



Department
for Transport

Capturing Local Context in Transport Appraisal

Case Studies

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Department for Transport
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Foreword

1. The Government has set out its clear priority to level up the country and the Department for Transport recognises the key role that investment in transport infrastructure and services can play in improving connectivity and access to employment, education and other amenities across the country in support of this agenda.
2. The Green Book Review set out the importance of understanding the strategic context for spending proposals as well as ensuring that the impact of those proposals on local places is analysed and presented to decision-makers. DfT's Transport Analysis Guidance (TAG) sets out detailed appraisal guidance for capturing the impacts of transport spending and provides advice and encouragement to those developing business cases to analyse and present this local context effectively.
3. Case studies can play a really valuable role in demonstrating to stakeholders how our guidance can be applied in practice, and we have had very positive feedback from stakeholders on our previous case studies.
4. The case studies presented here demonstrate how TAG can be used to make the case for transport investment which supports local economic growth objectives and takes full account of the local context. We hope these case studies will be of value to scheme promoters and analysts working on business cases, and we look forward to your feedback.

Amanda Rowlatt, Chief Analyst

A handwritten signature in black ink that reads "Amanda Rowlatt". The signature is written in a cursive, slightly slanted style.

Executive summary

1. Capturing local context in transport appraisal is an important part of understanding the strategic and economic case for investment. This is especially true when a given scheme has objectives around the “regeneration” or “levelling-up” of a certain area. Previous research carried out for the Department for Transport emphasises the importance of local context in determining the likely impact of a transport intervention on the wider economy and setting out a robust case for change¹. The Green Book Review 2020 and the updated Green Book place a strong emphasis on the importance of capturing these impacts in appraisal².
2. While the Department’s Transport Analysis Guidance is clear that the economic impacts of transport investment are context-specific, responses to the consultation on the Department’s Appraisal and Modelling Strategy indicated that transport practitioners would value examples of how to apply the guidance in practice³.
3. This report demonstrates how flexibilities in existing guidance can be used to capture the local context for schemes and make the case for schemes with impacts on the local economy. This report is split into three parts. Part A puts the case studies in the context of the Green Book Review and explains the importance of presenting local context in transport appraisal. While the business cases discussed here were completed before the Green Book Review, this report shows how scheme promoters have used existing guidance to present the local context and understand impacts of the proposed transport schemes on places. Part B provides detail on four analytical approaches relevant to capturing local context: (1) presenting the economic, social and policy context in the strategic case, (2) wider economic impacts analysis, (3) scenarios and sensitivity analysis and (4) place-based analysis.
4. Part C of the report presents three case studies which illustrate how these analytical approaches have been applied in business cases which have come to the Department for a decision. The first two case studies demonstrate how wider economic impacts analysis can be applied to illustrate place -based regeneration impacts such as agglomeration and job creation. The third case study shows how place-based analysis can be used to assess distributional and differential impacts by

¹ [Transport Investment and Economic Performance](#)

² [Final Report of the Green Book Review](#)

³ [DfT Appraisal and Modelling Strategy](#)

looking at impacts on local people, particularly those in deprived areas. It also considers how sensitivity analysis can be used to test more flexible assumptions about local context.

5. In summary, this report demonstrates how promoters can successfully use methodologies set out in Transport Analysis Guidance to provide insight on the local context for transport investment. The case studies are not intended to represent the sole methods by which local context can be understood and presented but an illustration of approaches which may be useful to transport practitioners facing similar challenges. Any analysis undertaken should be proportionate and appropriate to the nature of the scheme. The Department welcomes feedback on these case studies and alternative methods which could be potentially used to capture local impacts in appraisal.

1. Part A: The Green Book Review: Transport Analysis and Local Context

Introduction

1. Part A introduces key themes in the Green Book Review 2020⁴ (the Review) relating to how the appraisal framework should support the Government in meeting its strategic objectives, for example in relation to levelling up. The Review highlighted the need to engage with the strategic context of an investment proposal, avoid an excessive focus on benefit-cost ratios (BCRs) and the importance of place-based appraisal for understanding a scheme's impacts at the local or regional level.

The Green Book Review

2. HM Treasury updated the Green Book in November 2020 to reflect the findings and recommendations of the Green Book Review. A key objective of the Review was “to make sure that government investment spreads opportunity across the UK.”
3. The Review found that the strategic case for many proposals is weak, and that there is insufficient engagement with the strategic context in the economic appraisal. In the economic case, this can lead to undue focus on the BCR at the expense of analysis which illuminates impacts of interest, particularly those showing how a scheme contributes to achieving strategic priorities. This can lead scheme promoters to focus their efforts on boosting the BCR with inadequate attention given to how a proposal contributes to strategic priorities.
4. The Review states that business cases must do more to demonstrate the proposal's specific contribution to intended strategic goals. This can include place-based analysis for proposals with place-specific impacts:
 - Illustrating how the intervention interacts with the social and economic features of different places and the range of complementary investments in the geographical area

⁴ [Final Report of the Green Book Review](#)

- Capturing localised economic and distributional impacts

Implications of the Review for the DfT

5. Transport investment (alongside other policy interventions) plays a key role in supporting the government agenda around levelling up and other transformational policies. When making the case for transport interventions, it is therefore vital that promoters are given appropriate advice on how to demonstrate the impact of a scheme in its local setting and communicate this effectively to decision-makers.

Challenges with Making the Investment Case for Schemes with Levelling up Impacts

6. The DfT recognises that there can be challenges associated with capturing and presenting local impacts alongside standard transport analysis. Whilst promoters have put forward schemes which demonstrate value for money in all regions of the UK, there is a perception that it can sometimes be difficult for those proposals which are primarily intended to regenerate an economically disadvantaged area to provide a compelling investment case.
7. Left behind regions in the UK are likely to have lower levels of background travel demand, whilst also suffering from congestion hotspots and other problems on the network. As a result, the appraisal of such schemes may produce low user benefits and wider (economic, social and environmental) impacts. This may suggest that the scheme is low value for money, thereby weakening the argument for investment.
8. The Review implies that scheme promoters should avoid a sole focus on boosting the BCR and aim to develop analysis which provides insight on the extent to which a scheme meets strategic objectives. In particular, analysis should effectively capture local context to demonstrate how the scheme will meet place-based objectives.

The DfT's Interpretation of Local Context

9. DfT view is that a scheme's economic appraisal ought to account for the following areas to ensure that it is capturing local context:

Aspects of Local Context

- **The socio-economic context of the scheme:** This includes the characteristics of the local population in terms of employment status, wages, educational attainment and other indicators of socio-economic performance.
- **Transport constraints faced by people in the local area:** For instance, the extent to which a lack of connectivity constrains growth and access to centres of economic activity.
- **The scheme's role in the overall "intervention package":** Transport is often a necessary but insufficient condition for regeneration of an area. A business case must therefore clarify the role of the scheme in the overall intervention package (which may include both transport and non-transport interventions).
- **The scheme's potential social welfare impact on the local economy:** This includes impacts on user-benefits and through improved connectivity, the impact on the productivity of the local economy, the functioning of local labour markets and opportunities for commercial and residential development.
- **Place-based analysis:** This includes analysis on how impacts differ across areas including any differential impacts on vulnerable groups.

10. When referring to 'local impacts', in most instances the context and impacts of the transport scheme will relate to the near vicinity of the intervention. However, the methodologies set out in this report are also relevant where spatial impacts of a scheme, particularly those set out in strategic objectives, are further away, for example for some long-distance road or network schemes.

The Aims of this Report

11. This report aims to demonstrate how flexibilities in DfT's business case guidance – including guidance within [Transport Analysis Guidance \(TAG\)](#) and the [Rebalancing Toolkit⁵](#) – have been applied to different schemes to capture local context. In doing so, it aims to promote greater transparency surrounding how analysis supports DfT decision-making. The relevant TAG Units discussed in this report are Units A2 (Wider Economic Impacts), TAG Unit A4-2 (Distributional Impact Appraisal) and TAG Unit M5-3 (Supplementary Economic Modelling).
12. Part B of the report sets out selected analytical approaches which can be used to capture local context. Part C then applies these approaches to three case studies (detailed in the box below) which show how these approaches have already been used to develop successful cases for investment. All three schemes have received funding from their respective investment boards and are currently under construction, due to open in 2021.

⁵ The Levelling Toolkit is a forthcoming update to the Rebalancing Toolkit which forms part of the supplementary guidance to the Transport Business Case guidance.

Case Study Schemes

- **Sunderland Strategic Transport Corridor Phase 3:** This is the third phase of a road scheme aimed at improving transport links between the City of Sunderland, the Port of Sunderland and key industrial areas. The scheme primarily aims to provide improved connectivity for manufacturing businesses and support the redevelopment and regeneration of underutilised sites.
- **Newhaven Port Access Road:** This is the second phase of a road scheme aimed at improving transport links from Newhaven to the Port of Newhaven. The scheme primarily aims to support the delivery of complementary investment into a series of Enterprise Zone sites, which are targeted towards regenerating the Newhaven region.
- **Midland Metro Edgbaston Extension:** This is an extension of the existing Midland Metro tram that principally aims to improve public transport access to jobs and services to the west of Birmingham City Centre – also targeting relatively deprived areas within Birmingham and providing residents with access to greater economic opportunity.

2. Part B: Analytical Approaches to Capture Local Context

Introduction

13. Part B introduces four analytical approaches which use flexibilities in TAG and other DfT guidance to capture local context in both the economic and strategic cases. It then signposts how these have been used in analysis of the three schemes set out as case studies in Part C.

Analytical Flexibilities to Capture Local Context

- **Presenting the social, economic and policy context for a proposal in the strategic case:** This is required to develop a strong strategic case through considering fundamental questions regarding how the scheme interacts with its local setting and characteristics (i.e. its local context). The DfT Levelling-Up Toolkit⁶ provides useful guidance in this area.
- **Wider economic impacts:** The methodologies set out in TAG Wider Economic Impacts guidance (units A2) can be applied flexibly and proportionately to understand and present local impacts including those relating to productivity, employment and housing.
- **Scenarios and sensitivity analysis:** Use of scenario and sensitivity testing provides a more comprehensive understanding of potential localised impacts. For instance, the business case may test the impact on value for money of varying assumptions around the rate of local population or economic growth or the impact of other transport and non-transport interventions proceeding.
- **Place-based analysis:** This concerns economic analysis applied to geographically defined areas within the UK.

⁶ To be published shortly to replace the Rebalancing Toolkit as discussed above

- *Standard TAG distributional impact (DI) analysis:* This is important for systematically considering the potential for differential impacts on certain vulnerable social groups within the geographical area of interest.
- *Alternative distributional impact analysis:* TAG allows promoters to adopt innovative analytical approaches to DI analysis which are not currently set out in the guidance. This could include assessing a scheme's impact on groups which differ from the standard TAG socio-economic categories assessed as part of distributional impact analysis (e.g. Index of Multiple Deprivation deciles/quantiles, and Acorn classification groups). It could also include assessing non-TAG impacts such as wellbeing levels.
- *Choropleth maps:* These are coloured maps that visually categorise statistical data and can be used to present both TAG and non-TAG distributional impact analysis.

16. These analytical approaches are described in more detail below. The approaches illustrated should be applied proportionately in line with TAG principles. Their implementation will vary depending on the size and nature of the scheme being appraised. The advice in this report is not intended to be prescriptive and promotes the use of other forms of analysis.
17. It should also be noted that these approaches are not mutually exclusive. For instance:
- Evidence provided on the social, economic, and policy context in the strategic case may overlap with the evidence presented in the economic narrative (which is required in the economic case when wider economic impacts are estimated).
 - Sensitivity testing may include consideration of wider economic impacts
 - Wider economic impacts may be considered as part of place-based analysis

Presenting Social, Economic and Policy Context in the Strategic Case

18. To understand the “case for change”, it is important to understand the socio-economic context within which the proposed scheme will operate and the extent to which transport is acting as a constraint to economic efficiency and equity objectives. It is also important to understand the extent to which the intervention aligns with local plans and complementary policies within that area.

19. The Levelling-Up Toolkit will support scheme promoters in developing a clear evidence-based narrative for projects or programmes that have the objective of spreading growth across the country. Full guidance on the toolkit is available online⁷.
20. This Toolkit focuses specifically on helping promoters set out how an investment may contribute to supporting local and regional economic performance. It sets out steps which can be used to support the development of this narrative and provides the questions and evidence to consider at each step.
21. The Toolkit provides an analytical framework for understanding how a scheme may affect its locality. That is, it supports the development of a stronger, more context-specific strategic case by helping promoters more accurately assess how a programme or project addresses levelling up objectives.
22. The Toolkit includes questions to help identify important elements of local context including:
 - The socio-economic characteristics of the area targeted by the intervention
 - The extent to which transport is acting as a constraint on growth.
 - The potential local impacts of schemes and other strategies; and, programmes or projects with which the intervention may interact in the local vicinity including local growth plans.
23. Please refer to the Toolkit for checklists of analytical questions and suggested measures to inform the levelling-up analysis in the strategic case.

Wider Economic Impacts Analysis

24. TAG provides guidance on capturing the wider economic impacts of transport, which are the additional impacts of a scheme on the economy beyond transport user benefits. Such impacts occur in non-transport markets (such as labour markets). This report explores how wider economic impacts analysis can be used effectively to develop a stronger understanding of impacts on a local economy and help schemes highlight their potential contribution to economic development and regeneration.

Economic Narratives

25. In line with [TAG A2-1](#), the analysis of wider economic impacts should be underpinned by a clear economic narrative, which provides justification for the inclusion of these impacts by explaining how the intervention will address the market failures in secondary markets with reference to specific local context. The evidence in the economic narrative is important for two reasons. Firstly, it can usefully supplement evidence presented in the levelling up toolkit around the case for

⁷ <https://www.gov.uk/government/publications/transport-business-case>

change. Secondly it provides justification for quantified estimation of wider economic impacts, which are often an important element of the local impact of the proposed investment.

26. Economic narratives should include evidence and reasoning on the following areas:
 - The socio-economic context of the local vicinity of schemes.
 - The extent to which transport is acting as a constraint to connectivity, commercial and residential development, employment and productivity.
 - The existence of local market failures and displacement.
 - Justification of the required estimation approach adopted in the business case to capture and quantify the expected impacts, whilst considering robustness and proportionality.

27. The economic narrative in the **Newhaven business case** identified a lack of transport connectivity as constraining the area's regeneration potential. The Newhaven Port Access Road (NPAR) scheme was designed to enable regeneration of key areas by supporting the delivery of other complementary investments across the region, namely commercial investment in the Newhaven Enterprise Zone. These interventions were estimated to support development of the local economy through additional jobs and a rise in overall investment and economic activity.

28. The economic narrative in the **Sunderland business case** identified "economic activity inhibitors". One was the Sunderland economy being reliant on a narrow range of sectors and businesses based in out-of-town industrial and retail estates, leaving Sunderland city centre unable to fulfil an active economic role. The economic narrative also explored the lack of variety in types of jobs in the city centre resulting from stagnated growth– this was identified as reducing the attractiveness of Sunderland to investors and its ability to retain highly skilled workers.

29. The economic narrative argued that the Sunderland Strategic Transport Corridor Phase 3 would contribute to economic development, particularly in the form of increases in the concentration/density of economic activity in this area. This was evidenced through, for example, the scheme's proposed role in improving access between the city's manufacturing hub, the City Centre and the Port of Sunderland, thereby encouraging closer integration.

30. As part of wider impacts guidance, TAG presents a set of areas across England where, if a scheme falls within this area, productivity impacts could be expected to be significant. TAG refers to such areas as "Functional Urban Regions" (FURs) as these have typically high working populations and job densities, which reflects the fact that agglomeration impacts are most significant for transport schemes located within or near large and dense employment centres. The Sunderland scheme operates within a FUR and so scheme promoters were able to justify the inclusion of wider economic impacts in the business case. Promoters can capture the local economic potential of FURs through various methods of wider economic impacts modelling.

Estimating Wider Economic Impacts

31. Wider economic impacts analysis focuses on what TAG terms as “Level 2” and “Level 3” analysis (“Level 1” analysis only concerns transport user benefits). Level 2 impacts capture wider economic impacts assuming no land use change, whilst Level 3 analysis assumes land use change will occur because of the intervention.
32. The **Sunderland case study** shows how the application of Level 2 wider economic impacts modelling can function in practice. Induced investment, employment effects and productivity (agglomeration) impacts were estimated for the scheme. This analysis supported claims made in the strategic case that the scheme had the potential to provide wider benefits to the region through enhancing connectivity.
33. **The Newhaven case study** shows how additionality modelling can be used as a proportionate approach to estimating Level 3 impacts (detailed in the box below). The revised Green Book has an annex on place-based analysis which highlights the importance of considering leakage, substitution and displacement at lower spatial scales.

Additionality Modelling

- Additionality modelling is a form of Level 3 analysis which helps promoters explore the spatial distribution of commercial/residential development, employment and productivity arising from land use change.
- Assessing additionality is important when making the case for schemes that target specific regions. Where there is evidence that a scheme is unlocking new developments of local areas, additionality modelling is one of the more cost-effective forms of Level 3 modelling.
- Additionality modelling relies on local evidence and wider research to estimate the net national impact of interventions. Evidence must demonstrate that scheme impacts are indeed additional and not the result of merely displacing jobs or development already present in one location to another.

34. Following guidance found in [TAG M5-3](#), the Newhaven case study identified commercial developments dependent on the investment, estimated the number of potential jobs arising from these developments, accounted for deadweight and then adjusted for leakage, displacement and multiplier effects to estimate the impact of NPAR on unlocking employment across Newhaven’s Enterprise Zone sites. The analysis took account of the local context by considering interactions with various Enterprise Zone sites which scheme promoters argued to rely on NPAR for the full realisation of benefits.

Scenarios and Sensitivity Analysis

35. To address the uncertainties that exist around the value for money of an appraised scheme, promoters should conduct sensitivity and scenarios analysis to understand the potential impacts which varying key assumptions have on the case for

investment. In terms of capturing local context, sensitivity analysis can provide decision makers with a better understanding about how different assumptions regarding the local area may impact on the value for money assessment.

36. For instance, sensitivity testing can be used to reflect alternative scenarios around local housing and population growth, which could differ from the standard TAG forecasting assumptions. These assumptions may impact on transport demand and scheme benefits⁸. Sensitivity tests could also be conducted on the potential impact of other proposed transport and non-transport investments in the area which may be complements or substitutes to the appraised scheme.
37. An example of how sensitivity analysis can be used to explore the impact of local context can be found in the **Birmingham (Edgbaston Extension) case study**. The Birmingham Eastside Extension (BEE) is another section of the Midland Metro line planned in the local vicinity and separate to the Edgbaston Extension. A sensitivity test was conducted to show the impact of the BEE on the benefits of the Edgbaston Extension and showed that it could substantially improve the value for money of the scheme.

Place-Based Analysis

38. Place-based analysis concerns economic appraisal applied to geographical areas within the UK. The 2020 version of the Green Book states that place-based analysis should be conducted for proposals with objectives specific to a place, area or type of area.
39. Where a proposal has geographically focused strategic objectives, then the principle frame of reference relating to the analysis of costs, benefits and value is the area in question. There should also be proportionate analysis of the whole home country effects or the whole UK effects.

Revised Green Book: Place-based analysis for projects with a specific spatial focus

Where the objectives of proposals have a specific spatial focus then place-based analysis should be central to economic appraisal and the advice it supports.

The following questions may be considered as part of this analysis

- Is the proposal part of a wider programme that has been agreed in principle? If not, are there external dependencies that significantly affect its viability?
- What are the expected effects in the target areas?
- Are there likely to be unintended negative or positive collateral effects in the target area or within wider spatial area such as nearby travel to work areas?

⁸ [TAG Unit M4](#) describes the use of sensitivity testing and scenarios in transport appraisal. Section 4 from paragraph 4.2.8 onwards describes the discusses the special features of local uncertainty, although most of the document is relevant. Please also refer to the DfT note- [Updating Land Use Assumptions In NTEM](#), which provides advice about including local land use assumptions in appraisal.

- Within the identified areas will any of the protected groups identified by the Equality Act or will families be significantly adversely affected by the proposal?
- Will there be significantly different impacts by income group? All significant gaining and losing groups of a policy should be identified.
- Where relevant data is unsatisfactory or unavailable can improvements be made to produce it in the future?

Alignment with local plans and strategies

- What are the views of local stakeholders?
- To what extent does the proposal align with wider public policy in the relevant area/s and the UK as a whole?

Interdependencies with other local or national interventions

- Is achievement of the proposal's SMART objectives dependent on the successful delivery of other proposals? If so, are they part of the same programme? If not, how is this risk being managed?

40. The revised Green Book also states that schemes which do not have geographically defined strategic objectives but which appear likely to have different implications (either positive or negative) for parts of the UK should also conduct place-based analysis unless it can be justified as disproportionate to do so.
41. TAG guidance on distributional impacts can be useful in providing insight on place-based effects. The Departmental also welcomes the use of novel techniques and approaches to distributional analysis not currently incorporated in the guidance.

TAG Distributional Impact Analysis

42. According to [TAG Unit A4-2](#), distributional impact (DI) analysis considers how the impacts of a transport scheme (both beneficial and adverse) differ across social groups.
43. This analysis is a mandatory part of the transport appraisal process and is reported in the economic case and the Appraisal Summary Table. A range of social groups should be considered in DI analysis:

Social Groups Within the Scope of Distributional Impacts

- Individuals on low incomes
- Children: proportion of the population below 16
- Young adults: proportion of population aged 16-25
- Older people: proportion of population aged 70+
- Proportion of population with a disability
- Proportion of population of Black and Minority Ethnic (BME) origin

- Proportion of households without access to a car
- Carers: proportion of households with dependent children

Alternative Distributional Impact Analysis

44. Promoters are encouraged to adopt other approaches to understanding distributional impacts, beyond those in TAG unit A4.2, to capture local context in scheme appraisal. This can include assessing a scheme's impact on groups which differ from the standard TAG socio-economic categories considered as part of DI analysis and/or assessing non-TAG impacts such as wellbeing or loneliness (see box below).

Potential Alternative Distributional Analysis

Key impacts could include:

- User benefits
- Social/environmental impacts
- Wider Economic Impacts
- Wellbeing
- Loneliness

Disaggregated by:

- Occupation groups/industrial groups
- Multiple Indices of Deprivation
- Acorn social groups
- Employment status

45. The **Birmingham case study** shows how place-based analysis can be used to highlight the benefits that a scheme may provide to relatively deprived areas. This analysis used choropleth maps representing Index of Multiple Deprivation data to show how the Midland Metro Edgbaston Extension will provide improved connectivity to areas of significant deprivation and increase access to key economic centres.

3. Part C: Case Studies

Introduction

46. The purpose of Part C of this report is to present three case studies where the analytical approaches discussed in Part B have been used to support the business case for the scheme. The case studies set out a summary of the scheme's local context, key elements of the strategic case for the scheme and the TAG approaches and flexibilities used to capture local context. All three business cases were assured by DfT analysts who worked with scheme promoters and economic modellers to ensure economic appraisal was robust.

Case Study 1: Sunderland Strategic Transport Corridor 3

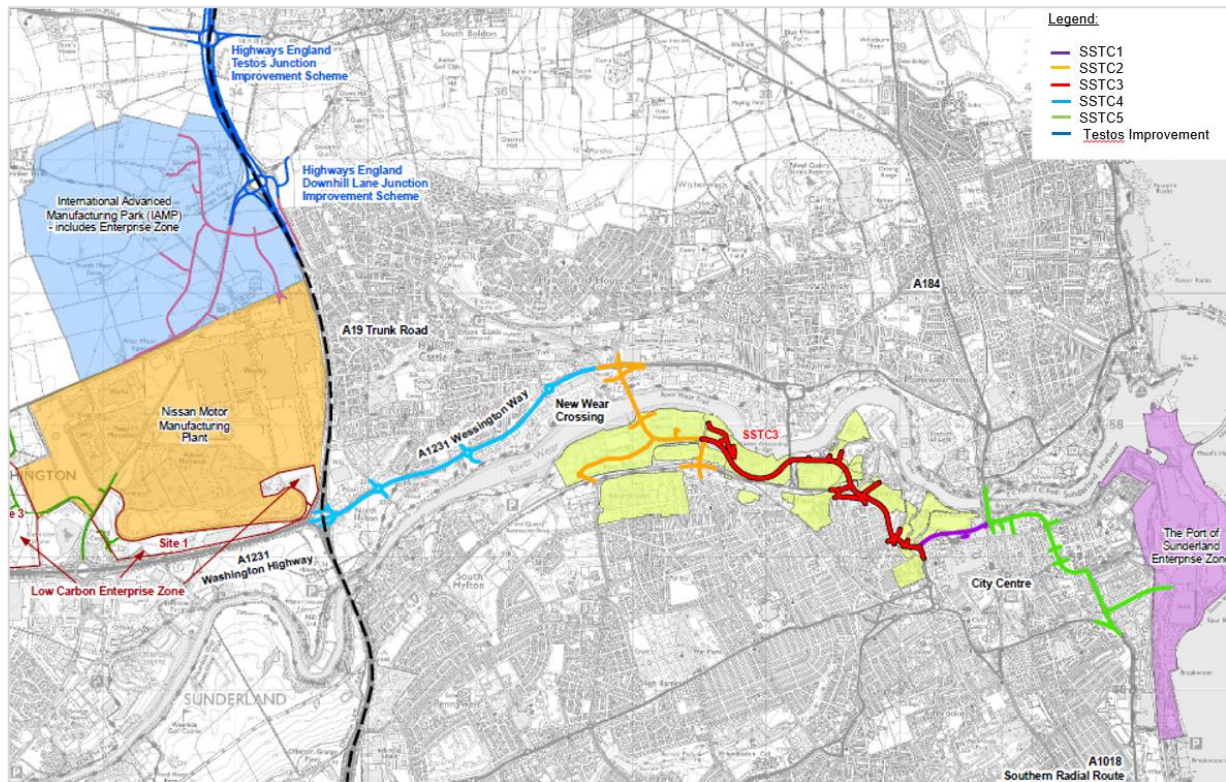
Local Context and Scheme Objectives

- Sunderland is in the local government district of Tyne and Wear, in the North East of England. In 2011, Sunderland had a population of over 275,000.
- The city is connected to the Strategic Road Network via the A1290 which links to the A19 and provides access to the Sunderland Low Carbon Enterprise Zone, the Nissan Motor Manufacturing Plant, the International Advanced Manufacturing Park, and the Port of Sunderland. The Port is identified as one of the city's key economic assets in Sunderland City Council's Core Strategy and Development Plan 2015-2033.
- The route between the Port of Sunderland, the city centre and key economic sites including the Nissan plant currently offers limited resilience or contingency during incidences or bridge closures. It is therefore judged as inadequate for large employers such as Nissan, especially where complicated "just in time" supply chains are required.
- Furthermore, the lack of cross-river highway capacity and high traffic volumes during peak periods results in significant congestion at pinch points on either side of the two existing city centre crossings.
- An improved road link is a key feature of the vision to regenerate Sunderland. The Sunderland Strategic Transport Corridor was first identified by the City Council in its Unitary Development Plan and continues to form a key element of the Council's emerging Local Development Framework.
- The Sunderland Strategic Transport Corridor Phase 3 scheme is the third phase of a continuous dual carriageway link between the A19 and the Port of Sunderland. It aims to support regeneration and further develop the Port through providing improved connectivity for manufacturing businesses and improving access to employment and training opportunities in the city.

The Scheme

47. The Sunderland Strategic Transport Corridor is comprised of five phases, with each phase assessed on its business case separately. The five phases of the SSTC3 are shown on the map below.

Figure 1: Sunderland Strategic Corridor 3 route



48. The Sunderland Strategic Transport Corridor 3 (SSTC3) is the focus of this case study and shown as the red line in Figure 1. It forms part of Sunderland’s Strategic Transport Corridor plans of phased works, with the first and second phases of the SSTC schemes having opened in 2015 and 2018 respectively.
49. SSTC3 consists of a new 2km dual carriageway linking these earlier phases between the Northern Spire Bridge (SSTC2) and St Michael’s Way in Sunderland City Centre (SSTC1).
50. SSTC3 is of importance as part of the wider SSTC programme. The strategic case states that without it the benefits of both SSTC1 and the SSTC2 Northern Spire are unlikely to be realised. It should be noted that the updated Green Book provides guidance on how programme-level impacts of this nature should be addressed in appraisal.

The Strategic Case

51. The strategic case identified three elements in the case for change. The first was a lack of network resilience between the A19, Nissan and the Port of Sunderland. The strategic case presented evidence that in 2016 there were 133 Wearmouth Bridge

incidences or an average of over 10 per month. Present transport links are judged as inadequate for Nissan’s “just in time” supply chain due to low resilience and contingency during incidences or bridge closures. SSTC3 connects the key economic places to the west of the scheme (wherein lies Nissan and the Enterprise Zone) to the east of the scheme (in which lies the City Centre and the Port of Sunderland). The strategic case argued that connecting these areas will help address Nissan’s supply chain issues and thereby safeguard Nissan’s significant role in the local economy.

52. The second element was the congested River Wear crossings. The strategic case explained that this was having a considerable impact upon accessibility to Sunderland which is particularly important to support access to the city’s employment sites. Promoters provided traffic modelling evidence which concluded that congestion would likely continue to stifle growth and regeneration aspirations in the area.
53. The third element was the fact that the local transport system arguably did not support the regeneration and redevelopment of the Sunderland area. This was supported by estimation of wider economic impacts in the economic case (i.e. around productivity, jobs and output).
54. The proposals for SSTC3 are incorporated within the Unitary Development Plan (UDP), the emerging Local Development Framework Core Strategy, the Tyne and Wear Local Transport Plan (to be replaced by the North East Transport Plan) and the Economic Masterplan (EMP) for the city.

Economic Appraisal

55. The economic case for the scheme was assessed in line with TAG and included both monetised and non-monetised impacts. Outputs from the transport model were used to assess Level 1 impacts (to produce the initial BCR) and to inform the calculation of the Level 2 impacts (for the adjusted BCR). The results are shown below:

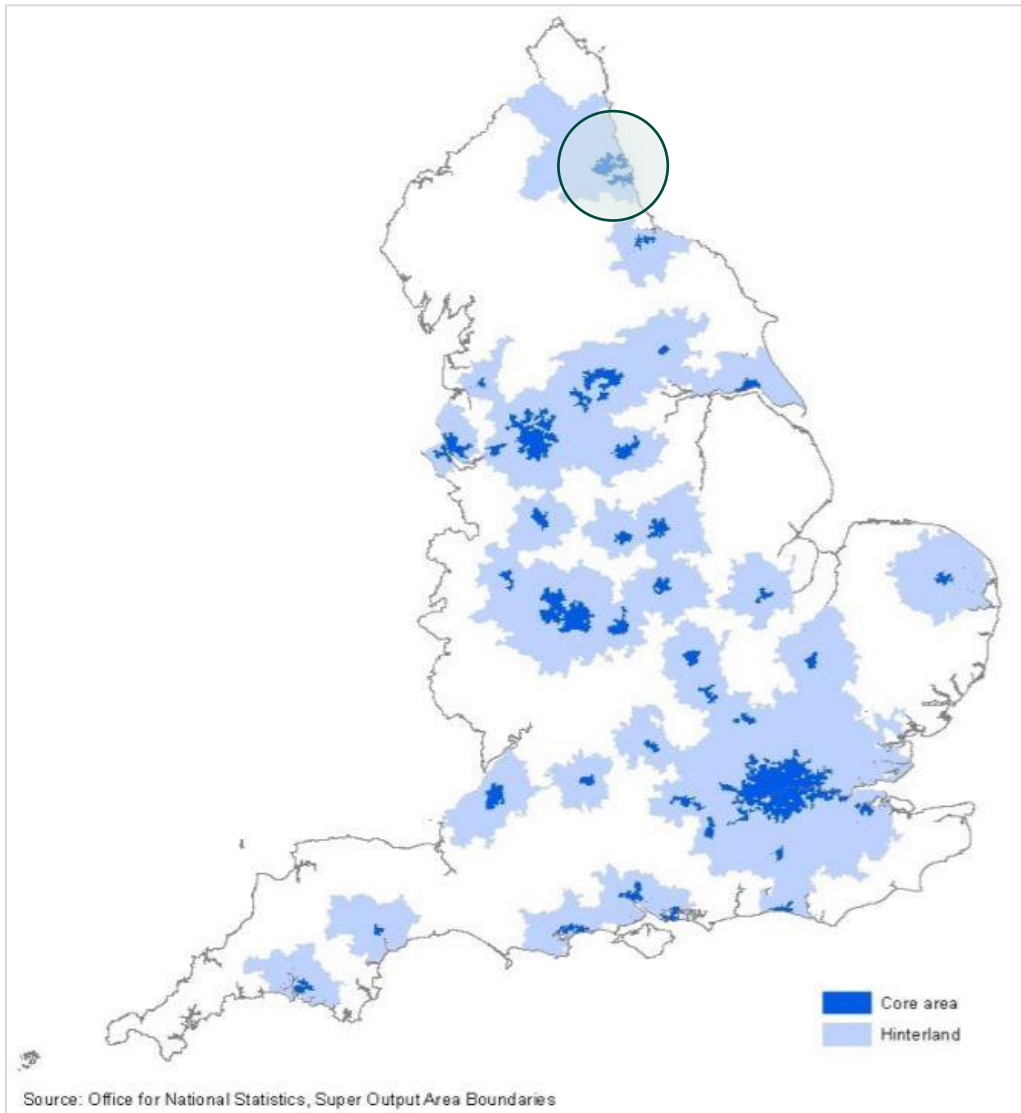
Table 1: Value for Money Summary

Metric	Value	VfM Category	Main Drivers
Initial BCR (Level 1)	2.0	Medium – High	Time savings: commuting and other trip purposes (£81.8m) and business users (£37.3m) Indirect tax revenues from fuel duty (£-6.3m) Greenhouse gases (£2.9m)
Adjusted BCR (Level 2)	2.9	High	Wider economic impacts from agglomeration, labour market impacts, and increased output (£46.6m)

Wider Economic Impacts Analysis

56. TAG Unit A2-4 assists scheme promoters in understanding whether productivity impacts are relevant to their scheme by identifying areas across England where productivity impacts could be expected to be significant. Schemes falling in one of these areas are said to be part of a “Functional Urban Region” (FUR).
57. FURs are constructed to reflect agglomeration potential through large and dense employment areas. The Middle Layer Super Output Areas (MSOAs) which make up a FUR are classified as either a core area or a hinterland area. A core area has relatively higher intensities of economic activity, with the corresponding commuting field being the hinterland area.
58. The economic narrative presented in the business case identified Sunderland as a FUR, with 31 of 35 MSOA Zones being classified as a core area, and the remaining four MSOAs classified as hinterland areas. This suggests the potential for productivity impacts associated with the transport investment. Figure 2 shows the UK’s FURs, with Sunderland highlighted.
59. The SSTC3 economic narrative explored the lack of variety in types of jobs in the city centre which has resulted from historically low levels of economic growth. This was identified as reducing the attractiveness of Sunderland to investors and its ability to retain highly skilled workers.
60. The economic narrative also explained the scheme’s proposed role in improving access between the city’s manufacturing hub, the city centre and the Port of Sunderland, thereby encouraging closer economic integration. It stated that by improving local access to the wider transport network and city centre, SSTC3 will help improve connectivity for business sites as referenced in the strategic case.
61. This analysis allowed the SSTC3 business case to justify including wider economic impacts estimates in line with TAG. DfT analysts working on the business case conducted a detailed review of the methodology and presentation of the analysis.
62. Following guidance in TAG units A2-1 to A2-4, the business case modelled induced investment impacts, employment effects and productivity impacts. This supported the strategic case narrative that SSTC3 would help increase economic activity in Sunderland, thus providing alignment between the economic and strategic cases, given the scheme’s objectives around promoting local growth.

Figure 2: England Functional Urban Regions



63. Benefits from wider economic impacts of agglomeration, labour market impacts, and increased output, were estimated at a total of £46.6 million. Although the BCR was presented at the national level, DfT analysts felt it was reasonable to suggest that SSTC3 benefits would primarily accrue to the Sunderland region due to its FUR status. Therefore, the wider economic impacts analysis provided helpful insight on the localised impacts of the scheme.
64. Accounting for the wider economic impacts improved the scheme's BCR from 2.0 to 2.9. Overall, the scheme was assessed to be High value for money. In this instance the transport user benefits and other Level 1 impacts alone would only have provided a Medium – High value for money assessment. This shows how wider impacts may play an important role (where their inclusion is justified in the economic case) in making the case for investment by strengthening the scheme's value for money.

Summary

65. This case study demonstrates how the case for the scheme was made with reference to the local context that operated across both the strategic and economic cases.

Using TAG methodology through including a strong economic narrative, the scheme promoters demonstrated significant wider economic impacts estimates that considered place characteristics such as Sunderland's manufacturing clusters. Further, identifying Sunderland as a FUR also strengthened the evidence base for these agglomeration benefits.

Case Study 2: Newhaven Port Access Road

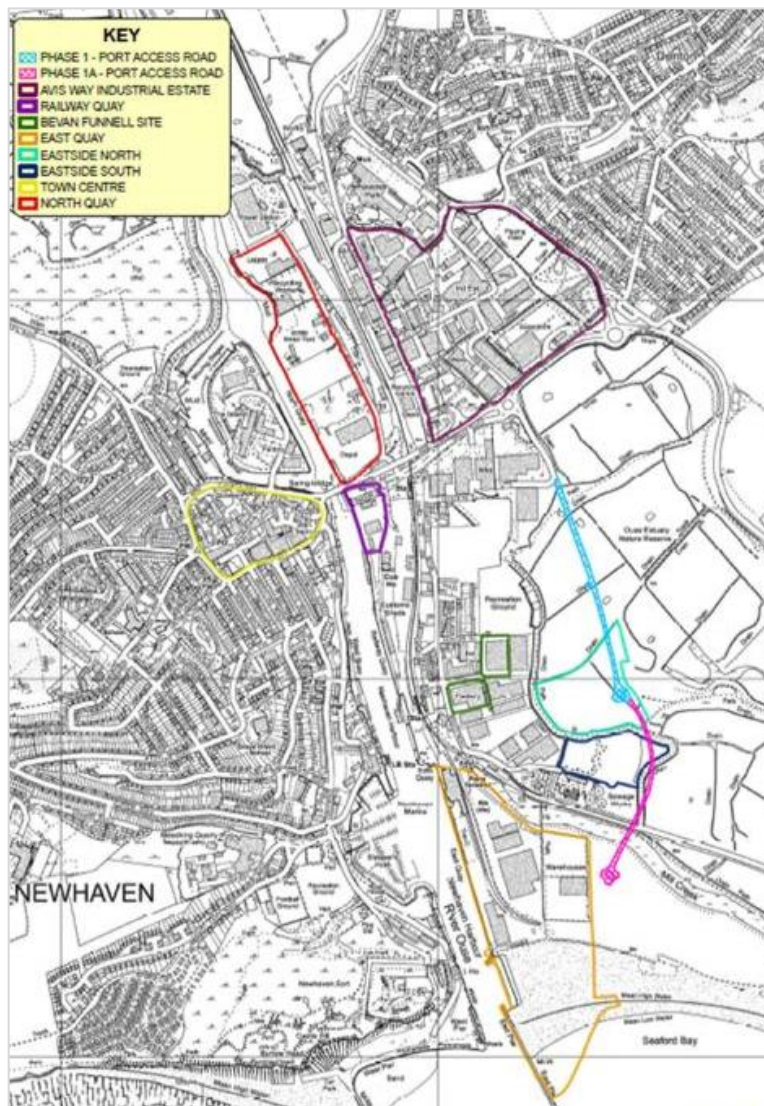
Local Context and Scheme Objectives

- Newhaven is a town within the district of Lewes in East Sussex, approximately 8 miles from Brighton city centre. As of the 2011 census, it had a population of around 12,000.
- Ferries from the Port of Newhaven run to the French port of Dieppe. In 2016 the port handled approximately 800,000 tonnes of cargo and 394,000 passengers. The port is therefore seen as a key economic driver in Newhaven and provides an important part of the infrastructure of Greater Brighton and the wider south coast.
- Newhaven and its Port have been marked as areas for regeneration and development: the 2015 Autumn Statement designated the Newhaven Enterprise Zone – a 79-hectare development opportunity spread across 8 sites in Newhaven. In addition, the Lewes District Local Plan (2016) allocated 65% of Lewes District’s employment land supply in Newhaven, further reflecting local authority objectives for Newhaven to be a growing employment centre.
- These ambitions reflect that Newhaven has been prioritised as a growth location in a range of strategic growth plans, including the Coast to Capital’s and South East Local Economic Partnerships’ Strategic Economic Plans, as well as the Greater Brighton City Deal.
- The poor state of current road access to the Port of Newhaven constrains opportunities for economic development as well as imposing social and environmental costs for those living along the road (including pollution, noise and vibration issues resulting from congestion).
- The complete Newhaven Port Access Road (phases 1 and 1A together) aims to improve the strategic connectivity of Newhaven. This should improve the attractiveness of Newhaven as an investment choice for local and regional businesses. The scheme also aims to contribute to Enterprise Zone objectives for business growth and transformation of the local economy.

The Scheme

66. The construction of the Newhaven Port Access Road (NPAR) was split into two phases. Phase 1 runs south for approximately 750m from the A529, completed in 2015. This case study is concerned with the second phase (Phase 1A) of the NPAR.
67. Phase 1A completes the Phase 1 route, continuing south into the Port via a 650m single carriageway road to the proposed Port roundabout. It includes a 122m long bridge over the Newhaven-Seaford rail line and Mill Creek canal and provides a link to the East Quay area of Newhaven Port which is currently underdeveloped.

Figure 3: Newhaven Port Access Road within Newhaven's context



The Strategic Case

68. Evidence presented in the strategic case pointed to a recognised constraint on the ability of Brighton and other parts of the City Region to attract and accommodate new business growth and expansion of existing firms. Evidence prepared on behalf of the

Brighton & Hove City Council was cited to confirm the limited space available for business occupants and very low levels of new build forecast for immediate development.

69. The strategic case explained that local authorities viewed a proposed local Enterprise Zone (EZ) as a fundamental element in enhancing the attractiveness of Newhaven as a business investment location and facilitating business development in the area. The strategic case reasoned that the Enterprise Zone would produce positive externalities for the region.
70. The Lewes District Local Plan allocated 65% of the entire District's employment land supply to the Newhaven Enterprise Zone and the 2015 Autumn Statement confirmed that it would go ahead.
71. The strategic case for NPAR focused on its role in supporting the delivery of the Enterprise Zone, explaining that the scheme would enhance connectivity and relieve constraints in the vicinity of some of the key Enterprise Zone sites. In particular, the strategic case provided evidence that the full development of the East Quay Enterprise Zone site would be inhibited in the absence of NPAR due to capacity constraints, affecting business accommodation. Promoters cited economic case analysis that found NPAR to enable the delivery of 450 jobs on the Enterprise Zone sites.
72. The strategic case also presented evidence of complementary policies, such as local authority investment in commercial and residential sites, in the public realm and in skills. For instance, the Coast to Capital Strategic Economic Plan (a growth deal covering Brighton and Hove) provides investment to support skills training among other initiatives promoting business growth.

Economic Appraisal

73. The initial Benefit Cost Ratio (BCR) for the scheme was poor at 0.1. Promoters attributed this primarily to the scheme including a bridge built on challenging ground. This resulted in high costs which, alongside low levels of time savings and other transport efficiency benefits, did not provide a strong economic case for investment. The inclusion of TAG labour supply and output change impacts in the adjusted BCR (0.8) was not enough to lift the scheme out of the Poor value for money category.

Table 2: Value for Money Summary

Metric	Value	VfM Category	Main Drivers
Initial BCR (Level 1)	0.1	Poor	Time savings: other trip purposes (£0.8m), commuting (£0.7m), business users (£0.6m) Reduction in Greenhouse gases (£0.2m)
Adjusted BCR (Level 2)	0.8	Poor	Labour supply impacts (£12.7m) Change in output in imperfectly competitive markets: 10% uplift to business user benefits

74. A major focus of the economic case analysis was NPAR’s role in unlocking the town’s economic growth potential as a business and residential location and in supporting investment by firms interested in expanding and relocating. Therefore, given the potential of the scheme for the scheme to deliver wider benefits, as identified in the economic narrative and strategic case, promoters produced additional Level 3 analysis to further explore NPAR’s impact on Newhaven.

Wider Economic Impacts: Additionality Modelling

- 75. The economic narrative highlighted the potential role of NPAR in enabling the regeneration of key areas through supporting the delivery of other complementary investments across the region. As well as addressing transport problems, NPAR was identified as enabling additional jobs and attracting investment and economic activity through its interaction with the Enterprise Zone.
- 76. The narrative provided an assessment of the potential for market failures associated with coordination of investment in the town which is preventing developable sites being fully utilised. The narrative explained that through improving connectivity, NPAR plays an important role in complementing the Enterprise Zone initiative, and therefore drawing in investment to the area.
- 77. DfT analysts reviewed the evidence put forward to justify wider economic impacts analysis for the Newhaven economic case and felt it was reasonable for the promoters to model these impacts. While the Level 2 benefits did not shift the VfM category, consideration was given to modelling Level 3 impacts. However, Level 3 modelling (for example Land Use-Transport Interaction modelling) can be complex and expensive and is generally not recommended for smaller-scale schemes. Therefore, promoters adopted a proportionate approach through estimating benefits using additionality modelling in line with TAG.

78. The purpose of this analysis was to show the impact of NPAR in terms of its influence on unlocking the delivery of key private sector development opportunities identified across the Enterprise Zones, which it was suggested would generate additional jobs in the area.
79. In line with [TAG Unit M5-3](#), this analysis first identified potential dependent developments (arising from NPAR) and then estimated the gross number of jobs generated by these developments. To derive the net GDP and jobs impacts, promoters adjusted for deadweight, leakage, displacement and multiplier effects. More detail on the approach used is given in the box below.

NPAR Additionality Modelling

Step 1: Identification of dependent developments. This involved understanding which sites in the local area were potentially dependent on NPAR.

Step 2: Gross jobs estimation. Floorspace estimates for these sites were then multiplied by benchmark ratios for employment and floorspace densities to give estimates of gross additional employment arising from dependent developments.

Step 3: Accounting for deadweight effects. This analysis considered the impact of NPAR in unlocking the Enterprise Zone sites, and how this varied between different locations within Newhaven. Promoters applied a judgement on likely private sector responses influenced by NPAR in terms of business relocation. In brief, the response was categorised into three types:

- The **direct** unlocking of a site by NPAR – corresponding to 100% impact attribution.
- The **indirect** impact on a site because of NPAR – corresponding to no more than 30% impact attribution.
- The **complementary impact** on site delivery – corresponding to 10% - 25% impact attribution.

Step 4: Adjusting for leakage and displacement. The following adjustments accounted for the characteristics of the local economy in terms of travel to work patterns and levels of labour movement between Newhaven and other nearby areas, as well as patterns of business demand for locations across the Greater Brighton area.

- **Leakage** – an allowance of 5% was reflected to account for job opportunities in Newhaven being taken by workers from outside of Greater Brighton.
- **Displacement** – Deductions to gross jobs estimates were made to account for a proportion of employment that would be displaced from within the County and City Region. A 35% deduction was applied to gross jobs estimates (after accounting for deadweight and leakage) in the benefits model to account for displacement effects.

Step 5: Applying multipliers. The business activities attracted to the Enterprise Zone sites were expected to generate downstream supply-chain effects and associated multiplier impacts across the local economy, thus, a composite multiplier of 1.35 was adopted based on established benchmarks.

80. Using DfT guidance, this additionality modelling led promoters to estimate that the scheme would facilitate approximately 450 additional jobs (with a net present value of net additional Gross Value Added impacts of £183m). Applying more stringent assumptions, this reduced to approximately 170 additional jobs (with an equivalent net present value of £69m). Promoters took a conservative approach and considered these impacts as positive non-monetised impacts which were judged as enough to raise the value for money category from Low to Medium-High.
81. There may have been a risk of double counting between the (static) Level 2 and (dynamic) Level 3 jobs impacts. However, this risk was likely reduced from the inclusion of an economic narrative which provided a basis for wider economic impacts specifically attributable to NPAR's interaction with the Enterprise Zones sites.
82. These estimates were assessed as sufficiently robust to shift the final value for money category to Medium-High. This analysis was consistent with strategic case analysis of local labour and land markets that showed how Newhaven could serve as a focus for investment if supported by wider public-sector interventions.

Summary

83. NPAR's objectives included a strong focus on regenerating the local economy, and evidence was provided that the scheme would unlock additional development within the Newhaven Enterprise Zone. The initial and adjusted BCRs suggested the scheme would be Poor value for money.
84. However, application of additionality modelling provided a more informed picture of labour market impacts, in line with the strategic objectives of the scheme. This additional analysis supported a higher value for money rating of Medium-High. DfT analysts felt the additionality analysis was particularly important to support the case for investment given that the initial and adjusted BCRs were relatively low.

Case Study 3: Midland Metro Edgbaston Extension

Local Context and Scheme Objectives

- Birmingham City Centre is at the core of the West Midlands Metropolitan Area. It was reported in the business case that the city alone employs nearly half a million people and is home to over 30,000 businesses with an economic output totalling nearly £24 billion a year.
- Birmingham however suffers from significant economic and social deprivation, with 56% of Birmingham's population living in the most deprived 20% of areas in England.
- The area is currently served by multiple public transport modes and services including rail and local and national bus services. The Midlands Metro operates regular tram services between Wolverhampton and Birmingham and provides transport links to two major rail interchanges.
- The West Midlands Local Transport Plan 2011-2026 focuses on providing sustainable travel and transport choices with improved connectivity within and between centres. The enabling role of the transport network aims to support economic growth and regeneration in the West Midlands.
- The Edgbaston extension is designed to improve public transport access to jobs and services in the city centre including for relatively deprived areas in Birmingham and the wider West Midlands.

The Scheme

85. The Midland Metro operates regular tram services between Birmingham City Centre and Wolverhampton St. George's. The Midland Metro Edgbaston Extension extends the Midland Metro system from Birmingham City Centre through to the Westside area of Birmingham. The length of the extension is just over 2km and comprises five new tram stations across the Westside area.
86. The five stops of the Edgbaston Extension include areas of central Birmingham which offer various amenities and attractions such as cinemas, civic centres and

retail outlets. The line will also run through areas of significant business and employment density.

Figure 4: Edgbaston Extension to Existing Midland Metro



The Strategic Case

87. The strategic case identified a lack of reliable connectivity between the areas along the Edgbaston Extension line and economically, socially and culturally important areas of central Birmingham. This has led to restricted access for people in these areas to destinations in the city centre which are attractive for commuters, tourists and leisure travellers.
88. The promoters explored the potential role of the Edgbaston Extension in helping to support economic growth. Referencing evidence of growth in the Westside area of Birmingham, they explained that major developments occurring along the proposed route, such as in Centenary Square, Brindley Place and Broadway Plaza, have stimulated new demand to access the Westside area of Birmingham, and other parts of Birmingham. They reasoned that these locations could suffer constrained growth in the absence of the extension, leading to a risk that the area's developments will not bring the full economic benefits anticipated.
89. Promoters also made the case for intervention in terms of promoting equity. Evidence was provided to show that Birmingham and the wider West Midlands area has below average levels of economic productivity and high levels of unemployment when compared to other regions and that the skills profile of the population is weak, with a low proportion of the working population holding a degree.

90. The strategic case identified a lack of transport connectivity to Birmingham's city centre as disproportionality affecting socio-economically deprived areas in Birmingham. Evidence presented later in the case study shows that the scheme is likely to help disadvantaged residents in the region, who would benefit from improved public transport to access services and employment, especially when considered alongside other investments into the area. These include major transport investments such as HS2, and non-transport investments such as planned Enterprise Zones which aim to attract new jobs, businesses and investment into the locality.
91. Promoters also presented data showing that younger and older age groups disproportionately rely on public transport to access amenities. 45% of the city's population are under 30, compared with 36% nationally. The proportion of people over 65 in Birmingham is below the national average (13% in Birmingham compared to 17% nationally). However, the areas along the existing Midland Metro line have a potentially higher proportion of elderly people (up to 19%). It was argued that extending the Metro line would help serve these demographics as they would benefit from greater connectivity to the city centre.
92. Further evidence showed relatively low levels of car ownership in the region. Data from the 2011 census was referenced to show that over 31% of households in the West Midlands do not own a car, a figure which rises to 35% for the city of Birmingham, higher than the national average of 26%. The Edgbaston Extension was argued as enabling the population surrounding the existing Metro Line (shown below as "Line 1") to access the further areas along the Edgbaston Route as part of the Metro Line.
93. The strategic case explored alignment between the proposal and local growth plans. For instance, the case for the scheme took account of the context of other investments in the local vicinity including the redevelopment of New Street station and the arrival of HS2, arguing that the Edgbaston Extension would deliver a more integrated transport network for Birmingham and the West Midlands.
94. Scheme promoters also considered the Edgbaston Extension's interactions with non-transport initiatives, including Birmingham's Local Enterprise Partnership (LEP). The LEP includes strategic aims such as promoting Birmingham as a regional economic hub, spatial programmes to unlock growth and enhancing Birmingham's growth sectors.

Economic Appraisal

95. Estimates from the transport model were used to assess Level 1 impacts and produce the initial BCR. The results are shown in Table 3 below. The scheme was assessed as Medium value for money with a BCR of 1.7. This was based on an assessment of the direct transport impacts as well as other impacts accounted for in the initial BCR such as accidents and greenhouse gases.
96. Whilst no quantitative assessment of wider economic impacts was carried out, the potential for these wider benefits was presented as contextual information in the Value for Money Statement.

Table 3: Value for Money Summary

Metric	Value	VfM Category	Main Drivers
Initial BCR (Level 1)	1.7	Medium	Time savings: other trip purposes (£67.5m), commuting (£50.1m), business users (£6.0m) Reduction in accidents (£2.0m) Reduction in Greenhouse gases (£0.6m)

Sensitivity Analysis

97. As discussed earlier in this report, sensitivity analysis can be an important technique for capturing local context in scheme appraisal. The business case provided a more nuanced understanding of the potential impact of local supply side uncertainty through conducting sensitivity testing around the potential impact of the Birmingham Eastside Extension (BEE) on the value for money of the Edgbaston extension.
98. The BEE is a separate Midland Metro line proposed to run as part of the line to Digbeth, also serving the HS2 station at Curzon Street, separating from the existing West Midlands Metro line at Bull Street. The estimated effect of the complementary synergies occurring from the Eastside Extension was to increase the Level 1 BCR from 1.7 to 3.1. This sensitivity testing allowed promoters to better reflect the local context through considering the potential impact of a separate investment along the Metro Line on the Edgbaston Extension.

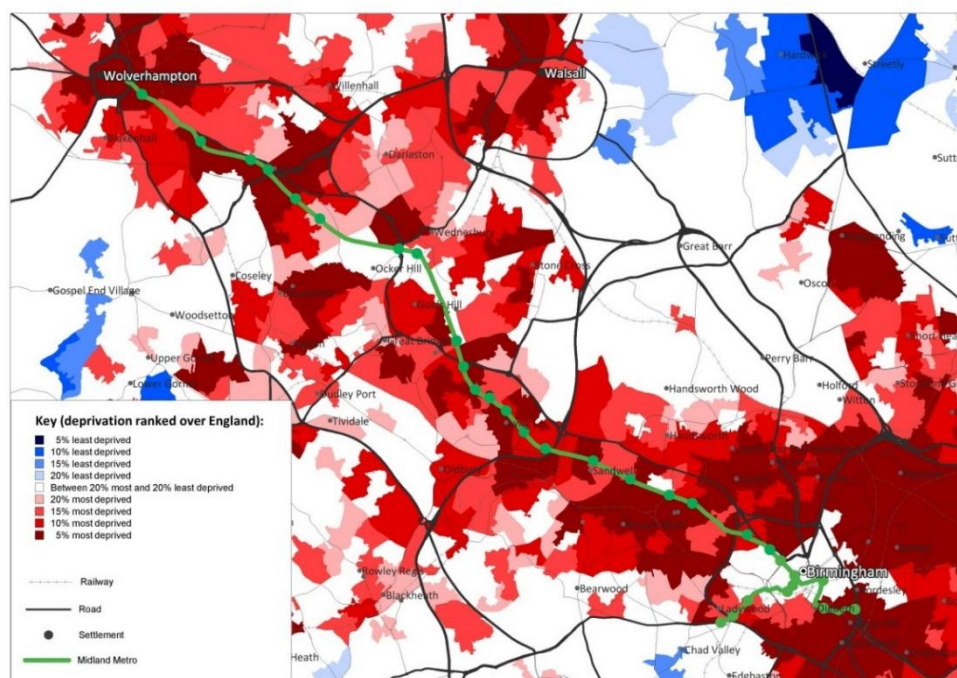
Place-based Analysis

99. As part of standard TAG distributional impact analysis (in line with TAG A4.2), the economic case presented a [Distributional Impact Screening Proforma](#). The analysis showed that the Edgbaston Extension was estimated to produce slightly positive noise and security impacts and small negative severance impacts. All other impacts (air quality, accidents and affordability) were found to be small with a mixture of positive and negative elements in each.
100. The business case further considered the impacts on specific localities near Edgbaston and New Street station (where the Extension will connect to the existing Midland Metro). The analysis showed that people living and working near Edgbaston Extension would be likely to benefit from the scheme once completed in terms of improved connectivity.
101. The improved connectivity to New Street station, Eastside and the rest of the existing Metro line was found to enable easier access for people living near the Edgbaston Extension route to the retail, leisure and commercial developments in the area.

Similarly, the analysis found that businesses and services in Edgbaston would be expected to benefit by being more easily accessible by people across Birmingham and for those arriving into the city from further afield. Analysis also indicated that passengers travelling to/from Birmingham Snow Hill station or HS2 Curzon Street station from other areas in the West Midlands or the UK would likely benefit from the more efficient interchange between rail and Metro that the scheme offers.

102. A qualitative assessment of the social impacts of the scheme also looked at affordability for users. This assessment noted that the extension will be included in the Metro’s local concession scheme, which means that the Extension is expected to provide more affordable travel opportunities for local residents.
103. The Edgbaston case study used choropleth maps to illustrate the socio-economic profile of the area based on the Multiple Indices of Deprivation (see below). This analysis showed that a large part of the Edgbaston Extension would run through wards which are in the 20% most deprived wards in the UK. Those living around the existing Metro line (which operates between Birmingham and Wolverhampton), and the proposed Eastside Extension are also in wards that are primarily in the bottom 20% across England, with several in the bottom 5%.

Figure 5: Index of Multiple Deprivation along Line 1 and proposed Midland Metro Extensions



104. Evidence suggested that by extending the line to Edgbaston, the improvements in connectivity would benefit disadvantaged residents in the vicinity of the Midland Metro as a whole. This would potentially enable more of these residents to have improved access to services and employment, particularly given the number of jobs recently created around areas such as Centenary Square, which lies on the Edgbaston line.

Summary

105. The evidence around socio-economic context presented in the strategic case was useful in understanding the opportunities provided by the regeneration of Birmingham city centre. It also highlighted some of challenges faced by more disadvantaged residents in the local vicinity and considered complementary investment in the area including High Speed 2 and New Street station and the provision of Enterprise Zones. This insight was complemented by effective use of place-based analysis.
106. Sensitivity testing also explored how interactions with other proposed schemes in the vicinity would affect the value for money of the proposed investment, giving greater clarity to decision-makers on how the scheme would work with other complementary investment to deliver social value.

Conclusion

107. This report has discussed a range of approaches which can be used to capture local context in scheme business cases, drawing upon flexibilities offered by DfT guidance.
108. The three case studies illustrate the application of this guidance. The Sunderland case study provided good evidence around the social, economic and policy context in the strategic case. It also demonstrated how an effective economic narrative can support the inclusion of wider economic impacts such as induced investment, employment and productivity.
109. The Newhaven case study examined how wider economic impacts can be proportionately considered. Analysis effectively used additionality modelling, avoiding the need for more complex and costly approaches to understanding Level 3 impacts.
110. The Edgbaston case study also provided a strong explanation of the local context for investment. It explored various aspects of place-based analysis in the form of both standard TAG distributional impact analysis as well as adopting alternative place-based approaches to provide a richer picture of potential impacts on disadvantaged residents in the area of interest.
111. The Department continues its work on refining and improving its approach to capturing local context in appraisal as part of its longer-term response to the Green Book Review and the Appraisal and Modelling Strategy. With this aim in mind, feedback from scheme promoters across the transport sector on how to effectively develop and present analysis on local context is welcomed. This could include other case studies where this analysis has been done well and innovative techniques for considering these effects.