

**Report for the Department for Transport**

**By the Transport Studies Group  
University of Westminster**

**MAKING LINKS WITH ACCESSIBILITY PLANNING  
AND CRIME REDUCTION ON AND AROUND PUBLIC  
TRANSPORT IN MIDDLESBROUGH**

**FINAL REPORT**

**April 14th 2004**



<b>Contents</b>	<b>Page</b>
1.0 Introduction	1
2.0 Stakeholder Involvement	5
3.0 Indicator Development	7
4.0 Strategic and Local Accessibility Assessment	11
5.0 Option Appraisal and Resource Auditing	17
6.0 Monitoring and Evaluation	21
7.0 Overview of Lessons Learned	23
Appendix A Modelling Approaches	
Appendix B Sources of Guidance and Advice	

## 1.0 Introduction

- 1.1 This report describes the main findings and key recommendations from a study linking piloting work to reduce crime and disorder on and around public transport in Middlesbrough, with the Department for Transport's *Accessibility Planning: Developing and Piloting Approaches* study. The main aim of this study has been to explore how considerations of crime and fear of crime on and around public transport can be integrated into the newly developed accessibility planning approach.
- 1.2 Middlesbrough was selected as a pilot study, because crime and fear of crime has been identified by Middlesbrough Council as a significant problem, impacting on public transport use and restricting fuller use of services and facilities. For its efforts in encouraging public transport use through reducing fear of crime, Middlesbrough Council and the local Crime and Disorder Reduction Partnership (CDRP) have been recognised as a good practice example in the SEU's 2003 report *Making the Connections*.

### The Context

- 1.3 It is widely recognised that concerns about personal security can act as a major barrier to public transport use, especially after dark. Fear of crime while waiting at bus stops and walking to and from buses has been identified as a particular problem<sup>1</sup> especially for women, the elderly, those on low incomes and people from different ethnic groups. It has been estimated that, by improving personal security on public transport through the implementation of appropriate measures, the number of journeys could increase by 11.6%<sup>2</sup>.
- 1.4 The DETR's 1998 White Paper on Transport<sup>3</sup> recognises that people living in deprived and high crime areas suffer most from poor levels of personal security on and around public transport. Not only do those living in these areas tend to be more fearful of crime, due to the higher levels of victimisation, many are dependent on public transport to access key activities and services such as employment, education or health care. Coincidentally, it is often people living in these areas and certain groups commonly associated with the problem of social exclusion, such as young people, who are often perceived to be causing the crime problems. This has meant that, in the past, severe public transport shortages have been caused by operators cutting back routes to avoid these areas.
- 1.5 The reduction of crime and fear of crime on the transport network has been identified as a key policy priority by central government<sup>4</sup>. However, no agency or department is currently responsible for crime/fear of crime across

---

<sup>1</sup> DETR (1998) *A New Deal for Transport: Better for Everyone*

<sup>2</sup> Crime Concern (2004) *People's perceptions of personal security and their concerns about crime on public transport: Research Findings*, DfT

<sup>3</sup> DETR (1998) *A New Deal for Transport: Better for Everyone*

<sup>4</sup> *A New Deal for Transport: Better for Everyone*, DETR, 1998  
*Planning Policy Guidance 13: Transport*, ODPM

the whole journey<sup>5</sup>. The Home Office is acting to raise the profile of crime and fear of crime on and around public transport amongst CDRPs, transport authorities and public transport operators. The accessibility planning process will play an important role in further encouraging all parties to consider the impacts of crime and fear of crime in their activities, and in encouraging local transport authorities together with CDRPs to consider the impact of crime/fear of crime on accessibility.

### **Linking crime, fear of crime and accessibility planning**

1.6 This report brings together the key findings and recommendations from research carried out over a period of six months. The key elements of the research involved:

- Reviewing datasets and indicators for measuring crime and fear of crime on and around public transport;
- Auditing accessibility, crime and fear of crime levels in Middlesbrough and assessing the transferability of good practice initiatives being used to improve accessibility by reducing crime and fear of crime;
- Reviewing the stakeholders who could be involved and the resources that could be brought into play to provide measures to reduce crime and fear of crime to improve accessibility; and
- Assessing how accessibility plans could be developed, which include considerations of crime and fear of crime, using the Middlesbrough pilot and reviews of other Crime and Disorder Reduction Partnerships and local authorities.

1.7 This study has adopted the same framework as used in the *Accessibility Planning: Developing and Piloting Approaches* study, in order to make recommendations on how crime and fear of crime issues can be fed into the accessibility planning process developed in that research. This has recommended that accessibility planning can be delivered in five key stages, as shown in figure 1.

1.8 It is anticipated that, in many parts of the country, it will be most appropriate to begin consideration and analysis of crime and fear of crime impacts at the local accessibility assessment stage, once local areas, types of activity and target groups have already been identified from the strategic audit. However, in cases where fear of crime is regarded as influencing levels of accessibility at the strategic level, then consideration should begin at that stage.

1.9 As a cross-cutting issue, questions about the impact of crime and fear of crime will need to be raised at each subsequent stage of the accessibility planning process, right through to the monitoring and evaluation stage. Such questions might include:

---

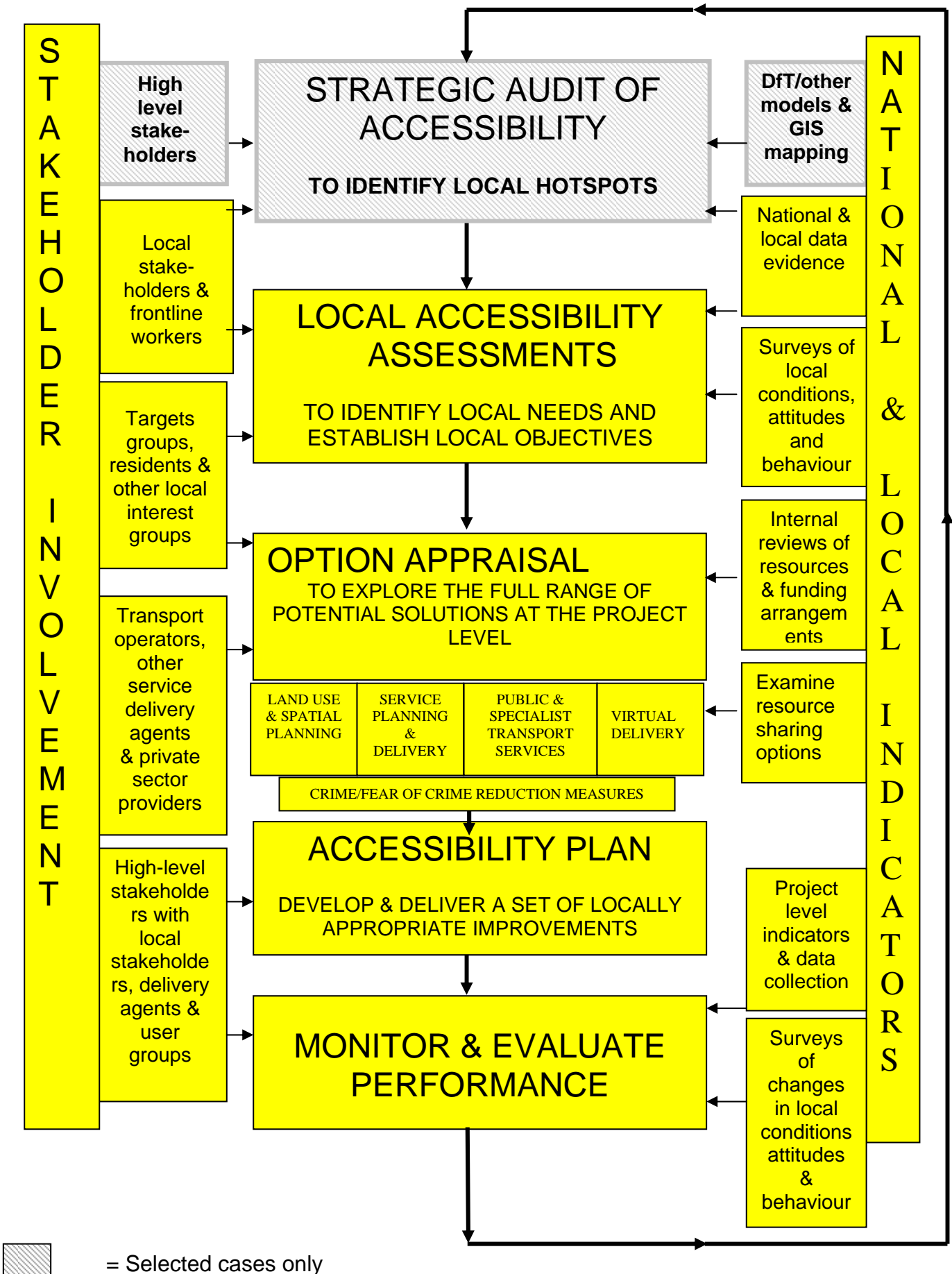
<sup>5</sup> SEU (2003) *Making the Connections: final report on transport and social exclusion*

- *Local accessibility assessments:* Does crime and fear of crime impact on accessibility in the identified local area or on the activity or target group? What is the extent of this impact?
- *Option appraisal:* How do potential solutions to accessibility problems address concerns about crime/fear of crime? What are the crime/fear of crime implications of suggested accessibility solutions?
- *Accessibility Plan:* Do accessibility plans appropriately address concerns about crime and fear of crime?
- *Monitor and evaluate performance:* What has been the impact of delivered actions to address crime and fear of crime issues?

### **Structure of the report**

1.10 This report is structured around the emerging framework for accessibility planning as adopted in the final report on *Accessibility Planning: Developing and Piloting Approaches*. *Figure 1* describes the overall processes identified for accessibility planning and highlights the stages, tasks and activities that should incorporate consideration of crime and fear of crime issues.

Figure 1: The Key Stages in Accessibility Planning



## **2.0 Stakeholder involvement**

### **Key stakeholders**

- 2.1 The ability to effectively engage crime reduction agencies and other relevant stakeholders is important in ensuring that crime and fear of crime is appropriately considered in the accessibility planning process, and that viable accessibility strategies are developed and delivered.
- 2.2 Once a local area has been identified for the focus of an accessibility plan, a community safety representative from the local CDRP should be invited to join the accessibility planning committee or group. The CDRP is required to develop an audit and strategy for crime and disorder in their local area and will have sound knowledge and intelligence on crime and fear of crime issues, as well as information on what data is available and from whom. This will be invaluable to those who need to consider crime and fear of crime issues in the accessibility planning process.
- 2.3 The extent of involvement of the local CDRP will depend on whether the Partnership has resources, in particular staff time, available to commit to the process and the priority given to issues relating to personal safety on and around transport. The increasing awareness of the importance of these issues amongst CDRPs is expected to encourage their involvement in the accessibility planning process; however, it must be recognised that, in many CDRPs, resources are already stretched and intermittent involvement in the process may be all that is realistically possible. Any potential solutions aimed at reducing crime and fear of crime in accessibility plans must be consistent with the aims and objectives of the CDRP, and thus will need to be developed in close consultation with them, where possible.
- 2.4 Existing forum and partnerships, for example, bus quality partnerships or public transport safety groups, could also prove to be useful for exploring issues relating to crime and fear of crime on and around public transport, and for evaluating the feasibility of potential solutions suggested in the accessibility action plan. In Middlesbrough, for example, crime related issues on the bus network and the roll out of initiatives such as CCTV and real time information, are discussed and taken forward at the bus quality partnership meetings. Officers with responsibility for the accessibility planning process are encouraged to converse with these groups, where appropriate.
- 2.5 At the local assessment stage, it may also be useful to involve representatives from the relevant sectors involved specifically with personal safety issues. For example, if poor access to out-of-school activities for socially excluded pupils is identified as a priority issue, then school safety officers could be invited to participate in the accessibility planning process.

## **Target groups, residents and local interest groups**

- 2.6 Residents, local interest groups and specific target groups can provide useful insights into the extent of crime and fear of crime and the impacts on accessibility. In Middlesbrough, the Council and the CDRP have good links with communities; they carry out extensive neighbourhood surveys and panel surveys to consult with them on key issues including crime, fear of crime and the use of public transport. Not all authorities will have the capacity to consult with residents to this extent, but some information will be available on fear of crime from the surveys which local CDRPs are required to conduct.
- 2.7 Hard-to-reach groups tend to be underrepresented in neighbourhood and panel surveys, and additional effort may be required to consult with these groups about their experiences in accessing specific activities. Involving relevant community and voluntary groups in the process may help facilitate access to these target groups

## **Working with delivery agencies and other local stakeholders**

- 2.8 Wider stakeholder involvement is likely to be needed to develop appropriate options for action planning, and to identify potential resources for actions seeking to address crime and fear of crime issues. These stakeholders might include front line providers (e.g. colleges), local delivery organisations (e.g. bus operators) or more wide-ranging groups (e.g. neighbourhood watch, Age Concern) who can provide useful insights into the feasibility and practical constraints of suggested 'solutions'.
- 2.9 It is important to recognise that crime and fear of crime is a peripheral issue for many agencies, and differing agendas and resource constraints are likely to impact on the level of their involvement in these issues. Relevant agencies are only likely to participate if they are able to see the benefits that their involvement will bring; accessibility planning representatives may have to 'prove' to agencies what they can get out of the process, e.g. increasing passenger numbers for bus operators.



### 3.0 Indicator development

- 3.1 Local Transport Authorities are not currently required to report progress in terms of an indicator relating to crime/fear of crime on the public transport network. Some are, however, setting their own indicators and targets. For example, Middlesbrough Council currently use the indicator 'number of incidents on buses' to measure their progress in reducing crime on the bus network. The only other indicator found by the research team to have been used by Local Transport Authorities to measure crime levels on public transport was 'assaults on bus staff'.
- 3.2 A key objective of this study has been to suggest potential indicators for identifying hotspots of crime/fear of crime on and around public transport and for monitoring and evaluating the effectiveness of crime reduction measures. It is evident that there is no one indicator that can be used across all local authorities due to the lack of data in many areas and the differing nature of problems and crime reduction objectives.

#### Policy sensitive people groups, locations and opportunities

- 3.3 A number of research studies<sup>6</sup> and the pilot work in Middlesbrough have identified that particular people groups and areas/neighbourhoods are affected more than others by crime/fear of crime. Measures of crime and fear of crime should, where possible, be sensitive to these variations.
- 3.4 Women, the elderly, those on low incomes and people from different ethnic groups, have been identified as those most likely to be fearful of crime and therefore are those groups where crime and fear of crime is most likely to act as a barrier to public transport use. People tend to be more fearful in areas with higher incidence of crime and residents living on social housing estates and inner city areas have been reported to feel particularly vulnerable<sup>7</sup>.
- 3.5 Previous studies<sup>8</sup> have highlighted that concern for personal safety is often more acute for people walking to and waiting for a bus, rather than on board the bus itself. Indicators, therefore, should not focus solely on crime/fear of crime levels on public transport, but also in the pedestrian environment.

---

<sup>6</sup> Crime Concern (2004) *People's perceptions of personal security and their concerns about crime on public transport: research findings*, DfT

Crime Concern (1999) *Personal security issues in pedestrian journeys*, DETR

Crime Concern (1999) *Young people and crime on public transport*, DETR

Nacro (2003) *Getting there: reducing crime on public transport*, Nacro

<sup>7</sup> Home Office, 2003, *Crime in England and Wales 2002/3: Home Office statistical bulletin*

Pantazis, C (2000), Fear of crime, Vulnerability and Poverty, *British Journal of Criminology*, 40, 414-436

<sup>8</sup> Crime Concern (1999) *Personal security issues in pedestrian journeys*, DETR

## Developing local indicators

3.6 A number of local indicators were developed and tested using local datasets available in Middlesbrough. These included:

- Number of disorder incidents<sup>9</sup> within 200 meters of a bus stop;
- Number of bus related incidents;
- Number of bus shelters damaged; and
- Proportion of people who feel unsafe walking in their neighbourhood at night.

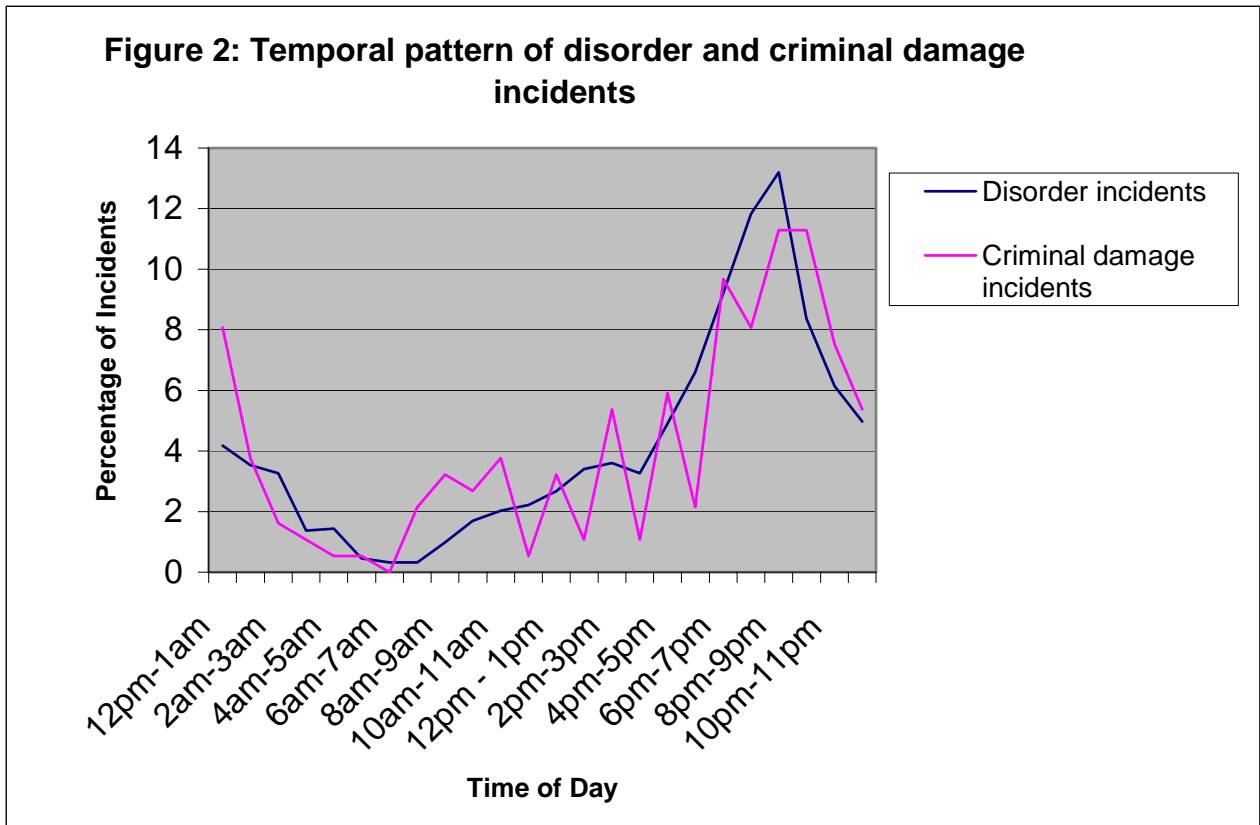
All of these indicators can be used for identifying crime and fear of crime hotspots, if comprehensive and reliable data is available. However, as discussed further in chapter 4, not all accessibility planning partnerships will be able to access the required datasets for measuring these types of indicators.

3.7 Further analyses of temporal patterns of crime and disorder are also highly desirable if data on the time of day of the reported incident is available. This can help the selection and targeting of appropriate remedial measures. For example, Figure 2 shows the temporal profile of reported incidents of disorder<sup>10</sup> and criminal damage for one month in 2003, illustrating a peak of activity during the evening hours. This analysis will allow more effective targeting of responses than would have been possible using data only at a daily level.

---

<sup>9</sup> Refers to disorder incidents reported to the police e.g. anti-social behaviour. These are incidents registered but not recorded as 'notifiable' offences.

<sup>10</sup> Refers to disorder incidents registered by the police



- 3.8 The Middlesbrough pilot and other studies<sup>11</sup> suggest that measuring fear of crime levels is more likely to identify the intensity and extent that crime affects public transport use, compared to using reported crime levels. It is preferable, therefore, that indicators use fear of crime levels rather than reported crime as a measure to identify hotspots and monitor progress in the impact of crime as a barrier to accessibility.
- 3.9 The most resonant indicators will, therefore, be those that use fear of crime perception surveys. As discussed previously, CDRPs are required to carry out fear of crime surveys for their audits and strategies, but these do not use standardised questions and many do not ask specifically about fear of crime on or around public transport.
- 3.10 Potentially, there is scope for many local authorities to use existing surveys to address these issues specifically. For example, Middlesbrough Borough Council currently includes questions about feelings of personal safety on and around buses in their bus satisfaction surveys, carried out every three years for the best value indicator BVPI 104<sup>12</sup>. It is not a requirement that local authorities ask specifically about personal security in these surveys; however, the Middlesbrough pilot showed that there are considerable benefits to the inclusion of fear of crime questions in such surveys. Responses to these surveys allow the council to gauge fear of crime levels among public transport

<sup>11</sup> Atkins, S, T (1990) Personal security as a transport issue: a state-of-the-art review, *Transport Reviews*, vol 10, no .2, 111-125

Crime Concern (1999) *Personal security issues in pedestrian journeys*, DETR

<sup>12</sup> Percentage of users satisfied with local bus services

users and carrying out these surveys on a regular basis, for example, every two or three years, enables assessments of how effective implemented measures to improve personal security have been. It is suggested that the DfT consider providing guidance to local authorities on the types of questions that could be included in bus satisfaction surveys (suggestions from the research team are outlined in chapter 4).

- 3.11 If good partnership working has been established, there should also be an opportunity to influence existing CDRP surveys to specifically include questions on crime and fear of crime on and around public transport. The questions focused on feelings of personal safety in areas or neighbourhoods, generally included in such surveys, will also be highly useful in measuring fear of crime levels in the pedestrian environment. Some local authorities, including Middlesbrough, use similar fear of crime questions to those used in the British Crime Survey<sup>13</sup>. This is potentially a useful resource for developing appropriate questions in local authority and CDRP surveys.
- 3.12 The indicator 'proportion of people who feel unsafe walking in their neighbourhood at night' is an effective measure of how secure people feel in their pedestrian environment. Depending on whether the data has been geo-coded, it can potentially be used to enable 'hotspot areas' to be identified, where fear of crime is most likely to be acting as a barrier to public transport use.

---

<sup>13</sup> <http://www.homeoffice.gov.uk/rds/bcs1.html>

## 4.0 Strategic and Local Accessibility Assessments

### From the strategic to the local

- 4.1 As identified in Chapter 1, it is anticipated in most cases that crime and fear of crime issues will be most appropriately considered once the strategic accessibility audit has identified specific areas, types of activity and target groups as the focus for action planning.
- 4.2 However, some authorities may consider crime and fear of crime to be a key accessibility issue at the strategic level of assessment, impacting significantly on access to a number of key activities across the whole LTA administrative area. This level of analysis would be more practical for unitary authorities, where only one CDRP and one local police force is in operation, from whom the necessary crime data will need to be directly accessed. Two-tier authorities would need to access the data from each CDRP and police force operating in their area and this could prove to be a highly burdensome exercise.
- 4.3 Generalised mapping of ward-based recorded crime data<sup>14</sup> at the strategic level of assessment, can be useful to some extent in identifying general areas, where recorded crime is a particular problem and where crime is more likely to act as a barrier to public transport use. Care should, however, be taken in the use of this data as crime patterns can vary significantly within ward boundaries and smaller hotspots may not be evident in ward level data. As such, it is recommended that local transport authorities and CDRPs use the lowest spatial level of data available to them to enable more detailed and accurate analysis of specific 'hotspot areas'.

### Detailed data and literature

- 4.4 At an early stage of the local accessibility assessments, CDRP survey and research work (including in particular the crime reduction audit and strategy) should be used to identify the key crime and fear of crime issues in the local area. These will include data relating to crime, disorder and in some cases fear of crime on public transport.
- 4.5 Table 1 identifies the key datasets that could be used for assessing crime and fear of crime levels on and around public transport. These datasets will not all be available across all local authorities, and the reliability and comprehensiveness of them will vary significantly between local authority areas.

---

<sup>14</sup> Available from neighbourhood statistics <http://neighbourhood.statistics.gov.uk>

**Table 1: Key sources of data for assessing crime/fear of crime on and around public transport**

Data type	Source	Strengths	Weaknesses
<b>Reported crime</b>			
<b>Bus/train related incident data</b> <ul style="list-style-type: none"> <li>Data on the number and types of crime/disorder on the network</li> </ul>	Local bus/train operator	<ul style="list-style-type: none"> <li>Can be used to identify 'hotspot' routes</li> </ul>	<ul style="list-style-type: none"> <li>Few operators record all incidents in a systematic way which facilitates effective analysis<sup>15</sup></li> <li>Many incidents not reported</li> <li>Difficult to identify specific crime locations on a moving bus</li> <li>Operators may be reluctant to share data with LTA or CDRP</li> </ul>
<b>Crimes reported at rail stations and along rail route</b> <ul style="list-style-type: none"> <li>Data on the number and types of crime/disorder reported incidents at rail stations and along rail route</li> </ul>	British Transport Police	<ul style="list-style-type: none"> <li>Can be used to identify 'hotspot' stations or routes</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to identify specific crime locations on a moving train</li> </ul>
<b>Reported crime data</b> <ul style="list-style-type: none"> <li>Data on street level locations of reported crime/disorder incidents</li> </ul>	Police	<ul style="list-style-type: none"> <li>Identify and analyse spatial and temporal patterns of reported crime/disorder</li> <li>Identify hotspots of crime and disorder around bus stops/routes etc</li> </ul>	<ul style="list-style-type: none"> <li>Some CDRPs and/or LTAs unable to access low level data for confidentiality reasons</li> <li>Many crimes are not reported</li> <li>Bus/train operators are not statutorily required to report crime/disorder incidents to the police</li> <li>Police do not specify in their records which crimes occur on or around public transport</li> </ul>
<b>Damage to bus shelters</b> <ul style="list-style-type: none"> <li>Data on the locations and nature of damage</li> </ul>	Local authority or private company	<ul style="list-style-type: none"> <li>Identifies frequency of damage and hotspots of vandalised/damaged shelters</li> </ul>	<ul style="list-style-type: none"> <li>Not all local authorities/private companies will maintain records</li> </ul>
<b>Fear of crime</b>			
<b>Household/Population/Omnibus surveys</b> <p>Topics might include:</p> <ul style="list-style-type: none"> <li>Feelings of safety in neighbourhood</li> <li>Experiences of crime</li> <li>Fear of crime on and around public transport</li> </ul>	Local Authority/CDRP	<ul style="list-style-type: none"> <li>Potentially representative</li> <li>Identify demographic variations</li> </ul>	<ul style="list-style-type: none"> <li>Expensive and time consuming</li> <li>Crime/fear of crime issues may be 'lost' in large surveys</li> </ul>

<sup>15</sup> DTLR (2002) *Get On Board: an agenda for improving personal security in bus travel*

<p><b>Panel surveys</b></p> <p>Topics might include:</p> <ul style="list-style-type: none"> <li>• Perceptions of safety in neighbourhood</li> <li>• Fear of different crimes</li> <li>• Crime prevention priorities</li> </ul>	<p>Local Authority</p>	<ul style="list-style-type: none"> <li>• Commitment to survey ensures response</li> </ul>	<ul style="list-style-type: none"> <li>• Only questions a small sample of the population</li> </ul>
<p><b>Bus surveys</b></p> <p>Topics might include:</p> <ul style="list-style-type: none"> <li>• Perceptions of personal security walking to, waiting for and travelling on buses</li> <li>• Potential measures to improve safety</li> </ul>	<p>Local Transport Authority/bus operator</p>	<ul style="list-style-type: none"> <li>• Focus on experiences/ concerns of bus users</li> <li>• Identify demographic variations</li> </ul>	<ul style="list-style-type: none"> <li>• Only questions those using the bus</li> <li>• Results sensitive to when survey administered</li> </ul>
<p><b>Bus satisfaction surveys</b></p> <p>Topics might include:</p> <ul style="list-style-type: none"> <li>• Perceptions of personal security walking to, waiting for and travelling on buses</li> </ul>	<p>Local Authority</p>	<ul style="list-style-type: none"> <li>• Satisfaction with safety levels on bus service could be included in surveys required as part of BVP1104</li> </ul>	<ul style="list-style-type: none"> <li>• LTAs are not provided guidance on the inclusion of fear of crime questions in their local bus satisfaction surveys</li> </ul>
<p><b>Focus Groups with bus passengers or non-bus passengers</b></p> <p>Topics might include:</p> <ul style="list-style-type: none"> <li>• Perceptions of safety</li> <li>• Specific problem areas/routes</li> <li>• Potential measures to improve safety</li> </ul>	<p>Local Authority</p>	<ul style="list-style-type: none"> <li>• Explore in more depth crime/fear of crime issues around bus use</li> </ul>	<ul style="list-style-type: none"> <li>• Not representative</li> <li>• Can be expensive and time consuming</li> </ul>

## Detailed mapping

4.6 In the Middlesbrough pilot, several of the datasets identified above were used to pinpoint crime and fear of crime 'hotspots'. The most useful local maps were:

a) **Hotspots of reported crime and disorder around bus stops** – This used street level reported crime and disorder data from the police, showing the x-y coordinate locations of crimes and bus stops. Three types of crime related incidents occurring in October 2003 were mapped:

- criminal damage,
- violence against the person and
- disorder.

These were selected because they have been identified by the Middlesbrough police force as the most prolific types of crime-related incidents in Middlesbrough likely to impact on people's willingness to use public transport<sup>16</sup>

Results from the mapping work (Appendix A) show the utility of this approach in enabling hotspots of crime to be identified around individual bus stops. To use a similar method in the national roll out, local transport authorities will need to access street level data from the police or CDRP. Many CDRPs already access and use depersonalised<sup>17</sup> data from the police in their analyses, through the setting up of protocol agreements between the local authority community safety representatives and the police which stipulate what data can be accessed, how it can be used and who can use it. In Middlesbrough, for example, a protocol agreement has been signed between the police force and the Council's community safety team, giving them access to street level data on a weekly basis. Given this precedent, it is likely that the protocol arrangements could be extended to local transport authorities, or if resources are available, analysis of incidents and hotspots around transport stops/hubs could be carried out by the community safety unit.

Some community safety units/teams in local authorities with poorer relationships with their local police force may be unable to access this level of spatial detail for confidentiality reasons. In these circumstances it is recommended that local transport authorities use other sources of data, identified in Table 1 to assess the extent of crime/fear of crime on and around public transport.

b) **Fear of crime hotspots** – This mapping exercise used results from a household survey of residents, commissioned by Middlesbrough Council and

---

<sup>16</sup> Other types of crime that could directly affect accessibility include: sexual offences, robbery, theft from person and drugs. Crimes, which could affect general feelings of safety include burglary, motor vehicle crime and other types of theft.

<sup>17</sup> Relates to information where any reference to an individual or means of identifying an individual has been removed



undertaken by MRUK for the Council's best value review in 2003<sup>18</sup>. This questioned 8080 residents on a range of issues, including crime and fear of crime. Each respondent gave their home postcode, allowing the responses to be mapped using GIS. These maps identify specific areas where different people groups are particularly fearful of crime and, therefore, those areas where fear of crime is more likely to act as a barrier to public transport use. Examples of the local detailed mapping are shown in Appendix A.

4.7 Accessibility maps showing access to education, employment, health, food and leisure were produced alongside the crime and fear of crime maps using the same method as has been adopted in the *Accessibility Planning: Developing and Piloting Approaches* study. An example is shown in Figure A4, overlaying hotspots of disorder incidents in October 2003 on a map showing accessibility to secondary schools. Here we can see that disorder hotspots can be found both in high and low accessibility residential areas. In the former case, they may be suppressing levels of public transport use, despite good accessibility by bus; and, in the latter, they suggest that any investment in additional public transport provision may not achieve its full potential unless issues relating to disorder in these areas are addressed.

## Developing useful datasets

### *Fear of crime*

4.8 Fear of crime surveys which specifically ask about transport issues will be most useful to local transport authorities and CDRPs in assessing the extent of the fear of crime on and around public transport. As identified by the Home Office there are no 'right' questions to ask to measure fear of crime but some of those that could be used are included in Figure 3<sup>19</sup>.

<b>Figure 3: Questions to ascertain feelings of personal safety on and around public transport</b>	
How safe do you feel walking to public transport during the day?	Very Safe Fairly Safe Neither Fairly Unsafe Very Unsafe
How safe do you feel walking to public transport after dark?	
How safe do you feel waiting for public transport during the day?	
How safe do you feel waiting for public transport after dark?	
How safe do you feel travelling on public transport during the day?	
How safe do you feel travelling on public transport after dark?	
Do you avoid using public transport after dark?	Always Sometimes Never
Do you avoid using public transport because of fear of crime?	
Would you travel more on public transport if it were safer?	Yes – a lot more Yes – a bit more No

<sup>18</sup> Funded by Middlesbrough Council through the 'Corporate Consultation budget'

<sup>19</sup> Questions sourced from: <http://www.crimereduction.gov.uk/toolkits/fc0401.htm>

- 4.9 Middlesbrough Council has also found it useful to conduct focus groups with different groups of bus passengers, including pensioners and young women, to identify some of the key safety concerns about walking to, waiting for and travelling on buses. This method can provide useful insights into the views of socially excluded groups, in particular, those who are likely to be underrepresented in other types of surveys.

### ***Bus related incident data***

- 4.10 As identified through a number of good practice examples, bus and train operator data on crime/disorder related incidents is potentially very useful for identifying particular crime/disorder 'hotspot' routes, the most prolific types of crime and at what time of the day they most frequently occur. A survey conducted by Crime Concern<sup>20</sup> and a forthcoming report from the Mobility and Inclusion Unit<sup>21</sup>, however, reveal that few CDRPs or authorities use bus related incident data for analyses of crime on and around public transport. There is no statutory requirement for bus operators outside London to record incidents occurring on or around buses; this means that many bus operators do not have standardised database systems in place, and for those that do they may be set up in such a way that does not facilitate effective analysis.
- 4.11 Guidance and good practice examples on recording and monitoring crime and disorder incidents are available for bus operators<sup>22</sup>, but these need to be more explicit in suggesting how systems should be set up and how they can be used. It is recommended that CDRPs and local transport authorities who do not already access bus related incident data, work alongside bus operators to identify what data is required for analysis; and protocols should be set up to enable the sharing of operator data with CDRPs and the local authority. Bus quality partnerships or public transport safety groups could help to facilitate this process.

---

<sup>20</sup> Crime Concern (2003), Crime and Disorder Audits and Strategies, Round Two: Addressing Crime and Disorder on Public Transport

<sup>21</sup> Study explores link between bus-related crime and other crime and is being carried out by Crime Concern and the Environmental Criminology Research Unit of the University of Liverpool. Publication expected spring 2004.

<sup>22</sup> DFT (2002) Get on board: An agenda for improving personal security – Case Studies, DTLR (1998) Personal Security on Public Transport: Guidelines for Operators

## 5.0 Option Appraisal and Resources Auditing

### Integrating considerations of crime and fear of crime into option appraisal

- 5.1 If local assessments have identified crime and fear of crime as potentially impacting on either the amount of walking, the use of public transport or people's ability to access key activities in an identified area, then option appraisals should reflect these concerns.
- 5.2 To illustrate how these issues can be incorporated in the options that are generated, several examples have been taken from option appraisals undertaken in the *Accessibility Planning: developing and piloting approaches* study. The reduction of crime/fear of crime might be the main focus of the action, or an integral part of it.

**Table 2: Integration of crime and fear of crime concerns into option appraisal**

Action Considered	Key crime/fear of crime focus	Potential solution
<b>Work</b>		
Encourage new employment opportunities in target areas	Are levels of fear of crime high in target areas? What crime reduction measures could be implemented?	Improve street lighting Install CCTV cameras
Close gaps in public transport coverage to solve issues of retention and recruitment	Is crime affecting operators willingness to operate in some areas?	Introduce wardens/community police officers on buses in areas of high crime
<b>Education</b>		
Support student travel needs with practical public transport based solutions	Is fear of crime a barrier to students walking to college and waiting for public transport?	Install real time display boards inside college Introduce warden safety scheme as part of wider walking strategy
Consider revised opening/closing times for schools	What are the potential implications for students walking from and to bus stops after dark?	Improved street lighting Install CCTV cameras Introduce teachers at bus stop scheme
<b>Health</b>		
Improve physical layout for access to public transport including new bus routes where needed	Should this include crime reduction improvements in high crime and fear of crime areas?	Implement crime reduction measures e.g. additional bus stop lighting, real time information Increase frequency of buses in high crime areas
Improve geographical coverage and extensions of time of day for demand responsive transport services	Should priority areas be those with high fear of crime areas?	Prioritise areas with high fear of crime levels for Demand Responsive Transport development
<b>Food</b>		
Target healthy eating publicity, mobile food vans, and home delivery options at those most in need	Does accessibility audit include those living in areas with high fear of crime levels?	Target home delivery options to target groups living in areas with fear of crime rates
Use accessibility criteria	What about personal	Integrate personal safety

when assessing the merits of proposed food shops and supermarkets?	safety criteria? Are food shops vulnerable to crime? Do they have appropriate surveillance? Adequate lighting?	concerns into accessibility criteria
--	--	--------------------------------------

5.3 It is recommended that option appraisals should consider a wide range of both transport and non-transport measures to address crime and fear of crime issues. These could include:

- Improved public transport services, e.g. increased frequency of bus services at night;
- Service planning and delivery, e.g. changes in opening hours for youth activities;
- Improved surveillance e.g. installation of CCTV cameras<sup>23</sup>, increased police or warden deployment;
- Improved lighting<sup>24</sup> e.g. installation of more street lights;
- Public transport infrastructure improvements e.g. improved bus shelters;
- Environmental/building redesign<sup>25</sup> e.g. removal of unnecessary alleyways, bus shelter redesign;
- Improved information e.g. provision of service information at bus stops to reduce the fear of the unknown;
- Education e.g. police seminars at schools to educate students about the impacts of vandalism; and
- Legal enforcement e.g. increased use of anti-social behaviour orders.

5.4 It will be necessary for authorities and their partners to work with their local CDRP and the local police in assessing the appropriateness and viability of suggested 'solutions'. Additional mapping may also be required to identify whether additional crime reduction measures are required and where these could most effectively be located. This is most likely to involve identifying the locations of CCTV cameras and streetlights. Both sets of data should be available from the local authority however; many will not have all (if any) of the CCTVs and in particular, street lamps, geo-coded and mapped. Unless the local authority are already proceeding with improvements to update their mapping systems with this data, it is not recommended that local transport authorities undertake this time consuming task as part of the accessibility planning process.

### Resource auditing and fund assembly

5.5 The resource auditing stage of the option appraisal should include consideration of the data and staffing resources that might be available across agencies, as well as the budgets that could be brought into play to address

<sup>23</sup> More information on CCTV and evaluations of their effectiveness available from:

<http://www.crimereduction.gov.uk/cctv30.htm>

<sup>24</sup> More information on the impacts of improved street lighting available from

<http://www.crimereduction.gov.uk/securedesign3.htm>

<sup>25</sup> More information available from *Planning Out Crime: good practice guidance (ODPM)*. To be published Spring 2004

crime/fear of crime issues or deliver the crime reduction measures set out in accessibility plans.

- 5.6 Funding sources are likely to vary significantly according to the proposed action and it is likely that some local transport authorities will need to acquire resources outside their local transport plan allocations and compete for funding with other service areas. It is anticipated that this will be an easier task in areas where the reduction of crime and fear of crime is high on local political and cross-agency agendas.
- 5.7 The local authority should work closely with the CDRP and, where necessary, directly with the police in developing funding bids to ensure that they are not competing for the same resources. In Middlesbrough, for example, the Council and the police effectively submit joint bids, an approach which could be adopted by CDRPs and local transport authorities.
- 5.8 A wide range of fiscal resources has been identified which could contribute to the delivery of actions addressing concerns about crime and fear of crime. These include:
- **Local Transport Plan budgets**
  - **Rural and urban bus challenge**
  - **CDRP budgets** – Building Safer Communities Fund, Basic Command Unit Fund, Regional Building Capacity Fund
  - **European funding** – Single Regeneration budget, European Social Fund (Objective 1 and 2), European Regional Development Fund
  - **Neighbourhood Renewal Fund**
  - **Neighbourhood Warden Programme**
  - **New Deal for Communities**
  - **Public–Private Partnerships** – Private Finance Initiatives
  - **Home Office** - Street Warden programme
  - **Strategic Rail Authority**
  - **Local bus operators**
  - **Local train operators**
  - **Council housing capital programmes** – street lighting improvements
  - **Education services transport budgets**
- 5.9 It is evident from the Middlesbrough pilot that problems might be experienced in encouraging particular agencies to commit resources to actions that address concerns about crime and fear of crime. Local education authorities, for example, may be reluctant to commit resources to the widespread problem of anti-social behaviour on buses by students, which many local authorities identify as a key problem in discouraging bus ridership. Local transport authorities may also find it difficult to encourage bus operators to commit resources to initiatives, many seeing crime and disorder as the responsibility of the police or local authority.
- 5.10 Local transport authorities may need to ‘prove’ to agencies how the commitment of resources to a crime reduction measure will help to remedy

problems and bring benefits. For example, implementing initiatives to reduce anti-social behaviour on buses is likely to encourage bus ridership amongst students and potentially reduce non-attendance. For bus operators, the implementation of crime reduction measures for example, CCTV on buses, is likely to increase patronage and therefore profits.

- 5.11 Current efforts by central government to spread good practice and increase awareness of crime and fear of crime on and around public transport amongst CDRPs, transport authorities and operators, should increase the importance of these issues for other agencies. However, more may be required by central government, possibly through guidance or seminars, to encourage other departments and agencies to give due attention and commit resources to these issues.

## 6.0 Monitoring and Evaluation

### Local indicators and targets in the action plans

- 6.1 Two types of indicator will be particularly important for monitoring actions that consider crime and fear of crime issues:
- a. Indicators that measure intermediate factors affecting accessibility outcomes, for example:
    - Reduction in crime/disorder incidents on buses
    - Reduction in crime/disorder incidents around bus stops
    - Reduction in the fear of crime for people walking to bus stops
    - Reduction in fear of crime for people waiting at bus stops
    - Reduction in fear of crime for people travelling on public transport
  - b. Indicators that measure other outcomes, which may indicate success but which are not directly related to accessibility outcomes. For example:
    - Number of public transport trips
    - Percentage of people regularly using public transport

### Data requirements for monitoring and evaluation

- 6.2 Using the indicator framework proposed above, additional local datasets may be required by local authorities for monitoring and evaluating actions. These might include:
- Perceptions of safety on and around public transport
  - Bus passenger journeys
  - Bus use
- 6.3 It cannot be expected that all local authorities will have the capacity to carry out regular perception surveys, as Middlesbrough have done. However, as discussed in chapter 3 there may be scope in many local authorities for adding questions to existing surveys already carried out by the CDRP (e.g. fear of crime surveys) or the local authority (e.g. panel surveys). This includes those carried out for best value reviews e.g. bus satisfaction surveys. It is important, however, that the questions are standardised, to enable change to be measured accurately over time.
- 6.4 Local authorities are required to report on the number of bus passenger journeys per year for the best value indicator BV102, and as a result this data should already be collected on a yearly basis for use in monitoring. Some local authorities may, however, experience difficulties in accessing commercially sensitive raw data; in particular, for specified routes, as was experienced in Middlesbrough. If this data is required for monitoring purposes, local transport authorities will need to work more closely with bus operators in specifying what data is required and what it will be used for. Protocol agreements could play an important role in reassuring bus operators that data will be used appropriately. Bus Quality Partnerships should also

provide a useful forum for facilitating discussion and overcoming these data barriers.

- 6.5 A useful resource for local authorities and CDRPs in evaluating crime reduction projects and initiatives is 'Passport to Evaluation' produced by the Home Office Crime Reduction Centre. This publication is available from [http://www.crimereduction.gov.uk/learningzone/passport\\_to\\_evaluation](http://www.crimereduction.gov.uk/learningzone/passport_to_evaluation).



## **7.0 Overview of lessons learned**

- 7.1 The overall aim of this study has been to investigate how considerations of crime and fear of crime on and around public transport can be integrated into the accessibility planning approach. The research has identified a number of key barriers and facilitators to this process. These are summarised in this chapter with, where possible, suggestions for how they can be addressed in the accessibility planning process.

### **Building effective partnerships**

- 7.2 The ability of accessibility planners to involve crime reduction agencies including in particular, local Crime and Disorder Reduction Partnerships and the local police, will be important in developing and delivering accessibility action plans that appropriately consider crime and fear of crime issues. However, the extent to which CDRPs will be able to get involved in the process will vary significantly depending on resources available, the number of competing demands for those resources and the priority given to the issue. It is evident, however, that actions and measures developed and implemented to address crime/fear of crime on and around transport will make some contribution to the local CDRP's overall aim of reducing crime and fear of crime. It is expected that this will play a role in 'winning' the support of CDRPs and in encouraging their and other crime reduction agencies' involvement in accessibility strategies that consider crime and fear of crime issues.
- 7.3 It is anticipated that existing government guidance, seminars and toolkits that aim to increase awareness of crime and fear of crime issues around public transport in CDRPs, will also serve to encourage their involvement in the accessibility planning process.
- 7.4 It is likely that many other relevant agencies will see crime and fear of crime as a peripheral issue in the delivery of their own policies agendas, and so will be reluctant to commit staff time or resources to address concerns. The Crime and Disorder Act requires local authorities to consider the crime and disorder implications of all their activities; however, more may be required to encourage some departments to fulfil their duties in giving due attention to these issues. Accessibility strategies which seek to address concerns about crime and fear of crime may help to raise these issues up the agenda of some departments, and encourage more joined up, cross departmental working for overcoming crime and disorder problems.
- 7.5 Nevertheless, it may be necessary for authorities and their partners to 'prove' to agencies that they can get something useful from the accessibility planning process to ensure their participation. Actions to address crime and fear of crime on and around buses, for example, are likely to benefit commercial operators by increasing patronage. Bus quality partnerships are potentially a useful forum for involving operators, where necessary, in the development and delivery of action plans.

## **Evidence from Analysis and Indicators**

- 7.6 In most instances, it is recommended that authorities and their partners start to examine crime-related issues as part of their local accessibility assessments, i.e. once local areas, key activities and target groups have already been identified through the strategic assessment of accessibility. In some cases it will be appropriate to include reported crime and fear of crime as a factor in the identification of local areas during the strategic accessibility audit stage.
- 7.7 Lack of suitable data is a significant barrier to developing local indicators. There are no nationally available datasets for building local indicators for identifying hotspots of crime/fear of crime around public transport or for monitoring purposes, which could be used across all local authority areas. Practically, the best local indicators are likely to be those that measure feelings of personal safety in neighbourhoods, using results from fear of crime surveys.
- 7.8 The types and quality of datasets that are available to local authority areas and CDRPs will vary between areas. It is anticipated that protocol agreements will play an important part in enabling authorities and their partners to gain access to useful datasets for analysis that would otherwise be regarded as confidential. Fear of crime surveys will be particularly useful for assessing the extent of fear of crime on and around public transport; and, if necessary, authorities and their partners should consult with the CDRP and other local authority departments about including relevant questions in existing surveys.

## **Developing appropriate option appraisals**

- 7.9 Potential options to address crime and fear of crime issues should be considered at the appraisal stage of the accessibility planning process. The local authority will need to ask whether proposed actions consider crime and fear of crime issues appropriately. These concerns may become the focus of the action itself or an integral part of it. For example, if the action being considered is to support young people's travel needs to leisure facilities, it will be necessary to assess whether crime and fear of crime plays a role in limiting public transport travel for the young, and what appropriate and viable options could be implemented to minimise this barrier.
- 7.10 A wide range of both transport and non-transport measures should be considered for addressing concerns about crime and fear of crime, and appraisal of the options should involve CDRPs as much as possible, to ensure delivered actions are appropriate and viable.

## **Resources issues**

- 7.11 It is likely that many authorities and their partners will need to compete for funding sources outside Local Transport Plan allocations to deliver actions that address crime and fear of crime issues. A range of potential resources

have been identified, including funding from crime–reduction budgets and other sources.

- 7.12 Authorities and their partners will need to engage effectively with all agencies involved, to maximise the funding opportunities available for addressing crime and fear of crime issues. This is likely to be more challenging in areas where crime and fear of crime is not a political or cross-agency priority.

### **Monitoring**

- 7.13 In local authority areas where authorities and their partners are unable to access appropriate data for monitoring, additional data sources could be provided by best value reviews and/or surveys conducted by other local authority departments or other agencies. It is recommended that authorities and their partners explore the types of surveys already conducted and whether additional standardised questions specifically relating to crime and fear of crime issues could be included to regularly monitor the progress and success of implemented measures.

### **Support and Advice**

- 7.14 There will be significant variation in the resources, skills and levels of partnership working across agencies and departments, that can be used for developing and delivering accessibility strategies addressing crime and fear of crime issues. Some guidance and examples of best practice are available from central government and include crime reduction toolkits (available from <http://www.crimereduction.co.uk/toolkits/>) which provide guidance on building effective partnerships, using intelligence and information sharing in crime reduction strategies as well as advice on how to tackle crime and fear of crime on public transport.

### Modelling Approaches

#### Introduction

A.1 A number of modelling approaches were used to map crime, fear of crime and accessibility in the Middlesbrough pilot. These included:

- Reported crime hotspots around bus stops
- Feelings of safety in neighbourhoods
- Access to activities and incidents of crime

#### **Reported crime**

A.2 Hotspot maps using street level reported crime and disorder data sourced from the police were developed for criminal damage, violence against the person and disorder incidents for October 2003. These were used together with the locations of bus stops to identify specific stops located in areas with high incidence of crime and disorder.

A.3 Figure A1 shows a typical hotspot crime/disorder map.

#### **Fear of crime**

A.4 Using results from the Middlesbrough household survey in 2003 (8080 respondents) average values per output area were plotted to create surfaces showing areas where people felt safe and unsafe in their neighbourhoods. This was used as a proxy for fear of crime.

A.5 Figures A2 and A3 show typical maps identifying areas where people feel unsafe in their neighbourhoods.

#### **Accessibility and reported crime incidents**

A.6 Accessibility modelling was undertaken using the same method adopted for the *Accessibility Planning: developing and piloting approaches study* to calculate access to a range of activities including employment, education, healthcare and leisure. Modelling was undertaken at census output area level so the journey times by public transport and walking were calculated from the population-weighted centroids of these areas. These journey times were then used to calculate the relevant indicators. Hotspots of reported crime and disorder were overlaid on the accessibility maps to observe any relationships.

A.7 Figure A4 shows a typical origin accessibility map overlaid with reported crime.

**Figure A1 – Hotspots of disorder incidents in October 2003 and bus stop locations in Middlesbrough**

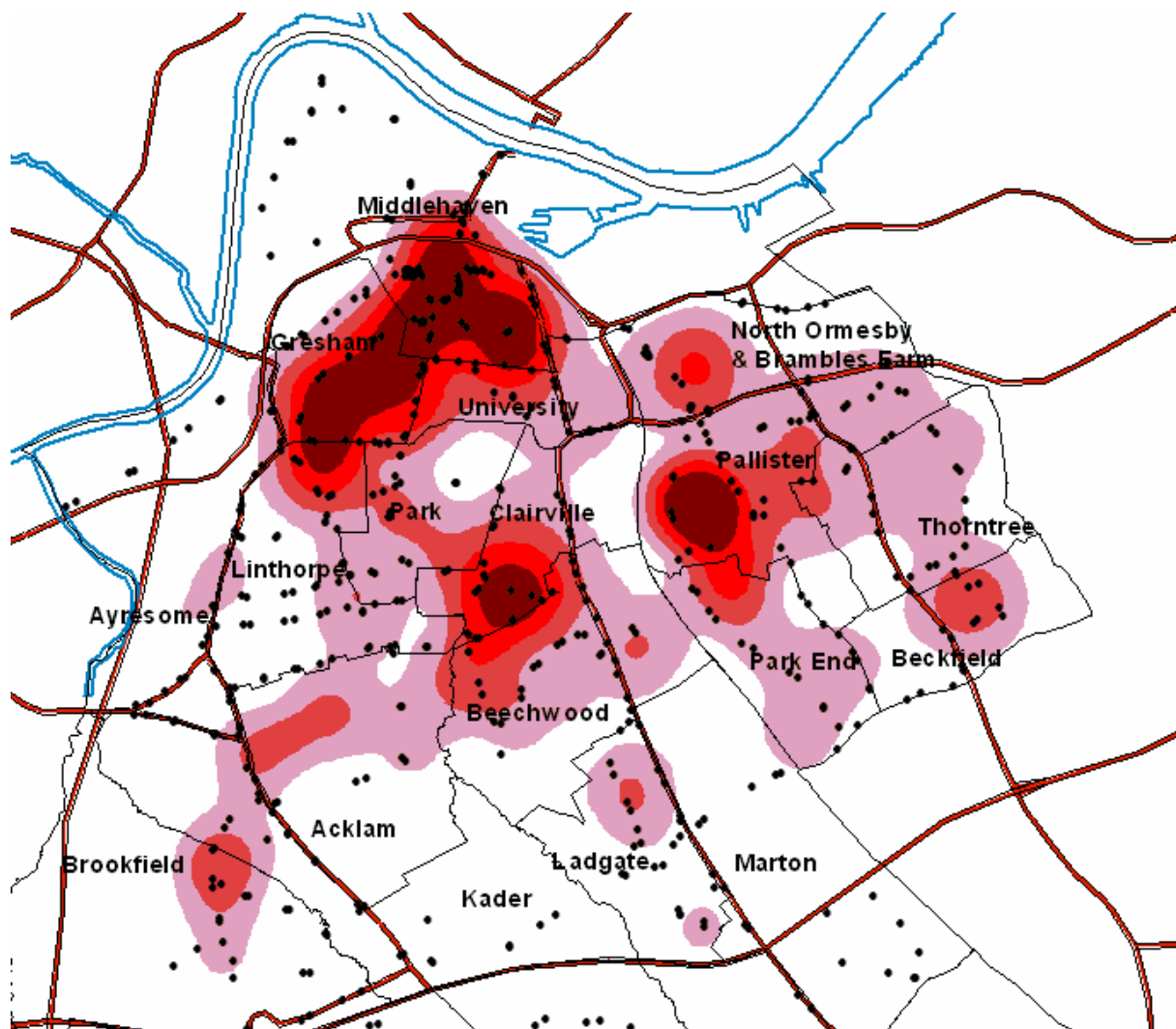
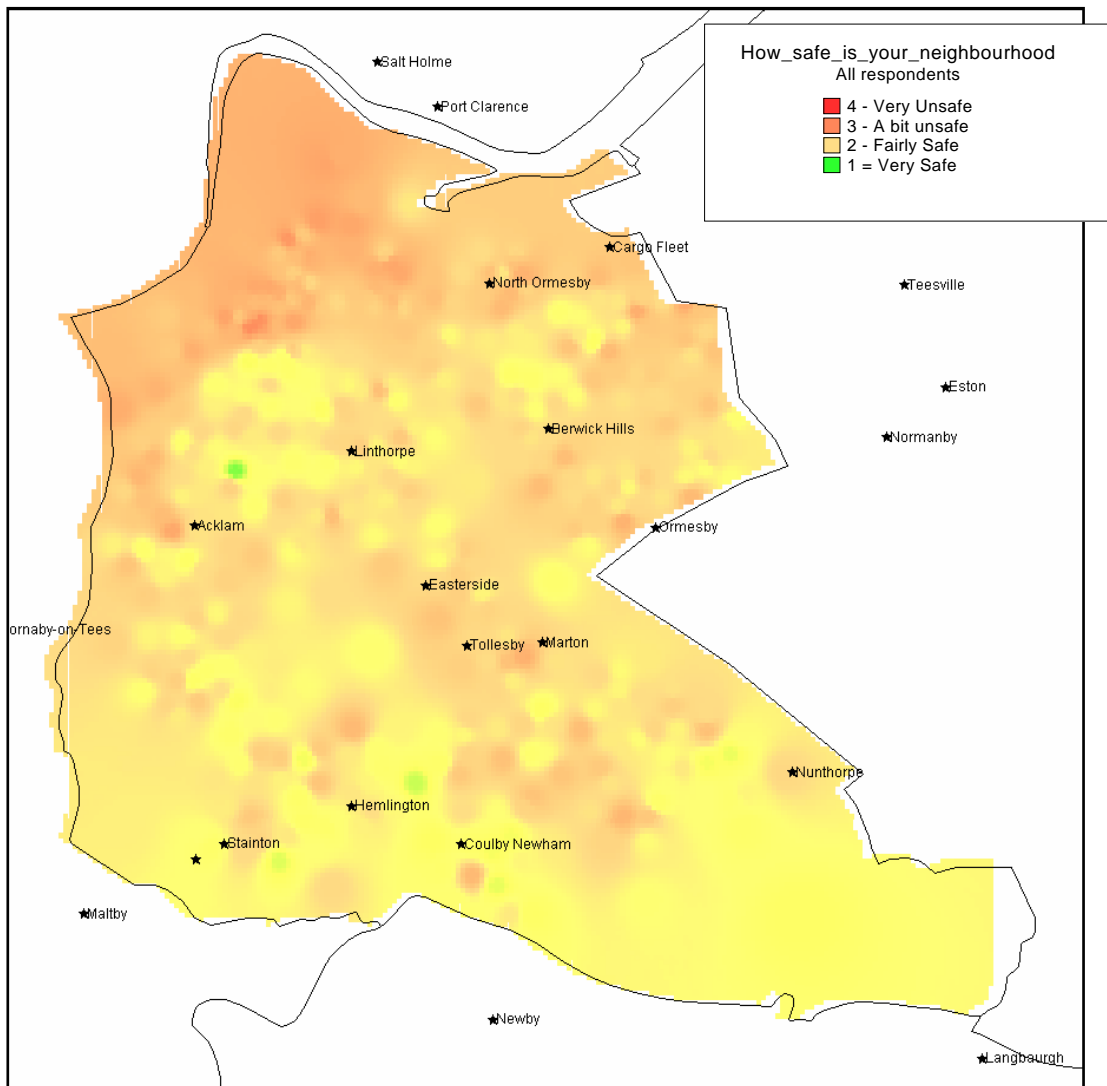
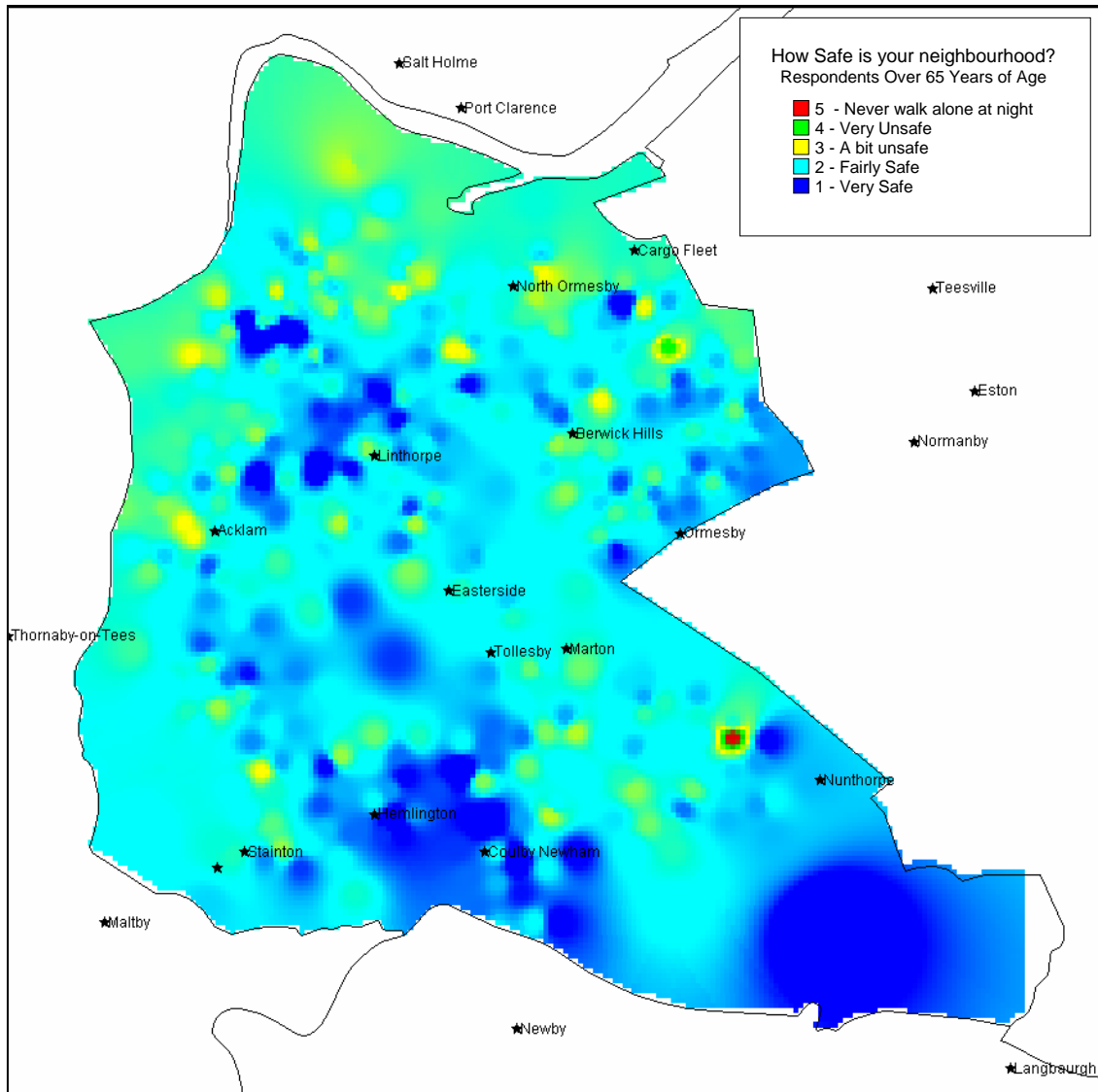


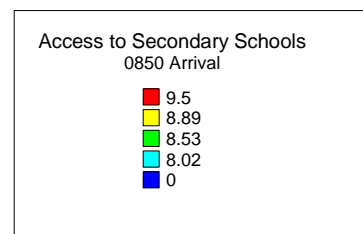
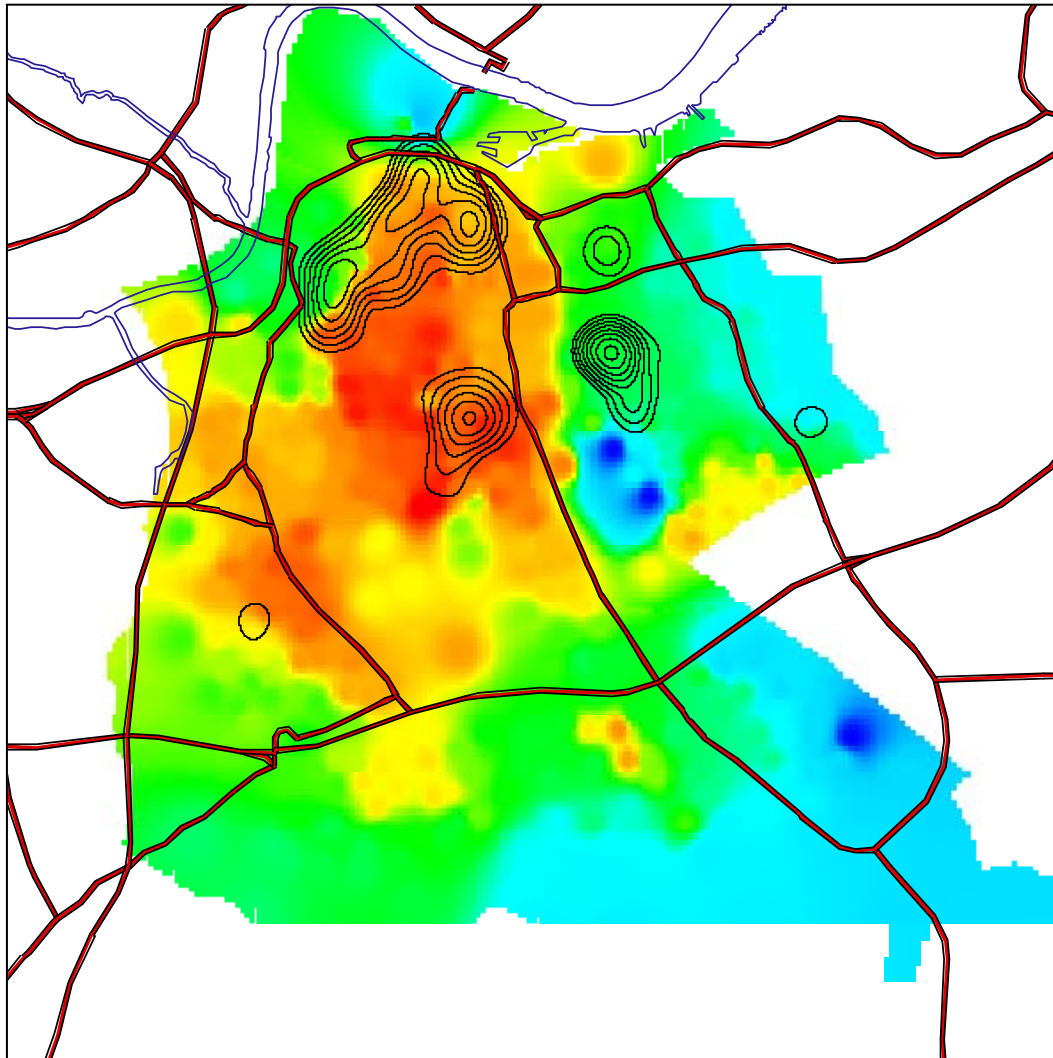
Figure A2 – Feelings of safety in neighbourhood for all respondents



**Figure A3 – Feelings of safety in neighbourhood for respondents over 65 years of age**



**Figure A4 - Access to secondary schools in Middlesbrough and disorder hotspots in October 2003**





## **Appendix B**

### **Sources of Guidance and Advice**

## **Publications**

Crime Concern (2004) *People's Perceptions of Personal Security and their Concerns about Crime on Public Transport: research findings*, DfT

Crime Concern (2003), *Crime and Disorder Audits and Strategies, Round Two: Addressing Crime and Disorder on Public Transport*

Crime Concern (1999) *Personal Security Issues in Pedestrian Journeys*, DETR

Crime Concern (1999) *Young People and Crime on Public Transport*, DETR

DETR (2001) *Secure Transport Route – Manchester (Victoria) to Clitrooe Pilot*

DETR (2001) *Older People: Their Transport Needs and Requirements*

DETR (1997) *Perceptions of Safety from Crime on Public Transport*

DfT (2003) *Transport Requirements of Minority Ethnic and Faith Communities – Good Practice*

DfT (2002) *Get on board: An agenda for improving personal security – Case Studies*

DTLR (1998) *Personal Security on Public Transport: Guidelines for Operators*

NACRO (2003) *Getting There: Reducing Crime on Public Transport*

NACRO (1999) *Crime and Disorder Act 1998 – section 17. A briefing for local authorities on the implementation of section 17 of the Crime and Disorder Act 1998*

ODPM (2004) *Safer Places: The Planning System and Crime Prevention*.

Social Exclusion Unit (2003) *Making the Connections: Final Report on Transport and Social Exclusion*

## **Websites**

Advice and good practice for crime reduction agencies:

<http://www.crimereduction.gov.uk>

Home Office Crime Reduction Toolkits: [www.crimereduction.co.uk/toolkits/](http://www.crimereduction.co.uk/toolkits/)

Passport to Evaluation:

[http://www.crimereduction.gov.uk/learningzone/passport\\_to\\_evaluation](http://www.crimereduction.gov.uk/learningzone/passport_to_evaluation)