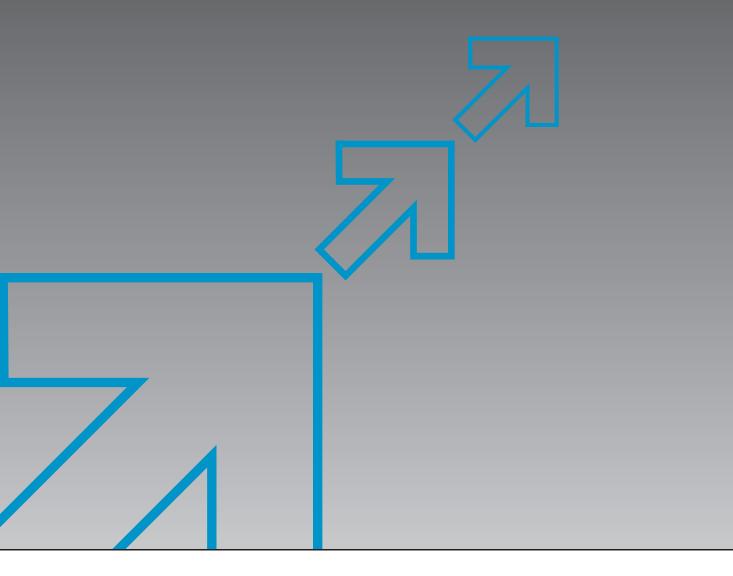
# A SUSTAINABLE JOURNEY TO WORK IN SOUTH YORKSHIRE

ANNEX 10: SOCIAL AND DISRUPTIONAL IMPACTS







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## 1. INTRODUCTION

#### 1.1 THE ANNEX DOCUMENTS

This document forms part of the series of Annex documents, which are presented here as an Annex to our Local Sustainable Transport Fund (LSTF) Business Case. This series of documents presents a substantial body of evidence we have compiled while developing the Business Case, which is the final submission to the Department for Transport, following our successful "key component" bid.

#### 1.2 THIS DOCUMENT

This document presents the detailed information relating to the appraisal of Social and Distributional Impacts (SDI) of the South Yorkshire LSTF Programme. A flowchart describing the approach adopted is included in Figure 1.1.

The annex sets out sections 0 to 3 of the SDI analysis as defined by the TAG unit 3.17. This TAG unit allows the measurement of impacts of a transport scheme on different groups within the community. It aims to check if the intervention being assessed impacts disproportionately on the more vulnerable members of the community.

A further note covering sections 4 and 5 of the SDI analysis will be produced at a later date dependent on the level of further analysis identified in Chapter 5.

This annex is structured as follows:

Chapter 2: Step 0 - Initial screening

Chapter 3: Step 1 – Areas impacted by the interventions

Chapter 4: Step 2 – Social groups impacted by the interventions

Chapter 5: Step 3 – Screening assessment

Chapter 6: Conclusions

STEP 0 Has the analyst demonstrated that there are no positive SDIs and that all negative SDIs can be eliminated through design / mitigation? Yes - if robust evidence, No - SDI appraisal is no SDI appraisal required for certain required for certain indicators indicators Build social / STEP 2 identify STEP 1 economic / confirm social groups in area demographic profile of areas impacted by impacted by intervention modelled area and sub intervention areas STEP 3 SCREENING Informed by **Develop specification** mainstream appraisal, for SDI appraisal of identification of impact required indicators areas, current and future social / economic / demographic For each indicator, is characteristics, the impact significant potential impacts of and/or concentrated, or intervention option marginal and dispersed Proposals for qualitative Proposals for detailed SDI appraisal for each SDI appraisal for each impact that is neither impact that is significant significant nor or concentrated concentrated Discuss and agree Discuss and agree proposals with DfT proposals with DfT Create and update STEP 4 STEP 4 appraisal audit trails Undertake appraisal Undertake appraisal STEP 5 STEP 5 Report appraisal in SDI Report appraisal in SDI matrix matrix Report in AST Report in AST

Figure 1.1: Social and Distributional Impacts Flowchart

## 2. STEP 0 - INITIAL SCREENING

Step 0 of the WebTAG guidance is the initial screening stage, in which consideration of whether the nature of the proposal will increase potential for SDIs (positive or negative). The following SDI impacts were considered at Step 0:

- User Benefits;
- Noise;
- Air Quality;
- Accidents;
- Security;
- Severance;
- Accessibility; and
- Personal Affordability.

It was decided through the Step 0 screening process that there was the potential for all of the SDIs to be affected by the South Yorkshire LSTF Programme. Consequently, all of the impacts were taken forward to the next stages of the SDI appraisal.

The proforma summarising the Step 0 screening stage is included on the following pages. This proforma was previously submitted to DfT on 25 November 2011 and they indicated that they were happy with approach to be adopted. It should be noted that the proforma has not been updated since it was submitted to DfT other than the last column regarding the need for further analysis required.

Figure 2.1: Step 0 Proforma

Impact	Is social/distributional impact relevant to stated scheme objectives?	Could scheme lead to impact on low income and/or vulnerable groups?	Can potential negative impacts be eliminated through design or mitigation?	Are potential impacts, where presumed, likely to be 'significant and concentrated'?	Next steps: what further screening (Step 1 to 3), or full SDI analysis (Step 1 to 5) is necessary and/or proportionate to potential impact?
(Consider each separately)	(If yes, provide details)	(Provide details)	(Provide details)	(Provide details)	(Provide rationale for proposal)
User Benefits (time/cost savings)	Yes. The LSTF programme will bring about reductions in journey times for highway and bus users as a result of modal shift from the private vehicles to bus and active modes, congestion reduction initiatives and the provision of additional bus priority measures (BARN1, DEAR1, DONV1, DONC1, DONV2).	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. The provision of additional buses and bus priority provide substantial (journey time and reliability) benefits to those without access to cars. Also, our LSTF programme provides facilities for pedestrian and cyclist to provide benefit to low income and vulnerable groups.	Yes. Negative impacts are not expected unless the LSTF programme unlocks significant suppressed demand for private car travel. This will be mitigated by locking in the congestion reduction benefits through use of appropriate LTP demand management policies. It will also be ensured that existing bus services are not undermined by the provision of additional bus services.	Yes. Impacts are expected to be positive (improvement to journey speed and reliability for highway and bus users), significant and concentrated (in the priority corridors). Negative impacts are not expected and will be carefully mitigated.	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is required (steps 4 & 5) and will be available after the December deadline due to time constraints (see Chapter 5 for further details).
Noise	Yes. Noise reduction is not an explicit programme objective. However, our LSTF programme is likely to bring about reductions in traffic levels through measures that encourage modal shift. This could help to reduce noise levels. There may also be some negative impacts in specific locations due to the provision of additional bus services (BARN4, DEAR5, DONV4 & DONC4) and the unlocking of development sites through infrastructure provision (DONC2 & DONC3).	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. There will be a differential effect on the population in the priority corridors. Some people may experience less noise and some more. As the priority corridors focuses on deprived areas both low income and vulnerable groups will be affected.	Yes. Where negative impacts are likely these will be mitigated by careful routing of buses and restricting their speeds through sensitive areas. Furthermore, the take up of sustainable travel options for new developments will be secured through the planning process and appropriate LTP demand management policies.	Yes. Impacts are expected to be mainly positive (reductions in traffic levels leading to reduction in noise levels), significant and concentrated (in the priority corridors). However, specific locations within the priority corridors may see increases in noise levels due to the LSTF interventions (increase in buses and traffic due to development sites).	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17(see Chapters 3, 4 and 5). Further analysis is not required (steps 4 & 5). See Chapter 5 for further details.
Air Quality	Yes. The LSTF programme seeks to reduce carbon and other air pollutants (to enhance health) through measures that encourage modal shift, more efficient driving styles and the use of less polluting vehicles (including electric vehicles). There may also be some negative impacts in specific locations due to the provision of additional bus services (BARN4, DEAR5, DONV4 & DONC4) and the unlocking of development sites through infrastructure provision (DONC2 & DONC3).	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. There will be a differential effect on the population in the priority corridors. Some people may experience an improvement in air quality and others not. As the priority corridors focus on deprived areas both low income and vulnerable groups will be affected. The Sheffield City Region has 20 AQMAs several of which are located within the four priority corridors.	Yes. Where negative impacts are likely these will be mitigated by careful routing of buses and restricting their speeds through sensitive areas. Furthermore, the take up of sustainable travel options for new developments will be secured through the planning process and appropriate LTP demand management policies.	Yes. Impacts are expected to be positive (reductions in traffic levels leading to air quality improvements), significant and concentrated (in the priority corridors). However, specific locations within the priority corridors may see increases in emissions due to the LSTF interventions (increase in buses and traffic due to development sites).	Steps 1-3 have undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is not required (steps 4 & 5). See Chapter 5 for further details.

Impact	Is social/distributional impact relevant to stated scheme objectives?	Could scheme lead to impact on low income and/or vulnerable groups?	Can potential negative impacts be eliminated through design or mitigation?	Are potential impacts, where presumed, likely to be 'significant and concentrated'?	Next steps: what further screening (Step 1 to 3), or full SDI analysis (Step 1 to 5) is necessary and/or proportionate to potential impact?
(Consider each separately)	(If yes, provide details)	(Provide details)	(Provide details)	(Provide details)	(Provide rationale for proposal)
Accidents	<b>Yes.</b> The LSTF programme seeks to maximise safety whilst encouraging mode shift from the private car to more sustainable modes. This includes the provision of training for cyclists (BEST3).	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. The number of accidents in the South Yorkshire is going down, but there is still more progress to be made, particularly in deprived areas where individuals are more at risk of being involved in a road accident. Furthermore, cyclists are also still at a greater risk of being involved in a road accident.	Partially. The LSTF programme may increase the number of accidents involving cyclists as the number of cyclists increases. The elements of the LSTF programme have been designed to ensure that where possible additional cycle accidents are mitigated either through the provision of training or appropriately designed facilities.	Yes. Impacts are expected to be positive (reductions in motorised road traffic accidents offset by some increases in cycle accidents), significant and concentrated (in the priority corridors). The impact of the LSTF measures could potentially be higher because of the nature of the priority corridors.	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is required (steps 4 & 5) and will be available after the December deadline due to time constraints (see Chapter 5 for further details).
Security	Yes. Improvement in personal security is not an explicit programme objective. However, the LSTF programme seeks to improve personal security for sustainable transport modes, for example, through the upgrading of public transport stops (DONV2 & DONV3) and provision of secure cycle parking (BEST4).	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. A 2007 survey undertaken by SYPTE identified that around one third (32.5%) of respondents have felt uneasy about their personal security while using public transport. 6.9% got into a situation where this unease turned out to be justified, resulting in an incident.	Yes. Negative impacts are not expected .The upgraded public transport stops will support the feeling of improved personal safety through the provision of appropriate measures. Cyclists will also benefit through the provision of secure cycle parking.	Yes. Impacts are expected to be positive (improved perceptions of personal security at public transport stops), significant and concentrated (in the priority corridors).	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is required (steps 4 & 5) and will be available after the December deadline due to time constraints (see Chapter 5 for further details).
Severance	Yes. Severance reduction is not an explicit programme objective. However, the LSTF programme seeks to encourage modal shift from the private car, helping to reduce traffic levels. Furthermore, the programme seeks to improve the connectivity of cycle routes (BEST4) and provide minor enhancements to the walking environment identified through pedestrian audits (BEST3).	<b>Yes.</b> The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. Specific LSTF interventions that may impact on low income/vulnerable groups include Walk Boost (BEST3) and Cycle Routes (BEST4).	Yes. Negative impacts are not expected unless the LSTF programme unlocks significant suppressed demand for private car travel. This will be mitigated by locking in the congestion reduction benefits through use of appropriate LTP demand management policies.	Yes. Impacts are expected to be positive (reductions in traffic levels leading to reductions in severance), significant and concentrated (in the priority corridors).	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is not required (steps 4 & 5). See Chapter 5 for further details.

Impact	Is social/distributional impact relevant to stated scheme objectives?	Could scheme lead to impact on low income and/or vulnerable groups?	Can potential negative impacts be eliminated through design or mitigation?	Are potential impacts, where presumed, likely to be 'significant and concentrated'?	Next steps: what further screening (Step 1 to 3), or full SDI analysis (Step 1 to 5) is necessary and/or proportionate to potential impact?  (Provide rationale for proposal)
(Consider each separately)	(If yes, provide details)	(Provide details)	(Provide details)	(Provide details)	
Accessibility	Yes. The LSTF programme seeks to enhance social inclusion and increase accessibility of employment in certain geographic areas and for particular target groups.	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. Whilst accessibility to key centres in South Yorkshire is generally good, links to neighbouring districts are less well specified. There are also issues of using public transport for employment trips due to shift work. Frequency enhancements on the X19 bus service, the provision of the Microbus service between Wentworth Industrial Park and Shortwood and Workplace Travel Solutions will impact on low income and vulnerable groups within the priority corridors.	Negative impacts are not expected	Yes. Impacts are expected to be positive (improvements in accessibility for users of sustainable modes), significant and concentrated (in the priority corridors).	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is required (steps 4 & 5) and will be available after the December deadline due to time constraints (see Chapter 5 for further details).
Affordability	Yes. The LSTF programme seeks to enhance social inclusion by increasing the availability of sustainable transport modes that are often more affordable for certain groups. Certain elements of the programme also seek to directly overcome cost issues relating to the use of sustainable modes, for example, Cycle Boost (BEST4) and Bus Boost (BEST2).	Yes. The LSTF priority corridors are selected on the basis of higher levels of unemployment and deprivation. Bus fares in South Yorkshire have steadily increased in real terms over the past 20 years and these increases have had a greater impact on low income/vulnerable groups.	Negative impacts are not expected. The additional sustainable transport options that will be provided by the LSTF programme will be designed to ensure they are appropriately priced to ensure take up by target groups. Other changes in Generalised Costs will be considered under the User Benefits Impact.	Yes. Impacts are expected to be positive (improvements in affordability through provision of additional affordable travel options), significant and concentrated (in the priority corridors). Changes in Generalised Costs will be considered under the User Benefits Impact.	Steps 1-3 have been undertaken using the methodology proposed in WebTAG Unit 3.17 (see Chapters 3, 4 and 5). Further analysis is required (steps 4 & 5) and will be available after the December deadline due to time constraints (see Chapter 5 for further details).

# 3. STEP 1 – AREAS IMPACTED BY THE INTERVENTIONS

It has been assumed that the areas impacted by the South Yorkshire LSTF programme will be focused upon the four priority corridors in which the interventions are to be implemented. These corridors are as follows: and are shown on the maps in the following chapters.

Barnsley Accessibility Improvement Corridor;

This priority corridor forms part of a wider Accessibility Improvement Zone (AIZ), which has been identified to concentrate development and renewal in the northern and eastern area of Barnsley and harnessing the strategic linkages with both SCR and Leeds City Region, and foster growth on the Barnsley-Doncaster axis. Beyond the town centre itself, Barnsley has a dispersed settlement pattern, including a number of former mining villages. Many of these communities suffer from deprivation, affecting health, which can be attributed to unemployment resulting from the loss of local industries.

Dearne Valley Enterprise Corridor;

This priority corridor incorporates a large tract of the Dearne Valley, which is a former coalmining area and was previously considered as one of the mostly heavily polluted areas in Western Europe. The Dearne Valley was particularly dependent on coal and related industries and as such, suffered severely as a result of the decline in traditional manufacturing industries in the UK. However, a new blueprint for the valley, supported by SCR Local Enterprise Partnership (LEP), will see it transformed as the 'first eco park in the UK', which it is envisaged will have 'the lowest carbon footprint of any comparable place within 10 years'.

• Don Valley Enterprise Corridor;

The Don Valley Enterprise Corridor between Sheffield and Rotherham represents the former industrial heartland upon which South Yorkshire's growth was founded in the 19th and 20th Century. The area is now reinventing itself as an Advanced Engineering and Manufacturing Growth Hub at the Advanced Manufacturing Park at Waverley in Rotherham. This will not only create employment opportunities within the corridor, but will also contribute to regional and national economic growth.

• Doncaster Regeneration Corridor.

Taking advantage of its accessible location, afforded through its connections via the M18, M1 and East Coast Main Line, Doncaster has developed a major industry in logistics and related activities and is seen as a second growth pole in SCR (accounting for approximately 16% of GVA in SCR). The Doncaster Regeneration Corridor is evidence of the area's re-invention in the service and tertiary industries, capitalising upon its assets, in particular the excellent communication links, to redefine its role and hierarchy within South Yorkshire.

# 4.STEP 2 - SOCIAL GROUPS AFFECTED BY THE INTERVENTIONS

### **Transport Users**

The characteristics of transport users affected by the LSTF programme have been determined using the segmentation of demand provided by the South Yorkshire Strategic Transport Model (SYSTM+). These demand segments are as follows and are only applicable to highway trips as no segmentation of demand for public transport is available.

- Commuting
- Business
- Other (education and other)
- LGV
- HGV

### **Those Living in Affected Areas**

In order to identify the social groups potentially impacted by the South Yorkshire LSTF Programme a series of maps has been produced. These maps illustrate for the affected area the distribution of different groups of people and have been produced in accordance with the guidance provided in WebTAG Unit 3.17, Section 2.4.

The maps produced are provided at the end of this chapter. In summary the maps indicate:

• Income Distribution

The map of income distribution (IMD rank) indicates that all of the priority corridors cover some of the most income deprived areas of the UK (ranking in the lowest 20%). Almost the entire Don Valley Enterprise corridor is in the lowest 20% of income deprived areas. Income deprivation was one of the reasons behind the selection of the four priority corridors.

Children (proportion of population aged <16)</li>

The maps indicate there are large parts of the study area where under 16s make up more than 15 percent of the population, in parts of the Don Valley Enterprise corridor and Doncaster Regeneration corridors (eg Park Hill, Tinsley and Darnall, Sheffield and Westfield Park, Doncaster) more than 30 percent of the population are children. The proportion of population aged under 16 was not one of the reasons behind the selection of the four priority corridors.

• Young adults (proportion of population aged (16-24)

The map indicates that the priority areas include concentrations of young people, specifically in the centre of Sheffield, Doncaster and Barnsley. The concentrations are greater in the centre of Sheffield where there are some areas where over 50% of the population is between 16 and 24. Promoting skills development and extending the travel horizons of young adults is one of the reasons behind the selection of the four priority corridors.

Older people (proportion of population aged 70+)

The map indicates there are less significant concentrations of older people within the priority corridors. The main concentration is located within the Doncaster Regeneration corridor (Adwick and Carcroft) where more than 50% of the population is aged 65 or more. The proportion of population aged over 70 was not one of the reasons behind the selection of the four priority corridors.

Proportion of population with a disability

There are areas within each of the priority corridors where between 30% and 43% of the population has a long term limiting illness. This is particularly the case for the Barnsley Accessibility Improvement corridor which covers Barnsley town centre. Health issues were one of the reasons behind the selection of the four priority corridors.

• Proportion of population of Black and Minority Ethnic origin

The Don Valley Enterprise corridor has high concentrations of ethnic minority groups. In some areas of this corridor up to 92% of the population is from an ethnic minority group. There are also some small pockets of ethnic minority groups in the southern part of the Doncaster Regeneration corridor. The other priority corridors have less significant concentrations of ethnic minority groups. The proportion of population of Black and Minority Ethnic origin was not one of the reasons behind the selection of the four priority corridors.

• Proportion of households without access to a car

The maps indicate that the priority corridors include areas where the proportion of households without access to a car is greater than 25%. This is particularly the case for the Don Valley Enterprise and Doncaster Regeneration corridors where there are also significant areas where there are 50-75% of households do not have access to a car and also small pockets where 75-100% of households do not have access to a car. Lack of suitable transport opportunities was one of the reasons behind the selection of the four priority corridors.

• Carers (proportion of households with dependent children)

The maps indicate that within the priority corridors there are varying concentrations of households with dependent children. All the corridors include areas where up to 75% of households have dependent children. The Don Valley Enterprise corridor is the only priority corridor to have an area where 100% of households have dependent children. This is located in Sheffield city centre. The proportion of households with dependent children was not one of the reasons behind the selection of the four priority corridors.

In conclusion, the mapping exercise has provided an in-depth picture of the socio-economic and socio-demographic profile of the priority corridors. This understanding has been used to determine whether to proceed with the detailed analysis of the social and distributional impact for specific indicators as described in the following section.

Figure 4.1: Income Distribution Map

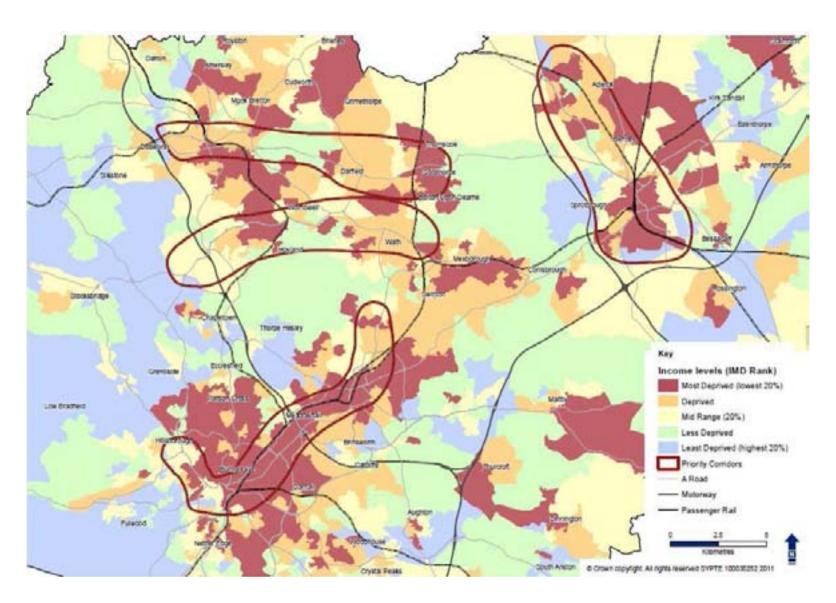


Figure 4.2: Population Aged 0-15 Years Map

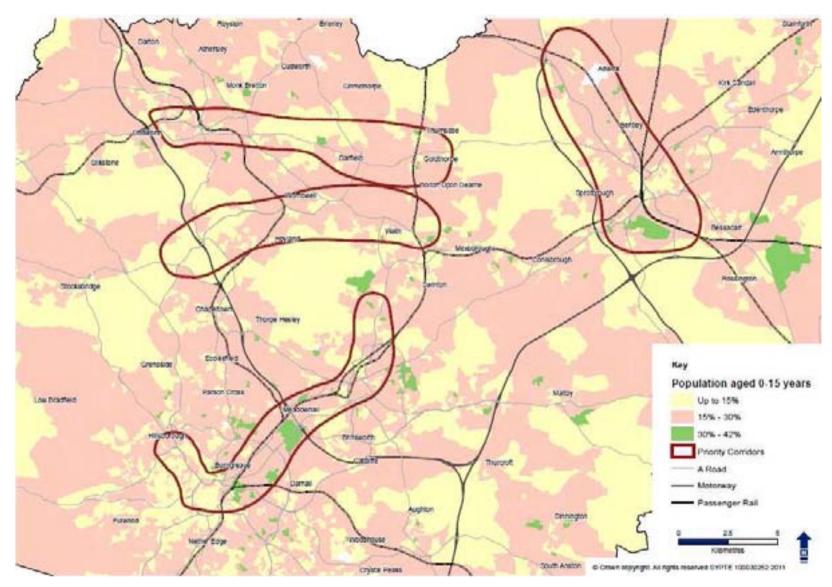


Figure 4.3: Population Aged 16-24 Years Map

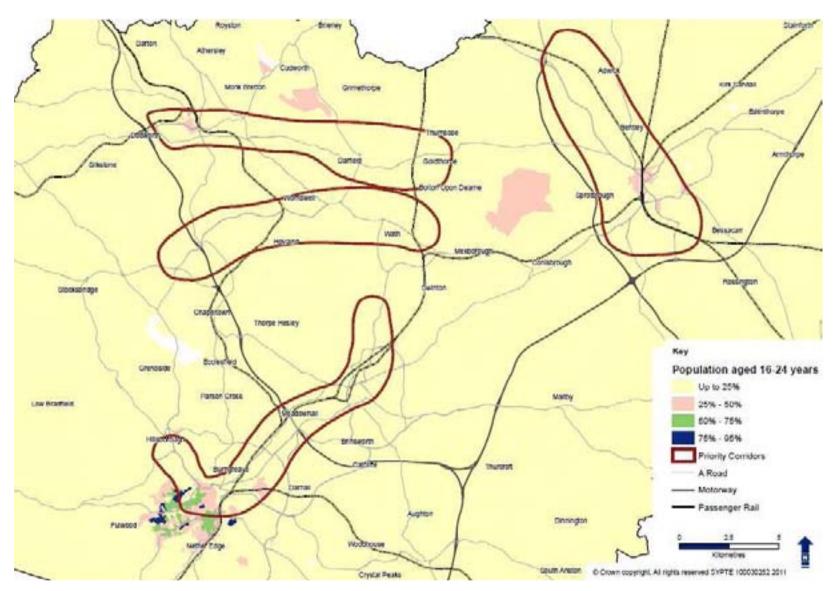


Figure 4.4: Population Aged 65+ Years Map

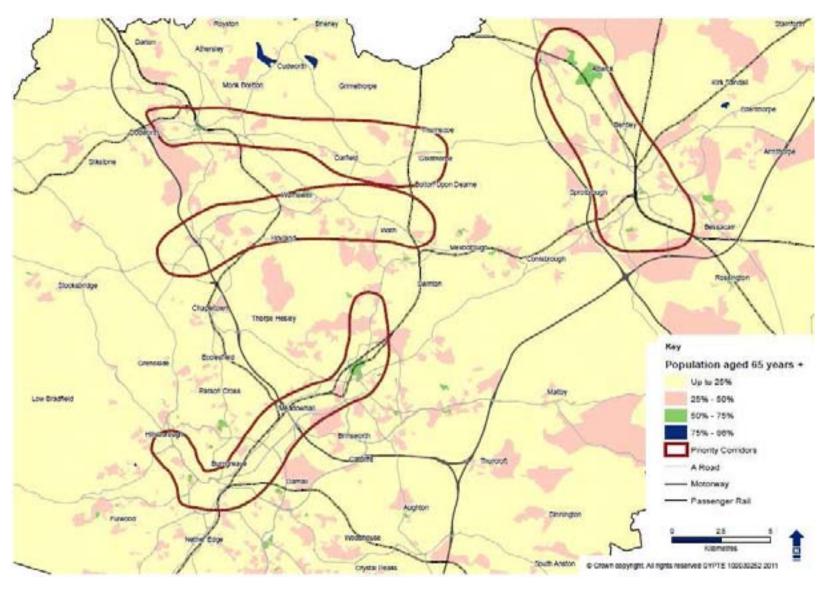


Figure 4.5: Long Term Limiting Illness Map

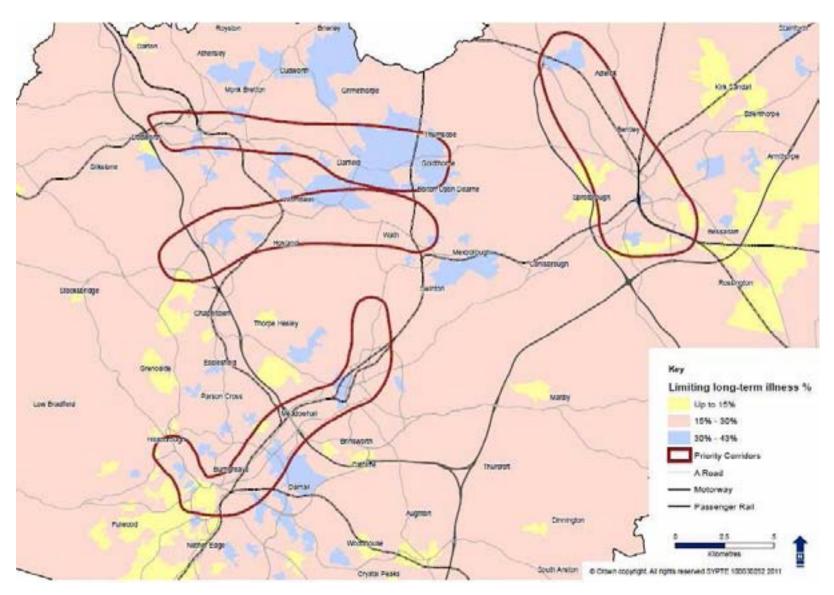


Figure 4.6: Minority Ethnic Groups Map

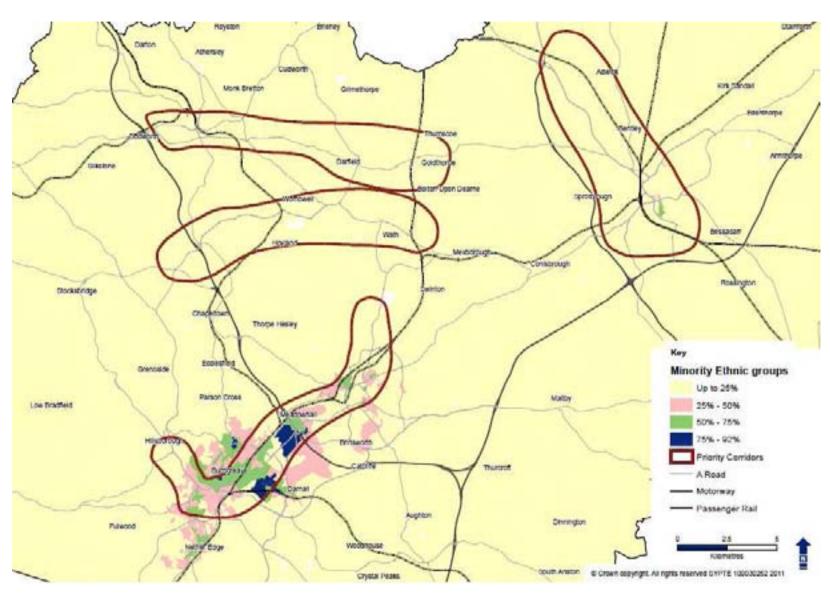


Figure 4.7: Households without Cars Map

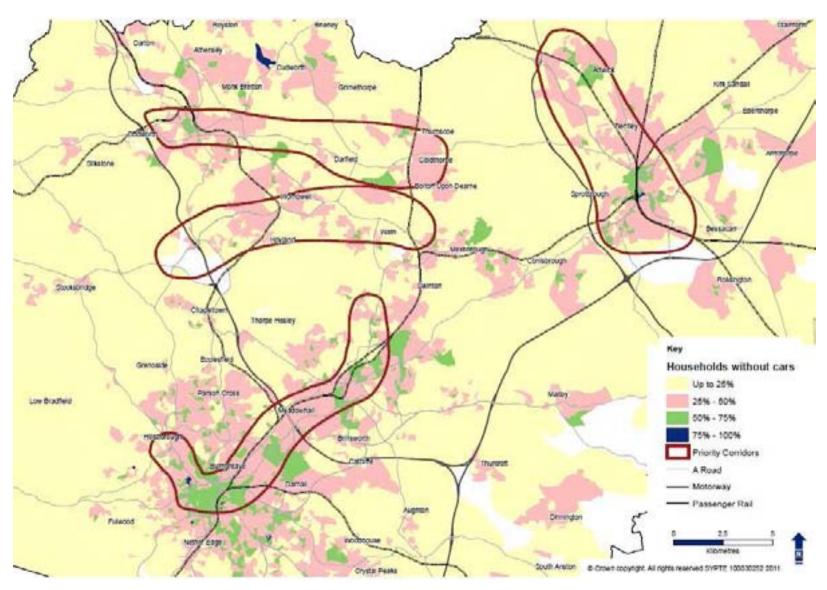
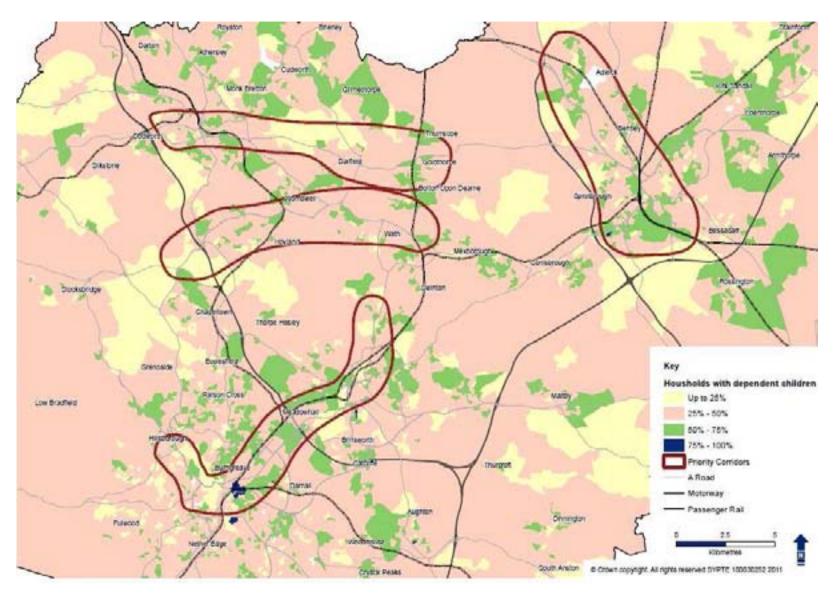


Figure 4.8: Households with Dependent Children Map



## 5. STEP 3 – SCREENING ASSESSMENT

The outputs from Steps 1 and 2 indicate that there may be some need to undertake further SDI appraisal. The need to undertake further appraisal has been determined using specific criteria concerning changes in transport conditions and how these may impact upon certain groups in society. Assessments have been informed by the outputs from the South Yorkshire Strategic Transport Model (SYSTM+). The outcomes of the appraisal are summarised in Figure 5.1 below. It should be noted that as User Benefits have been assessed for the Economic Case these will automatically be considered for further SDI analysis (Step 4 and 5). Affordability, which currently has not been considered in the economic appraisal will also require further consideration to determine whether there are any significant changes in user costs as a result of the LSTF programme.

Figure 5.1: Screening assessment

Impact	Transport Conditions Criteria	Transport Conditions Assessment	Additional Considerations	Additional Considerations Assessment	Conclusion
Noise	Existence of links with change in vehicle flows of +/- 100 pcus and +/- 10%	Condition not met except on two links.  The Economic Case and Annex 8 indicate only marginal changes in noise levels by priority corridor as a result of the LSTF Programme.	Impact on low income areas Impact on children Location of significant receptors	N/A as transport conditions criteria not met.	Having analysed the link based data from the SYSTM+ model for the four priority corridors there are only two links where there is a change of +/- 100 pcus and +/- 10% in flow during one of the model hours. One of these links leads to the development site associated with the Waterfront Regeneration (DONC2) scheme where there is an increase of approximately 150 pcus in the AM and PM peaks hours. This relates to just over a 10% increase in traffic. Based on this analysis no further analysis is believed to be required.
Air quality	Existence of links with change in vehicle flows of +/- 100 pcus and +/- 10%	Condition not met except on two links.  The Economic Case and Annex 8 indicate only marginal changes in air quality as a result of the LSTF Programme.	Impact on low income areas Impact on children Location of significant receptors	N/A as transport conditions criteria not met.	Having analysed the link based data from the SYSTM+ model for the four priority corridors there are only two links where there is a change of +/- 100 pcus and +/- 10% in flow during one of the model hours. One of these links leads to the development site associated with the Waterfront Regeneration (DONC2) scheme where there is an increase of

					approximately 150 pcus in the AM and PM peaks hours. This relates to just over a 10% increase in traffic. Based on this analysis no further analysis is believed to be required.
Accidents	Significant change in road and cycle accidents	Condition met as additional cycle accidents are predicted from the increase in cycle trips brought about by the LSTF programme  See Economic Case and Annex 8 for further details.	Local presence of vulnerable road users including children, young adults and older people.	Condition met	The additional cycle accidents will occur within the four priority corridors where there are concentrations of vulnerable groups. Further analysis required.
Security	Change in public transport and cycle facilities expected to affect user perceptions of personal security.	Condition met as LSTF programme will provide additional bus shelters with lighting (DONV2) and enhanced cycle facilities including secure cycle parking (BARN2, DEAR2, DEAR4, DONV5, DONV6 & BEST4). These features will improve perceptions of security.  See Economic Case and Annex 8 for further details.	Evidence of deterrence due to security factors.  Local presence of vulnerable road users including children, older people and those with a disability.	A 2007 survey undertaken by SYPTE identified that around one third (32.5%) of respondents have felt uneasy about their personal security while using public transport. 6.9% got into a situation where this unease turned out to be justified, resulting in an incident.  A recent DfT study indicated that 41% of those who cycled agreed they would cycle more if there were more secure places to store bicycles.	The improvements in security will occur within the four priority corridors where there are concentrations of vulnerable groups. Further analysis required.
Severance	Existence of links with change in vehicle flows of +/- 100 pcus	Condition not met	Evidence of deterrence due	N/A as transport conditions	Having analysed the link based data from the SYSTM+ model

	and +/- 10%	except on two links.	to severance factors.  Local presence of vulnerable road users including children, older people, those with a disability and those without access to a car.	criteria not met.	for the four priority corridors there are only two links where there is a change of +/- 100 pcus and +/- 10% in flow during one of the model hours. One of these links leads to the development site associated with the Waterfront Regeneration (DONC2) scheme where there is an increase of approximately 150 pcus in the AM and PM peaks hours. This relates to just over a 10% increase in traffic. Based on this analysis no further analysis is believed to be required.
Accessibility	Changes to public transport provision (frequencies, provision)	Condition met as the LSTF programme will enhance the frequency of the Jobconnector X19 (BARN4 & DONC4), provide an additional Jobconnector Wentworth to Shortwood Microbus (DEAR5) service and allow the operation of a Jobconnector Malin Bridge Feeder Service (DONV4).	Evidence of deterrence due to existing provision factors.  Presence of vulnerable groups.	Evidence from South Yorkshire ((Job Centre Plus Research, 2011) suggests that c 400 people reject job offers per month for reasons that include transport issues or timetables not matching working hours.	The improvements in accessibility will occur within the four priority corridors where there are concentrations of vulnerable groups. Further analysis required.

### 6. CONCLUSIONS

In conclusion, having conducted Steps 0-3 of the SDI analysis, it has been possible to show that the LSTF Programme explicitly aims to improve social and distributional objectives. The four priority corridors were specifically chosen to tackle issues associated income deprivation, skills development particularly in relation to young adults, health issues and lack of access to suitable transport options. Consequently, the LSTF Programme will have positive impacts on specific social groups as illustrated by the maps in Chapter 3.

The analysis conducted indicates there is a need to conduct further analysis for the following impacts:

- User Benefits
- Accidents
- Security
- Accessibility
- Affordability

The full or proportionate appraisals for these impacts will be agreed with DfT and conducted post the December LSTF deadline due to time constraints to complete the necessary analysis. Only the accident impact is likely to include consideration of negative impacts in relation to additional cycle accidents. Overall the impact of the LSTF programme in SDI terms is positive.

