

Poynton Relief Road

Outline Business Case

OD134

September 2018

Poynton Relief Road

Project No: B1832054
Document Title: Outline Business Case
Document No.: OD 134
Revision: Rev 0
Date: September 2018
Client name: Cheshire East Council
Project Manager: Adam Godbold
Author: Richard McGarr
File name: B1832054_OD_134_OBC Combined Cases

Jacobs U.K. Limited

© Copyright 2017 Jacobs U.K. Limited. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This report has been prepared on behalf of, and for the exclusive use of Jacobs' Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

Document history and status

Rev	Date	Description	By	Review	Approved
0	23/08/2018	OBC – 5 Cases	RM	RH	AG

Contents

Contents	2
1 Introduction	4
1.1 Introduction	4
1.2 Scheme Background and Overview	4
1.3 Purpose of Document	9
1.4 Document Structure	9
2 The Strategic Case	10
2.1 Introduction	10
2.2 Existing Arrangements	11
2.3 Future Situation	29
2.4 Identified Problems and Issues	31
2.5 Scheme Objectives	35
2.6 Proposals	39
2.7 Strategic Fit	45
2.8 Planning Position	54
2.9 Political Support	54
2.10 Stakeholders	54
2.11 Internal or External Business Drivers	55
2.12 Synergy	55
2.13 Conclusions	56
3 The Economic Case	58
3.1 Introduction	58
3.2 Methodology	58
3.3 Assumptions	1
3.4 Scheme Cost for Economic Assessment	3
3.5 Assessment of Monetised Benefits	5
3.6 Assessment of Wider Economic Benefits	10
3.7 Value for Money Assessment	11
3.8 Conclusions	13
4 The Financial Case	15
4.1 Introduction	15
4.2 Methodology	15
4.3 Assumptions	15
4.4 Base Costs	16
4.5 Adjusting for Risk - Quantified Risk Assessment (QRA)	16
4.6 Optimism Bias	17
4.7 Rebasing to DfT Base Year (2010)	18
4.8 Conclusion	18
5 The Commercial Case	19

5.1	Introduction	19
5.2	Procurement Workshops	19
5.3	Procurement Options	20
5.4	Securing the Services of a Contractor	22
5.5	Cabinet Approval of Recommend Procurement Strategy	24
5.6	Payment Mechanisms	24
5.7	Contract Length	24
5.8	Contract Management	25
5.9	Risk Allocation and Transfer	25
5.10	Procurement Programme	25
5.11	Conclusion	26
6	The Management Case	28
6.1	Overview	28
6.2	Governance	28
6.3	Programme / Project Dependencies	32
6.4	Assurance	32
6.5	Delivery Programme	36
6.6	Risk Management	37
6.7	Evidence of Similar Projects	38
6.8	Communication and Stakeholder Engagement	39
6.9	Conclusions	39
7	Monitoring and Evaluation and Benefit Realisation	42
7.1	Introduction	42
7.2	Sources of Information	43
7.3	Monitoring and Evaluation Requirements	43
7.4	Logic Mapping	45
7.5	Standard Monitoring Approach	47
7.6	Enhanced Monitoring Approach	55
7.7	Data Collection	57
7.8	Governance	58
7.9	Benefits Realisation Plan	62

1 Introduction

1.1 Introduction

Jacobs has been commissioned by Cheshire East Council (CEC) to prepare an Outline Business Case for Poynton Relief Road (the scheme). This section provides an introduction to the Business Case with the Strategic Case for the scheme set out in Section 2.

The business case is presented in accordance with the Department for Transport (DfT) guidance for major transport schemes, namely Transport Appraisal Guidance (TAG) which outlines the processes for appraising transport schemes to assess impacts against key policy objectives (local and national), to assess the value-for-money of proposed investment in infrastructure and to secure DfT funding for the proposals.

1.2 Scheme Background and Overview

Poynton lies along the A523 London Road, which is the principal north/south route connecting Leek and Macclesfield with Stockport and Manchester, via the A6. Due to its close proximity to Manchester, the A6 and the M60; Poynton acts as a commuter town for residents who live in the town and commute into Stockport, Manchester or Macclesfield for work.

The A523 and A5149 in Poynton form the arterial north/south routes through Poynton's social and commercial centre. There are a number of town centre retail, leisure and employment premises located along these roads through the town centre which attract high volumes of pedestrian footfall. The A523 through the town centre carries both local and strategic traffic, passing through the town to destinations further afield including Macclesfield and the M6 to the south and Stockport, the M60 and Manchester to the north.

The A6MARR (Manchester Airport Relief Road) scheme will provide an east-west transport link through south east Greater Manchester and Cheshire East. There are a limited number of east-west routes to the south of the A6MARR.

This lack of suitable east-west routes causes strategic traffic to and from the south of the region to travel via the A523 through Poynton or via the A34 to access the A6MARR. Consequently, strategic traffic flows contribute to congestion in Poynton.

The volume of traffic and many conflicting traffic movements (due to limited North-South connectivity) impact on the operation of a number of junctions on the A523. This causes severe congestion along the A523 corridor, particularly in Poynton.

This congestion has created problems of journey time reliability, severance and environmental impacts that degrade transport efficiency and quality-of-life in and around Poynton.

Plans to bypass Poynton have been in existence since the 1940s, although they only came to prominence in the 1970s, when they were packaged up alongside wider proposals, namely the "A6(M) Outer Ring Road" improvements in the south east of Manchester, including a link between Manchester Airport, Handforth, Woodford, Hazel Grove and Bredbury.

These plans were scaled back in the 1990s due to funding restrictions, meaning that out of all the Outer Ring Road improvements, only the section between Handforth and Woodford was completed (as part of the A34 Wilmslow and Handforth Bypass). This was completed in November 1995 and is now designated as the A555.

The 'Poynton Bypass', a highway scheme proposal developed by the Highways Agency (now Highways England), and shown in Figure 1.1, was proposed to include two sections:

- The east-west link between the extant A555 Handforth Bypass and the A6(M) proposal at Hazel Grove.
- The north-south section extending from the A555, crossing the Chester Road to the north east of the Woodford Aerodrome and extending further south to the northern end of the Silk Road in Macclesfield;

The Poynton Bypass remained on the Government's Roads Programme until the publication of the "New Deal for Transport: Better for Everyone" in July 1998, that established the Government's policy for developing an integrated transport system that would address problems of congestion and pollution. The Government also published "A New Deal for Trunk Roads in England", which streamlined the Roads Programme into a seven year Targeted Programme of Improvements (TPI) to be taken forward by Highways England.

Neither the Poynton Bypass nor the remaining Outer Ring Road schemes were included in the TPI as they were not seen as an immediate priority. These schemes are shown in Figure 1.1. Instead, the Government commissioned a series of studies to address problems not covered by measures in the TPI.

This led to the production of the South East Manchester Multi Modal Study (SEMMMS) published in 2001. SEMMMS is a 20-year strategy that has been developed to relieve existing and predicted transport problems in a wide area to the South and East of Manchester and aims to:

- Improve public transport
- Improve the use of road space
- Encourage transport change
- Encourage urban regeneration
- Improve highways



Figure 1.1: Remitted Road Schemes (Source: SEMMMS Strategy Report 2001)

SEMMMS (2001) recommended that local authorities in the study area develop smaller and more appropriate scale road proposals along the protected alignments for these schemes. These should be designed to provide relief for the study area and communities affected by inappropriate through traffic, but not to provide a new strategic route of regional and potentially national significance.

The original SEMMMS strategy (2001) recommended a package of highway schemes and other measures, including the following Highways England and Local Authority major highway schemes, presented in Figure 1.2:

- A6 (M) Stockport North-South Bypass (including A6 Stepping Hill Link)
- A523/A555 Poynton Bypass
- A555 Manchester Airport Link Road West (MALRW)

As part of the SEMMMS strategy the proposed Poynton Bypass and MALRW were reduced in scale (length, structure, capacity etc.). This was because they contributed to meet the study's objectives in terms of significant reduction of traffic in areas with high level of congestion but without providing a new strategic route of regional importance. They would also facilitate other potential measures, which in turn would provide additional benefits. The reduced scale Poynton Bypass comprised of:

- The east-west dual carriageway linking the A555/A5102 junction north of Woodford to the A6 at Hazel Grove; and
- The shorter north-south single carriageway bypass from the existing A523 at Adlington, joining the east-west section of the bypass at north of Woodford. This route does not connect to the Silk Road in Macclesfield.

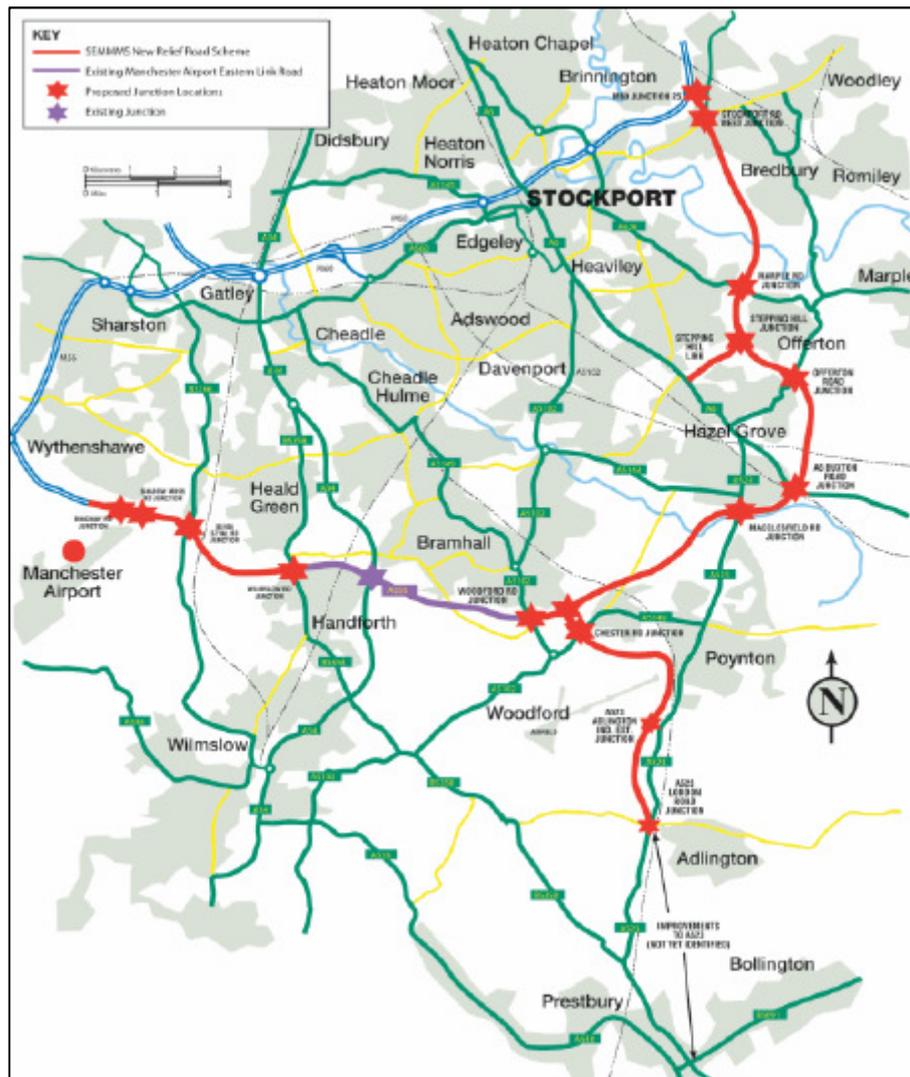


Figure 1.2: SEMMMS New Relief Road Schemes
Source: SEMMMS Strategy Report (2001)

Following discussions with the Department for Transport (DfT) between 2007 and 2011 regarding the affordability of the SEMMMS strategy, and confirmation of £165m of funding in the 2011 Autumn Statement, it was concluded that a reduced package of measures should be promoted through SEMMMS. This included the A6 to Manchester Airport section only, although it was acknowledged that Poynton Relief Road remained a long term aspiration.

The A555 Manchester Airport Link Road West (MALRW) became the A6 to Manchester Airport Relief Road (A6MARR). It crosses an area to the South East of Manchester including parts of Cheshire East, Derbyshire, Stockport and Tameside local authority areas, and will connect the A6 to Manchester Airport at Hazel Grove, near Stockport.

The Business Case for the reduced SEMMMS package was submitted to the DfT in November 2012. At this point, the reduced route (Red Route) for Poynton Relief Road connected to the A6MARR scheme at a junction to the north of the A5149 Chester Road. This alignment ran from the proposed A6MARR, under the A5149 Chester Road before passing to the east of Woodford Aerodrome (then an active aerodrome).

It then ran through Adlington Business Park before connecting into the existing A523 London Road.

Following the publication of this route option, it was announced that Woodford Aerodrome would close and be identified as an area for future development. As a result of this announcement, it was deemed that there was an opportunity to develop other preliminary options for a more direct alignment for the Relief Road.

An in-depth process of investigation, option assessment and development has confirmed the need for a bypass, which would allow north-south traffic to connect onto the A6MARR whilst avoiding Poynton town centre.

In determining the proposed alignment for the Poynton Relief Road, the preceding studies have previously considered a corridor of interest through which the road could pass, with a range of possible scheme route alignments modelled. From this range of options, two route options were assessed and taken forward to a route options public consultation in summer 2014. These options are shown in Figure 1.3, with public consultation showing a strong preference for the Green Route Option and a strong level of support for the overall scheme.

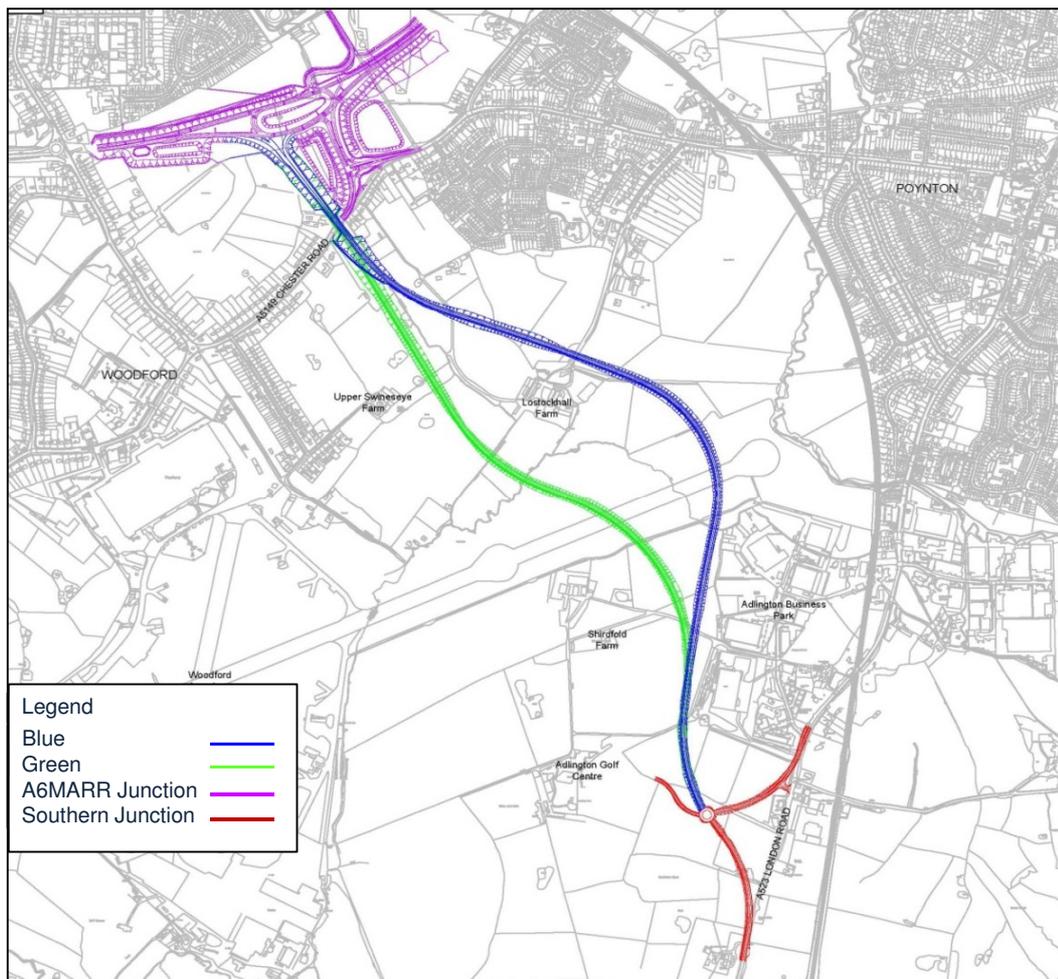


Figure 1.3: Options from the Summer 2014 Route Options Public Consultation

The Green Route Option has subsequently been taken forward as the preferred route and is the subject of this Outline Business Case.

1.3 Purpose of Document

This document represents the Outline Business Case for Poynton Relief Road.

It has been developed in line with the structure mandated by the Department for Transport's (DfT) Transport Business Case guidance to establish whether the specified scheme is:

- *Supported by a robust case for change that fits with wider policy objectives (**the Strategic Case**);*
- *Demonstrates value for money (**the Economic Case**);*
- *Financially affordable (**the Financial Case**);*
- *Commercially viable (**the Commercial Case**); and*
- *Achievable (**the Management Case**).*

1.4 Document Structure

The remainder of this document is structured as follows:

- *Chapter 2: The Strategic Case*
- *Chapter 3: The Economic Case*
- *Chapter 4: The Financial Case*
- *Chapter 5: The Management Case*
- *Chapter 6: The Commercial Case*
- *Chapter 7: Monitoring, Evaluation and Benefits Realisation.*

2 The Strategic Case

2.1 Introduction

The Strategic Case determines whether or not an investment is needed, either now or in the future. It demonstrates the case for change - that is, a clear rationale for making the investment; and strategic fit - how an investment will further the aims and objectives of both Cheshire East Council and the Cheshire and Warrington Local Enterprise Partnership (LEP).

More specifically, the Strategic Case should:

- *Specify the business need for a project;*
- *Set the context and identify a series of investment aims;*
- *Assess the investment aims that Cheshire East Council (and Government) wants to achieve as a whole;*
- *Determine the case for change and strategic fit. This should be an iterative process as the business case develops, and always supported by robust evidence, such as identifying key risks and constraints; and*
- *Demonstrate the business case has been informed by consultation with the main stakeholder groups.*

The Strategic Case is discussed in detail under the following sub-headings:

- *Existing Arrangements*
- *Future Situation*
- *Identified Problems and Issues*
- *Scheme Objectives*
- *Proposals*
- *Strategic Fit*
- *The Planning Position*
- *Political Support*
- *Stakeholders*
- *Internal or External Business Drivers of Change*
- *Synergy*
- *Conclusions*

2.2 Existing Arrangements

2.2.1 Population, Vehicle Ownership and Skills

The tables below summarise 2011 Census data for the area in order to provide a demographic profile of Poynton and the surrounding area.

No. of Cars in the Household	Poynton	Cheshire East	England
No car or van	10%	16%	26%
One car or van	39%	41%	42%
Two car or van	39%	33%	26%
Three car or van	9%	7%	3%
Four or more car or van	3%	3%	3%

Source: Census 2011

Table 2.1: Car Ownership Levels in Poynton, Cheshire East and England

Table 2.1 shows that car ownership in Poynton and Cheshire East is significantly higher than the average for England. In Poynton and Cheshire East respectively, 90% and 84% of households own one or more car or vans compared to 74% in England as a whole. Poynton also has a higher percentage of individuals with more than one vehicle in their household (51%) when compared with Cheshire East (43%) and England (32%).

The high rates of car ownership in Poynton are reflected in Table 2.2 below which shows that 72% of workers in Poynton drive to their place of work in a car / van, compared to 57% nationally. However, travel by bus, mini bus or coach is lower than that of both Cheshire East and England, at 1%.

Mode of travel	Poynton	Cheshire East	England
Driving a car or van	72%	68%	57%
Passenger in a Car or Van	4%	5%	5%
Total (car users)	76%	74%	62%
Work from home	8%	7%	5%
Underground, metro or light rail	0%	0%	4%
Train	5%	3%	5%
Bus, mini bus or coach	1%	2%	8%
Taxi	0%	0%	1%
Motorcycle, scooter or moped	0%	1%	1%
Bicycle	2%	3%	3%
On foot	7%	10%	11%
Other	1%	1%	1%
Total (non-car users)	24%	26%	38%

Source: Census 2011

Table 2.2: Mode of Travel to Work by Residents of Poynton in Comparison to Cheshire East and England

Table 2.3 shows that the average distance travelled to work by Poynton residents is also higher than the national average, at 26.3km, compared to 14.9km in England.

Table 2.3 also shows that a high proportion (46%) of Poynton residents travel between 5km and 20km to work. This indicates the likelihood that significant numbers of people are commuting to locations such as Manchester, Macclesfield and Stockport.

Distance Travelled to Work	Poynton	Cheshire East	England
Less than 2km	14%	18%	17%
2km to less than 5km	9%	14%	18%
5km to less than 10km	25%	14%	17%
10km to less than 20km	21%	18%	15%
20km to less than 30km	4%	7%	6%
30km to less than 40km	3%	4%	3%
40km to less than 60km	2%	2%	2%
60km and over	2%	3%	3%
Work mainly at or from home	13%	13%	10%
Other	7%	7%	8%
Average (km)	26.3	16.5	14.9

Source: Census 2011

Table 2.3: Distance Travelled to Work for Those Living in Poynton, Compared to Cheshire East and England

High car ownership and high car mode-share reflect that the local context in Poynton where a high proportion of travel is being undertaken by car.

Table 2.4 shows that the proportion of the population in Poynton attaining higher level qualifications is greater than the national average. Typically, people with higher qualifications will be willing to travel further to access skilled, higher paid jobs.

Highest Qualification Held	Poynton	Cheshire East	England
No qualifications	15%	20%	23%
Level 1 (equivalent to GCSE G-D grade)	11%	8%	14%
Level 2 (equivalent to GCSE A*-C grade)	16%	15%	16%
Apprenticeship	4%	8%	4%
Level 3 (equivalent to A level)	12%	13%	13%
Level 4 or above (equivalent to a diploma)	38%	42%	28%

Source: Census 2011

Table 2.4: Highest Qualification Held by Residents of Poynton, Cheshire East and England

The Index of Multiple Deprivation (IMD) is made up of the following distinct dimensions called Domain Indices:

- *Income Employment*
- *Health and disability*
- *Education, skills and training*
- *Barriers to Housing and Services*
- *Living environment*
- *Crime*

The IMD is used to score deprivation in each electoral ward. The most deprived ward in the UK would score 1, with the least deprived ward scoring 32,482. Any wards scoring less than 6,497 are within the 20% most deprived wards in the UK (the 5th quintile nationally). In contrast, the 20% least deprived wards are in quintile 1. The majority of Poynton is in IMD Quintile 1 i.e. the 20% least deprived places in the UK.

In summary, Poynton residents tend to possess higher skill levels and a propensity to travel further for employment. They are attracted to employment opportunities in managerial, professional and technical roles, which are predominantly located in the Greater Manchester conurbation. As such, Poynton acts as a commuting town for this working population.

Key Observation

Car ownership in Poynton and Cheshire East is significantly higher than the national average. The private car is the dominant mode of transport to work for residents of Poynton.

2.2.2 Economy

Cheshire and Warrington is one of the strongest economies in England. Pre-2008, employment growth in Cheshire and Warrington was stronger than most of the core city regions, and comparable to that experienced in London and high-growth locations such as Cambridge and Peterborough. The economy of Cheshire and Warrington is characterised by a highly active resident population, a strong enterprise culture and a highly skilled workforce.

This economic strength provides employment opportunities beyond the Cheshire and Warrington boundaries, with the area being a net importer of labour. The number of net additional jobs created since 2008 in Cheshire and Warrington is significant – some 42,000 (as of 2014), with a peak employment of over 430,000 prior to the economic downturn. Key firms with a presence in the region include Bentley, Tata, Vauxhall and Barclays.

Cheshire and Warrington has one of the best performing economies in England. With a gross value added (GVA) of £20bn per year, the economy of Cheshire and Warrington is the strongest in the North of England. The Cheshire and Warrington LEP's vision is to grow the economy to £35bn per year by 2030, with GVA per head at 115% of the UK average. This level of growth would lead to an additional 100,000 residents, 70,000 new homes and 75,000 new jobs by 2030.

Recently, 2 key employers - Astra Zeneca and Shell - have relocated out of the area. Transport infrastructure is seen as a key constraint on further economic development. Significant investment in infrastructure is required in order to achieve the full economic potential of Poynton and Cheshire East. Key local employers have reported the need to improve strategic transport links to facilitate growth.

Key Observation

Cheshire and Warrington is one of the strongest economies in England. However significant investment in infrastructure is required in order to achieve the economic potential of Poynton and Cheshire East.

2.2.3 Transport Network

Poynton lies on the A523 London Road, which is the principal north/south route connecting Leek and Macclesfield with Stockport and Manchester, via the A6. As outlined above, due to its close proximity to Manchester, the A6 and the M60, Poynton acts as a commuter town for individuals to live and commute into Stockport, Manchester or Macclesfield.

The A6 Manchester Airport Relief Road (A6MARR) scheme (which is due to open in spring 2018) provides 10 kilometres of 2-lane dual carriageway. A6MARR is an east-west route from the A6 at Hazel Grove (south east of Stockport), via the existing A555 to Manchester Airport and the link road to the M56. The A6MARR bypasses heavily-congested district and local centres, including Bramhall, Cheadle Hulme, Handforth, Poynton, Wythenshawe, Gatley and Heald Green. It provides much-needed east-west orbital connectivity on key strategic routes to the north west and to Manchester Airport; including traffic flows from the A6, A523 and A34, which are key routes for business, leisure and freight from Cheshire, Derbyshire, Staffordshire and further afield.

A6MARR will connect with Chester Road, to the west of Poynton and with the A523, to the north of Poynton. This improves connectivity, allowing Macclesfield and Poynton improved access to Manchester Airport and areas south of Stockport, including Bramhall and Handforth.

The A523 and A5149 in Poynton form the arterial north/south routes through Poynton's social and commercial centre. A number of high footfall retail, leisure and employment sites are located along these roads in the town centre. The A523 carries both local and strategic traffic, which passes through the town to travel to destinations further afield, including Macclesfield and the M6 (to the south) and Stockport, M60 and Manchester (to the north).

To improve the public realm and reduce severance in Poynton town centre, a 'Shared Space' was created in and around the A523/A5149 junction in 2011, as shown in Figure 2.1 below.



Figure 2.1: A523/A5149 Shared Space Junction, Poynton

The shared space scheme involved radical streetscape changes, as well as the removal of all traffic signals and barriers and the simplification of road markings to create a low-speed integrated road space.

The carriageway was narrowed, footways widened and bold courtesy crossings were developed. New paving materials, planting, lighting and street furniture all contributed to establishing a sense of place at the town's major and minor intersections.

Current traffic volumes passing through the shared space are high and noise, air quality and severance issues remain. The Poynton Relief Road scheme will significantly reduce the volumes of traffic passing through Poynton on the A523, enabling the full benefits of the shared-space scheme to be realised in the town centre.

This effect is further demonstrated in the following sections of this OBC, which quantify problems on the wider network and explore the impact of the proposed Relief Road.

Key Observation

The A523 through the town centre carries both local and strategic traffic, which passes through the town to travel to destinations such as Macclesfield and the M6 (in the south) and Stockport, M60 and Manchester (to the north). The opening of the A6MARR will improve east-west connectivity to Manchester Airport and surrounding localities such as Bramhall, Cheadle Hulme and Handforth. Congestion associated with north-south movements remains, emphasising the need for the Poynton Relief Road scheme.

2.2.4 Rail

Poynton rail station is a local station situated on the Manchester to Stoke line via Macclesfield. Local trains serving Poynton are operated by Northern Rail. The station is located to the west of the town centre along the A5149 (Chester Road), roughly 10 minutes walk from the town centre.

Facilities at Poynton Railway Station include:

- *Cycle parking for a limited number of cycles outside the station.*
- *A Ticket office, which is open from 06:30 to 14:00 Monday to Friday, 07:30 to 14:50 Saturday, Closed Sundays.*
- *A car park, with capacity for 40 vehicles.*

However, there are no toilets or waiting rooms and therefore passenger facilities are poor. Parking is also limited, with only 40 spaces available and access to the station is prohibitive for wheelchair users. Thus, for many residents of Poynton, the lack of car parking, passenger facilities and the long journey times on foot to the train station are not conducive to encouraging journeys by rail.

Northern Rail provides a regular hourly service (with additional peak hour services) between Stoke-on-Trent and Manchester Piccadilly, calling at Bramhall, Cheadle Hulme and Manchester Piccadilly. A journey time of approximately 20 minutes to Manchester compares favourably with equivalent journey times by car. Southbound, Northern Rail services call at Adlington, Prestbury, Macclesfield, Congleton, Kidsgrove and Stoke-on-Trent, taking around 35 minutes to reach Stoke-on-Trent. From both Macclesfield and Stoke-on-Trent, connections can be made to Virgin Wesy Coast and Cross-country services to Birmingham New Street, (calling at Stafford and Wolverhampton) and London Euston via Stafford.

It should be noted that Poynton is located just outside the Greater Manchester (TfGM) area. Therefore, rail journeys into Stockport, Manchester and elsewhere in the Transport for Greater Manchester (TfGM) area are significantly cheaper from Bramhall station, which is located about 2.5 miles to the northwest of Poynton. Bramhall does not have a dedicated rail user's car park but does have a Local Authority maintained car park nearby. Services from Hazel Grove, approximately 3 miles to the north, are more frequent than from Poynton and benefit from TfGM ticketing. Hazel Grove has a car park with 389 spaces which was recently extended. A range of competitively priced multimodal tickets are available within the TfGM area which are not available outside Greater Manchester. Station usage has been increasing over recent years. Table 2.5 below tabulates the station usage over the last 6 years, showing a 11.9% increase in passenger entries/exits over this period.

Year	Total Entries & Exits	Percentage Growth from Previous Year
2015-2016	219,072	3.8%
2014-2015	211,048	-0.8%
2013-2014	212,802	8.3%
2012-2013	196,590	0.4%
2011-2012	195,782	7.0%

Source: Rail Delivery Group

Table 2.5: Station Usage Statistics

Northern Rail has been able to issue more recent information from their Latest Earnings Networked Nationally over Night (LENNON) ticket sales data. This has shown an increase year on year (with the exception of 2014-2015 where a minor decrease was seen).

Key Observation

Poynton has its own railway station which provides connections to the national rail network. However, the proportion of people using the train to travel to work remains lower than in both Cheshire East and the national average. This is primarily due to its limited connectivity with the wider network, cheaper fares and more frequent services at nearby Hazel Grove, plus there's an unattractive walk time and limited parking at Poynton station.

2.2.5 Bus Services

Poynton is served by the 391 and 392 bus services which combine to form an hourly service between Macclesfield and Stockport. Figure 2.6 below identifies the routes of both services within Poynton.

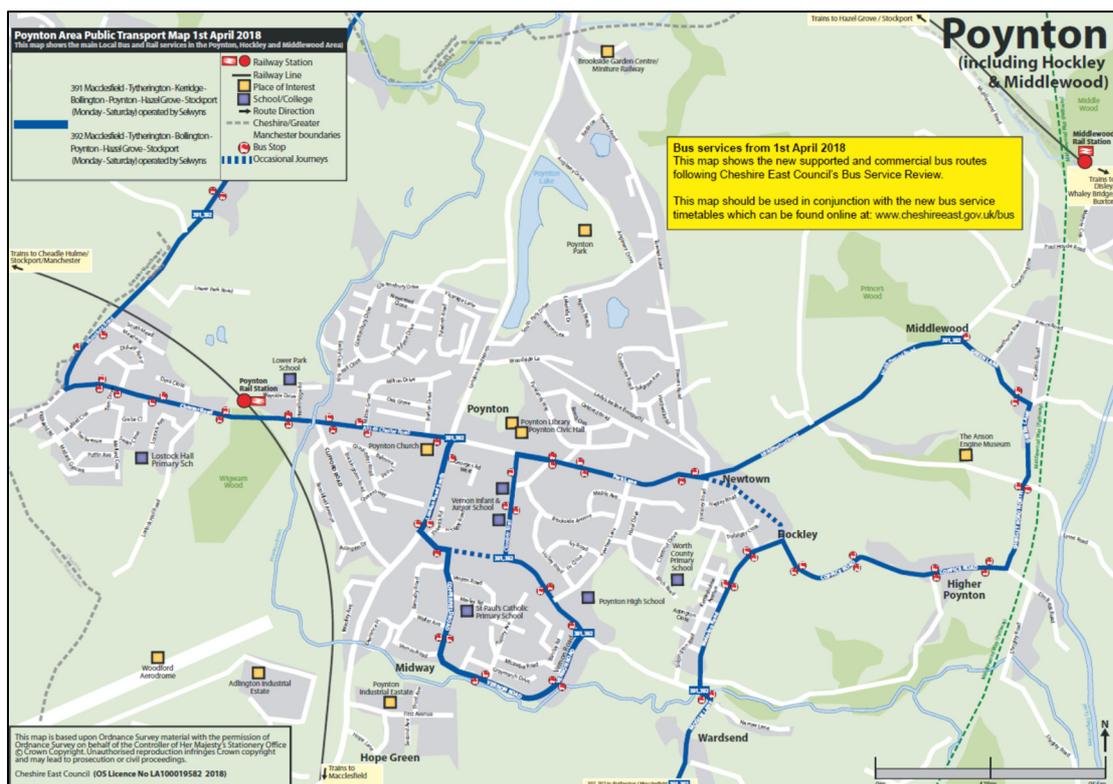


Figure 2.2 Bus Routes Within Poynton

The routes are summarised in Table 2.6.

Service	Places served	Operator	Mon to Saturday		Sunday and Bank Hol.
			Peak	Off peak	
391	Macclesfield to Stockport via Kerridge	Selwyns	Two-hourly		No Service
392	Macclesfield to Stockport via Bollington	Selwyns	Two-hourly		No Service

Source: Cheshire East Council
There Are Services Direct to Manchester but Involve A 30min Walk from Poynton.

Table 2.6 Current Bus Services in Poynton

The 391 and 392 services commenced in April 2018. A request was made for reliability figures to Cheshire East Council, however they do not store reliability figures. Cheshire East Council has however confirmed that congestion in Poynton is an issue at peak times affecting the reliability of the service and requiring additional running time to be added into the service timetable.

Since the completion of the SEMMMS study, approximately £63 million has been spent on non-highway SEMMMS projects across South East Manchester including Quality Bus Corridors, accessibility improvements to bus stops and transport interchanges, the provision of yellow buses as well as road space reallocation involving the creation of on street cycle facilities and improvements to the pedestrian network. The local network within Poynton, in line with the Council's approach to Bus Quality Partnerships, include raised kerbs, bus stop clearways, shelters and timetable information.

Therefore, it can be concluded that, at present and due to the better quality rail services, Poynton is not well connected by bus to the rest of Cheshire East or cities further afield such as Manchester. Thus, local bus is not a realistic, viable alternative to using the private car for many commuters who travel further afield to access employment.

Key Observation

Poynton is served by regular weekday bus services which are provided under contract to Cheshire East Council. Poynton is not well connected by bus to the rest of Cheshire East or cities further afield such as Stoke-on-Trent or Manchester. There are no commercially-operated bus services providing local buses in Poynton.

2.2.6 Non- Motorised Users (NMU)

Walking and cycling can provide health and financial benefits for users, whilst also contributing to air quality improvement through lower emissions and reducing peak

hour congestion. This section will illustrate facilities available to cyclists & pedestrians within Poynton and the local area. These are shown below in Figure 2.3.

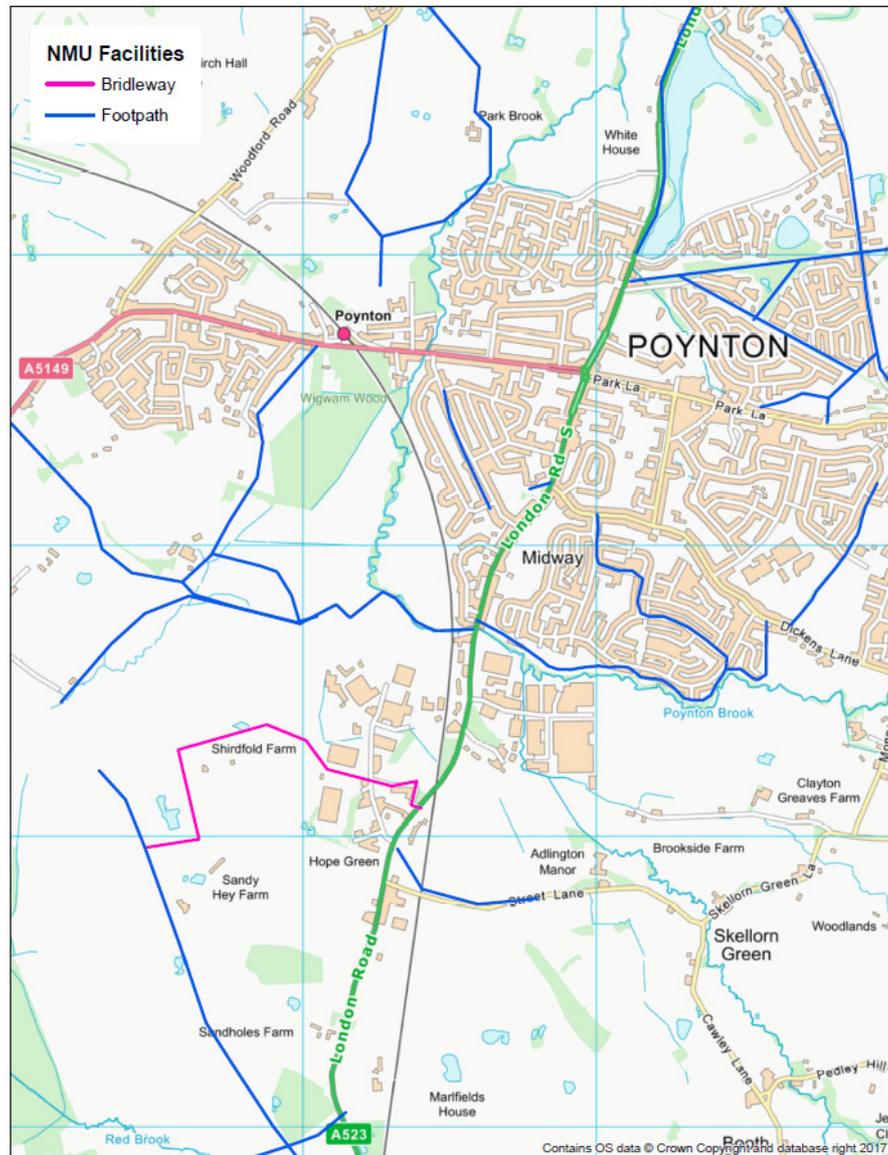


Figure 2.3: NMU Facilities Around Poynton

The following describes the footpaths located to the west of Poynton:

- *FP70 – Originates at the junction between Chester Road and Lostock Hall Road to the west of Poynton. The footpath continues in a southerly direction towards Lostockhall Farm and then turns in a westerly direction before connecting with FP75 to the northeast of Upper Swineseye Farm.*
- *FP75 – Originates on Chester Road, to the east of Walnut Tree Farm, before continuing in a south-easterly direction and connecting with FP70 to the northeast of Upper Swineseye Farm.*
- *FP80 – Originates on Lostock Road to the north of Adlington Business Park, before continuing in a generally westerly direction and connecting with 107HGB to the southwest of Lostockhall Farm.*
- *FP81 – Connects FP80 and FP70, to the north of Lostockhall Farm.*

- *FP84 – Connects FP80 and 107HGB, to the west of Lostockhall Farm.*
- *101HGB – Originates on Bridle Road to the north of Woodford Aerodrome, before continuing in a north-easterly direction and connecting with 107HGB to the west of Lostockhall Farm.*
- *107HGB – Connects 101HGB and FP84, to the west of Lostockhall Farm.*
- *FP41 – Originates on London Road to the south of Marfields Hall, before continuing in a generally northerly direction and terminating at the Woodford Aerodrome boundary to the west of Shirdfold Farm.*
- *BR42 – Originates London Road to the east of Adlington Business Park, before continuing in a westerly direction towards Shirdfold Farm and then a southerly direction towards Adlington Golf Course. At this point the bridleway connects with FP41. Footpath FP41 and Bridleway BR42 combine to form a circular route.*

The National Cycle Network Route 55 provides a traffic free route from Ironbridge to Preston. Locally the route provides cycle access between Macclesfield and Stockport although is not directly connected to Poynton by a marked cycle route.

In summary, the walking and cycling routes that are available in and around Poynton do not substantially aid the north-south and east-west travel demands. It is not anticipated that they will provide any material relief to the congestion arising as a result of increased travel demands in the future.

Key Observation

There are a number of footpaths around Poynton which intersect with the busy road network. There are presently no designated cycle routes within Poynton. The available walking and cycling routes in and around Poynton does not aid the north-south and east-west travel demands.

2.2.7 Travel Patterns

Data collated during the 2011 census shows that there are approximately 53,000 trips each day travelling into Cheshire East to work from neighbouring authorities. A further 52,500 people live in Cheshire East and commute out of the authority for work. Of these trips, 85% are made by car. Of these car trips, over 25% are to/from the neighbouring districts of Stockport, Manchester, Newcastle-under-Lyme, Staffordshire Moorlands, Stoke on Trent and High Peak.

This demonstrates the large numbers commuting in and out of Cheshire East on a daily basis. It also highlights Cheshire East's strong connection to neighbouring areas, including the Manchester conurbation. Due to this high demand for travel to/from Cheshire East, with relatively poor public transport and limited highway connectivity; the principal routes, especially the A523 / A5149 through Poynton, experience congestion and delays.

The A6MARR will improve east-west connectivity but it is expected to result in greater north-south traffic levels transferring onto the surrounding network and generating congestion. These impacts are expected on the A523 from Macclesfield and the A5149 between Poynton and Woodford.

Poynton's proximity to urban centres such as Macclesfield, Crewe and Manchester, as well as Manchester Airport means that Poynton is a popular base to commute to work in these urban centres. This leads to significant north-south radial flows primarily along the A523, travelling through Poynton generating localised problems of congestion in peak hours and noise and air quality issues. At the junction of the A523/A5149, the highway network has limited capacity for the additional traffic accessing the A6MARR at Woodford. This will be exacerbated when the A6MARR scheme is completed, with traffic using this part of the network to travel northwards to access Manchester Airport and Greater Manchester.

There are currently limited east-west transport links through the south-eastern part of Greater Manchester and Cheshire East. The lack of such connections contributes to congestion on relatively minor, residential roads in the settlements of Bramhall, Woodford and Poynton plus other local roads giving access to the A5102. Many of these local roads were not designed to cater for large volumes of through traffic.

2.2.8 Speed Analysis

Traffic speed data has been analysed to understand the average traffic speeds and levels of congestion in Poynton and the local area.

Journey time data has been obtained from TrafficMaster Ltd, through Cheshire East Council. This data provides individual vehicle speeds obtained via GPS devices fitted to both private and commercial vehicles. TrafficMaster data provides a large sample of vehicle speeds and can be analysed over any route.

Traffic speed data analysis identifies that both the A523 London Road / A5149 Chester Road / Park Lane junction in Poynton (and all approach roads) and the A523 / A6 junction in Hazel Grove experience considerable delay in both the morning (08:00 to 09:00) and evening (16:00 to 17:00) peak hours.

At the A523 London Road / A5149 Chester Road / Park Lane junction in Poynton, average speeds in each time period were between 7mph and 15mph so markedly less than 30mph on a road with a 30mph speed limit.

At the A523 / A6 junction in Hazel Grove, average speeds in each time period were between 11mph and 19mph so also markedly less than 30mph on a road with a 30mph speed limit.

TrafficMaster data also shows that speeds are low on Bulkeley Road and Clumber Road which run parallel to the A523 London Road. This is likely to be due to drivers diverting off London Road, using these roads to access the junction from Park Lane, as this is perceived to be quicker than approaching from London Road. These routes are residential streets with primary schools located on them. These routes are not considered to be appropriate for large numbers of through vehicles, with prevailing traffic flows likely to represent an elevated road safety risk to school children.

Key Observation

Analysis of TrafficMaster data indicates that there is significant congestion within Poynton in both the morning and evening peak periods.

2.2.9 Journey Time Analysis

Analysis of TrafficMaster data (2012) has identified the locations shown below as experiencing delay in the morning (07:00 to 09:00 AM) and evening (16:00 to 18:00 PM) peak periods, where the average speed is recorded to be below 15mph.

- *A523 London Road / A5149 Chester Road junction in Poynton*
- *A538 through Prestbury village centre*
- *A538 through junctions in Wilmslow town centre*

The extent and scale of delay is worse in the AM peak than in the PM peak. In addition, speeds are significantly below the speed limit in both directions on the A523 and A6 between Poynton and Hazel Grove, particularly on the approaches to the A6 / A523 traffic signals.

Between Macclesfield and Poynton, delays on the A523 are worst northbound at the B5358 Bonis Hall Lane signals in the morning peak. At Adlington Crossroads, delays are greatest northbound in the AM peak and southbound in the PM peak, reflecting the tidal flows to / from the Greater Manchester area.

There are also delays around the existing A34 / A555 junction on approaches to the at-grade roundabout.

It should be noted that conflicting turning movements at the A523 / A5149 junction in Poynton lead to delays for vehicles. The recently implemented “shared space” scheme has helped to reduce severance issues for pedestrians but cannot resolve all the issues arising due to a lack of junction capacity for vehicles.

Key Observation

Journey time surveys have provided further evidence of the congestion within Poynton during peak periods.

The greatest level of congestion is experienced at the following locations:

- *A523 London Road / A5149 Chester Road junction in Poynton*
- *A538 through Prestbury village centre*
- *A538 through junctions in Wilmslow town centre*

2.2.10 Heavy Goods Vehicles

Data collected by Manual Classified Counts (MCC) in Poynton have allowed a comparison to be made between the proportion of HGVs travelling through Poynton and the national average.

Table 2.7 below shows the proportion of HGVs travelling through Poynton. It shows that the percentages vary from between 4% and 11%.

These proportions have been compared to the Annual Average Proportions by Class of Road as stated in Table 8/1 of the COBA Manual.

Location	Observed Proportion of HGVs	Annual Average Proportion of HGVs by Class of Road (from COBA manual)
A523 London Road North of Poynton	AM: 11% IP: 9% PM: 4%	3%
A5149 Chester Road West of Poynton	AM: 7% IP: 9% PM: 7%	3%
Park Lane East of Poynton	AM: 9% IP: 10% PM: 4%	3%
A523 London Road South of Poynton	AM: 10% IP: 11% PM: 5%	3%

Table 2.7: Comparison of Observed HGV Proportions Through Poynton to The Annual Average Category Proportions by Class of Road (2002)

Table 2.7 shows that the proportions of HGVs are above the average for their class of road. It is noted that the proportions quoted in COBA are from 2002 and may be considered dated. Therefore, the HGV proportions have also been compared to those reported in the 'Annual Road Traffic Estimates: Great Britain 2016' released by the DfT in April 2017. This states that in 2016, 5.1% of all motor vehicle traffic in the UK was made up of HGVs, of this 36% were on rural A Roads.

It can be concluded that roads through Poynton have higher levels of HGVs than the national average for this type of road. This may be due to the towns proximity to the M6 (the annual average proportion of HGVs on motorways is approximately 11%), with these roads forming the principal route between the M6 and Macclesfield. The A523 acts as a key connection to the M60.

Key Observation

The proportion of HGVs using key routes within Poynton is above the national average for the corresponding class of road.

2.2.11 Traffic Volumes

Existing weekday AM and PM traffic flows on the main routes through the town are shown below in Table 2.8. These averages exclude any days that have missing data due to the counters being out of operation.

Site Location	Traffic Volume		
	AM (8am-9am)	IP (10am-4pm)	PM (5pm-6pm)
A523 London Road North of Poynton	1,600	1,100	1,500
A5149 Chester Road West of Poynton	1,100	500	900
Park Lane East of Poynton	900	700	700
A523 London Road South of Poynton	900	900	1,200

Table 2.8: Two-Way Traffic Through Poynton (rounded to nearest 100).

2.2.12 Safety

Accident data for Poynton and the surrounding area has been provided for the period between 2010 and 2015, see Table 2.9.

Year	Slight	Serious	Fatal	Total
2012	23	7	0	30
2013	11	2	2	15
2014	16	3	0	19
2015	17	4	0	21
2016	11	3	0	14
Total	78	19	2	99

Table 2.9 Accidents in Poynton and The Surrounding Area by Severity Between 2010 And 2015

Accidents over this 5-year period were plotted and an analysis was undertaken on the roads immediately affected by the Poynton Relief Road. Chester Road (A5149) is considered to have a slightly higher accident rate compared to the national average. London road (A523) south of Poynton crossroads to Adlington is considered to have lower accident rate compared to the national average.

Poynton crossroads saw a notable improvement in terms of accidents after the shared space scheme was introduced. Due to the high volume of traffic passing through this location, there is still a relatively high number of accidents, although most of these are recorded to be slight.

2.2.13 Air Quality

In accordance with Part IV of the Environment Act (1995) local authorities in the UK must carry out a review and assessment of air quality in their area. The Air Quality Strategy (Department for Environment, Food and Rural Affairs 2000) outlines a framework for improvements and where an authority identifies an area which is likely to exceed these targets it must be declared an Air Quality Management Area (AQMA).

The Local Air Quality Management process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedances are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

Cheshire East Council monitors nitrogen dioxide (NO₂) levels in a number of locations. A NO₂ level in ambient air is present as a result of the transformation of nitric oxide (NO), which is produced during high temperature combustion processes for a number of uses. During 2006, the largest source of emissions within the UK came from the transport sector, with road vehicles contributing 32% of total emissions.

The introduction of catalytic converters along with tighter controls on industrial emissions has resulted in a halving of emissions since 1990. Nitrogen dioxide can irritate the lungs and lower resistance to respiratory infections such as asthma. It can have a short and long term health effects; a one-hour and annual mean objective has therefore been specified as well as an annual mean.

NO₂ levels have been monitored on the A523 London Road, south of Poynton crossroads since the year 2000 and the recorded levels remain within objective levels. Thus, an AQMA has not been declared at this location.

However, even though no AQMAs have been declared, forecast increases in traffic and associated increases in congestion will increase the potential for air quality issues and for AQMAs to be declared in future.

Key Observation

There are no Air Quality Management Areas (AQMAs) within Poynton.

Forecast increases in traffic and associated increases in congestion will increase the potential for air quality issues / AQMAs to be declared in future

2.2.14 Noise and Vibration

A review of available overhead mapping suggests that Poynton is likely to be predominantly influenced by local and distant road traffic, together with localised farming activities at some locations.

2.2.15 Cultural Heritage

A total of 35 Heritage Assets have been identified within the study area. These are summarised in Table 2.10.

Asset No.	Asset name	HER /other reference	Designation	Value
1	Possible Roman road at Lumb Lane	15248.1.0	None	Low
2	Field/Township boundary	15249.1.0	None	Low
3	Possible Buxton to Cheadle Roman road	11265.1.0	None	Medium
4	Possible Buxton to Cheadle Roman road	13585.1.0	None	Medium
5	Building (Site of) Bowerstump House	13593.1.0	None	Negligible
6	Walnut Tree Farm cottage	1337.2.0	None	Low
7	Walnut Tree Farm Shippon	1337.1.1	None	Low
8	Walnut Tree Farmhouse	1337.1.0	None	Low
9	Rose cottages	14690.1.0	None	Low
10	Township boundary	None	None	Low
11	Royal Observer Corps monitoring post at Poynton	4132/0/1	None	Low
12	Projected line of possible Buxton to Cheadle Roman road	None	None	Low
13	Glacial Lake	None	None	Unknown
14	Lostock Hall Farmhouse	1277166	Grade II Listed	Medium
15	Upper Swineseye	14713.1.0	None	Low
16	Woodford Airfield	4058/0/0	None	Low
17	Brick Kiln meadow	2741	None	Negligible
18	Lostock Deserted Medieval Village	NMR 78416	None	Low
19	Cheadle and Macclesfield Railway Line	NMR1371585	None	Low
20	WWII pillbox	NMR1422168	None	Low
21	Possible Roman Road along lane to Shirdfold Farm	None	None	Low
22	Greenacres, Windle Hey	1329973	Grade II Listed Building	Medium
23	Milestone 125m north of Street Lane farmhouse	1234107	Grade II Listed Building	Medium
24	Field bank and ditch (pre 19th century)	2743	None	Negligible
25	Street Lane Farmhouse	1276184	Grade II Listed Building	Medium
26	Possible Roman road along Street Lane	NMR1416434.2740/1	None	Low
27	Sandholes Moss - Peat deposit in glacial kettle hole	None	None	Medium
HLT1	Recreation	None	None	Negligible
HLT2	Enclosed Land	None	None	Low
HLT3	Settlement	None	None	Low
HLT4	Post Medieval Fieldscapes	None	None	Low
HLT5	Industry	None	None	Negligible
HLT6	Communications	None	None	Low
HLT7	Twentieth Century Fieldscapes	None	None	Negligible
HLT8	Woodland	None	None	Low

Table 2.10 Cultural Heritage Baseline

In summary a total of 35 heritage assets consisting of 27 archaeological remains and historic buildings, and eight Historic Landscape Types have been identified within the study area. These comprise:

- Seven heritage assets of Medium value.
- 21 heritage assets of Low value.
- Six heritage assets of Negligible value.
- One heritage asset of Unknown value.

Key Observation

There are 35 cultural heritage and historic landscape types located within 5km of Poynton, seven of which are considered to be of Medium value, with the remainder of Low, Negligible or unknown value.

2.2.16 Landscape, Ecology and Nature Conservation

Habitats within the study area which may qualify as priority habitats in the UK BAP or are classed as habitats of principal importance under section 41 of the Natural Environment and Rural Communities Act (2006) (NERC 2006) are listed in Table 2.11.

Habitat	Designation
Woodland	NERC 2006 Habitat of Principal Importance: Deciduous Woodland UK BAP / Cheshire LBAP / GM LBAP
Running Water	NERC 2006 Habitat of Principal Importance: Rivers UK BAP (Rivers and Streams)
Hedgerows	NERC 2006 Habitat of Principal Importance: Hedgerows UK BAP / Cheshire LBAP / GM LBAP
Standing Open Waters (Ponds)	NERC 2006 Habitat of Principal Importance: Ponds UK BAP / Cheshire LBAP / GM LBAP
Traditional Orchard	NERC 2006 Habitat of Principal Importance: Arable and Horticulture UKBAP / Cheshire LBAP / GM LBAP
Urban Managed Greenspace	GM LBAP only

Table 2.11 UK Bap Priority Habitats

There are five Statutory Designated Sites located within 5km of the route with the closest being Wigwam Wood. However, it is not anticipated that the proposed route would have a direct effect upon these.

The following species of conservation concern were identified as being or having the potential to be within 2 km of the route.

- *Badgers*
- *Bats*
- *Barn Owl*
- *Kingfisher*
- *Brown Hare*
- *Brown Trout*
- *Great Crested Newt*
- *Common Toad*
- *Common Frog*

The scheme is accompanied by a comprehensive Environmental Management Plan which defines the impacts, mitigations and management measures that will be put in place to minimise scheme impacts on these species and ecological / heritage assets.

Key Observation

Records indicate that there are five Statutory Designated Sites located within 5km of the route

2.2.17 Geology and Soils

The nearest SSSI to the study area is outside of the study area and is the River Dane SSSI, just to the north of the western boundary of the study area. This SSSI has been designated primarily on the basis of the active geomorphological and fluvial processes underway within the river channel. The study area includes or lies adjacent to operational silica sand extraction sites and preferred future extraction areas at Eaton Hall and Bent Farm Quarries.

The granular glacio-fluvial and alluvial deposits within the study area are designated by the Environment Agency (England and Wales) as a Secondary A Aquifer. These aquifers are regarded as permeable layers capable of supporting water supplies at a local rather than strategic scale, in some cases forming an important source of base flow to rivers. However, the Bedrock within the study area is designated as a Secondary B Aquifer. These aquifers are regarded as predominantly lower permeability layers which may store limited amounts of groundwater due to localised features such as fissures and thin permeable horizons. These are generally the water-bearing parts of former non-aquifers. No groundwater protection zones have been identified within the study area.

The surface water drainage of the study area is dominated by two watercourses, the River Dane and Loach Brook. Both watercourses drain in a south-east to north-west direction in the vicinity of the study area.

2.2.18 Road Drainage and Water Environment

The scheme lies within the Weaver and Gowy Catchment. Two designated main rivers are crossed by the study area. These are the River Dane and Loach Brook.

The EA Flood Map indicates that a significant portion of the route corridor for the proposed relief road is located within Flood Zone 1. According to the National Planning Policy Framework, this zone comprises land assessed as having a less than 0.1% probability of river or sea flooding in any year.

However, where the study area crosses both the River Dane and Loach Brook the Environment Agency Flood Map indicates that there is a potential fluvial flood risk. Where the route corridor crosses the River Dane, the area has a moderate chance of flooding. The study area also lies within a surface water Nitrate Vulnerable Zone. Upstream of the study area, the River Dane is designated as a salmonid fishery under the Freshwater Fish Directive. This may be of relevance if there are migratory fish species present. The River Dane is also designated as a cyprinid fishery under the Freshwater Fish Directive. The stretch of this river within the study area forms part of this designation.

2.3 Future Situation

2.3.1 Introduction

This section aims to develop an understanding of the future transport situation in the study area. This uses policy documents, travel demand forecasts and the results of a SATURN¹ traffic model to identify any changes that are likely to occur in the study area, in terms of future land-use and policies, future changes to the transport system, and future travel demands and levels of service.

2.3.2 Future Developments

A traffic model has been developed in order to investigate the effect of potential options on the future operation of the highway network.

Policy documents have been reviewed in order to produce a detailed Uncertainty Log which considers the likelihood of all potential developments in the area coming forward.

In accordance with the DfT's Transport Appraisal Guidance (TAG), developments from within Cheshire East Council's Local Plan and Stockport MBC's Local Plan that were classified as either "Near Certain" or "More than Likely" were subsequently included in the 'Core' Growth Scenario. Additional local developments that were classified as "reasonably foreseeable" have been included in a High Growth sensitivity test, this would ensure the future demands on the network would be accurately assessed.

Consequently, in accordance with TAG, not all the development proposals outlined in the Local Plan have been included in the Core Scenario. The level of growth in the Core Scenario is lower than if the Local Plan is fully implemented. Over time, more of the proposed Local Plan development sites may come forward for planning permission. A final review of the Uncertainty Log will be undertaken prior to submission of the Full Business Case.

Key Observation

Proposed Local Plan developments in and around Poynton will cause traffic flows to increase significantly in the future.

¹ A6M60 SATURN Model –
A6M60 Local Model Validation Report
A6M60 Forecasting Report

2.3.3 Traffic Volumes

Table 2.12 to 2.13 **Error! Reference source not found.** (below) present the base year modelled trip totals for each vehicle user class and compares these values to the forecast modelled trip totals for the Do Minimum scenarios. The data is presented for both the opening (2020) and design (2035) years. The percentage growth is given to provide an overall sense check of the levels of growth forecast applied within the models.

User Class	2015 Base			2020 Do Minimum			% Growth		
	AM	IP	PM	AM	IP	PM	AM	IP	PM
CAR	144,526	108,843	151,363	151,448	116,585	159,930	5%	7%	6%
LGV	14,382	13,587	11,897	16,183	15,303	13,422	13%	13%	13%
HGV	7,767	8,707	4,083	7,820	8,834	4,109	1%	1%	1%
Total	166,675	131,137	167,343	175,451	140,722	177,461	5%	7%	6%

Table 2.12 – 2020 Do Minimum and Base Year Matrix Comparisons

User Class	2015 Base			2035 Do Minimum			% Growth		
	AM	IP	PM	AM	IP	PM	AM	IP	PM
CAR	144,526	108,843	151,363	172,564	135,154	179,533	19%	24%	19%
LGV	14,382	13,587	11,897	19,399	18,296	16,095	35%	35%	35%
HGV	7,767	8,707	4,083	8,606	9,828	4,529	11%	13%	11%
Total	166,675	131,137	167,343	200,569	163,278	200,157	20%	25%	20%

Table 2.13 – 2035 Do Minimum and Base Year Matrix Comparisons

User Class	2015 Base			2020 Do Minimum			% Growth		
	AM	IP	PM	AM	IP	PM	AM	IP	PM
CAR	144,526	108,843	151,363	151,448	116,585	159,930	5%	7%	6%
LGV	14,382	13,587	11,897	16,183	15,303	13,422	13%	13%	13%
HGV	7,767	8,707	4,083	7,820	8,834	4,109	1%	1%	1%
Total	166,675	131,137	167,343	175,451	140,722	177,461	5%	7%	6%

Table 2.12 and Table 2.13 show that proposed developments within and around Poynton will cause traffic flows to increase significantly in the future.

Clearly with increased traffic levels forecast for the peak periods, congestion will increase at the junctions that currently experience congestion. The length of delay and duration of delays will increase.

In the Do Minimum situation (the existing transport network incorporating any future planned improvements), traffic accessing development sites in and around Poynton such as Woodford Aerodrome, and traffic transferring to the A6MARR would do so via the A523 and the town centre. The most notable impact of this development traffic is likely to be an increase in the amount of through traffic that inappropriately reroutes through local roads across the network in and around Poynton, as this traffic may divert to avoid the most congested section of the A523. Alongside this, traffic levels will increase significantly on roads close to the town centre.

Key Observation

Significant traffic flow changes and specific traffic transfers are forecast for the future years in Poynton.

Without any highway mitigation, the consequence of future traffic flows is expected to be worsening congestion at the main junctions in Poynton with associated negative impacts on air quality and noise.

2.3.4 Need for Intervention

The need for intervention has been identified after consideration of these modelling results, which establish a significant increase in traffic flows and traffic-related issues with likely negative impacts on Poynton and the wider area including locations in Stockport MBC such as Bramhall and Cheadle Hulme.

Whilst the A6MARR provides a new east-west transport link through south eastern Greater Manchester, there are only limited east-west routes to the south of the A6MARR.

The lack of east-west routes causes strategic traffic to/from the south of the region to travel via the A523 through Poynton or on the A34 to access the A6MARR. This results in strategic traffic contributing to congestion in Poynton.

This congestion has created a need for a bypass to allow north-south traffic to access the A6MARR whilst avoiding the town centre.

During the development of the Cheshire East Local Plan, issues that are impacting on local business growth were identified. The Local Plan aims to create the conditions for greater prosperity. In transport terms, this centres on the removal of barriers to doing business, especially congestion and poor journey-time reliability.

It is important that all issues impacting local areas are well understood and an appropriate intervention is identified. In the following chapters (section 2.4), further evidence is presented on the problems arising in Poynton and the surrounding areas. Section 2.6 summarises the option assessment process that has led to development of the proposed scheme.

2.4 Identified Problems and Issues

2.4.1 Transport Related Problems

The volume of traffic and the many conflicting traffic movements (due to limited North-South connectivity) impact on the operation of a number of junctions on the A523. This can lead to considerable congestion along the A523 corridor, particularly in Poynton.

In future, without the scheme in place, the level of development planned for the town in the Local Plan will generate traffic levels significantly higher than currently exist.

In addition to increased traffic levels due to local development, the A6MARR will attract a large volume of traffic which will re-route through Poynton for trips between the south west of Manchester and Macclesfield.

The additional development traffic and routing transfers associated with A6MARR will exacerbate existing transport-related problems, such as congestion on the key north-south routes through Poynton.

This will culminate in deteriorating quality-of-life for people residing in Poynton and along the south Manchester corridor, constraining the ability of the area to involve itself in the national and international economy. The core problems that exist within the region are discussed below.

Poor Environmental Conditions

The issues surrounding congestion are well documented. The negative impact of congested conditions is not just limited to increased travel time for vehicle occupants. Standing and slow moving traffic emits noise and particulate pollution which deteriorate the environmental conditions. Within Poynton, the current traffic levels are generating the negative impacts associated with congestion.

The significant amounts of congestion within Poynton can lead to pedestrians experiencing severance; whereby the presence of traffic acts as a physical barrier to pedestrians from walking in Poynton, further encouraging use of the car so as to exacerbate the existing problems.

This ongoing problem has been recorded previously. The SEMMMS Final Report 2001 identified that the crossroads in Poynton between the A5149 Chester Road and A523 London Road experiences congestion and as a result there is an adverse environmental impact at this location.

A shared space scheme has been implemented to address the issue of pedestrian severance and poor environmental conditions, however as the shared space scheme fails to address the vehicle capacity constraints of the area, it is not capable of mitigating all the problems.

Economic Constraints

As a result of the identified transport constraints and impacts, there are a number of economic consequences for local and regional growth within the area.

Within the local area, Poynton has many allocated housing development sites earmarked for expansion, such as the land adjacent to Hazelbadge Road, land at Sprink Farm, land south of Chester Road, as well as commercial developments at Adlington Business Park. However, these sites cannot be fully developed with the existing traffic conditions. The traffic constraints in Poynton are therefore having a negative impact upon the economic performance of the town.

Traffic flows through the shared space scheme in Poynton town centre will increase but the capacity of the town centre will be unchanged, therefore town centre congestion will increase.

Key Observation

The volume of traffic which will travel through Poynton will cause key junctions to operate above their capacity. This will cause increased congestion through the A523 corridor and will have a negative impact on the environmental, social and economic performance of the town. The key issues can be summarised as:

- *Poor journey times through Poynton for traffic between Macclesfield and South East Manchester;*
- *Noise problems, poor air quality and community severance within Poynton, and the local surrounding area including areas of Stockport Council;*
- *Constraining the economy of Cheshire East and Greater Manchester so that they do not meet their full economic potential.*

2.4.2 Future Economy

If the restrictions on the transport network remain as they currently exist, the relationship between land use and transport provision will mean that pressures on the network will increase as will restrictions on economic potential. The constraints of the road network will mean that planned growth in housing within Poynton will be hard to accommodate without significantly increasing the pressure on the network.

The introduction of the A6MARR has the potential to improve the economy for the area, providing greater connectivity to the east and west. The improved economy of the region will also increase travel demands between the existing urban areas of Bramhall, Cheadle Hulme, Handforth, and Woodford. Their proximity to the A6MARR will create additional demand in these areas as individual access areas to the south and east.

The restriction created by congestion in Poynton will result in the economic benefits of a new east west link (A6MARR) not being fully realised. Furthermore, the restrictions on economic growth between areas to the north and south of Poynton will also increase.

2.4.3 Impact of Doing Nothing

If no improvements are made to the existing situation, traffic levels on the A523 and within Poynton are expected to increase dramatically, causing the key junctions to operate at or above capacity, causing increased congestion on the main routes within Poynton. To avoid the congestion, drivers are likely to use alternative, less appropriate routes within Poynton, increasing community severance and compromising road safety.

This increase in traffic levels will also be seen on roads within the local network of Handforth, Bramhall, Cheadle Hulme and Woodford.

Furthermore, it is likely that the worsening travel conditions would mean the area would struggle to attract inward investment. Thus, the economy of Poynton and Cheshire, as a whole would be negatively impacted.

2.4.4 Underlying Drivers or Causes

As well as traffic wishing to travel within Poynton, the A523 carries strategic traffic travelling between the M6, Macclesfield, destinations in north Cheshire, Stockport, the Airport and the M60. Thus, the A523 carries high volumes of traffic which are travelling in many different directions causing many conflicting traffic movements.

In summary, the route through the town and the mix of strategic and local traffic in Poynton is seen as the underlying cause of the congestion within the town. These effects are compounded by the lack of any suitable alternative routes in the local roads network.

Key Observation

If no improvements are made to the existing situation, traffic levels on the A523 and in Poynton, plus traffic transferring to access the A6MARR, are expected to increase causing increased levels of congestion.

2.5 Scheme Objectives

2.5.1 Introduction

This section presents the objectives of the scheme based on the identified problems with the current situation. This section also highlights how these objectives align to the wider policy context; this is done for various policy documents at various levels of government.

2.5.2 Policy Context

SEMMMS acts as a key policy document regarding transport development in the region. The derivation of the objectives for SEMMMS was an objective-led process, with the objectives being closely related to the identified problems, issues and opportunities. The derivation of the study objectives was an iterative process which was informed by public and professional consultation.

The 5 core objectives which were adopted in SEMMMS are:

- *the promotion of environmentally sustainable economic growth.*
- *the promotion of urban regeneration.*
- *the improvement of amenity, safety, and health.*
- *the enhancement of the regional centre, town centres and local and village centres and the Airport.*
- *the encouragement of the community and cultural life of the neighbourhood and of social inclusion.*

2.5.3 Objectives

Poynton Relief Road would form a vital link for the area; it would provide improved north-south highway connectivity for the northern Macclesfield business area.

Whilst the above objectives cover the whole of the South East Manchester area, the Poynton Relief Road scheme has specific objectives; these objectives sit within the SEMMMS policy objectives, and ensure the scheme is aligned with the wider regional and national policy direction. The objectives for Poynton and their synergy with National and Regional Polices are outlined in the key observation below and in Table 2.14.

Key Observation

The scheme objectives are:

Objective 1 – *To support the economic, physical and social regeneration of Poynton and the north of the Borough, in particular Macclesfield.*

Objective 2 – *To relieve traffic congestion within Poynton by removing traffic, including Heavy Goods Vehicle (HGVs), onto the Relief Road, and to reduce traffic using less desirable roads on the wider network.*

Objective 3 – *To deliver a range of complementary measures on the A523 corridor to Macclesfield that address road safety and congestion and which mitigate the wider environmental impact of traffic.*

Objective 4 – *Boost business integration and productivity: improve the efficiency and reliability of the highway network, reduce the conflict between local and strategic traffic, and provide an improved route for freight and business travel.*

Objective 5 – *To allow improvements to the highway network for walking, cycling and public transport.*

The Poynton Relief Road scheme provides a significant positive contribution to all of the scheme objectives.

2.5.4 Alignment with Policy

As shown in Table 2.14, the scheme objectives have a strong synergy with national, sub-regional and local policy. Each objective aligns with at least one policy and in most cases, two or more. The objectives formed part of the appraisal process when appraising potential options.

In addition to the alignment of the Poynton Relief Road Scheme with the wider regional and national policies, there is the alignment of the Poynton Relief Road Scheme with the SEMMMS strategy. The completion of Poynton Relief Road will complement the strategic impact of other schemes completed as part of the SEMMMS Strategy, in particular the A6MARR. The implementation of Poynton Relief Road will enhance the benefits of the A6MARR and mitigate against the impact of increased traffic anticipated in Poynton as a result of the A6MARR.

Policy	Scheme Objectives				
	1	2	3	4	5
National Policy					
National Planning Policy Framework (March 2012)	✓	✓		✓	
Investing in Britain's Future (June 2013)				✓	
Action for Roads, A Network for the 21st Century (July 2013)	✓				
National Infrastructure Plan (December 2013)	✓	✓		✓	
DfT Strategic Vision (December 2014)	✓	✓			
DfT Transport Investment Strategy (2017)	✓	✓	✓	✓	
DfT's Single Departmental Plan 2015 to 2020	✓	✓		✓	
The Northern Powerhouse: One Agenda, One Economy, One North (March 2015)	✓	✓		✓	
Sub-National					
TfN Initial Major Roads Report (2017)	✓				✓
Regional Policy					
Strategic and Economic Plan for Cheshire and Warrington (March 2014)	✓		✓	✓	
Stronger Together – Greater Manchester Strategy 2013	✓		✓	✓	
Local Policy					
Cheshire East Local Plan (2015)	✓	✓	✓	✓	✓
Stockport Local Development Framework	✓			✓	✓
Cheshire East LTP (2011-2026)	✓	✓	✓	✓	✓
Greater Manchester Third Local Transport Plan 2011/12-2015/16	✓			✓	✓
<p>Objective 1 – To support the economic, physical and social regeneration of Poynton and the North of the Borough, in particular Macclesfield.</p> <p>Objective 2 – To relieve traffic congestion within Poynton by removing traffic, including Heavy Goods Vehicle (HGVs), onto the Relief Road, and to reduce traffic in less desirable roads on the wider network.</p> <p>Objective 3 – To deliver a range of complementary measures on the A523 corridor to Macclesfield that address road safety and congestion and which mitigate the wider environmental impact of traffic.</p> <p>Objective 4 – Boost business integration and productivity: improve the efficiency and reliability of the highway network, reduce the conflict between local and strategic traffic, and provide an improved route for freight and business travel.</p> <p>Objective 5 – To allow improvements to the highway network for walking, cycling and public transport.</p>					

Table 2.14: Poynton Relief Road Objectives and Local Authority Alignment

2.5.5 Targets

In order to assess the performance of the scheme against the scheme objectives, targets will be set for each of the objectives. These targets look to set up a scope for monitoring the scheme as it addresses the problems identified within Poynton. In particular, the targets will monitor how the scheme performs when addressing the congestion identified, as well as proposed economic impact, and the impact of the social and physical regeneration of the town.

Targets have not yet been confirmed but a qualitative description of the anticipated target for each scheme objective is provided below:

Objective 1 – To support the economic, physical and social regeneration of Poynton and the North of the Borough, in particular Macclesfield

In liaison with Cheshire East Council, a target would be set which focuses on job creation and retention at Adlington Business Park and Macclesfield. As part of ongoing monitoring by the Cheshire and Warrington Local Enterprise Partnership, Cheshire East Council and the Chamber of Commerce the number of jobs created in the two areas are monitored. Thus, a target will be set which focuses on the number of jobs created.

Social and physical regenerative aspects of the objective can be assessed with surveys of local residents to gather their perceptions of the towns physical infrastructure, and its performance as a platform for social interaction.

Objective 2 – To relieve traffic congestion within Poynton by removing traffic, including Heavy Goods Vehicle (HGVs), onto the Relief Road, and to reduce traffic in less desirable roads on the wider network

A target is to be set which will focus on percentage reduction of vehicles (including HGVs) on the A523 within Poynton as well as other 'less desirable roads'. This is to be monitored by placing Automatic Traffic Counters on the appropriate roads both before and after the scheme is in place to count the volume of cars and HGVs travelling on them. Journey times on key routes along the A523 will be monitored to assess congestion levels before and after scheme implementation.

Objective 3 – To deliver a range of complementary measures on the A523 corridor to Macclesfield that address road safety and congestion and which mitigate the wider environmental impact of traffic

A target is to be set which will focus on improving performance in terms of journey times and safety on the A523 corridor. These shall be monitored by conducting journey time surveys both before and after the scheme is in place (as mentioned in Objective 2) and monitoring STATS19 data.

Equally, targets are to be set which will aim to improve air quality within Poynton. The targets will focus on reducing NO₂ emissions.

Objective 4 – Boost business integration and productivity: improve the efficiency and reliability of the highway network, reduce the conflict between local and strategic traffic, and provide an improved route for freight and business travel

A target is to be set which will focus on improving access to the business parks in the area. This could be monitored by way of a short questionnaire and / or survey to be filled in by delivery drivers and staff to gain their perception of whether access had improved once the scheme is in place.

Objective 5 – To allow improvements to the highway network for walking, cycling and public transport

A target will be set for the provision of walking, cycling and bus facilities in the area and especially on A523. This should be monitored by NMU and public transport surveys both before and after the scheme is in place

2.6 Proposals

2.6.1 Introduction

A Poynton Relief Road has been in discussion over a long period of time, extending back to the 1930's. It has undergone various iterations from its inception to the scheme's current position.

This section outlines the development of options derived from an improved understanding of issues, opportunities and objectives of the scheme as a method for reducing the transport and transport-related impacts for Poynton, the A523 corridor and the local area. Following an explanation of the option generation and descriptions, this chapter will go on to demonstrate the options assessment process undertaken to establish a Preferred Option.

2.6.2 Option Generation

As previously mentioned, a Poynton Relief Road has been in consideration for a long period of time. Whilst historically, options developed are based on a road-based approach, as part of SEMMMS, a multi-modal study, non-highway options were also assessed.

A wide range of possible measures, in line with TAG guidance, covering all modes and potential combinations of options has been considered. Of the measures considered, the need for increased highway capacity for regional traffic on the A523 corridor and the issues of future traffic growth across the network meant that a public transport only approach would not adequately address the current and future transportation needs of Poynton and the A523 corridor.

A range of options has been developed which address some, or all, of the problems identified and deliver benefits in line with the scheme. This led to the development of a Red Option (the "Historic Preferred" option) and, following the announcement of the closure of the Woodford Aerodrome (and the opportunity to develop other preliminary options on a more direct alignment), a Green and Blue Route Option. Furthermore, a relief road for Poynton should be accompanied with capacity improvements at junctions on A523 to the south of each option in order to manage any potential traffic increases and improve the safe operation of the highway. Therefore, all options were considered with appropriate improvements on the existing network.

These options are discussed in more detail in the following section.

2.6.3 Non-Highways Options

In terms of non-highways options considered in SEMMMS for Poynton and the A523 corridor between Poynton and Macclesfield, SEMMMS assessed rail and light rail options for connecting the settlements of the area to Manchester and Manchester Airport.

SEMMMS identified that although residents in Macclesfield Borough are amongst the more frequent car users, they are the most likely to use the train more regularly. Therefore, SEMMMS recommended that the trips between Macclesfield and Manchester city centre on the A523 corridor should be better facilitated via rail.

Equally, amongst the Metrolink extensions considered as part of SEMMMS in order to improve connectivity between towns south of Manchester and Manchester city centre, Poynton was considered as part of the ML2.2 extension option linking Poynton

to MALRW and Manchester Airport. All the options beyond the Manchester Airport, including ML2.2, were discounted as insufficient demand was identified to warrant their further consideration.

In line with TAG guidance, a wide range of possible measures should be considered which cover all modes and potential combinations of options. PRR being a mature scheme meant that various options have been considered in the past and discounted to the favour of the ones named 'Preferred' or 'Recommended'.

2.6.4 Option Descriptions

Table 2.15 includes a list of the options being assessed as part of the Poynton Relief Road scheme. Figures 2.4 & 2.5 show the alignments for each scheme.

No.	Option	Description
1	Red - The 'Historic Preferred'	A single carriageway from the A555 (A6MARR) Road to the east of Woodford Aerodrome and to the A523 London Road.
2	Green	A single carriageway from the A555 (A6MARR) Road crossing the Woodford Aerodrome and to the A523 London Road– New Option.
3	Blue	From the A555 (A6MARR) Road crossing the Woodford Aerodrome and to the A523 London – New Option.
4	Junction Improvements on A523	Capacity improvements at junctions along A523 between Macclesfield and Adlington Business Park.

Table 2.15: List of Route Options

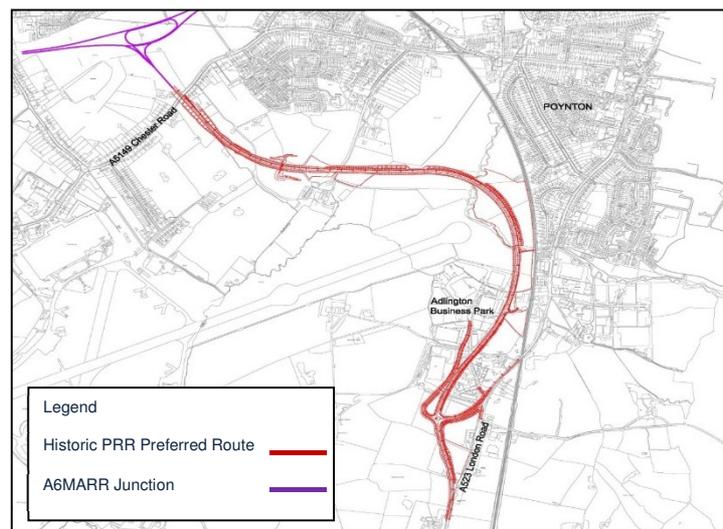


Figure 2.4: Alignment of Red Route Option

Green Option

The Green Option also connects with the A6MARR Junction, north of the existing A5149 Chester Road at its northern extent. This option (similar to the Blue Option) was developed after the closure of Woodford Aerodrome and crosses the disused runway, this takes a more direct route than the Blue Option, shortening the overall length of the scheme. It then re-joins the network at the same proposed southern junction with the A523 as the Red option. This is shown in Figure 2.5.

A523 Online Highway Improvements

A preliminary traffic assessment as part of the Poynton Relief Road scheme has indicated potential increases in traffic flows on the A523 London Road south of the scheme between the proposed Poynton Relief Road southern junction and The Silk Road, to the north of Macclesfield. This resulted in a number of junction improvements to be recommended in support of the scheme along the A523 Corridor. These include highway improvement works at two junctions:

- *Adlington Crossroads: A notional layout has been drawn up to cater for these increased flows. This widens the A523 on its western side, still remaining within existing highway limits. In addition, the northbound bus lay-by would be removed and re-located. There would be two straight on lanes provided for northbound and southbound journeys;*
- *Bonis Hall Lane Junction: Improvements would involve an extra through lane added in northbound and southbound directions along the A523. A signalised junction improvement was selected for Bonis Hall Lane as it provides adaptability for changing traffic conditions.*

Key Observation

A number of options have been identified for a scheme within Poynton. PRR was considered and recommended in SEMMS and hence the Red Option is the Historic Proffered Route. The closure of the runway has allowed opportunity for new alignments to be considered.

The options include:

- *Red Option*
- *Blue Option*
- *Green Option*

2.6.5 Option Assessment

Full details of the Option Assessment process are contained within the Option Assessment Report. This section seeks to summarise the process followed to identify a Preferred Option.

The flow chart below summarises the main stages involved in identifying and assessing potential options and subsequently identifying the Preferred Option. Further detail on each stage is provided in the following text.

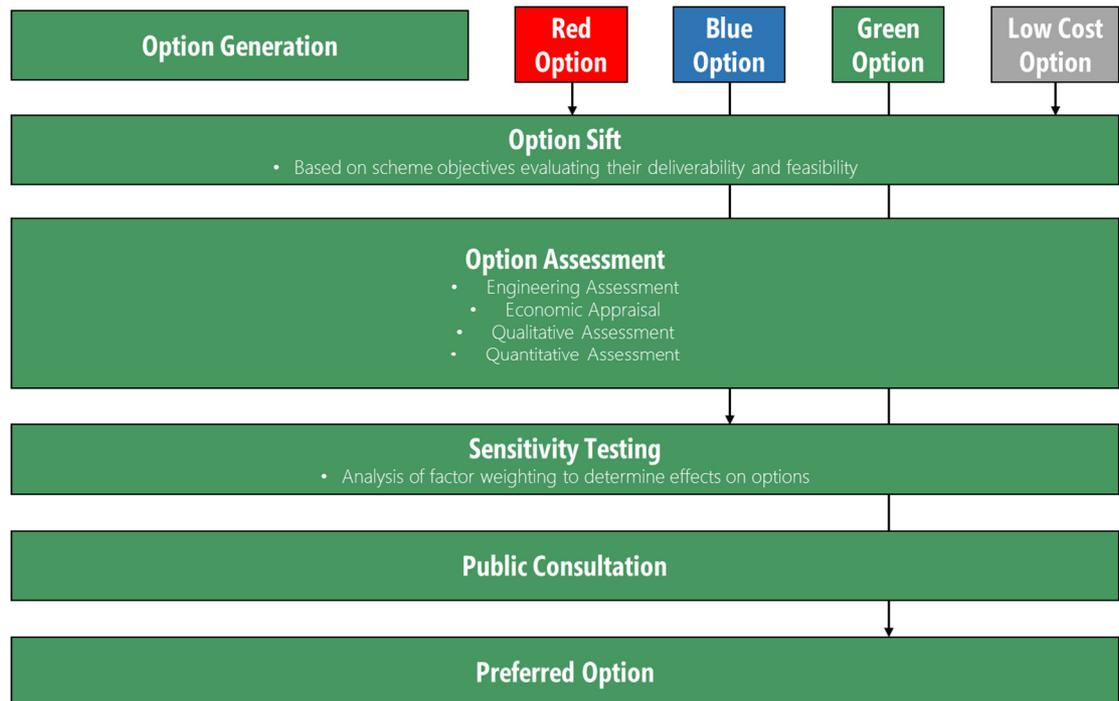


Figure 2.6: Option Assessment Process

As this is a mature scheme which has undergone previous option assessments, a proportionate approach was followed based on the option sifting recommended by tag unit 'the transport appraisal process'. The options were sifted based on the scheme objectives. The results of this initial sifting discounted the low cost option which was solely junction improvements on the A523, and the red option which was deemed no longer viable due to cost, value for money, feasibility and deliverability issues.

The Blue and Green options were then assessed; one as the Preferred Option and the other as the next best alternative.

The engineering considerations and constructability issues associated with the Green and Blue route options were considered as part of the engineering assessment, this focused on the potential options purely from an engineering and constructability standpoint e.g. Geology, Geomorphology and Ground Conditions.

Following this, further qualitative and quantitative assessment was carried out focusing on key areas including the following:

- *Scheme Cost Estimate*
- *Benefit to Cost Ratio (BCR)*
- *Scheme Length and Earthworks Volume*
- *Engineering Constraints*
- *Road User Safety*
- *Public Endorsement*
- *Environmental Impacts*

The qualitative assessment describes how the two options perform against the factors identified, whilst the quantitative assessment assigns scores to each of the route options to allow them to be ranked in order of performance (where the highest score indicates the best option).

The scores from the quantitative assessment are as follows:

- *Total Weighted Score of Green Option: 13.6*
- *Total Weighted Score of Blue Option: 5.3*

It can be seen from the results of the assessment that the Green Option outscores the Blue Option. Based on that, the Green option will be taken forward as the Preferred Option and the Blue Option as the Next Best Alternative. Further sensitivity testing confirmed the results obtained were robust.

The option sifting process has shown that the low cost option would not meet the scheme objectives as the junction improvements would not be able to add sufficient capacity. Whilst junctions on the A523 south of Poynton could potentially be improved the junctions in Poynton could not be suitably improved to accommodate the additional traffic.

Following feedback received from members of the public throughout the consultation period, it was necessary to develop and assess alternative alignments that were suggested. Given that the Blue Option (Next Best Alternative) was already discounted, the amendments which are assessed in this section were variations on the Green Route Option only. These route options were then subject to a qualitative assessment compared to the Green Route Option to determine the most preferable overall route option. This assessment reflected the present day situation, and Cheshire East Council's priorities and aspirations, to identify the route expected to perform best with regards to the private assets in and adjacent to Adlington Business Park. This assessment identified the Green Route Option as the most preferable option and the alternative route options were discounted.

Key Observation

The Green option was found to be the Preferred Option with the highest total weighted score.

2.7 Strategic Fit

2.7.1 Local Policy

Cheshire East Local Plan

Cheshire East Council's Local Plan sets out the Council's case for sustainable economic growth and is the strategy that the Council wants to adopt to manage development in Cheshire East up to 2030.

The Local Plan Strategy (LPS) was submitted to the Secretary of State for examination in May 2014. The Inspector is the person appointed to carry out the independent examination under Section 20 of the Planning and Compulsory Purchase Act and this report contains his recommendations and the reasons for those recommendations. Following the second set of examination hearings in October 2015, the Inspector issued his Further Interim Views in December 2015. These Further Interim Views address the additional evidence produced by the Council during the previous suspension of the examination and its implications for the submitted plan.

Following the Further Interim Views, the Council published the proposed changes to the Local Plan Strategy, including changes to policies, supporting text and new and amended site allocations. These proposed changes were subject to formal public consultation until the 19th April 2016, with further hearing sessions held in September and October 2016. The Inspector's views on main modifications were published on 13 December 2016. Consultation on Main Modifications has been completed and Cheshire East Council has now received the Inspector's Report on the Examination of the Cheshire East Local Plan Strategy Development Plan Document.

At this time, the Local Plan document has been adopted by cabinet, and is undergoing an examination period where it can be formally challenged. However, the priorities and key messages will not change significantly. Thus, the document reflects the Council's latest vision and, as such, has been reviewed.

The Local Plan is underpinned by a need to improve transport connections across the Authority area. Poynton Relief Road is named as one of the projects which are planned to address congestion issues in the area, as well as South Macclesfield Link Road and improvements on the A51, A530 and the A500 Barthomley Link, and as such it is explicitly listed in their Infrastructure Delivery Plan.

The Plan identifies Poynton as an area of high quality employment led growth to accommodate the expansion of existing businesses and attract new investment in to the town, as well as new housing. These local developments are shown below in *Figure 2.7*.

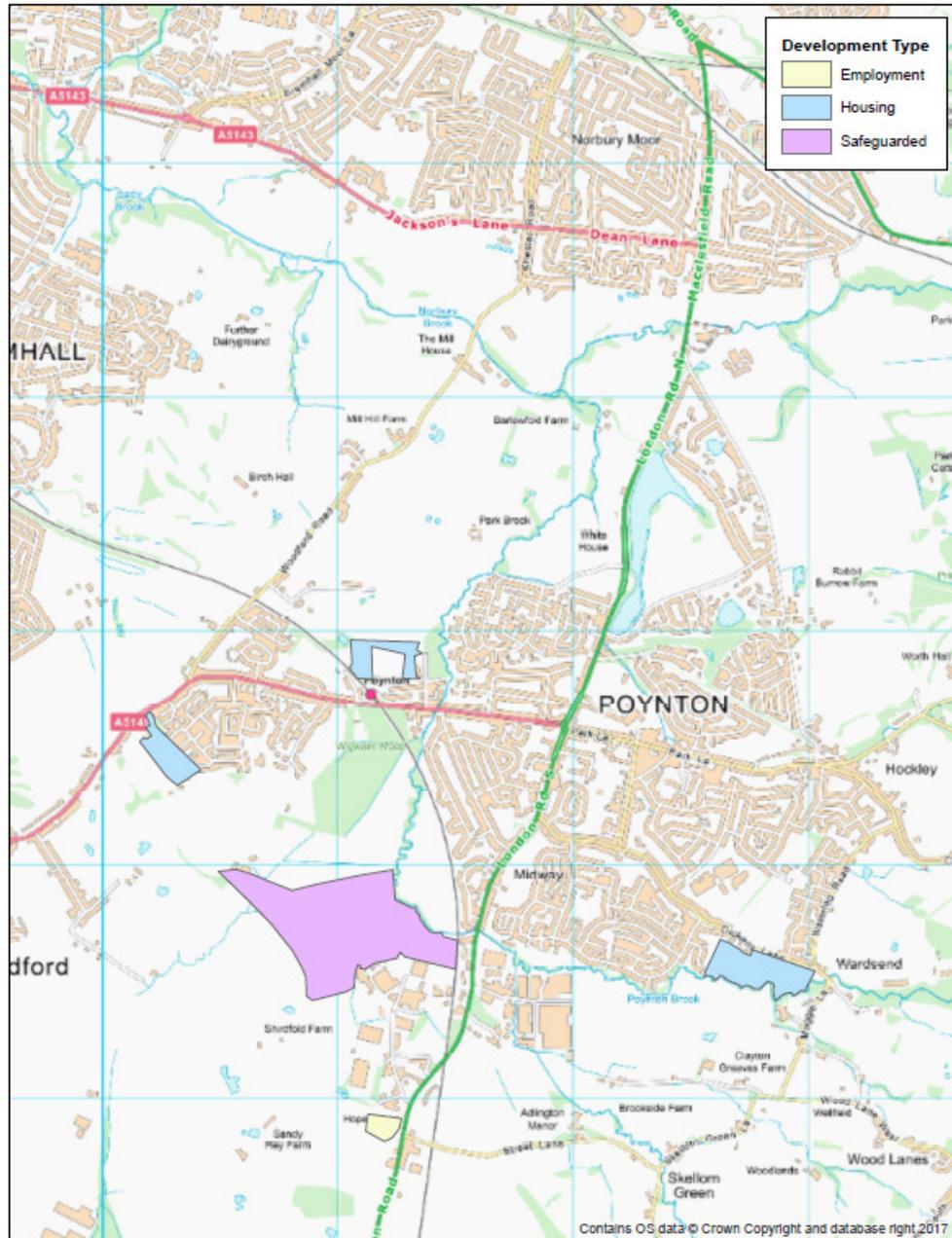


Figure 2.7: Local Developments Around Poynton

Land adjacent to Hazel Badge Road (150 dwellings)

On green belt land, 150 homes, which incorporates green infrastructure, adjacent to the West Coast Main Line to the north west of the town.

Land at Sprink Farm (150 dwellings)

On green belt land, 150 homes, which incorporates green infrastructure, to the south east of the town.

Land south of Chester Road (150 dwellings)

On green belt land, 150 homes, which incorporates green infrastructure, adjacent to the proposed A6MARR to the north west of the town.

Adlington Business Park Extension

The development of Adlington Business Park Extension will be achieved through:

- *The provision of around 10ha of new employment land.*
- *The incorporation of Green Infrastructure, including greenways, and the provision of new pedestrian and cycle links to new and existing residential areas, and shops.*

The Poynton Relief Road forms the western boundary of the site and would significantly increase its accessibility.

The Relief Road will assist in meeting the objective of employment led growth as it will support:

- *The economic, physical and social regeneration of the town*
- *Open up new development sites*
- *Will reduce existing town centre traffic and facilitate town centre regeneration*
- *Improve strategic transport links across the area*
- *Reduce community severance along key town centre corridors*
- *Reduce traffic related pollutants within the town especially on those areas declared Air Quality Management Areas*

The delivery of the Relief Road is integral to delivering employment led growth within Poynton which is the vision for Poynton within the Local Plan.

In order to deliver their vision for Cheshire East as a whole, the Council has set four strategic priorities. Table 2.16 demonstrates how the Poynton Relief Road scheme fits with those strategic priorities.

Strategic Priority	Fit
Promoting economic prosperity by creating conditions for business growth.	The Relief Road will improve access to Industrial and Business development, promoting expansion to the levels stated in the Local Plan. The Relief Road will also relieve congestion on the A523 and other key routes in Poynton town centre, creating an environment within the town which is conducive to attracting new businesses and the expansion of existing ones.
Creating sustainable communities where all members are able to contribute and where all the infrastructure required to support the community is provided.	By reducing traffic flows within the town centre, particularly the A523, community severance will be reduced, encouraging more people to walk and cycle around the town.
Protecting and enhancing the environmental quality of the built and natural environment.	The Relief Road will reduce traffic flows on the A523 in Poynton, particularly in the locations which are identified as potential future Air Quality Management Areas. It will also reduce the noise disturbance and greenhouse gas emissions caused by vehicles travelling through the town centre, improving the built environment within Poynton.
Reducing the need to travel, managing car use and promoting more sustainable modes of transport and improving the road network.	Community severance will be reduced, thus encouraging more people to walk and cycle around the town.

Table 2.16: Strategic Fit with The Cheshire East Local Plan

Cheshire East LTP

All local authorities are required to produce a Local Transport Plan (LTP) which sets out a long-term strategy for travel and transport within the area for the period 2011 to 2026. Cheshire East's Local Plan identifies the A523 through Poynton as one of five congestion hotspots within Cheshire East.

The LTP also contains seven objectives. These objectives aim to make explicit the areas where transport can make a positive contribution to the achievement of the priority goals within each area, and also where it would be likely to hinder achievement if under-performance is not addressed. Table 2.17 demonstrates the strategic fit of the Poynton Relief Road with the seven objectives within the LTP.

Objective	Fit
Minimise congestion and improve the overall efficiency of the highway network	The scheme will reduce congestion within Poynton town centre by providing an alternative route for drivers wishing to travel through Poynton in order to get to their destination. Thus, the flows within the town centre would be lower, improving the efficiency of the highway network.
Improve accessibility to key services and reduce the need to travel	Reduced congestion in Poynton town centre would reduce bus journey times and improve their reliability. Thus, accessibility to key services in Macclesfield and Crewe (the main locations which the buses serve from Poynton), such as Leighton Hospital and key employment centres would be improved for the residents of Poynton. Accessibility between Poynton, Macclesfield, the M6, Stoke On Trent and Newcastle Under Lyme would also improve by car as journey times would be more reliable.
Improved maintenance of the highway and transport network	The scheme would be built to modern standards. Thus, maintenance would not be required for 15 years. Due to the reduced traffic flows in Poynton, the key routes in Poynton are unlikely to need to be maintained as regularly as at present.
Support community involvement and decision-making	The project team have had close liaison with relevant councils and groups in the area in order to consider their views. Public Consultation events were undertaken in order to inform the Preferred Route Announcement. The majority of the respondents to the consultation questionnaire showed their support for the scheme.
Support active and healthy lifestyles	Community severance will be reduced, encouraging more people to walk and cycle around the town.
Protect and enhance the local and global natural environment	The Relief Road will reduce traffic flows on the A523 in Poynton, particularly in the locations which are identified as potential future Air Quality Management Areas. It will also reduce the noise disturbance and greenhouse gas emissions caused by vehicles travelling through the town centre, improving the built environment within Poynton.
Improve road safety for all users and increase personal and community safety	The scheme is expected to deliver road safety benefits.

Table 2.17: Strategic Fit with The Cheshire East Local Transport

Thus, it is considered that the Poynton Relief Road scheme fits well against the objectives contained within Cheshire East's LTP.

Stockport Local Development Framework

The Local Development Framework (LDF) for Stockport sets out the future planning and development of the Borough in terms of physical and environmental context as well as social and economic context. The LDF comprises of a suite of documents including the Core Strategy Development Plan Document (DPD) as well as saved from the May 2006 Stockport Unitary Plan (UDP) Review.

The saved policies of the Stockport UDP include policy ST2.2 which protects the land for future major road schemes. Policy ST2.2 specifically identifies the A523 Poynton bypass as one of the major road schemes likely to be required in the future with the proposals map showing the alignment of the scheme, and the junction with the A6MARR to be protected.

Stockport MBC support for the scheme is also confirmed in the more recent 2011 Core Strategy DPD with the document confirming the land of the route alignment is to remain protected from other development.

The scheme would also assist in achieving the objectives of the Core Strategy DPD, particularly Objective 6 Transport which the scheme, in combination with the SEMMMS relief road, would assist in removing traffic from the district and local centres.

In addition to benefits to Cheshire East and Manchester, residents within Stockport Metropolitan Borough Council will also experience benefits. Through the introduction of A6MARR and Poynton Relief Road the key benefits are:

- *Access between Macclesfield and the Cheshire Science Corridor would be improved, widening the number of job seekers which could access job opportunities within the Science Corridor. This could allow greater expansion of the Science Corridor*
- *It is likely that the number of vehicles which travel on the A5102 and A5149 between Cheshire East and Stockport, through Bramhall and Cheadle would be reduced as they would be transferred on the Poynton Relief Road and A6MARR. This would relieve the two, currently congested roads, improving safety for road users and the air and noise quality for the residents along them.*
- *The junction between the A6 Buxton Road / A6 London Road and the A523 Macclesfield Road (locally known as the Rising Sun junction) would be relieved of its existing congestion as vehicles wishing to travel westwards towards Manchester Airport would be transferred on to the A6MARR at the junction with the A6 east of the junction.*
- *Poynton Relief Road is likely to reduce forecast traffic growth on the A6 at High Lane as a result of local traffic from the Whaley Bridge, Chapel-en-le-Frith and Buxton areas and to a lesser extent strategic traffic rerouting to the A523 / Poynton Relief Road to access the A6MARR.*

Greater Manchester Third Local Transport Plan

Greater Manchester Local Plan has the following core objectives:

- *To ensure that the transport network supports the Greater Manchester economy to improve the life chances of residents and the success of business;*
- *To ensure that carbon emissions from transport are reduced in line with UK Government targets in order to minimise the impact of climate change;*
- *To ensure that the transport system facilitates active, healthy lifestyles and a reduction in the number of casualties and that other adverse health impacts are minimised;*
- *To ensure that the design and maintenance of the transport network and provision of services supports sustainable neighbourhoods and public spaces and provides equality of transport opportunities; and*
- *To maximise value for money in the provision and maintenance of transport infrastructure and services.*

Given that Stockport Council is a joint promoter of Poynton Relief Road, and this scheme will support the local network of Stockport as well as that of Cheshire East, the Poynton Relief Road scheme can be seen to align well with the aims Greater Manchester's Local Plan.

2.7.2 Sub-Regional Policy

A Strategic and Economic Plan for Cheshire and Warrington

The aim of the Cheshire and Warrington Local Enterprise Partnership is to make Cheshire and Warrington the best place to do business in the UK by creating the ideal environment for businesses to grow, providing access to the right skills, delivering supportive and efficient public services, infrastructure and utilities and maintaining the sub region as a beautiful part of the country to enjoy.

In order to achieve this aim, the LEP produced a Strategic Economic Plan (SEP) in March 2014 which outlines how the aim is to be achieved. The SEP outlined three priority areas:

- *Atlantic Gateway*
- *Cheshire Science Corridor*
- *Crewe High Growth City*

The Poynton Relief Road scheme aligns well with the aims of Cheshire and Warrington's Strategic Economic Plan.

Stronger Together – Greater Manchester Strategy 2013

The Greater Manchester Strategy (GMS) was the response to the Manchester Independent Economic Review. It focuses on developing the Greater Manchester City Region to deliver services differently, more efficiently and reduce the level of demand for those services, by bringing more people into higher quality work. This includes continuing to invest in Greater Manchester's strategic transport network to link people

and neighbourhoods with jobs, and businesses to their supply chains and markets including improved connectivity within areas such as Stockport.

Stockport Council is a joint promoter of the Poynton Relief Road, noting the benefits it can have for both Stockport and the wider area, thus the Poynton Relief Road scheme aligns well with the aims of Greater Manchester

2.7.3 National Policy

The following National and Sub-National documents are currently pertinent and have been reviewed:

- *National Planning Policy Framework, 2012*
- *Investing in Britain's Future, 2013*
- *Actions for Roads, A Network for the 21st Century, 2013*
- *National Infrastructure Plan, 2013*
- *DfT's Strategic Vision*
- *DfT Single Departmental Plan 2015-2020*
- *National Policy Statement for National Networks (December 2014)*
- *The Northern Powerhouse: One Agenda, One Economy, One North (March 2015)*
- *TfN Initial Major Roads Report (2017)*

Key policies / objectives which the Poynton Relief Road scheme would contribute towards have been highlighted within these national policy documents.

Table 2.18 summarises the key extracts key policies / objectives which the Poynton Relief Road scheme would contribute towards.

Policy	Key Extracts
National Planning Policy Framework (March 2012)	<p>“Planning must operate to encourage growth and not act as an impediment”. Therefore, significant weight should be placed on the need to support economic growth through the planning system.</p> <p>The document has the following core principles:</p> <ul style="list-style-type: none"> • Building a strong, competitive economy • Ensuring the vitality of town centres • Supporting a prosperous rural economy
Investing in Britain's Future, 2013	<p>A pipeline of public investment in infrastructure worth over £100 billion to 2020;</p> <p>Strengthening public sector delivery of major projects and programmes, learning from successful approaches taken in the Olympics and elsewhere.</p>

Policy	Key Extracts
Action for Roads, A Network for the 21st Century (July 2013)	<p>“The local highway network is the country’s most valuable public asset”.</p> <p>Central Government have provided significant funding for major road schemes promoted by local authorities and the document announced that they are to free up longer term investment funding so that local authorities are better able to tackle transport problems in the area.</p>
National Infrastructure Plan (2013)	<p>Building on the success of City Deals, the government has introduced Growth Deals which provide LEPs with money from the Local Growth Fund (LGF) for projects that benefit the local area and economy.</p> <p>The government’s aim is to create a national road network fit for the 21st century, which improves economic productivity and supports jobs and growth across the country. It seeks to increase capacity, tackle congestion, support development, strengthen connectivity, improve reliability and resilience, and ensure a road network of the best possible quality.</p>
DfT’s Strategic Vision	<p>The DfT has eight performance areas and each area has a long term aspiration. The eight performance areas are:</p> <ul style="list-style-type: none"> • Making the network safer • Improving user satisfaction • Supporting the smooth flow of traffic • Encouraging economic growth • Delivering better environmental outcomes • Helping cyclists, walkers and other vulnerable users of the network • Achieving real efficiency • Keeping the network in good condition
DfT Single Departmental Plan 2015-2020	<p>The DfT plan for 2015 – 2020 invests to make journeys better: simpler, faster and more reliable in order to support business and job growth. The four objectives are:</p> <ul style="list-style-type: none"> • Boosting economic growth and opportunity • Building a One Nation Britain • Improving Journeys • Safe, secure and sustainable transport

Policy	Key Extracts
<p>TfN Initial Major Roads Report (2017)</p>	<p>The Major Roads Report, alongside its Rail counterpart and the sustainability appraisal, is a fundamental component of a long-term, sequential investment programme underpinning the STP that sets the context for investment priorities up to 2050.</p> <p>The objective of this work is to achieve the joint ambition of the Government and TfN for the Northern Powerhouse, and to ensure a step change in economic growth. By doing this, the report will help TfN to secure the investment in roads that the Northern Powerhouse needs to realise its potential.</p> <p>This focuses on the following Conditional Outputs:</p> <ul style="list-style-type: none"> • Journey Reliability. • Network Efficiency, including a measure of average delay, enhanced use of technology and vehicle occupancy as a proxy for people’s behavioural change. • Network Resilience. • Journey Quality including information provision and asset condition
<p>The Northern Powerhouse: One Agenda, One Economy, One North (March 2015)</p>	<p>Transport for the North (TfN) has the following transport objectives:</p> <ul style="list-style-type: none"> • Better connections between economic centres allowing clusters to develop even where companies are located apart; supporting more trade, more interactions between businesses and the generation of more products and ideas; and allowing businesses to specialise in their core business and become more efficient; • Better commuting opportunities to the centres of economic activity, allowing businesses to access ever more of the skills that they need to have a competitive advantage, and empowering people to derive most benefit from their individual talents through their career; • Better capacity and reliability for freight and logistics infrastructure that supports the region’s businesses; and • Better travel information and ticketing systems that can expand travel horizons for businesses and individuals, multiplying the benefits offered by infrastructure and investment alone.

Table 2.18: Strategic Fit with National Policy Documents

Table 2.18 highlights that the Poynton Relief Road scheme provides a strong positive fit with key National Government policy.

Key Observation

The Poynton Relief Road scheme has a strong strategic fit with local, sub regional and national policy.

2.8 Planning Position

The Poynton Relief Road scheme has been granted planning permission by Cheshire East Council as the local planning authority under the reference 16/4436M on the 8th of June 2017 and by Stockport Metropolitan Borough Council on 19th July 2017 under the reference DC/063174.

2.9 Political Support

The Poynton Relief Road has been endorsed by a number of key political stakeholders including Cheshire East Council, Poynton Town Council and Cheshire and Warrington Local Enterprise Partnership, all of which understand the importance of the scheme in the strategic development of Poynton.

Poynton Town Council has been closely involved in the development of the scheme. A meeting with Poynton Town Council was held in March 2015 in order to share the details of the proposed Poynton Relief Road scheme. Poynton Town Council is subsequently in support of the delivery of the scheme, with the conditions of no additional spurs or roundabouts being added to the scheme and the scheme should ideally be finished as soon as possible after the SEMMMS road is completed

The scheme is also supported by the Cheshire and Warrington Local Enterprise Partnership, having been identified in their Strategic Economic Plan.

Stockport Council also remains strongly supportive of the development and delivery of the Poynton Relief Road, wishing to have a strong understanding of how the scheme will impact the local area.

Key Observation

The Poynton Relief Road scheme has strong political support.

2.10 Stakeholders

The project team have had close liaison with relevant councils and groups in the area in order to consider their views. This involved two consultations, a route option consultation, and a pre-planning application consultation.

The Poynton Relief Road Route Options Consultation took place from 2nd June 2014 to 28th July 2014. The route options consultation asked broader questions about the proposed development to gauge overall opinion of the proposal and a preference of route option. A total of 11,700 questionnaires and leaflets were delivered across the local area and 1,818 responses were received through a range of methods.

The Poynton Relief Road Pre-planning application began on 5th October 2015 and closed on the 30th November 2015. Similar to the Route Options consultation, 11,700

questionnaires and leaflets were delivered across the local area. This time with 1,287 responses received through a range of methods.

Overall, the responses indicated that there is overwhelming stakeholder support for the scheme with approximately 95% of respondents being in favour of the Relief Road proposals (either fully or partly).

In summary, public consultation events and written correspondence demonstrated that the scheme has very high levels of public and business support.

Key Observation

Two Public Consultation exercises have been undertaken in order to provide stakeholders with an opportunity to provide feedback and influence the proposed scheme.

These highlighted strong support for the scheme from both the public and local businesses.

2.11 Internal or External Business Drivers

Poynton has strategic development sites earmarked for expansion, such as Adlington Business Park, as well as land near to Woodford Aerodrome.

If no improvements are made to the existing highway network, traffic levels on the A523 and within Poynton are expected to increase significantly, causing the key junctions to operate at or above capacity, causing increased congestion on the main routes within Poynton.

The Poynton Relief Road scheme is required in order to deliver all of the proposed developments within Poynton, including the development proposals outlined in Cheshire East's Local Plan.

Furthermore, there is a risk that businesses may relocate from Poynton due to the worsening travel conditions in the town, and the town would also struggle to attract inward investment. Thus, the economy of Poynton and Cheshire, as a whole could be negatively impacted.

Further strategic developments within the area can be accessed with greater ease through Poynton Relief Road, including the expanding Manchester Airport Enterprise Zone, and the growing Cheshire Science Corridor developing along the southern bank of the Mersey. Strategic traffic from south of Poynton would be able to access this region with greater reliability.

2.12 Synergy

Cheshire East Council are also promoting the construction of Congleton Link Road, 16 miles to the south of Poynton. These two schemes would greatly improve connectivity between Cheshire East and Stockport by reducing journey times and improving journey time reliability. As previously stated, the A6MARR scheme is under construction and its implementation will harmonise well with the two schemes solving the north-south and east-west problems.

2.13 Conclusions

The rationale for investment in the Poynton Relief Road scheme is strong.

The scheme delivers on core policy objectives at a local, sub-regional and national level.

The Poynton Relief Road scheme provides a positive contribution to all of the scheme objectives.

In conclusion, investing in the scheme will address existing and future problems within Poynton and the wider area including Bramhall, Cheadle Hulme, Handforth and Woodford. This scheme will also support Cheshire East's strategic development opportunities around Poynton and is subsequently considered to be one of the top priorities for the area.

Strategic Case Summary

Poynton is defined as a key location providing North-South connectivity between Macclesfield and Stockport.

Cheshire and Warrington has one of the best performing economies in England. With a GVA of £20bn per year, the economy of Cheshire and Warrington is the strongest in the North of England. The Cheshire and Warrington LEP has a vision to increase the economy to be worth £35bn a year by 2030 with GVA per head at 115% of the UK average. It is to home an additional 100,000 residents, 75,000 new jobs and 70,000 new homes by 2030.

A Relief Road passing to the south west of Poynton has been promoted by Cheshire East Council as a means of opening more land to potential development, reducing town centre congestion and improving journey time reliability.

Journey time data has provided evidence of poor journey time reliability, congestion alongside subsequent traffic-related issues within Poynton and on the local surrounding network including the A5149, A523 and A5102. There will also be traffic-related improvements within Bramhall, Cheadle Hulme, Handforth and Woodford.

If no improvements are made to the existing situation, with the construction of the A6MARR (which will provide improved orbital connectivity between Hazel Grove and Manchester Airport) traffic levels within Poynton are expected to increase, causing increased levels of congestion.

Based on the identified problems and issues, a set of scheme objectives were developed. These objectives attempted to capture the strategic aspirations of SEMMMS as well as the local aims of the Poynton Relief Road scheme:

- to support the economic, physical and social regeneration of Poynton and the north of the area, in particular Macclesfield*
- transfer Heavy Goods Vehicles (HGVs) onto more appropriate roads on the wider network and relieve existing traffic congestion in Poynton*

- *deliver a range of complementary measures on the A523 corridor to Macclesfield that address Road Safety, Congestion and Mitigation of the wider environmental impact of traffic*
- *boost business integration and productivity by improving the efficiency and reliability of the highway network, reducing the conflict between local and through traffic, by the improved route for freight and business travel*
- *allow improvements to the highway network for public transport, walking and cycling*

The Poynton Relief Road scheme makes a positive contribution to all of the scheme objectives.

The Green Option was endorsed by Cheshire East Council as the Preferred Option. The scheme is also supported by Stockport Council, Poynton Town Council and the Cheshire and Warrington Local Enterprise Partnership, having been identified in their Strategic Economic Plan.

A review of pertinent planning documents has been undertaken. The Poynton Relief Road scheme provides a strong strategic fit with local, sub-regional and national policy. The delivery of the scheme is integral to delivering employment led growth within Poynton which is the vision for Poynton outlined within Cheshire East's Local Plan.

Two Public Consultation exercises have been undertaken in order to provide stakeholders with an opportunity to provide feedback and influence the proposed scheme. These demonstrated the scheme has very high levels of public and business support.

The Poynton Relief Road scheme has been granted planning permission by Cheshire East Council as the local planning authority under the reference 16/4436M on the 8th of June 2017.

In conclusion, investing in the scheme will address the existing and future problems within Poynton and subsequently support future investment in the town. The Poynton Relief Road is considered to be a priority highways improvement scheme for the area.

3 The Economic Case

3.1 Introduction

The economic case presents the extent to which the Poynton relief Road (PRR) would be beneficial to the UK economy and whether it represents Value for Money (VfM). The economic case has been prepared in accordance with the DfT's WebTAG documents. WebTAG is the guidance that is used to assess transport schemes in accordance with the requirements of HM Treasury's Green Book, which is used across government for investment decisions through identification, selection and appraisal of options.

In line with HM Treasury's appraisal requirements, the impacts considered are not limited to those directly impacting on the measured economy, nor to those which can be monetised. The economic, environmental, social and distributional impacts of a proposal are all examined, using qualitative, quantitative and monetised information. In assessing Value for Money, all of these are consolidated to determine the extent to which a proposal's benefits outweigh its costs.

The economic appraisal is discussed under the following headings:

- *Methodology*
- *Assumptions*
- *Scheme Cost for Economic Assessment*
- *Assessment of Monetised Benefits*
- *Assessment of Non-Monetised Benefits*
- *Assessment of Distributional Impacts*
- *Assessment of Wider Economic Benefits*
- *Value for Money Assessment*
- *Sensitivity Test Results*
- *Conclusions*

3.2 Methodology

3.2.1 Overview

Industry standard approaches have been used to calculate and define the relative benefits of the PRR scheme through the use of DfT approved software packages, namely TUBA, COBALT and QUADRO, using the output from the SATURN traffic model and DIADEM Variable Demand Model (VDM).

The Value for Money assessment is a staged process which includes appraisal of the scheme's economic, environmental, social, distributional and fiscal impacts using qualitative, quantitative and monetised information.

It starts with the assessment of monetised costs and benefits and calculation of the Benefit Cost Ratio (BCR) of the Scheme. The next stage is to capture and analyse those impacts which cannot be monetised but can be presented as qualitative information. Finally, it looks at how the impacts of the scheme are distributed across different social groups - the Distributional Impacts assessment. The processes used for the Economic Assessment for the PRR scheme are outlined in Figure 3.1 below.

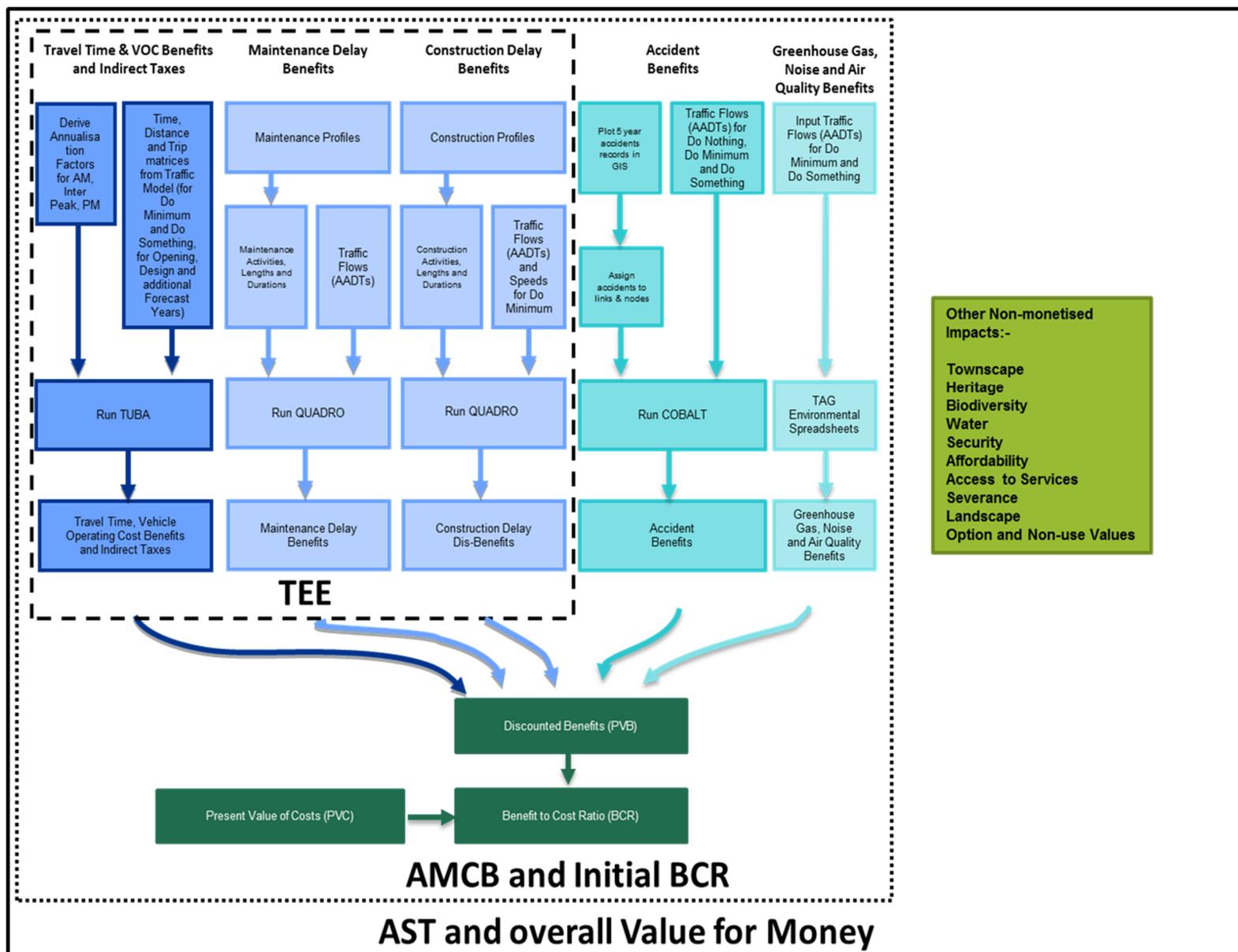


Figure 3.1: Economic Assessment Methodology

3.2.2 Assessment of Monetised Impacts and Costs

In line with DfT guidance, Value for Money assessment starts with the calculation of those impacts that can be expressed in monetary terms. These monetised impacts are derived and summed to generate a Present Value of Benefits (PVB).

The total costs are also summed to construct the Present Value of Costs (PVC).

The monetised scheme benefits and costs are used to calculate a Benefit Cost Ratio (BCR) – that is the amount of benefit being delivered for every £1 of cost. The BCR is calculated by dividing the Present Value of Benefits (PVB) by the Present Value of Cost (PVC).

The summary of the monetised information along with the BCR is presented in the standard Assessment of Monetised Costs and Benefits (AMCB).

The following monetised impacts have been included in the economic assessment and are presented in the AMCB Table:

- *TEE - Travel time benefits as a result of the scheme;*
- *Vehicle Operating Cost;*
- *Accidents;*
- *Greenhouse Gases emissions;*
- *Air Quality and Noise;*
- *Changes in Indirect Taxes;*
- *TEE - Delays during Maintenance; and*
- *TEE - Delays during Construction (N.B. This is always a dis-benefit and is therefore recorded as a negative benefit).*

3.2.3 Assessment of Non-Monetised Impacts

The second stage of the Value for Money assessment builds on the initial monetised costs and benefits and considers qualitative and quantitative information on those impacts which cannot be monetised and how these contribute to the Value for Money of the scheme.

The impacts which cannot be monetised but which have been appraised for the scheme and given an overall qualitative assessment score are listed below:

- *Regeneration Benefits;*
- *Impacts on Landscape;*
- *Impacts on Townscape;*
- *Impacts on Historic Environment;*
- *Impacts on Biodiversity;*
- *Impacts on Water Environment;*
- *Impacts on Physical Activity;*
- *Impacts on Journey Quality;*
- *Impacts on Security;*
- *Impacts on Access to services;*
- *Impacts on Affordability; and*
- *Impacts on Severance.*

The assessment of non-monetised impacts has been undertaken in accordance with the methodology recommended within the relevant WebTAG units.

The results of the assessment of non-monetised impacts have been summarised within the Appraisal Summary Table (AST).

3.2.4 Assessment Tools

In accordance with guidelines outlined in WebTAG, the following industry standard software packages have been used to conduct the economic appraisal:

- Transport User Benefit Appraisal (TUBA) - Version 1.9.11 – primarily used to derive travel time and Vehicle Operating Cost (VOC) benefits.
- Cost and Benefit to Accidents – Light Touch (COBA-LT) - Version 2013.2 - used to derive the accident benefits.
- Delays during Construction and Maintenance - Associated travel time and VOC dis-benefits as a result of Construction and Maintenance activities, have been assessed using the DfT's QUEues And Delays at ROadworks (QUADRO) software.

Table 3.1 below, indicates the methods used to assess each of the elements.

Element of Assessment	Assessment method
Travel Time Benefits	TUBA
VOC Benefits	TUBA
Indirect Tax	TUBA
Accident Benefits	COBA-LT
Maintenance Delay Benefits	QUADRO
Construction Delay Dis-benefits	QUADRO
Environmental Impacts (Air Quality, Noise, Greenhouse Gases)	WebTAG Worksheets

Table 3.1: Approach to Elements of Economic Assessment

Each of these elements informs the overall Value for Money (VfM) of the scheme.

Key Observation

Industry standard approaches have been used to calculate and define the relative benefits of the PRR scheme through the use of DfT approved software packages, namely TUBA, COBALT and QUADRO.

The economic assessment has been based on the outputs from the Poynton SATURN traffic model which has been constructed specifically for the purpose of assessing the PRR scheme.

3.3 Assumptions

3.3.1 Overview

This section summarises the key assumptions supporting the Value for Money assessment. This includes the assumptions set out in WebTAG as well as further assumptions specific to the PRR scheme.

3.3.2 Traffic Model

The impact of the proposed scheme is based on the differences between forecasts of the Do Minimum (without scheme) and Do Something (with scheme) scenarios. These forecasts have been developed within the PRR Traffic Model which consists of a SATURN Highway Model and DIADEM Variable Demand Model (VDM).

Full details of the PRR Traffic Model and the DIADEM VDM can be found in the Local Model Validation Report and the Traffic Forecasting Report.

3.3.3 Time Periods

The following time periods were modelled in the traffic model:

- *Morning (AM) weekday peak hour between 08:00 and 09:00;*
- *An average inter-peak weekday hour between 10:00-15:30; and*
- *Evening (PM) weekday peak hour between 17:00 and 18:00.*

Appropriate assumptions have been made regarding the annualisation of these benefits (i.e. converting from one-hour traffic models to produce benefits for a full year). Further details of the use of the traffic model to inform the economic assessment can be found in the scheme's Economic Assessment Report (EAR).

The weekday off-peak (19:00-07:00), weekends and Bank Holidays have not been modelled as those periods would not add significant benefits to the appraisal due to lower levels of traffic. Excluding the off-peak and weekend benefits ensures a conservative approach and is consistent with latest TAG guidance, which recommends not including benefits from non-modelled periods.

3.3.4 User Classes

As per WebTAG guidance, the traffic model splits the traffic flows into different vehicle categories and different journey purposes for each modelled year. The future year matrices consist of the following user classes:

- *User Class 1: Cars Commuting.*
- *User Class 2: Cars Business.*
- *User Class 3: Cars Other.*
- *User Class 4: Light Goods Vehicles (LGVs).*
- *User Class 5: Heavy Goods Vehicles (HGVs) and buses / coaches (also known as Public Service Vehicles (PSVs)).*

Where possible this has allowed benefits to be calculated individually for separate journey purposes as shown in TEE and AMCB tables.

3.3.5 Appraisal Period

In line with WebTAG guidance, the impacts of the scheme have been assessed over the 60-year period after the scheme opens.

After the final forecast year, the results of the model have been extrapolated to cover the whole appraisal period of 60 years, but with no further traffic growth assumed beyond the final forecast year.

3.3.6 Discounting and Units of Accounts

Costs and benefits occur in different years throughout the assessment period, e.g. the scheme development and construction costs occur before the scheme opens, whilst the benefits occur over the DfT standard appraisal period of 60 years.

In addition, it is considered that benefits that accrue now are considered to be more valuable than those that accrue further into the future. Consequently, in order to compare benefits and costs it is essential that they are all converted to a common base and a common value (known as the Present Value Year).

The process used is called discounting and the Present Value Year, as per DfT guidance, is currently 2010.

Discounting is undertaken internally within the software programmes that have been used, using the standard DfT discount rates of 3.5% per year for the first 30 years of appraisal and 3.0% per year thereafter.

The unit of account must also be consistent between costs and benefits in order to allow comparison between the two. There are two different units of accounts:

- *Market price unit of account – this refers to the prices paid by consumers for goods and services and therefore includes indirect taxation (e.g. VAT); and*
- *Factor cost unit of account – this excludes indirect taxation. Prices paid by Government bodies are usually quoted in the factor cost unit of account as any tax paid is recovered by the Government and is therefore ignored.*

While scheme benefits are calculated in market prices, scheme costs are usually quoted as factor costs.

The scheme costs must therefore be adjusted to market prices for economic assessment purposes – this is done within the economic assessment software.

3.3.7 Inflation

Costs can also be in different price bases. In order to enable comparisons to be made between such costs and to take account of the effect of inflation all monetary values in the calculation of costs and benefits are adjusted so that they are all in a common price base of 2010.

Key Observation

The impact of the proposed PRR scheme is based on the differences between forecasts of the Do Minimum (without scheme) and Do Something (with scheme) scenarios. These forecasts have been developed within the PRR Traffic Model which consists of a SATURN Highway Model and DIADEM Variable Demand Model (VDM).

3.4 Scheme Cost for Economic Assessment

Along with the estimation of benefits, the costs are also required for the economic assessment of the scheme.

Costs can be defined as the total amount of money spent on constructing and maintaining the scheme. The costs are therefore referred to as Scheme costs and Maintenance costs:

- *Scheme costs are construction costs, land costs, preparation costs (planning and designing the scheme) and supervision costs during the scheme construction.*
- *Maintenance costs are the cost of people, machinery and materials required to maintain the highway network. These costs are also known as the Capital Costs of Maintenance.*

Base costs for construction, land / property, preparation / administration and supervision, including adjustment for risk are based on the scheme design.

When the scheme is in place, the Relief Road will require additional maintenance that would not occur if the scheme was not built. Typical road maintenance profiles with the scheme in place were assumed. The cost of these maintenance activities were then derived based on Part 2, Chapter 4 of the QUADRO manual.

Prior to using the base scheme costs in the Economic Assessment, as per DfT guidance TAG (Unit A1-2), the base costs have to be adjusted to account for measured risks and optimism bias.

A quantified risk assessment (QRA) was completed collectively by Cheshire East Council and Jacobs. The QRA includes all types of risk which could affect the cost of the scheme such as planning delay, political decisions, land acquisition issues and legislative delays. For each risk, the QRA includes an estimate of the likelihood of the risk occurring and the associated financial impact.

Based on the QRA, a risk allowance has been included within the scheme costs.

An allowance for inflation was made by inflating the scheme costs to the relevant year of expenditure using the BCIS General Civil Engineering Cost Index for construction-related costs.

In accordance with DfT guidance an optimism bias uplift factor of has been applied to the scheme costs for the purposes of the economic assessments that follow. This is in line with a highways scheme at the Outline Business Case stage.

In line with TAG requirements, any 'sunk' costs that have already been spent have been excluded from the costs used in economic assessment.

The undiscounted outturn scheme costs with both risk and 15% optimism bias are presented in Table 3.2 below. These scheme cost estimates were prepared in 2015 prices and then inflated to outturn costs (i.e. expected costs in the actual years of expenditure).

Cost Element	Cost £m
Construction	£32.6m
Land	£19.3m
Preparation	£5.1m
Supervision	£0.6m
Total	£57.6m

Table 3.2: Undiscounted Outturn Scheme Costs by Cost Element

3.4.1 Maintenance Costs

Details of the likely maintenance costs with and without the scheme in place are provided within the Financial Case.

The capital cost of maintenance is the cost of people, machinery and materials to maintain the new highway network.

With the scheme in place, the Relief Road will require additional maintenance that would not occur if the scheme was not built.

Typical road maintenance profiles with the scheme in place were used. The cost of these maintenance activities were then derived based on Part 2, Chapter 4 of the QUADRO manual.

3.4.2 Present Value of Costs (PVC)

The costs used in scheme appraisal differ from the outturn costs used for funding decisions, as reported in the Financial Case. Costs for scheme appraisal are adjusted to the DfT standard present value year (2010) to allow direct comparison with the monetised benefits and are in calendar years.

The outturn scheme costs were entered into TUBA to be estimated over the 60 year appraisal period, converted to 2010 prices, discounted to 2010, and converted to the market price unit of account. A summary of the Present Value of Costs (PVC) output by TUBA is provided in Table 3.3.

Category	Discounted Costs (£m)
Scheme Costs	£45.64
Costs of Maintenance	£1.31
Developer Contributions	-£5.46
Total PVC	£38.88

Table 3.3: Present Value of Costs

Key Observation

Based on the QRA, a risk allowance has been included within the scheme costs.

In accordance with DfT guidance, an optimism bias uplift factor of 15% has been applied to the scheme costs for the purposes of the economic assessments.

The undiscounted outturn scheme costs with both risk and 15% optimism bias applied is £57.6m

It is estimated that an additional £1.3m will be required for maintenance of the new road, over the 60 year appraisal period.

The outturn scheme costs were entered into TUBA to be estimated over the 60 year appraisal period, converted to 2010 prices, discounted to 2010, and converted to the market price unit of account, this equate to a PVC of £39m.

3.5 Assessment of Monetised Benefits

3.5.1 Introduction

As shown in Figure 3.1 several elements of a scheme's overall benefits can be monetised. This section of the report describes and summarises each element of the monetised benefits which inform the Benefit to Cost Ratio. Further details of the monetised economic assessment are provided in the scheme's Economic Assessment Report.

3.5.2 TEE Benefits as a Result of the Scheme

The Transport Economic Efficiency (TEE) benefits consist of four key components, set out below and as summarised in Figure 3.1:

- *Travel time savings and Vehicle Operating Costs (VOC) benefits as a result of the scheme;*
- *Impacts on private sector providers and other business impacts;*
- *Travel time and Vehicle Operating Costs (VOC) dis-benefits as a result of construction activities and*
- *Travel time and Vehicle Operating Costs (VOC) benefits as a result of maintenance activities.*

TEE Travel time savings and VOC benefits as a result of the scheme are calculated with the use of TUBA software and normally constitute the largest proportion of the scheme benefits.

TUBA takes trip, time and distance matrices from the traffic forecast model for each future year, vehicle type and journey purpose (i.e. each User Class) and each time period and calculates travel time saving benefits. It does this by comparing the travel times in the Do-Minimum (without the PRR scheme) scenario with those in the Do-Something (with PRR scheme) scenario. It then applies monetary values (known as Values of Time) to derive the monetary benefits of those time savings over the standard 60 year appraisal period.

TUBA also calculates Vehicle Operating Cost (VOC) changes which occur over the standard 60 year appraisal period due to changes in costs associated with such items as fuel, maintenance, and wear and tear. These occur due to changes in speed and distance when the scheme is implemented and can include both positive and negative values depending upon the scheme's impact upon traffic flows and routing.

The diagram in Figure 3.2 below shows the process for the derivation of the TUBA benefits.

Full details of TUBA assessment undertaken for the PRR scheme can be found in the Economic Assessment Report.

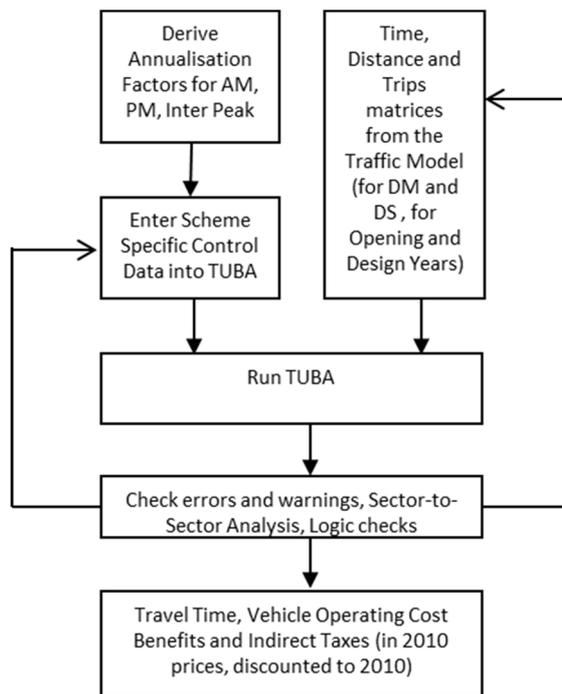


Figure 3.2: TUBA assessment

The results of the TUBA assessment show that the PRR will deliver significant benefits from journey time savings, amounting to £141.6m over the 60 year appraisal period.

Assessment of the TUBA benefits show that, 25% of the benefits are associated with Business trips, 38% from Commuting and 37% from other.

3.5.3 Changes in Indirect Tax

Indirect taxes relate to the taxation levied on goods and services and therefore include excises, duties and VAT. TUBA calculates the changes in Indirect Taxes as a result of changes in speed and distance. These changes affect the amount of fuel being used and therefore affect the amount of taxes the Government receives.

According to TAG guidance, changes in indirect tax revenues are included as part of the Present Value of Benefits (PVB). The change in Indirect Taxes (as a monetary value in 2010 prices discounted to 2010) is therefore included within the AMCB and PA tables and forms part of the BCR.

The results output from TUBA for the entire study area predict a decrease in indirect tax revenues of £18.5m. This is added to the benefits, as shown in the AMCB Table.

3.5.4 Accident Benefits

The PRR scheme is expected to transfer traffic from local roads through Poynton to a modern high quality single carriageway road, thus providing significant accident savings.

In accordance with WebTAG, the DfT's COBALT software was used to derive accident benefits of the scheme. COBALT compares the predicted numbers of accidents with and without the scheme, and converts them into monetary values by multiplying the numbers of accidents in each scenario by their monetised costs.

The diagram in Figure 3.3 shows schematically the methodology for COBALT assessment.

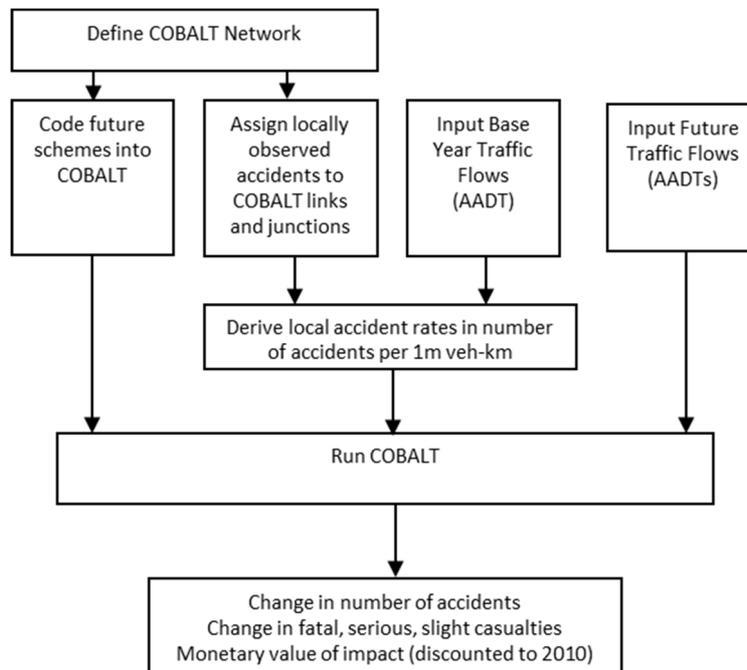


Figure 3.3: COBALT Assessment Methodology

The COBALT output shows accident benefits. It has been assumed that the COBALT benefits calculated are equally applicable to both options as they are similar to each other.

With the scheme in place less traffic travels through Poynton as the proposed Relief Road (new road designed to modern standards) is being used as an alternative and this should result in a reduction in accidents and therefore an accident benefit. However, the introduction of the scheme results in an increase in traffic on other roads, which can increase and decrease flows on existing roads away from the scheme, which could in turn result in an increased or decreased number of accidents away from the scheme. In summary, there is therefore a mixture of increases and decreases in accidents.

The accident results for the wider study area show that there would be an overall decrease in accidents. Table 3.4 below shows the decrease in the predicted number of accidents and casualties over the 60 year appraisal period for the wider study area.

The monetary value of this overall benefit would be £-0.4m (PVB, 2010 prices, discounted to 2010).

Table 3.4: - Summary of Accident Benefits

Reduction in Number of Accidents	72
Total Casualties Saved by Scheme:	
Fatal	-3
Serious	1
Slight	74

Overall, the safety case for the scheme is positive and many links on the existing network are assessed to experience a decrease in accidents as a result of the scheme. There will be some negative impacts which relate to the creation of new high volume junctions at either end of the PRR, especially the A6MARR junction at the northern end of the scheme.

To some degree there will always be a need to trade off enhanced connectivity to the Major Routes Network with the safety risks of making these connections. It is the interactions between these new links and roads of different characteristics, compared to the base case, that is expressed by the COBALT software in its assessment of safety benefits. Based on probabilities and accident rates, where high speed / high volume roads interact there will be an enhanced risk of more serious / even fatal accidents.

However, COBALT takes only limited account of the detailed design and safety characteristics of the proposed PRR. It is reasonable to expect that an awareness of this enhanced safety concern will be considered further during detailed design and safety audits.

Despite this assessment result showing a higher number of fatal accidents, the proposed scheme delivers an overall improvement in road safety across the network.

3.5.5 Environmental – Greenhouse Gases

Changes in traffic flows caused by the introduction of the scheme will result in changes in greenhouse gas emissions from vehicles due to changes in flows, speeds and distance travelled.

The standard Greenhouse Gases Spreadsheet from TAG Unit A3 has been used to calculate the changes in carbon dioxide emissions (tonnes) caused by the scheme, over the duration of the appraisal period.

The results show that the monetary value of the change in carbon dioxide emissions over the 60 year appraisal period is a dis-benefit of £-2.0m (PVB, 2010 prices, discounted to 2010).

3.5.6 Environmental – Noise

Changes in traffic flows can also result in changes in noise, depending on whether properties are located adjacent to affected roads or not. The standard Noise

Worksheet from WebTAG Unit A3 has been used to calculate the change in noise levels during the life of the scheme, the change in number of people 'annoyed' and the monetary value of those changes (PVB).

The results output from the Noise assessment show that there is predicted to be a dis-benefit from increased noise levels, equating to £-1.7m over the 60 year appraisal period.

3.5.7 Environmental – Air Quality

The likely effects on air quality once the scheme is in place relate predominantly to the changes in traffic emissions for vehicles travelling along affected roads in the study area. The standard Air Quality Worksheet from WebTAG Unit A3 has been used to calculate the impact of the scheme on local air quality, regional air quality and the economic valuation of air pollution over the 60 year appraisal period.

In terms of local air quality there will be an increase in PM₁₀ and NO₂ concentrations as a result of the scheme resulting in a monetary dis-benefit of £-1.7m.

Key Observation

The results of the TUBA assessment show that the PRR will deliver significant benefits of £141.6m from journey time savings, over the 60 year appraisal period.

The maintenance of the PRR scheme will create a delay benefit of £0.9m (2010 prices, discounted to 2010) over the 60 year scheme appraisal.

The monetary value of the overall change in accidents over the 60 year appraisal period would be a benefit of £-0.4m (2010 prices, discounted to 2010).

The monetary value of the increase in carbon dioxide emissions over the 60 year appraisal period is a dis-benefit of £-2.02m (2010 prices, discounted to 2010).

The Noise assessment shows that there is predicted to be a dis-benefit from changes in noise levels, equating to £-1.7m over the 60 year appraisal period.

The total value of the change in Air Quality as a result of the PRR scheme is an overall dis-benefit of £-0.15m.

3.6 Assessment of Wider Economic Benefits

3.6.1 Introduction

In line with WebTAG, the monetised impacts included in the calculation of the scheme BCR do not include the effect of the wider economic impacts of the scheme, as measured by an assessment of the gross value added (GVA) growth unlocked by the scheme.

However, given the nature and objectives of the PRR it was considered important that the economic assessment would to some extent capture the GVA impacts to demonstrate that the strategic objectives will be met.

3.6.2 Gross Value Added (GVA) Benefits

GVA measures the total value of goods and services; i.e. economic activity. In its simplest terms, it is therefore Gross Domestic Product (GDP) at a local/regional level.

Transport acts as an enabler of growth by allowing additional jobs to be accommodated in a certain location thanks to enhanced transport links and transport capacity. This applies especially to areas suffering from congestion and insufficient transport links. These jobs are therefore not created by the transport scheme itself, but are supported by the increase in accessibility facilitated by the scheme. The jobs are therefore (to varying proportions) dependent on the transport scheme. This GVA assessment aims to quantify the increase in GVA for the local economy as a result of these additional jobs.

The GVA analysis seeks to complement the standard economic appraisal and provide an indication of the total GVA that could be realised if a transport scheme is implemented.

Unlike standard transport appraisals, there is not a single methodology that has been incrementally improved over the years for estimating the impacts of a scheme on GVA, employment, or similar measures of the performance of the real economy. In contrast, methodologies vary considerably across studies.

For the Poynton Relief Road scheme, a methodology has been used that is based on empirical evidence, research and a consistent theoretical framework. This methodology has been utilised previously to assess similar transport schemes across the country, and is considered suitable for the assessment being undertaken.

Based on the above, there is a forecast increase in GVA to the local economy of £116.5m over the 60 year period, and which can be directly related to the impacts of the transport scheme. This is a 'net' GVA figure, and incorporates the impacts of the potential redistribution of jobs from other areas. This equates to a benefit of around £1.94m per year in a DfT price base of 2010 (based on the total number of jobs in 2077).

Key Observation

A Gross Value Added (GVA) assessment has also been undertaken based on the number of jobs likely to be created as a result of the PRR scheme. Through supporting the creation of additional jobs, it is estimated that over the course of the 60 year appraisal period, the PRR scheme could add an additional net £116.5m to the local economy.

3.7 Value for Money Assessment

3.7.1 Appraisal Summary Table (AST)

The AST presents evidence from the assessment that is undertaken to inform the Economic Case of an intervention. Applying the principles of HM Treasury Green Book, the AST has been designed to record all impacts - Economic, Environmental, Social, Public Accounts and Distributional - at the national level.

The AST for PRR scheme, which summarises the information contained within the Economic Case, is included in the Economic Assessment Report.

3.7.2 Value for Money Statement

The Value for Money assessment of the proposed Poynton Relief Road scheme has been undertaken in line with WebTAG, in order to support the Outline Business Case of the scheme.

As part of this assessment the economic, environmental, social, distributional and fiscal impacts of the proposed scheme have been appraised using qualitative, quantitative and monetised information.

A summary of the overall monetised costs and benefits as prepared for the economic case is provided in Table 3.5. Full details of the economic assessment results are contained within the Economic Assessment Report.

The Net Present Value (NPV) has been calculated, which shows the extent to which the benefits of the scheme outweigh the costs. In addition, a Benefit to Cost Ratio (BCR) has been calculated. The BCR represents the level of benefits generated by the scheme for every £1 of cost and is simply calculated by dividing the PVB by the PVC.

	Costs / Benefits (£m)
Travel Time and Vehicle Operating Costs	£122.54
Delays During Construction	-£1.78
Delays During Maintenance	£2.66
Indirect Tax Revenues	£18.48
Accidents	-£0.40
Greenhouse Gases	-£2.02
Air Quality	-£0.15
Noise	-£1.71
Developer Contributions	-£5.46
TOTAL Benefits (PVB)	£132.16
TOTAL Costs (PVC)	£38.88
NPV	£93.7
Benefit Cost Ratio (BCR)	3.40
Wider Impacts (Benefits not included in BCR)	£0.84
Adjusted Benefit Cost Ratio (BCR)	3.42

Table 3.5: Monetised Assessment Summary (2010 prices, discounted to 2010)

Table 3.5 indicates that the PVB of the scheme exceeds the PVC to provide a Net Present Value (NPV) of £93m. The BCR of the scheme is **3.4**.

Based on the DfT guidance on Value for Money categorisation (provided in Table 3.6), based on the BCR alone, the proposed PRR scheme represents High Value for Money.

Value for Money Category	BCR Range
Poor VfM	Less than 1.0
Low VfM	Between 1.0 and 1.5
Medium VfM	Between 1.5 and 2
High VfM	Between 2.0 and 4.0
Very High VfM	Greater than 4.0

Table 3.6: DfT's Value for Money Benefit Cost Ratio Categorisation

As detailed in section 3.5.2, the majority of the benefits generated by the scheme are associated with travel time savings for business and non-business road users, with some further contributions from Vehicle Operating Costs.

The Present Value of Benefits would need to reduce by more than 36% in order for the BCR categorisation to change from High Value for Money to Medium Value for Money and reduce by 52% to change to Low Value for Money.

The Present Value of Costs would need to increase by more than 55% in order for the BCR categorisation to change from High Value for Money to Medium Value for Money and increase by 107% to change to Low Value for Money.

Taking into account both the monetised BCR and the non-monetised assessments, it is considered that the Poynton Relief Road scheme would still represent High Value for Money.

Key Observation

The PVB of the PRR scheme exceeds the PVC to provide a Net Present Value (NPV) of £93.7m. The BCR of the scheme is 3.4.

Based on the BCR alone, the proposed PRR scheme represents High Value for Money.

Taking into account both the monetised BCR and the non-monetised assessments, it is considered that the Poynton Relief Road scheme would still represent High Value for Money.

3.8 Conclusions

The Economic Case has presented a comprehensive assessment as to the economic impacts of the proposed PRR scheme.

The results of the economic assessment show that the PRR scheme is forecast to generate a BCR of 3.4. The PRR scheme therefore represents **High** Value for Money based on DfT guidance.

A Gross Value Added (GVA) assessment has also been undertaken based on the number of jobs likely to be created by the PRR scheme. These developments would provide a net GVA benefit to the local economy of £1.94m per year. Through supporting the creation of these additional jobs, it is estimated that over the course of the 60 year appraisal period, the PRR scheme could add an additional net £116.5m to the local economy.

As GVA analysis is not a mandatory requirement within WebTAG transport scheme appraisal, the GVA benefits have not been included in the calculation of the BCR and Value for Money of the scheme. However, they do support the strategic and economic case for the scheme.

Economic Case Summary

The economic assessment of the monetised costs and benefits of a scheme forms a key element in the overall Value for Money assessment as prescribed within WebTAG appraisal guidance. It aims to quantify in monetary terms, over a 60 year appraisal period, as many of the costs and benefits of a proposal as is feasible.

The estimation of scheme costs is a crucial part of the scheme appraisal. Economic assessment considers both the actual cost of the scheme, together with any changes in the capital cost of maintenance in future years.

An industry standard approach has been used to define and calculate the costs and benefits of the scheme, through the use of DfT approved software packages, namely TUBA, COBALT and QUADRO.

The economic assessment of the PRR scheme includes the analysis of travel time and vehicle operating cost benefits, changes in tax revenues, safety benefits and environmental benefits (air quality, noise and greenhouse gases).

The results of the economic assessment show that the PRR scheme is forecast to generate a BCR of 3.4.

4 The Financial Case

4.1 Introduction

The Financial Case concentrates on the affordability of the proposal, its funding arrangements and technical accounting issues (value for money is scrutinised in the Economic Case). The Financial Case is discussed under the following headings:

- *Methodology*
- *Assumptions*
- *Base Costs*
- *Maintenance Costs*
- *Quantified Risk Assessment (QRA)*
- *Optimism Bias*
- *Scheme Costs Adjusted for Risk and Optimism Bias*
- *Preferred Funding Arrangements*
- *Alternative Funding Arrangements*
- *Conclusion*

4.2 Methodology

The scheme cost estimate has been derived for the Preferred Option.

The cost estimate is based on the following:

- *Bill of quantities prepared using a well-developed highways design and structures general arrangement drawings, all informed by a ground investigation;*
- *The outline highways alignment design was completed in Bentley MX, in accordance with the Highway Agency's Design Manual for Roads and Bridges (DMRB). Bulk earthwork quantities were calculated and used in the cost estimate.*
- *C3 Estimates received from statutory authorities;*
- *Land and compensation costs including compensation payable under Part 1 of the Land Compensation Act 1973.*
- *Quantified Risk Assessment.*

4.3 Assumptions

Key assumptions in the calculation of base costs are shown below:

- *An allowance has been included for Tender Inflation and Construction Inflation based on the scheme programme. The level of inflation has been calculated based on the Building Cost Information Service (BCIS) General Civil Engineering Cost Index. The estimate has been inflated from November 2015 to midway through the construction programme.*
- *The number of properties eligible for Part 1 Claims have been calculated using the existing number of properties which lie within the immediate vicinity of the proposed relief road the criteria, plus those which are yet to be built but have planning approvals granted and pending.*

4.4 Base Costs

The base costs, which do not include risk, optimism bias or real cost increases due to inflation are shown in Table 4.1 below. They are based on Q4 2015 prices. The base costs are split in to the following categories:

- Construction
- Land, Property and Compensation
- Supervision Costs
- Preparation Costs

Investment Cost Component	Calendar Year	Base Cost (Q4 2015)
Construction and Preliminaries	2018 - 2019	£26,548,290
Land and Property (incl. Injurious Affection)	2017 – 2018	£16,788,999
Preparation Costs	2014 – 2017	£5,008,476
Supervision Costs	2018 - 2019	£500,000
Base Cost Sub Total		£48,845,765

Table 4.1 - Base Costs – 2015 Prices

4.5 Adjusting for Risk - Quantified Risk Assessment (QRA)

A Quantified Risk Assessment (QRA) has been undertaken in order to determine the amount of risk to be applied to the base costs. It includes all types of risk which could affect the cost of the scheme such as planning delay, political decisions, land acquisition issues, legislative delays etc. The QRA is based on industry knowledge and experience from other, similar schemes which have been constructed.

Risk is an agenda item at both Progress Meetings and Project Board Meetings, both of which are held monthly. At each of these meetings the 'Top 5' risks are discussed and if necessary the QRA is updated.

A Risk Workshop was held at the start of the Preliminary Design Stage, and further workshops have been held at the discretion of the Project Manager.

The (current) 'Top 5' risks on the project are presented in Table 4.2 below:

Key Risk Components	Likelihood	Impact on Cost	Mitigation Measures						
The CPO and Part 1 Claims compensation exceeding estimate outlined in the valuation report	75%	£1.21m	Incorporate appropriate mitigation for noise and air quality. Engagement with landowners.						
Requirement to undertake Variable Demand Modelling (VDM)	75%	£0.06m	Ongoing discussions with DfT. Note prepared which explains justification as to why VDM is not required.						
Statutory Undertaker (SU) diversion cost increases between C3 and C4 stage	50%	£0.43m	Monitor costs between C3 and C4 stage, and challenge where possible. Specialist company Gattica assisting with SU diversions.						
Potential for Chester Road Structure to include raking piles or larger secant piles	50%	£0.50m	Contractor to undertake his own detailed GI around Chester Road.						
Excessive surplus material resulting from unbalanced cut/fill	50%	£0.46m	Design optimised to balance cut/fill as much as possible through detailed design. Adjacent developer keen to receive surplus topsoil.						
Likelihood / Impact on Cost									
<table border="0"> <tr> <td style="width: 15px; height: 10px; background-color: red;"></td> <td>High</td> </tr> <tr> <td style="width: 15px; height: 10px; background-color: yellow;"></td> <td>Medium</td> </tr> <tr> <td style="width: 15px; height: 10px; background-color: lightgreen;"></td> <td>Low</td> </tr> </table>					High		Medium		Low
	High								
	Medium								
	Low								

Table 4.2 Quantified Risk Assessment – Top 5 Risks

Table 4.3 shows the £1.8m quantified risk contribution from the QRA of the scheme investment costs and how it should be added to the base cost to produce a risk-adjusted cost estimate of £50.6m.

Investment Cost Component	Cost Excluding Real Cost Increases
Construction and Preliminaries	£26,548,290
Land and Property (incl. Injurious Affection)	£16,788,999
Preparation Costs	£5,008,476
Supervision Costs	£500,000
Sub Total	£48,845,765
Quantified Risk Contribution using QRA (Assume no real cost increase on QRA)	£1,800,000
Risk Adjusted Cost Using QRA	£50,645,765

Table 4.3 Risk Adjusted Base Cost (Q4 2015 Prices)

4.6 Optimism Bias

The next stage is to calculate Optimism Bias which will be applied at a rate of 15% in the economic appraisal calculations for the Preferred Option. This reflects the level of detail and certainty behind the scheme design and cost estimates for the Preferred Option. It is also consistent with TAG Unit A1.2 for a Local Authority highways scheme seeking Conditional Approval, as shown in Table 4.4 below.

Table 8 Recommended optimism bias uplifts for different projects at different stages of the life of a transport project				
Category	Types of projects	Stage 1	Stage 2	Stage 3
Roads	Motorway, Trunk roads, Local roads, Bicycle facilities, Pedestrian facilities, Park and ride, Bus lane schemes, Guided buses on wheels	44%*	15%	3%*
Rail	Metro, Light rail, Guided buses on tracks, Conventional rail, High speed rail	66%*	40%	6%*
Fixed links	Bridges and Tunnels	66%*	23%	6%*
Building projects	Stations and Terminal buildings	51%*	-	4%*
IT projects	IT system development	200%*	-	10%*

Table 4.4 Recommended Optimism Bias Uplifts (Source WebTAG A1.2)

Table 4.5 shows that Optimism Bias increases the cost estimate by £7m to £57.6m. These costs will be used in the TUBA assessment of the scheme.

Investment Cost Component	Cost
Construction and Preliminaries	£26,548,290
Land and Property (incl. Injurious Affection)	£16,788,999
Preparation Costs	£5,008,476
Supervision Costs	£500,000
Sub Total	£48,845,765
Quantified Risk Contribution using QRA (Assume no real cost increase on QRA)	£1,800,000
Risk Adjusted Cost Using QRA	£50,645,765
Contribution of Optimism Bias (15%)	£6,955,243
Risk and Optimism Bias Adjusted Cost	£57,601,008

Table 4.5 Optimism Bias & Risk Adjusted Base Cost (Q4 2015 Prices)

4.7 Rebasing to DfT Base Year (2010)

The above costs have been presented in real prices but in a 2015 price base year. For economic and other appraisal purposes the costs should be presented in the DfT's base year. The costs can be deflated to the correct price base by multiplying them by the ratio of the inflation index in the desired base year to the inflation index in the year currently being used. Assuming a Departmental base year of 2010 (and an index value of 100 for that year) and an inflation index of 108.913 for 2015 (GDP Deflators from December 2015 TAG Databook), the costs for each component should be multiplied by $100/108.913 = 0.918$ to convert from 2015 to 2010 prices.

Table 4.7 shows the full scheme costs including Optimism Bias in 2010 prices (undiscounted).

Investment Cost Component	Cost (Rebase to 2010) (Undiscounted)
Construction and Preliminaries	£24,371,330
Land and Property (incl. Injurious Affection)	£15,412,301
Preparation Costs	£4,597,781
Supervision Costs	£459,000
Sub Total	£44,840,412
Quantified Risk Contribution using QRA (Assume no real cost increase on QRA)	£1,652,400
Risk Adjusted Cost Using QRA	£46,492,812
Contribution of Optimism Bias (15%)	£6,384,913
Risk and Optimism Bias Adjusted Cost	£52,877,725

Table 4.6 Scheme Costs in DfT Base Year Values (2010 Prices)

4.8 Conclusion

The scheme cost is estimated to be £57.6m including risk adjustments and optimism bias based on Q4 2015 prices.

5 The Commercial Case

5.1 Introduction

The Commercial Case provides evidence on the commercial viability of a proposal and the procurement strategy that will be used to engage the market. It presents evidence on risk allocation and transfer, contract timescales and implementation timescale as well as details of who will be responsible for managing the contract.

The Commercial Case is discussed under the following headings:

- *Procurement Workshops*
- *Procurement Options*
- *Securing the Services of a Contractor*
- *Cabinet Approval of chosen Procurement Strategy*
- *Payment Mechanisms*
- *Contract Length*
- *Contract Management*
- *Risk Allocation and Transfer*
- *Procurement Programme*
- *Conclusion*

5.2 Procurement Workshops

5.2.1 18th May 2015 Workshop

In order to assist with determining an optimum 'Procurement Method' a Procurement Workshop was held on 18th May 2015 at the Cheshire East Council Offices in Sandbach, Cheshire. The workshop was attended by the following individuals:

- *Paul Griffiths (Cheshire East - Congleton Link Road Project Sponsor)*
- *David Skeet (Cheshire East – Poynton Relief Road Project Sponsor)*
- *Steve Mellor (Cheshire East - Procurement)*
- *Jane McLaughlin (Cheshire East - Legal)*
- *Helen Ashley (Cheshire East – Programme Manager)*
- *Matthew Clark (Jacobs – Procurement Manager)*
- *Peter Kirk (Jacobs – Project Director)*
- *Adam Godbold (Jacobs – Poynton Relief Road Project Manager)*
- *Martin Davis (Jacobs – Congleton Link Road Project Manager)*

The workshop was convened in order to examine the potential procurement options on the two major highway schemes currently being promoted by Cheshire East Council; Poynton Relief Road and Congleton Link Road.

The aims and the objectives of the workshop were as follows:

- *Assess the pros and cons, opportunities and risks associated with each of the potential procurement options.*
- *Analyse the programmes associated with each of the procurement options and whether they can be achieved given the milestone dates on each of the projects.*
- *Assess the ways in which the services of a contractor could be secured – i.e. via a framework or the open market.*

The outcome of this Procurement Workshop, specifically in relation to Poynton Relief Road, can be found in the Jacobs report titled 'B1832054-OD-17 - Procurement Workshop Summary (Final)'.

This Procurement Workshop Summary Report was subsequently used as the basis for Cheshire East Cabinet endorsing a procurement strategy.

5.2.2 Subsequent Procurement Workshop

The key aims of this workshop were to confirm whether the conclusions and recommendations from the previous workshop were still valid, and still achieved the clients core procurement objectives of cost certainty, commercial tension and value for money.

This workshop brought together key Jacobs individuals with a wealth of highways major project procurement expertise. The workshop attendees, along with their roles, are defined below:

- *Adam Godbold – Poynton Relief Road Project Manager*
- *Matt Clark – Commercial Manager*
- *John Dixon – Head of Highways*
- *John Farrell – Project Director (Manager of Projects)*
- *Ian Webster – Commercial Director of Operations*

There was a general agreement between workshop attendees, that the procurement method recommended at the initial workshop (Design and Build Lump Sum (i.e. NEC ECC Option A)), and subsequently endorsed by Cheshire East Cabinet, was still valid.

This workshop also investigated and recommended ways in which to enhance the key procurement 'drivers' of cost certainty and overall value for money.

Key Observation

In order to assist with determining the optimum procurement method, two procurement workshops have been undertaken.

5.3 Procurement Options

Discussion in the Procurement Workshop held on 18th May 2015 focussed on the following three procurement options, as reported in the workshop report titled 'B1832054-OD-17 - Procurement Workshop Summary (Final)'.

- *Design and Build (D&B), both during statutory process or after Secretary of State decision.*
- *Early Contractor Involvement (ECI)*
- *Construction Only Contract – i.e. NEC3 Engineering and Construction Contract (ECC) Option A*

It was concluded that a Design and Build Lump Sum (NEC ECC Option A) contract, during the statutory process, would be the preferred procurement option for the tender process. It also recommended that Cheshire East Council seek Cabinet and Legal approval to commence procurement during the statutory process.

5.3.1 Design and Build during the Statutory Process

This Option (with invitation to tender shortly after Public Inquiry) would allow a competitive tender price to be included in the funding application submitted to the DfT and enable the start of the construction phase at the earliest opportunity.

The Design and Build Lump Sum tender would also provide some cost certainty and is considered to provide CEC with best value for money. Design and Build contracts offer early Price Certainty and optimum risk transfer to the contractor.

Concern was expressed that undertaking this before the Secretary of State (SoS) decision could be seen as prejudging the outcome of the Public Inquiry. Feedback from experience within Jacobs noted that inviting tenders before the Secretary of State's decision was not unprecedented with award of contract being after SoS decision. Additionally, the Inspector is independent and will need to conclude that there is a compelling case for the scheme and that the public benefit outweighs the private loss.

The Inspector's recommendation will be made independently of the procurement process. However, the following risks were identified.

- *The statutory process delays or significantly amends the scheme thus requiring negotiation and/or significant change to the contract (or delay to the originally foreseen programme).*
- *Potential lack of interest/commercially acceptable price due to contractors not being confident in the scheme going ahead.*
- *Provides any objectors with ammunition to claim that the outcome of the statutory process was being prejudged, and increases the risk of procedural challenge/judicial review.*

Following this review, it was recommended that:

- *Cheshire East Council would need to obtain Cabinet and Legal approval regarding Invitation to Tender during the Statutory Process and issuing the Selection Questionnaire (SQ) in advance of Public Inquiry as this could be seen as prejudicing the Secretary of States' decision on the scheme.*
- *The Tender invitation documents should clearly state that the award of a contract will be subject to a successful Secretary of State Decision, and approval of funding.*

The benefits of the Design and Build during statutory process procurement strategy option was considered to outweigh the risks, and subsequently this option was taken to Cheshire East Cabinet as the selected procurement strategy.

5.3.2 Design and Build after Secretary of State Decision

Procurement using Design and Build with the tender process starting after the Secretary of State's decision is not preferred due to a delay of at least nine months to a year in starting work on site, and the resultant increase in construction inflation costs.

5.3.3 Early Contractor Involvement (ECI)

The use of an ECI procurement route using an NEC3 Option A, Lump Sum or Option C Target Cost Contract negotiated after the Public Inquiry was also rejected. ECI would provide some price and programme certainty, as the design and construction programme is better developed and there is opportunity to reduce risk prior to starting on site. However, experience suggests the following.

- *Scheme development costs (phase 1 of ECI) are higher when procured through ECI than when procured directly from the designers. This is primarily due to Contractors adding their overhead and profit onto the designer's costs which they procure through a subcontract.*
- *In construction (phase 2 of ECI) the Target Cost is derived through negotiation and Contractors predominantly seeking to include a high level of risk within the target which in a competitive D&B they would have to include within the tender price.*
- *The price of the ECI option, being a negotiated price, is likely to be higher than the Design and Build option.*

5.3.4 Construction Only Contract

With this route, all tender documentation is required to be ready and published at the same time as the OJEU contract notice. The restricted procedure requires tenderers to prequalify by submitting a Selection Questionnaire (SQ) which limits the number of tenderers submitting a final price.

This process is more favourable with bidders as they only have to complete the tender documentation in stages and are not required to complete the tender documentation if they are not short-listed and therefore less resource hungry for them.

A construction contract (NEC3 ECC Option A) was rejected because of the increased programme. Although Tenderers would be pricing a fully developed design, providing certainty of price, the design of the scheme would not be complete until after the statutory process resulting in a delay to the project construction start date as the tender process could not begin until after the Secretary of State's decision.

Additionally, with the detailed design work being carried out in advance of the SoS decision, there is the risk of this work being abortive with costs being borne by the Council. Additionally, the opportunity for the Tenderers to offer alternatives and reduce overall cost/programme is minimal.

Key Observation

A Design and Build Lump Sum (NEC ECC Option A) contract, during the statutory process is the preferred procurement option for the tender process.

5.4 Securing the Services of a Contractor

Discussion in the Procurement Workshop held on 18th May 2015 focussed on the following three options for securing the services of a Contractor, as reported in the workshop report titled 'B1832054-OD-17 - Procurement Workshop Summary (Final)'.

- *OJEU Notice – Restricted Procedure*
- *OJEU Notice – Open Procedure*

- *Framework (Highway England's Collaborative Delivery Framework (CDF) or the Midlands Alliance Framework)*

5.4.1 OJEU Notice - Restricted Procedure

The restricted procedure requires tenderers to prequalify by completing a Selection Questionnaire (SQ) which limits the number of tenders submitting a price. It was concluded that this was the most appropriate method. The SQ would enable an appropriate tender list to be drawn up, of tenderers interested in the work, and who Cheshire East were likely to want to appoint.

5.4.2 OJEU Notice - Open Procedure

An open OJEU procedure is open to all contractors and this option was dismissed because of the potentially large number of tenderers to be assessed and the time to do so.

5.4.3 Framework – Collaborative Delivery Framework (CDF)

It was agreed that a potential framework which could be used was Highways England's Collaborative Design Framework (CDF). Poynton Relief Road, with a construction estimate of approximately £23m would fall into the CDF Lot 2 medium value construction work category ("schemes up to £25m, may be extended to £50m"). The following Contractors are on the framework:

- *EM Highway Services Limited*
- *Geoffrey Osborne Limited*
- *Interserve Construction Ltd*
- *John Graham Construction Ltd*
- *Volker Fitzpatrick Ltd*

The decision to favour the OJEU route over the CDF framework route was primarily down to the following:

- *Progression down the CDF framework route, results in Cheshire East Council being restricted to the contractors who are on the framework.*
- *The contractors on the framework have no previous working relationship with Cheshire East Council and were not regionally recognisable.*

5.4.4 Framework – Midlands Alliance

The Midland Alliance Framework is run by Leicestershire County Council. The key features of the framework are as follows:

- *There are charges associated with joining the alliance and using the framework*
- *The framework only applies to schemes up to a construction value of £25m*
- *Balfour Beatty, Lafarge/Tarmac, Galliford Try are on the framework*

The decision to favour the OJEU route over the Midlands Alliance Framework was primarily a result of the contractors on the framework having no previous working

relationship with Cheshire East Council and were not regionally recognisable. The framework also applies to schemes with a construction value up to £25m, hence there was a concern that Poynton Relief Road could surpass this limit.

Key Observation

The 'OJEU Notice – Restricted Procedure' is the preferred method for securing the services of a Contractor.

5.5 Cabinet Approval of Recommend Procurement Strategy

Cheshire East Council Cabinet resolved the following:

- *Notes the findings of the Poynton Relief Road Procurement Workshop Summary Report;*
- *Approves the use of the Restricted Procedure for the procurement of the contractor through a NEC3 Option A Priced Contract with Activity Schedule with Contractor Design (Design and Build contract);*
- *Approves the publication of the OJEU (Official Journal of the European Union) contract notice and all tender documentation prior to the commencement of the CPO Public Inquiry;*
- *Authorises the Executive Director of Place to shortlist potential contractors following the return of the Stage One Selection Questionnaire documents; and*
- *Authorises the Director of Legal Services to procure additional legal support to approve the contract documents prior to their publication.*

Key Observation

The Cheshire East Council Cabinet has approved the use of the Restricted Procedure for the procurement of a Contractor through an NEC3 ECC Option A Priced Contract with Activity Schedule with Contractor Design (Design and Build Contract).

5.6 Payment Mechanisms

The payment mechanisms between Cheshire East Council and the appointed contractor will be set out in the construction contract, which will identify the work to be undertaken in a priced Activity Schedule. On-site inspections and regular reviews will be carried out; payment will only be made against completed activities (i.e. only work undertaken will be paid for).

5.7 Contract Length

The construction contract will cover the duration of the main construction works as well as a design period and advanced environmental works (prior to the main construction works).

A detailed construction programme would be produced when a Contractor has been procured.

Key Observation

The construction contract will cover the duration of the main construction works as well as a design period and advanced environmental works (prior to the main construction works).

5.8 Contract Management

Timescales for implementation will be as per the programme contained within the management case.

The contract management arrangements during the implementation stage will be administered by an ECC Project Manager and Supervisor. The ECC Project Manager and Supervisor will also provide a site presence to deal with all contract variations/issues and early warnings/compensation events. The roles for the project will otherwise be as set out in the detail within the Project Governance section of the Management Case.

This approach will also ensure that the construction contract is programmed and coordinated. In this way, Cheshire East Council will seek to ensure certainty of programme and high value for this project whilst minimising wider impacts on local highway users, residents and business.

The contract will establish an approval processes that will be put in place via the Project Board. Project tolerances will be approved by the Project Executive. If these tolerances are exceeded, an exception report will be raised by the Project Manager. If there is a prediction that any one tolerance is to be exceeded; this will be raised as an issue to the Project Board for agreement.

5.9 Risk Allocation and Transfer

Use of a NEC3 Option A Priced Contract with Activity Schedule with Contractor Design (Design and Build contract), will provide Cheshire East Council with early Price Certainty and optimum risk transfer to the contractor.

5.10 Procurement Programme

Table 6.1 provides a summary of the key dates in the procurement programme for the scheme, as reported to Cheshire East cabinet in February 2017. This programme assumes the use of a NEC3 Option A Priced Contract.

Procurement Milestone	Date
Upload and Publish OJEU notice	23 rd October 2018
OJEU and SQ Tender Period	23 rd Oct to 23 rd Nov 2018
Collate and Assess SQ Returns	26 th Nov to 14 th Dec 2018
Issue ITT to Selected Tenderers	14 th Jan 2019
Tender Period (14 Weeks)	14 th Jan to 18 th Apr 2019
Tender Evaluation	23 rd Apr to 2 nd Aug 2019
CEC Cabinet Approval of Contract Award	Mid Sept 2019 (exact date TBC)
Issue Award Letter and Contract Documents	2 nd Oct 2019

Table 5.1: Procurement Programme

It has subsequently been decided that the SQ will now be issued shortly after the Public Inquiry.

5.11 Conclusion

In order to assist with determining the optimum 'Procurement Method', two Procurement Workshops have been held.

The following procurement options have been considered in detail:

- *Design and Build during statutory process.*
- *Design and Build after Secretary of State Decision.*
- *Early Contractor Involvement (ECI).*
- *Construction only contract – e.g. NEC3 ECC Option A or C.*

It has been concluded that Design and Build options with invitation to tender for a NEC Option A Lump Sum Contract during the Statutory Process would be the preferred procurement option for the tender process.

This Option (with invitation to tender shortly after Public Inquiry) would allow a competitive tender price to be included in the funding application submitted to the DfT, and enable the start of the construction phase at the earliest opportunity. The Design and Build Lump Sum tender would also provide some cost certainty and is considered to provide CEC with best Value for Money. Design and Build contracts offer early Price Certainty and optimum risk transfer to the contractor.

Cheshire East Council Cabinet have resolved the following:

- *Notes the findings of the Poynton Relief Road Procurement Workshop Summary Report;*
- *Approves the use of the Restricted Procedure for the procurement of the contractor through a NEC3 Option A Priced Contract with Activity Schedule with Contractor Design (Design and Build contract);*
- *Approves the publication of the OJEU (Official Journal of the European Union) contract notice and all tender documentation prior to the commencement of the CPO Public Inquiry;*
- *Authorises the Executive Director of Place to shortlist potential contractors following the return of the Stage One Selection Questionnaire documents; and*
- *Authorises the Director of Legal Services to procure additional legal support to approve the contract documents prior to their publication.*

It has subsequently been decided that the SQ will now be issued shortly after the Public Inquiry.

Commercial Case Summary

In order to assist with determining the optimum procurement method, two procurement workshops have been undertaken.

A Design and Build Lump Sum (NEC ECC Option A) contract, during the statutory process is the preferred procurement option for the tender process.

The 'OJEU Notice – Restricted Procedure' is the preferred method for securing the services of a Contractor.

The Cheshire East Council Cabinet has approved the use of the Restricted Procedure for the procurement of a Contractor through an NEC3 ECC Option A Priced Contract with Activity Schedule with Contractor Design (Design and Build Contract).

The construction contract will cover the duration of the main construction works as well as a design period and advanced environmental works (prior to the main construction works).

6 The Management Case

6.1 Overview

The Management Case describes how the Poynton Relief Road scheme will be managed and delivered. In accordance with the Department for Transport (DfT) requirements it presents details of the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

The Management Case sets out a plan to ensure that the benefits set out in the Economic Case are realised and will include measures to assess and evaluate this.

The Management Case for the Poynton Relief Road scheme is discussed under the following headings:

- *Governance*
- *Assurance*
- *Delivery Programme*
- *Risk Management*
- *Communications and Stakeholder Management*
- *Monitoring and Evaluation*
- *Benefits Realisation Plan*
- *Conclusion*

The DfT's guidance document, '*The Transport Business Case (January 2013)*', outlines the areas which should be covered as part of the Management Case.

6.2 Governance

The local authorities of Cheshire East Council and Stockport Metropolitan Borough Council are jointly developing Poynton Relief Road. The structure of governance for the scheme enables the two councils to jointly work to oversee the schemes delivery.

The governance structure operates at a number of levels including:

- *Strategic Programme Board*
- *Project Board*
- *Project Delivery Team*

The methodology used to define the process and procedures necessary to manage this project is based on the PRINCE2 methodology promoted by the Office of Government Commerce (OGC).

A summary of the key governance levels and the roles and responsibilities at each of these levels is provided below:

6.2.1 Programme Board

The Strategic Programme Board takes a view across the portfolio of strategic infrastructure projects and focuses on programme level issues including:

- *Funding and Investment*
- *Resources*
- *Continuous Improvement*

The programme board does not typically get involved in project level issues unless they potentially have a bearing on the wider programme.

Attendance at the board is made up of senior managers from the Council and the Council's design consultant. The precise composition of the board is at the discretion of the Head of Strategic Infrastructure who acts as chair for the board's meetings.

6.2.2 Project Board

The Project Board meets monthly. The Project Board is chaired by the SRO (Chris Hindle), who takes executive responsibility for decisions relating to the project. Other members of the Project Board are shown in Table 6.1 below:

Name	Role	Organisation
Chris Hindle	Senior Responsible Owner	Cheshire East Council
Paul Griffiths	Project Sponsor	
Adrian Williams	Land & Property	
Sue Stevenson	Stockport MBC Representative	Stockport Metropolitan Borough Council
Rachel Brosnahan	Senior User	Local Enterprise Partnership
Ken Simmonds	Senior Supplier	Jacobs

Table 6.1 – Project Board Members

It is envisaged that following the award of the main construction contract, the Contractor's director would join the Project Board to help oversee delivery of the scheme.

Key responsibilities of the Project Board include:

- *Overseeing the development and implementation of the project Implementation Programme.*
- *Reviewing tender documentation as developed for the project and to monitor key policy or other issues requiring the attention of the Executive Officers of Cheshire East Council.*
- *Ensuring the required resources are identified and deployed on a timely basis across the Project.*
- *Ensuring the relevant Funding & Risk, Procurement and Consultation strategies are developed in a timely basis and implemented across the Project.*
- *Ensuring the project Implementation schedule is developed and regularly reviewed and updated to monitor actual progress against planned activity.*

- Ensuring risks are identified and captured in the project Risk Register and mitigated against.
- Ensuring that key issues are identified, captured in the project Issue Log, managed and escalated when required.
- Ensuring that costs are identified and managed within agreed budgets.
- Ensuring that the required environmental, health and safety procedures are implemented and subsequently complied with across the project.
- Advising the Cabinet of project progress including key issues and options for decision making.

As the Project Board members do not work full time on the project they place a great deal of reliance on the Project Manager (the role of the Project Manager is outlined later within this section). Although they receive regular reports from the Project Manager, there are key issues for consideration:

- Are things really going as well as we are being told?
- Are any problems being hidden from us?
- Is the solution going to be what we want?
- Are we suddenly going to find that the project is over budget or late?

All of these points mean that there is a need in the project organisation for independent monitoring of all aspects of the project's performance and products. This is the Project Assurance function.

6.2.3 Project Delivery Team

The Project Delivery Team consists of a number of specialist skilled staff from the consultancy acting on behalf of Cheshire East Council to develop the scheme. The role of the Project Delivery Team is to deliver the scheme in line with instructions provided by the Project Manager.

The Delivery Team consists of a number of discipline team leads who are responsible for delivering work packages ranging from highways design to deliver of the outline Business Case. Team Leaders are responsible for identifying and reporting potential issues at an early stage to ensure resources are appropriately allocated to minimise risk.

Members of the Poynton Relief Road Delivery Team are shown on Table 6.2 below.

Role	Name	Organisation
Project Manager	Adam Godbold	Jacobs
Project Controller	Emma Agar	
Principal Designer	Ringway Jacobs	
Part 1 Claims/ Property Valuation	Steve Thompson	
Environmental Co-ordinator	Simon Bird	
Highways Team Leader	John Anderson	
Traffic & Transportation Team Leader	Richard McGarr	
Planning	Ashley Stratford	
Operational Safety	Stewart Knowles	
Structures Team Leader	Jing Cai	
Lands team Leader	Rhodri Thomas	
Geotechnical Team Leader	Daniel Stannard	
Geomatics Team Leader	Nick Blakeway	

Table 6.2 – PRR Delivery Team

The Project Delivery Team are supported by specialist external sub-suppliers where appropriate.

6.2.4 Project Manager

The role of the Project Manager is to provide the project with a firm foundation and to maximise its success within challenging timescales. Adam Godbold from Jacobs has been appointed to deliver the scheme. As the Project Manager he is responsible for:

- *Managing the production of the required deliverables.*
- *Planning and monitoring the project.*
- *Direct and motivate the project team.*
- *The primary contact for the project.*
- *Adopting any delegation and use of project assurance roles within agreed reporting structures.*
- *Preparing and maintaining the Project Plan (or Project Execution Plan), Stage and Exception Plans as required.*
- *Manage project risks, including the development of contingency plans.*
- *Liaison with programme management and related projects to ensure that work is neither overlooked nor duplicated.*
- *Overall progress and use of resources, initiating corrective action where necessary.*
- *Change control and any required configuration management.*
- *Reporting through agreed reporting lines on project progress through Highlight Reports and stage assessments.*
- *Liaison with appointed project assurance roles to assure the overall direction and integrity of the project.*
- *Adopting technical and quality strategy.*
- *Identifying and obtain any support and advice required for the management, planning and control of the project.*
- *Managing project administration.*
- *Conducting end project evaluation to assess how well the project was managed.*
- *Preparing a Lessons Learned report.*
- *Preparing any follow-on action recommendations as required.*

6.2.5 Senior Responsible Owner

The Senior Responsible Owner (SRO) for the scheme is Chris Hindle from Cheshire East Council.

The Senior Responsible Owner's key responsibilities include:

- *Ultimate responsibility for the project.*
- *Appointment of the Project Manager.*
- *Chairing the Project Board meetings.*

- *Approving the milestone reports and initiate follow on action as necessary.*
- *Monitoring the scheme in line with the business and financial progress with in the agreed tolerances.*
- *Ensuring that a project or programme of change meets its objectives and delivers the projected benefits.*
- *Ensuring that the project is subject to review at appropriate stages.*
- *Owning the project or programme brief and business case.*
- *Development of the project or programme organisation structure and logical plans.*
- *Monitoring and control of progress.*
- *Formal project closure.*
- *Post implementation review.*
- *Problem resolution and referral.*

Key Observation

A project board has been setup which consists of representatives from Cheshire East Council, Stockport Metropolitan Borough Council, Cheshire & Warrington LEP and Jacobs. An organogram has been produced which outlines the governance structure for the project management and delivery of the Poynton Relief Road Scheme.

6.3 Programme / Project Dependencies

The scheme programme is dependent on the following:

- *Successful public inquiry to acquire land under the highways act;*
- *Timely procurement of a capable supplier;*
- *Political backing and funding from each of the identified funding streams;*
- *Successful liaison with the local communities ensuring they are included in regular updates throughout the scheme development;*
- *Successful discharge of conditions attached to the Cheshire East Council and Stockport Metropolitan Borough Council planning permissions; and*
- *Successful construction and enabling works associated with the A6 to Manchester Airport Relief Road (A6MARR) scheme.*

6.4 Assurance

6.4.1 Gateway Reviews

A Gateway Review is an assessment of a project or programme carried out at crucial junctures in its development, in order to provide assurance to the Senior Responsible Owner that it can progress successfully to the next stage. Its focus is on whether the appropriate framework, processes and resources are in place. It does not duplicate the appraisal of the Value for Money case for a scheme.

The Gateway process was developed by the Office for Government Commerce (OGC) who has accredited 'Local Partnerships' to conduct Gateway Reviews for Local Authorities.

There are five Gateway Reviews during the lifecycle of a project, three before contract award, one post contract award looking at service implementation and a final review seeking confirmation of the operational benefits. The five Gateway Reviews are listed below.

- *Gateway Review 1 – Business Justification*
- *Gateway Review 2 – Procurement Strategy*
- *Gateway Review 3 – Investment Decision*
- *Gateway Review 4 – Readiness for Service*
- *Gateway Review 5 – Benefits Evaluation*

The Gateway stages are broadly linked to the DfT's approval stages, but the precise timing may vary from scheme to scheme. Normally Gateway 1 and 2 reviews would be carried out between Programme Entry and Conditional Approval, with Gateway 3 being carried out prior to Full Approval.

As the scheme costs are in excess of £20m, Poynton Relief Road intends to accord with best practice and progress the scheme through all stages of the Gateway Review process. This will ensure that the delivery of the scheme is challenged by independent review. As part of its ongoing commitment to the progression of the scheme Poynton Relief Road has already commenced the Gateway Review process.

Cheshire East Council's Finance and Contract Procedure Rules set out the arrangements for managing the Council's financial and contractual arrangements. The Finance, Contract and Procedure Rules also deal specifically with risk management, control of resources and establish key principles for decision making practice.

The Council is effectively operating "Project Gateway" which is a robust discipline to manage Major Projects and Programmes across the authority. The key aspect of effectively operating the Project Gateway is a high-level, Member led Governance Group called the Executive Monitoring Board (EMB). One of the key aims of the EMB is to provide consistent and robust direction for all Major Projects and Programmes that rest within the Capital Programme.

The EMB rejects scheme business case proposals if they are unconvinced of the viability of the Business Case and any other aspect of the of the delivery plan or of fit with corporate priorities and also identifies improvements in the process as part of the annual lessons learnt exercise.

The monitoring is mainly focused on performance, progress against plan, risks and issues, quality, benefits and Value for Money.

The EMB also ensures that major projects and programmes are on track to deliver what they set out to do in their Business Case and Planning proposals and confirm there is a continued Business Case viability.

Gateway Review 1

On the 15th January 2013 the scheme was subject to a Gateway Review 1 (Business Justification) by the EMB. The purpose of the Gateway Review 1 (Business Justification) is summarised below.

- *To confirm that the business case is robust and that in principle it meets business need, is affordable, is achievable with appropriate options explored and is likely to achieve value for money.*
- *Confirm that appropriate expert advice has been obtained as necessary to identify and / or analyse potential options.*
- *Establish that the feasibility study has been completed satisfactorily and that there is a preferred way forward, developed in dialogue with the market.*
- *Confirm that the market's likely interest has been considered.*
- *Ensure that there is internal and external authority, if required, and support for the project.*
- *Ensure that the major risks have been identified and outline risk management plans have been developed.*
- *Establish that the project is likely to deliver its business goals and that it supports wider business change, where applicable.*
- *Confirm that the scope and requirements specifications are realistic, clear and unambiguous.*
- *Ensure that the full scale, intended outcomes, timescales and impact of relevant external issues have been considered.*
- *Ensure that there are plans for the next stage.*
- *Confirm planning assumptions and that the project team can deliver the next stage.*
- *Confirm that overarching and internal business and technical strategies have been taken into account.*
- *Establish that quality plans for the project and its deliverables are in place.*

Gateway Review 2

Following the completion of the Public Inquiry for the Compulsory Purchase Order (CPO) and Side Road Order (SRO) application, the Gateway Review 2 will be scheduled.

The Gateway Review 2 focuses on the scheme's procurement strategy. It should be noted that the Poynton Relief Road scheme has already defined its procurement strategy, outlined within the Commercial Case, which has already been approved by Cheshire East Council's Cabinet.

Gateway Review 2 will also:

- *Confirm the Outline Business Case now the project is fully defined.*
- *Confirm that the objectives and desired outputs of the project are still aligned with the programme to which it contributes.*
- *Ensure that the delivery strategy is robust and appropriate.*

- *Ensure that the project's plan through to completion is appropriately detailed and realistic, including any contract management strategy.*
- *Ensure that the project controls and organisation are defined, financial controls are in place and the resources are available.*
- *Confirm funding availability for the whole project.*
- *Confirm that the development and delivery approach and mechanisms are still appropriate and manageable.*
- *If appropriate, check that the supplier market capability and track record are fully understood (or existing supplier's capability and performance), and that there will be an adequate competitive response from the market to the requirement.*
- *Confirm that the project will facilitate good client/supplier relationships in accordance with government initiatives such as Achieving Excellence in Construction.*
- *Confirm that appropriate project performance measures and tools are being used.*
- *Confirm that there are plans for risk management, issue management (business and technical) and that these plans will be shared with suppliers and/or delivery partners.*
- *Confirm that quality procedures have been applied consistently since the previous Review.*
- *Confirm compliance with health and safety and sustainability requirements.*
- *Confirm that internal organisational resources and capabilities will be available as required for future phases of the project.*
- *Confirm that the stakeholders support the project and are committed to its success.*
- *Evaluation of actions taken to implement recommendations made in any earlier assessment of deliverability.*

Gateway Review Timetable

An indicative timetable for undertaking the Gateway Reviews for the Poynton Relief Road scheme is shown in Table 6.3 below.

Key Milestone	Target Completion Date
Gateway 2	Spring 2018
Gateway 3	Winter 2018
Gateway 4	Spring 2019
Gateway 5	2020

Table 6.3 – Indicative Timetable for Gateway Reviews

Key Observation

As part of the project assurance arrangements, the Poynton Relief Road scheme will be subject to a series of Gateway Reviews.

On the 15th January 2013 the scheme was subject to Gateway Review 1 (Business Justification). A programme has been developed for undertaking the future Gateway Reviews for the Poynton Relief Road scheme.

6.4.2 Retained Scheme

When Local Growth Deal funding was announced, the DfT reported that larger Growth Deal transport projects (over £20m total cost and with Growth Fund bids of £10m or more) would be 'retained' by the DfT, and the final funding decision will be taken by Ministers.

Due to the amount of Local Growth Deal funding being sought, the Poynton Relief Road scheme was subsequently identified as a DfT 'retained' scheme.

In November 2015 the DfT issued guidance on its expectations for these retained schemes, which are now considered to be part of their major schemes portfolio.

This guidance included the following pertinent points

- *Although the final funding decision will be taken by the transport minister the funding would continue to be routed through the LEP Growth Deal allocation.*
- *The LEP does not need to formally approve business cases, but it will be for the LEP to decide whether it wishes to apply its own assurance processes in parallel with, or ahead of, submission to DfT.*
- *Prior to signing off the funding approval DfT will wish to ensure that the LEP is content with the basis on which the approval is proposed.*

Consequently, the Cheshire & Warrington LEP has been closely involved with the development of the Business Case for the Poynton Relief Road scheme. This has included being represented on the Project Board as well as reviewing the Business Case and supporting documents prior to submission to the DfT.

In addition, the DfT have been closely involved in the development of the Business Case for the Poynton Relief Road scheme, having reviewed all of the supporting documents including those that explain the traffic modelling and economic assessment work that has been undertaken.

Key Observation

Due to the amount of Local Growth Deal funding being sought, the Poynton Relief Road scheme was subsequently identified as a DfT 'retained' scheme.

6.5 Delivery Programme

The delivery programme for the scheme is owned by the Project Manager and updated by the Project Planner. The programme is reviewed and updated as necessary prior to formal monthly progress meetings. Changes to the project

programme that could impact upon key milestones within the development and delivery of the Poynton Relief Road scheme are communicated to the Project Board.

The key project milestones for the Poynton Relief Road scheme are shown in Table 6.4.

Key Milestone	Programme Date
Planning Permission granted (complete)	
CPO & SRO Orders published (complete)	21 st Nov 2017
Public Inquiry for CPO & SRO Orders	20 th to 27 th Nov 2018
OJEU Notice Issued	Above
Return of Selection Questionnaire (SQ)	Above
ITT issued to shortlisted contractors	Above
Tender returns	Above
CEC Approval of Tender	Above
Submit Final Business Case to DfT	Late Sept 2019
Issue Award Letter and Contract Documents	Above
DfT Funding Award	Dec 2019
Serve Notices to access land	Jan 2020
Start of Main Works	Apr 2020
Scheme opens	Feb 2022

Table 6.5 - Key Milestone Programme

Key Observation

A detailed scheme delivery programme highlighting key project interdependencies has been produced and will be owned by the Project Manager.

6.6 Risk Management

6.6.1 Risk Register

A detailed Quantified Risk Assessment (QRA) has been undertaken. The QRA is based on industry knowledge and experience from the team's involvement in other schemes of a similar nature.

Each of the risks identified been allocated a 'risk owner', depending on the risk type and its proximity (i.e. when it is likely to be realised / removed).

Informal risk reviews are undertaken on a monthly basis. Formal risk workshops are held if and when the Project Manager deems them necessary. Risk is an agenda item at both Progress Meetings and Project Board Meetings, both of which are held monthly. At each of these meetings the 'Top 5' risks are discussed and if necessary the QRA is updated.

The risk register attempts to separate risks out dependant on their nature. Examples of the type of risk include (but are not limited to):

- *Infrastructure;*
- *Political;*
- *Environmental;*
- *Process; and*
- *Stakeholder.*

The QRA is based on industry knowledge and experience from other schemes which have been constructed.

6.6.2 Contingency Plan

The following contingency measures are in place on the Poynton Relief Road scheme:

- *Funding – as stated in the Financial Case, in the event of overspend the liability will fall upon Cheshire East Council to source and secure funding for any overspend.*
- *People – all resources have been identified both pre and post construction. All positions have been filled and in the event that people leave the project team with little or no notice, the contingency plan is to recruit from the Council's own resource availability;*
- *Information – all information is currently held on either the Council's IT servers (backed-up daily) or suppliers' own IT servers (backed-up daily);*
- *Skill sharing and knowledge transfer – the project team has monthly (Project Delivery group) meetings, which are structured to ensure each aspect of the project under development is discussed; and that each work stream report is also discussed.*
- *Suppliers (including consultants, delivery partners and contractors) – the Council has in place robust procurement procedures, which incorporate business continuity requirements, and are designed to maximise the capacity of appointed suppliers to deliver the desired outcomes.*
- *The project team has established governance and reporting frameworks that are in part designed to provide early warnings of a supplier's inability to continue to undertake its duties. Early warnings will enable the project team to implement contingency plans, which in the event that duties cannot be redistributed within the existing project team and wider supply chain, could ultimately include replacing affected suppliers. If suppliers need to be replaced during the performance of individual contracts, the project team and the Council's legal and procurement teams will work closely together to ensure the time taken to appoint replacement suppliers is minimised.*

6.7 Evidence of Similar Projects

The promoting authority, Cheshire East Council has relevant experience delivering projects similar to Poynton Relief Road, including major highways infrastructure schemes and local junction improvements, both of which are core elements of the Poynton Relief Road proposals.

Crewe Green Link Road

Crewe Green Link Road is a £26.5m dual carriageway scheme to reduce congestion, improve journeys and boost job growth in the area. The 1.1km route forms a valuable link between the A500 Hough-Shavington bypass and the A5020 Weston Road. Construction of the scheme commenced in September 2014 and the new road was opened in December 2015.

Alderley Edge Bypass

Alderley Edge Bypass is a £52m highways scheme aimed at providing congestion relief and improved connectivity for commuter and business travel. The 5km scheme starts at the Harden roundabout at the southern end of the existing Wilmslow bypass and continues west to re-join the A34.

The project was constructed between February 2009 and November 2010, and was opened six months ahead of schedule.

Junction Improvement Schemes

Other projects recently completed to improve traffic flow and support economic development are junction improvements on the local road network at Junctions 16 and 17 on the M6 motorway, which are major routes for Crewe and the rest of south Cheshire and north Staffordshire.

Key Observation

The promoting authority, Cheshire East Council has successfully a number of major schemes and junction improvements in the last 10 years, and has a proven track record in delivery on time and within budget.

6.8 Communication and Stakeholder Engagement

In order to ensure that all stakeholders affected by the Poynton Relief Road scheme are kept informed throughout the development and construction of the scheme, an extensive stakeholder mapping exercise has been completed.

A Stakeholder Engagement Plan has subsequently been developed which details all of the stakeholders (both statutory and non-statutory) that either have already been or will be engaged with during the development of the Poynton Relief Road scheme. It also provides a summary of the purpose of the consultation as well as providing a summary of the engagement to date and the proposed future engagement.

Key Observation

Stakeholders were involved in a Route Options Consultation event that was held in January and February 2014 in order to inform the Preferred Route Announcement.

The same stakeholders were also involved in a pre-planning Public Consultation held in October/November 2015 when a leaflet was deposited to each household in Poynton and the surrounding area as well as other stakeholders. The pre-planning Public Consultation demonstrated that the scheme has very high levels of public and wider support.

A Stakeholder Engagement Plan has subsequently been developed which details all of the stakeholders (both statutory and non-statutory) that either have already been or will be engaged with during the course of the Poynton Relief Road scheme.

6.9 Conclusions

The Management Case for the Poynton Relief Road scheme demonstrates that robust project governance and assurance frameworks are already established. A detailed scheme delivery programme highlighting key project interdependencies has been produced and will be owned by the Project Manager.

A risk register has been developed which has a 'risk owner' allocated to each risk. Risk workshops are already taking place and risk is discussed at every Project

Board Meeting, which are held monthly and the QRA is subsequently updated. Key risks are also discussed at the formal monthly progress meetings.

The promoting authority, Cheshire East Council has successfully a number of major schemes and junction improvements in the last 10 years, and has a proven track record in delivery on time and within budget.

Two extensive public consultation events have already taken place for the scheme. The pre-planning Public Consultation (Oct/Nov 2015) demonstrated that the scheme has very high levels of public and business support.

A Stakeholder Engagement Plan has been developed which details all of the stakeholders (both statutory and non-statutory) that either have already been or will be engaged with during the course of the Poynton Relief Road scheme.

An Outline Monitoring and Evaluation Plan has been produced and a Benefits Realisation Plan has also been developed to enable the benefits that are expected to be derived by the scheme to be identified, tracked and compared to those that were predicted.

Management Case Summary

A project board has been setup which consists of representatives from Cheshire East Council, Cheshire & Warrington LEP and Jacobs. An organogram has been produced which outlines the governance structure for the project management and delivery of the Scheme.

As part of the project assurance arrangements, the scheme will be subject to a series of Gateway Reviews. A programme has been developed for undertaking the future Gateway Reviews for the scheme.

A detailed scheme delivery programme highlighting key project interdependencies has been produced and will be owned by the Project Manager.

Each of the risks on the risk register have been allocated a 'risk owner', depending on the risk type and its proximity. Risk workshops are held if and when the Project Manager deems them necessary.

Risk is also discussed at every Project Board Meeting, which are held monthly and the QRA is subsequently updated. Key risks are also discussed at the formal monthly progress meetings.

The promoting authority, Cheshire East Council has successfully delivered three major schemes in the last 10 years, and has a proven track record in delivering them on time and within budget.

Stakeholders were involved in the Public Consultation events.

The same stakeholders were also involved in a pre-planning Public Consultation. The pre-planning Public Consultation demonstrated that the scheme has very high levels of public and business support.

A Stakeholder Engagement Plan has subsequently been developed which details all of the stakeholders (both statutory and non-statutory) that either have already been or will be engaged with during the course of the scheme.

7 Monitoring and Evaluation and Benefit Realisation

7.1 Introduction

The Department for Transport (DfT) is responsible for demonstrating that its funding for local-level investment has provided value for money for the taxpayer. It is also responsible for ensuring that lessons learnt from this evidence are used to inform future decision making. The DfT approach to achieving this varies to reflect the nature and scale of the programme under consideration.

The funding of Local Authority Major Schemes represents a substantial investment for government. Evaluating the investment would satisfy the following objectives:

- *Provide accountability for the investment;*
- *Evidence future spending decisions;*
- *Learn about which schemes deliver cost-effective transport solutions;*
- *Enhance the operational effectiveness of existing schemes or future schemes;*
- *Improve future initiatives based on learning.*

A National Audit Office (NAO) report on Local Authority Major Schemes highlighted the importance of evaluation for ensuring transparent and accountable decision making. The report concluded that whilst the DfT has made advances in this area, there is still scope for improvement in the coverage, quality and resourcing of evaluations.

In September 2012, the DfT released an updated framework to meet responsibilities for the evaluation of Local Authority Major Schemes (entitled, "Monitoring and Evaluation Framework for Local Authority Major Schemes" (to be known as "the DfT's guidance" throughout the remainder of this report)).

The DfT's guidance is designed to make the process as consistent and proportionate as possible. It also aims to be complementary with the devolution of decision making, developing a consistent evidence base to enable a clear demonstration that intended outcomes and impacts have been delivered effectively, and assess whether scheme objectives have been achieved. This will provide valuable evidence to support future funding of such investment streams.

A consistent monitoring approach across all Local Authority Major Schemes will also facilitate programme level analysis to be carried out by the DfT on a regular basis, enabling dissemination of good practice and lessons learnt across the investment programme.

The framework sets out:

- *The expectations for the monitoring and evaluation of Local Authority Major Schemes and engagement with DfT*
- *Standard Monitoring requirements*
- *Enhanced Monitoring requirements*
- *Fuller Evaluation requirements*
- *The schemes selected for Fuller Evaluation*
- *Monitoring and Evaluation Plan requirements*

This section sets out the Outline Monitoring and Evaluation Plan for the proposed Poynton Relief Road (referenced throughout the remainder of this section as “the Scheme”).

This Outline Monitoring & Evaluation Plan will be updated as part of the Full Business Case submission.

7.2 Sources of Information

The following documents have been consulted as part of the development of the Monitoring and Evaluation Strategy:

- *Poynton Relief Road - Outline Business Case;*
- *Monitoring and Evaluation Framework for Local Authority Major Schemes (DfT, September 2012);*
- *HMT Magenta Book; and*
- *Logic Mapping Hints and Tips (Tavistock Institute, October 2010)]*

7.3 Monitoring and Evaluation Requirements

The DfT Monitoring and Evaluation Framework guidance sets out three tiers of Monitoring and Evaluation:

- *Standard Monitoring*
- *Enhanced Monitoring*
- *Fuller Evaluation*

All Local Authority Major Schemes approved for funding as part of the ‘Supported Pool’ in 2010 or as part of the ‘Development Pool’ process in late 2011 / early 2012 are required to undertake Standard Monitoring.

Those schemes that cost more than £50m or which are anticipated to have significant impact upon particular indicators (e.g. local air quality) are required to undertake Enhanced Monitoring.

A selection of schemes, as identified by the DfT, are also required to undertake a Fuller Evaluation, which consists of assessments of the delivery process, outcomes and impacts, and value for money. These schemes have been selected based on the scale of investment, the nature of the scheme and the benefits to be gained from the evaluation evidence generated.

The Poynton Relief Road scheme has a scheme cost of £41m and has not been selected for Fuller Evaluation; therefore, this Monitoring and Evaluation Plan will use Standard and Enhanced Monitoring. Full details of the proposals to satisfy those requirements are set out in below.

7.3.1 Inputs, Outputs, Outcomes and Impacts

Before outlining the requirements for the three tiers of Monitoring and Evaluation, it is worth explaining four terms that are used, namely Inputs, Outputs, Outcomes and Impacts, as described below:

- **Inputs:** What is being invested in terms of resources, equipment, skills and activities undertaken;
- **Outputs:** What has been delivered and how it is being used, such as roads built, bus services delivered;
- **Outcomes:** Short-term intermediate effects, such as changes in traffic flows, modal shifts; and
- **Impacts:** Longer-term effects on wider social and economic outcomes, such as supporting economic growth.

7.3.2 Standard Monitoring

Table 7.1 summarises the DfT's Standard Monitoring requirements for all Local Authority Major Schemes.

Item	Stage	Data Collection Timing
Scheme Build	Input	During delivery
Delivered Scheme	Output	During delivery / post opening
Costs	Input	During delivery / post opening
Scheme Objectives	Output / Outcome / Impact	Pre or during delivery / post opening (up to 5 years)
Travel Demand	Outcome	Pre or during delivery / post opening (up to 5 years)
Travel Times and Reliability	Outcome	Pre or during delivery / post opening (up to 5 years)
Impact on the Economy	Impact	Pre or during delivery / post opening (up to 5 years)
Carbon	Impact	Pre or during delivery / post opening (up to 5 years)
Stage Inputs: What is being invested in terms of resources, equipment, skills and activities undertaken Outputs: What has been delivered and how it is being used, such as roads built, bus services delivered. Outcomes: Intermediate effects, such as changes in traffic flows, modal shifts. Impacts: Longer-term effects on wider social and economic outcomes, such as supporting economic growth).		
	Reported within 'One year after Report' (released 1 – 2 years post scheme implementation)	
	Reported within both the 'One year after Report' and 'Final Report' (~5 years after scheme implementation).	

Table 7.1 Standard Monitoring Requirements

7.3.3 Enhanced Monitoring

Table 7.2 summarises the DfT's Enhanced Monitoring requirements for those schemes with a capital cost of greater than £50m.

Item	Stage	Data Collection Timing
Noise	Impact	Pre or during delivery / post opening (up to 5 years)
Local air Quality	Impact	Pre or during delivery / post opening (up to 5 years)
Accidents	Impact	Pre or during delivery / post opening (up to 5 years)
Stage Inputs: What is being invested in terms of resources, equipment, skills and activities undertaken Outputs: What has been delivered and how it is being used, such as roads built, bus services delivered. Outcomes: Intermediate effects, such as changes in traffic flows, modal shifts. Impacts: Longer-term effects on wider social and economic outcomes, such as supporting economic growth).		
		Reported within both the 'One year after Report' and 'Final Report' (~5 years after scheme implementation).
		Reported within the 'Final Report' only (released approximately five years after scheme implementation).

Table 7.2 Enhanced Monitoring Requirements

7.4 Logic Mapping

7.4.1 Introduction

To support the monitoring and evaluation process, scheme promoters need to clearly articulate the assumptions underpinning how the scheme will deliver the intended outcomes and impacts. The DfT Monitoring Framework guidance recommends that logic mapping should be undertaken by scheme promoters to present their scheme's causal pathways (the chain of connections showing how a scheme is expected to achieve desired results and anticipated benefits).

7.4.2 Method

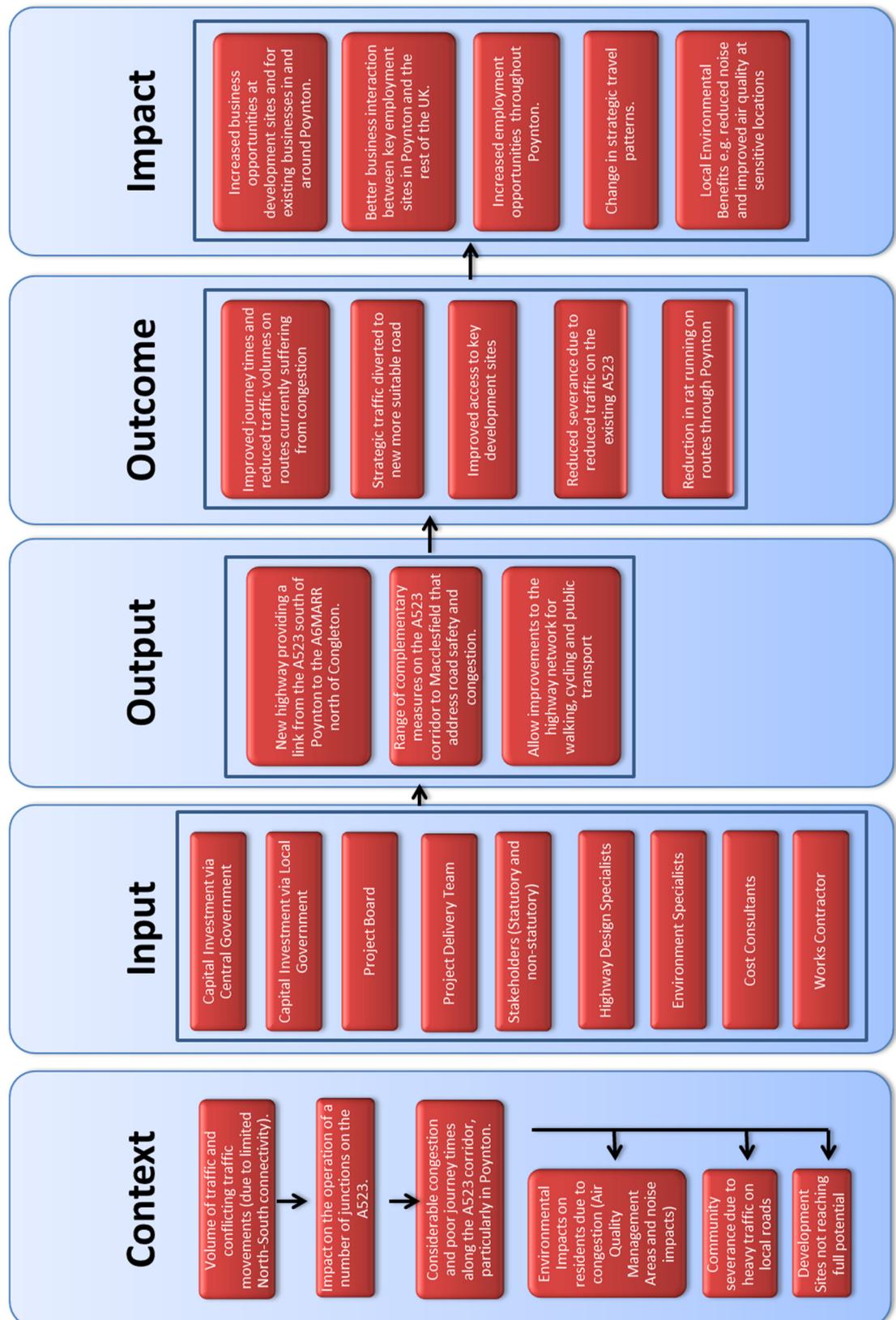
Logic mapping is a systematic and visual way of presenting the key steps required in order to turn a set of resources or inputs into activities and outputs that are designed to lead to a specific set of changes or outcomes / impacts. The aim is to articulate the underlying causal theory based on the assumptions and evidence underpinning the rationale for the scheme. Causality is central to logic maps, as they order events in such a way that the presence of one event or action leads to, or causes, a subsequent event or action.

Logic maps should seek to:

- *Articulate what needs to happen in order for the anticipated outcomes and impacts to be achieved;*
- *Provide a clear line of sight between the inputs and the anticipated impacts;*
- *Visualise unintended effects;*
- *Highlight gaps in the evidence base and therefore help to focus evaluation effort accordingly;*
- *Outline the stages between the inputs and the desired impacts, which provides a transparent assessment framework within which existing evidence and evaluation results can be combined to provide answers to the evaluation questions; and*
- *Point to where the links between the inputs, outputs, outcomes and impacts are unclear, which aids delivery as well as evaluation design.*

7.4.3 Logic Map

A logic map for the scheme has been developed and has been used to aid the development of the Monitoring and Evaluation strategy for the scheme. The logic map is shown below.



7.5 Standard Monitoring Approach

7.5.1 Introduction

This chapter details the proposed methodology and the reporting mechanisms to be adopted for Standard Monitoring.

The Standard Monitoring approach is discussed under the following headings:

- *Scheme Build*
- *Delivered Scheme*
- *Scheme Costs*
- *Scheme Objectives*
- *Travel Demand*
- *Travel Times and Reliability*
- *Impact upon the Economy*
- *Carbon*

The Evaluation Manager will be responsible for the overall coordination and management of the Monitoring and Evaluation process. They will not be involved in the day to day scheme delivery, but will be a visible member of the team who is able to objectively assess the various elements of Monitoring and Evaluation metrics.

7.5.2 Scheme Build

Monitoring of the Scheme Build process will form a key component of the ongoing delivery of the Scheme. The evaluation of the Scheme Build will be published within the 'One Year After Report'.

Key information and evidence to support a transparent evaluation of the Scheme Build process will be collected throughout the delivery process.

Table 7.3 provides a summary of the key items that will be included within the evaluation of Scheme Build. Information will be documented as part of regular progress meetings (monthly), Project Board meetings (every three months), Cabinet papers and Gateway Reviews at key milestones.

The Project Board will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

Metric	Details
<i>Programme</i>	The scheme delivery process will be monitored against the proposed delivery programme put forward as part of the Best and Final Funding Bid / confirmation of funding. Key milestones in the delivery process will be used to understand whether the Scheme Build has met expectations and details of any variances will be documented and discussed.
<i>Stakeholder management</i>	The evaluation of Stakeholder management will focus upon the effectiveness of engagement. Both statutory bodies and non-statutory stakeholders, such as the public and local employers, will be asked for their views on whether the engagement was thorough, open, at the right times etc. Details of Stakeholder engagement undertaken during the delivery process, including historic consultation during scheme development will be published, along with key findings. This will be used to inform potential lessons learned from effective consultation and to clearly demonstrate its value.
<i>Risk management</i>	The effectiveness of the risk management process will be evaluated at key stages in the delivery process e.g. planning application / consent, funding / business case submissions, Gateway Reviews and during construction. It will consider the following:- <ul style="list-style-type: none"> • Were all risks identified in the early stages of scheme development? • If new risks became apparent during the course of scheme development or delivery, could they have been reasonably foreseen? • How were risks managed during scheme development and delivery? Were actions clearly recorded? Were actions taken by the nominated person responsible? • Was the reporting of risks open and transparent? • What worked well and what are the lessons learnt for other schemes? This will be used to inform the overall impact of risk upon the delivery process, the appropriateness of risk assumptions within the scheme cost estimates and use of Optimism Bias uplift within the scheme appraisal.
<i>Scheme Completeness</i>	A comparison will be made between the scheme as originally proposed at Programme Entry versus that evolving during the Scheme Build process. This will identify whether, for example, de-scoping has occurred to keep within budgets, resulting in some beneficiaries losing out.

Table 7.3 Standard Monitoring - Scheme Build

7.5.3 Delivered Scheme

Details of the delivered scheme will be provided within the 'One Year After Report'. This will provide a detailed comparison of the proposed scheme at funding approval, detailed design and the delivered scheme.

The design team will work alongside the construction team to identify and document the outturn deliverable against the planned deliverables.

The Project Manager will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

Table 7.4 provides a summary of the key items that will be included within the evaluation of the Delivered Scheme.

Metric	Details
<i>Implemented Scheme</i>	The following information will be documented: <ul style="list-style-type: none"> • Full description of implemented scheme • Plans of the delivered scheme • Plans of individual elements as required
<i>Changes</i>	Identification of any changes to the scheme since funding approval. For example, changes to route and/or design of the scheme and details of the reasons for any such changes.
<i>Intended Beneficiaries</i>	A qualitative assessment of whether the scheme has reached the intended beneficiaries e.g. road users, pedestrians, cyclists, and developers and residents in Poynton.
<i>Mitigation</i>	Identification of changes to mitigation measures (e.g. on landscape, noise mitigation etc.) with a clear description of the changes and the reasons for implementation (or non-implementation).

Table 7.4 Standard Monitoring - Delivered Scheme

7.5.4 Scheme Costs

A detailed account of the scheme costs will be provided within the 'One Year After Report' and 'Final Report'. It will provide a detailed comparison of the cost estimates at funding approval, detailed design, the outturn values once the scheme is delivered and, for maintenance costs, 4-5 years after scheme opening.

The design team and the cost consultants will work alongside the construction team to identify and document the outturn costs against the cost estimates. The Project Manager will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

Table 7.5 provides a summary of the key items that will be included within the evaluation of the Scheme Costs.

Metric	Details
<i>Outturn costs</i>	Outturn investment costs broken down into key elements as put forward for the Major Scheme funding bid.
<i>Risk</i>	Details of the manifestation of identified risks within each element of the scheme cost estimate.
<i>Savings</i>	Identification of those cost elements with savings, and identification of the reasons for those cost savings.
<i>Overruns</i>	Analysis of those cost elements with overruns, and identification of the reasons for those cost overruns.
<i>Maintenance costs</i>	Comparison of outturn maintenance or other capital costs with those forecast analysis of any variations from forecast and any unanticipated costs identified.

Table 7.5 Standard Monitoring - Scheme Costs

7.5.5 Scheme Objectives

DfT guidance suggests that up to three main objectives of the scheme should be evaluated against appropriate metrics to enable an assessment to be made of how scheme objectives have been realised.

The evaluation of the scheme objectives will be provided within both the 'One Year After Report' and the Final Report.

The scheme objectives are shown in Table 7.4 below.

	Scheme Objective
1	To support the economic, physical and social regeneration of Poynton and the north of the Cheshire East area, in particular Macclesfield, by creating and securing jobs.
2	To relieve traffic congestion within Poynton by removing traffic, including Heavy Goods Vehicle (HGVs), onto the Relief Road, and to reduce traffic in less desirable roads on the wider network.
3	Deliver a range of complementary measures on the A523 corridor to Macclesfield that address road safety, congestion and mitigation of the wider environmental impact of traffic.
4	Boost business integration and productivity: improve the efficiency and reliability of the highway network, reducing the conflict between local and through traffic, and providing an improved route for freight and business travel.
5	Allow improvements to the highway network for public transport, walking and cycling.

Table 7.6: Scheme Objectives

It is considered that the evaluation of Objective 1, 3 and 5 can be covered within the 'Impacts on the Economy' Standard Monitoring metric. Objective 2 is seen as being covered within the 'Travel Demand' Standard Monitoring metric. Objective 4 is seen as being covered within the 'Travel Time and Reliability' Standard Monitoring metric.

The recommended evaluation approach for the two chosen scheme Objectives are outlined below. The Project Manager will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager. The evaluation of the objectives will be presented within both the 'One Year After Report' and the Final Report.

7.5.6 Travel Demand

Travel demand information will be collected on key corridors of travel that are affected by the scheme. This data will be used to inform an assessment of the impact upon travel patterns within the area.

The evaluation of the travel demand metrics will be provided within both the 'One Year After Report' and the Final Report.

Table 7.7 provides a summary of the metrics that will be considered to evaluate changes in Travel Demand as a result of the scheme.

During the development of the Poynton Traffic Model a number of traffic counts were used to both calibrate and validate the model to real world flows, these and other existing counts will form the baseline data for this metric.

These same sites have been identified for use in the monitoring of travel demand based on proximity to the scheme and the forecast impact on traffic volumes and speed between the Do Minimum and Do Something. New sites will also be proposed to monitor the actual use of the scheme. The locations of these count sites are shown in Figure 7.1 and Figure 7.2.



Figure 7.1 Proposed sites to monitor traffic flows



Figure 7.2 Proposed sites to monitor traffic flows

Daily weekday traffic flows (AM (0700-1000), PM (1600-1900) and 12-hour flows) for a neutral month (April, May, June, September, October or November) for all locations will be monitored using temporary and permanent Automatic Traffic Counters (ATCs) and turning counts where required.

Data will be collected for the baseline conditions (pre-opening), the settling down period post-construction (within 1 year of opening) and the longer-term impact (4 to 5 years after opening). Some counts were undertaken for the construction of the model and so the results of those counts will be used as base data.

The Team Leader for the Travel Demand Data Collection will be responsible for ensuring the above data is readily available and clearly documented for supply to the Evaluation Manager.

Metric	Details
Traffic Flows (screenlines)	Traffic volumes will be monitored using continuous ATCs that are already in place, and additional temporary ATCs, on key routes that will be affected by the Scheme. Data will be collated for the baseline conditions pre-opening, the settling down period post-construction (up to 12 months) and the longer term impact (4 to 5 years after opening). Data will be analysed for Weekday AM/ PM/12hr to determine changes in traffic patterns as a result of the scheme.

Table 7.7 Standard Monitoring - Travel Demand

7.5.7 Travel Time and Reliability

Travel times will form a key measure of the success of the scheme in relieving existing routes and improving strategic links across wider transport network. While the scheme is likely to improve Reliability it is not regarded as a key objective of this scheme. It is therefore proposed that reliability would not be assessed.

During model development a number of different journey time routes were used to ensure the traffic model was replicating real world traffic conditions. It is proposed that journey time data for these same routes will be analysed using data obtained from TrafficMaster plc. to monitor the performance of the scheme.

Data will be collected in the same neutral month as the Travel Demand data. Analysis will be undertaken for weekday peak hours i.e. 0800-0900hrs and 1700-1800hrs.

Analysis will be undertaken within 1 year after opening and 4 to 5 years after opening as the baseline analysis has already been completed through model development.

The Team Leader for the Journey Times Data Collection will be responsible for ensuring the above data is readily available and clearly documented for supply to the Evaluation Manager.

The evaluation of the travel time and reliability metrics will be provided within both the 'One Year After Report' and the Final Report.

Table 7.8 summarises the proposed methodology to be adopted.

<i>Metric</i>	<i>Details</i>
<i>Travel times</i>	Changes in journey times on key corridors of interest will be measured using TrafficMaster data. Data will be collected pre-construction and post-scheme opening (both within 1 year and 4 to 5 years after opening). Analysis of the data will be used to demonstrate that the scheme has reduced travel times on several key routes into Poynton.

Table 7.8 Standard Monitoring - Travel Time and Reliability

7.5.8 Impact on the economy

Scheme promoters are required to monitor and report information which shows how the scheme is contributing to economic growth.

Within standard economic analysis, travel times are converted to monetary values through the application of Values of Time. This means that reductions in travel times can be converted into monetary benefits to the economy.

Improved access to development sites can also benefit the economy by accelerating and stimulating their development, thereby creating employment at those sites. The evaluation of the impact on the economy will be provided within both the 'One Year After Report' and the Final Report.

The introduction of the Scheme will significantly improve access from the strategic highway network to strategic development sites identified for industrial and commercial growth.

The evaluation metrics that will be employed to understand potential impacts upon economic growth are summarised in Table 7.9.

<i>Metric</i>	<i>Details</i>
<i>Implemented Scheme</i>	Qualitative assessment of how the scheme has improved access to strategic development sites.
<i>Travel times</i>	Changes in journey times will be evaluated using TrafficMaster data on various key routes for the Travel Times metric, as detailed in section 7.5.7 above. Data will be collected pre-construction and post-scheme opening (both within 1 year and 4 to 5 years after opening). The analysis will show which routes have seen reductions in travel times and improvements in travel time reliability.
<i>Accessibility</i>	Accessibility plots, in the form of 20mins isochrones, will be derived in GIS for cars, LGVs and HGVs using TRACC software and TrafficMaster data this will then be compared to forecast SATURN model journey time skims and pre-scheme opening data to assess the performance of the scheme.
<i>Employment levels</i>	The impact of the scheme upon employment levels at key development and regeneration sites will be monitored by Cheshire East Council. This will identify any changes in employment at the sites closest to the scheme.

Table 7.9 Standard Monitoring - Impact on the economy

7.5.9 Carbon

Scheme promoters are required to monitor and report information which shows how the scheme has affected carbon emissions. The evaluation of the impact on Carbon will be provided within both the 'One Year After Report' and the Final Report.

Changes in the volume of traffic and their speeds affect carbon emissions. An analysis will be undertaken to identify any significant differences between outturn flows and/or speeds compared to those forecast for the scheme.

The evaluation metrics that will be employed to understand the impact of the scheme on carbon emissions are summarised in Table 7.10.

The Team Leader for Travel Demand Data Collection will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

<i>Metric</i>	<i>Details</i>
<i>Traffic Volumes</i>	Traffic volumes will be monitored using the ATCs identified for the Travel Demand metric, as detailed in section 7.5.6 above. Data will be collected post-scheme opening (both within 1 year and 4 to 5 years after opening). The data will be used to determine changes in traffic patterns as a result of the scheme.
<i>Traffic speeds</i>	Changes in journey times will be evaluated using TrafficMaster data on the river crossings for the Travel Times and Reliability metric, as detailed in section 7.5.7 above. From this, the ratio of peak hour to free-flow speeds can be derived. Data will be collected pre-construction and post-scheme opening (both within 1 year and 4 to 5 years after opening). The analysis will show which routes and sections have seen changes in speeds.

Table 7.10 Standard Monitoring - Carbon

7.5.10 Summary of Standard Monitoring

Table 7.11 below summarises the Standard Monitoring to be undertaken for this scheme:

Standard / Enhanced / Fuller	Item	Stage (Inputs / Outputs / Outcomes / Impacts)	Sub-Item
Standard	Scheme Build	Inputs	Programme
			Stakeholder management
			Risk management
			Scheme completeness
	Costs	Inputs	Outturn construction costs
			Risks
			Cost savings
			Cost over-runs
	Delivered Scheme	Outputs	Outturn maintenance costs
			Changes to scheme
			Intended beneficiaries
	Travel Demand	Outcomes	Changes to mitigation
			Traffic volumes
	Scheme Objectives	Outputs, Outcomes & Impacts	Build Out / Occupancy Rates
			Accessibility
			Traffic Volumes
	Travel Times and Reliability	Outcomes	Journey times surveys
			Variability of journey times
	Economy	Impacts	Travel times
			Accessibility
Employment levels			
Carbon	Impacts	Traffic volumes	
		Traffic speeds	

Table 7.11 Standard Monitoring – Summary

7.6 Enhanced Monitoring Approach

7.6.1 Introduction

This chapter details the proposed methodology and the reporting mechanisms to be adopted for the Enhanced Monitoring measures. Data collection requirements and programme are discussed in chapter 8.

The Enhanced Monitoring approach is discussed under the following headings:

- *Noise*
- *Local Air Quality*
- *Accidents*

7.6.2 Noise

The noise impact of the scheme will be assessed using the relevant WebTAG worksheet in line with WebTAG Unit A3. Overall the scheme is expected to lead to a greater number of houses receiving a reduction in noise than those receiving an increase.

To save both time and cost, it is proposed that noise would only be monitored qualitatively by undertaking a comparison of forecast versus actual changes in flows.

It should also be noted that it is assumed that noise monitoring will also be undertaken on behalf of the Main Works Contractor during construction to satisfy planning conditions attached to the planning consent for the proposed scheme. However, as noise monitoring during construction is not a requirement within the DfT guidance on Monitoring and Evaluation, we do not propose to incorporate it into this Monitoring and Evaluation Plan.

The Team Leader for the Environmental Data Collection will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

The evaluation of the impact of the scheme upon noise levels will be provided within both the 'One Year After Report' and the Final Report.

7.6.3 Local Air Quality

There are areas within Poynton that are likely to experience changes in traffic conditions due to the scheme. As such one of the objectives of the scheme is to reduce traffic related pollutants within the town.

To monitor this metric, it is proposed that NO_x and NO₂ levels will be monitored through the use of data from CEC's ongoing monitoring of conditions.

Through comparison of observed data to the forecast impacts as modelled during scheme development the effectiveness of the scheme in relieving emission related pollutants. In addition, the observed data will be compared to the pre-scheme opening base data to review whether the scheme has had a significant impact on reducing the level of NO_x and NO₂ in the AQMAs, potentially leading to them no longer being designated.

During scheme development no PM₁₀ analysers were noted within the study area and therefore an NO_x Road Adjustment factor has been applied to the modelled PM₁₀ road contributions in line with guidance. It is proposed that a similar approach will be adopted post-scheme opening using observed NO_x levels.

The Team Leader for Environmental Data Collection will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

The evaluation of the impact of the scheme upon air quality will be provided within both the 'One Year after Report' and the Final Report.

7.6.4 Accidents

Changes in accidents were forecast using COBALT, the DfT's industry standard software.

For monitoring of accidents, STATS19 accident data will be obtained from police records once the proposed scheme has opened, including those on the scheme itself.

Comparisons will be made between forecast and outturn accidents on the same area as the initial COBALT assessment

The comparisons will be undertaken for the period 5 years after opening.

Analysis of the STATS19 data will also be undertaken to identify the impact upon vulnerable groups by identifying pedestrians and cycle accidents and those involving young children, the elderly and young drivers.

As accidents are directly related to traffic flows, consideration will also be given to changes in traffic flows with the introduction of the scheme, as well as any infrastructure changes and developments that were not included as part of the Do-Minimum scenario for the scheme.

The Project Manager will be responsible for ensuring details are readily available and clearly documented for supply to the Evaluation Manager.

7.6.5 Summary of Enhanced Monitoring

Table 7.12 below summarises the Enhanced Monitoring to be undertaken for this scheme:

Standard / Enhanced / Fuller	Item	Stage (Inputs / Outputs / Outcomes / Impacts)	Sub-Item
Enhanced	Noise	Impact	Qualitative monitoring on traffic levels
	Local air quality	Impact	Quantitative monitoring using NO ₂ and NO _x diffusion tube records from CEC
	Accidents	Impact	Accident records

Table 7.12 Enhanced Monitoring – Summary

7.7 Data Collection

7.7.1 Introduction

This chapter of the report sets out the data collection requirements, timescales and budgetary estimates associated with each of the evaluation metrics for the Standard Monitoring, Enhanced Monitoring and Fuller Evaluation.

7.7.2 Data Collection Requirements

Table 7.13 provides a summary of the data collection requirements for each of the evaluation metrics outlined within this document, together with an indication of when the data collection would be required within the monitoring and evaluation period. The indicative timescales are based upon the current programmed opening of the scheme in Summer 2020 i.e. 1 year after surveys would be undertaken in neutral months in Summer 2021, with the 4 to 5 years after surveys in Summer 2025 in the same neutral months.

Metric / Data Collection Standard Monitoring	Timescale			
	Baseline	Construction	~1 yr after Summer 2016	-5 yrs after Summer 2020
1. Scheme Build	✓	✓	✓	
2. Scheme Costs	✓	✓	✓	✓(A)
3. Delivered Scheme	✓	✓	✓	
4. Travel Demand				
a) Traffic volumes	✓(B)		✓	✓
5. Scheme Objectives	✓(B)	N/A	✓	✓
6. Travel Time and Reliability				
a) Journey time surveys	✓(B)		✓	✓
b) Journey time reliability	✓(B)		✓	✓
7. Impact on the Economy				
a) Employment levels	✓		✓	✓
8. Carbon	N/A	N/A	N/A	N/A
Enhanced Monitoring				
9. Noise	✓(B)			
10. Local Air Quality	✓(B)			
11. Accidents	✓(C)			✓
A = maintenance costs only B = already undertaken during scheme development N/A = uses survey data collected for other metrics C = already obtained for accident analysis				

Table 7.13 Data Collection Requirements

7.8 Governance

7.8.1 Introduction

This chapter sets out the proposed Governance arrangements to be adopted as part of the Monitoring and Evaluation strategy. It provides details of the key personnel responsible for each aspect of the scheme evaluation, the reporting lines and information dissemination.

7.8.2 Governance Structure

The proposed management structure for the coordination and delivery of the scheme evaluation is summarised in Figure 7.3 with key roles discussed in more detail within the subsequent paragraphs.

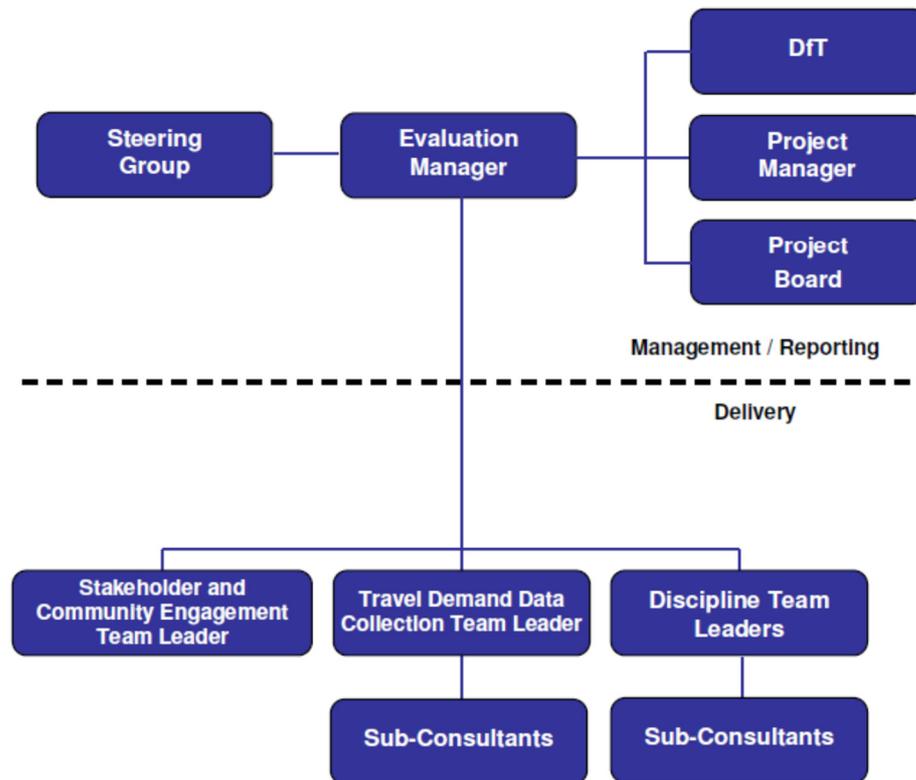


Figure 7.3 Governance

7.8.3 Key Personnel

Evaluation Manager

The Evaluation Manager will be responsible for the overall coordination and management of the Monitoring and Evaluation process and the production of relevant Evaluation Reports. The Evaluation Manager will be of an appropriate position and hold the relevant skills to be able to directly influence resources and drive the process forward. The Evaluation Manager will have knowledge of the scheme but will not be heavily involved in the process. This will ensure the avoidance of bias within the reporting procedure. In addition, they will have knowledge and appropriate experience of the appraisal and review process to ensure that the overall objectives are met.

The Evaluation Manager will also be responsible for the dissemination of the Monitoring and Evaluation information to the Project Board, the DfT and key stakeholders.

Steering Group

The Steering Group will be made up of key officers within CEC, members of the project team and external consultants employed to help deliver the scheme. Additional stakeholders who have a vested interest in the scheme may also be represented within the steering group. External stakeholders are likely to include representatives from the DfT as well as members / officers from other agencies or organisations.

The steering group will undertake an advisory role to the evaluation team to ensure that best use is made of local knowledge, experience and skills as part of the evaluation process. This will ensure that the evaluation is effectively managed and driven forward with consideration of a range of views.

The steering group will also advise on the commissioning of any sub consultants required to undertake specific elements of the evaluation such as data collection / analysis.

Upon completion the results of the evaluation will be presented to the steering group. A review will be undertaken to establish whether the evaluation has fully captured the resultant impacts of the scheme.

Delivery Team

Below the Steering group will be the delivery teams, each managed and led by a discipline Team Leader.

Each team leader will be directly responsible for ensuring that work is completed in line with the Evaluation Plan and will report directly to the Evaluation Manager.

Team Leaders will be responsible for identifying and reporting potential issues at an early stage to ensure resources are appropriately allocated to limit risks.

7.8.4 Quality Assurance

In order that the monitoring and evaluation exercise is a productive endeavour, the findings must be accurate, reliable and uncompromised. The evaluation must be independent, inclusive, robust and transparent.

There may be pressures on the evaluation project timescales and/or resources. Should such a situation occur, it is preferable to reduce the scope of the evaluation rather than compromise the quality of the evaluation.

The Evaluation Manager will ensure consistency in data collection, the methodology used, reporting and the interpreting of findings. The Evaluation Manager will be independent of the project team, providing impartiality to the evaluation. More information regarding the role of the Evaluation Manager is given in section 0 above.

Quality control is the responsibility of the Evaluation Manager. Quality assurance procedures will be implemented throughout the evaluation programme, enabling an early response to any problems encountered.

7.8.5 Management of Risk

It is important to consider potential risks to the Monitoring and Evaluation programme during the planning stage, so that mitigation measures can be identified and put in place should action be necessary. Table 7.14 gives details of potential risks and measures to be taken to mitigate these risks.

<i>Risk</i>	<i>Mitigation Measures</i>
Evaluation fails to fully address objectives	The approach to evaluation is to be agreed with CEC, DfT and the Steering Group before construction begins. It will be the responsibility of the independent Evaluation Manager to ensure the agreed approach is adhered to.
Failure to agree the purpose of evaluation	The Monitoring and Evaluation Plan is to be disseminated to the Steering Group to set out the purpose of evaluation so any areas of concern can be addressed.
Outcome/impact evaluation being carried out too early	Data collection will take place one year and 4-5 years after scheme completion, as recommended by the DfT, in order to capture the outcomes and impacts respectively, allowing sufficient time for the scheme benefits to take effect.
Failure to understand the limitations of the data	Sections 5 and 6 of this report gives details of the data to be collected and the conclusions that can be inferred from the findings. The methods of data collection have been designed to provide suitably detailed data for the evaluation requirements of the scheme and will be agreed with the DfT.
Evaluation design failing to provide robust data	Industry-standard forms of data collection are being employed and the evaluation has been designed to give thorough coverage of the area surrounding the bypass. The evaluation design will be agreed with the DfT.
Failure to foresee future analytical or data requirements	CEC are aware of the permanent count sites and employment data needed to complete each stage of the evaluation. Forward planning is needed so that temporary traffic counts can be commissioned to replace any non-operational permanent traffic counts, and to ensure employment data is being collected periodically throughout the evaluation process. Data collection and analysis procedures will be agreed with the DfT.
Failure to gather sufficient, good quality data	There will be comprehensive coverage of the Poynton area by traffic counts that can be in place for longer if the data collected is not sufficient. Journey time surveys and employment data are more routine, non-project specific forms of data, which are less susceptible to technical problems. The evaluation design will be agreed with the DfT to ensure sufficient data is collected.
Producing evaluation findings that are not actionable or that do not have clear implications	The One Year After Report and Final Report will summarise findings in terms of lessons learned and improvements to scheme planning and delivery that could have brought about greater benefits. This information can then be used to inform proposals and decision making for similar schemes and to ensure good practice is replicated.
Poor or disrupted planning as a result of insufficient time, resources or management priority	The evaluation programme follows DfT guidance and will be agreed with the DfT. A suitably experienced independent Evaluation Manager will be appointed by CEC, who will be responsible for the delivery of the evaluation programme.
Failure to account for other outcome/impact influencing factors, and so not being able to directly attribute outcomes/impacts to this scheme	The Monitoring and Evaluation Plan will have to be assessed on an ongoing basis for its suitability, and amended as necessary to take account of any factors that may arise during the Monitoring and Evaluation programme.

Table 7.14 Mitigation Measures for evaluation risks

7.8.6 Timescale for Reporting

Monitoring and Evaluation progress will be reported within the Quarterly Reports issued to the DfT during scheme construction.

Post-implementation, based on the expected data collection programme given in section 7.7.2, the One Year After Report is expected to be issued to the DfT in Winter 2021, followed by the Final Report in Summer 2025. This timeframe allows a six-month window for data to be collated, analysed and the findings to be reported.

7.8.7 Dissemination Plan

As mentioned above, the One Year After and the Final Monitoring and Evaluation reports will be disseminated to the Project Board, the DfT and key stakeholders by the Evaluation Manager.

Briefings will be held with the Steering Group, which includes local Members, the Local Enterprise Partnership, local Chamber of Commerce, local residents groups and pedestrian / cycle groups.

Once those briefings have been held, the main method of disseminating the Monitoring and Evaluation reports will be via Cheshire East Council (CEC)'s website. This will be managed by CEC's communications department. Local press releases will be issued as appropriate.

7.9 Benefits Realisation Plan

A key part of future monitoring and evaluation is benefits realisation. The purpose of a Benefits Realisation Plan (BRP) is to enable the benefits that are expected to be derived by a project to be identified, tracked and compared to those that were predicted. A BRP details the key activities that are required to manage the successful realisation of the benefits i.e. what needs to be done, when and by whom.

The BRP is owned by the Senior Responsible Owner (SRO) who will use it to guide decision making about the scheme and to demonstrate completed delivery.

The objectives of the scheme are set out in section 7.5.5 of this report and are the starting point for the BRP. As the scheme has been developed the mechanism to deliver these objectives has been designed into the scheme and has been reviewed by the project manager and project board to ensure that the scheme is anticipated to meet all objectives.

The method for determining the success of the scheme is by monitoring the delivery of the outputs to ensure that they are delivered in such a way that meets the objectives and by finding a suitable measure to assess performance.

Measurement of benefits can also be time critical, the BRP therefore sets out the appropriate time for monitoring to provide the best information on the effectiveness of the scheme.

The BRP makes use of both qualitative and quantitative data depending on the measure being reviewed, however, quantitative data is generally makes the outcome and level of impact clearer.

It is also important to consider the risks associated with the delivery of any benefit and achieving the objective; therefore, the BRP provides an indication of the key risks to achieving each objective.

Scheme Objectives	Infrastructure to Deliver the Objective	Indicator for Measuring Success	When will it be measured?	Qualitative / Quantitative	Data Collection Requirements	Key Risks to achieving Scheme Objective
To support the economic, physical and social regeneration of Poynton and the north of the Cheshire East area, in particular Macclesfield, by creating and securing jobs.	Poynton Relief Road	Employment levels in Poynton and build out / occupancy rates of key development sites	One year and five years after scheme opening	Quantitative	Employment statistics for the local area and build out / occupancy information from development sites	Socio-economic downturn leading to a lower level of investment than expected
To relieve traffic congestion within Poynton by removing traffic, including Heavy Goods Vehicle (HGVs), onto the Relief Road, and to reduce traffic in less desirable roads on the wider network.		Reduction in traffic volumes on routes through Poynton town centre and improved speeds	From scheme opening	Quantitative	Traffic flow data from ATCs, journey time data from TrafficMaster.	Lower volume of traffic switching to use the PRR than forecast. Higher levels of traffic growth than forecast resulting in ongoing congestion in Poynton town centre.
Deliver a range of complementary measures on the A523 corridor to Macclesfield that address road safety, congestion and mitigation of the wider environmental impact of traffic.		Reduction in traffic volumes on routes around the A523 and improved speeds	From scheme opening	Quantitative	Traffic flow data from ATCs, journey time data from TrafficMaster.	Lower volume of traffic switching to use the PRR than forecast. Higher levels of traffic growth than forecast resulting in ongoing congestion on A523.
Boost business integration and productivity: improve the efficiency and reliability of the highway network, reducing the conflict between local and through traffic, and providing an improved route for freight and business travel.		Improved journey times for long distance movements	From scheme opening	Quantitative	Journey time data from TrafficMaster	The volume of traffic using the PRR is lower than forecast.
Allow improvements to the highway network for public transport, walking and cycling.		Increased use of pedestrian and cycle facilities and improved bus patronage.	From scheme opening	Quantitative	Cycle and pedestrian surveys and bus patronage data.	No improvements to facilities and lower usage.

