
Improved signage	Improving signage to direct traffic away from the town, for example via the A47, is considered to have limited impact in achieving the objectives of the WRR Scheme on its own.
Improvements to the A47	Improvements to the A47 which is part of the Strategic Road Network is within National Highways scope, and outside of scope and influence of the WRR Scheme.

Option name	Rationale for discounting
Improved bus service frequency	Service frequency is largely within the control of bus operators who operate services on a commercial basis. For them to increase frequencies, certainty over increased patronage that would cover the costs of the additional services would be required. CPCA currently have intentions to improve services in Whittlesey through their current Bus Service Improvement Plan (BSIP).
Improved rail service frequency	The ability to influence and change the frequency of rail services at Whittlesea is deemed out of scope, as this would require wider changes to the rail network such as the Ely Capacity Enhancements. This is within the remit of Network Rail.
Promoting Whittlesea Railway Station as a parkway station	Works to improve the station and its car parking facilities are being progressed separately to the WRR Scheme. FDC have received funding from CPCA to deliver £3m of improvements as part of the Whittlesea Station Enhancement Programme. Building a large parkway station would likely require a link road to serve it. Otherwise, there is a risk that traffic would be drawn down Station Road, thereby not alleviating issues on the A605 from through traffic and potentially adding more traffic to an unsuitable road.
New river bridges	This option is likely to have limited impact in addressing the Scheme objectives due to the location of the river south of Whittlesey and the population it would serve.
Increase highway capacity by widening the A605 within Whittlesey	To deliver this would require significant intrusive construction, reducing kerb space, and the need to acquire land or property for demolition. This is considered significantly unfeasible and, while it would increase highway capacity on the A605, it would not address the issues of through traffic and associated impacts of traffic within the town.
Level crossing improvements	As the level crossing is within Network Rail ownership, any changes would be in their remit, therefore out of scope for the WRR Scheme. However, the level crossing is being considered as part of the Whittlesea Station Enhancement Programme.

3.2.4 Longlist options assessment

The outcome from the pre-sift resulted in 15 options being identified as the longlist. These were progressed to more detailed assessment.

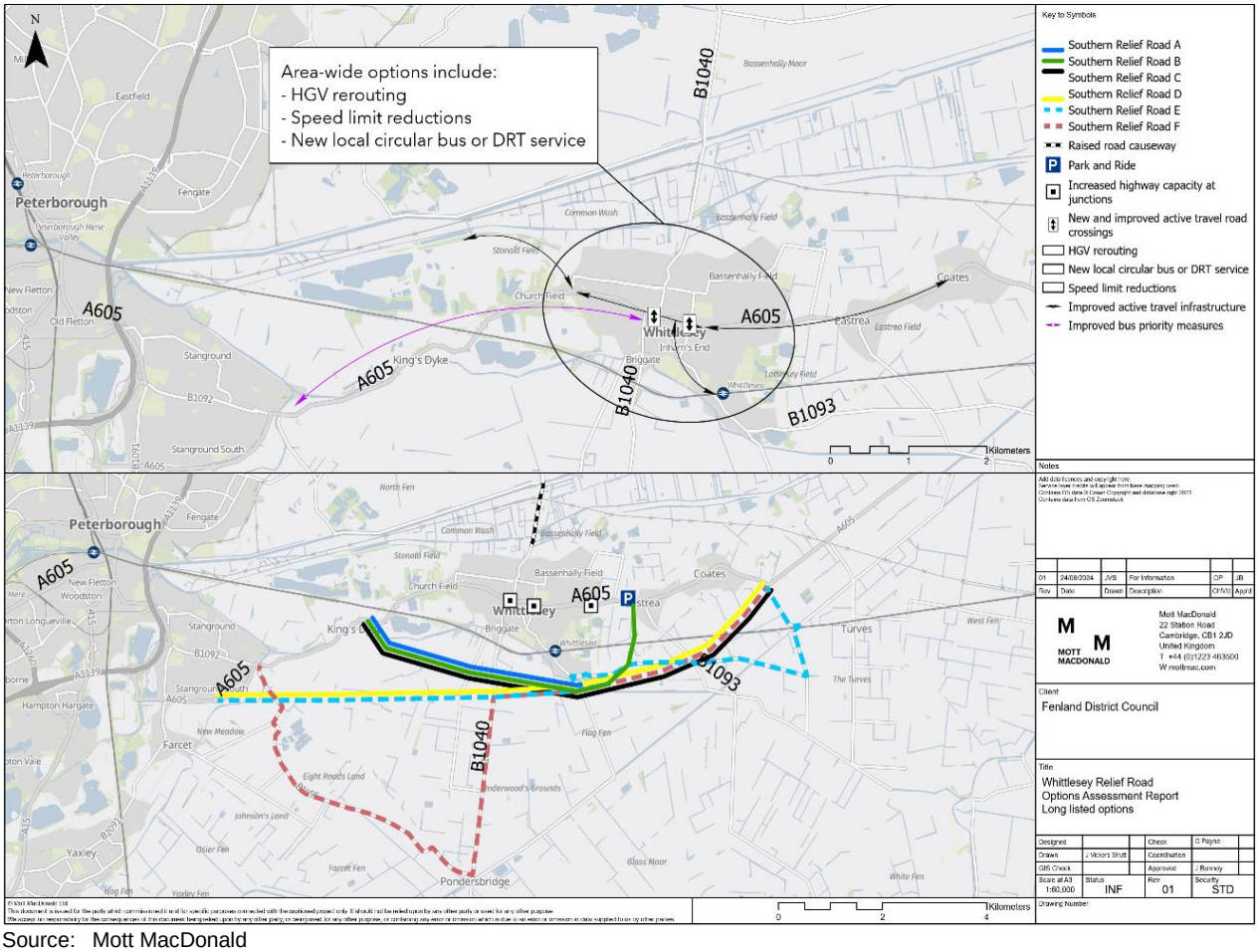
Table 3.2: Longlisted options

No.	Option name	Option description
2	Southern Relief Road A (Blue route alignment[19])	Relief road to the south of Whittlesey between Ralph Butcher Causeway and B1093, near Whittlesea Station, linking to industrial areas.
3	Southern Relief Road B (Grey route alignment)	Relief road to the south of Whittlesey between Ralph Butcher Causeway and A605 Eastrea Road, west of Eastrea.
4	Southern Relief Road C (Black route alignment)	Relief road to the south of Whittlesey between Ralph Butcher Causeway and A605 March Road, east of Coates.
5	Southern Relief Road D (Yellow route alignment)	Relief road to the south of Whittlesey between A605 Whittlesey Road at Cardea Morrisons roundabout and A605 March Road, east of Coates.
6	Southern Relief Road E (involving upgrade of roads to southeast and new relief road to the west)	Upgrade of existing roads to the southeast (e.g. B1093) and construction of new relief road linking these to the A605 west of Whittlesey.
7	Southern Relief Road F (involving upgrade of roads to southwest and new relief road to the east)	Upgrade of existing roads to the southwest (e.g. Ramsey Road and B1040) and construction of new relief road linking these to the A605 east of Whittlesey.

[19] The route colours for the relief road options stated in Table 3.2 correspond to the route alignments shown in Figure 3.2.

19	Improved bus priority measures	Improving the attractiveness of bus services within Whittlesey through the introduction of bus priority measures along the A605, helping to improve journey time reliability and speeds.
20	Bus based Park and Ride	Park and Ride site to the east of Whittlesey, providing parking provision for car journeys from the east. (Eastrea/Coates/March) with direct bus service into Whittlesey and Peterborough.
28	New and improved active travel road crossings of the A605	Additional signalised crossing points of the A605 to reduce severance for pedestrians and cyclists.
29	Speed limits	Reduce speed limits along the A605 to improve safety for road users.
31	Increase highway capacity at junctions	Increase capacity of the main junctions through Whittlesey on the A605 (e.g. through roundabout signalisation).
33	Raised road/causeway road to the north	Construction of a raised road/causeway along existing B1040 road to limit impact of flood events.
36	Active travel infrastructure improvements	Improvements to the active travel infrastructure within Whittlesey to improve connectivity (e.g. shared-use paths; footway improvements; cycleways).
37	HGV rerouting	Rerouting of HGV travel within Whittlesey to limit the impact on the network. (e.g. time/weight restrictions).
38	New local circular bus or DRT service within Whittlesey	Introduction of a local circular bus route within Whittlesey, providing connection between key locations. This includes the potential for the service to be demand-responsive.

Figure 3.2: Longlisted Options



Source: Mott MacDonald

The sifted longlisted options were assessed against a Multi-Criteria Assessment framework, built using Mott MacDonald's in-house Investment Sifting and Evaluation Tool (INSET). INSET is a decision-making support process that helps manage information on investment options and to evaluate them. The tool uses a set of assessment themes that group together homogenous criteria to appraise each option.

The longlisted options were assessed using a five-point scale against the four main themes and SMART sub-objectives, as set out in Section 2.2. The full assessment criteria scoring can be found in Appendix D.

Note - all scoring for the criteria were weighted the same, generally applying a 5-point scale (the carbon assessment criteria was scored on 7-point scale to accommodate additional granularity between the options to be scored. The scores are based on qualitative assessments, against defined scoring scales (set out in Appendix D), with justification for each scoring captured within the INSET tool.

The options assessment outputs (Figure 3.3) suggest that no single option delivers strongly against all objectives. Instead, the best performing options each have different areas of strength against individual themed objectives.

Figure 3.3: Longlisted options assessment results

Rank	Scheme	Sustainable Growth	Connectivity and Access to Opportunity	Health, Wellbeing and Sense of Community	Environmental	Total Score
1	Southern Relief Road B (Green route alignment)	1.00	0.33	0.67	0.33	0.58
1	Southern Relief Road C (Black route alignment)	1.00	0.33	0.67	0.33	0.58
1	Southern Relief Road D (Yellow route alignment)	1.00	0.33	0.67	0.33	0.58
4	Bus based Park and Ride	0.50	0.50	0.83	0.28	0.53
5	HGV rerouting	0.50	0.17	1.00	0.39	0.51
6	Improved bus priority measures	0.50	0.50	0.50	0.28	0.44
6	New local circular bus or DRT service within Whittlesey	0.50	0.50	0.67	0.11	0.44
8	Southern Relief Road E (involving upgrade of roads to south east and new relief road to the west)	0.75	0.17	0.33	0.28	0.38
8	Active travel infrastructure improvements	0.25	0.33	0.83	0.11	0.38
10	Southern Relief Road A (Blue route alignment)	0.50	0.00	0.50	0.28	0.32
11	Southern Relief Road F (involving upgrade of roads to south west and new relief road to the east)	0.50	0.00	0.33	0.28	0.28
11	New and improved active travel road crossings of the A605	0.00	0.17	0.83	0.11	0.28
13	Speed limit reductions	-0.50	-0.17	0.50	0.00	-0.04
14	Raised road/causeway road to the north	0.50	0.33	-0.50	-0.56	-0.06
15	Increase highway capacity at junctions	0.50	0.50	-1.00	-0.56	-0.14

Source: Mott MacDonald – Appendix D: Longlist Options Assessment Report

The best performing options for **sustainable growth** are the Southern Relief Road variants. These options score well as they could provide the significant additional capacity while also allowing for reduced journey times along the A605. Analysis of ANPR data suggested that 20% of all traffic and 45% of HGV traffic could potentially utilise a Southern Relief Road which exceeds the 16% growth in future trips. Options that do not perform as well for this objective tend to be those focused on improving other modes such as active travel infrastructure and bus-based options. These options do not offer the potential to accommodate the predicted growth in trips as a result of new developments. Speed limit reductions score poorly for this option as it may result in lower road capacity and throughput and could increase car journey times.

The best performing options for **connectivity and access to opportunity** are bus-based options as these provide benefits in accessing opportunities and are likely to result in increased public transport patronage. Increased highway capacity at junctions may also result in improved bus reliability as well as providing additional resilience and therefore also scores well. While the relief road options score well against improving access to opportunities and improving the resilience of the network, they do not score as well for supporting the integration of public

transport and supporting the use of sustainable modes, therefore the overall score against the main objective for connectivity is not as high.

For **improved health, wellbeing and sense of community,** HGV rerouting is the best performing option. HGVs are large, loud and polluting and therefore rerouting these away from the centre of Whittlesey could see great improvements to public health and perceptions within Whittlesey. Highway options such as the relief road could result in traffic being taken away from Whittlesey, resulting in benefits along the A605. In comparison the raised road/causeway and increased highway capacity at junctions score very poorly as they could increase traffic levels, therefore contributing to increases in NO_2 concentrations, reduced safety, and worse public perceptions of the town centre.

When assessed against **environmental** objectives, the rerouting of HGV traffic scores well as it is likely to reduce the level of such traffic through Whittlesey. It is noted that emissions may increase elsewhere as HGVs undertake alternative (and potentially longer) routes and therefore this option does not score as well against carbon impact. The three main relief road options also score well against the environment objective as these may contribute to the diversion of traffic away from the centre of Whittlesey. These options may have a high carbon impact however which reduces their overall performance against this objective. Options to provide increased highway capacity at junctions and a raised road score poorly as these could encourage additional tail-pipe emissions and may be carbon intensive to construct. Although active travel options may be thought to score well against an environmental objective, it is thought that these options may have no impact on general through traffic or HGV through traffic.

3.2.4.1 Sensitivity test

Deliverability was included as a sensitivity test to consider what impact issues such as cost, land take, planning requirements, and environmental constraints may have on the overall scoring of the options and their feasibility to deliver.

Figure 3.4: Multi-Criteria Assessment results - deliverability

Rank	Scheme	Deliverability
1	New local circular bus or DRT service within Whittlesey	0.67
2	Speed limit reductions	0.58
3	Active travel infrastructure improvements	0.56
4	HGV rerouting	0.50
5	New and improved active travel road crossings of the A605	0.42
6	Improved bus priority measures	-0.06
7	Increase highway capacity at junctions	-0.22
8	Bus based Park and Ride	-0.25
9	Southern Relief Road A (Blue route alignment)	-0.58
10	Southern Relief Road E (involving upgrade of roads to south east and new relief road to the west)	-0.61
11	Southern Relief Road C (Black route alignment)	-0.64
11	Southern Relief Road F (involving upgrade of roads to south west and new relief road to the east)	-0.64
13	Southern Relief Road D (Yellow route alignment)	-0.67
14	Southern Relief Road B (Green route alignment)	-0.72
15	Raised road/causeway road to the north	-0.78

Source: Mott MacDonald

The options considered to have the highest **deliverability** are Localised Public Transport, speed limit reductions, Active Travel Infrastructure and HGV rerouting, which all score well due to their potential for quicker implementation times, lower costs and limited land acquisition requirements. Although HGV rerouting scores relatively well, it would be difficult to deliver this option without significantly affecting businesses in Whittlesey as there are no real viable alternative routes currently serving the industrial estates to the west or south of the town. Larger scale interventions, such as a relief road and causeway, score poorly for deliverability due to high assumed costs, land requirements and complexity of their construction. Of the relief road options, the black route is deemed the most deliverable.

3.2.5 Arriving at the shortlist

A more detailed examination of how the options perform against each themed objective is presented in Appendix D. The conclusion of the options assessment is that no single option delivers strongly against all of the Scheme objectives, with each option having specific areas of strength and weakness. Therefore, the conclusion of the longlisting stage was that by packaging the better performing options together - where they complement each other across the themed objectives - the overall outcomes from investment could be improved. The final shortlisted options reflect this packaging approach.

Figure 3.5: Best performing longlisted options by theme

Scheme	Sustainable Growth	Connectivity and Access to Opportunity	Health, Wellbeing and Sense of Community	Environmental	Total Score
Southern Relief Road	1.00	0.33	0.67	0.33	0.58
Bus based Park and Ride	0.50	0.50	0.83	0.28	0.53
HGV rerouting	0.50	0.17	1.00	0.39	0.51
Improved bus priority measures	0.50	0.50	0.50	0.28	0.44
New local circular bus or DRT service within Whittlesey	0.50	0.50	0.67	0.11	0.44
Southern Relief Road E (involving upgrade of roads to south east and new relief road to the west)	0.75	0.17	0.33	0.28	0.38
Active travel infrastructure improvements	0.25	0.33	0.83	0.11	0.38

Source: Mott MacDonald – Appendix D: Longlist Options Assessment Report (note: for the purpose of this table, the relief road options have been grouped and presented as one)

The Southern Relief Road may achieve sustainable growth ambitions but performs poorly across the other themes. HGV rerouting scores higher against Health, Wellbeing and Sense of Community, as well as the Environmental themed objective, but there are challenges with the viability of the option without a clear alternative route for HGV traffic. Combining these options helps to strengthen overall outcomes.

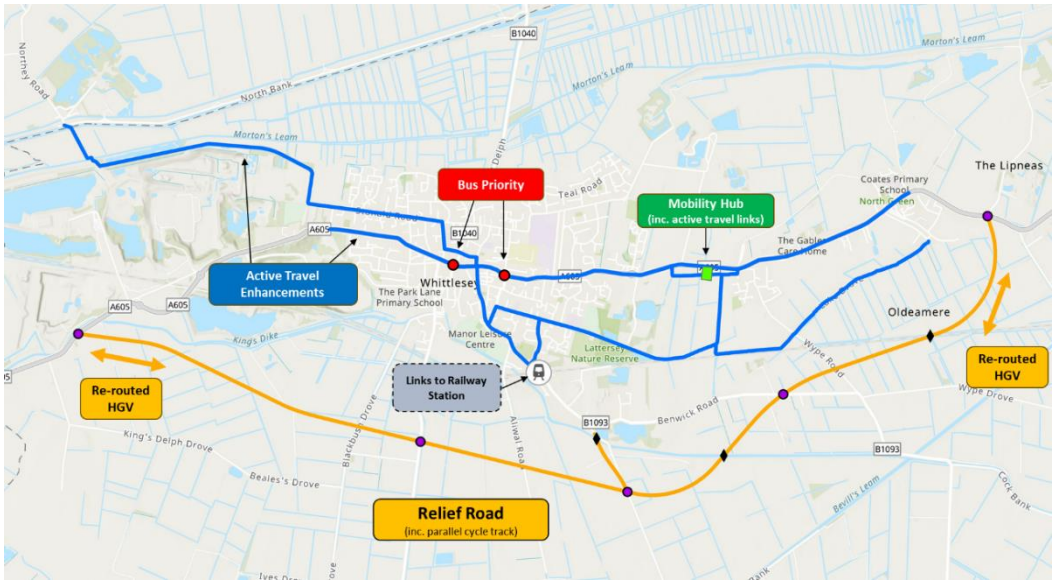
The delivery of a relief road would also release road capacity to enable complementary public transport improvements, such as improved bus priority, and/or active travel infrastructure enhancements. By packing these measures together, the overall Scheme outcomes would improve in relation to Connectivity and Access to Opportunity, as well as Enhanced Health, Wellbeing and a Sense of Community and improved Environmental conditions for the town.

For the purpose of packaging, the best performing relief road route alignment (Black route) is proposed to be taken forward. It is proposed that further investigation of exact routing options will take place at later stages of the Scheme development process.

The outcome of this packaging process resulted in 4 options to be progressed to concept design, more detailed appraisal and consultation:

- **Option 1** - Relief Road with HGV re-routing
- **Option 2** - Relief Road with HGV re-routing and bus priority improvements
- **Option 3** - Relief Road with HGV re-routing and active travel improvements
- **Option 4** - Mobility Hub with active travel improvements

Figure 3.6: Shortlisted options

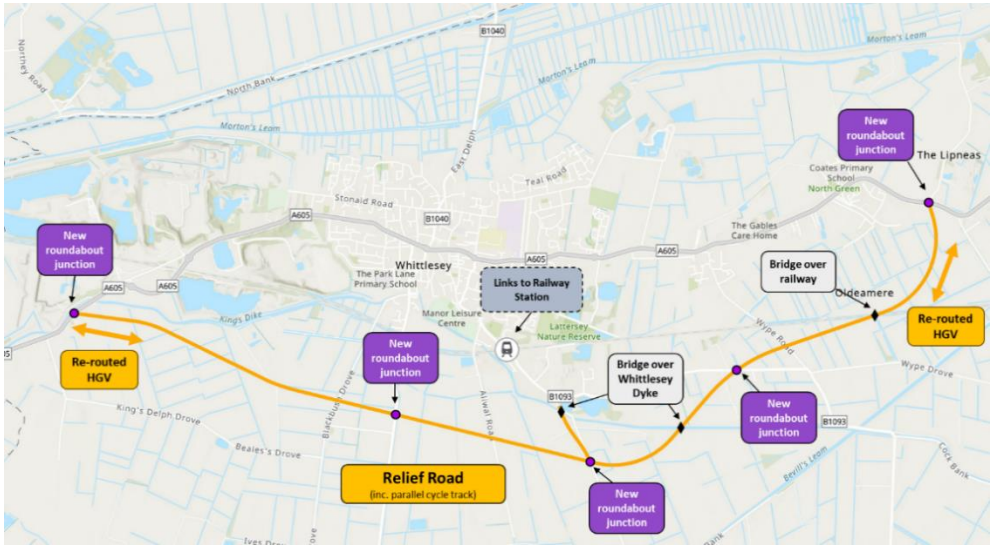


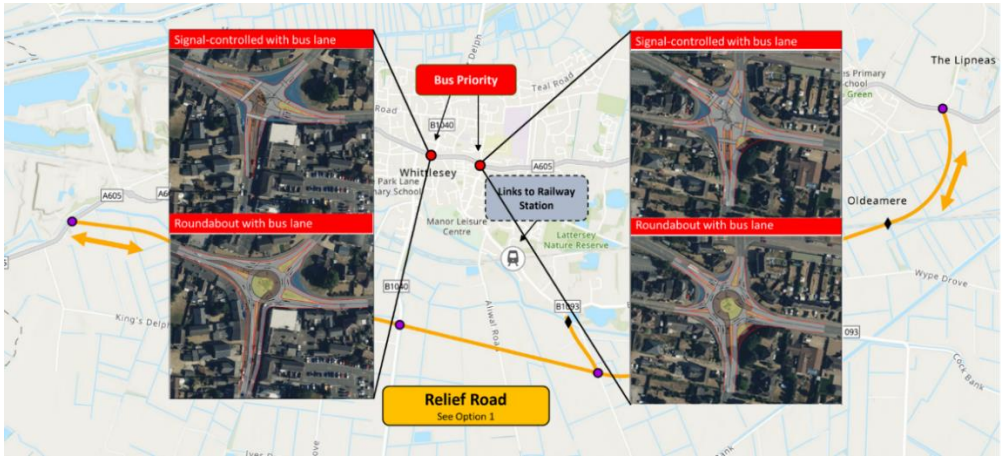
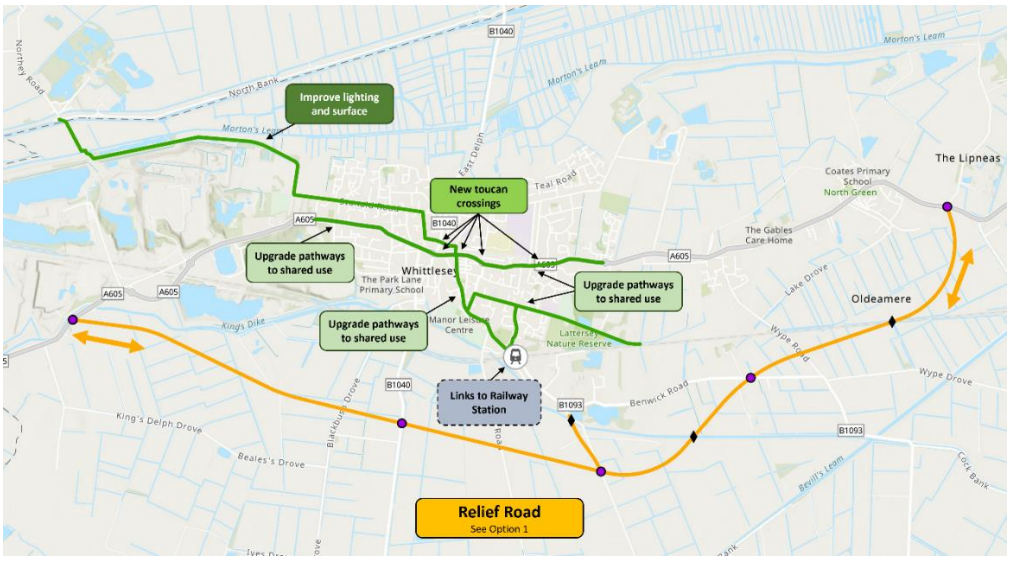
Source: Mott MacDonald

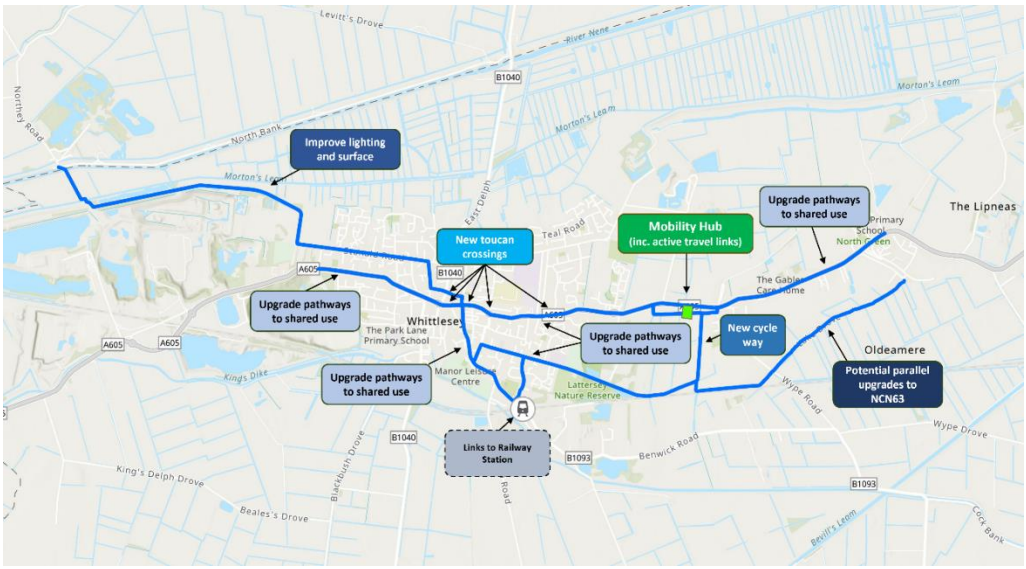
3.2.6 Shortlist option descriptions

Each of the four options are described in more detail below in Table 3.3**.**

Table 3.3: Shortlist option descriptions

Option	Description
Option 1 – Relief Road with HGV re-routing	A new single carriageway road running to the south of Whittlesey town centre, that includes a parallel cycle track. Coming from the west of the town, the new road would divert from the A605 to the south of King's Dyke, running across fields to link into Turningtree Road, to the south of Station Road, enabling access to Whittlesea railway station. The road would then continue to the east, crossing over Whittlesey Dyke and the railway line, before connecting back into the A605 at Wisbech Road. The road would include junctions at key intersects with roads connecting into Whittlesey, including the B1093 Turningtree Road to allow access to the railway station and industrial sites to the south of the town, and Wype Road to allow access to Eastrea.
	

Option 2 – Relief Road with HGV re-routing and bus priority improvements	As with Option 1, but to also include the introduction of new bus priority measures through the town and along the A605 to Peterborough. Measures will be introduced at the junctions between A605 and B1040, and the A605 and B1093, that will provide priority for buses accessing these roundabouts. This could be in the form of either enhancing the current roundabouts to provide a bus lane through them, or through the introduction of signal-controlled junctions that would allow for buses to be given priority. Enhanced pedestrian crossing facilities are also introduced in the form of either islands or traffic lights. This option could see a downgrade in road space for cars at these junctions to provide bus priority.
	
Option 3 – Relief Road with HGV re-routing and active travel improvements	As with Option 1, but to also include the introduction of new active travel improvements through the town and along the A605. This will include segregated active travel provision where possible along the A605 through the town, including enhanced junctions with greater priority for active travel to allow for safe and seamless connections across the town, and the A605. Improvements will be made to National Cycle Network route 63 through the town, from the northwest outskirts of the town to Lattersey Nature Reserve. This will also include an improved cycle link to the station along Station Road from the A605, New Road, and Hawthorne Drive.
	

Option 4 – Mobility Hub with active travel improvements	A new Mobility Hub located to the east of the town which can improve access to existing bus services and enable the introduction of shuttle bus type express services linking into the town centre, Whittlesea station, and Peterborough. To include improved active travel provision from across the town to both the Mobility Hub and Whittlesea station to encourage local trips to access bus and rail services without the use of a car. **Mobility Hub Assumptions:** ● Provision for circa 200 spaces, including for blue badge holders, and cycle storage facilities. ● Provision of seating and waiting facilities, with the potential also for bike pumps, toilets and showering facilities. ● Assumed that in order to attract users the site, it would be served by either dedicated services, or by existing services with higher frequency (circa 2 buses per hour), offering an express-type service to Peterborough with limited stops i.e. Whittlesey town centre and Peterborough city centre.
	

3.3 Shortlist option appraisal

Each of these four shortlisted Options have undergone appraisal to assess each of the economic, environmental, social and wider economic impacts. Full details of this appraisal can be found in the Options Assessment Report (Appendix E).

3.3.1 Appraisal approach

The appraisal of the Scheme focuses on illustrating how the scheme benefits meet the individual Scheme objectives. As the Scheme options include highway, bus and active travel elements, the direct impacts upon travel by each mode have been separately appraised, with the outcomes then used to help build the economic, environmental and social appraisals of each of the four Options.

A summary of the approach to appraisal is outlined in Table 3.4, while a detailed description of the approach is available in the Appraisal Specification Report (Appendix F). In line with TAG – The Transport Appraisal Process (May 2018), under Section 3.1 on scope for proportionality, where impacts are unlikely to have influence on the Scheme's overall value for money, no further assessment has occurred. The TAG databook (May 2024) has been used throughout this appraisal process.

Table 3.4: Summary of appraisal approach

Impact	Appraisal approach
Highway traffic user impacts	Quantitative / Monetised
Bus user impacts	Quantitative / Monetised
Active travel impacts	Quantitative / Monetised
Accident impacts	Quantitative / Monetised
Environmental impacts	Qualitative
Social impacts	Qualitative
Wider economic impacts	Qualitative
Carbon impacts	Quantitative

3.3.2 Monetary impacts

3.3.2.1 Economic monetary impacts

Each of the four shortlisted scheme options will impact upon overall network journey times and distance travelled for business, commuter, and other trip purposes. This will generate economic efficiency benefits for these travellers.

Table 3.5 provides a summary of the direct economic benefits to consumer users, business users and providers as a result of the changes in flows and journey times for each option. These values have been discounted to 2010 and converted to market prices using an adjustment factor of 1.19.

Table 3.5: Economic efficiency user benefits (£,000, 2010 prices discounted to 2010, over a 60-year appraisal period)

Option	Option 1	Option 2	Option 3	Option 4
Consumer users (commuting)	£2,983	£3,004	£3,123	£4,378
Consumer users (other)	£5,867	£5,880	£5,867	£1,320
Business users and providers	£9,596	£9,597	£9,596	£159
Economic efficiency total	**£18,417**	**£18,481**	**£18,586**	**£5,857**

Source: Mott MacDonald

These results show that Options 1, 2 and 3 bring about very similar levels of user benefits for all user classes, with a difference range of only £169,000 over the 60-year appraisal period between them, with Option 3 coming out on top with over £18.5 million This is due to the impact of the relief road providing journey time savings for consumer and business users who are able to bypass the traffic on the A605 within Whittlesey town centre when travelling between Peterborough and Fenland.

These options specifically provide journey time and vehicle operating savings for business users. By diverting HGVs away from the narrow streets in Whittlesey, and from the centres of Eastrea and Coates, onto the relief road, this provides a more appropriate route for HGVs to access the industrial area to the south of Whittlesey. Option 2 sees a small increase in benefits from the bus priority measures and Option 3 slightly higher again from active travel improvements. However, these measures account for a small level of the overall benefit values for these options.

Option 4 provides much lower overall economic efficiency benefits of £5.9 million. While the commuting benefits are higher than the other three options because of the impact it could have on public transport the lack of relief road or alternative routes for general traffic or HGVs, means there is much less benefit for other user groups, especially with business users.

3.3.2.2 Network resilience monetary impacts

Alongside the journey time benefits forecast to be delivered by the Scheme under normal day-to-day transport network operations (as set out in Table 3.5), another important benefit of the Scheme options is the potential to support network resilience.

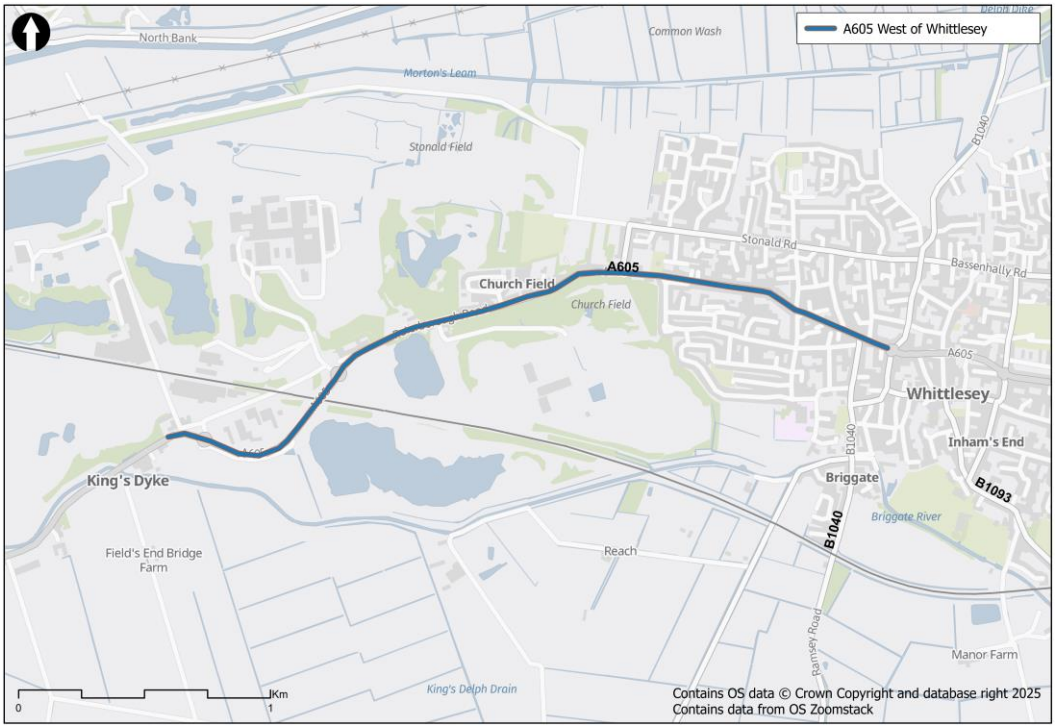
As outlined within the Strategic Dimension, Whittlesey town centre regularly suffers as the result of frequent disruptions to the operation of the local road network. This includes closures of the B1040 and North Bank to the north of the town, that can be in the region of 24 and 30 days per year due to flooding events.[20] More recently, the partial closure of the Ralph Butcher Causeway (RBC) due to concerns over its structural stability, with one-way working implemented for traffic, has further compounded this issue, highlighting the lack of resilience in the road network.

In order to examine how the Scheme options would support the resilience of the transport network, a sensitivity test has been carried out that estimates the potential additional benefits from average journey times savings resulting from the introduction of a relief road (Options 1, 2 and 3) for those impacted by road closures and diversions. This sensitivity test is set out in detail in Appendix O.

Analysis focused on the key section of the A605 between RBC and the A605/B1040 Roundabout shown in Figure 3.7, where delays have previously been identified. The test used journey time data for the following time periods[21]:

- **2nd Oct – 20th Oct 2023** – Normal operation (B1040 and RBC open)
- **11th Dec – 15th Dec 2023** – B1040 was closed due to flooding
- **12th Feb – 16th Feb 2024** – B1040 was closed due to flooding
- **7th Oct – 11th Oct 2024** – B1040 was closed due to flooding and RBC traffic restrictions in place

Figure 3.7: A605 impacted by road closures



Source: Mott MacDonald

[20] Environment Agency flood warning records 2019-2024.

[21] TomTom data

The analysis focused on average travel times along this section during the AM (08:00-09:00) and PM (17:00-18:00) peak periods in both the eastbound and westbound directions. The results are shown in Table 3.6.

Table 3.6: Average travel time (minutes) along the A605 west of Whittlesey

Direction	Time Period	October 2023 (Normal conditions)	December 2023 (B1040 closed)	February 2024 (B1040 closed)	October 2024 (B1040 closed & restrictions on RBC)
Westbound	AM	4m 48s	10m 15s	10m 19s	12m 15s
	PM	4m 34s	4m 49s	5m 09s	11m 16s
Eastbound	AM	4m 51s	5m 15s	5m 14s	6m 49s
	PM	4m 54s	9m 05s	8m 48s	9m 12s

Source: TomTom data

The results clearly demonstrate that the closure of the B1040 has a significant impact upon average journey times. This is particularly the case in a westbound direction in the AM peak, and the eastbound direction in the PM peak where journey times roughly double.

Using the outputs from the analysis of the TomTom data, along with the agreed frequency of the occurrences of closures (27 days on average per year), an estimate of the potential additional journey time savings that could result on days when the B1040 is closed through the delivery of an option including a relief road, has been produced. The theory being that any option that helps some drivers avoid Whittlesey town centre, such as a relief road, can help improve the capacity of the A605 to better handle diverted traffic.

The full estimates of average travel time savings for individual movements across Whittlesey as a result of introducing a relief road are reported in Appendix O. The largest estimated average journey time saving are for those trips, in the AM peak, originating to the east of Whittlesey and travelling through to the west. These were recorded as having an average saving of **7 minutes 44 seconds.**

The estimated average journey times savings for all movements have been monetised and projected across the 60-year appraisal period and discounted to produce an **estimate of additional PVB of £4.1m, based on 27 days of closure pa**. If a higher number of closure days of 55 is applied[22] the estimated PVB increases to £8.3m.

The results illustrate that there are clearly additional benefits to be realised through the introduction of a relief road option that would address the needs of Whittlesey and improve the resilience of the highway network through the town.

Further appraisal of the scheme's impact on network resilience is recommended. Specifically, using the Cambridge and Peterborough Sub-regional Model, which is currently being developed, to capture a broader network-wide assessment of the scheme's benefits, including traffic re-routing. This would help illustrate how the scheme supports network resilience.

3.3.2.3 Environmental and social monetary impacts

In addition to the economic efficiency user benefits, there are also potential environmental and social monetary benefits that may result from the Scheme options. In terms of the monetary benefits for each of these Options, these only relate to the active travel aspects of each Option and does not take into account for the impact of the relief road or changes to road user

[22] 2012/13 data recorded 55 days of closure of North Bank – Value sourced from the Major Scheme Business Case Report | Version 3.0 | September 2018 (Skanska)

behaviour. Accidents, however, also include the monetary benefits from the COBALT analysis of the highway improvements in Options 1,2 and 3. These benefits are outlined in Table 3.7.

Table 3.7: Environmental and social economic benefits (£,000, 2010 prices discounted to 2010, over a 60-year appraisal period)

Option	Option 1	Option 2	Option 3	Option 4
Environmental benefits				
Noise	£1.5	£1.5	£3.1	£2.7
Local air quality	£0.6	£0.6	£1.3	£1.2
Greenhouse gases	£8.3	£8.3	£17.0	£15.0
Total	**£10.4**	**£10.4**	**£21.4**	**£18.9**
Social benefits				
Journey quality	£785	£785	£1,178	£1,136
Physical activity	£1,428	£1,428	£2,991	£2,905
Accidents	£3,273	£3,273	£3,297	£123
Total	**£5,486**	**£5,486**	**£7,466**	**£4,164**

Source: Mott MacDonald - Monetary values relate to the active travel aspects of each option. Accidents also includes benefits from COBALT.

These results show that Option 3 provides the greatest level of both environmental and social benefits with £21,360 and £7.5 million respectively. The majority of the environmental benefits are derived from a reduction in greenhouse gases as a result of alleviating congestion, improving traffic flow and reducing emissions associated with stop-start driving engines, and encouraging active travel. However, as the calculations only account for the active travel interventions, these reductions in emissions may be partially offset by the increase in journey lengths for those using the relief road.

While Options 3 and 4 have very similar active travel provision in Whittlesey, Option 3 includes the cycle track that runs parallel with the relief road, whilst Option 4 includes additional provision along the A605 to the east of Whittlesey, linking to the Mobility Hub as well as Eastrea and Coates. Overall, both of these routes provide large benefits to physical activity and journey quality, with Option 3 providing slightly more benefit overall than Option 4.

However, as the majority of the accident benefit is calculated by COBALT for the relief road and the potential of moving cars and HGVs away from Whittlesey town centre, reducing the likelihood of collisions, Option 4 sees very little monetary benefit from reducing accidents.

Options 1 and 2 provide near identical levels of environmental and social benefits due to the two schemes being very similar with the measures they are providing. Option 4 performs better than Options 1 and 2 in most areas given the greater focus on sustainable transport, however, due to the lack of an alternative route providing limited accident benefit, Option 4 provides the lowest monetised social benefits. By combining the physical activity and environmental benefits of active travel with the accident reduction benefits of a relief road, Option 3 is the best performing in terms of both environmental and social benefits.

In addition to direct monetary benefits, the Scheme has the potential to raise wider public finances through indirect tax such as fuel costs or public transport operating costs. This does not directly affect the transport budget as the funds are accrued directly to the Treasury. These funds are shown in Table 3.8.

Table 3.8: Wider public finances (£,000, 2010 prices discounted to 2010, over a 60-year appraisal period)

Option	Option 1	Option 2	Option 3	Option 4
Wider public finances	£480	£480	£478	£93

Source: Mott MacDonald

Options 1, 2 and 3 have very similar impacts on wider public finances as they are very similar options, whilst Option 4 provides significantly less benefit due to the increase in operating costs associated with the mobility hub.

3.3.2.4 Summary of monetary impacts

Taking into account economic efficiency user benefits outlined in Table 3.5, the economic benefits outlined in Table 3.7 and the wider public finances outlined in Table 3.8, an overall Present Value of Benefits (PVB) for each Option has been calculated, shown in Table 3.9. A more detailed summary of these monetised benefits for each option is presented in the Analysis of Monetised Costs and Benefits tables in Appendix L.

Table 3.9: Present Value of Benefits (£,000, 2010 prices discounted to 2010, over a 60-year appraisal period)

Option	Option 1	Option 2	Option 3	Option 4
Present Value of Benefits (PVB)	£23,462	£23,498	£25,596	£10,051

Source: Mott MacDonald

This shows that out of the four Options, Option 3 will provide the highest level of monetary benefits with approximately £25.6 million over the 60-year appraisal period. The majority of this benefit is derived from the economic efficiency user benefits driven by the business user benefits as a result of the relief road. This is then supported by the active travel benefits, which gives Option 3 a higher overall value than Options 1 and 2, which follow closely behind.

Option 4 provides much less benefit compared with the other options, with £10 million over the appraisal period. This is due to not having the user benefit or reduction in accidents that are related to the relief road.

In addition, when considering the sensitivity test around network resilience, the options that include a relief road, have the potential to increase monetised benefits between 16% and 35%. The overall impact of including the potential benefits associated with the relief road during closure of the B1040 on the PVBs for Options 1, 2 and 3 are presented in Table 3.10 below.

Table 3.10: Network resilience impact on scheme PVB

	PVB (£,000)	% increase
PVB Range (Options 1,2,3)	£23.5m - £25.6m	
Additional PVB – 27 days of road closures	£4.1m	
Additional PVB – 55 days of road closures	£8.3m	
Overall PVB inc. 27 days of road closures	£27.6m - £29.7m	+16/17%
Overall PVB inc. 55 days of road closures	£31.8m - £33.9m	+32/35%

3.3.3 Non-monetary environmental impacts

An Environmental Impact Appraisal has been conducted to assess the environmental impacts of the shortlisted options. This has been undertaken in accordance with TAG Unit A3 following a qualitative approach, with the level of impact for each topic is summarised using the standard TAG seven-point scale of beneficial, neutral or adverse impacts. A more detailed analysis of the appraisal is available in the OAR (Appendix E).

The environmental topics covered include:

- Noise
- Air Quality
- Greenhouse gases
- Landscape
- Townscape
- Historic Environment
- Biodiversity
- Water

3.3.3.1 Option 1 – Relief Road with HGV re-routing

Through the introduction of the relief road there is the opportunity to reduce traffic flows along the A605 and B1040, and to re-route HGVs away from the centre of Whittlesey. In turn, this could significantly reduce traffic congestion and therefore reducing emissions associated with stop-start driving engines, improving noise levels, air quality and reducing greenhouse gas emissions. By diverting traffic from the town centre, it is also likely to make the area more pedestrian-friendly, leading to an overall improvement in townscape character.

While the reduced congestion and emissions may benefit the historic environment in the market town, the new route may impact known archaeological sites and measures would be required to avoid physical damage to these regionally or nationally important sites.

The proposed relief road would be in flood zone 3a and, therefore, the new road infrastructure will require design and construction of appropriate flood management features to ensure it can withstand flooding events and to avoid damage and ensure the continuity of the transport network.

However, a new road will alter the visual character of the landscape to the south of Whittlesey centre as it will replace existing fields with paved surfaces and infrastructure, which may also have an impact on local biodiversity. The impact on biodiversity will need to be carefully considered and potentially offset in future stages of scheme development.

3.3.3.2 Option 2 – Relief road with HGV re-routing and bus priority improvements

The environmental impact of the relief road in Option 2 is the same as with Option 1. However, by introducing signal-controlled junctions, bus priority lanes, and enhanced pedestrian crossings the townscape and functionality of the town centre may be improved by making it more accessible and pedestrian-friendly. This could enhance the overall townscape environment.

By improving bus services and reducing traffic congestion, Whittlesey could also become more accessible to visitors and could promote heritage tourism, increasing awareness and appreciation of Whittlesey's historic and archaeological significance.

3.3.3.3 Option 3 – Relief road with HGV re-routing and active travel improvements

The environmental impact of the relief road in Option 3 is the same as with Option 1. However, the enhanced active travel infrastructure within Whittlesey, can significantly improve the townscape by making the town more pedestrian and cyclist friendly.

Option 3 could also see more benefits to the townscape than Option 4 due to lower vehicle flows and potentially more space for active travel improvements if traffic reroutes to the relief road.

The historic environment may benefit from active travel improvements and reducing traffic congestion. Whittlesey could become more accessible to visitors and could promote heritage tourism, increasing awareness and appreciation of Whittlesey's historic and archaeological significance.

3.3.3.4 Option 4 – Mobility Hub with active travel improvements

The Mobility Hub and active travel improvements could encourage local journeys to be made by walking or cycling, and improve access to the existing public transport, likely leading to reduced car use and traffic levels in Whittlesey. This can lead to improved noise levels, air quality and reduced greenhouse gas emissions; however, this is not anticipated to be as significant as for the relief road options, particularly as it does not address the challenges with HGV traffic in Whittlesey.

While this reduction of traffic in Whittlesey may contribute to a more pleasant and less cluttered landscape, the presence of the Mobility Hub itself, including parking facilities and bus infrastructure, may alter the character of the surrounding area. This is something that would need to be carefully considered at the design stage to mitigate any impacts.

The enhanced active travel infrastructure and the reduction in traffic is likely to improve the townscape by making Whittlesey more pedestrian and cyclist friendly and by reducing the visual and physical clutter associated with high traffic volumes. By improving pedestrian and cycling routes, the historic environment could also become more accessible and attractive to visitors.

By encouraging mode shift, active travel infrastructure improvements may reduce the pressure on existing natural habitats and biodiversity in and around Whittlesey, thereby helping to protect habitats from being degraded by vehicle emissions and polluted road runoff.

The area around Whittlesey is primarily within flood zone 3, and has a high probability of flooding, and so appropriate management and mitigation would need to be implemented to minimise potential adverse effects on the local water environment.

3.3.3.5 Summary

A summary of the non-monetary environmental analysis of each shortlisted option is outlined in Table 3.11 with the level of impact for each topic summarised using the standard TAG seven-point scale of beneficial, neutral or adverse impacts, in accordance with TAG Unit A3. Note that definitions for the scoring scale vary for each appraisal type, will full definitions available in TAG.

Table 3.11: Environmental appraisal summary

	Option 1	Option 2	Option 3	Option 4
Noise	Slight beneficial	Slight beneficial	Slight beneficial	Neutral
Air Quality	Moderate beneficial	Moderate beneficial	Moderate beneficial	Neutral
Greenhouse gases	Slight beneficial	Slight beneficial	Slight beneficial	Neutral
Landscape	Moderate adverse	Moderate adverse	Moderate adverse	Neutral
Townscape	Slight beneficial	Moderate beneficial	Moderate beneficial	Slight beneficial
Historic Environment	Neutral	Neutral	Neutral	Slight beneficial
Biodiversity	Moderate adverse	Moderate adverse	Moderate adverse	Slight beneficial
Water Environment	Neutral	Neutral	Neutral	Neutral

Source: Mott MacDonald

Options 2 and 3 perform well overall, with the potential to reduce through trips in Whittlesey resulting in moderate benefits to townscape and air quality, as well as smaller benefits to noise and greenhouse gases. However, the construction of the relief road does result in adverse impacts on landscape and biodiversity for options 1, 2 and 3. Whilst Option 4 doesn't have any negative impacts, neither does it offer any real benefits.

3.3.4 Non-monetary social impacts

A Social Impact Appraisal has been conducted to assess the social impacts of the shortlisted options, covering the human experience of the transport project and its impact on social factors. This has been undertaken in accordance with TAG Unit A4.1 following a qualitative approach and is informed by the result of the environmental appraisal and transport model outputs when appropriate. The appraisal will produce summary assessment scores for each social impact on a seven-point scale of beneficial, neutral or adverse impacts. A more detailed analysis of the appraisal is available in the Social Impact Appraisal report (Appendix G). The impacts considered as part of the social appraisal include:

- Physical activity
- Accidents
- Security
- Severance
- Journey quality
- Option and non-use values
- Accessibility
- Personal affordability

3.3.4.1 Option 1 – Relief Road with HGV re-routing

By transferring through traffic and HGV movements from Whittlesey town centre and onto the relief road, it can bring many social benefits. This will reduce casualties by rerouting traffic away from residential areas, lower accident severity and lower the accident rate, benefiting both motorised and non-motorised users. This will also have a positive impact on severance and journey quality by lowering traffic volumes and making the A605 easier to cross, thereby making active travel journeys in Whittlesey more appealing. Option 1 will also help with reducing traveller frustration and stress for road users through reduced congestion and providing more predictable and reliable journey times.

This option has a slight benefit for physical activity as it is likely to reduce the number of vehicles travelling through Whittlesey town centre, improving safety and making local trips more appealing for pedestrians and cyclists in Whittlesey. The cycle track will also provide a new connection for longer journeys, allowing opportunities for longer distance commutes to be undertaken safely by bike. The relief road and cycle track will increase accessibility to local roads and the railway station, increasing interconnectivity and accessibility within and around Whittlesey.

This option will not have any impact on personal safety or security, the availability of other modes of transport, or the personal affordability of transport.

3.3.4.2 Option 2 – Relief road with HGV re-routing and bus priority improvements

The social impact of the relief road in Option 2 is the same as with Option 1. However, there will be further changes to physical activity through the improvements to pedestrian crossing infrastructure at key junctions in Whittlesey town centre.

The bus priority enhancements will also bring improvements to journey quality and accessibility by reducing bus journey times and improving reliability, thus enhancing the bus offer for those travelling between Whittlesey, March and Peterborough. However, this is reliant on bus operators capitalising on these new improvements by running services.

3.3.4.3 Option 3 – Relief road with HGV re-routing and active travel improvements

The social impact of the relief road in Option 3 is the same as with Option 1. However, the active travel infrastructure improvements will bring large benefits to physical activity, severance, and accessibility. This option will enable a greater level of local journeys around Whittlesey to be undertaken by walking or cycling whilst reducing car use for shorter journeys. Improvements

to National Cycle Network route 63 will improve the quality of longer distance journeys and improvements to active travel access to Whittlesea station, allowing for easier access to onwards journeys by rail.

Improved active travel infrastructure, including segregation, improved lighting and improved surfaces may also increase feelings of security amongst vulnerable road users (VRUs) such as the elderly.

3.3.4.4 Option 4 – Mobility Hub with active travel improvements

The Mobility Hub and active travel improvements will predominantly bring improvements to physical activity and accessibility through the improved active travel provision across the town and to a new Mobility Hub. This benefit will also apply for access to Whittlesea station and will encourage local trips by walking and cycling to access bus and rail services. The option will also help reduce severance, by lowering traffic volumes (via mode shift to public transport and active travel) and help improve pedestrian safety and reduce accidents.

The Mobility Hub will also bring some small benefits to journey quality as through reduced car usage, improved public transport and improvements to active travel infrastructure, it is anticipated to improve the journey reliability and reduce stress of users travelling through and accessing Whittlesey. However, the extent of this benefit is not as great as with the other three options. The Mobility Hub will improve the transport options available as it provides the opportunity to encourage more bus services to serve Whittlesey, improve access to existing bus services, and enable the introduction of shuttle bus type express services linking into the town centre, Whittlesea railway station, and Peterborough.

Similar to Option 3, the improved active travel infrastructure, including segregation, improved lighting and improved surfaces may also increase feelings of security amongst VRUs.

There are no significant impacts relating to personal affordability of transport. The proposed scheme does not include measures that will change the affordability of public transport options for those living in the study area.

3.3.4.5 Summary

A summary of the non-monetary social analysis of each shortlisted option is outlined in Table 3.12 with the level of impact for each topic summarised using the standard TAG seven-point scale of beneficial, neutral or adverse impacts, in accordance with TAG Unit A4.1. Note that definitions for the scoring scale vary for each appraisal type, will full definitions available in TAG.

Table 3.12: Social appraisal summary

	Option 1	Option 2	Option 3	Option 4
Accidents	Moderate beneficial	Moderate beneficial	Moderate beneficial	Slight beneficial
Physical Activity	Slight beneficial	Moderate beneficial	Large beneficial	Moderate beneficial
Security	Neutral	Neutral	Slight beneficial	Slight beneficial
Severance	Moderate beneficial	Moderate beneficial	Large beneficial	Slight beneficial
Journey Quality	Moderate beneficial	Large beneficial	Large beneficial	Slight beneficial
Option & non-use values	Neutral	Neutral	Neutral	Slight beneficial
Accessibility	Slight beneficial	Moderate beneficial	Large beneficial	Moderate beneficial
Personal affordability	Neutral	Neutral	Neutral	Neutral

Source: Mott MacDonald

Whilst all four options are beneficial to improving the human experience within Whittlesey, Option 3 performs best overall. Option 3 offers the potential to reduce through trips in Whittlesey, whilst at the same time the active travel improvements will help deliver large benefits by encouraging physical activity, reducing severance, improving journey quality, and increasing accessibility, as well as moderately reducing accidents and slightly improving personal security. Options 2 and 4 also perform well when compared to the existing situation, however, Option 1 performs worst as this option primarily benefits drivers and does not change the existing infrastructure along the A605 through the town centre, therefore only slightly improving journeys for pedestrians and cyclists through the reduction in traffic. This highlights the need to maximise the opportunities to utilise the released road capacity along the A605 for all users, in order to fully realise the benefits of rerouting traffic away from the A605 and onto a relief road.

3.3.5 Wider economic impacts

The wider economic impacts for the Scheme are those that are considered additional to the transport user benefits. This includes benefits such as supporting future expansion; improving productivity; and creating healthier streets, as well as disbenefits such as induced demand. As the level of benefits coming from wider economic impacts, including both from changes in land use and fixed land use are predicted to be small in relation to the overall Scheme benefits, a qualitative approach has been taken. The full appraisal of Wider Economic Benefits can be found in the OAR (Appendix E).

3.3.5.1 Option 1 – Relief Road with HGV re-routing

The relief road with HGV re-routing could increase carrying capacity for future development, improve living standards, the quality of Whittlesey's public realm, and support local trade within the town. Enhanced infrastructure such as new roads can lead to positive effects in several economic indicators, including user benefits and improvements in productivity which can encourage investment and employment opportunities. The relief road may support local industry and business to the South and West of the town by improving connections to employment.

However, there is a potential the induced demand could negate traffic reduction objectives. Any increased capacity introduced by the relief road may attract additional trips by car, resulting in no overall capacity benefit in comparison to the current situation.

3.3.5.2 Option 2 – Relief road with HGV re-routing and bus priority improvements

In addition to the benefits and disbenefits outlined in Option 1, this option may benefit from a higher quality urban realm through the provision of pedestrian crossings as part of the bus priority improvements. Additionally, the public transport enhancements could be a benefit for future development enabling future residents to be less car reliant from the outset.

However, Option 2 is reliant on provision of bus services to maximise this benefit, which could pose a challenge given constrained budgets for public transport and a steady decline in rural bus services over many years.

3.3.5.3 Option 3 – Relief road with HGV re-routing and active travel improvements

Active travel improvements in Whittlesey can enhance the benefits of the relief road outlined in Option 1 by improving access for local journeys, improving the quality of the public realm, and encouraging modal shift to improve health and potential growth. However, improvements remain constrained due to limited space along parts of the A605 and the surrounding road network. Whilst improved active travel links may promote walking and cycling over private vehicles, the relief road could still draw people away from active travel for longer journeys.

3.3.5.4 Option 4 – Mobility Hub with active travel improvements

This option includes all the benefits already stated for active travel improvements in Option 3, but not the relief road. The Mobility Hub and further active travel infrastructure may enhance benefits such as better health and wellbeing outcomes, and improved quality of the public realm.

The lack of a relief road means it is likely that HGVs and through vehicle traffic will continue to travel through the town of Whittlesey. This will limit the previously mentioned benefits of the scheme such as a reduction in air and noise pollution, increase in local transport capacity to support development, and enhancement of public realm through reduced traffic volumes. However, the lack of a relief road may also encourage modal shift and public transport by making driving a less attractive option for many.

3.3.5.5 Summary

Overall, Options 1, 2 and 3 could see benefits as a result of the relief road with HGV re-routing. This could increase carrying capacity for future development, improve living standards, the quality of Whittlesey's public realm, and support local trade within the town. Options 2 and 3 could see further benefits to the public realm through the provision of bus priority and active travel measures respectively.

Despite this, some benefits may be lessened by the effects of induced demand, with a growth in traffic on the A605 that would not have occurred without the improvement of the network capacity.

The Mobility Hub and active travel improvements in Option 4 could enhance benefits such as better health and wellbeing outcomes, and improved quality of the public realm. However, without a relief road, HGVs and through vehicle traffic levels within the town would not reduce and therefore, benefits such as reduced noise and air pollution, improved public realm and reduced traffic volumes may not be realised.

3.3.6 Present Value Costs

Option base line costs have been produced to include direct construction works, indirect construction works and design, project management and other project costs. These are presented in Table 3.13 below.

Table 3.13: Base Costs Used in PVC (£,000, 2024 prices)

Option	Option 1	Option 2	Option 3	Option 4
Direct Construction Works Costs	£90,654	£91,268	£92,323	£4,359
Indirect Construction Works Costs	£46,415	£46,729	£47,269	£2,265
TOTAL CONSTRUCTION COSTS	£137,069	£137,997	£139,592	£6,623
Design, Project Management & Other Project Costs	£37,593	£37,825	£38,224	£1,798
BASE COSTs	**£174,662**	**£175,823**	**£177,816**	**£8,422**

Source: Mott MacDonald

These costs have been calculated in 2024 prices and converted into 2010 prices, with optimism bias applied at 46% and construction inflation above GDP deflator added at 2.1%. These have also been profiled to provide the Present Value of Costs (PVC), as shown in Table 3.14.

In addition to the upfront infrastructure costs, the PVC for Option 4 also includes an estimate for the operation and maintenance of the Mobility Hub site, and the operation of additional bus routes serving the site over a 60-year period. It also takes into account revenue raised from ticket sales. Therefore, the PVC for Option 4 is made up of £6.85m relating to the investment costs and £17.14m for operation and maintenance, totalling £23.99m. Taking into account revenue, estimated at circa £500k, the total PVC is brought down to £23.49m (this is set out in Appendix N Public Accounts Tables).

The construction of the relief road represents the single largest element of potential scheme costs, with the differential between Option 1 (relief road only) and Options 2 (with bus priority) / Option 3 (with active travel provision within Whittlesey) being relatively small. The absence of the relief road from Option 4 results in this having a substantially lower PVC.

The Public Accounts tables for each option is included in Appendix N.

Table 3.14: Present Value of Costs (£,000, discounted to 2010 prices)

Option	2025	2026	2027	2028	2029	2030	2030+*	TOTAL
Option 1	£6,471	£6,376	£12,564	£30,947	£36,589	£30,041	**n/a**	**£122,988**
Option 2	£6,514	£6,418	£12,647	£31,152	£36,832	£30,241	**n/a**	**£123,806**
Option 3	£6,687	£6,588	£12,982	£31,977	£37,807	£31,041	**n/a**	**£127,082**
Option 4	£343	£343	£685	£1,713	£2,056	£1,713	**£16,638**	**£23,492**

Source: Mott MacDonald *The costs for 2030+ are only included for Option 4 as they relate to the ongoing operation and maintenance costs associated with the Mobility Hub and revenue from bus tickets.

3.3.7 Value for Money assessment

From the analysis of the monetary PVB and PVC of each of the four Options (shown in Table 3.9 and Table 3.14 respectively), a Net Present Value (NPV) and Benefit to Cost Ratio (BCR) have been calculated to inform the Value for Money (VfM) of the scheme options. These are outlined in Table 3.15.

Table 3.15: Value for Money

Option	Option 1	Option 2	Option 3	Option 4
Present Value of Benefits (PVB)	£23,462	£23,498	£25,596	£10,051
Present Value of Costs (PVC)	£122,988	£123,806	£127,082	£23,492
Net Present Value (NVP)	-£99,526	-£100,308	-£101,486	-£13,441
Benefit to Cost Ratio (BCR)	**0.19**	**0.19**	**0.20**	**0.43**

Source: Mott MacDonald

The assessment of monetary impacts indicates the Scheme could offer significant potential benefits, in the region of £10m to £26m. However, recognising the large costs of implementing the Scheme Options - particularly the relief road within Options 1, 2, and 3, this does have a large impact on the overall VfM assessment.

The monetised appraisal of benefits, however, does not capture the full VfM position, with a range of potential wider impacts identified that are not directly captured in monetary terms. Furthermore, it is often these wider non-monetised benefits that more closely align with agreed objectives for the Scheme, particularly in terms of social, environmental, and wider economic impacts. Good examples of this are enhanced network resilience, the reduction of noise and emissions, as well as improvement to the townscape within Whittlesey town centre, that will be delivered under Options 1, 2 and 3. These three Options will also reduce the number of HGVs travelling through Whittlesey, helping to alleviate issues of safety, noise, congestion, and a poor

urban environment. All four Options are also expected to provide improvements to physical activity and a reduction in accidents, in line with the Scheme objectives. None of these aspects are captured within the monetary assessment but reflect significant benefits from investment within the Scheme.

Overall, the Scheme Options, and in particular Option 3, meet the Scheme objectives, offering both monetary benefits and other non-monetised benefits. This is an important consideration within the overall assessment of Value for Money. It should be recognised that the overarching purpose of the scheme is not about journey time improvements, but on improving the conditions within the town. Option 4 does not address the objective of reducing HGV traffic and therefore the extent of improved conditions within Whittlesey may be more limited than the other three options. In comparison, Options 1, 2 and 3 are all forecast to deliver against this requirement, with Option 3 considered to perform best overall.

3.3.8 Sensitivity tests

To understand the extent to which the performance of the options would vary under different scenarios, three sensitivity tests have been undertaken. The three tests are:

- **High growth** – assuming a 9.5% growth in traffic based on NTEM growth factors for the East region and Cambridgeshire by 2045.
- **Lower cost** – assuming a 30% reduction in cost to reflect the low cost estimate range.
- A **combination** of higher growth and lower cost.

Given the value for money position of the core scenario, neither a low growth nor high cost sensitivity test has been presented, but both result in BCR values below the core.

Table 3.16: Sensitivity tests for Option 1 (£,000s)

	Core	High Growth	Lower Cost	Combined
PVC	£122,988	£122,988	£86,092	£86,092
PVB	£23,462	£25,214	£23,462	£25,214
BCR	0.19	0.21	0.27	0.29

Table 3.17: Sensitivity tests for Option 2 (£,000s)

	Core	High Growth	Lower Cost	Combined
PVC	£123,806	£123,806	£86,664	£86,664
PVB	£23,498	£25,254	£23,498	£25,254
BCR	0.19	0.20	0.27	0.29

Table 3.18: Sensitivity tests for Option 3 (£,000s)

	Core	High Growth	Lower Cost	Combined
PVC	£127,082	£127,082	£88,957	£88,957
PVB	£25,596	£27,362	£25,596	£27,362
BCR	0.20	0.22	0.29	0.31

Table 3.19: Sensitivity tests for Option 4 (£,000s)

	Core	High Growth	Lower Cost	Combined
PVC	£23,492	£23,492	£16,444	£16,444
PVB	£10,051	£10,607	£10,051	£10,607
BCR	0.43	0.45	0.61	0.65

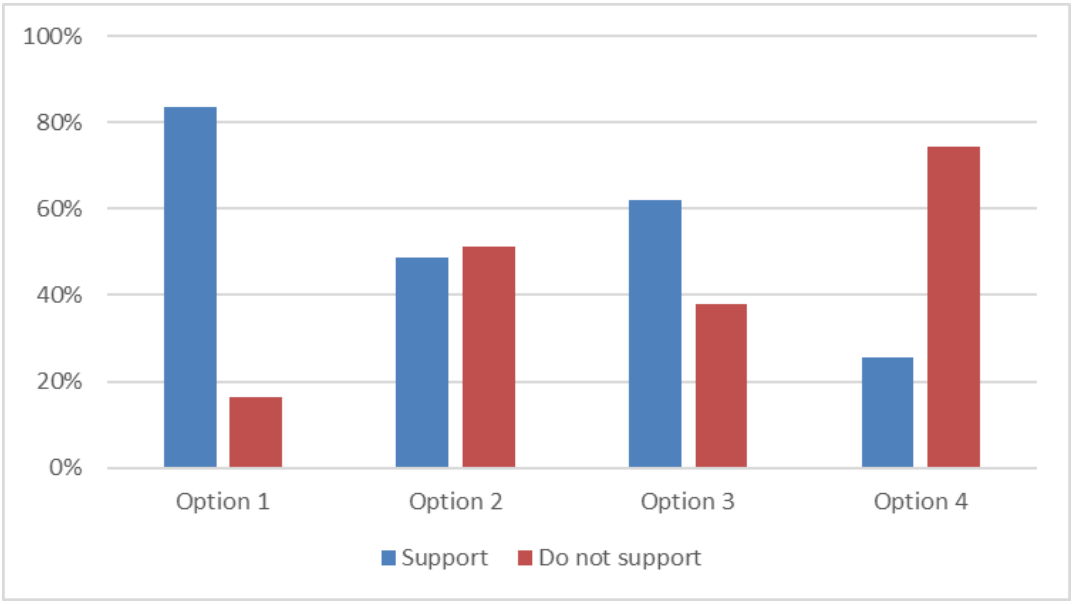
3.3.9 Feedback on options from consultation

A public consultation on the four Shortlisted Options was held between 23rd October and 24th November 2024 to gain feedback from stakeholders, residents, and members of the public on their general view of the Scheme and the proposed short-listed options.

This consultation included two in-person events, one virtual event held via Microsoft Teams, and an online consultation via SurveyMonkey. These events were well attended with approximately 150 attendees at the first event, 300 at the second event, and nine at the online event. In addition to this, the consultation materials were available in Whittlesey Town Hall to be viewed by the public, with approximately 400 people having access to these over the consultation period. There was a total of 310 respondents to the online consultation, where they were asked their opinions on the current issues in Whittlesey and the four Shortlisted Options. A full summary of the consultation material and responses can be found in Appendix H.

The support for each option is shown in Figure 3.8. Overall, Option 1 had the most support with 84% (218 people) of respondents in favour of this Option, followed by Option 3 with 62% support (162 people). Options 2 and Option 4 both received less than 50% support, having 49% (127 people) and 24% (67 people) support respectively.

Figure 3.8: Public support for each option



Source: Mott MacDonald

The main reasons given for supporting Option 1 was the potential for a relief road to reduce traffic through Whittlesey and to re-route HGVs away from the town centre. This could make the roads safer for pedestrians and school children, improve air quality, reduce noise pollution, prevent worsening road conditions, and protect buildings in the town. Some respondents raised concerns regarding the disruption the relief road may have on local properties and natural habitats.

While Option 2 provides the same interventions as Option 1 as well as additional bus priority measures, this was not as well supported due to the perceived lack of effectiveness of the bus priority measures. This was due to the current infrequent of bus services, and doubts that the measures would be needed if a relief road was to be implemented.

Option 3 gained more support than Option 2 due to the active travel proposals being seen to improve safety for pedestrians and cyclists, something that was highlighted as an issue. This option received some opposition, primarily due to the potential cost of the improvements as well as the thought that funding priority should be given to constructing the relief road first.

Option 4 received the least amount of support, predominantly as this was not seen to address the main issues of congestion and HGVs within Whittlesey when compared to the other Option. In addition to this, there was some scepticism about if the Mobility Hub would be widely used however, there was also some acknowledgment that it could be the most cost-effective option and would help those who do not drive.

3.3.10 Performance against Regional Priorities

In order to demonstrate that the Scheme would deliver against the regional priorities of the CPCA, the results of the options appraisal has been used to consider how well each option is meeting the Local Transport and Connectivity Plan priorities. This assessment illustrates that Option 3 is likely to deliver the maximum benefits against these regional priorities, although further development of this option would be required in order to improve the carbon impacts it would have.

Table 3.20: CPCA Local Transport and Connectivity Plan Priorities

Regional Priority	Option 1 - Relief road with HGV re-routing	Option 2 - Relief road with HGV re-routing and bus priority improvements	Option 3 - Relief road with HGV re-routing and active travel improvements	Option 4 – Mobility Hub with active travel improvements
Climate – Successfully and fairly reducing emissions to net zero by 2050.	Has the potential to reduce greenhouse gas emissions by alleviating congestion, and improving traffic flows. However, the construction of a relief road would result in significant capital carbon emissions.	Has the potential to reduce greenhouse gas emissions by alleviating congestion, and improving traffic flows. However, the construction of a relief road would result in significant capital carbon emissions.	Has the potential to reduce greenhouse gas emissions by alleviating congestion, and improving traffic flows. Has the added benefit of supporting active travel, further contributing to a reduction in vehicle emissions. The construction of a relief road and active travel measures would result in significant capital carbon emissions.	Has the potential to reduce greenhouse gas emissions by encouraging more sustainable trips through public transport and active travel. This option requires the construction of a mobility hub however this is not as carbon intensive as the construction of a new relief road.
Productivity - Giving both employers and people the means to achieve more of their potential, making them more efficient and more innovative to create more prosperity.	Journey times between Ralph Butcher Causeway and Coates may be around 27% quicker for vehicles travelling along the relief road compared to current journey times along the A605. For vehicles remaining on the A605, there could be a moderate reduction in journey times as 30% of trips along the A605 divert to the relief road, although induced demand may limit this. Economic efficiency of Option 1 is £18.4m.	Same as Option 1, but with the added benefits from the bus priority measures that may result in some journey time increases for private vehicles through the centre of Whittlesey. Economic efficiency of Option 1 is £18.5m.	Same as Option 1, but with the added benefits from the active travel measures. Economic efficiency of Option 1 is £18.6m.	Option 4 could encourage modal shift away from private vehicles, reducing congestion within the peak periods and decreasing journey times. Whilst journey times across Whittlesey may be reduced, the extent of this is unlikely to be the same as options with a relief road. Economic efficiency of Option 1 is £5.9m.
Connectivity – People and communities are brought closer together, giving more opportunity for work, education, leisure and pleasure.	Journey times for vehicles using the relief road could be 27-73% faster than existing journeys. Journey times along the A605 may also decrease as a result of the relief road and therefore the number of education and employment opportunities that are accessible could increase.	Same as Option 1, but with the bus priority measures improving bus travel within Whittlesey and allowing residents without a car to access more opportunities.	Same as Option 1, but with the added benefits from the active travel measures. Active travel improvements may allow more people to safely undertake walking and cycling journeys to access opportunities.	Active travel improvements and improved public transport options may allow more people to safely undertake journeys by walking, cycling and public transport to access opportunities. By encouraging shorter journeys to be undertaken by active modes, congestion may reduce, thereby also improving the access to opportunities for those driving.

Regional Priority	Option 1 - Relief road with HGV re-routing	Option 2 - Relief road with HGV re-routing and bus priority improvements	Option 3 - Relief road with HGV re-routing and active travel improvements	Option 4 – Mobility Hub with active travel improvements
Safety – To prevent all harm by reducing risk and enabling people to use the transport system with confidence.	Could reduce the number of vehicles travelling through Whittlesey town centre, reducing the likelihood of collisions which will potentially improve safety. Appraisal of accidents suggests a 10% reduction in all accidents along the A605 as a result of a relief road.	Same as Option 1, however enhanced crossing facilities proposed as part of bus priority measures would offer even further safety benefits.	Same as Option 1, however enhanced crossing facilities proposed as part of active travel measures would offer even further safety benefits.	Same as Option 1, however enhanced crossing facilities proposed as part of active travel measures would offer even further safety benefits. However, this option will not reduce the level of HGV movements in Whittlesey which may still pose a risk to pedestrians in the town.
Health – Improved health and wellbeing enabled through better connectivity, greater access to healthier journeys and lifestyles and delivering stronger, fairer, more resilient communities.	Could significantly reduce traffic congestion, leading to lower vehicle idling and smoother traffic flows, which would improve air quality. The rerouting of HGVs away from the town centre may decrease emissions of nitrogen oxides and particulate matter (PM10 and PM2.5) in the area. New cycle lane may improve active travel, therefore leading to decreased emissions and better air quality.	Same as Option 1, but in addition to this, bus priority and the parallel cycle lane to the relief road may change travel patterns, promoting mode shift away from private car and therefore leading to decreased emissions and better air quality.	Same as Option 1, but in addition to this, the new active travel infrastructure may change travel patterns by encouraging a greater uptake in walking and cycling, therefore leading to decreased emissions and better air quality.	Same as Option 1, but in addition to this, the new active travel infrastructure may change travel patterns by encouraging a greater uptake in walking and cycling, therefore leading to decreased emissions and better air quality. However, the Mobility Hub does not address HGV traffic, which is considered to be a significant contributor to emissions in Whittlesey.
Environment – Protecting and improving our green spaces and improving nature with a well-planned and good quality transport network.	The new road will alter the visual character of the landscape to the south of Whittlesey centre as it will replace existing fields with paved surfaces and infrastructure, significantly changing the natural landscape. Construction may impact local hydrology and impact wetland habitats. However, by providing the new route to the south of the town, there is potential to reduce the existing impacts from the highway network on ecological receptors close to the A605 or centre of Whittlesey.	Same as Option 1.	Same as Option 1.	The improvements in active travel infrastructure associated with Option 4 may slightly reduce the visual impact of vehicular traffic and road infrastructure, contributing to a more pleasant and less cluttered landscape. Option 4 may also positively impact biodiversity by reducing traffic through ecologically sensitive areas. However, the presence of the Mobility Hub itself, alter the character of the surrounding landscape and may temporarily disturb local habitats.

3.4 Economic Dimension summary

All four shortlisted Options for this Scheme have the potential to deliver benefits and address the transport issues facing Whittlesey.

Option 3 is forecast to provide the highest level of monetary benefit, with a PVB of £25.6 million, predominantly derived from the economic efficiency user benefits driven by the business user benefits as a result of the relief road. It is also supported by active travel benefits, such that it generates higher benefits than Options 1 and 2. Option 4, without the relief road, is forecast to generate much lower benefits, with a PVB of £10 million.

In regard to environmental impacts, Options 2 and 3 perform well overall, with moderate benefits to townscape and air quality, as well as smaller benefits to noise and greenhouse gases. However, the construction of the relief road does result in adverse impacts on landscape and biodiversity. Option 4 is anticipated to perform the best environmentally, with a neutral impact on most environmental aspects and small benefits for townscape, historic environment, and biodiversity. Option 1 is forecast to deliver the least amount of environmental benefit across the four options as the new road will alter the visual character of the landscape and may have an impact on local biodiversity, without providing the same level of benefits to the townscape that could be seen for Options 2 and 3. Impacts on environmental aspects such as biodiversity will need to be carefully considered and potentially offset in future stages of scheme development.

Option 3 has the best overall social impact, with large benefits to physical activity, reducing severance, improving journey quality, and increasing accessibility, as well as moderate benefits in reducing accidents and slightly improving personal security. Options 2 and 4 also perform well compared to the existing situation. Option 1 is anticipated to deliver the least social benefits as this will not have any impact on personal safety or security, the availability of other modes of transport, or the personal affordability of transport, while the benefits for physical activity, accessibility and journey quality are not as great as seen for Options 2 and 3.

Options 1, 2 and 3 are anticipated to provide some wider economic benefits, with increased transport capacity and improved public realm able to support local trade within the town. Options 2 and 3 could see further benefits to the public realm through the provision of bus priority or active travel measures, respectively. Option 4 is anticipated to have the lowest impact upon wider economic activity, with much lower additional transport capacity provided as it is reliant on the existing highway network.

Whilst none of the Options deliver strong monetary BCR values, it should be recognised that the overarching purpose of the scheme is not about standard monetised transport benefits, such as journey time improvements, but on improving the conditions within the town centre. Options 1, 2 and 3 are all forecast to deliver against this requirement, with Option 3 considered to perform best overall. In addition, for the three relief road options, the Scheme will also provide benefits in relation to network resilience by providing an alternative route when roads, such as the B1040 are closed. These options could see between £4.1m to £8.3m in additional benefits (16-35% increase in benefits) associated with improved network resilience.

When the four Options were put to the public, there was strong support for the construction of a relief road due to the potential to reduce traffic and HGV movement in Whittlesey, therefore improving safety, reducing air and noise pollution, and protecting buildings and infrastructure. Whilst Option 1 gained the most support from the public, there was also 62% of respondents who supported Option 3 and the active travel improvements with most of the opposition towards potential cost. However, the cost difference between Options 1 and 3 are relatively small.

Individual summaries of the appraisal of each option against all considered impacts are presented in the Appraisal Summary Tables in Appendix M.

4 Financial Dimension

The Financial Dimension outlines the affordability of the Whittlesey Relief Road scheme shortlisted options and the potential funding arrangements. The dimension presents the financial profile of each of the shortlisted Scheme options and an overview of the potential mechanisms for funding the delivery of the Scheme.

4.1 Overview

Scheme costs for the shortlisted options have been developed based upon 2D concept drawings. These costs have been developed by Mott MacDonald cost estimators and include a breakdown of direct and indirect construction costs. In addition, there are allowance for inflation, risk, land purchasing and environmental mitigation measures.

An 'anticipated final cost' is presented as part of a high and low cost range. The level of detail in the Scheme costings is considered proportionate to the current stage of Scheme development at SOC stage.

4.2 Scheme cost estimates

A high-level cost estimate has been prepared for each of the Whittlesey Relief Road Scheme shortlisted options. The base cost estimates include the following:

- **Direct construction costs:** This includes general works, site clearance and earthworks. For the options with the relief road, this includes the cost of structures, for which there are two bridges over Whittlesey Dike and one bridge over the railway line.
- **Indirect construction costs:** These include contractors preliminaries, and contractors' overheads and profit margin.
- **Design and project management costs:** This accounts for design fees, on-site supervision and testing of Scheme elements prior to Scheme opening, project management, public consultation, public inquiry, and the costs of obtaining statutory orders.
- **Risk and contingency allowance:** 40% has been applied based on historical projects of a similar nature and has been benchmarked against industry guidance.
- **Inflation costs:** This accounts for inflation above the base cost estimates, in accordance with RPI.
- **Land allowance**: This is based on review of freehold titles that intersect the limits of the relief road, and estimated value of the land according to its use.

The key assumptions made with regards to producing the cost estimates included:

- The project began in 2023 (in terms of Scheme development work) and is expected to be completed by 2031.
- The Scheme would have an opening year of 2031.
- Unit prices are based on Q3 2024 prices.
- Inflation added from base date of Q3 2024 to mid-point of construction Q3 2028 at 12.3% using RPI indices.
- Prelims estimates at 35% of construction costs, including traffic management.
- Overheads estimates at 12% of construction costs.
- Design cost estimates at 12% of construction costs.
- Project management cost estimates at 10% of construction costs; and
- Environmental mitigation measures at 2.5% of construction costs.

Table 4.1 shows the breakdown of the costs for the shortlisted options.

Table 4.1: Scheme cost estimates (£,000)

Description	Option 1	Option 2*	Option 3	Option 4
Direct Construction Works	£90,654	£91,268	£92,323	£4,359
Indirect Construction Works	£46,415	£46,729	£47,269	£2,265
Design, Project Management and Other Project Costs	£37,593	£37,825	£38,224	£1,798
Base Cost Plan	£174,662	£175,823	£177,816	£8,422
Risk (40%)	£69,865	£70,329	£71,126	£3,394
Inflation	£30,077	£30,277	£30,620	£1,461
Anticipated Final Cost	**£274,604**	**£276,428**	**£279,563**	**£13,277**
*Higher cost range (+50%)***	*£411,905*	*£414,643*	*£419,344*	*£19,916*
*Lower cost range (-30%)***	*£192,222*	*£193,500*	*£195,694*	*£9,294*

Source: Mott MacDonald
* The bus priority element of the cost estimate is based on a signal-controlled junction solution
**Estimates are at Association for the Advancement of Cost Engineering (AACE) Class 4, within an assessed accuracy range of +50% / -30%.

When benchmarking the cost assessment for the relief road against other similar schemes, the relief road elements of the Scheme options are in the region of £450/m^2 for the direct construction costs. Compared to similar relief road schemes, such as the Balsall Common bypass where costs were estimated to be around £300/m^2. If the relief road were to be closer to this price per m^2 then it may bring the cost estimate closer to the lower cost estimate range. However, this comparator scheme did not have any bridge structures, which account for about £115/m^2 of the total £450/m^2 for the Whittlesey relief road options. Other considerations driving the costs include the extra earthworks required due to the location and constructing within flood zone areas.

4.3 Spend profile

Table 4.2 shows the projected annual spend profile for the shortlisted options. The spend profile is based on the Scheme cost estimates, with costed items being proportionally split out by each phase of Scheme development depending on when it is anticipated to be spent. For example, all project construction costs are applied to the final phase of Scheme delivery in line with the programme.

Table 4.2: Annual spend profile (£,000)

	Development Period	Construction Period			Total
Year	**2023-28**	**2029**	**2030**	**2031**	
Option 1	£32,327	£84,797	£84,797	£72,683	**£274,604**
Option 2	£32,544	£85,360	£85,360	£73,165	**£276,428**
Option 3	£32,916	£86,326	£86,326	£73,994	**£279,563**
Option 4	£1,574	£4,096	£4,096	£3,511	**£13,277**

Source: Mott MacDonald

4.4 Maintenance and operating costs

At this stage of Scheme development, maintenance and operating costs relating to highway interventions (new relief road, active travel measures and bus priority measures in Options 1, 2 and 3) have not been estimated. This is because they are anticipated to reflect a minor element of overall scheme costs. It is expected that a new road scheme will have very low maintenance costs, especially in the years immediately following construction.

For Option 4, the Mobility Hub, the operating costs have been considered though, as they reflect a significant aspect of the delivery of that option (over 70% of total costs over a 60 year period). Along with the costs of operating the Mobility Hub site, there are likely to be costs associated with the operation of bus services serving the site (this is regardless of whether these costs are covered by bus operators through the adaptation of an existing service to serve the site or funded as a subsidised service for an entirely new service). As such there is a greater need to understand and reflect these likely costs at this stage.

An initial high-level estimate of operating and maintenance costs for the Mobility Hub, suggests that there could be an annual cost of approximately £1.5m per year (2024 prices) to operate the site and any associated bus service. These costs cover site maintenance, and labour for bus drivers, and bus running costs.

4.5 Budgets and funding sources

The required funding for the Scheme is still unknown and may depend on which of the shortlisted options is selected as the preferred option to be developed. Whether the various elements of each option are delivered in a phased approach could also impact upon funding requirement, e.g., if a relief road is funded and delivered separately to the active travel measures in Option 3.

Current development funding for the Scheme, and this SOC, has come from the CPCA. In order to progress the Scheme further (i.e. OBC stage), additional development funding would be required. At the point of developing the SOC any additional funding from CPCA for developing the Scheme to OBC has not been agreed.

The funding source, or sources, for developing the Scheme, and then delivery, are currently unknown. Considerations for funding are set out below.

4.5.1 Funding context

To successfully deliver the interventions proposed by the Scheme, access to adequate funding will be required. Without sufficient funding, the full aspirations of the Scheme will be restricted, which will, in turn, constrain the delivery of the Scheme objectives.

This section provides an overview of the types of funding sources and financing facilities that are currently available to FDC as the current Scheme promoters.

It should be noted that this SOC is being produced in a climate of a new UK government as a result of the July 2024 General Election. As a result of the 2024 Autumn Statement there was little information provided about the funding allocations for major schemes of this nature, however, there were commitments to addressing local connectivity and supporting local bus and active travel improvements. There will potentially be further announcements that will impact the funding of transport schemes in the 2025 Spring Budget.

Given this current funding context, it is challenging to identify the full range of potential funding sources that may become available for the delivery of the Scheme. Rather than seeking to identify specific funding sources at this stage, this Financial Dimension reviews the different

types of potential funding that are typically available. This provides a basis upon which to understand future funding options that may come forward in the short term and during any further development of the Scheme beyond this SOC.

4.5.2 Funding options

There are a wide range of potential sources of funding available to help achieve the interventions proposed by the Scheme. In broad terms these can be considered within five overarching categories:

- Government grants
- Private sector contributions
- Public sector finance
- Private finance
- Revenue streams

Examples of current funding sources in each of these categories are set out within the section below.

4.5.2.1 Government grants

Government grants are funds awarded directly, or indirectly, by Government through successful applications or by demonstrating adherence to agreed criteria. In general, these are capital focussed, relating to specific infrastructure projects or defined programmes, but can, in some instances, support on-going revenue activities.

As grants they are not subject to repayment and so do not constitute debt on a local authority's balance sheet. Often, they will include specific funding criteria and timeframes and require monitoring and evaluation of outcomes.

It is not unusual for Government grants to require some form of match-funding, often from the private sector, or to at least demonstrate the investment will open up future opportunities for private sector investment. FDC recognises some of the challenges in securing government grants as they frequently now form part of a competitive bidding processes. This requires FDC to commit significant time and resource to demonstrate the merit of their applications and creates both uncertainty and irregularity in funding opportunities.

Government grants can be provided by many central government departments, including the DfT. The DfT has historically provided a wide variety of funding pots for transport schemes and initiatives. This includes funding for bus, active travel and freight. Some of these are provided as block grants, others are subject to bidding criteria. For the latter, where criteria align with proposals of the Scheme, FDC can consider submitting bids, albeit this often requires internal council resource to prepare supporting material.

Active Travel England (ATE) offer grants for schemes focused on improving walking, cycling and wheeling across England. This includes the Active Travel Fund 4 which has now been allocated; however, ATE offer an annual Capability Fund for active travel schemes. CPCA have been allocated funds from both of these streams and, if already assigned to other projects, there may be potential for the CPCA to apply for further funding in future opportunities.

The DfT have previously offered funding for Mobility Hubs through grants such as the Future Transport Zones programme, and National Highways have offered funding for road schemes through the Road Investment Strategy. Although the allocations for funding have been assigned, there may be potential to seek funding through these streams in the future.

The DfT also offer funding dedicated to improving bus services through the Bus Service Improvement Plan+, which local authorities can apply for to introduce new bus services or routes, extend timetables, or lower ticket fairs.

The DfT previously announced Network North, which commits £36 billion to improve transport across England. However, since its announcement there has been little update on the funding allocations of this, and the future of the plan is uncertain after the July 2024 General Election.

4.5.2.2 Regional funding

Some regional funding agencies have, historically, provided funding for transport-related projects, including CPCA and England's Economic Heartland. As part of the Cambridgeshire and Peterborough devolution deal, CPCA are the Local Transport Authority of the area and are able to allocate funding for transport schemes. The remit of sub-regional bodies remains uncertain at this moment in time, with central government taking a more active role in the direct allocation of funding to local authorities.

Although CPCA prioritise the development of public transport and active travel, they also 'recognise that the private car remains a key mode for many residents' and therefore 'support targeted highway infrastructure and enhancement schemes.[23] As the current funder for the Scheme development, there is potential to receive funding for further stages of the Scheme from the CPCA.

CPCA are also currently in the process of producing a Mobility Hub Strategy. Through this there may be potential for funding from the CPCA for development, delivery or operation of a Mobility Hub if this option were to be progressed.

4.5.2.3 Private sector contributions

A long-standing mechanism for raising funding for infrastructure projects is to secure development contributions from private sector organisations as part of wider investment projects. Through the planning process for large-scale housing and commercial developments, contributions can be sought to support a range of community infrastructure enhancements, including transport provision.

As with government grants, these contributions have the advantage of having no net-impact upon a local authority's balance sheet; however, planning legislation can place certain restrictions upon the areas in which funding can be deployed.

There are long-standing mechanisms for securing private sector contributions to deliver enhancements in transport provision. This applies the principle that businesses benefit financially from enhanced accessibility and that efficiency is provided through improved transport and so can contribute a proportion of the benefit they gain. Private sector development can also directly generate additional transport trips and so require transport mitigation.

Developer-based contributions, such as S106 contributions can be utilised to support the delivery of transport enhancements. In the financial year 2022/23 there were two development sites in the east of Whittlesey that had S106 agreements in place; however, there are currently no developments that have a requirement to contribute to this Scheme. Given the scale of potential development in and around Whittlesey that is outlined within the Emerging Local Plan, there is potential for conditions to be set on future sites that come forward for planning approval.

[23] https://cambridgeshirepeterborough-ca.gov.uk/what-we-deliver/transport/roads/

There are a variety of other mechanisms that may be considered to capture business contributions to transport investments. These include forms such as the Workplace Parking Levy, Land Value Capture, and Business Rates.

Business contributions have become an increasingly important element of transport funding, particularly for major schemes that deliver major positive benefits to local land and property owners. With potential constraints on overall levels of future public sector funding, securing part-funding through new business funding mechanisms may become increasingly important deliver some of aspects of the Scheme.

4.5.2.4 Public sector finance

Government has, historically, provided local authorities with opportunities for low interest loans. Capital infrastructure loans are now being offered via the National Infrastructure Bank, although the long-standing Public Works Loans Board remains.

As a loan, this type of finance will register on a local authority's balance sheet and requires the principal and interest to be repaid over an agreed period of time, albeit the source of repayment does not need to be specifically tied to the investment itself. This makes these funding options significantly less advantageous compared to direct grants and private sector contributions. In circumstances where there may be a funding shortfall, this type of finance may be an option but with due consideration for on-going repayment requirements. Where an investment will generate a future revenue stream, then this source of funding becomes more financially viable.

4.5.2.5 Private finance

Private sector finance or investment can be available, as debt or equity, as an alternative to public sector finance. Whilst traditionally offering less competitive rates, the recent private debt market has offered a viable alternative for some types of capital infrastructure investment. Unlike public finance, investments tend to require directly generated financial return that can be linked to repayment – limiting the applicability within a transport market context.

As with public sector finance, this type of finance will register on a local authority's balance sheet and requires the principal and interest to be repaid over agreed period of time.

A range of private financing initiatives may be considered by local authorities for larger-scale investment requirements, including the UK Municipal Bond Agency, Open Market Municipal Bond Issues, and Private Equity Investment.

4.5.2.6 Revenue streams

Whilst not a direct source of funding for immediate capital spend, the generation of future revenue streams can be utilised to off-set current, and future, expenditure. These might take the form of direct user charges relating to transport provision, or more generic tax revenues, which could include transport user charges / tolls or fares, as well as Council tax. Since these do not provide an upfront source of funding, they are most likely to be utilised in conjecture with other financing options and represent a mechanism for repayment over time. However, due to current constraints on local authority budgets, any potential revenue streams through FDC will be limited.

4.5.2.7 Other funding

Other local sources of funding, in the form of inter-departmental grants or the utilisation of FDC or CPCA wider asset base, could be used to support transport investment.

These funding sources do not increase the overall net finances available to the FDC but may provide a mechanism in specific circumstances to support the delivery of some transport measures.

4.6 Financial Dimension summary

Scheme costs for the options that include the relief road, could range between £192m and £419m, with an anticipated cost in the region of £270m+. Although Option 4 has a much lower anticipated cost (between £9m and £20m), it is estimated that the Mobility Hub would require approximately £1,500,000 in maintenance and operation per year, increasing the overall total cost over time.

At this stage, the required funding for the Scheme is unknown and will depend on which of the shortlisted options will be selected as the preferred option to be developed. The Whittlesey Relief Road is an ambitious Scheme that will require a significant capital funding to deliver, as well as an increase in local revenue funding to maintain once delivered. Whilst there are various types of funding the Scheme can explore, it is likely that it will require a collaborative approach between FDC, as the current Scheme promoter, and the CPCA to find a suitable funding source, or sources, to deliver the Scheme.

Given the nature of the Scheme, it is likely that the majority of funding opportunities will be sought by way of Government grants and through devolved funding through CPCA. In addition, opportunities to leverage private sector contributions would need to also be explored.

5 Commercial Dimension

The purpose of the Commercial Dimension is to demonstrate that there are viable routes for the procurement of the solution for the Scheme; however, at the SOC stage, the Commercial Dimension simply presents a light touch overview around appropriate ways in which the potential options being presented for the Scheme could be procured. A more in-depth assessment would be conducted at OBC stage once a preferred scheme option has been identified.

5.1 Overview

The Commercial Dimension sets out potential considerations for procuring the solution, both with regards to development and delivery. The final preferred procurement route for the Scheme will require a full procurement strategy to be produced at the next stage of Scheme development. Early-stage commercial considerations include:

- What Scheme elements may need to be procured, including supporting works to develop the Schemes?
- What potential procurement routes exist that could be used to develop and then deliver each Scheme element?

At this stage of Scheme development for the Whittlesey Relief Road it is not possible or appropriate to consider key contractual arrangements, or other such commercial matters, such as risk allocation with a contractor.

At present it is assumed that FDC, as the current promoter of the Scheme, will be responsible for progressing the Scheme through its development stages. However, the Commercial Dimension would require a full review if an alternative lead promoter were to take the Scheme forward, both through its development, and/or its delivery phases.

5.2 Required scheme outputs

While it is not possible to fully define the require outputs for the Scheme at this stage, as these will depend on the preferred option that is taken forward at later stages of the business case development process, it is still likely that following works will need to be procured:

- Scheme design and associated preparatory works, including advisory support.
- Physical works to implement a solution, these works may vary by option.

A separate procurement exercise might also be required for operation and maintenance activities depending on the solution that is taken forward. This is particularly the case for Option 4, Travel Hub, which could require the procurement of additional bus service provision. This does not form part of the current Commercial Dimensions considerations.

A more detailed output-based specification for the Scheme to inform the procurement of the solution will be developed at the OBC stage.

5.3 Procurement strategy

The Procurement Strategy will be developed in full at the OBC stage. Below sets out a high-level overview of procurement approaches that could be adopted for the development of the Scheme and its delivery.

5.3.1 Procurement options – Scheme development

As the current promoter for the Scheme, FDC are responsible for the procurement of advisory services to develop the Scheme.

The commission for the development of this SOC was advertised through an open tender on the Crown Commercial Service Contracts Finder website. A total of 12 tenders were received and subsequently reviewed through the following process:

- Appointment of an assessment team consisting of officers from FDC, CPCA and CPCA.
- Independent review and assessment of each tender using an agreed criteria and scoring template.
- Team review of independent tender scores resulting in full agreement of successful candidate for the commission.

An independent assessment of this process was completed by FDC Procurement Manager prior to the release of the notifications.

As a result of this process, Mott MacDonald were awarded the commission to deliver this SOC.

As with similar projects at this stage of development, FDC is expected to continue to act as lead partner and deliver the OBC stage of the project. All the arrangements for governance, procurement and delivery are expected to be the same, or similar, to this SOC stage.

Whilst no decisions have yet been made on the detailed design, Full Business Case (FBC) and build stage of the project, a range of options are available. FDC Transport Team may deliver these elements in-house, with support from the Engineering Team, or may seek assistance from another organisation. This may be CCC, as the Highway Authority, or a third-party contractor, mostly like through a framework.

There are a number of routes to procurement available to the Scheme promoter. These may depend on who takes future stages (i.e., OBC, FBC & Construction) forward:

- Fenland District Council – It is expected that FDC will take responsibility for the development and delivery of the project, with input from key stakeholders. As the Lead Organisation for the project, FDC has access to the following routes of procurement:
  - Open Tender advertised through Crown Commercial Service Contracts Finder
  - A Professional Services Framework
- Cambridgeshire County Council Highways – As the Local Highway Authority, it may be decided at later stages that CCC should take over as Lead Organisation for the project. Should this take place, CCC has access to the following routes of procurement:
  - Eastern Highways Alliance Framework
  - Open Tender advertised through Crown Commercial Service Contracts Finder
  - Cambridgeshire Highway Services Contract
  - Other Joint Professional Framework

5.3.2 Procurement options – Scheme delivery

At this early (conceptual) stage, procuring the design and construction of the works will largely depend upon the type, complexity and estimated cost of the options under consideration.

For simple construction works, that take place within the existing highway boundaries, including junction improvements, active travel enhancements, and additional bus priority measures, traditional procurement methods can be adopted where the Scheme can be designed and constructed under separate contracts.

In considering a high-level procurement strategy for concepts that require a greater level of buildability consideration, Early Contractor Involvement (ECI) arrangement could be considered to ‘de-risk’ the project and provide a more cost-effective solution.

For options that do not require specialist construction considerations, for example those that include standard modifications to the road and junctions, these could be procured locally through the established routes.

For those options that include more complex elements, and are of a larger scale, including any relief road solution, this may attract a more traditional form of procurement, and could be let under separate design and construction contracts, or alternatively, a design and build procurement route could be taken.

5.4 Commercial Dimension summary

A more detailed consideration of procurement issues will be provided as part of any future OBC. In the OBC, the type of work associated with shortlisted options will be detailed, with the alternative procurement routes set out with the pros and cons for each. In turn this will lead to the production of a detailed Procurement Strategy that will set out the preferred procurement route for the preferred option.

6 Management Dimension

The Management Dimension assesses whether a proposal is deliverable. It looks at the project planning, governance structure, risk management, communications, and stakeholder management to establish if adequate resources are in place to ensure delivery on time, on budget and in accordance with specifications.

At SOC stage, the Management Dimension includes an indicative programme and commentary on governance, quality assurance, communications, and risk management.

6.1 Overview

For the purposes of the SOC, the Management Dimension has been developed to cover current arrangements for the management of the Scheme under the ownership of FDC. At subsequent stages of the Scheme's development, this would require a full review and update, depending on who takes the Scheme forward. For example, the OBC may be progressed by FDC under the same governance arrangements set out below, or it may be taken forward by the Highway Authority i.e. CCC.

6.2 Evidence of similar projects

The successful delivery of these previous schemes provides confidence that FDC and its strategic partners have a significant level of experience in the planning and delivery of transport (and non-transport) improvements. A selection of these is presented below.

If the development of the Scheme beyond SOC, or at any other future stage of development, is undertaken by the CCC then this section will be reviewed and updated to reflect their experience and evidence of projects they have delivered.

6.2.1 Whittlesey Heritage Walk

The Whittlesey Heritage Walk (WHW) was a Growing Fenland Masterplan project for Whittlesey, focused on providing a town centre walking route to promote the towns heritage and encourage active travel and tourism. FDC successfully bid for £218,000 from the CPCA Market Towns Programme fund to design and deliver this project.

The WHW was managed by FDC and governed in a similar way to the Whittlesey Relief Road SOC, with support from Whittlesey Town Council and CCC. A Project Board was appointed to oversee the project. Reporting to the funder (CPCA) was carried out in the same format through quarterly highlights reports and funding claims.

The project involved significant local engagement and input, including the successful delivery of a public consultation. It required the installation of several items of street furniture, along with resurfacing works to a significant portion of the highway and footpath around Whittlesey Town Centre.

The WHW was successfully completed on time and on budget and formally launched in October 2022. A portion of the overall usage has been monitored through the mobile phone app linked to the route and from the provision of printed copies of the route brochure. This shows that hundreds of participants have taken part, and it is still drawing new users to date.

6.2.2 Manea Railway Station Car Park

From 2014 onwards, the use of Manea Railway Station has increased significantly following the introduction of a two hourly service, where previously there had only been two services a day and at times unsuitable for most people to use. An ongoing draw back with the station has been the lack of a car park, as the rural setting means access for many relies on car use.

FDC Transport and Engineering Teams worked in partnership to deliver this £1million project to deliver 112 car parking spaces, motorcycle and bike parking and provision for bus turning to support service vehicles and rail replacement buses. The car park includes CCTV, electronic gates and lighting. There were several challenges to find and secure the land for the car park. Very poor weather with heavy rain had a significant impact on the scheme build.

The Project was governed through a bi-monthly Project Board, with key decisions, such as funding, being made by FDC Cabinet and CPCA Board. Contractors were awarded through an open tender process in accordance with FDC procurement process.

A soft launch of the facility commenced in August 2022 and the car park was officially opened to the public in January 2023. The car park has been well received, is showing an increase in use, especially at weekends. It will serve the needs of substantial local housing growth now and in the future.

6.2.3 March Railway Station – Station Building and Car Park Extension

This £2.1million pound project, refurbished and extended the existing station car park. The platform 1 building, that had been a series of small and tired looking spaces, now provides a light, bright and substantial booking hall and ticket office, new toilet facilities, new staff accommodation, a meeting room and a ticket office. A retail unit also forms part of the proposal.

FDC secured the funding for this project through the CPCA Fenland Stations Regeneration Programme. The governance was managed through a Project Board, which met bi-monthly. This reported to FDC Cabinet and CPCA Board for key decisions such as funding. FDC worked in partnership with Greater Anglia as the facility owner of March Station. All technical and option work was taken forward by the train company and their contractors, with the public being consulted at key stages and choosing the final design for the platform building. The detailed design and construction were also completed through the same process.

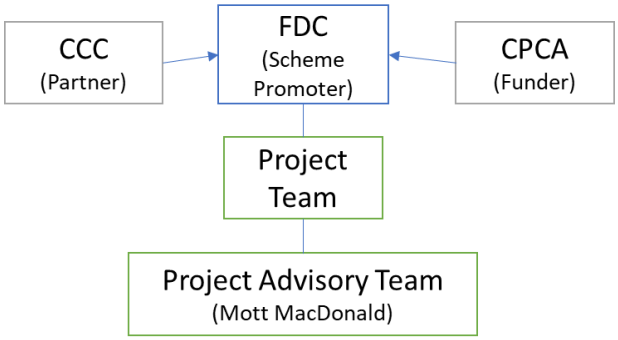
FDC procured an independent organisation to complete the business case documents and associated assessment work that formed part the OBC and FBC. An open tender exercise was undertaken from which the consultants were appointed.

This project was formally opened to the public in May 2022. The use of the new car park is consistently greater than the use of the previous car park. The overall use of the station in September 2024 is just below pre-covid levels, but nearly 100,000 journeys per annum more than when the scheme opened just over 2 years ago. This scheme has been well received by the public and stakeholders.

6.3 Governance arrangements

The current development of the Whittlesey Relief Road Scheme is being overseen by FDC, who are the Scheme promoters. The CPCA, as the Local Transport Authority, are the funders behind the current development of the SOC and are working in partnership with FDC to support the development of the SOC. The development of the Scheme is support by Mott MacDonald as the advisory team.

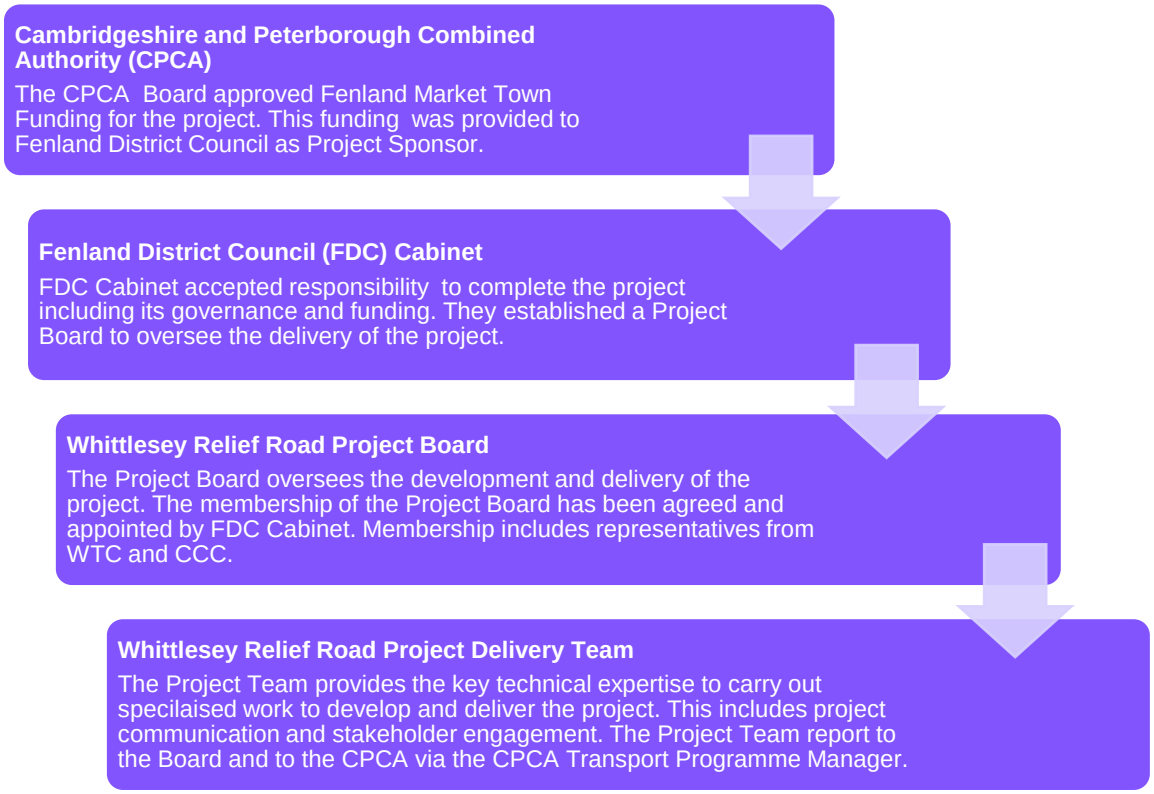
Figure 6.1: Project development governance structure



FDC have developed a robust governance arrangement around this structure to ensure that the Scheme is managed effectively; taking into consideration any potential risks that might arise, while continuing to adhere to the Scheme's delivery timeline.

Given the stage of the project, a finalised project governance and organisational structure for managing the future stages, including the delivery of the of the Scheme, is yet to be determined. It is expected that FDC will take responsibility for the delivery of the project with input from key stakeholders. Delivery of the Scheme will be managed by a Project Team led by a designated FDC Project Manager. On this basis the current governance structure for the project set out below is expected to continue.

Figure 6.2: Project delivery governance structure



6.4 Project management

The project management and development of the Whittlesey Relief Road Scheme follows good practice project governance, management principles and processes. The project is currently being led by FDC as the lead promoter.

6.4.1 Project board

A Project Board has been established to manage delivery and be accountable to FDC and to the CPCA as funders. The Project Board comprises of members from FDC, Whittlesey Parish Council, CPCA and the CCC. The Project Board is support by subject matter experts led by the Project Team.

All Project Board meetings are managed by the Scheme Project Manager. They are responsible for managing all project meetings, reporting and updates, and holds all information regarding Scheme performance monitoring, issues and risk logs.

The board will ultimately provide the direction for the project, support project delivery teams, challenges decisions, and ensure the development and delivery is on track, within budget and will deliver the required standards of quality. The Project Board is chaired by the Senior Responsible Owner (SRO).

Table 6.1: Project Board members

Board Member	Board Role	Organisation
Cllr Chris Seaton	Chair (Project SRO)	FDC Portfolio Holder for Transport & Social Mobility
Cllr Chris Boden	Board member	FDC Leader of the Council & Portfolio Holder for Finance
Cllr Dee Laws	Board member	FDC Portfolio Holder for Planning
Cllr Elizabeth Sennitt-Clough	Board member	Whittlesey Town Council
Cllr Jason Mockett	Board member	Whittlesey Town Council
Cllr Neil Shailer	Board member	CCC Vice Chair of Transport and Infrastructure Committee
Matthew Lutz	Funder Representative	CPCA Transport Programme Manager

Officers from the Project Delivery Team attend the Project Board meetings to report on Scheme progress and to provide technical support and assistance to the Project Board Members. The structure of the Project Delivery Team is set out in Table 6.2.

Table 6.2: Project Delivery Team

Role	Organisation	Title
Project Funder	Cambridgeshire and Peterborough Combined Authority	Transport Programme Manager
Project Sponsor	Fenland District Council	Transport Manager
Project Manager	Fenland District Council	Senior Transport Officer
Technical Support/ Stakeholder	Cambridgeshire County Council	Transport and Infrastructure Manager
Consultant/ Technical Advisor	Mott MacDonald	Project Director
Consultant/Technical Advisor	Mott MacDonald	Project Manager
Consultant/Technical Advisor	Mott MacDonald	Technical Lead

6.4.2 Project management team

The Project Management Team is accountable to the Project Board and ultimately the FDC Executive Board. It is the Project Management Team who manage the delivery of Whittlesey Relief Road SOC. The Project Management Team are responsible for the day-to-day delivery of the SOC and will ensure technical and financial control.

The Project Management Team coordinates inputs from technical advisors responsible for the delivery of the key workstreams in pursuit of the agreed programme, including:

- Business Case development
- Design development
- Transport modelling
- Environment assessment
- Procurement
- Planning
- Communications

For the overall project management and delivery of the Scheme, there are several key roles, which are outline in Table 6.3. This includes detail of each role and associated responsibilities.

Table 6.3: Key project roles

Role	Responsibilities	Name
Project Sponsor	The Project Sponsor is responsible for: ● Direct liaison with the Elected Members, FDC Cabinet and Board Members. ● Representing the Scheme at meetings in the absence of the Project Manager. ● Overseeing the work of the Project Manager	Wendy Otter
Project Manager	The Project Manager is responsible for: ● Appraising options for, and risks to, delivery of the project and make clear and concise recommendations to senior officers and Elected Members. ● Establishing, implementing and maintaining procedures and records relating to the project management and finance function, to ensure effective delivery of the wider Programme outcomes. ● Monitoring and control of risks and issues.	Belinda Pedler

	● Managing the procurement process to select specialist consultants / partner organisations to support / deliver project commissions in accordance with Council policies and manage these commissions to ensure all objectives and outcomes are met to time and to budget. ● Proactively managing changes in project scope, identifying potential crises, devising contingency plans and providing lessons learnt reporting as required in order to identify successful/unsuccessful project elements. ● Implementing appropriate procedures for managing, monitoring and reporting progress on the project. ● Establishing, developing and maintaining effective and co-operative communications, working relationships and arrangements with all internal/external stakeholders.	
Technical Lead	● Provide a technical lead role including advice/guidance, particularly in relation to the development of the Business Case. ● Also provides advice and support with the development of a comprehensive stakeholder engagement programme, ensuring that the Scheme's vision and benefits are articulated in various media forms, and helping to manage and deliver stakeholder engagement events.	Mott MacDonald

6.4.3 Decision making and change control

The delivery programme and budget forecast for the project are set out by the Project Team and agreed by the Project Board and Funder at the outset of the project. Progress against these documents is monitored and reported closely throughout the project.

Any changes or variations to the agreed programme is identified and recorded by the Project Team through a Change Event process with the project Consultants. These are submitted in writing for review and approval. All key decisions relating these changes are discussed and formally agreed by the Board through Project Board meetings prior to work commencing. These discussions and resulting decisions are recorded and ratified through formal meeting minutes.

Actions that have affected the overall budget or end date for the project also require CPCA approval through their Change Control process. The CPCA process is used for all their funded projects and involves the submission of a Change Control proforma by the Project Manager which is subsequently discussed and approved at CPCA Transport Committee. Similarly, changes to the programme or budget are also recorded through formal minutes.

6.4.4 Project Manager Report

The Project Manager prepares the Project Manager's Report to present at Project Board meetings. This report is the main source of documentation which summarises progress and change in the Scheme. The Project Manager's Report sets out the:

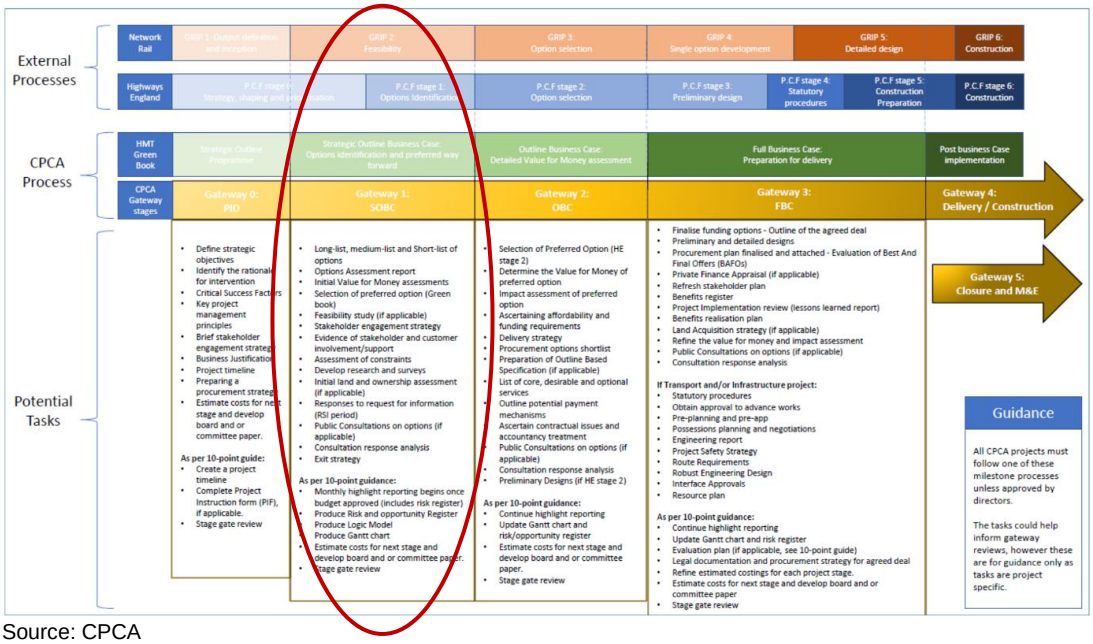
- Progress of each work stream (for example, business case and consultation).
- Key activities to be undertake before the next reporting meeting.
- Budget update; and
- Review of strategic risks and issues.

In addition to the Project Manager's Report for the Project Board, there is a Quarterly Report that is prepared by the Project Manager and submitted to the CPCA as the funder to provide an update on the progress of the Scheme, in particular in relation to spend.

6.5 Project Delivery Plan

In line with good project management principles, a phased approach to the delivery of the Whittlesey Relief Road project has been adopted. These phases have been aligned with the CPCA Assurance Framework and the five CPCA Gateway Stages which are shown in Figure 6.3. The Scheme is currently at Gateway 1: SOBC.

Figure 6.3: CPCA Assurance Process



Source: CPCA

The phased delivery of the Whittlesey Relief Road Scheme has also been designed to reflect HM Treasury Green Book Guidance for the development and delivery of a major scheme, including the development of the Scheme's business case. As such, the Scheme will pass through three business cases stages as part of the overall approvals process. These are aligned with the CPCA Assurance Process and Gateway stage 1-3. Approval to progress to the next business case stage is a key decision that will be taken by the CPCA.

6.5.1 Project programme

The programme for the Scheme is included in Appendix I (this includes the detailed tasks for the current SOC, and indicative milestones for subsequent stages of scheme development and delivery, assuming that the Scheme secures approvals and funding). This has been approved by the Project Board. If the programme for the current stage of work should change, this would be reported through the Project Mangers Report, to the Project Board, seeking approval with a recommendation as a key decision.

Table 6.4 below provides the key milestones and associated delivery dates. These are based on the assumption that the Scheme is approved at Gateway 1 by CPCA and secures funding to immediately progress. This has been developed as a best-case scenario, in terms of length of time to deliver and reflects the delivery time periods associated with the delivery of a new road. Where there may be a delay in the Scheme progressing due to funding, this would directly

translate to the programme milestone dates moving. Similarly, should a non-road solution be taken forward the timescales would also vary.

Table 6.4: Project Programme Indicative Key Milestones

Milestone	Est. Start	Est. Completion
Stage 1 - SOC		
Inception	Jul 2023	Oct 2023
Baseline & Evidence Review	Sept 2023	Feb 2024
Case for Change	Feb 2024	Apr 2024
Longlist Options Identification and Assessment	Feb 2024	Jul 2024
Established Shortlisted Options	Jul 2024	Oct 2024
Public Consultation	Aug 2024	Dec 2024
SOC Completion and Sign Off (Gateway 1)	Q1 2025	
Stage 2 - OBC		
Shortlist Options Preliminary Design Development	Q2 2025	Q3 2025
Shortlist Economic Appraisal	Q4 2025	Q4 2025
Public Consultation	Q1 2026	Q1 2026
Preferred Option Identified	Q2 2026	Q2 2026
OBC Completion and Sign Off (Gateway 2)	Q3 2026	
Stage 3 - FBC		
Preferred Option Detailed Design	Q4 2026	Q4 2027
Statutory Approvals	Q1 2028	Q1 2028
Procurement	Q2 2028	Q2 2028
FBC Completion and Sign Off (Gateway 3)	Q3 2028	
Stage 4 – Construction and Delivery		
Construction	Q4 2028	Q3 2030
Scheme Completion (Gateway 4)	Q4 2030	
Stage 5 – Closure and Monitoring and Evaluation (Post 1 year)		
Post Completion Monitoring and Evaluation	Q4 2030	Q4 2031
Project Closure (Gateway 5)	Q4 2031	

Source: Mott MacDonald

6.6 Quality assurance

There are a number of key milestones in the Project Programme where internal and/or external approvals will be required in order for the project to progress.

As part of the approval process at each stage, the project will progress through a number of key decision points where assurance will be carried out to ensure the project meets the required standards to be approved and progress to the next phase of work.

6.7 Stakeholder engagement

Public and stakeholder consultation is essential to ensure that the various aspirations of the general public and key stakeholders are taken into account throughout development and delivery of the project, and to manage the communication and flow of information relating to the Scheme.

Non-statutory stakeholder engagement and public consultation will be undertaken throughout Scheme development. A Stakeholder Engagement and Communications Plan (SECP) has been prepared, with the purpose of setting out the planned approach to engagement and consultation

with stakeholders and members of the public to inform the development of the SOC. The SECP is attached in Appendix C.

Included in the SECP is the detailed list of stakeholders who have been engaged with. These were identified through a stakeholder identification exercise, which was undertaken early in the development of the SOC, and includes the organisations, groups, and individuals with an interest in the proposals. Some of the key stakeholders include:

- CPCA
- Whittlesey Town Council
- Fenland District Council
- Cambridgeshire County Council
- Peterborough City Council
- Huntingdon District Council
- Whittlesey Business Forum
- National Highways
- Environment Agency
- Natural England
- Anglian Water
- Middle Level
- Network Rail
- Greater Anglia
- Stagecoach East
- Large local businesses e.g. McCains, Fonterra
- FACT Community Transport
- Sustrans
- CamCycle

6.7.1 Stakeholder workshops

Five stakeholder workshops have been undertaken to support the development of the SOC. The attendees for these sessions have come from the key stakeholder list. These workshops have covered the following:

Workshop 1

- **Purpose:** The session was used as a form of knowledge transfer to make sure the project team had a broad understanding of the constraints and aspirations for the proposals, and a clear understanding of the regional context and aspirations for Whittlesey.
- **How it informed the SOC:** the outputs from this workshop informed the development of the Case for Change (Section 2.2)

Workshop 2

- **Purpose:** The second stakeholder workshop was held to build further understanding of the issues underpinning the need for intervention, drawing in a wider stakeholder group to help inform the understanding of current issues within the town.
- **How it informed the SOC:** the outputs from this workshop informed the development of the Case for Change (Section 2.2)

Workshop 3

- **Purpose:** This session focused on identifying all potential options for the Scheme that could address the issues identified and meet the established Scheme objectives.
- **How it informed the SOC:** the outputs from this workshop informed the development of the longlisted options (Section 3.2.1)

Workshop 4

- **Purpose:** Following the sifting of the longlisted options, the shortlist was presented to the stakeholders to seek their views in advance of taking them out to public consultation.
- **How it informed the SOC:** their views were used to inform the assessment of the final shortlist (Section 3.5.5).

Workshop 5

- **Purpose:** The final session was used to present the outcomes from the shortlist options assessment, along with summary of the Options Assessment Report, and core themes from public consultation.
- **How it informed the SOC:** the outcome of this session did not result in changes to the SOC but kept stakeholders informed of the final recommendations being taken forward.

6.7.2 Public consultation

Public consultation took place between 23 October and 22 November. A mixture of in-person and virtual consultation methods were used over three planned events, with the consultation materials available online throughout the 4-week period. Advertisement of these consultation sessions and the consultation period was undertaken by the project team, and was promoted through social media, the FDC website and leafletting in the local town area.

The aim of the public consultation was to ascertain feedback from members of the public and local businesses to gauge their general support and public acceptability for the Scheme, including their views on the proposed shortlisted options. Feedback from the consultation is reported in Section 2.2.3 to enhance the case for change and the understanding of the current issues that underpin it. The findings are reported in Section 3.5.5 and adds a further layer of detail to the options assessment and appraisal, ultimately informing the potential preferred way forward.

The detailed feedback from the public consultation is set out in the Consultation Summary Report (Appendix H).

6.8 Risk management

The management of risk and uncertainty is key to the successful delivery of the Scheme. The risk management strategy, outlined below in preliminary form, will enable the identification of threats (and opportunities) to project delivery and enable effective risk management actions to be assigned.

This section sets out the arrangements for risk management and the effectiveness of the strategy so far. There are two types of risks, which are organised as follows:

- **Strategic Risks** – these are presented in the Project Manager's report and are those risks which impact the overall delivery of the project scope; and
- **Technical Risks** – these are associated with specific work streams and are managed by the Project Manager.

As such a risk register has been developed and RAG rated according to the impact the risk may have on the Scheme:

- **Red** – significant and live risk with high potential to occur and to impact project delivery either at the strategic or technical level.
- **Amber** – risk that has lower potential to occur and lower impact.
- **Green** – risk is unlikely to occur and or has small/negligible impact.

All risk registers are continually reviewed regularly, with the risk management processes being employed throughout the project lifecycle. This includes the regular review and updating of the Risk Register through workshops and meetings. The Project Manager has responsibility for overseeing the Risk Management process.

A Risk Register has been prepared (Appendix J), setting out the threat, consequences, scale of impact if realised, likelihood of realisation, risk control measures, and the risk owner. This is summarised in Section 2.7.

To account for risks that, if realised, would lead to a Scheme cost increase, a 40% risk allowance has been included in the high-level Scheme costs reported in the Financial Dimension (Section 4.2). At the OBC stage, a Quantified Costed Risk Assessment will be undertaken based on the project risk register, to identify a risk budget more that is more closely matched to the actual risk profile.

6.9 Benefits Realisation Plan

A Benefits Realisation Plan has been prepared that sets out how the Scheme benefits will be tracked to ensure successful Scheme outcomes. This is presented in Appendix K. A summary of the key benefits set out in the plan are shown below, including the key risks to them being realised:

Table 6.5: Key Project Benefits

ID	Benefit title	Benefit description	Risks to realisation
001	Reduced air and noise pollution within Whittlesey	Reduction in measurable levels of PM10 and NOx. Reduction in road related noise levels.	Provision of alternative modes, such as the frequency of bus and rail services is reduced, or people are unable to access active travel modes, thereby reducing level of mode shift. There is also a risk that a relief road may free up capacity on the A605 that is then used by local trips, thereby not achieving the reductions in air and noise pollution being targeted.
002	Increased physical activity and generated health benefits through an increase in active travel.	Increased levels of walking and cycling within Whittlesey. Reduction of traffic within Whittlesey, easing issues around congestion, noise, air quality and safety. Improved health and fitness of residents.	Lack of mode shift from car use towards cycling and walking as car is still considered as first choice of travel.
003	Enhanced connectivity within the town and across the wider district.	Improved access to education, work and recreation opportunities. Improved economic activity leading to growth.	Key locations are not served by the Scheme.
004	Reduced economic inactivity as people can access opportunities in the district efficiently.	Decreased levels of economic inactivity Whittlesey and Fenland. Stimulus of jobs and land value uplift.	External factors such as economic downturn.
005	Decreased levels of congestion within Whittlesey, resulting in improved journey times.	Reduction in journey time variability and junction queues during peak times.	Use of the Scheme not significant enough to meaningfully reduce congestion. Any reduction in vehicles along the A605 is short term before growth in traffic results in re-

		A reduction in noise and an increase in air quality along route due to lower levels of traffic.	emergence of congestion issues.
006	Improved safety for pedestrians and cyclists.	Reduction in accidents involving pedestrians and cyclists. Increase in walking and cycling within Whittlesey.	Scheme design does not improve infrastructure provision that enables safer journeys to be undertaken.
007	Decrease in private car use as a result of increased public transport use.	Increased bus and rail patronage, and public transport operator revenue. Decrease in traffic and private vehicle use.	Service cuts result in poorer service provision.
008	Improved levels of the public's satisfaction with public realm.	Improvement in local residents' satisfaction within Whittlesey. Whittlesey becomes a more attractive place to live, work and invest.	Quality of public realm improvements does not increase public satisfaction.

6.10 Monitoring and evaluation

Monitoring and evaluation of benefits is required to establish the extent to which the Scheme achieves its objectives. It also provides an opportunity to improve performance by reviewing past and current activities, with the aim of replicating good practice in the future and eliminating mistakes in future work. A draft Monitoring and Evaluation Plan for the Whittlesey Relief Road project will be prepared as part of the next stage of work in developing the OBC.

The Monitoring and Evaluation Plan programme will focus on measuring performance, understanding Scheme impacts and disseminating this to Government and wider stakeholders to ensure that any potential issues occurring post-implementation are identified and addressed.

As the Monitoring and Evaluation Plan evolves, it will expand to detail data requirements and sources, the approach to collecting and collating data, and define the audience, programme and governance structure for monitoring and evaluation.

The Project Board will need to agree to this plan as part of the 'sign-off' process and ensure that subsequent evaluation is undertaken in line with guidance and will have a role in the scrutiny and review of findings.

6.11 Management Dimension summary

The Management Dimension has been developed to cover current arrangements for the management of the Scheme under the ownership of FDC; however, this is subject to change at subsequent stages depending on which organisation takes the Scheme forward. FDC is currently overseeing the development of the Whittlesey Relief Road Scheme, as Scheme promoters, with the CPCA being the funders of the SOC, and Mott MacDonald as the advisory team.

A Project Board has been established to manage delivery, and be accountable to FDC and the CPCA, comprising of members from FDC, Whittlesey Parish Council, CPCA and the CCC, and chaired by the SRO. The board provide the direction for the project, support project delivery teams, challenges decisions, and ensure the development and delivery is on track, within budget and will deliver the required standards of quality.

The Project Management Team is accountable to the Project Board and are responsible for the day-to-day delivery of the SOC and ensure technical and financial control. The Project Manager prepares the Project Manager's Report to present at Project Board meetings, along with the Quarterly Report submitted to the CPCA as the funder to provide an update on the progress of the Scheme, in particular in relation to spend.

Table 6.6 below provides the key milestones, and associated delivery dates, based on the assumption that the Scheme is approved by the CPCA at Gateway 1 and secures funding to immediately progress. This has been developed as a best-case scenario, in terms of length of time to deliver. Any delays in the Scheme progressing would directly translate to the programme milestone dates moving.

Table 6.6: Project Programme Indicative Key Milestones Summary

Milestone	Estimated completion
Stage 1 – SOC: Completion and Sign Off (Gateway 1)	Q1 2025
Stage 2 – OBC: Completion and Sign Off (Gateway 2)	Q3 2026
Stage 3 – FBC: Completion and Sign Off (Gateway 3)	Q3 2028
Stage 4 – Construction and Delivery & Scheme Completion (Gateway 4)	Q4 2030
Stage 5 – Project Closure and Monitoring & Evaluation (Gateway 5)	Q4 2031

As part of the approval process at each stage, the project will progress through a number of key decision points where assurance will be carried out to ensure the project meets the required standards to be approved and progress to the next phase of work.

Non-statutory stakeholder engagement and public consultation will be undertaken throughout Scheme development. The SECP sets out the planned approach to engagement and consultation with stakeholders and members of the public, which, to-date, has included five stakeholder workshops and public consultation taking place between 23 October and 22 November. The aim of these were to ascertain feedback from stakeholders, members of the public and local businesses to understand the current issues, gauge support and for the Scheme, and understand views on the shortlisted options.

The management of risk and uncertainty is key to the successful delivery of the Scheme. The risk management strategy will identify threats (and opportunities) to project delivery and enables effective risk management actions to be assigned.

A risk register has been developed and RAG rated according to the impact the risk may have on the Scheme, which is continually reviewed, with the risk management processes being employed throughout the project lifecycle. At the OBC stage, a Quantified Costed Risk Assessment will be undertaken based on the project risk register, to identify a risk budget more that is more closely matched to the actual risk profile.

Appendices

A. Case for Change

B. Baseline Evidence Review

C. Stakeholder Engagement and Communications Plan

D. Longlist Options Assessment Report

E. Options Assessment Report

F. Appraisal Specification Report

G. Social Impact Appraisal Report

H. Consultation Summary Report

I. Scheme Programme

J. Risk Register

K. Benefits Realisation Plan

L. Analysis of Monetised Costs and Benefits Tables

M. Appraisal Summary Tables

N. Public Accounts Tables

O. Network Resilience Technical Note