Regeneration at Transport Interchanges

A report for *emda*

ECOTEC

2008

This document forms part of the *emda* Knowledge Bank

Regeneration at Transport Interchanges

Final Report to the East Midlands Development Agency

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ECOTEC

Priestley House
12-26 Albert Street
Birmingham
B4 7UD
United Kingdom

T +44 (0)121 616 3600
F +44 (0)121 616 3699
www.ecotec.com

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Executive Summary

This report sets out an overview of the rationale for investment in transport interchanges and provides an implementation framework to guide decision making by *emda* and its public and private sector partners in respect of opportunities for investment in transport interchange projects. The intention is that the implementation framework can be used by all partners across the region to provide consistency and to assist in the development, delivery, monitoring and evaluation of transport interchange project interventions

People interchange when there is no direct, convenient through service or route for the journey they wish to make; or if interchanging offers the superior speed, comfort or convenience of a particular mode of transport for part of the journey. Interchanges are therefore both an inconvenience inflicted on passengers, and an opportunity which passengers willingly use in order to reduce their travel costs/ times. In a network comprising different modes of transport interchanges provide the opportunity to move between modes. There is usually a hierarchy between the modes ranging from intercity rail travel – offering fast services with few stops and therefore operating at some distance from many destinations – to local bus services offering a finely grained pattern of stops at a reduced speed. Interchange does not however have to take place at purpose built facilities, such as train or bus stations, but can also take place at informal interchanges, for example where two bus stops are close to each other on the street. *Transport Interchanges* are therefore, the *physical spaces* where passenger interchanges occur.

The research has shown that investment in transport interchanges can have marked economic impacts and the scale of economic impact varies according to the type of transport interchange and the nature of that investment. Here we provide guidance for *emda* regarding what projects should be considered for funding and what its role can be in ensuring the realisation of project aims:

- The clearest case for economic benefits arising from investment in transport interchanges are to be found within the national urban hub type, that is to say at transport interchanges located in primary urban areas. Although marked benefits may also be achieved at parkway type locations where new networks are delivered at the same time. It is recommended that *emda* concentrate investment on transport interchanges falling within the national urban hub type.

- Economic benefits are most clearly discerned where projects include network improvements, through either new infrastructure or increased frequency. It is recommended that *emda* prioritise transport interchange projects that improve the efficiency and capacity of the transport network in preference to those that solely address the appearance and function of public transport interchanges.

- Any investment in transport interchanges by *emda* should focus on addressing market failure, particularly with regard to the provision of public goods. Interventions should make a positive impact to the public realm and the realisation of regeneration and renewal improvements.

- *emda* can play a leading role in maximising the economic return from investment in transport interchanges. This can be achieved by leading discussion amongst stakeholders or helping to facilitate an appropriate partner to take on that role so that any development can contribute to regional and local economic growth.

- *emda* funding should clearly demonstrate clear evidence of additionality and be clearly targeted so as not to replicate the statutory role of other partners or delivery bodies. Local authorities are well placed to act as credible champions and project leaders and should be supported in this role by *emda*.

- Regeneration at transport interchanges can contribute to employment creation, business creation and the reclamation and redevelopment of brownfield land to assist *emda* in meeting the core outputs identified in the RDA Tasking Framework (DTI, 2005).

- Where there is no market failure and the new transport interchange is being funded by a private sector partners there could be a case for, *emda* to ensure that the potential wider regeneration impacts are fully considered. If a compelling case can be made for intervention then even in the absence of any other public funder *emda* might consider intervening but only where the intervention clearly satisfies *emda*'s RES objectives.

- Together with public sector partners, *emda* can address market failures and ensure that public goods are realised and opportunities maximised through investment in transport interchanges. In particular, the research has shown that *emda* can play a leading role not only as a source of funding for feasibility studies and masterplanning but also public realm works and land packaging. As a key regional body *emda* can play the role of credible champion, lobbying other statutory bodies, strategic partners, network operators and private sector actors

1.0 Introduction

1.1 ECOTEC Appointment

ECOTEC Research and Consulting Limited were appointed by the East Midlands Development Agency (*emda*) in October 2007 to undertake a study investigating the potential and rationale for *emda* to invest in regeneration at public transport interchanges.

1.2 Transport and Regional Development

Transport interchanges are recognised as key mechanisms in linking together people, businesses and markets, providing opportunities to secure regeneration benefits including the bringing forward of brownfield land; enhancing the quality of the public realm and improving access to jobs.

Transport and Logistics is a Priority Action within the East Midlands Regional Economic Strategy[1] (RES). A Key Aim within the RES is to improve the quality of regional infrastructure to enable better connectivity within and outside the region. The RES highlights the importance of good regional infrastructure and the important role it can play in supporting a successful regional economy:

- ***Good regional infrastructure is recognised as a fundamental prerequisite for successful regional development***. The quality and efficiency of the region's transport infrastructure is believed to be essential to its attractiveness and success as a place to live, work and invest[2]. It can play an important part in helping to address or overcome peripherality or relative isolation from drivers of economic growth and opportunity. Improved management of travel demand and behaviour also relates directly to both the environmental and productivity agendas.

- ***Transport infrastructure provides the links which enable regional economies to function effectively and grow***. In general terms transport plays a key and catalytic role by providing people with access to employment and educational opportunities, and businesses with access to both labour and markets.

- ***Transport contributes directly to economic growth, both in areas of growth, and areas of regeneration need***. Transport accessibility has been a key objective in efforts to progress regeneration and economic growth. By addressing barriers of poor accessibility and the need to improve reliability, transport schemes and investment can help create new employment opportunities, and provide improved economic conditions and stability in the East Midlands. In areas of growth and opportunity the provision of infrastructure and transport services is one mechanism to stimulate more sustainable patterns of development.

[1] *emda* (2006) *A Flourishing Region: Regional Economic Strategy for the East Midlands 2006 - 2020*
[2] Martin, R (2005) *Thinking About Regional Competitiveness: Critical Issues*

- ***The region's location and connectivity are key strengths***. The East Midlands has a range of transport assets and shares its boundaries with five other regions which provide access to and from markets, investment and opportunities to secure spill over benefits from other areas to contribute towards indigenous economic growth in the region. Centrality and strategic transport routes make the region an attractive location for the distribution industry.

Experience in the region to date suggests that within the framework presented above well designed transport interchanges can play a catalytic role in the regeneration of the areas surrounding them. For example, the Nottingham Station Masterplan[3] considers not only the immediate station site but also linkages to regeneration opportunities in other parts of the city such as Southside and the Meadows.

Investment at transport interchanges can offer the potential to secure wider economic benefits: bringing forward brown field land for redevelopment; addressing social exclusion; enhancing the quality of the public realm; creation of employment opportunities; improved access to jobs; connecting inner urban areas; and, supporting anticipated population growth in identified Growth Areas and New Growth Points. Transport interchanges also offer the potential to provide improved gateways into the region and its urban and rural areas – an important element of place making and image improvement.

However, the provision of direct funding for transport infrastructure is not the responsibility of *emda*. Typically, this responsibility lies with a range of other organisations including the Highways Agency, Network Rail, British Waterways and Local Transport Authorities. *emda* has historically supported studies and feasibility work to identify the value of and need for regeneration at transport hubs, providing a body of evidence supporting the view that transport interchanges are suitable locations for regeneration investment. Furthermore a number of regeneration projects at transport hubs are coming to the fore, these include:

- The recent decision to provide a railway station at Corby will help the town secure demographic and economic growth and provide impetus for office development in the town.

- Efforts are underway to ensure the regeneration of Derby Railway Station to improve its linkages with the city centre, and use the station's regeneration to provide a catalyst for development in the surrounding areas.

- The business case for the complete redevelopment of Nottingham Railway Station is being advanced, drawing on its roles as a transport hub and its role in developing the city's business quarter, in addition to helping deliver significant economic benefit for the wider Southside area.

- The remodelling of Leicester railway station to improve accessibility into the city's office core, making it easier for companies to invest in Leicester.

[3] Nottingham City Council *(2003) Nottingham Station Masterplan*

1.3 Study Aims and Objectives

To date, and as outlined above, *emda* has generally used its funding indirectly in respect of supporting investment in transport interchanges for funding research; developing masterplans; and identifying facilities in need of investment and new facilities. *emda* considers that investment in transport interchanges can potentially contribute to addressing both regeneration and growth agendas, and that sensibly targeted interventions in these key locations can provide market confidence and encourage transport operators to invest in the development of important passenger hubs. It is the testing of this hypothesis that lies at the crux of the study.

The Invitation to Tender[4] translates this hypothesis into a clear research aim:

Research Aim: "…The study should seek to examine the potential wider economic impact arising from *emda's* investment in transport interchanges across the East Midlands…The report should also seek to develop a clear and transparent intervention logic to help provide a rationale…The study will ensure better responsiveness to demands for intervention by identifying specific thresholds and levels of intervention appropriate from *emda* to ensure wider participation by other partners and securing private sector engagement in the development and on-going management of transport interchanges…"

It continues to translate this into an expected outcome:

Expected Outcome: "…The development of an objective and transparent assessment framework – aligned to RES strategic priorities – to help ensure that *emda* investment in transport schemes secures both value for money and maximises wider regional economic development objectives... "

The Invitation to Tender identifies a number of specific research objectives to be met in reaching this outcome:

- Provide a robust definition of what constitutes a strategically important public transport interchange;
- Assess the importance of transport interchanges to regional, sub regional and local economies both in the context of areas of regeneration need and in areas of growth and opportunity;
- Examine and quantify the economic impact of regeneration at transport interchanges and schemes where direct investment in the transport interchanges themselves has acted as a catalyst for wider regeneration or enabling growth through a range of case studies;
- Identify specifically how the case studies have delivered against the RES strategic priorities of Land and Development and Transport and Logistics;

[4] *emda* (2007) *Regeneration and Transport Interchanges TNR195: Invitation to Tender*

- Assess the role of private and public sector organisations in the development and delivery of regeneration at transport interchanges;

- Identify areas for strategic partnership working and development around inter modal passenger interchanges in the region;

- Develop an implementation framework compliant with RES aims and objectives detailing thresholds, criteria and levels of intervention for the delivery of transport interchange schemes;

- Identify specific transport interchange schemes which may come forward in the short, medium and long term and articulate how, if at all, *emda* could be involved in their development and delivery – including details on the organisations bringing forward the scheme, delivery timescales, other funding bodies and stakeholders, potential shortfalls in funding and likely regeneration impacts; and

- Recommend an appropriate funding route to take forward future *emda* activity in this area.

1.4 Defining Transport Interchanges

This section provides an operational definition of transport interchanges. People interchange when there is no direct, convenient through service or route for the journey they wish to make; or if interchanging offers the superior speed, comfort or convenience of a particular mode of transport for part of the journey. Interchanges are therefore both an inconvenience inflicted on passengers, and an opportunity which passengers willingly use in order to reduce their travel costs/ times[5].

In a network comprising different modes of transport interchanges provide the opportunity to move between modes. There is usually a hierarchy between the modes ranging from intercity rail travel – offering fast services with few stops and therefore operating at some distance from many destinations – to local bus services offering a finely grained pattern of stops at a reduced speed. Private modes of transport are included in the network where passengers for example ride bicycles or drive cars from their homes to a railway station serving to increase the zone of influence of a station or stop.

Interchange does not however have to take place at purpose built facilities, such as train or bus stations, but can also take place at informal interchanges, for example where two bus stops are close to each other on the street.

Bearing in mind these considerations and drawing on the Warwickshire Local Transport Plan[6] we have adopted the following definition of transport interchange for this study:

[5] Colin Buchanan and Partners (1998) *Transport Interchange: Best Practice*
[6] Warwickshire Country Council (2006) *Warwickshire Final Local Transport Plan 2006 Annex 2 – Public Transport Interchange Strategy*

"…the process by which passengers move or connect within one mode of public transport or between one mode and another public or private transport mode. This includes both the act of joining and leaving the public transport network…"

Transport Interchanges are therefore, the *physical spaces* where such passenger interchanges occur. It is acknowledged that within this definition there is a typology of transport interchanges, and that the type of interchange under consideration may well have a marked influence on the regeneration benefits that can be expected to accrue from investment. The table below illustrates the key variables in defining different types of transport interchanges.

Table 1.1 Key Variables in Developing a Typology of Transport Interchanges

Settlement Type	Primary Urban Areas Secondary Urban Areas Other Urban Rural 80 Rural 50 Other Rural
Number (and type) of transport modes	Variables include: Rail Light rail Taxi Bus Coach Bicycling Private car Walking Waterways Air
Convenience	Distance between modes Degree of integration
Destinations Served	International National Regional Local

These variables demonstrate the various forms transport interchanges can take, frustrating attempts to develop an all-inclusive typology. However, the main considerations are the number of modes represented; the range of destinations served and proximity to major urban centres. In adopting an approach based on prioritising these considerations, the following broad typology can be discerned:

National Urban Hubs: Multiple modes, serving national (with access to international), sub-regional and local services. Located exclusively in city centres, they are often destinations in their own right as well as providing options for interchange and make a significant contribution to the public realm. Examples from this research include: Nottingham Station, Sheffield Station, s'Hertogenbosch Station.

Regional Urban Hubs: Multiple modes, serving predominantly regional routes but with limited access to national networks. Located in town or large suburban centres they function as local hubs distributing passengers to local networks. Areas around stations service local markets. Examples from this research include: Mansfield Town Station.

Sub-regional / Local Interchanges: Limited modes represented, serving local needs. Provides connection to regional networks. Passengers are drawn from the local area, serving regular

transport needs. Examples from this research include: Market Rasen Bus Station, Matlock Bus Station.

Parkway Interchanges: Display similar characteristics to Regional Urban Hubs but are located outside of main urban areas. Examples from this research include: Liverpool South Parkway Station.

While this research considers transport interchanges from each of the types presented above, it argues that marked regeneration benefits are most readily associated with schemes centred on national urban hubs.

1.5 Work Undertaken to Inform the Report

A significant amount of work has been completed in preparing this report. This has included:

- A literature review of relevant academic and consultancy output.
- A detailed policy review across a range of scales from White Papers to local authority strategies.
- The undertaking of case studies of investment in transport interchanges in the East Midlands.
- The provision of further case studies from outside the East Midlands where city centre transport interchanges have been the recipients of investment.
- Surveys of businesses located close to selected East Midlands transport interchanges to assess their reaction to the investment and the impact it has had on their business and locality.
- The drawing up of a list of planned schemes including transport interchanges in the East Midlands.
- A series of interviews with national and regional stakeholders with a strategic interest in transport interchanges and regeneration in the East Midlands.
- A series of interviews with stakeholders from across the East Midlands that have been closely involved with particular schemes relating to transport interchanges.
- The holding of a workshop with regional and sub-regional stakeholders to discuss and test the emerging findings from the research.

1.6 Status of the Report

This is our final report. It builds on and takes due cognisance of comments received from the Steering Group[7] in respect of the earlier Phase 1[8], Phase 2[9] and Draft Final[10] reports.

1.7 Structure of the Report

The remainder of this report is structured as follows:

- **Section Two: Policy Drivers** – explores the principal national, regional, sub regional and local policy drivers behind investment in transport interchanges.
- **Section Three: Literature Review** – presents a review of the literature review in respect of the economic benefits arising from investment at transport interchanges.
- **Section Four: International and National Experience** – explores the findings and lessons from a series of case studies where investment at transport interchanges has led to regeneration impacts, in other regions of the UK and the Netherlands.
- **Section Five: East Midlands Case Studies** – presents the findings of a series of in-depth case studies of investment at transport interchanges from the East Midlands region.
- **Section Six: Stakeholder View and Investment Opportunities** – presents an overview of planned and developing projects centred on transport interchanges, drawing on both published strategies and the findings of consultations with key actors across the region and draws out stakeholder views on the development and delivery of regeneration projects focused on transport interchanges.
- **Section Seven: Implementation Framework** – brings the results of the research together, sets out an overview of the rationale for investment by *emda* in transport interchanges and provides an implementation framework to guide *emda*'s future investment in transport interchange projects.

The report is supported by the following annex:

- **Annex One**: Schedule of Consultees.

[7] *emda* staff on the Steering Group have been Liz Aspray, Alan Srbljanin and Julie Tanner
[8] ECOTEC Research and Consulting (2007) *Regeneration and Transport Interchanges: A Phase 1 Report to the East Midlands Development Agency*
[9] ECOTEC Research and Consulting (2008) *Regeneration and Transport Interchanges: A Phase 2 Report to the East Midlands Development Agency*
[10] ECOTEC Research and Consulting (2008) *Regeneration and Transport Interchanges: A Draft Final Report to the East Midlands Development Agency*

2.0 Policy Drivers

2.1 Introduction

This chapter of the report explores the key national, regional, sub-regional and local policy drivers behind investment in transport interchanges.

2.2 National Policy

2.2.1 The Future of Transport

The Government's most recent Transport White Paper[11] sets out a vision for transport over the next 30 years, clearly recognising that good transport is essential for a successful economy; stating that: "…*the transport system helps to underpin the international competitiveness of the economy…*" To further clarify this, transport infrastructure has a crucial role to play in connecting people to employment and services, for example good transport can enable an urban area to grow the size of its labour market significantly. The UK's transport infrastructure also underpins supply chains and logistics networks and new connections allow new markets to be tapped into.

Furthermore, the White Paper argues that *"…experience suggests that as the economy grows, people's need and desire to travel, for business or leisure, will also increase, therefore putting a growing pressure on the capacity of the UK's transport system …"* Beyond the more direct economic benefits of a good transport system, *"…there has also been an increasing recognition that transport is fundamental to the continuing social well being of our metropolitan areas, and that the conurbations, themselves are, in turn, major drivers of national economic growth…"*[12]

The White Paper argues that transport decisions should not be viewed in isolation as they have a direct impact on the choices that people make on how and when to travel, where to live and work and the markets businesses operate in. Thus decisions at the regional and local level should be clearly linked to other decisions such as the location of housing and new employment sites and also be integrated between different forms of transport.

In respect of Growth Points the White Paper acknowledges that transport networks can play a leading role in addressing the challenges presented by the increased travel demands of a growing economy and increasing awareness and endorsement of sustainable technologies and development. Transport networks can meet these challenges through:

- the road network providing a more reliable and freer-flowing service for both personal travel and freight, with people able to make informed choices about how and when they travel;

[11] Department for Transport (2004) *The Future of Transport*
[12] Commission for Integrated Transport (2007) *Moving Forward: Better Transport for City Regions*

- the rail network providing a fast, reliable and efficient service, particularly for inter-urban journeys and commuting into large urban areas;
- bus services that are reliable, flexible, convenient and tailored to local needs;
- making walking and cycling a real alternative for local trips; and
- port and airports providing improved international and domestic links.

The White Paper argues that more effective decision making by local and regional stakeholders will ensure greater influence over transport investment in their area. It also aims to ensure that choices on transport are made alongside other decisions that have an impact on transport, particularly housing and regeneration at the regional and local level. For example, in terms of the rail network, regional and local stakeholders are expecting to have the means to influence services in their own areas and "…*rail should be considered alongside other forms of transport, including bus and light rail, to provide a coherent solution to local issues*…"

2.2.2 The Eddington Transport Study

The Eddington Report[13] also advises on the long term impact of transport decisions on the UK's productivity, stability and growth. It demonstrates that the performance of the UK's transport networks will be a crucial enabler of sustained productivity and competitiveness. The infrastructure that makes up the UK's transport network is considered to be "*… the lifeblood of domestic and international trade…*"; it is considered to be important in ensuring the UK's competitive position in what is today, a global and highly competitive economy. It is important to emphasise that current government policy accepts Eddington's view that transport cannot create growth itself; instead it is an enabler than can contribute to improved productivity if other conditions (e.g. labour supply) are right. With this in mind, the Eddington Report highlights seven ways in which transport impacts on the economy:

- Increasing business efficiency through time savings and improved reliability.
- Increasing business investment and innovation by supporting economies of scale or new ways of working.
- Supporting clusters and agglomerations of economic activity. Transport improvements can expand labour market catchments, improve job matching and facilitate business to business interactions.
- Improve the efficient functioning of labour markets, increasing labour market flexibility and the accessibility of jobs.

[13] Eddington (2006) *The Eddington Transport Study*

- Increasing competition by opening up access to new markets. Transport improvements can allow businesses to trade over a wider area, increasing competitive pressure and providing consumers with more choice.

- Increasing domestic and international trade by reducing the costs of trading.

- Attracting globally mobile activity to the UK by providing an attractive business environment and good quality of life.

In summary, Eddington (2006) argues that *"…a modern, responsive and efficient transport system will support the UK's competitiveness, boost the productivity of the economy, help UK businesses to compete on the global stage, whilst enabling government to meet its challenging environmental goals and improving the quality of life for all who live in this country…"* Historically, new transport connections played a pivotal role in periods of rapid economic growth in many economies but today, it is more likely to be transport constraints that will impact on productivity and competitiveness in the UK. There are instances whereby places have grown rapidly without significant transport improvements, for example Ireland's recent growth was achieved predominantly on the back of an attractive environment and investment in labour force skills. However, as greatly increased demand has started to outstrip supply, transport has become a factor in limiting that growth.

2.2.3 Planning Policy Guidance 13 Transport

Planning Policy Guidance 13[14] (PPG13) sets out that quality of life depends on transport and easy access to jobs, shopping, leisure and services, therefore an efficient and integrated transport system is required to support a strong and prosperous economy. The objectives of this guidance are to integrate planning and transport at the national, regional and local level to:

- Promote more sustainable transport choices for both people and for moving freight.

- Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling.

- Reduce the need to travel, especially by car.

In delivering these objectives the guidance agues development plans should *"…actively manage the pattern of urban growth to make the fullest use of public transport and focus major generators of travel demand in city, town and district centres and near to major public transport interchanges..."*

[14] Department for Communities and Local Government (2001) *Planning Policy Guidance 13: Transport*

2.2.4 Strong and Prosperous Communities

The link between a well functioning transport system in cities and an improved economic performance is a key theme of the Local Government White Paper[15]. Changes suggested to achieve this include reforming Passenger Transport Authorities and Executives in order to enable a more coherent approach to transport in major cities. The need for collaborative working when planning transport is stressed in the White Paper, taking into account the needs of education, physical regeneration and neighbourhood renewal. Recommendations for transport included in the White Paper can be separated into three broad themes:

- Accessibility: the White Paper identifies two aspects of accessibility; firstly increasing the physical accessibility of public transport, and secondly, increasing transport provision so that more areas are reachable. Accessibility supports the economy in two ways. Good quality transport can make cities more attractive to business and investment. Additionally, increasing accessibility increases the number of people who can access jobs and services.

- Environment: transport has a large role to play in helping Government meet its commitments to reduce carbon emissions. The White Paper recommends that the efficiency of transport is increased, which would then lead to a reduced carbon footprint in the local area. It highlights the need to invest in and promote sustainable alternatives to car use and that managing demand for road transport is key in reducing emissions and improving air quality. Similarly, good quality and well used public transport is often identified as a mechanism to help address localised air quality issues.

- Congestion: is identified as a prime reason why cities cease to function effectively. Good transport links are considered to help labour markets function and increase access to work.

2.3 Regional Policy

2.3.1 A Flourishing Region

The RES defines the vision *"...that by 2020, the East Midlands will be a flourishing region - with growing and innovative businesses, skilled people in good quality jobs, participating in healthy, inclusive communities and living in thriving and attractive places..."* The vision is underpinned by three structural themes:

- Raising Productivity: enabling people and businesses to be more competitive and innovative.

- Ensuring Sustainability: investing in and protecting our natural resources, environment and other assets such as infrastructure.

[15] Department for Communities and Local Government (2006), *Strong and Prosperous Communities; The Local Government White Paper.*

- Achieving Equality: helping all people to realise their full potential and work effectively together to enrich their lives and communities.

The role of transport and connectivity is recognised in the RES as having an important role in 'raising productivity' and therefore *emda* endorses targeting and prioritising investment to improve accessibility, tackle travel demand and to reduce congestion and minimise harmful environmental impacts.

The strategic priority Transport and Logistics aims "…*to improve the quality of regional infrastructure to enable better connectivity within and outside the region*…", while the priority action improve transport connectivity and accessibility prioritises long term investment that will "… *maximise the contribution of the region's transport infrastructure and services make to the delivery of the RES objectives*…", and identifies the following actions to be promoted by partners through the Regional Spatial Strategy[16] (RSS), the Regional Transport Strategy[17] (RTS), Local Transport Plans and Local Development Frameworks:

- Improve inter and intra-regional connectivity by strengthening links between the region's main urban centres, improving reliability on key routes for passengers and freight and address poor connectivity or capacity to key centres in other regions, including London, Leeds, Birmingham and Manchester.

- Improve international accessibility by improving surface access to East Midlands Airport and other airports serving the region and strengthening connectivity to mainland Europe by a range of modes, including rail via London.

- Support regional regeneration and growth by improving access from all communities to employment and maximising the impacts of economic drivers and growth areas, unlocking investment sites in disadvantaged communities and addressing inequality by improving accessibility.

- Contribute to environmental, quality of life, and wellbeing indicators by implementing demand management measures, and access to recreation, sport and culture facilities.

2.3.2 Regional Spatial Strategy for the East Midlands

The achievement of good transport interchanges is reflected throughout the RSS. Policies 2 and 3 set out an overarching framework for the location of future development in the region. Policy 2 advocates that a sequential approach to the selection of land for development be adopted in Development Plans and Local Development Frameworks. The order of priority being:

[16] Government Office for the East Midlands (2005) *Regional Spatial Strategy for the East Midlands (RSS8)*
[17] Government Office for the East Midlands (2005) *Regional Transport Strategy*

- Suitable previously developed sites and buildings within urban areas that are or will be well served by public transport.

- Other suitable locations within urban areas not identified as land to be protected for amenity purposes.

- Suitable sites in locations adjoining urban areas, which are or will be well served by public transport, particularly where this involves the use of previously developed land.

- Suitable sites in locations outside of (that is not adjoining) urban areas, which are or will be well served by public transport, particularly where this involves the use of previously developed land.

Policy 3 addresses 'sustainability criteria'. It confirms that in order to assess the suitability of land for development, in accordance with Policy 2 above, the nature of the development and its locational requirements will need to be taken into account along with all of the following criteria:

- The accessibility of development sites by non-car modes and the potential to improve such accessibility to town centres, employment, shops and services.

- The capacity of existing infrastructure, including the highway network, public transport, utilities and social infrastructure (such as schools and hospitals) to absorb further development.

- The suitability of sites for mixed use development and the contribution that development might make to strengthening local communities.

Policy 4 demands that standards of design and construction be constantly improved through improving access from new development to local facilities on foot, by cycle or by public transport and highway and parking design should improve both the safety and the quality of public space.

The five Principal Urban Areas (PUAs), the built up areas centred on Derby, Leicester, Lincoln, Northampton and Nottingham; are identified as areas that can develop into sustainable communities. Achieving a "… *modern urban transport networks and modal interchanges with an emphasis on public transport provision …* " is considered to be an essential component in achieving this. The RSS identifies that "… *accessibility will need to be enhanced to the PUAs from both within and beyond the region, particularly through the provision of high quality public transport services. National and international links by rail and air should also be strengthened ...*"

Sub Regional Centres (SRCs) have been identified to complement the PUAs. In order to effectively contribute to sustainable development, transport interchanges are again a key component. The RSS identifies that SRCs should be "… *the most accessible centre in an area with a range of transport modes ...*"

The RSS identifies five sub-areas in the East Midlands:

- Eastern – including Lincoln and the SRCs Boston, Grantham, Melton Mowbray and Newark;

- Northern – including the SRCs Mansfield, Chesterfield and Worksop;
- Peak – including Matlock, Glossop and Buxton, but no SRCs;
- Southern – including Northampton, Corby, Wellingborough and Kettering and the SRC of Market Harborough and Daventry; and
- Three Cities – which comprises the cities of Derby, Leicester and Nottingham as well as the SRCs Loughborough, Coalville and Hinkley.

Regional priorities for development in rural areas are addressed in Policy 6. Again, transport is identified as a key issue for these areas in order to remain sustainable and economically vibrant. The RSS encourages the "…*provision of public transport and opportunities for the use of other non car modes of travel…*" and improving transport where poor linkages have disadvantaged areas.

2.3.3 East Midlands Regional Transport Strategy

The RTS aims to integrate land-use and transport planning to steer new development into more sustainable locations, reduce the need to travel and enable journeys to be made by more sustainable modes of transport. The main aims of the RTS are:

- Reducing the need to travel, especially by car and reducing the traffic growth and congestion.
- Promoting a step change in the level of public transport.
- Making better use of existing networks through better management.
- Only developing additional highway capacity when all other measures have been exhausted.

The Core Strategy and Regional Transport Objectives are:

- Support sustainable development in the region's PUAs and SRCs.
- Promote accessibility and overcome peripherality in the region's rural areas.
- Support the regional priorities for the economy and for regeneration.
- Promote improvements to inter-regional and international linkages that will support sustainable development within the region.
- Improve safety across the region and reduce congestion, particularly within the region's PUAs and on major inter-urban corridors.
- Promote opportunities for modal shift away from the private car and road based freight transport across the region.

Of particular relevance to this study is Policy 48 which aims to achieve "… *a regional approach to developing public transport accessibility criteria* …" through national and regional bodies working with local authorities. Furthermore, Policy 51 addresses 'Regional Priorities for Integrating Public Transport'. The RTS recognises that the development of public transport interchanges in both urban and rural areas can help to ensure a smoother switch between services and modes. It goes on to say that public transport interchanges can also act as sustainable locations for new development. New development of a significant scale should include provision for new public transport interchanges where such facilities are not already present. The policy seeks to:

- Promote the development of multi-modal through ticketing initiatives and the integration of public and other transport services supporting health, education and social care.
- Promote the development of a hierarchy of public transport interchange facilities at key locations, starting with the PUAs, the Growth Towns and SRCs.
- Promote safe and convenient access on foot and by cycle to public transport services.
- Consider settlements with existing or proposed public transport interchange facilities as locations for new development, subject to full consideration of Policies 2 and 3.
- Promote the development of new park and ride facilities in appropriate locations to reduce traffic congestion on routes into the region's PUAs and along strategic transport corridors.

2.3.4 East Midlands Regional Freight Strategy

Although freight interchanges are outside the remit of this study, the East Midlands Regional Freight Strategy[18] (RFS) provides useful context. The strategy aims "…*to create a framework within the East Midlands Regional Spatial Strategy which helps industry and society to develop more efficient and sustainable use of distribution by 2021...*"

The strategy sets out key policies, targets and an action plan. Furthermore it states that the key policies should be implemented and delivered through partnership working with regional and local partners. There are eight key policies identified in the strategy to be achieved by regional and local partners working together to:

- Establish a Regional Freight Group (EMRFG) to coordinate implementation and monitoring of the Strategy's Action Plans, to be a central resource for local Freight Quality Partnerships (FQPs) and to act as a focus for strategic liaison.
- Pursue a range of measures to actively influence the reduction of the environmental impact of freight.
- Actively pursue a range of measures to assist the efficiency of the road haulage industry.

[18] East Midlands Regional Assembly (2005) *East Midlands Regional Freight Strategy*

- Through the EMRFG to identify and pursue realistic opportunities for expanding the usage of inland waterways and coastal navigation especially where these can make a useful contribution to modal shift.

- Identify and promote opportunities to achieve a significant shift from road to rail freight.

- Support the national role and sustainable growth of East Midlands Airport by promoting and supporting appropriate planning policies and guidance within the context of current Government policy.

- Support opportunities for greater use of pipelines in contributing to freight modal shift.

- Ensure that the RFS is supportive of and complements land-use planning environmental and economic regeneration strategies and vice-versa.

2.3.5 East Midlands Urban Action Plans

Since 2001, two East Midlands Urban Action Plans (EMUAP) have been developed for the region to set out a framework for urban renaissance. The latest[19] focuses on a small number of PUAs in order to keep action clear and deliverable. The table below identifies the key themes of the EMUAP including the priorities and drivers of growth.

Table 2.1 Key East Midlands Urban Action Plan Themes, Priorities, and Drivers for Growth

Theme	Priority	Drivers of Growth
Transport	Rail enhancements; connectivity	Investment, competition and enterprise
Skills and business development	Capturing jobs	Skills, innovation, enterprise, investment and competition
Public realm	Public realm gateways	Investment and competition
Culture and tourism	Key cultural developments	Innovation, competition, investment, skills and enterprise
Land supply	Brownfield sites / employment land	Investment and competition
All five themes	Olympics	Competition, investment, skills and enterprise

Source: East Midlands Urban Action Plan 2005-2011

The table demonstrates that transport and accessibility are major issues for the region, being considered as key components for the region as a whole and key hubs and service centres are of particular relevance to urban areas. Furthermore, the strategy recognises that accessibility and

[19] Urban Partnership Group (2005) *East Midlands Urban Action Plan 2005 - 2011*

connectivity are important to economic, social and environmental agendas, and are key elements in creating sustainable and attractive urban areas.

Some important issues and concerns are raised and in the EMUAP, such as the requirement for significant investment for transport links at city level, across the region and nationally, including rail and road. Connectivity between the Three Cities and the more isolated urban areas to the rest of the region need to be improved in terms of increasing growth of access to employment and services. Also, ensuring good access by a range of transport modes to all airports serving the region is highlighted as this will improve accessibility for passengers but also ensure employment opportunities are more easily accessible.

For transport, the EMUAP focuses on:

- Urban partners providing input to future reviews of the RTS and helping inform the Regional Funding Allocations process by making the case for investment in key schemes from the urban perspective, helping with evidence and support within the region.
- Partnerships to help implement key transport schemes through joint working on LTPs, work to deliver the RTS and securing public transport infrastructure improvements to improve transport provision and gateways in urban areas and promote behavioural change.
- Support partnership working with national bodies and agencies to improve connectivity to and from the region, especially links to other key cities in the UK, particularly by rail.
- Working with regional and national partners to secure the necessary surface access improvements to serve East Midlands Airport (EMA) and other airports serving the region, to maximise the value to the region and improve accessibility from urban areas and communities.
- Supporting action to help reduce the need to travel, such as the use of technology and home working.

2.3.6 East Midlands Rural Action Plan

The East Midlands Rural Action Plan[20] (EMRAP) is the first by the East Midlands Rural Affairs Forum to cover actions for the rural parts of the region on social, cultural, economic and environmental issues. It sets out the vision for 2013 where the rural areas of the East Midlands will be vibrant places for people to live, work and visit, with:

- A thriving rural economy.
- Quality, accessible services.
- A high quality environment.

[20] East Midlands Rural Affairs Forum (2007) *East Midlands Rural Action Plan 2007 - 2013*

- Sustainable and inclusive communities.

The EMRAP identifies seven policy areas where a step change is needed to improve delivery for the benefit of rural areas, businesses and communities. Priority 4 - Improving Accessibility to Jobs and Services is underpinned by the objective "…*to ensure a basic level of access, using defined standards, throughout rural areas to needs such as health, work, education and shopping facilities and needs for sport, culture, arts, further and higher education, green space leisure, clubs etc*…"

The following outcomes are desired:

- Achieve, as a minimum, the DEFRA Rural Services Standards and agree an East Midlands standard for rural services and transport.
- Viable rural modes for providing transport solutions, local service delivery and the provision of information and advice.
- Improved collaboration by service providers, transport providers and relevant authorities to tackle existing and potential social exclusion through transport disadvantage.

This is to be achieved through a series of actions on a regional, sub-regional and local level. The action at a regional level includes:

- Develop the EMRAF Accessibility Sub-group to act as an effective regional champion for rural transport and accessibility issues and hub for identifying and sharing good practice in improving accessibility in rural areas, investigating different rural service delivery vehicles and producing proposals for future support.
- Actively promote measure to improve rural access to services through the Local Area Agreements (LAAs) and promote the Rural Charter to services providers.
- Contribute to national debate about sustainable communities to identify what sustainability means in a rural context and how this should be reflected in a range of policies, including public transport and housing provision and spatial planning.

2.4 Local Policy

2.4.1 Local Transport Plans

LTPs were introduced by the Transport Act 2000, which required most local transport authorities to produce and maintain a LTP. The first round of LTPs were introduced in 2000 and covered the period from 2001/02 to 2005/06. The second round were submitted in 2006 and cover the period from 2006/07 to 2010/11. The Department for Transport (DfT) uses LTPs in four main ways:

- To inform decisions on capital funding for local authorities.

- To inform the development of DfT policies on local transport.
- To monitor the delivery of DfT key objectives and targets that are delivered through the actions of local government.
- To feed into the authority's Comprehensive Performance Assessment (CPA).

2.4.1.1 *Transport Problems and Opportunities in the East Midlands*

Within the East Midlands, there are nine LTPs, covering Lincolnshire[21], Rutland [22], Derbyshire [23], Derby [24] (covering the city of Derby and immediate surrounding area), Greater Nottinghamshire [25], North Nottinghamshire [26], Leicestershire[27], Central Leicestershire LTP[28] (covering the city of Leicester and surrounding area) and Northamptonshire[29].

Each of the Local Transport Authorities has identified different problems and opportunities for transport in their area. However common issues and opportunities can be identified:

- The increase in car use and ownership is identified in all areas as an issue to be addressed by the LTPs. It is a dual concern due to links with congestion and declining air quality, and the question of whether those left without a car have adequate access to services.
- Growing congestion is a feature of both urban and rural communities. The cities of Leicester, Nottingham and Derby all have issues with congestion at peak times despite the extensive public transport options available.
- The need to support the economy is raised by most LTPs, particularly the role of transport in connecting deprived communities to services and employment.
- The coverage of the public transport system is an issue identified in rural areas, with concerns about social exclusion and isolation for those without access to private transport.
- The potential for population growth in the East Midlands presents transport with an opportunity to connect areas of new housing and business with existing services and facilities.

[21] Lincolnshire County Council (2006) *2nd Local Transport Plan 2006/07-2010/11.*
[22] Rutland County Council (2006) *Local Transport Plan 2006-2011.*
[23] Derbyshire County Council (2006) *Derbyshire Local Transport Plan 2006-2011.*
[24] Derby City Council and Derbyshire County Council (2006) *Derby Joint Local Transport Plan 2006-2011.*
[25] Nottingham City Council and Nottinghamshire County Council (2006) *Greater Nottingham Local Transport Plan.*
[26] Nottinghamshire County Council (2006) *North Nottinghamshire Local Transport Plan.*
[27] Leicestershire County Council (2006) *Leicestershire Local Transport Plan 2006-2011.*
[28] Leicester City Council and Leicestershire County Council (2006) *Second Central Leicestershire Local Transport Plan (2006 – 2011)*
[29] Northamptonshire County Council (2006) *Local Transport Plan 2006-2011.*

2.4.1.2 *Mandatory Priorities*

LTPs must consider how local transport programmes and policies respond to the four priorities of accessibility, congestion, air quality and road safety.

Accessibility: this priority refers to achieving sustainable access to work and services for all, especially for those most in need. All authorities have to produce an accessibility strategy to complement the LTP. In Rutland and Lincolnshire extending transport services to people living in rural areas without a car is a key priority. Improving accessibility for those in deprived communities is also a priority for a number of the LTPs. The role of accessibility in driving economic growth is also a common theme. The Greater Nottingham LTP highlights the possibility of making services more accessible by making them available electronically.

The types of measures included in the East Midlands LTPs include:

- improving existing bus routes or creating new ones;
- promoting walking and cycling;
- increasing the role of community transport;
- increasing the scope of concessionary fare schemes; and
- improving the physical accessibility of transport, for example with low floor buses.

Congestion: the extent to which traffic congestion is a problem varies throughout the region; while it is not a significant problem in Rutland, Lincolnshire or North Nottinghamshire, it is a significant issue in the urban areas of Greater Nottingham, Northampton, Derby and Leicester. This is reflected by the policies and measures set out in the respective LTPs. The main challenge when tackling congestion is the predicted increase in the demand for commuters entering the urban areas in future years. The need to tackle congestion in order to attract new businesses and residents to the area is mentioned in a number of LTPs.

The type of initiatives proposed in order to tackle congestion are similar in all LTPs. The two main strategies for tackling congestion are encouraging walking, cycling or the use of public transport, or discouraging private car use. Specific measures include:

- Improving the standard of bus infrastructure and improving frequency and reliability.
- The introduction/improvement of park and ride schemes.
- Improving the standard of foot paths and cycle ways.
- Improving parking facilities.
- Improving maintenance of roads and future transport planning.

Air Quality: similarly to the priority of reducing congestion, air quality is a more significant issue in the more developed areas. Since the most congested areas are those with the highest emissions levels, the methods to tackle them are very similar to those aiming to reduce congestion. Additional measures include monitoring emissions levels, promoting 'greener' methods of travel and using education and the provision of information to encourage people to use their cars less.

Road Safety: this is the priority which shows most difference between the different Local Transport Authorities. The policies and measures set out depend on local problems relating to road safety, however it is possible to see some areas of similarity. Reducing the number of accidents on rural roads is a priority in a number of LTPs, especially those with a high proportion of rural roads. Reducing speed is also a priority, as is reducing accidents amongst motorcyclists and young drivers.

Key measures include:

- Speed reducing measures, such as speed bumps and safety cameras.
- Improving education and information provision to increase awareness of road safety.
- Improve road maintenance.
- Traffic management schemes.

2.4.1.3 *Local Priorities*

All of the LTPs in the East Midlands identify additional local priorities. The diversity of the economy and population of the sub-regions within the East Midlands is reflected in the local priorities included in the LTPs. The local priorities differ by Local Transport Authority, however it is possible to identify some common priorities:

Improving maintenance: Four of the Local Transport Authorities have identified improving maintenance of the transport infrastructure as a specific local priority in their LTPs. This priority is closely linked with improving accessibility and road safety. A number of the LTPs also link improving the road, cycle and walkway infrastructure with raising economic prosperity.

The specific aspects identified as needing maintenance vary among the LTPs, but generally focus on improving the roads most in need of repair, or with heaviest usage, improving planning for road repair works and targeting roads where safety is an issue.

Growing the economy: This is identified as a specific local priority in the Derby Joint and Northamptonshire LTPs, and is combined with the reducing congestion priority in the Derbyshire LTP. In Northamptonshire the priority concentrates on ensuring that the transport infrastructure is sufficient to enable growth within the county. The Derby Joint Plan stresses that transport investment must not harm the economic prosperity of the region. The Derbyshire LTP highlights the role of transport in promoting sustainable economic growth and regeneration. Whilst this is not

a specific local priority for the majority of the Local Transport Authorities in the East Midlands, the role of transport in supporting and growing is a theme running through the policies and proposals of all the LTPs.

Measures identified by the LTPs for this priority include:

- Ensuring adequate access to employment by improving the road network and increasing the role of public transport.
- Supporting regeneration with transport initiatives.
- Ensuring new business developments are adequately served by transport facilities.

Supporting Quality of Life: The priority is similar to improving air quality, but encompasses other aspects such as the quality of public spaces, noise and the impact of not taking much exercise on public health. The policies contained under this priority are similar in the Lincolnshire, Greater Nottinghamshire and Central Leicestershire LTPs. The exception to this is the North Nottinghamshire LTP, which highlights the role of transport in meeting the social needs of residents, including health, education and health.

Policies designed to improve quality of life include:

- Taking environmental concerns into account when designing future transport plans.
- Improving the built environment and public green spaces.
- Encouraging use of public transport, cycling and walking as opposed to private car use.

Other Local Priorities: Other local priorities selected by two or less Local Transport Authorities include promoting healthier transport, sustainability, reducing the impact of traffic, managing transport assets, reducing social exclusion and integrating transport and land use policy. Generally the policies suggested under these priorities are similar to those listed under the four mandatory priorities.

2.4.1.4 *Conclusions*

Although the LTPs in the East Midlands cover areas with a range of different transport needs, some common themes have emerged:

- The promotion of alternative modes of transport to private car use, to reduce congestion and raise air quality.
- Increasing and improving the provision of public transport, especially bus and park and ride schemes.

- Increasing the geographic reach of public transport to encourage less car use and provide access to services to those in isolated areas.

- The need for careful and sustainable future planning when designing transport systems and improvements.

- Using various methods to improve safety on roads, especially among priority groups.

2.4.2 Sub-regional Strategic Partnerships

Each Sub-regional Strategic Partnership (SSP) produced a Delivery Plan for 2006-07. In some cases these have been replaced by Sub-Regional Investment Plans for 2007-10. In the case of the Northamptonshire Partnership, the Sub-Regional Economic Strategy[30] was used. The Delivery Plans of Leicestershire Economic Partnership[31], The Welland SSP[32] and Lincolnshire Enterprise[33] are all quite concise when outlining investment priorities for transport, instead focussing on activities for raising employment, stimulating rates of business creation and increasing skills levels. The Derby and Derbyshire Economic Partnership[34], Greater Nottingham[35] and The Alliance SSP[36] Sub-Regional Investment Plans have much fuller coverage of their priorities for investment in transport.

The Plans all have similar overall aims, generally to promote economic regeneration and sustainable communities within their sub-region. Each identify weakness and opportunities for the local economy, which differ widely between the sub-regions. Those representing the more rural areas, such as The Welland and Lincolnshire Enterprise SSPs, identify weaknesses such as social exclusion resulting from a lack of services and amenities in rural areas. Other areas, such as Alliance and Derby and Derbyshire SSPs, identify tackling employment and skills inequalities as their primary objectives.

In most areas, the good quality regional and national transport links which exist in the sub-regions are identified as strengths. However, it is acknowledged that bottlenecks exist, especially round the major cities, and that there are rural communities without access to adequate public transport.

2.4.3 Urban Regeneration Companies

There are three URCs in the East Midlands: Leicester Regeneration Company; Derby Cityscape; and North Northants Development Company (NNDC). URCs are responsible for leading and co-ordinating the redevelopment of, and new investment in, declining urban areas. The URCs aim to achieve regeneration of their areas through partnership working in order to deliver a shared vision.

[30] Northampton Partnership (2006) *Northamptonshire Sub-Regional Economic Strategy*
[31] Leicester Shire Economic Partnership (2005) *Leicester Shire Economic Partnership Delivery Plan 2006-0*.
[32] The Welland SSP (2005) *The Welland SSP Delivery Plan 2006-07*.
[33] Lincolnshire Enterprise (2005) *Final Approved Delivery Plan 2006/07*
[34] Derby and Derbyshire Economic Partnership (2006) *Derby and Derbyshire Economic Partnership Sub-regional Investment Plan 2007-2010*.
[35] Greater Nottingham Partnership (2006) *Greater Nottingham Partnership Sub-Regional Investment Plan*.
[36] Alliance SSP (2006) *Sub Regional Investment Plan 2007/08-2009/10*.

URCs are supported by the local authorities, local employers, amenity groups and community representatives. Each of the URCs in the East Midlands has developed a plan outlining their vision for the area. Leicestershire Regeneration Company and Derby Cityscape have both developed Masterplans[37,38], and NNDC have a Core Spatial Strategy[39], whilst each of the plans is tailored to the needs of their local area, the themes and objectives identified are similar in all three. In addition to the three URCs there are other regeneration vehicles working within PUAs. These include Nottingham Regeneration and West Northamptonshire Development Corporation.

2.4.3.1 *Overall Aims*

The plans all identify similar aims in order to bring about the regeneration of their areas. All aim to improve the city or town centres through measures including improving office space and the retail offer and by encouraging more mixed use developments. New residential developments within the city centres are also planned in all of the areas.

2.4.3.2 *Transport Aims*

Improving transport is a key feature of each of the Plans:

- All of the plans highlight the importance of improving access into the town or city centres. Two broad measures are proposed: increasing public transport provision; and improving routes for pedestrians and cyclists. In Derby and Leicester the connecting routes to the railway stations will be improved to give better access to the retail and office centres to pedestrians and cyclists. The number of parking spaces will also be increased to encourage greater use of urban centres.

In both Leicester and Derby, sections of major roads in the city centre will be downgraded, making them less attractive to cars and providing increased accessibility for pedestrians and cyclists.

Increasing national, regional and local connections is a key aim of all the plans. This will occur through improvements to public transport and roads. In the cases of Derby CityScape and Leicester Regeneration Company, both city rail stations are due to have improvement work. Plans for a new rail station in Corby are included in the NNDC's Core Spatial Strategy.

Improving access to employment, services and good quality housing is a feature of all the Masterplans. In the NNDC Core Spatial Strategy providing transport choice and ensuring all areas are well connected is part of encouraging communities to become self sufficient. Part of the rationale for the remodelling of Leicester railway station is to improve accessibility into the office core, and thus make it easier for companies to invest in Leicester.

The importance of making the city centre accessible for all is highlighted in all of the plans, in the Derby CityScape Masterplan it is proposed that all gradients should be suitable for those with

[37] Derby Cityscape.(2005) *Derby Cityscape Masterplan* (2005).
[38] Leicester Regeneration Company (2002) *Leicester Regeneration Company Masterplan.*
[39] North Northamptonshire Joint Planning Unit (2007) *North Northamptonshire Core Spatial Strategy*.

mobility difficulties, and all road crossings should have tactile paving, audible signals and adequate crossing time.

While the NNDC Core Spatial Strategy is the only document to include promoting Green Living and the Environment as specific objectives, the benefits to the environment of ensuring sustainable transport choice is mentioned in all of the plants. Whilst all of the plans acknowledge the need to increase the amount of car parking spaces, all want to increase the public transport offer in order to reduce carbon emissions and improve air quality.

Nottingham Regeneration identifies[40] that the redevelopment of Southside will be led by *"…a real revolution in transport..."* going on to note that "…*A multi-million pound masterplan for Nottingham Station will transform the way we get in and out of the city, and how we get around it..."*

2.5 Strategic Conclusions

The strategic conclusions that can be drawn from the review of strategic policy drivers in respect of the aims of the study are:

- At all levels of policy, transport and transport interchanges are widely considered to play an important role in regeneration and economic development, both by lowering costs, through reduced congestion and journey times and by improving connectivity between places, supporting development of cities as drivers of economic growth. Indeed the Eddington Report positions the transport network as "… *the lifeblood of domestic and international trade …*"

- The importance of transport interchanges is acknowledged beyond the traditional transport sector, for example in addition to regional transport strategies, transport, including passenger transport, features prominently in strategies across a range of spatial scales, including the RES, the RSS and in planning policy guidance notes.

- Beyond economic benefits, transport is an important factor in quality of life, providing links to jobs, leisure facilities, shopping and services. Accordingly, transport is a primary consideration in development planning, so that major sources of travel demand in urban areas are close to public transport interchanges.

- Transport interchanges can make a marked cross-cutting contribution to regional development, contributing to the realisation of all of the strategic themes identified in the RES, including social (e.g. improving access to services) and physical development issues (e.g. bring forward brownfield sites for development).

- The sub-regional and local plans and policies emphasis the importance of interventions being in city centre locations if they are to achieve maximum economic impact.

[40] http://www.nottinghamregeneration.ltd.uk/southside.html

- While regeneration benefits are highlighted in strategies at all levels, the principal focus is on transport and connectivity more broadly. With the exception of NNDC's and the Greater Nottingham Partnership's (GNP) commitment to support the development of Corby and Nottingham Railway Stations respectively, where transport is addressed in sub-regional and local strategies the focus is usually on reducing congestion or increasing the frequency of services than on investing in specific transport interchanges.

3.0 Literature Review

3.1 Introduction

This chapter of the report presents the results of the review of the literature concerning the regeneration benefits associated with transport interchanges.

3.2 Transport and Economic Development

It is widely accepted that transport matters for economic development, although the exact nature and scale of the relationship is much debated. Historically, as confirmed by Eddington (2006) step changes in transport connectivity have been pivotal in supporting periods of rapid growth of economies as they develop. For example, reductions in international transport costs (steamships), together with falling domestic transport costs (canals and railways) played a key role in facilitating early globalisation. This in turn enabled a spatial division of labour where countries and regions focused on activities in which they held comparative advantage. In connection with increasing globalisation, transport improvements (railways and road network) also supported internal and external migration - transferring workers from declining industries to new industries and creating labour market flexibility - which allowed the UK to take advantage of the new opportunities created by globalisation[41].

Whilst transport developments have in the past led to significant economic growth, as outlined above, it is important to note that its contribution is heavily dependent on other factors and circumstances, and that economies can grow even without major investment in transport infrastructure. For example, Ireland's recent growth has not been accompanied by significant transport investment, with growth being achieved largely on the back of investment in skills and fiscal incentives for foreign direct investment (FDI) (Crafts and Leunig, 2005). However, while Ireland has managed to grow without significant improvements in transport, the greatly increased demand arising from this growth has started to outstrip supply, presenting transport as a limiting factor of growth.

In light of this assertion, Eddington (2006) notes that in mature economies with a well established transport network, such as the UK, there is less scope for transport improvements to deliver the periods of rapid growth seen historically. Thus, rather than investing in new transport infrastructure *per se*, the focus should be on improving the capacity and performance of the existing network. Indeed, Eddington (2006) argues that in developed countries productivity benefits from transport may be more closely related to the efficiency of infrastructure use rather than simply the absolute amount of investment, particularly were capacity is stretched (through congestion and/ or

[41] Crafts and Leunig (2005) *The Historical Significance of Tansport for Economic Growth and Productivity*

unreliability). The relationship between transport and growth in a mature economy is therefore likely to be an incremental one.

It follows from this that in areas where the efficiency of infrastructure is adequate; the existing provision of transport infrastructure is likely to be sufficient for continued growth without further increases in transport provision. On this basis, there is little strategic case for action in all places. Indeed, Eddington (2006) suggests that future transport policy and investment should be focussed on urban areas; commuter and intra-urban networks; ports; and airports that are showing signs of increasing congestion and unreliability.

There is a broad consensus that the positive effects of transport investment, and its magnitude, are conditional on certain external pre-conditions: the availability of skilled labour; and a favourable environment for business investment[42]. In other words, a transport link is unlikely to improve an unproductive urban area unless there is underlying demand for this connection. Moreover, in some instances, a link between two areas can result in displacement of economic activity, with the core benefiting at the expense of the periphery, and with little or no impact on national productivity and growth.

In summary, the evidence presented above suggests that under the right conditions transport can deliver Gross Domestic Product (GDP) and productivity benefits, although the scale of this is difficult to assess. While transport investment cannot in itself generate economic growth, a lack of investment can constrain it. It follows that there is no simple, unambiguous link between transport provision and local regeneration[43].

3.2.1 Micro Drivers of Productivity

Whilst the exact relationship between transport and economic growth remains ambiguous, Eddington (2006) identified a number of micro drivers of productivity that transport interventions can influence (by improving journey time, reliability, cost, connectivity, comfort, safety, and security):

- business efficiency: through time, cost and journey reliability savings, particularly for business and freight traffic;
- business investment and innovation: where direct savings (time, cost and reliability) lead to a higher rate of business investment;
- clusters/ agglomerations: by facilitating the expansion of clusters/ agglomerations by reducing travel time and costs, bringing firms, workers and consumers closer than otherwise would be the case;

[42] see for example Lynde and Richmond (1993) *Public Capital and Long-run Costs in the UK* ; Trinder (2002) *Economic Growth and Transport Infrastructure Appraisal*; O'Fallon (2003) *Linkages Between Infrastructure and Economic Growth*
[43] SACTRA (1999) *Transport Investment, Transport Intensity and Economic Growth*

- labour market: by supporting the overall efficiency and flexibility of labour markets, through better matching of people and skills to jobs;

- competition: by offering consumers a greater choice of goods and services; and allowing businesses to trade over a wider, previously unattainable area, access more suppliers and reach more potential consumers;

- domestic and international trade: through reductions in transport costs; and

- globally mobile connectivity: by attracting, retaining and expanding globally and nationally mobile activity through good transport links.

- In addition to these, transport interventions can also contribute to social and environmental goals which may ultimately impact on GDP and welfare.

3.3 Transport Interchanges

A key theme of the Transport White Paper (2004) is transport integration. It identifies the importance of developing a seamless journey with good integration between trains, buses, taxis and community transport. This concept of a 'seamless journey' aims to make journeys by public transport as smooth as possible and achieve the White Paper's goal of delivering faster, greener and more reliable journeys. The role of transport interchanges can therefore be seen to be fundamental, although it should be noted there is only a limited literature documenting the benefit of investing in public transport interchanges and what evidence exists is in need of updating.

Research conducted by the Commission for Integrated Transport (2007) concluded that there is a direct relationship between the degree of functional integration of local transport delivery and the achievement of results on the ground. In addition, Eddington (2006) indicates that transport projects can offer remarkably high returns, such that in some locations, benefits can be four times in excess of costs, even after environmental factors have been considered (highest returns are in congested urban areas, key inter-urban corridors and key international gateways). Partners in the East Midlands (including *emda*, Highways Agency, EMRA and EMA) have worked together to develop a land use and transport interactive model (LUTI) for the Three-Cities Sub-Region to help provide a fuller evidence based approach to transport and land use planning. As outlined in the EMUAP this will also allow a more sophisticated analysis and understanding of the relationships between transport accessibility and investment.

Drawing on these sources, the potential regeneration benefits from investment in transport interchanges can be seen to fall into two interdependent areas:

- benefits derived from investing in regeneration that improves the efficiency and capacity of the transport network; and.

- benefits derived from regenerating the appearance and function of public transport interchanges.

These are considered in turn below.

3.3.1 Improving the Appearance and Function of the Public Transport Interchange

Given the high volume of people that pass through public transport interchanges (including visitors, business people and potential investors) the appearance of these areas is critical and should be given due attention. Particular issues include:

- ***Improving gateways to the region*** – Public transport interchanges are seen as gateways to the region. They have an important role to play in providing visitors and investors with a crucial first impression. If their potential is maximised, they can also ease and encourage journeys around the region which will achieve significant benefits to businesses and also the visitor economy.

- ***Enhancing environmental quality*** – Transport Trust 2000 (2003) suggest that in recent times, public transport interchanges have become associated in the public mind with "*…seediness, decline and low aspirations…*" but a gradual shift is becoming evident where investment in the public realm and architecture is taking place. Enhancing the environmental quality in and around public transport interchanges can result in numerous benefits, for example in 2004, Frontier Economics Ltd examined the link between local environmental quality and economic improvement[44], concluding that investment in the public realm can have a positive economic effect. Furthermore, interviews with investors have revealed that environmental quality was seen as a key factor in occupier decision making[45].

- **Providing redevelopment opportunities** – Work conducted by the Transport 2000 Trust (1993) states that "…*stations need to be seen in a fresh light – as integral parts of the town to which they belong*…". With this in mind, there is an opportunity to encourage wider development in and around transport interchanges. Indeed, the RSS states that "…*public transport interchanges can act as sustainable locations for new development*…" As an example quoted by Transport Trust 2000 (1993), at Rotherham Interchange the existing bus station brought the opportunity to add a shopping mall and multi-storey car park. Likewise, current development plans at New Street Station in Birmingham aim to modernise the existing station in order to increase passenger capacity and enhance the overall passenger experience but they also aim to link the station's redevelopment with a wider redevelopment of that part of the city centre[46]. On a smaller scale, cafes and shops, which would improve people's journeys, can provide opportunities to bring redundant buildings back into use whilst encouraging increased

[44] Frontier Economics Ltd. (2004) *Quality of Place and Regional Economic Performance – Draft Evaluation of the Existing Evidence Investment Checklist*

[45] Commission for Architecture and the Built Environment and Department for Environment, Transport and the Regions (2001) *The Value of Urban Design*

[46] Department for Transport (2007) *Delivering a Sustainable Railway*

consumer spending. Within the East Midlands, the Nottingham Station Masterplan not only includes plans for the immediate station site but also makes clear linkages as to how redevelopment can assist regeneration in the Southside and Meadows area of the city. The Transport 2000 Trust (1993) argue that transport interchanges can be "…*a powerful catalyst for regeneration*…" and that "…*there is tremendous potential to develop these interchanges as a destination in their own right*…"

3.3.2 Improving the Efficiency and Capacity of the Transport Network

As noted above, by enabling a more efficient transport network, regeneration at interchanges can encourage a greater number and wider cross section of people to use public transport and allow journeys to be made more efficiently. Potential economic benefits that could be realised include:

- ***Reducing congestion*** – In the absence of further action, the DfT suggests that congestion is set to rise by a further 25 per cent to 2015[47]. Furthermore, the RSS reveals that in the decade up to 2003, the East Midlands saw the largest increase in road traffic of all the English regions and evidence indicates that traffic in the East Midlands is set to grow at around one per cent per annum for the next 20 years. This will have a significant impact on the efficiency of the region's road networks. Improvements to public transport interchanges can encourage a greater number of people to choose to travel by public transport and therefore ease congestion on the roads. Eddington (2006) states that "*…eliminating existing congestion on the road network would be worth some £7-8 billion of GDP per annum…*" Transport 2000 Trust suggests that at Denby Dale some of the new VillageLink and ThroughLink routes have benefited from a new rural bus/rail interchange[48]. This featured: improved road access (including better footways and lighting) and shelters; and buses being timed to connect with each other and with trains on the Huddersfield to Sheffield line. A total of 65,000 journeys a year are now being made on the VillageLink and ThroughLink services, with 50 per cent of bus users choosing to use the bus rather than the car.

- ***Improving productivity*** – Despite improvements, the East Midlands still demonstrates a productivity gap. The RES indicates that in 2003, GVA per hour worked in the East Midlands was 96.9 per cent of the UK average. Given the region's high employment rate and low unemployment rate the key to raising GVA seems to be making workers more productive. In this respect research by Local Transport Today (1998) indicates that transport interchanges can not only provide a more efficient journey for people but that developments at the interchange, for example shops and refreshment facilities, can ensure people make beneficial use of their time. Any means of improving people's journeys may impact on the health and satisfaction of the workforce, providing an associated knock-on effect on the local economy.

- ***Addressing social exclusion*** – Regeneration at public transport interchanges has the potential to address some of the fundamental issues of social exclusion. Improvements to transport

[47]DfT (2006) *Putting Passengers First – The Government's Proposals for a Modernised National Framework for Bus Services*
[48] Transport 2000 Trust (2003) *At the Leading Edge*

interchanges can make public transport appeal to a wider cross section of the population. It would also enable people to make journeys that were previously not possible or very difficult, particularly for disabled people, the elderly and those without a car, thus playing a key role in addressing the economic challenge of social inclusion.

- ***Improving access to employment and education opportunities*** – A sufficient pool of labour is a critical factor when businesses are looking to locate in an area. In recognition of this, the Government aims to promote accessibility to jobs and services by public transport. The importance of public transport in accessing employment is demonstrated by the fact that over 40 per cent of all bus journeys reported to be made by working-age people are for commuting and business purposes (DfT, 2006). Good public transport interchanges can therefore do a lot to improve people's accessibility to buses and other modes of public transport. Crucially, an efficient public transport system contributes to stronger and deeper labour markets, by enabling employers to access a wider pool of potential employees, and individuals to access a wider range of jobs.

- ***Increasing connectivity*** – Although it is important to promote the major towns and cities, it is also necessary to ensure that rural areas are well connected. Public transport interchanges can attract people, and more importantly workers, to the wider area around major towns and cities if easy access into the centres is provided. Within the East Midlands, initiatives such as the Skylink bus service which operates across Nottingham, Leicester and Derby and 'Interconnect' in Lincolnshire provide excellent examples of connectivity. In Lancashire, the market town of Clitheroe restored its train service and established an effective interchange between the new train service and the extensive but infrequent rural bus network. The Transport 2000 Trust (2003) suggests that the interchange has allowed the town to maintain its core economic function - as the regional centre for Ribble Valley.

- ***Maintaining support for the local economy*** – Research conducted by the Commission for Integrated Transport[49] found that public transport users spend as much as car users in the town and city centres, and crucially, that they are more likely to support their local town and city centres, and local shops, by visiting them more frequently than car users. As stated earlier, regeneration at public transport interchanges can increase public transport use and therefore ensure that local economic centres continue to be supported.

3.3.3 The Impact of Interchange, Penalties and Valuations

Generally, interchanging is regarded as an impediment or even a deterrent to public transport use[50]. Much of the reluctance to use interchanges stems from widely perceived penalties (physical and mental effort; and uncertainty), which are often greater than actual delays or costs[51]. Other

[49] Commission for Integrated Transport (2006) *Sustainable Transport Choices and the Retail Sector – Advice to Government from the Commission for Integrated Transport*
[50] Scottish Executive (2001) *Interchange and Travel Choice*
[51] Local Transport Today (1998) *Interchange: Weak Link or Golden Opportunity to Boost Public Transport*

deterrents include the time spent transferring between or within modes and the time spent waiting for a connection.

Several studies have quantified the value of interchange, although most of these have been conducted within the rail industry rather than giving even coverage for all modes. The Scottish Executive (2001) valued interchanging at 4.5 minutes for bus travellers, 8 minutes for train travellers and 8.6 minutes for car commuters[52]. Notably, it was also estimated that a guaranteed bus connection could reduce the bus penalty to 0.9 minutes.

Importantly, interchange penalty valuations vary according to journey purpose, distance and mode used as well as factors such as age, gender, social class, income level and group size. For example those making business trips have higher interchange penalty values than those on private travel[53] and that commuters have lower values than the base group of leisure travellers, perhaps because they are more familiar with interchanging and because the generally higher service frequencies in the peak reduce the risks involved in interchange. Car users have very much higher values than public transport users. A strong positive distance effect was also apparent.

3.3.4 The Impact of Interchange on Demand and Behaviour

Several studies, albeit relatively old, have indicated that the presence of an interchange can have an adverse impact on demand for public transport[54]. For example Hine, Wardman and Stradling (2003) found the introduction of an additional interchange penalty on non-London inter-urban routes was estimated to reduce rail demand by 20 percent (±11 percent) independent of any journey time effect[55].

Notwithstanding the impact interchange may have on demand for public transport, improvements to the physical quality of interchange facilities, including waiting environments, information provision and staff preference, will undoubtedly go some way to improving passenger perceptions and attitudes, and contribute to a reduction in the perceived penalties associated with interchange. This in turn may encourage car users, especially commuters, to choose public transport even where an interchange is required. Importantly, the evidence suggests that car users are more likely to use public transport where 'pull' measures are in place, such as frequency, reliability and speed of travel, rather than 'push' measures, such as increased parking costs.

[52] Excluding the time spent transferring between modes/ within modes and the time spent waiting for a connection.
[53] Wardman (1999) cited in Hine, Wardman and Stradling "Interchange and Seamless Travel" , in Hine and Preston (eds. 2003) *Integrated Futures and Transport Choices: UK Transport Policy Beyond the 1998 White Paper and Transport Acts*
[54] Wardman (1983) cited in Hine, Wardman and Stradling "Interchange and Seamless Travel" , in Hine and Preston (eds. 2003) *Integrated Futures and Transport Choices: UK Transport Policy Beyond the 1998 White Paper and Transport Acts,* White and Holt (1979) *Inter-urban Passenger Demand on the Southern Region* ; and Steer Davies Gleave and Ted Hudson and Partners (1981) *Research into Elasticity of Demand in Respect of Service Frequency and Through Trains for British Railways Board*
[55] Hine, Wardman and Stradling (2003) "Interchange and Seamless Travel " in Hine and Preston (eds.) *Integrated Futures and Transport Choices: UK Transport Policy Beyond the 1998 White Paper and Transport Acts*

Despite the evidence suggesting that interchange can have an adverse impact on demand for public transport, PTEs and many operators generally assume that it makes sense for transport interchanges to be used. This is largely because a transport system without interchanges would result in low frequency services. In support of this claim, Vuchic and Musson have shown that waiting times will be 2.5 times longer if the network is designed to provide through services for all origins and destinations rather than being built around the concept of interchanges between simple, high frequency services[56]. In other words, what looks to be in the interest of passengers actually gives them worse services (longer journey times).

If interchanges involve a significant interchange penalty, this can cancel or even exceed the savings in waiting times. Despite its simplifications, the formula of Vuchic and Musso (1991) illustrates the contribution which the provision of good interchange might make to the network design and performance, especially if the other barriers to interchange, such as the lack of through-ticketing, are removed, as in the case on many continental public transport networks and the London Underground. Correspondingly, Transport 2000 Trust (2003) reported that Dutch Railways have calculated that investing in improving the journey chain is more cost effective than investing in heavy railway infrastructure to reduce rail journey times.

3.3.5 The Wider Social and Economic Impact of Interchanges

As noted above, the Eddington Transport Study (2006) found that bus and interchange schemes can offer significant returns to investment – more than 4.5 times the direct investment once environmental and social impacts have been factored in. Moreover by improving journey time, reliability, cost, connectivity, comfort, safety, and security, transport interchanges have the potential to influence the micro drivers of productivity, as outlined above, and hence improve economic growth.

3.3.6 Improvements to Interchanges

Whilst there appear to be a clear preference among users for direct, frequent and reliable services, the evidence, as outlined above, does not always support the idea of the public transport network being built around direct public transport routes. It is therefore important that policy makers look at the potential to improve interchanges to provide an attractive public transport system. Indeed, as outlined in the Future of Transport White Paper (1998) – "…*quick and easy interchange is essential for public transport to compete with the convenience of car use…*". This message was reiterated by the Guidance on Full Local Transport Plans[57], which argues that there needs to be "… *more through-ticketing, better connections and co-ordination of services, improved accessibility, wider availability of information and improved waiting facilities…*".

Thus, rather than being perceived simply as a barrier to travel, quality interchanges are increasingly being regarded as an opportunity to create new journey opportunities. Research by Colin Buchanan and Partners (1998) suggested that: "…*it will become more sensible and*

[56] Vuchic and Musson (1991), cited in Colin Buchanan and Partners (1998) *Transport Interchange: Best Practice*
[57] Department for the Environment, Transport and the Regions (2000) *Guidance on Full Local Transport Plans*

economic to base public transport networks around the concept of interchange rather than the alternative of trying to avoid it…". However this is dependent on a number of barriers to interchange being removed or reduced. The principal barriers to easy interchange, as identified by Colin Buchanan and Partners (1998) can be summarised as follows:

- Physical - poor layout involving long walks, stairs, crossing busy roads etc.
- Timing/ reliability – uncoordinated timetables, low frequencies and unreliable services.
- Ticketing/ financial cost – lack of through-ticketing.
- Organisations/ institutional – competition, unclear responsibilities, lack of co-operation between operators.
- Information – lack of understandable and relevant information.
- Quality – poor quality design and maintenance.
- Passenger expectations – amenity and environmental issues is tending to rise in importance, as is the desire for better information.

3.3.7 Interchange Developments

Responding to the Government's intentions of making integration the cornerstone of its transport policy, there has been a renaissance in public transport architecture in the last few years. Many towns and cites are now competing to have the most attractive stations and interchanges – the redeveloped St Pancras and the JLE represent some of the most spectacular stations and interchanges. Some of Britain's largest stations have also benefited from major investment, both in terms of the renewal of historic structures and new airport-style retail facilities. The Transport 2000 Trust (2003) suggest that as well as transforming the perception and the experience of public transport these new interchanges have also been designed to act as the stimulus and hub for wider urban regeneration.

Particularly since the introduction of LTPs there has been increasing integration between car users and public transport, particularly rail. At many stations, car parks and parkways have been built or extended in an effort to win over motorists for at least part of their journey. To some extent, the ease of parking at stations has often been prioritised above access for bus users, cyclists and/ or pedestrians (even though 80 per cent of passengers arrive at or leave stations on foot, according to the National Travel Survey[58]). In the longer-term, this may lead to a reduction in public transport flows. Interestingly, travel behaviour research argues that the egress link is more critical than the access link. In other words, people are prepared to drive some distance to reach the train at the home end of the trip, instead of using the car all the way, provided that the train delivers them close to their destination. To a considerable extent, this explains why concentrations of economic

[58] http://www.statistics.gov.uk/ssd/surveys/national_travel_survey.asp

activity near stations have a bigger impact on mode choice than concentrations of homes near stations.

Away from the physical side it is suggested that there are also a number of other improvements that can be made in order to reduce the inconvenience of interchanges. For example, integrated fares and ticketing has been identified as an important factor that can improve people's perceptions of public transport. In Britain the most celebrated scheme is the London Travelcard, which was introduced in the 1980s and allows travel by bus, tube and train, Transport 2000 Trust (2003) suggest it increased public transport use in London by 16 per cent at a time of generally declining usage.

In addition to integrated fares and ticketing there is also need for increased cooperation between bus and rail services. The Transport Research and Information Network[59] have argued that a bus/ train link should be seen as "…*an extension of the train service and be treated as though it is a connecting rail passenger service…The timetable should be carefully integrated with the core rail service, with reliable connections and through-ticketing…*".

3.4 Strategic Conclusions

The strategic conclusions that can be drawn from the literature review in respect of the aims of the study are:

- While there is consensus in the literature that transport plays a central role in economic development there is no accepted methodology to measure the benefits that accrue from investment in transport. There has been rather less research on the wider social and economic impacts of transport interchanges.

- Eddington (2006) highlighted that investment in transport in a mature economy is likely to yield only incremental economic growth, however it is not clear how this national level study applies to regional or local economies.

- Although a key contributor to regeneration, transport investment alone is insufficient, and must be combined with other pre-existing conditions, such as the presence of a suitably skilled labour force or favourable business environment, to realise maximum benefit.

- The effect of interchanges on transport use is not clear cut. While transport interchanges provide a central, easily accessible hub and therefore can be seen to improve accessibility and can therefore be seen to facilitate an efficient network, introducing an additional interchange on specific routes, regardless of impact on journey time, can have a marked effect on travel demand.

[59] Transport Research and Information Network (1999) *Getting the Best from Bus and Rail in Rural Communities: A Review of Best Practice and Recommendations for Future Development*

- The mix of modes at interchanges can be of great importance. In the UK, efforts have recently been made to encourage car drivers to use public transport for at least part of their journeys, accordingly, large car parks are being included in the design of interchanges.

- Transport interchanges can be expected to work most effectively where as well as sharing physical space, different transport modes cooperate on ticketing strategies, with travelcard type tickets having been identified as being particularly important in promoting light rail services.

- Transport interchanges are regarded as fundamental in delivering *seamless* public transport journeys and are therefore important in delivering against modal shift, reduced carbon footprint and time saving objectives. In order to address these objectives, regeneration at transport interchanges should therefore aim to deliver smoother transition between modes.

- Potential regeneration benefits fall into two categories: benefits derived from improving the capacity and efficiency of the network; and benefits derived from improving the appearance and function of transport interchanges. Benefits from the first category include measurable benefits for example contributing to reduced congestion and reducing journey times as well as enabling benefits such as providing addressing social exclusion by providing links to previously isolated communities and those that cascade from being better integrated into the national transport network. Where the focus is on improving the function and appearance of transport interchanges benefits are enabling, focusing on enhancing environmental quality, improving the image presented by gateways.

- Additional development opportunities, for example bringing adjacent or nearby sites into use, can be realised by schemes of both types leading to quantifiable economic benefits such as area of brownfield land reclaimed or new office and commercial developments.

4.0 International and National Experience

4.1 Introduction

This chapter of the report explores and summarises the findings and lessons from case studies of transport interchanges from outside the East Midlands. These comprise the examples of the Breda High Speed Rail (HSR) Station and the redevelopment of the s'Hertogenbosch station area in the Netherlands and from the UK, the Jubilee Line Extension (JLE) in London, the Liverpool South Parkway Railway Station and Sheffield Railway Station.

4.2 Case Study Selection and Evidence Base

Each case study has been informed by a desk review of core documentation. The case studies give consideration to the background of the transport interchanges, the wider economic and social impacts arising from them and important lessons that have been learned. The case studies have been selected to reflect the variety of forms that transport interchanges take.

- In, s'Hertogenbosch, redevelopment of the railway station as part of a wider plan for the city centre has removed the physical barrier formed by the tracks in the city centre and brought forward 120 hectares of industrial land in the station's vicinity. The redevelopment has given rise to a marked increase in passenger numbers and ticket revenue.

- The Breda HSR Station connects the town to a network of cities in the Netherlands and the rest of Europe through the HSR network. The station and this new connectivity will facilitate the development Via Breda, a new 160 hectare mixed use development.

- The JLE added 11 interchanges to the London Underground markedly changing East London's connectivity with the rest of the capital and reducing dependence on Docklands Light Rail. This scheme both improved the accessibility of deprived areas and enabled the development of a major new financial centre at Canary Wharf.

- Liverpool South Parkway serves an urban population in a different manner, rather than enabling regeneration of a deprived area, it has serviced new demand for travel in Speke Garston, in part the result of the development of Liverpool John Lennon Airport. Opened in 2006 it is now used by almost 5,000 passengers daily.

- Delivered by multiple partners at a cost of £50.5 million, the redevelopment of Sheffield Railway Station has delivered a number of regeneration benefits, including road realignment; creation of additional shopping units; the development of a new tram station; and enabling demolition of old buildings to be replaced by the city's Digital Campus.

4.3 ’s-Hertogenbosch Station Area Redevelopment

4.3.1 Introduction

’s-Hertogenbosch is the 14th largest city in the Netherlands with approximately 150,000 inhabitants. The city is located to the south of the Randstad, approximately in the centre of the Netherlands, accordingly the city’s railway station is served by train services coming in from four directions with 36,000 passengers using the station every day[60], 11,000 catching connecting trains.

The redevelopment of the station was started in 1985 as part of a wider plan to enlarge the city centre and create spaces for large-scale functions in the historic centre. The total investment is now estimated at €1 billion. The station project had the twin objectives of removing the physical barrier formed within the city by the railway tracks and regenerating the 120 hectare industrial area next to the station.

The redevelopment of the station encompasses the following three considerations:

- Acceleration: reducing travel and waiting times.
- Concentration: developing destinations in the vicinity of stations
- Enhancement: making arriving and transferring more pleasant experiences.

’s-Hertogenbosch railway station is divided into fast and slow areas. The specific requirement of each has influenced the way in which the three considerations are weighted, leading to distinct approaches within the station. These are considered in turn below.

4.3.1.1 *Fast Area*

The fast area forms the core of the rail centre and has two functions: transfer or the interchange between trains and connecting transportation modes; and services such as ticket sales, travel information, route information, and shops and cafes. Shops and cafes surround the transfer nucleus. It consists of:

- The new station building.
- A station square on the city centre side.
- A second square on the other side of the rail tracks including small shops and other amenities.
- A 117-metre long pedestrian footbridge joining the two squares, giving the station two fronts.

Figure 4.1 below presents an overview of the main activities in the fast area within the framework of the redevelopment broken down by the three considerations. An increase in frequency of the

[60] In 2000-2001

main train connections, more opportunities for cross-platform interchanges, dynamic travel information and clear, short walking connections between the different travel modes have resulted in acceleration. In the fast area concentration is most clearly demonstrated best by the compact layout of the station and its squares. The application of transparent and high quality materials and presence of staff present has transformed the fast area into a pleasant environment.

Figure 4.1 Practical Steps Taken in the Fast Area of 's-Hertogenbosch.

Acceleration	Concentration	Enhancement
¼ hour frequency main train services Cross platform transfer between main train services Double escalators Wide passage (15 m) Dynamic train information in transfer areas Dynamic bus information at bus station Kiss & Ride on both side of the station Dynamic bus station with 50 urban- and regional destinations	Overbridge serving as passenger and local interchange Manned storage below the station for 3000 bicycles Short walking distance between train and bus Parking below the station forecourt for 300 cars Extension of Park & Ride facilities	Use of transparent materials in the over bridge has created a good view and natural illumination Restoration of original platform roofing Architecturally attractive station building
Ticket vending machines and baggage storage in the over bridge Commercial outlets	600 m² of services at over bridge level	NS "maxi-service" formula: including station assistants Ticket sale from open service counters Travel shop for regional bus services on station forecourt Mix of food, non-food and services outlets

4.3.1.2 *Slow Area*

The slow area surrounds the fast area, extending no more than 1,000m from the station's centre including commercial activities with no direct relationship with the journey (such as shops) and urban functions like housing, office and leisure areas surrounding the commercial functions.

The slow area contributes most to concentration. In 2006 the new urban area accounted for an additional 25,000 inhabitants, jobs and students. These centres of activities are origins and destinations are close to the station so increasing the appeal of public transport compared to the car.

The redevelopment of the station area aims to achieve an environment in close harmony with the historical city centre. The architectural design and support for the location of amenities such as cafes and restaurants should advance this aim.

The slow area of 's-Hertogenbosch consists of the urban function around the station forecourt and the redeveloped former industrial area on the other side of the tracks. Figure 4.2 shows the main steps taken in the slow area within the framework of the redevelopment, broken down by the three considerations. The orientation of the bridge and the main axis of the new urban area along the road connecting the station directly with the historical city centre make the station easy to find and provide a clear orientation. The conference centre located at the station benefits from its location at a transport interchange. These factors have had a great effect on the increasing of the use of the station area.

Figure 4.2 Practical Steps Taken in the Slow Area of 's-Hertogenbosch.

Acceleration	Concentration	Enhancement
Fast food outlets Conference centre in station building (10 meeting rooms)	2.700 m² of commercial functions Mix of food, non-food, service and catering Concentration of catering on station forecourts	Terraces on station forecourts Pedestrianised station forecourts
Main axis of station area oriented towards the city's cathedral tower Stations clock tower as point of orientation Direct walking route to city centre Planned extra pedestrian crossing of rail tracks	1,495 apartments 189,600 m² of office space (10.000 jobs) 45,000 m² of educational facilities (13.000 students) 35,000 m² of commercial space Parking below water basin for 1,070 cars	Plans for large-scale public functions Restaurants contribute to a vibrant environment Use of high quality materials in public spaces Use of modern styles in keeping with the historical city centre

4.3.2 Economic Impacts

Although no formal evaluation has been published, the following economic benefits have been discerned:

- Rail traffic has benefited from the customer driven approach to developing the 's-Hertogenbosch station. The concentration of activities (up to now mainly offices) has led to a more than average attraction and a concentration of employees holding season ticket near the station. The availability of car parking and the clear pedestrian route to the historical city-centre account for the high percentage of car use and walking as access and egress mode. This closely relates to the preferences of the customer. The net result has been an above average rate of growth in the number of station users.

- From 1998 to 2002 ticket revenue grew 33 per cent. The growth of the number of users of the station was 26,800 in 1996 to 33,500 in 1998 and 40,100 in 2002. Revenues as well as trips have risen since the opening of the new station in 1998. The rate of rise of revenue is almost twice as high as that for five comparable stations with similar numbers of customers over the same time period.

4.3.3 Lessons Learned

The case study has highlighted the following lessons:

- Although the redevelopment of the station area of 's-Hertogenbosch has been a success, there have been some bottlenecks in its implementation. These arise when one or more of the three considerations are not included in the design of a specific element.

- Bottlenecks that threaten acceleration can be found on the platforms, at the station forecourt and far away from the station near the outside of the city. The design of the over bridge has resulted in escalators and stairs feeding into the platforms right behind each other. This figuration causes unnecessary congestion around the escalators at rush hours. A shortage of free bicycle storage on the forecourt near the station entrance results in bicycles being left everywhere. The greatest threat to acceleration is however the postponement of the last part of the city's ring-road, which has led to congestion in the station area, and has disturbed the timetables of local and regional bus services.

- Striving for concentration has been a success, except at the station forecourt where all the commercial space is located opposite the main pedestrian flow. This combined with restriction on the types of use permitted led to an overrepresentation of employment agencies and vacant lots in the first year after the station opened in 1998. In the same period the shops at the station showed a growth in turnover of 33 per cent.

- A survey of the environmental quality of the station and its forecourt showed that the public regard the attractiveness, liveliness and personal security aspects of the station as satisfactory and of the forecourt as very good. Problems occur at night, when it is less busy, since the station cannot be closed because of its function as a local pedestrian crossing of the railway.

4.4 Breda High Speed Rail Station

4.4.1 Introduction

The Netherlands is set to join the European HSR network, which will create great opportunities for the stations on the HSR network. Their improved accessibility should persuade many national and multinational businesses to locate close to HSR Stations. With new facilities, outstanding architecture and uncluttered open spaces, the HSR station areas could be transformed into attractive places to live and work.

The investments in the HSR station areas are expected to spin off to the rest of the Netherlands. This is why the Dutch Government launched six New Key Projects (NKPs) in 1997. The NKPs are centred on six HSR stations:

1. Amsterdam South (Amsterdam-Zuidas)
2. Rotterdam Central
3. The Hague Central
4 Breda
5. Utrecht Central
6. Arnhem Central and Coehoorn

4.4.2 Attractive Places to Live and Work

The construction of the HSR lines has caused the government to take a fresh look at the HSR stations, which are having to cope with growing numbers of passengers. Some of the stations will soon be too small, and some passengers find them unpleasant and unsafe. On the other hand, the stations occupy central areas of the cities - areas currently underused.

The Government has therefore seized the occasion of the HSR construction as a chance to renovate and improve these stations and their surroundings. It wants to spread the bustling urban atmosphere to the station surroundings, creating new station areas that will again become a valuable part of the city. It has therefore urged the municipalities to transform their HSR station areas into hubs of urban life.

The HSL station areas are to become:

- Attractive - The HSR station areas must become highly desirable places, with a balanced mix of dwellings, businesses, and urban facilities.

- Transport hubs and "passenger palaces" - The HSR stations should be future-proof, with optimum accessibility, connections, and interchange capacity. They should be able to cope with large amounts of passengers.

- Urban meeting places - The HSR station areas should match the demands of passengers and residents. Their buildings should be well laid out and the overall atmosphere should be one of a safe, lively public space.

In line with its overall policies on planning and the environment, the Dutch Government wants the NKPs to help improve the quality of life in their cities and encourage large businesses to move there.

4.4.3 Participants in the NKPs

Many participants are engaged in the six NKPs. The public sector participants include the Dutch Government, municipalities, provinces, and regions. The private sector participants include landowners, property developers, and investors. Co-operation is crucial and the participants must share the tasks and risks equally.

The Dutch Government has reserved €1 billion for the NKPs. The Ministry of Housing, Spatial Planning and the Environment will help plan the HSR station areas and provide funds to match those of private participants. The Ministry of Transport, Public Works and Water Management will be primarily responsible for optimising the railway stations' transport function. The municipalities, provinces, and regions will be responsible for improving the regional and local infrastructures. The Dutch Government, the Dutch railway company NS, and the HSR operators will work together to improve the quality of other station facilities.

The municipalities are the prime participants in the NKPs. The Dutch Government's role is to ensure optimum quality. Investors and property developers are expected to contribute financially to the development of the HSR station areas.

4.4.4 Principal Objectives

The Dutch Government's principal objectives for the NKPs are:

- To develop the HSL station areas holistically, ensuring high architectural and environmental quality; the areas should be easily accessible and attractive places to live and work.

- To maximise the spin off from the investment in the HSR station areas in urban renewal and the intensive use of urban space.

- To maximise the spin off from investment in commercial real estate in urban renewal and a better environment.

4.4.5 Breda HSR Station Project

The city of Breda has 170,000 inhabitants and the HSR station will be served by high speed trains to Rotterdam – Amsterdam and Antwerp – Brussels via the new HSR South Line. In the next twenty years the city of Breda will develop a new (regenerated) urban district, called Via Breda, occupying 160 hectares.

This district consists of eight areas, each with their own characteristics and qualities. The railway crosses four of these and together with the river Mark will determine the special living and working climate in the new district. The station area will be the economic core, with its international connections and new housing and working facilities.

The areas are:

- Station area (divided in north and south).
- Residential areas (Belcrum and Stationskwartier).
- Faam area (east of station area).
- Mark zone (east and west of the river Mark).

Breda is the only city in the province of North Brabant to receive an HSR connection. Therefore Breda wants to develop the station into a strategic transport hub for the other cities in the province (Tilburg, Eindhoven and s'Hertogenbosch), making it the gateway to the province.

The new public transport terminal of Breda Central Station will be the interchange point for international, national, regional and local transport connections, including, apart from the high speed train services: regional train services, a bus rapid transit system, other bus services and taxis, while there is also parking accommodation for bicycles and cars. The station complex will provide an efficient and comfortable interchange between these modes under one roof.

4.4.6 Key Figures for Breda Central Station

Following the development, which will provide interchange functions for trains and buses through three railway platforms and a bus station (for 20 urban bus positions), Breda HSL Station will serve:

- 15 trains per hour including four high speed trains
- 26,800 train passengers per day in 2020 (+25 per cent compared to 2002)
- 38,000 bus passengers per day in 2020
- 14,200 pedestrians per day passing through

- Parking facilities: 700 places
- Bicycle facilities: 4,200 places (of which 2,800 guarded)
- Government Contribution € 62 million

4.4.7 Planning Schedule

This section sets out the key milestones for the project, highlighting that the scheme is underway and that the completion of the different components of the scheme are to be staggered, so that although benefits may be discerned as each stage becomes operational, the full impact will not be known until all elements are completed.

- Start of construction for the NSP project: 2006
- Start of construction for the passenger station: 2007
- Completion of the passenger station: 2010
- Completion of the full NSP project, including the station area: 2015 at an estimated cost of €545 million (of which €339 million is provided by the Dutch Government).

4.5 The Jubilee Line Extension

4.5.1 Introduction

The JLE came into operation in the autumn of 1999 and represented the most significant addition to the London Underground system since the completion of the original Jubilee Line 20 years earlier. The JLE provided an additional 11 stations, six of which secured local access to the Underground for the first time. The principal reason for constructing the JLE was to assist in the regeneration of areas of East London, including the Docklands, which were, and to some extent still are, relatively deprived and underdeveloped[61], by providing better transport links with the rest of London and relieving the capacity constraints on the Docklands Light Rail (DLR).

4.5.2 Economic Impacts

In addition to the direct impacts of the JLE, including better network connectivity; interchange opportunities; faster point-to-point journey times; and increased capacity, the extension has also had significant wider economic and social impacts, as identified in a recent report for Transport for London and the Department for Transport[62]. The JLE has provided access to a greater number of jobs within given travel time for local residents and larger markets for local businesses. Indeed, surveys have confirmed that local businesses have benefited from increased ease of recruitment

[61] Most JLE wards in the Southwark, London Bridge, Isle of Dogs and Lower Lea Valley (Canning Town to Stratford) areas fall within the 10per cent most deprived wards in England (2001 Index of Multiple Deprivation)
[62] Transport Studies Group , University of Westminster (2004) *JLE Summary report*

and retention of employees, whilst local residents have found it easier to travel to central London and other areas.

Since the implementation of the JLE there has been more interest in residential development in the JLE corridor than in the rest of Inner East London (IEL). This partly reflects the fact that a substantial proportion of developable land in IEL was located in the JLE Corridor, although it is believed that the JLE Corridor has achieved a faster rate of development and overcome the negative image of some areas through the enhanced accessibility afforded by the JLE. The impact on the rate of mixed-use or commercial development in the JLE Corridor has been less significant, apart from on the Isle of Dogs.

Whilst the supply of residential and to a lesser extent commercial property in the JLE Corridor has increased significantly, demand has outstripped supply leading to significant increases in residential and commercial property values. Indeed, in Jones Lang LaSalle's assessment of land and property values around two of the JLE stations[63] – Southwark and Canary Wharf – it was estimated that the total value of property increased by £2 billion around Southwark Station and £3.9 billion around Canary Wharf Station between 1992 and 2002. It is estimated that between £150 and £650 million of this increase in property values at Southwark Station, and between £755 million and £1.9 billion at Canary Wharf Station, would not have occurred without the JLE.

The study by Jones Lang LaSalle also provides estimates for the increase in land value around the two stations attributable to the JLE – approximately £830 million around Southwark station and £2 billion around Canary Wharf station. The increases in property and land values may have important distributional effects in the longer-term, forcing some poorer renters to move to cheaper areas. For land and property owners it is likely to lead to an increase in perceived wealth and eventually actual wealth, if they decide to sell, although the distributional effect of this wealth will largely depend on the residence of the land and property owners.

The JLE has also had a significant impact on employment levels in the JLE Corridor since its opening. Indeed, for those companies that have located in the JLE Corridor, the presence of 'good public transport' was cited as an important factor. Importantly, the JLE appear to have relieved pressures from established employment locations and has, in part, been successful in redirecting employment to areas needing regeneration. Notably though, local residents have been relatively unsuccessful in capitalising on most of the growth in employment.

Indeed, the JLE has had less of an impact on the availability of good jobs than residents anticipated, and there has been a reduction among residents supporting the statement that 'the area offered good opportunities' after the opening of the JLE. Possible explanations for this include: a skills mismatch between local residents and the requirements of the new employment (implying that a period of retraining must first take place); increased competition for the new employment opportunities as a result of the improved accessibility to other residential areas; and

[63] Jones Lang LsSalle (2004) *Land and Property Value Study – Assessing the Change in Land and Property Values Attributable to the Jubilee Line Extension*

existing employees moving with the company. Worryingly, long-term unemployment rates have dropped more slowly than in comparable areas, suggesting that the opening of the JLE has not ameliorated local long-term unemployment.

Closely reflecting the new employment opportunities in the JLE Corridor, largely in managerial, professional and technical (MPT) occupations, the characteristics of the migrant populations moving into the JLE Corridor has changed significantly. Since the opening of the JLE, the migrant population has in general become predominantly white and seven to ten .years younger. Moreover, the size of households has become smaller and is less likely to contain children. Migrants, particularly those moving into new-build, were significantly more likely to be employed, possess higher level qualifications and be employed in MPT occupations.

In terms of environmental impact, the JLE has been found to have only a limited direct impact, although it has led to a reduction in previously contaminated land. Furthermore, the visibility of the JLE stations have created landmark features, establishing a standard of design quality and a concern for public space that has and will continue to be reflected in subsequent developments and regeneration.

4.5.3 Lessons Learned

The case study has highlighted the following lessons:

- The case study of the JLE clearly shows that transport improvements have the potential to be significant economic enablers – unlocking under-utilised resources, such as land, and relieving pressures in neighbouring areas.

- Before the opening of the JLE it was assumed that local residents and businesses would benefit from regeneration along the route of the JLE, however, this does not appear to have materialised yet. Part of the reason for this is that there were no complementary policies to ensure that these benefits were maximised for local residents, for example, by retraining the local unemployed residents.

- A full assessment of the impact of the JLE is likely to require a decade of observations rather than just a couple of years, so some of the findings from the impact assessment are inevitably interim in nature. Hence, established residents may benefit in the longer-term from improvements in their local urban environment, and the creation of new employment opportunities, that may, after retraining, become available to them.

- There has only been limited emphasis on ensuring good local access on foot or by bicycle, bus/ rail interchange has been prioritised, which may deter some people from using the interchange.

4.6 Liverpool South Parkway

4.6.1 Introduction

Liverpool South Parkway is a £32 million transport interchange in South Liverpool, which opened its door for the public in June 2006. The interchange is a key transport hub of regional significance, linking regional rail services to Merseyrail (local) services and providing direct access to the expanding Liverpool John Lennon Airport without the need to travel via Liverpool city centre. It will also provide facilities for local passengers accessing rail services by all modes. The major features of the scheme include:

- A single integrated booking office and passenger information and enquiry point for bus, rail and airport journeys.
- Incorporated bus station and taxi rank.
- High frequency bus shuttle to Liverpool John Lennon Airport (every ten minutes).
- A 240 space park-and-ride car park free to users of the facility.
- A secure and safe environment with CCTV and customer information systems.
- Secure motor bike and cycle storage.
- Fully accessible facility incorporating 32 person lifts.

The principal reason for constructing the interchange was to meet the anticipated increase in demand for travel in and around Speke Garston, arising from expansion at the airport; new jobs and housing; and improved quality of life. In addition, it was built to encourage public transport access.

Since opening (and even before it opened), the interchange has won awards and accolades for its design, use of building techniques and its potential contribution to the regeneration of the Speke and Garston areas. The specific awards won, include:

- UK Rail Business Awards – Station Excellence of the Year.
- Network Rail Environmental Awards – Innovation.
- Green Apple Awards – Transport and Freight Excellence.
- Institution of Civil Engineer (North West) Awards – Community.

Several partners have been involved in the planning of Liverpool South Parkway, including Merseytravel; Liverpool City Council, Liverpool Land Development Company, Government Office for the North West, Liverpool John Lennon Airport, Network Rail and train operators Northern,

Central and Merseyrail Electrics. This range of partners contributed a varied skills base and ensured that wide ranging outputs were incorporated into the project from the outset, which led to a comprehensive approach to securing funding[64]. For example, funding from the City Council was obtained through the recognition of the project's contribution to economic development, social inclusion and regeneration. Some £6 million was raised from the DfT based on the multimodal role of the scheme as a gateway linking buses, regeneration opportunities and the airport. Approximately £11 million was also secured through the European Regional Development Fund (ERDF) with the support of the Government Office.

4.6.2 Economic Impacts

Whilst no formal assessment has been conducted, the interchange is a high priority for local and regional agencies and was expected to make a significant contribution to relevant local and regional policies and strategies. In particular, the interchange facility will help to provide public transport linkages to South Liverpool and Knowsley, which means that Merseyside residents have the potential to take advantage of some 11,000 jobs set to be created in the area. In turn it was envisaged that this would help the area's economic regeneration and ongoing impetus by allowing 'would-be' developers unrestricted access to the potential workforce across Merseyside and Halton.

The performance of the interchange has in many aspects surpassed expectations. For example, with approximately 4,700 passengers using the facility every day, compared to the forecast of 2,000, the interchange has attracted and enabled more people to travel by public transport. It has also improved access to many attractions of Liverpool and Merseyside, as well as linking people to international travel. In addition, the interchange has opened up new markets for rail travel. For example, Liverpool South Parkway will play an integral role in two new national rail franchises. Indeed, the DfT has stipulated that it should be a principal station and a mandatory stop for the East Midlands and West Midlands franchises when they start in 2008.

In terms of its environmental performance, the interchange has saved some 700,000 litres of mains water in its first year, through its rainwater harvesting system. Its geo thermal heat pumps have exceeded targets by saving more than 33 tonnes of CO_2. The enhanced roof insulation has saved 3.4 tonnes of CO_2 and the solar photovoltaic cells on its south facing windows have saved 1.5 tonnes of CO_2 by providing an electricity supply to the building[65].

4.6.3 Lessons Learned

The case study has highlighted the following lessons:

- Whilst Liverpool South Parkway has and will continue to encourage public transport, the interchange would not have got off the ground without its wider regeneration impact.

[64] Campaign for Better Transport (2007) *Case Study: Liverpool South Parkway*
[65] Merseytravel (2007) *Liverpool South Parkway Celebrates First Birthday*

- In addition to its impact on public transport use and wider regeneration, Liverpool South Parkway also shows that transport interchanges can be showcases for low-carbon construction and energy use.

- The involvement of several different partners contributed a varied skills base and ensured that wide ranging outputs were incorporated into the project from the outset. This in turn led to a comprehensive approach to securing funding.

4.7 Sheffield Station

4.7.1 Introduction

The project, started in 2000, aimed to transform the railway station and its surroundings to create an improved gateway to Sheffield and to unlock the development potential of the area immediately surrounding the station and to improve integration between different transport modes.

The project has been delivered by a number of partners: Sheffield City Council; Yorkshire Forward; Sheffield One; English Partnerships; Network Rail; and South Yorkshire Passenger Transport Executive with a Station Steering Group meeting monthly since the project inception.

The project has cost £50.5 million, with money being drawn from Objective 1 (£9.85m for transport infrastructure and public realm improvements and the creation of development plots); Yorkshire Forward (£7.2m for land acquisition); English Partnerships (£0.25m on land acquisition and public realm); Strategic Rail Authority's Rail Passenger Partnership (£12.8m on station improvements); Single Regeneration Budget (£1.79m on station and Sheaf Square); LTP (£2.13m on access improvements); DfT (£6.78m on highway improvements); and the private sector (£7.54m on purchase of a multi-storey car park and other acquisitions).

4.7.2 Economic Impacts

Both partners and the public are reported to be satisfied by the project[66]. The targets set for the project have almost been met, for example the 3,500 m^2 of employment floorspace has been delivered; 28 jobs have been created or safeguarded and 1.19 hectares of brownfield land have been brought back into use. Other benefits have included:

- The station improvements have been accompanied by the introduction of faster and more frequent train services to Leeds and Barnsley.

- The new tram station and footbridge has improved access to the tram network.

- Bus access has been improved through road realignment.

[66] Evans, R, Hutchins, M, Meegan, R and Parkinson, M (2007) *Sheffield One: Final Evaluation*

- Car parking provision has improved, with the number of spaces available increasing from 200 to 700.

- Additional shopping units have been added, the seven units now include WH Smiths and Marks and Spencer.

- There is however less capacity for taxis.

More broadly, the project enabled the demolition of Sheaf House and Dyson House, which has provided land for the development of Sheffield's digital campus,

4.7.3 Lessons Learned

The case study has highlighted the following lessons:

- The evaluation of Sheffield One highlighted the effective way in which the partners worked together, noting that *" ... team members enjoyed a good rapport and there was a joint commitment to resolving difficulties rather than 'hiding behind corporate facades…'*

- The public were kept informed of progress throughout the project by the "All Change" newsletter.

- However, short-term parking has become an issue as the new owners of the multi-storey car park have withdrawn free short-term parking, adding to congestion in the drop off area and compounding the shortage of space in the redesigned taxi rank, restricting the potential to accommodate future passenger growth.

4.8 Strategic Conclusions

The strategic conclusions that can be drawn from the case studies in respect of the aims of the study are:

- Regeneration investment at transport interchanges can have marked economic benefits. The case of Sheffield Station highlights how transport interchange redevelopment can facilitate the development of employment uses on adjacent land in addition to improving the experience of travellers.

- While the case studies offer broad support for the hypothesis that interventions targeted at transport interchanges contributes to regeneration and growth agendas, the evidence presented in this chapter is stronger with regard to supporting growth agendas. This has been demonstrated in the case of the JLE by the levels of land uplift and the growth in the number and quality of jobs now available in the JLE Corridor. The Breda HSR case highlights the confidence of the public sector in the Netherlands that the provision of improved transport interchanges and improved transport can act as a catalyst for further regeneration.

- The case of ‘s-Hertogenbosch shows that the design of each element of the redevelopment of a station area should be considered against all three strategies of acceleration, concentration and enhancement to increase the product of time spent and value of time during the door-to-door journey.

- The cases of s'Hertogenbosch and Sheffield both highlight the benefits to the public realm and sense of place resulting from a large scale redevelopment of a centrally located transport interchange. Providing evidence that regeneration investment without network improvement can deliver economic benefits.

- Accordingly, particular consideration needs to be given to the social implications of regeneration at transport interchanges. In the case of the JLE, the associated uplift of land values has seen some sections of both the community and the economy priced out, while new labour demand has proved to be better suited to the skills of those arriving via the transport interchange than those of existing local residents.

- The number of modes of transport meeting at an interchange need not limit the regeneration effects. The JLE case has led to marked regeneration benefits at the same time as drawing criticism for not adequately meeting the requirements of cyclists.

5.0 East Midlands Case Studies

5.1 Introduction

This chapter of the report provides a regional focus on the analysis of the economic impact of investment in transport interchanges.

5.2 Case Study Selection and Evidence Base

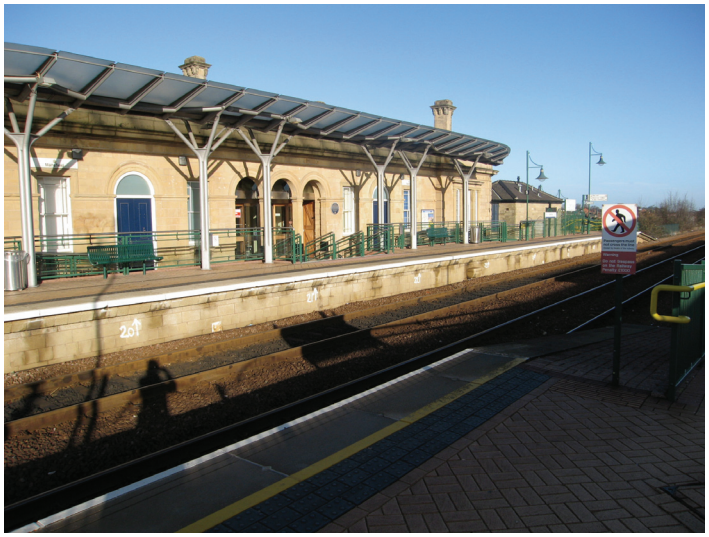
The case studies reflect a range of transport interchanges from across the region. Projects had to have been completed to be selected to allow the case studies to draw on evaluations and to ensure findings reflect the impact of completed projects. The case studies presented in this chapter are:

- Mansfield Town Station on the Robin Hood Line (RHL).
- Matlock Bus Station.
- Market Rasen Bus Station.
- Nottingham Express Transit.

The evidence base to inform each of the case studies has been drawn from a number of sources. These have included literature reviews, including policy documents and any evaluations or assessments made; interviews with local stakeholders; and primary research in the form of a telephone survey of businesses located in the vicinity of the interchanges.

5.3 Mansfield Town Station

5.3.1 Context



The RHL is a 32 miles long rail line between Nottingham and Worksop. The first part of the rail line, between Nottingham and Newstead, opened in 1993 and was later extended to Mansfield (1995) and Worksop (1998). The reason for developing the line in three sections was partly so that the partners could get Government funding, but also due to the fact that sections of the old rail line

between Newstead and Mansfield had been removed and that Kirkby Tunnel had been used as a landfill. Importantly, before the re-opening of the Mansfield Town Station in 1995, Mansfield was the largest town in the country without a rail link[67].

Currently, the RHL calls at 13 stations and operates Monday to Saturday. From Mansfield there is an hourly service to Worksop and a half hourly service to Nottingham (between 9am and 6pm and hourly thereafter). Nottinghamshire County Council and its partners are currently campaigning for the Government to fund a Sunday service on the RHL from Worksop and Mansfield Woodhouse to Nottingham.

In 2005/06, the total number of people[68] using Mansfield Town Station was more than 379,000, representing an increase of nearly 5,000 people or 1.2 per cent compared with the year before. Compared with 2002/03, the number of people using Mansfield Town station has increased by over 43,000 or 13 per cent[69]. With regards to the RHL as a whole it is estimated that up to 3,500 people use it each day with over a million using it each year[70]. This makes the RHL one of the most heavily used re-opened rail lines in the UK. Up until November 2007 Central Trains operated the trains on the RHL, however, since then Stagecoach Rail has taken over and signed a contract for 7 years and 4 months.

5.3.2 Rationale

- The RHL project, promoted by Nottinghamshire County Council together with neighbouring Local Authorities, was conceived in the late 1980s, when the Nottinghamshire/ Derbyshire coalfields were suffering from severe economic, social and environmental problems arising from rapid industrial decline, particularly in the mining industry. In Mansfield the pit closures of the 1980s and 1990s were particularly significant as passenger services had been withdrawn in 1964, which left thousands of people without direct access to the national rail network – a fact that, for a town with below average car ownership, further inhibited the ability of residents to find employment.

- Consequently, the main reason for 'reopening'[71] the RHL was to aid economic regeneration in the area, by enhancing workforce mobility and job search horizons, particularly for those without access to a car. This was principally focussed on a fast direct connection from the area into Nottingham where there were job opportunities for the large pool of newly unemployed workers.

- Another reason for 'reopening' the line was to assist the development of sites and job creation on derelict sites adjacent to the rail line, including the colliery sites. Inevitably this took longer to

[67] Passenger services to and from Mansfield were withdrawn in 1964.
[68] Based on number of entries and exists (ticket sales) – it is understood that there are some problems with revenue securing so this estimate is likely to underestimate the actual usage.
[69] Rail statistics – Station Usage (2007) Office of Rail Regulation. Note that the methodology for calculating station usage has been improved since the 2002/03 data was calculated. Data for 2003/04 has not been calculated.
[70] Nottinghamshire County Council http://www.nottinghamshire.gov.uk/home/traffic_and_travel/trains/robinhoodline.htm
[71] Although the RHL *per se* did not exist previously, many stations on the line were reopened.

achieve, however, it has borne fruit with a considerable number of *emda* and Local Authority initiatives built or planned, most with reasonable access from a local railway station.

5.3.3 Partnership

- The RHL has been promoted by Nottinghamshire County Council together with Derbyshire County Council and eight district councils. Local Authority officers have played an important role in the design and construction of what was a complex engineering project and also assisted in decisions on the location of stations. With the exception of the operation of the RHL, the private sector has not been involved in the reopening of the line. This can partly be explained by the fact that the line reopened before the Private Finance Initiative (PFI) came into force.

5.3.4 Investment

- The line has been funded by Nottinghamshire County Council, Nottingham City Council and Derbyshire County Council in association with the Strategic Rail Authority. In total some £30 million has been invested to make the project a reality, one third of which has been met by the county councils and Nottingham City Council. The remainder of the funding has come from central government and European grants. Despite receiving Government and European funding, it proved to be a significant challenge to find additional funding, particularly against the backdrop of rising costs following privatisation. The privatisation of rail also means that a similar project today would require significantly more funding.

- In addition to the funding of the rail line, significant capital investment has also been committed to the station building at Mansfield Town, which reopened a few years after the rail line following substantial growth in passengers. It is understood that this capital investment has been relatively high compared with investment committed at other transport interchanges in the UK, which should ensure its durability and attractiveness to travellers.

- More recently, funding has been committed to a new £7.8 million transport interchange in Mansfield town centre which is expected to open in 2009. It will be located adjacent to Mansfield town centre and Mansfield Town Station, providing enhanced links with the RHL. As a result, the scheme will offer greatly improved levels of interchange between bus and rail thus allowing for more sustainable travel patterns whilst providing for new travel opportunities both within Nottinghamshire and the rest of the country.

5.3.5 Economic Impact

The economic impact of the RHL (Mansfield Town Station) is set out below.

5.3.5.1 *Documentary Evidence*

Whilst the available documentary evidence in respect of its economic and social impact is limited, a number of passenger surveys have been carried out revealing some interesting outcomes. For example, the passenger surveys have confirmed that the line is delivering substantial community

benefits in terms of modal shift, and a widening of journey to work horizons in the former coalfield communities[72]. More specifically, the 2003 Passenger Survey revealed that:

- approximately a third of passengers (34 per cent) are using the RHL to travel to work, the same proportion of passengers are using it for shopping trips;
- the incidence of passengers walking to the stations has increased in recent years, supporting the theory that the people using the RHL are choosing to live and work in places adjacent to the stations;
- nearly 40 per cent are making a journey that they would not have made before the RHL started, many of these are travelling to and from work or on employers' business;
- more than a third of passengers (36 per cent) used to make the same journey by car, indicating a significant modal shift;
- among the passengers that have changed jobs since the start of RHL, approximately two thirds (63 per cent) of passengers said the RHL has been very or fairly important in their choice of workplace – notably, the proportion considering the RHL as very or fairly important was significantly higher for those who were unable to make the journey by any other means, those without regular access to a car, and those aged 34 and under;
- the main reason for using the RHL is that it is 'less stressful/ more relaxing', particularly for shopping travellers; and
- for people travelling to work and travelling on employers' business, 'traffic congestion' and 'convenience' were the main reasons for using the RHL.

Whilst the surveys do not generally distinguish between individual stations, it was estimated that 10 to15 per cent of all trips originated from the Mansfield Town Station. More specifically, it was estimated that approximately one in five (18 per cent) passengers were residing in NG18 and NG19 postcode districts. The urban areas of these two post code districts are largely within a two mile radius of the Mansfield Town Station.

Notably, house prices in the post code sector incorporating the Mansfield Town Station have grown at a relatively high rate compared with the Mansfield and East Midlands averages as shown in table 5.1 below. Indeed, house prices in postcode sector NG18 5 have grown at an average quarterly rate of 2.47 per cent compared with an average of 2.32 per cent in Mansfield and 2.45 per cent regionally. House prices in the two postcode districts accounting for 18 per cent of passengers have also seen relatively strong growth in house prices, particularly NG19.

[72] Nottinghamshire County Council (2003) *Robin Hood Line Passenger Survey*

Table 5.1 House Price Growth, 1995-2006

Area	Average quarterly house price growth	Average house price Jan-Mar 1995 (index)	Average house price Oct-Dec 2006 (index)
NG18 5	2.47%	£41,019 (78.3)	£128,970 (79.0)
NG18	2.43%	£41,702 (79.6)	£128,777 (78.9)
NG19	2.46%	£37,742 (72.4)	£118,179 (72.4)
Mansfield	2.32%	£40,966 (78.2)	£120,342 (73.7)
East Midlands	2.45%	£52,362 (100.0)	£163,225 (100.0)

Source: ECOTEC Analysis based on Land Registry data

Whilst this data on its own does not provide evidence that Mansfield Town Station and the RHL have had a significant impact on the demand for houses in the area, the results of the passenger survey (the incidence of passengers walking to the station has increased significantly in recent years) combined with the house price data would tend to support the argument that the working community in the RHL catchment area is beginning to settle into a pattern whereby choice of home, workplace, and travel between them, are being selected to make it as convenient as possible. In other words, the Mansfield Town station appears to have had a significant impact in the regeneration of the catchment area around the station.

Being located in a comparatively densely populated area the interchange experiences significant footfall and so can be seen to have made a strong contribution to meeting the transport and logistics priority of the RES, while the new office development facilitated by the opening of the station mean that the investment has also made a strong contribution to the land and development priority.

5.3.5.2 *Stakeholder Views*

With the growth of Sunday trading and seven day working, the local authorities along the route led by Nottinghamshire County Council, are engaging with the Government to fund a Sunday service to replicate the success of the Monday to Saturday operation. The business community in Mansfield is understood to be very positive to this initiative, as it would have a positive impact on the economy, both in terms of attracting customers and allowing better access for employees.

Although most trips on the RHL have their final destination in Nottingham, it is understood that there are relatively good contraflows at Mansfield Town Station. Mansfield is particularly popular as a shopping destination for people from the former coalfield communities.

Whilst many Mansfield residents seek employment in Nottingham, it is important to note that the income earned will be brought back to Mansfield and hence will support the viability of local services and businesses.

In terms of the catalytic impacts, it is understood that the RHL provides a pre-requisite for future investment and development of sites in close proximity to the line's stations. Nevertheless, the transport interchange will not on its own generate these catalytic impacts, other important determinants include the availability of land and housing provision. Notably though, offices are currently being developed on the land between Mansfield Town Station and the planned bus station. Outside Mansfield, the RHL has encouraged inward industrial investment in for example Sutton Parkway and Shirebrook.

5.3.5.3 *Near Neighbour Views*

The respondents were split between services, retail and hospitality, although all were typical town centre activities – five shops, three estate agents, a pub and a hotel. Seven of the respondents had ten employees or fewer and none had been established less than two years. Despite the longevity of businesses surveyed, the station was opened ten years ago, and this has reduced respondents' ability to accurately answer questions relating to changes in turnover or rents. Seven of the ten respondents rated Mansfied Town Station as being 'very important' (2) or 'fairly important' (5) to their business, while two rated it as 'not at all important' and one as 'not very important'.

The reported impact of Mansfield Town Station varied markedly. It was rated as having made 'a major impact' on attracting investment in the area' and for 'increasing access to market' by one respondent and as having 'no impact at all' by at least three respondents across all categories: attracting business to the area (5); increasingly land and property values (5); attracting people to the area (3); improving productivity of staff (8); enhancing the image of the area (4); improving access to market (6); and increasing ease of recruitment (7).

When asked to identify the main benefits, responses concentrated on connectivity, particularly with reference to travelling to and from Nottingham for commuting and shopping purposes. The disadvantages all related to levels of service, such as the absence of a Sunday service and the lack of late trains.

5.3.6 Lessons Learned

The case study has highlighted the following lessons:

- An important lesson highlighted by Nottinghamshire County Council is that it is desirable to develop transport interchanges in relatively densely populated areas, in order to generate sufficient demand.

- Good partnership working between regional and sub-regional partners and Government bodies (British Rail initially, Railtrack (Network Rail) and the Strategic Rail Authority since privatisation) has also been highlighted as a desirable feature.

5.3.7 Observations

A number of observations can be made in relation to this case study:

- The RHL at Mansfield Town Station has experienced considerable growth in passenger numbers in recent years, indicating a substantial and growing demand for public transport in the area.

- Transport interchanges can have a significant impact in terms of delivering substantial community benefits, including modal shifts, a widening of journey to work horizons, and the sustainability of local services and business.

- Significant investment has been directed at the station building and its immediate environment to reduce any perceived penalties of using the transport interchange.

- The project has shown signs of strong partnership arrangements, which has aided project promotion and development. Importantly, the partnership arrangements have been sustained and the partners are now engaging with the Government to fund a Sunday service to replicate the success of the Monday to Saturday operation.

- The scheme was backed up with a comprehensive marketing strategy, including a high quality user guide and timetable (distributed to all households in the corridor), fares promotions, walking and cycling guides and dedicated bus link schemes.

5.4 Matlock Bus Interchange

5.4.1 Context

It has been a long-standing ambition of Derbyshire Dales District Council (DDDC) to redevelop Cawdor Quarry – a derelict brownfield site to the south of River Derwent. The site has been identified in various local plans as a key site for both housing and commercial development, although access to the site has always been a significant obstacle to development.

A planning application to develop the site was submitted by Sainsbury's in 1997, which was eventually approved on the condition that a new bus station (to be located next to the railway station), a relief road on the A6, a pedestrianised area on Crown Square, and a one-way system on the bridge over the River Derwent was included in the planning proposal through a Section 106 Agreement.

Following the planning approval, further works and development have been planned on the site, including:

- More than 400 homes at Cawdor Quarry in a development called Matlock Spa.
- A community building.
- Employment space.

Construction of the new supermarket and some of the other amenities on the site began early in 2007 and both the supermarket and the new bus station opened in October 2007. The bus station serves both local town routes and regional services.

5.4.2 Rationale

- Access to the Cawdor Quarry site has for many years been the main obstacle to development on the site and it was therefore required that any development would have to include:
  - ► A new relief road on the A6.
  - ► A 200 space car park.
  - ► A new bus station.
- The new bus station and the new car park are located directly adjacent to Matlock Railway Station, creating a unified transport interchange facility for the first time in the town. It is understood that these modes are currently used for different purposes, so that integration has been limited to date. Moreover, local bus services are generally poor in the Derbyshire Dales, partly a result of the rural character of the district, which means residents are highly dependent on private transport. Seen in this light it is currently the car park and the railway station that have provided the most scope for integration. The district council is, however, committed to the increased use of public transport and is confident that once all the works have been finalised, Matlock will have the benefit a modern transport interchange, allowing a more seamless journey and serving the needs of a growing and prospering town.
- In order to provide high-quality public and passenger facilities, an unused former goods shed has been converted into a fully covered waiting area with public toilets. By preserving some of the original features, such as the stonework, the conversion adds interest and provides a historical link between the new and the old. The difference in appearance between the new and old station is quite striking (figure 5.1 below).

Figure 5.1 Old Bus station (Bakewell Road) and New Bus station (Cawdor Quarry)

5.4.3 Partnership

- The work at the Cawdor Quarry has been completed in partnership between Sainsbury's, DDDC and Groveholt Ltd.
- Sainsbury's have financed most of the project, including the bus station and public car park, and has provided project management.
- Groveholt Ltd is the developer of the remainder of Cawdor Quarry, excluding the Sainsbury's development.
- DDDC have been responsible for liaison with Derby and Derbyshire Economic Partnership (DDEP) during the project and became the freehold owner of the majority of the land covered by the project and have adopted the transport interchange, the public toilets and public car park.

5.4.4 Investment

- The development of the bus station has largely been financed by Sainsbury's to a cost of £859,000.
- A further £390,000 was invested in the public car park directly adjacent to the bus station and the railway station.
- In addition to the money invested by Sainsbury's and Groveholt Ltd, DDDC received a grant from DDEP of £500,000.

5.4.5 Economic Impact

The prospective economic impact of Matlock Bus Interchange is set out below.

5.4.5.1 *Documentary Evidence:*

The bus station and public car park at Cawdor Quarry has only been in operation since October and hence there has not yet been an ex post evaluation of the transport interchange. However, in the application for a DDEP grant it was anticipated that the transport interchange, together with the other developments on the site, will enable the regeneration of parts of Matlock Town Centre. More specifically, the transport interchange will create the opportunity to redevelop the old bus station on Blakewell Road, a prime site in the town centre. Indeed, a recent Retail Assessment Study carried out for DDDC in conjunction with the Matlock Town Centre Masterplan[73] has shown that there is a substantial current under supply of comparison goods retail floorspace in the town.

Traffic studies conducted during the original planning application stage also showed that, as a result of the new relief road and the transport interchange, journeys by private car and traffic congestion in Matlock town centre would be reduced bringing environmental benefits. Moreover, by co-locating the new bus station alongside Matlock Railway Station it is expected that the new transport interchange will achieve both regional and sub-regional transport enhancement goals.

Importantly, the new transport interchange makes it easier for Matlock residents to seek employment in Derby and beyond. Derby already accounts for the largest share of employment (outside DDDC) by residents of the district.

Service providers have responded unevenly to the new bus station with the result that there are now two bus stations serving the town, although the new location close to the railway station eases interchange between these modes so that the investment can be seen to have made a moderate contribution to realising the RES's transport and logistics priority. It has however made a strong contribution to the land and development priority having been delivered following a s106 agreement with a supermarket and allowed land to be released which is now being developed for residential and commercial use.

5.4.5.2 *Stakeholder Views*

Our interviews with local stakeholders have suggested that the long-term prospects and benefits of the new transport interchange and the wider development scheme at Cawdor Quarry are expected to be an important factor in the redevelopment of Matlock Town Centre, which will benefit both residents and visitors to the area. However, the effect of the transport interchange has so far been mixed. For example, it is understood that some bus services have not relocated to the new bus station due to longer routings and timings not being able to be absorbed into their current timetables, which means that the town now has two bus stations. Moreover, after seeing an 11 per cent fall in passenger numbers, one service that had relocated to the new bus station has reverted to calling at both stations. It is understood that this has lead to the omission of stops in the Wirksworth area. Moreover, the Transpeak service between Nottingham and Manchester will only call at the new bus station on the way to Manchester and use the old bus station in the other direction.

[73] Derbyshire Dales District Council (2007) *Matlock Town Centre Masterplan Area Action Plan*

DDDC are aware of these problems and accept that the changes have not been readily accepted yet and will take time to bed in. Nevertheless, DDDC still believe that the gain in the long term will be significant and that the transport interchange will become the focal point of the town centre again after several years in the backwater, particularly as employment space and housing is developed at the remainder of the Cawdor Quarry site. Importantly, there has been an upsurge in development interest in Matlock following the new developments at Cawdor Quarry. Some fears have been raised that the new transport interchange and the one-way system on the Derwent River Bridge would have the effect of drawing the focal point of the town to the southern side of the River Derwent, although this does not appear to have materialised.

5.4.5.3 *Near Neighbour Views*

The coach station's near neighbours are predominantly shops and the respondents to the survey reflect this, there being nine shops and a solicitors' practice. Eight of the ten respondents have ten employees or less. There is a wider spread of years in business, with six having been established for more than ten years and two for less than two years.

The respondents have been notably downbeat about the economic benefits accruing to their business from the investment in the interchange – all ten respondents claiming that the coach station has had 'no impact at all' in either attracting investment to the area or increasing land and property values or in increasing productivity of staff or in increasing ease of recruitment. Indeed, across all criteria only one respondent identified an area where the investment in the interchange has made a major impact, this was with reference to increasing access to market. The other nine respondents to this question identified that it has made 'no impact at all'. When asked to consider the effect of the investment on the image of the area, eight respondents thought it had made 'no impact at all'.

When asked to identify specific disadvantages to the investment, respondents concentrated on private transport and the increased cost and increased levels of car parking, one respondent stating it had led to *'a long winded road to get nowhere – killing the town and the character of Matlock*'. The other major criticism concerned the location of the coach station and how it effectively created 'two centres', the coach station being removed from the town centre shops and the train station.

Seven of the ten respondents reported lower business turnover than before the investment in the interchange, with six attributing this to the investment. There were no reported changes in the levels of rent and no reports of an improved local environment.

5.4.6 Lessons Learned

The case study has highlighted the following lessons:

- Whilst it is understood that the bus companies were consulted during the planning process, there appears to have been some resistance from the bus companies to relocate all their services to the new transport interchange.

- Bus companies run a commercial service and it is therefore important that partners work together to find a suitable solution to the problems encountered.

- The cooperation between the private and public sector has otherwise been successful, particularly between Sainsbury's and DDDC.

- The development of the new bus station and transport interchange in Matlock also highlights the difficulties, at least in the short-term, of establishing new infrastructure into peoples' routines. Perhaps more could have been done to promote the new station in order to sustain the demand on the bus services which in effect may have made the bus companies less reluctant to relocate all their services to the new transport interchange.

5.4.7 Observations

A number of observations can be made in relation to this case study:

- The new transport interchange in Matlock sits within a large redevelopment area to the south of the town centre and was together with a relief road on the A6 a key pre-requisite for development at the site.

- Importantly, the new transport interchange, together with the other developments at Cawdor Quarry, has created an upsurge in development interest in the town and delivered environmental benefits through a reduction in traffic going though the town centre.

- By converting a former goods shed the new transport interchange benefits from high-quality passenger and public facilities, which may result in welfare gains to those using the transport interchange and entice more people to travel by public transport.

- It is the ambition of the district council to increase the use of public transport, however, the provision of public transport by several different private operators has hindered the planning of the public transport network.

- The new bus station in Matlock provides the town with the opportunity of extending the train service from Derby by offering a connecting bus service on the door step, however, to date the two modes have not been adequately integrated.

5.5 Market Rasen Coach Stop

5.5.1 Context

Market Rasen is a traditional market town located on the fringe of the Lincolnshire Wolds and a designated Area of Outstanding Natural Beauty. Historically, the arrival of the railway to Market Rasen in 1848 changed the face of the town and opened it up to economic opportunities. Market Rasen became an economic centre and a thriving market town.

The site of the transport interchange covers 2.5 hectares of formerly brownfield land, located immediately east of Market Rasen railway station, on the southern edge of the town centre. It is consists of 8 bays for coaches, together with service bus set down points. The Interchange shares the same site as a Tesco supermarket. The supermarket's café and toilet facilities are available to users of the coach stop. Tourist information boards have been erected in the car park, with further tourist information facilities and an inter-connect information electronic kiosk planned.

5.5.2 Rationale

- The Market Rasen Development Trust (MRDT) identified that a priority for the town should be a purpose built transport hub offering coach parking, toilet, café and tourist information facilities. The aim being to encourage visitors to use the town centre facilities and put money into the local economy.

- The economic benefits of the transport interchange were envisaged as being threefold; increasing tourism, increasing local trade and improving facilities and opportunities for local residents. There were several reasons identified for developing the transport interchange. The most salient were; improving local transport infrastructure, increasing tourism to the area, developing business and local trade and meeting local action plans. Market Rasen was recognised as a place of great potential due to the proximity of the train station to the town centre providing good rail links to Lincoln and beyond. In addition, the rural location of the coach station provides a much needed service to outlying villages.

- In 1999, when the bid for funding from the Single Regeneration Budget (SRB) was put together it was identified that a large number of holiday coaches passed through Market Rasen on their way to coastal holiday resorts and stopped at a lay-by and car park in Willingham Woods, one mile out of the town.

- Through attracting tourists into the town, it was believed that local businesses could raise their productivity and develop new trade. The SRB bid report identified the potential regeneration that could occur in this otherwise neglected area of the town as a result of a transport hub, so meeting local plans to develop Market Rasen as a tourist destination.

5.5.3 Partnership

- MRDT and West Lindsey District Council identified an opportunity to work with Tesco Stores to maximise and gain improvements to proposals for the development of the new store that offers

direct benefit to the local community, and the wider potential to develop a strong community relationship with local store management. Construction costs were considerably reduced by Tesco providing the venue for the transport interchange and incorporating its construction with that of the store.

- MRDT were responsible for ensuring that grant monies from all parties to this project were disbursed, spent and recorded appropriately. They have also coordinated advertisement of the coach stop to relevant companies and the MRDT were also responsible for the day to day management of the individual aspects of spend and programme delivery with support from West Lindsey District Council's Economic Development Services.

5.5.4 Investment

- The Transport Interchange bid emerged as part of a wider proposal to develop a Tesco store and petrol station, and build a new fire and police station complex, an investment totalling £5.3m. Tesco committed to a contribution of £670,000 to these public facilities, with a further £120,000 to meet the requirements of the s. 106 agreement.

5.5.5 Economic Impact

The prospective economic impact of Market Rasen Coach Stop is set out below.

5.5.5.1 *Documentary Evidence*

Tourist and visitor numbers to the area have increased as a result of the development. Previously coaches only stopped on the outskirts of the town on their way to the coast, preventing passengers from easily accessing the town's shops and services.

The increase in visitor numbers has had a positive impact on increasing trade in the town, enhanced by the positioning of signs guiding tourists from the coach stop into the town centre. Shopping is therefore increasing in the town centre and reducing the numbers drawn away to larger, out-of-town shopping centres. Increased numbers of visitors and demand for shopping facilities has helped to sustain and improve existing retail and business outlets. Equally importantly, it has encouraged demand for properties for trading and reduced the number of empty commercial properties in the town.

In reducing the number of empty properties, the built environment and public realm of the town is being improved and creating a more pleasant and effective environment in which local residents can live and work. This will stimulate additional growth and lead to increased services and access to services for local people, as well as job opportunities such as those provided by Tesco. There has been a positive impact for the Tesco store with increased customer figures from coach drivers and tourists stopping at the site.

The interchange has created 45 new jobs, 2 community facilities and provided investment of £66,885 for deprived local areas, including improvements to the physical environment in Market Rasen. These improvements are partly a result of significantly reducing the level of coach parking

on the main thoroughfares of the town, with its attendant congestion problems, and providing a 'bespoke' facility closer to the town centre for those operators using out of town lay-bys. The interchange has therefore supported the work of the Rural Tourism Development Area Partnership and may stimulate greater investment in the local area. Overall, investment in the Interchange and the opportunities generated from it are aiding regeneration in the town which will have the effect of reducing social exclusion and generating a feeling of optimism among local residents.

The interchange contributes RES priorities most obviously in creating a transport service which is increasing connectivity and physical access for both local residents and visitors to the area. It is also aiding tourism and culture by encouraging visitors to go into Market Rasen itself. This has been achieved by enabling coaches to stop close to the town centre, providing tourist information at the site and providing signage to encourage tourists to walk into the town. The increase in visitor numbers to the town has generated economic growth, encouraged the establishment of new business enterprises and encouraged increased public realm activity which is contributing to a more pleasant environment. Overall the project can be seen to have made a moderate contribution to the RES's Transport and Logistics Strategic Priority and a minor contribution in respect of land and development.

The public facilities that Tesco contributed to funding were new public sector buildings, off-site signage and walkway improvements as well as necessary archaeological works. Development of the Tesco store more generally has had a positive impact on the Transport Interchange, for example, the establishment of an in-store café, providing incentives to coach drivers to use the stop (free meals) and running a store bus to pick up customers from surrounding villages. Additional private investment has been utilised from local business, particularly restaurants, which have been keen to offer inducements for visitors.

5.5.5.2 *Near Neighbour Views*

The firms surveyed were all small, well established firms. All of the firms having fewer than ten employees and none having been in business for less than two years. A range of services were represented, including three shops, two cafes, a builders' merchants, with the remaining four being engaged in professional services. Of these only two firms felt the interchange was important to their business, one rating it as 'fairly important' and one as 'very important', compared to the eight that rated it as either 'not very important' or 'not at all important'.

This broadly downbeat assessment of the interchange reported by firms located in its vicinity is repeated through the considerations of specific aspects of economic benefit. All ten respondents felt the interchange had made 'no impact at all' in both improving access to markets and in attracting tourism, although this figure fell to seven when considering the interchange's impact in bringing in visitors more generally, with two of the three with a more positive outlook attributing the increase to shoppers visiting the adjacent Tesco supermarket. Nine respondents felt that the interchange had made 'no impact at all' on the image of the area, seven reported 'no impact at all' in increasing land and property values and seven also reported 'no impact at all' in increasing staff's productivity, although two respondents did report a large impact on this measure.

Of the seven firms to answer the question two firms reported higher business turnover following interchange improvements, four reported no change and one a decrease, with three respondents not answering. No respondents reported higher rent since the interchange opened.

5.5.6 Lessons Learned

The case study has highlighted the following lessons:

- In April 2001 *emda* commissioned a study to consider the regeneration potential of the Linwood Road site, adjacent to the station area in Market Rasen. The study helped define the goals, opportunities and potential problems of the project.
- The project demonstrated innovation in planning and the benefits of working in cooperation with private sector investors in order to generate effective and efficient project delivery. This is the first time that Tesco has been involved in a scheme of this nature and highlights the need to remain open-minded in planning and securing investment.
- Part of the project delivery included providing training for local proprietors to enable them to benefit from the increased visitor numbers to the area. Coach drivers were also canvassed in order to raise their awareness of the new facilities. Including local businesses and residents in the project and marketing the project also contributed to the ultimate success of the project.

5.5.7 Observations

A number of observations can be made in relation to this case study:

- The project is engaging local businesses through a series of questionnaires to measure the impact of the project on their business. However, Tesco are primarily in charge of monitoring usage of the site. This is being achieved through monitoring of the number of coach drivers taking up their free meal. The necessity to note seasonal variations in trade and local business has also been identified.
- Our *near neighbour* survey found little support for the assertion that the interchange had delivered economic benefits to firms located in the vicinity.

5.6 Nottingham Express Transit

5.6.1 Context

Opened in 2004, Nottingham Express Transit (NET) is Britain's newest light rail system. The system is run on electricity and is well suited to integration with the city's other transport systems. The system carried 8.4 million passengers in its first year of operation, attracting praise from passengers, press and local and central government. The success of the development has led to the planning of a second phase which will serve to better connect the south of the city.

Physical regeneration along the route has included investment in shops, hotels, housing, bars and restaurants near to the tram stops. The NET also passes by many of the city's existing cultural and entertainment attractions including the Victoria and Broad Marsh shopping centres. These developments have boosted the local economy by bringing local people back into the city centre to access services and leisure facilities. In addition, they are encouraging people from the wider region to utilise Nottingham city centre and attracting tourists.

5.6.2 Rationale

- Although Nottingham was thought to have a diverse and resilient economy, the city and wider region had been severely affected by the decline in mining and manufacturing industries in the latter part of the 20th Century. In order to regenerate the city and develop the local economy in the service and finance sectors, improved transport links were recognised to be essential. Without the transport necessary for economic diversification, the city was at risk of stagnating and possibly degenerating as residents, tourists and employment opportunities moved to neighbouring cities. Developing an environmentally sustainable transport system that would meet present economic needs was seen as a challenge that had to be overcome.

- Feasibility studies undertaken by external consultants in 1989 and 1990 indicated the benefits of developing a comprehensive rapid transit network, and contributed to the choice of route for Line 1. In addition to external advice, local plans and strategies suggested that improved transport links were essential to the future of the city. The Greater Nottingham LTP[74] for example highlighted the following transport needs:

  ► To improve integration and interchange between modes,

  ► To maintain and enhance Greater Nottingham's accessibility to regional, national and international markets (particularly by modes other than the car)

- The Nottinghamshire Community Strategy[75] consists of 5 themes, all of which require effective transport in order to be met. The Local Transport Plan for Greater Nottingham 2006/07-2010/11 highlights how effective transport links fit in with plans for expansion of the town centre, expansion of the Broadway Shopping Centre and public realm improvements. Finally, a new, City Centre Masterplan establishing a clear urban design framework for proposed City Centre development has been published which is reliant on efficient transportation in the city.

- The RES recognises the benefits of improving accessibility within the East Midlands as well as between the East Midlands and other regions. As a result, 'Improving Transport Connectivity and Accessibility' is one of the 10 RES priorities. In addition, transport improvements are linked to other RES priorities including; the 'Establishment of New Markets and Enterprise Opportunities' and 'Increasing Business Survival'. The strategic development of the NET has

[74] Nottingham City Council and Nottinghamshire County Council (2006) *Local Transport Plan for Greater Nottingham 2006/7 – 2010/11*
[75] Nottinghamshire Partnership (2005) *All Together Better: Nottinghamshire Community Strategy 2005 - 2009*

also delivered the aim of sustainable economic growth through ensuring that there is a good quality and supply of development land balanced between competing land uses.

5.6.3 Partnership

- NET Line One was developed by the Arrow Consortium on behalf of Nottingham City Council and Nottinghamshire County Council. The Arrow Consortium designed, built and now operates the tram network with the help of a number of other private partners including; Carillion (civil engineers), Bombardier (rail vehicle builders) and Transdey (integrated public transport deliverers). They work alongside Nottingham City Transport, the largest public transport provider in the city. There has subsequently been an emphasis on partnership working across and within the public and private sectors which has been coordinated by the Greater Nottingham Transport Partnership (GNTP).

5.6.4 Investment

- Funding to build the tram line was also a joint public/private sector aspect of the project. Funding was secured largely through a Private Finance Initiative (PFI) which gained Government accreditation in December 1998. The PFI secured £174m out of the total of £200m needed for the project with the rest funded by the European Community (EU). The Arrow Consortium put forward the initial £180m to construct the network and will be paid back by the Government over a 27 year period.

5.6.5 Economic Impact

The economic impact of NET is set out below.

5.6.5.1 *Documentary Evidence*

NET can be seen to have made a strong contribution to meeting both the land and development and transport and logistics priorities of the RES. NET interchanges have proved to be focuses for varied types of development including hotels, offices and shops, while the ridership levels and patterns demonstrate that residents are using the service to access Nottingham's cultural assets and employment opportunities.

5.6.5.2 *Stakeholder Views*

NET has had a positive impact on reducing congestion by providing residents and businesses with an efficient means of moving around the city. Reductions in congestion have increased the reliability of distribution channels for local businesses and eased access to shopping facilities for residents, therefore increasing the economic activity and competitiveness of local businesses.

Tackling congestion and improving accessibility increases the range of markets that can be exploited and widens the pool of labour available to local businesses. These improvements also benefit local residents who have more employment opportunities and greater access to training and learning facilities. This is not only beneficial to the local economy in monetary terms, but is

important in reducing social exclusion by increasing opportunities, particularly for disadvantaged groups.

The private/public sector partnership was a very effective way of delivering a project of this magnitude because of the high cost, need for professional expertise but also the impact the service would have on the public realm. The financial arrangements highlight particularly good practice, ensuring that the service will fundamentally be publicly owned, but financing the system through a loan so that development was not delayed or hindered by lack of available public funding. The partnership also appears to have been beneficial as the expertise of the private sector were utilised to ensure an efficient system was created, whilst ensuring that public need was addressed through the City Council and GNTP.

5.6.5.3 *Near Neighbour Views*

In contrast to the other East Midlands case studies the respondents did not include any shops and the firm size was markedly higher, with one firm having over 100 employees and only two having less than ten. Five firms had been in business for over six years, with only two having been trading for less than two years.

There were however some mixed messages received from these respondents. The NET was well received, with the fact that the tram did not extend far enough being one of the few disadvantages being identified in investing in the interchange, while positive comments included reduced congestion, there being an alternative to buses and improved connectivity. However while three respondents felt the interchange was 'fairly important' for their business, seven rated it as either 'not very important' or 'not important at all', furthermore six respondents felt that it had 'no impact at all' on land and property values, while five felt it had 'no impact at all' on improving productivity of staff and five reported it having had 'no impact at all' on improving access to market.

However, when considering the broader impact of the investment on its local area the respondents were more positive. Benefits were mostly related to businesses, for example while all respondents felt that the investment would attract visitors to the area, eight felt that it had 'no impact at all' on levels of tourism and four felt that the interchange would have a marked effect (scoring 2 out of 5 for improving access to markets. In terms of business performance, eight of the ten respondents reported that turnover was unchanged since the opening of the interchange.

5.6.6 Lessons Learned

The case study has highlighted the following lessons:

- NET was delivered with the intention of delivering an environmentally sustainable transport system that would meet present economic needs and allow the repositioning of Nottingham in national and international markets.

- NET contributed to a number of strategic ambitions at the national, regional and local levels across the spheres of transport policy, regeneration and sustainable development. This allowed the development of a strong partnership with significant lobbying power.

- The strong policy backing for the project and the strong partnership, which included a strong private sector presence, facilitated the funding of the project through a combination of PFI and EU funds.

5.6.7 Observations

A number of observations can be made in relation to this case study:

- Although regeneration was to the fore in the reasons for building NET, the economic benefits that have accrued can be seen to be more closely associated with network developments than the associated investments in interchanges.

- While difficult to quantify, the ease of movement afforded by NET has however been identified as a significant factor in the inward investment decision taken by Capital One to locate in Nottingham.

- The success of NET has led to its incorporation in further transport schemes, most notably in the case of the Nottingham Station Hub project reviewed in the following section, and can therefore be expected to contribute additional economic benefits as these schemes are completed.

5.7 The Hub / Nottingham Station: Learning from Experience

5.7.1 Introduction

The Hub project involves the redevelopment and restoration of the existing Nottingham Station and surrounding land. The key objectives of the scheme therefore focus on the development of a transport interchange and improvements to passenger and operational facilities. Wider benefits realised from the scheme will include improvements in Nottingham's connectivity to the rail network and development of brownfield land sites adjacent to the train station.

Masterplanners were appointed in 2001, which resulted in a planning application being submitted in April 2006. Obtaining planning permission and completion of an outline business case, including funding applications is programmed to be submitted by April 2008. From 2009 – 2013 a new Hub car park, train concourse and station will built and refurbished, with the NET stopping at the Hub by 2013.

The project has a number of partners, including the Greater Nottingham Partnership, Network Rail, East Midlands Trains, Nottingham City Council, Nottinghamshire County Council, Nottingham Development Enterprise, The Railway Heritage Trust, Nottingham Regeneration Ltd, *emda* and EMRA.

The total project cost is expected to total £60 million. Whilst the funding mix is yet to be confirmed, sources of monies may include the railway industry, regional funding allocations, Local Authorities, *emda*, DCLG / Growth point funding and other public sector bodies. Local Authority funding is yet to be agreed, but expected sources include LTP and S106 agreement contributions.

5.7.2 Economic Impacts

The development mix of the site and the immediate surrounding area is expected to create job outputs. These are estimated to include 2,000 new commercial jobs on the station site, 150 new retail jobs in the station, 7,700 jobs brought forward in adjacent commercial developments and 450 additional jobs in adjacent commercial developments.

The project has also identified other quantifiable economic benefits, including development of 2000m^2 of new retail space and 38,000m^2 mixed use space. The projected land uplift has been estimated at 10 to 15 per cent.

5.7.3 Success Factors and Challenges

The project steering group have identified a number of success factors and challenges. The factors underpinning the success of the project so far have been:

- Securing widespread stakeholder support.
- Partnership working.
- Setting out a clear governance and appointing a project board.
- Giving the local authority a strong client role.

The main challenges to be overcome have been:

- Ensuring Network Rail's involvement.
- Ensuring an appropriate funding mix.
- Gathering together a robust business case.
- Successful lobbying – particularly of the DfT.

5.8 Strategic Conclusions

The strategic conclusions that can be drawn from the East Midlands case studies in respect of the aims of the study are:

- Economic benefits play a key role in building the case to proceed with an investment in transport interchanges. In reviewing the impact of schemes however, a number of factors have

been considered in measuring their success, including impact on meeting transport and social objectives. Our research has shown that investment in transport interchanges have met with more success in meeting strategic objectives, such as rerouting roads, than in delivering economic benefits for small firms located in the vicinity of the transport interchange.

- The East Midlands case studies have shown that schemes investing in transport interchanges are most likely to have marked effects where that investment is related to the delivery of a new network – for example the RHL or NET – than to the upgrading of transport interchanges in isolation.

- Economic impact is considered to be greatest where the transport interchanges are located in city centre locations. The benefits of NET and those projected for the Nottingham Station Hub are far in excess of those realised by schemes delivered in market towns, where benefits are most likely to be felt in terms of social inclusion and accessibility rather than in pure economic terms. Survey results from Market Rasen suggested the new interchange and associated development had very limited impact on economic performance. In Europe, this finding is reflected by the experience of s'Hertogenbosch.

6.0 Stakeholder Views and Investment Opportunities

6.1 Introduction

This section presents an overview of planned and developing projects centred on transport interchanges across the region. It also draws out stakeholder experience of the design and implementation of interchange projects.

6.2 Regeneration Benefits of Transport Interchanges

Consultation found broad agreement that investment in transport interchanges has economic impacts at the local and regional levels. However, the importance and the extent to which economic benefits can be realised through investment in transport interchange was found to be dependant on a number of factors, including: network and service provision (both current and future); the location of interchange; size of site and any adjacent plots of land; and quality of design.

Regarding the importance of location, it was noted that in rural areas initiatives that increase accessibility to transport by investment in services and the network should be prioritised in preference to the interchange itself. For example one respondent identified a lack of investment in the network as being the main inhibitor of economic development in rural areas.

Echoing the findings from the literature review, our consultations found that economic impacts resulting from investment in transport interchange can be seen to fall into two broad categorises of economic benefit:

- Network benefits
- Development related benefits.

6.2.1 Network Benefits

- Network benefits include:
- Encouragement of a modal shift.
- Increasing the connectivity to other markets; local, region or national.
- Increasing accessibility (all modes of transport were noted, including cycling and pedestrian) to employment sites, town centre facilities, including retail and commercial.

6.2.2 Development Related Benefits

Development related benefits include:

- Release of land / brownfield land for commercial, residential, retail use. Some examples included existing transport interchanges acting as a barrier development.
- Job creation.
- Diversification of employment base.
- Catalyst for other private sector developments, including linking the site to a wider masterplan / local development objective.
- Bringing forward economic activity.
- Unlocking development potential of site, by either rationalising existing transport interchange or by relocating it to another site.
- Future proofing locations for capacity required by the city. For example, a number of stakeholders noted that transport interchanges and network improvements could have a role to play in meeting the new national housing policy objectives.
- Improvement of image.

6.3 Forthcoming Transport Developments

A wide range of transport interchange projects are planned for the East Midlands. This section draws on the policy review and consultations to provide an overview of forthcoming projects involving transport and transport interchanges. The projects are presented according to which type of organisation has identified the projects.

6.3.1 Regional Transport Investment Priorities

There is a significant level of investment planned for the coming years in the region, the draft East Midlands Regional Plan[76] identifies the following transport investment priorities:

- Corby Railway Station: new interchange
- Derby Railway Station: master plan
- Nottingham Railway Station: masterplan
- Leicester Railway Station: masterplan
- East Midlands Parkway
- Colwick Inland Port: feasibility study

[76] East Midlands Regional Assembly (2007) *Draft Regional Plan Part 1: Regional Strategy*

- Ilkeston Station: new station
- Loughborough Town Centre: bus and rail improvements
- Mansfield Bus Station
- Lincoln Railway Station
- Skegness Railway Station
- In addition to the schemes identified above, it is understood that that service are due to commence on the second phase of NET from 2012.

6.3.2 Key SSP Transport Investment Priorities

The majority of the priorities included in SSPs' plans are concerned with increasing employment and skills levels, stimulating productivity and ensuring communities are sustainable. Transport is usually mentioned as a method of removing barriers to work and education by providing more accessibility to those in rural or deprived areas and is also identified as a way of enhancing urban centres by providing greater access to services and facilities.

The transport priorities of the SSPs are considered in turn below.

Alliance SSP key transport investment priorities
Enhancing Sheffield to Manchester road connections.
Improvements to Midland Mainline.
Extension of the Sheffield tram network into Derbyshire.
Better road and rail links from Robin Hood Airport.

Greater Nottingham Partnership key transport investment priorities
Assisting with the implementation of the 2nd Greater Nottingham LTP.
Supporting the implementation of Nottingham Station Masterplan.
Developing Nottingham Express Transit phase 2.
Encouraging increased public transport usage.
Encouraging modal shift by promoting health benefits.
Promoting cycling and walking.

Leicester Shire Economic Partnership key transport investment priorities
Promoting accessibility in rural areas.

Northamptonshire Partnership key transport investment priorities
Ensure all key centres offer an appropriate range of services and amenities conductive to maximising quality of life and quality of business.
Improve access to physical, social and cultural infrastructure for all.
Support communities and businesses in rural areas.
Support the development of appropriate infrastructure to enhance the position of Northampton town as a key national and international centre, for the economic benefit of the entire county.

Lincolnshire Enterprise key transport investment priorities
Whilst there are no specific transport investment priorities mentioned, transport infrastructure is a key strand in the Lincoln Urban Action Plan. One key action is to increase access to the Eastern side of the city and ease traffic flows through the city centre.
As part of its Rural Development objective, Lincolnshire Enterprise funds a delegated fund for Lincolnshire Rural Transport Partnerships to make capital grants to address problems faced by people without access to transport.

Welland SSP key transport investment priorities
Delivery of a rural transport programme, working in partnership with local community groups and local authorities.

DDEP key transport investment priorities
Reduce barriers to accessing employment opportunities.
Supporting transport solutions to attract new businesses.
Activities include Wheels to Work, developing RTP framework for the sub-region, increasing access to work in South Derbyshire, supporting the development of Nottingham East Midlands Airport and A38/50 growth zones.

6.3.3 Main URC Transport Projects

This final section presents the transport objectives for each of the region's URCs.

Derby CityScape Main transport projects	
Station Links	Improve links to and from Derby Station for pedestrians, cyclists and public transport. Also improve the arrival area in order to create a vibrant transport exchange.
Pedestrians and cyclists	Creation of a dedicated route from station to city centre.
Improving public transport	A modern, high quality public transport system will be developed to increase connectivity around the city. In the future there is potential to introduce more innovative transport solutions to link the station and city centre, for example a TDI minitram or ULTra system.
Traffic Management and highway modifications	The key aims of the transport proposals are to improve access to the central area and reducing the impact of through traffic.

Leicester Regeneration Company key transport projects	
Remodelling of Leicester Railway station and development of a New Business Quarter (NBQ).	Including a new public space and 50,000 m^2 of new office space, providing direct pedestrian access to retail and cultural centres. A new transport interchange will complement on site parking provision.
Reconnecting with the waterside	Downgrading a section of the ring road in order to assemble a corridor site for mixed development, connecting the riverside to the city centre.

NNDC key transport projects	
Establishment of Corby railway station and transport exchange	Increase connectivity between Corby and the rest of the country. It is hoped that the station will open in 2011.
Wellingborough urban bus enhancements	New buses and services will revive bus services and provide potential for growth. This will support the planned growth in population.
Traffic Management and highway modifications	A number of projects designed to relieve congestion, improve accessibility and cope with expected population growth.

In addition to the URCs, there are two established Regeneration Vehicles in the region, Nottingham Regeneration and West Northamptonshire Development Corporation. Where these Regeneration Vehicles consider transport interchanges, for example the Nottingham Station Hub, it is to restate priorities covered elsewhere in this research.

6.4 Public and Private Sector Roles

Our consultations showed that in nearly all cases, transport interchange projects, either past, current or planned for future are part of a wider scheme or development plan. The role of private and public partners is therefore partly dependent on the aims, objectives and constraints of each scheme. The role of the private sector extends beyond developers to network and local transport providers.

Consultees noted that key roles of the public sector include, provision of funding (particularly where there is market failure), land ownership, land assembly, provision of a strategic overview, lobbying, liaison and working with the private sector (developer and network providers) and providing links with other public agencies / interested parties (including politicians and ministers).

Private sector bodies have a major role to play in shaping the delivery of schemes, including, providing development land and investment (including monies from s106 agreements). Network Rail, the Strategic Rail Authority and other local transport providers have been shown to influence the network capacity and service provision, and in some cases have contributed to investing in capital monies for transport interchange investment.

Understanding the statutory duties and how Network Rail and train operating companies operate was also recognised as key to fully realising the economic impact of investment in transport interchanges. Some consultees noted there was a clear gap in the statutory requirements of the network providers and what investment is clearly needed to meet the future demands placed on transport interchanges.

Consultees noted that inhibitors to realising the economic impact of investments in transport interchanges included the ability of the public sector to influence network and service providers. In some interviews Network Rail were named as key partners in ensuring that investment in transport interchange benefits were realised. A clear role of the public sector was identified in providing a way in which strategic partnerships between network providers could be facilitated. Derby Railway Station Partnership was discussed as an example of a strategic partnership approach which includes partners, such as Network Rail, East Midlands Trains, City Council, Derby Cityscape and Marketing Derby, the Nottingham Hub follows a similar model. An example of where the public sector is able to influence transport provision is through the re-franchising of rail operators' contracts.

On a related point, our consultations showed that that political pressure by local Councillors and Ministers has proven to be effective mechanism for finding a way forward with DfT and the Strategic Rail Authority.

6.4.1 Expectations of *emda*'s Role

The key themes evident from the research on the role of *emda* are listed below. These roles, in the majority of cases were consistent across different types of transport interchange:

- Where there is no market failure and the new transport interchange is being funded by a private sector partners, *emda* should ensure wider regeneration catalyst impacts are considered.

- *emda* should also continue to assist with the lobbying of the network providers, this was particularly in reference to the rail industry.

- Although local authorities are often well placed to lead partnerships, *emda* can also be effective as the partnership coordinator, particularly where there is a strong influence from national policy.

- *emda* should continue to provide expertise and funding for masterplanning and feasibility studies. Importantly they also have an advisory role and in sharing and distilling good practice from across the East Midlands and beyond.

- *emda* should continue to consider funding the upgrading of station facilities where these would not otherwise occur as part of a transport interchange development project, where such funding will help realise RES objectives, drawing out and supporting wider economic benefits.

6.5 Strategic Conclusions

The strategic conclusions that can be drawn from this chapter in respect of the aims of the study are:

- Echoing the findings from the literature review, our consultations found that economic impacts resulting from investment in transport interchange can be seen to fall into two broad categorises of economic benefit: network benefits and development related benefits.

- *emda*'s contribution to transport interchange projects is welcomed by both public and private sector partners. In addition to continuing to fund feasibility studies, masterplans and station improvements, identified roles for *emda* include: ensuring that the wider economic benefits of transport interchange projects are addressed in project appraisal and maximised; and lobbying strategic partners.

- There is a clear role for the private sector in ensuring the successful delivery of transport interchange projects. Any project hoping to achieve network improvements will require the cooperation of the operating companies. More generally, experience across the East Midlands has shown s106 Agreements to be powerful tools for securing private sector investment in transport interchanges.

- The Nottingham Station Hub project reinforces these conclusions, highlighting how a strong partnership structure, fully supported by the private sector can facilitate the realisation of projected benefits, and demonstrating an important role for the public sector, not only in securing funding, but also in assuming a client role and ensuring that broader strategic objectives can be realised through the project.

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7.0 Implementation Framework

7.1 Introduction

Taking the previous chapters of the report into account, this final chapter brings the results of the research together. It sets out an overview of the rationale for investment in transport interchanges and provides an implementation framework to guide decision making by *emda* and its public and private sector partners in respect of opportunities for investment in transport interchange projects. The intention is that the implementation framework can be used by all partners across the region to provide consistency and to assist in the development, delivery, monitoring and evaluation of transport interchange project interventions. The implementation framework adopts the following format.

- Defining transport interchanges.
- Typology of transport interchanges.
- Rationale for public sector investment.
- Economic benefit of investment in transport interchanges.
- Economic impact and a theory of change.
- Meeting the priorities of the RES.
- Outputs and outcomes.
- Partner roles.
- Project prioritisation and selection criteria.
- Role of *emda.*

7.2 Defining Transport Interchanges

People interchange when there is no direct, convenient through service or route for the journey they wish to make; or if interchanging offers the superior speed, comfort or convenience of a particular mode of transport for part of the journey. Interchanges are therefore both an inconvenience inflicted on passengers, and an opportunity which passengers willingly use in order to reduce their travel costs/ times.

In a network comprising different modes of transport interchanges provide the opportunity to move between modes. There is usually a hierarchy between the modes ranging from intercity rail travel

– offering fast services with few stops and therefore operating at some distance from many destinations – to local bus services offering a finely grained pattern of stops at a reduced speed. Private modes of transport are included in the network where passengers for example ride bicycles or drive cars from their homes to railway station serving to increase the zone of influence of a station or stop.

Interchange does not however have to take place at purpose built facilities, such as train or bus stations, but can also take place at informal interchanges, for example where two bus stops are close to each other on the street.

Bearing in mind these considerations and drawing on the Warwickshire Local Transport Plan we recommend the following definition of a transport interchange for use when assessing projects:

"…the process by which passengers move or connect within one mode of public transport or between one mode and another public or private transport mode. This includes both the act of joining and leaving the public transport network…"

Transport Interchanges are therefore, the *physical spaces* where such passenger interchanges occur. The forms they may take are elaborated in the following section.

7.3 Typology of Transport Interchanges

It is acknowledged that within the definition adopted above there is a typology of transport interchanges, and that the type of interchange under consideration may well have a marked influence on the regeneration benefits that can be expected to accrue from investment. The table below illustrates the key variables in defining different types of transport interchange.

Table 7.1 Key Variables in Developing a Typology of Transport Interchanges

Settlement Type	Primary Urban Areas Secondary Urban Areas Other Urban Rural 80 Rural 50 Other Rural
Number (and type) of transport modes	Variables include: Rail Light rail Taxi Bus Coach Bicycling Private car Walking Waterways Air
Convenience	Distance between modes Degree of integration Location within settlement
Destinations Served	International National Regional Local

The various forms transport interchanges can take frustrates attempts to develop an all-inclusive typology. However, the main considerations are the number of modes represented; the range of

destinations served and proximity to major urban centres. In adopting an approach based on prioritising these considerations, the following broad typology can be discerned.

National Urban Hubs: Multiple modes, serving national (with access to international), sub-regional and local services. Located exclusively in city centres, they are often serving destinations as well as providing options for interchange and make a significant contribution to the public realm. Examples from this research include: Nottingham Station, Sheffield Station, s'Hertogenbosch Station.

Regional Urban Hubs: Multiple modes, serving predominantly regional routes but with limited access to national networks. Located in town or large suburban centres they function as local hubs distributing passengers to local networks. Areas around stations service local markets. Examples from this research include: Mansfield Town Station.

Sub-regional / Local Interchanges: Limited modes represented, serving local needs. Provides connection to regional networks. Passengers are drawn from the local area, serving regular transport needs. Examples from this research include: Market Rasen Bus Station, Matlock Bus Station.

Parkway Interchanges: Display similar characteristics to Regional Urban Hubs but are located outside of main urban areas. Examples from this research include: Liverpool South Parkway Station.

7.4 Rationale for Public Sector Investment

7.4.1 Market Failure

Market failure occurs where the market produces an allocation of resources that does not achieve economic efficiency. Market failure is likely to occur in the presence of monopoly, public goods, externalities and common property resources.

7.4.1.1 *Public Goods*

Public goods are goods and services that cannot be supplied to one member of society without offering them to all members. Classic examples include street lighting and the provision of a police service. A further property of a public good is that consumption of it by one individual does not reduce the amount available for others. This lack of excludability means that the private sector is unlikely to service any demand for public goods.

In some cases transport interchanges demonstrate the characteristic of a public good. Consumers cannot easily be excluded from station areas – and indeed may be encouraged to use the area around as a public space and so are unlikely to be willing to pay in order to use them. With no financial return being provided through the price mechanism, private sector operators have little incentive to invest in the public realm aspects of transport interchanges. As with other public goods, intervention by the public sector is therefore justified in order to ensure the more effective

supply of publicly accessible space within cities and towns. The concept of a transport interchange as part of the public realm provides a strong theoretical rationale for investment and provision by the public sector.

7.4.1.2 *Externalities*

Externalities occur when the costs or benefits, from a particular good or service, to society as a whole, are not adequately reflected in the market price for that good or service. The built environment is characterised by both negative and positive externalities arising from relationships between consumers, between producers and between consumers and producers. Negative externalities arise because of the detrimental impact on society of certain actions by others, and positive externalities arise in situations where society benefits from the actions of such third parties.

Externalities are not reflected through the pricing mechanism and therefore exhibit the characteristic of non pricing. In addition, as externalities have implications for others over and above the direct users of a good or service they are also characterised by interdependency. It is for this latter reason that externalities are often referred to as 'spill over costs' in the case of negative externalities, and 'spill over benefits' in the case of positive externalities, as interdependency implies that other people are affected by the actions of others.

In summary, externalities arise because there are a number of instances when consumers and producers take decisions in the light of their own (internal) costs and benefits that will produce an impact on the welfare or output of others in ways that are not reflected in the prices facing those consumers or producers. Under this scenario intervention by the public sector is justified to address the issue of externalities as there is a risk that that the market system may create too many instances of negative externalities, and would encourage too little activity that promoted the existence of positive externalities.

In the case of transport interchanges the externalities are related to the number of people present that may otherwise not be there, for example presenting commercial opportunities for shops on concourses and increasing the footfall past other local concerns and widening the labour market from which firms can draw, potentially improving job matching and conversely the absence of those people from the places may previously have been.

7.4.2 Opportunity

As shown by this research, investment in transport interchanges can deliver economic benefits. However, such investment is likely to be primarily driven by strategic objectives rather than securing economic benefits, examples of which might include providing an enhanced network through new infrastructure or more frequent services, reducing road congestion, or delivering modal shifts.

Where the private sector or other state actors are developing a transport interchange there may be opportunities for further investment to enhance their economic impact, particularly where schemes

are of large scale. Investment in transport interchanges can facilitate the development of land adjacent to the site, particularly where Network Rail have land holdings extending beyond a railway site and an opportunity for development exists, for example, investment proposals for the Nottingham Station Hub are expected to develop the city's business quarter.

Furthermore, as shown in the case of Market Rasen Bus Station and Matlock Bus Station, other types of development – supermarkets in both of these cases – can be used to deliver transport interchanges through the use of the planning system, and s106 agreements in particular.

Examples of opportunities presented by transport interchange projects include:

- Land parcelling to widen the impact of the proposed scheme.
- Providing additionality to network improvements by enhancing the public realm within and beyond the transport interchange.
- Using the development to undertake wider masterplanning of the area around the transport interchange.
- Maximising private sector contributions through the drafting of s.106 agreements to benefit local transport infrastructure.

7.4.3 Tackling Barriers to Development

Finally, the public sector has a role in overcoming barriers to development. These can derive both from the factors considered above and from specific local conditions. Public sector actors can be well placed to overcome:

- Policy fragmentation across a range of scales and delivering consensus.
- The provision or and securing of funding.
- Organisational capacity constraints, particularly in the case of complex schemes with multiple objectives.
- Fragmented land holding - parcelling land to accelerate development.

7.5 Economic Benefit of Investment in Transport Interchanges

At all levels of policy, transport and transport interchanges are widely considered to play an important role in regeneration and economic development, both by lowering costs, through reduced congestion and journey times and by improving connectivity between places, supporting the development of cities as drivers of economic growth. The Eddington Report positions the transport network as "...*the lifeblood of domestic and international trade...".*

The rationale for public sector investment in transport interchanges set out in the previous section is important, but does not fully define and scope the economic benefits and impact that investment in transport interchanges can deliver for sub national economies. However, the findings of this study offer a cautious acknowledgement that economic benefits can and do arise from investment in transport interchanges.

The literature review concludes that:

- While there is consensus that transport plays a central role in economic development there is no accepted methodology to measure the economic benefits that accrue from investment in transport, while Eddington (2006) highlighted that investment in transport in a mature economy is likely to yield only incremental economic growth, however it is not clear how this national level study applies to regional or local economies.

- Although a key contributor to regeneration, transport investment alone is insufficient, and must be combined with other pre-existing conditions, such as the presence of a suitably skilled labour force or favourable business environment, to realise maximum benefit.

- The effect of interchanges on transport use is not clear cut. While transport interchanges provide a central, easily accessible hub and therefore can be seen to both improve accessibility and facilitate an efficient network. Introducing an additional interchange on specific routes, regardless of impact on journey time, can have a marked effect on travel demand.

- The mix of modes at interchanges can be of great importance. In the UK, efforts have recently been made to encourage car drivers to use public transport for at least part of their journeys, accordingly, large car parks are being included in the design of interchanges.

- Transport interchanges can be expected to work most effectively where as well as sharing physical space, different transport modes cooperate on ticketing strategies, with travelcard type tickets having been identified as being particularly important in promoting light rail services.

- Potential regeneration benefits fall into two categories: (1) benefits derived from improving the capacity and efficiency of the network; and (2) benefits derived from improving the appearance and function of transport interchanges.

  ► Benefits from the first category include measurable benefits, for example, contributing to reduced congestion and reducing journey times. It could also include enabling benefits such as addressing social exclusion by providing links to previously isolated communities which have a cascade effect through integrating previously severed communities into the wider national transport network.

  ► Where the focus is on improving the function and appearance of transport interchanges benefits are enabling, focusing on enhancing environmental quality, improving the image presented by the region's transport interchanges.

- Additional development opportunities, for example bringing adjacent or nearby sites into use, can be realised by schemes of both types leading to quantifiable economic benefits such as area of brownfield land reclaimed or new office and commercial developments.

The international and national case studies provide evidence of positive economic benefits that have arisen from investment in transport interchanges, particularly where they fall into the National Urban Hub and Parkway types, or where they have involved the delivery of new network as in the case of Mansfield Station and the JLE. They have shown that transport interchanges can have a significant impact in terms of delivering substantial community benefits, including modal shifts, increased travel to work areas and enhancing the sustainability of local services and businesses.

- Regeneration investment at transport interchanges can have marked economic benefits. The case of Sheffield Station highlights that transport interchange redevelopment can facilitate the development of employment uses on adjacent land in addition to improving the experience of travellers.

- While the case studies offer broad support for the hypothesis that interventions targeted at transport interchanges contributes to regeneration and growth agendas, the evidence presented in this chapter is stronger with regard to supporting growth agendas. This has been demonstrated in the case of the JLE by the levels of land uplift and the growth in the number and quality of jobs now available in the JLE corridor. The Breda HSR case highlights the confidence of the public sector in the Netherlands to invest at a range of scales in transport interchanges which can act as a catalyst for further regeneration.

- Accordingly, particular consideration needs to be given to the social implications of regeneration at transport interchanges. In the case of the JLE, the associated uplift of land values has seen some community and business constituencies effectively priced out. At the same time there is evidence of a skills mismatch with the pattern of labour demand proving to be better suited to the skills of those arriving via the transport interchange than those of existing local residents.

- The case of ‘s-Hertogenbosch shows that the design of each element of the redevelopment of a station area should be considered against all three strategies of acceleration, concentration and enhancement to increase the product of time spent and value of time during the door-to-door journey.

- The cases of s'Hertogenbosch and Sheffield both highlight the benefits to the public realm and sense of place resulting from a large scale redevelopment of a centrally located transport interchange, providing evidence that regeneration investment without network improvement can nevertheless deliver economic benefits.

- The number of modes of transport meeting at an interchange need not limit the regeneration effects. The JLE case has led to marked regeneration benefits at the same time as drawing criticism for not adequately meeting the requirements of cyclists.

The strategic conclusions that can be drawn from the East Midlands case studies in respect of the aims of the study are:

- Economic benefits play a key role in building the case to proceed with an investment in transport interchanges. In reviewing the impact of schemes however, a number of factors have been considered in measuring their success, including impact on meeting transport and social objectives. Our research has shown that investment in transport interchanges have met with more success in meeting strategic objectives, such as rerouting roads, as compared to say, delivering economic benefits for small firms located in the vicinity of the transport interchange.

- Echoing Eddington, this research shows that economic impact is greatest where the transport interchanges are located in city centre locations. The benefits of NET and those projected for the Nottingham Station Hub are far in excess of those realised by schemes delivered in market towns, where benefits are most likely to be felt in other policy areas.

- The East Midlands case studies have shown that schemes investing in transport interchanges are most likely to have marked effects where that investment is related to the delivery of a new network – for example the Robin Hood Line (RHL) or NET – than to the upgrading of transport interchanges in isolation.

7.5.1 Summary

The analysis presented in this section suggests that economic benefits arising from investment in transport interchanges can be expected to fall into the following categories:

- Construction benefits: temporary economic benefits experienced during the construction phase, including jobs in the construction sector.

- Very local impacts: shops and services within or immediately adjacent to the interchange will provide employment opportunities and attract consumer spending.

- Spin-off impact: sites close to the transport interchange can be made available for development either as part of a wider scheme or through the catalytic effects

- Connectivity – access to markets: where investment in transport interchange involves either network improvements or increased frequency, suppliers located near to transport interchanges may be able to reach suppliers or customers who would previously been more easily served by companies in other locations.

- Connectivity – access to labour markets: again where transport interchange projects include network improvements this can lead to better job matching as more households fall within reasonable travel to work isochrones for employers located near the interchange.

- Connectivity – accessible to tourists: similarly, where investment in transport interchanges is accompanied by network improvements or reduced journey times additional visitors may be attracted for day trips or longer visits.

- Productivity – reduced journey time: if the investment in the transport interchange includes measures to reduce journey times then less time during the working day will be spent travelling. If a higher proportion of journeys are then taken by public transport, the resulting lower levels of congestion will further add to the effect of this category of benefit.

- Image and place making – where investment in transport interchanges involves redevelopment it can contribute to improved urban design, creating an improved image for the wider town or city and more locally provide an environment likely to encourage passengers and other pedestrians to spend time in the vicinity of the transport interchange.

These benefits are likely to be most felt where the transport interchange is of the National Urban Hub type defined above. This is due to the functions of town and city centres as drivers of the economy making them destinations for large numbers of people. Where stations are located outside of large urban centres the research suggests that although investments have met their strategic objectives the economic impacts have been more localised and of less magnitude.

7.6 Economic Impact and a Theory of Change

Research undertaken for this report suggests that the clearest case for economic benefits arising from investment in transport interchanges are to be found within the national urban hub type examples, although marked benefits may also be achieved within the parkway type where new networks are delivered at the same time.

We have used a 'theory of change' model to demonstrate the economic benefits of regeneration investment in transport interchanges. A theory of change model involves the specification of an explicit theory on how and why an intervention might cause an effect. The theory of change model suggests that economic benefit flows translate into further expenditure flows and investment flows by both producers and consumers which in themselves generate the potential for further positive impacts.

The model adds value to the implementation framework by outlining how and why economic benefit streams occur and how they translate into economic outputs (for example job creation, business creation, investment leverage and brown field land reclaimed) and economic impacts (such as improvements in employment rates and GVA). Figure 7.1 presents the 'theory of change' model.

Figure 7.1 Investment in Transport Interchanges Logic Model

7.7 Meeting the Priorities of the Regional Economic Strategy

The RES defines the vision *"...that by 2020, the East Midlands will be a flourishing region - with growing and innovative businesses, skilled people in good quality jobs, participating in healthy, inclusive communities and living in thriving and attractive places..."* The vision is underpinned by three structural themes:

- Raising Productivity: enabling people and businesses to be more competitive and innovative.
- Ensuring Sustainability: investing in and protecting our natural resources, environment and other assets such as infrastructure.
- Achieving Equality: helping all people to realise their full potential and work effectively together to enrich their lives and communities.

The role of transport and connectivity is recognised in the RES as having an important role in raising productivity. Accordingly, *emda* endorses targeting and prioritising investment to improve accessibility, tackle travel demand and to reduce congestion and minimise harmful environmental impacts.

The strategic priority Transport and Logistics aims "…*to improve the quality of regional infrastructure to enable better connectivity within and outside the region*…", while the priority action Improve Transport Connectivity and Accessibility prioritises long term investment that will "… *maximise the contribution of the region's transport infrastructure and services make to the delivery of the RES objectives*…", and identifies the following actions to be promoted by partners through the RSS, RTS, LTPs and Development Frameworks:

- Improve inter and intra-regional connectivity by strengthening links between the region's main urban centres, improving reliability on key routes for passengers and freight and address poor connectivity or capacity to key centres in other regions, including London, Leeds, Birmingham and Manchester.
- Improve international accessibility by improving surface access to East Midlands Airport and other airports serving the region and strengthening connectivity to mainland Europe by a range of modes, including rail via London.
- Support regional regeneration and growth by improving access from all communities to employment and maximising the impacts of economic drivers and growth areas, unlocking investment sites in disadvantaged communities and addressing inequality by improving accessibility;
- Contribute to environmental, quality of life, and wellbeing indicators by implementing demand management measures, and access to recreation, sport and culture facilities.

The Land and Development Strategic Priority aims *"…to ensure that the quality and supply of developed land, and balance between competing land uses, contributes towards sustainable growth of the regional economy..."*, while the priority action Development of Land and Property seeks to *"…develop land, property and facilities which maximise opportunities for collaborative innovation activities and inward investment by providing quality sites and buildings which support enterprise development…"*, particularly where proposed developments are linked to RES priority sectors; maximise clustering benefits; improve links between academic institutions and business; are supported by the work of Innovation East Midlands and Blueprint[77]; and encourage sustainable building design.

Reflecting the policy drivers and literature review, the regional case studies offer support to the conclusions in the literature review that investment in transport interchanges can lead to the realisation of economic benefits. While investment in transport interchanges can make a marked cross-cutting contribution to the realisation of all the RES strategic priorities, the case studies illustrate that such investment can be seen mostly tightly aligned with the strategic priorities for Land and Development and particularly Transport and Logistics. The following table assesses the contribution made by regional case studies to these two key strategic priorities.

Table 7.2 Addressing the Priorities of the Regional Economic Strategy

	Contribution to Transport and Logistics	Contribution to Land and Development
Mansfield Train Station	**Strong contribution**, being located in a comparatively densely populated area the interchange experiences sufficient demand that has continued to increase since opening.	**Strong contribution**, offices are currently being developed between the railway station and the planned bus station. At both Sutton Parkway and Shirebrook the Robin Hood line has enabled inward industrial investment
Market Rasen Coach Stop	**Moderate contribution**, the provision of the coach station allows tourist coaches to park in the town and make use of the town centre facilities. Furthermore, the position of the coach station at the edge of the town provides services to the adjacent rural settlements. However, the distance between the coach	**Minor contribution**, the coach station was developed as part of a s106 agreement attached to the development of the supermarket that houses the coach station facilities, including toilets and a cafe. Other developments include a new police and fire stations. The increased tourist footfall has contributed to stronger

[77] Blueprint is a Property Regeneration Partnership set up to deliver new solutions for physical regeneration in the East Midlands. The Partnership comprises *emda* (25 per cent), English Partnerships (25 per cent) and Morley Fund Management's Igloo Regeneration Fund (50 per cent). Investment, ownership, risk and profit are shared equally between public and private sector.

	Contribution to Transport and Logistics	Contribution to Land and Development
	station and the town centre, where the railway station is located, reduces the new development's impact on delivering integrated transport. New signs for tourists directing them to the town centre offset this issue and it is reported that visitor numbers are increasing.	demand for retail units in the town centre.
Matlock Bus Station	**Moderate contribution**, service providers have responded unevenly to the new interchange with the result that there are now two bus stations serving the town and the rerouting of the services has meant that some areas now have reduced services. The development included new pedestrian areas, a one way system and a relief road. The new bus station is located close to Matlock Railway Station and a new car park, easing interchange between the modes.	**Strong contribution**, the new bus station was developed in part due to a s106 agreement attached to a new supermarket development. Following the granting of planning permission there have been further applications on adjacent land for 400 homes at the Matlock Spa development, a new community building and new employment space.
Nottingham Express Transit, West Nottingham:	**Strong contribution**, NET offers fast and reliable access to the city centre to enable residents at the edges of the city to more readily access its cultural assets and employment opportunities, and providing easier access to the transport interchanges of the city centre with their regional and national connections. At West Nottingham the interchange serves a business park whose tenants have reported marked modal shifts in their staff's travel to work and a change in the areas from which they recruit.	**Strong contribution**, across the network NET interchanges have stimulated hotel, retail and office development as access to other part of the city and wider transport links is facilitated. The provision of NET has been a key factor in the office development of Capital One.

This analysis highlights that across the full typology, investment in transport interchanges can make a contribution to meeting RES objectives, particularly in relation to transport and logistics. In the case of land and development the benefits are more dependent on provision of network improvements as part of the investment in transport interchanges.

7.8 Transport Interchange Outputs and Outcomes

This section lists the outputs and outcomes that can be expected to be realised drawing on evidence from across all stages of the research. Where network improvements are delivered, investment in transport interchanges increases the market area that can be efficiently served by local companies. Investments in transport interchanges can be expected to realise the core RDA outputs presented below. Taken together these changes can be expected to make a contribution to raising the region's competitiveness, employment rate and sustainability.

- Reclaimed or redeveloped brownfield land: particularly where Network Rail has released land holdings close to stations for redevelopment, or where new or improvement access to brownfield sites is delivered through the development process.

- Business creation: through both increased footfall and the provision of new business premises, ranging from small kiosks offering retail services to travellers to the larger sites developed close to NET stations or to office developments close to city centre station developments, such as Capital One in Nottingham.

- Employment creation: both in the construction phase and subsequently most often in retail and office based developments. Similar to business creation above new jobs can be driven by units for micro business or headquarter type developments.

In addition, schemes may provide:

- Office and commercial floorspace

- New public spaces

- Additional public and private investment

- Increased passenger numbers

The outputs can be expected to lead to the economic benefit identified in section 7.5 above. In turn these benefit streams can lead to:

- Reduced congestion.

- Wider markets for local firms to serve.

- Wide travel to work areas for local firms to draw on, improving job matching.

- Increased consumer spending driven by new retail outlets.

- A contribution to place making and local image enhancement, including the raising of national profile.

- Spillovers.

These in turn can address the core RDA outputs of:

- Job creation.
- Business creation.
- Securing private and public investment.
- Redeveloping brownfield land.

In addition to improving the investment climate through:

- Enabling a change in how the settlement is perceived by visitors
- Enabling a change in how the settlement is perceived by residents, adding to civic pride and making residents ambassadors for their home town when travelling.

7.9 Roles of Partners

Our consultations with strategic and project partners have provided an overview of:

- The roles that must be fulfilled in successful partnerships in delivering schemes involving transport interchanges
- The roles specific partners can contribute to regeneration at transport interchanges.

7.9.1 Necessary Project Roles

There are a number of roles that must be filled in order to deliver a successful transport interchange project:

- Credible champion (either an individual or an organisation)
- Identify what needs to be done (prioritise)
- Identify who is best placed to do what
- Recognise that roles change over time
- Strong lobbyist
- Trusted deliverer
- Ensuring engagement of private sector

- Roles Specific Partners Can Play

Having identified the roles that need to be filled, this section highlights which organisations might be best considered for each role and provides an indication the broader contribution they can be expected to make in realising the project's regeneration aims.

Table 7.3 Partner Contributions to Regeneration at Transport Interchanges

Partner	Role in Partnership	Regulatory and Statutory Obligations
Emda	Strong lobbyist, credible champion, trusted deliverer, EU funding, capital funding Funding provider: feasibility study, masterplan	Strategic driver of sustainable economic development, work in partnership with public, private and voluntary organisations to deliver the goals of the Regional Economic Strategy,
Department for Transport	Capital spending, NATA (New Approach to Appraisal)	Appraise and inform the prioritisation of transport investment proposals.
Network Rail	Land holdings, major investment in infrastructure, including station, GRIP, funder	Provision of a safe, reliable and efficient rail infrastructure.
Highways Agency	Modelling, maintenance of strategic routes, NATA	Operating, maintaining and improving the strategic road network
Regional Planning Body / Regional Assembly	Regulation, regional planning framework. (including the Regional Transport Strategy)	Regional Spatial Strategy
Local Authorities	Credible champion, trusted deliverer, providing local leadership and playing a leading role in partnership development. Regulatory control (including s106 agreements), capital funding (including Community Infrastructure Fund). Land and community assets Funder	Regulation, including development planning, leadership of economic development and neighbourhood renewal. Drafting of s.106 agreements.
Local Transport Authorities	Local Transport Plan Funding, access to DfT Innovation Fund, funding social need routes, liaison with operators	Encourage high quality planning and effective delivery of local transport, provision of a basis for monitoring local performance.
Sub-regional Strategic Partnerships	Strategic alignment, funding of feasibility studies	Ensure the Regional Economic Strategy is delivered in local communities throughout the East Midlands.
Local Area Agreements	Provides structure and strategic alignment, including the alignment of funding at the local level.	Describes how local priorities will be met by delivering local solutions, helps local areas contribute to national priorities
URCs and local delivery vehicles	Focus on facilitating the delivery of key projects. Leveraging of support from	Produce business plans for the delivery of key projects.

Partner	Role in Partnership	Regulatory and Statutory Obligations
	partners to ensure projects meet their potential	Masterplanning.
English Partnerships	Bring substantial land holdings and early stage funding in addition to experience and expertise in regeneration of all types of sites.	The national regeneration agency is charged with supporting high quality sustainable growth in England. Ensuring Government land is used to support wider Government objectives.
Private sector – operators	Provision of networks / running services / using interchanges Private investment	Rail franchise obligations.
Private sector – others	Developing reclaimed brownfield land, occupation of retail units / office space. Private investment	Compliance with s.106 and other planning obligations.

7.10 Project Prioritisation and Selection Criteria

In this section we present our recommended project prioritisation and selection criteria. These should be taken into account by *emda* and partners in deciding whether to make an investment in particular transport interchange projects. The decision making criteria set out below are drawn from the evidence gathered throughout the research.

Table 7.4 Decision Making Criteria

Criteria	Justification	Evidence
Strategic fit and programme context	The project should demonstrate alignment with relevant strategies to contribute to regional aims.	Identification of relevant strategies and programmes, appreciation of the 'bigger picture' across the EU, national, regional and local levels.
Clarity of business case	The rationale for the project must set out the need for intervention and what that intervention will enable.	Clear rationale, SMART Objectives, Clarity of outputs and outcomes.
Multi-modality	Interchanges can be expected to have greater impact where more modes are represented.	Review of project specifications. Relative to modes expected to be impacted upon and clear articulation of regulatory / statutory implications.
Other opportunities	Greater benefits will accrue if investment in the interchange can be expected to enable development, for example the release of additional land, delivery against a masterplan, attraction of a key investor.	Could be identified through market assessments or feasibility studies.
Network Improvement	Greater benefits can be expected	Full involvement of providers in

Criteria	Justification	Evidence
	to accrue where investment in the interchange is accompanied by network improvements.	partnerships and all aspects of project.
Strong leadership	A strong leader will have the capability to drive the project forward and act as champion – thereby enthusing other stakeholders / partners.	Identification of the right partner: enthusiastic, knowledgeable, persuasive and well connected
Buy in and support	Committed partnership members will increase the chances of meeting milestones securing a successful outcome.	Commitment to use resources to deliver against the aims of the partnership. Memorandum of Understanding or Terms of Reference agreed.
Robust partnership and governance structure	An established partnership – including the key players – will ensure a joined up approach and increase the chances of success.	Setting and agreement of key milestones. Understanding the regulatory framework within which partners work.
Competence	To ensure that project aims and objectives have the best chance of being realised and that all required skills are present in the partnership	A skills audit of the experiences of partnership members and any other partners brought in should be undertaken.
Planning and milestones	To demonstrate the staging of the process and to ensure partners are clear where the greatest demands are to be made on their time and resources. To facilitate evaluation.	An agreed project timetable with measurable milestones.
Impact of the project	Capturing evidence. There should be a clear view on the impact of the project – and the case for funding - so that the benefits accruing can be identified.	Project preparation should include economic impact studies to demonstrate the likely benefits. A full evaluation process throughout the project should be undertaken.
Impact of public sector funding	There should be a clear view on the impact of the publicly funded elements of the project – and the case for funding - so that the benefits accruing can be identified.	As for project impact
Funding package and contracting	Funding should be secured and committed from a mix of sources including private and public sector. Where contracting obligations exist, these should be milestoned.	Proof that all relevant funding sources have been explored and applications developed, with support where appropriate.
Marketing and communication strategy	The marketing of the project is important to secure political and civic support.	Demonstration that officers are engaged in developing a marketing and communication

Criteria	Justification	Evidence
		strategy. Local press and broadcast coverage demonstrates backing for the project.
Monitoring and evaluation plan for the interchange	Project monitoring and evaluation should be considered at the outset to ensure realisation of objectives can be measured and any lessons learned can be identified and disseminated.	A baseline has been drawn up and agreement reached on what data was to be collected, identification of who will conduct the monitoring and estimation of costs produced.

7.11 Role of *emda*

The research has shown that investment in transport interchanges can have marked economic impacts and the scale of economic impact varies according to the type of transport interchange and the nature of that investment. Here we provide guidance for *emda* regarding what projects should be considered for funding and what its role can be in ensuring the realisation of project aims:

- The clearest case for economic benefits arising from investment in transport interchanges are to be found within the national urban hub type, that is to say at transport interchanges located in primary urban areas. Although marked benefits may also be achieved at parkway type locations where new networks are delivered at the same time. It is recommended that *emda* concentrate investment on transport interchanges falling within the national urban hub type.

- Economic benefits are most clearly discerned where projects include network improvements, through either new infrastructure or increased frequency. It is recommended that *emda* prioritise transport interchange projects that improve the efficiency and capacity of the transport network in preference to those that solely address the appearance and function of public transport interchanges.

- Any investment in transport interchanges by *emda* should focus on addressing market failure, particularly with regard to the provision of public goods. Interventions should make a positive impact to the public realm and the realisation of regeneration and renewal improvements.

- *emda* can play a leading role in maximising the economic return from investment in transport interchanges. This can be achieved by leading discussion amongst stakeholders or helping to facilitate an appropriate partner to take on that role so that any development can contribute to regional and local economic growth.

- *emda* funding should clearly demonstrate clear evidence of additionality and be clearly targeted so as not to replicate the statutory role of other partners or delivery bodies. Local authorities are well placed to act as credible champions and project leaders and should be supported in this role by *emda*.

- Regeneration at transport interchanges can contribute to employment creation, business creation and the reclamation and redevelopment of brownfield land to assist *emda* in meeting the core outputs identified in the RDA Tasking Framework (DTI, 2005).

- Where there is no market failure and the new transport interchange is being funded by a private sector partners there could be a case for, *emda* to ensure that the potential wider regeneration impacts are fully considered. If a compelling case can be made for intervention then even in the absence of any other public funder *emda* might consider intervening but only where the intervention clearly satisfies *emda*'s RES objectives.

Together with public sector partners, *emda* can address market failures and ensure that public goods are realised and opportunities maximised through investment in transport interchanges. In particular, the research has shown that *emda* can play a leading role not only as a source of funding for feasibility studies and masterplanning but also public realm works and land packaging. As a key regional body *emda* can play the role of credible champion, lobbying other statutory bodies, strategic partners, network operators and private sector actors

Annex: Schedule of Consultees

Consultee	Organisation
Alan Srbljanin	*Emda*
Alan Swales	Leicester Regeneration Company
Andrew Street	Alliance SSP
Barry Davies	East Midlands Regional Assembly
Bob Lane	North Northants Development Corporation
Chris Deas	Nottingham City Council
Chris Garden	West Northamptonshire Development Company
Clive Thomas	Northampton Borough Council
David Nock	Highways Agency
Dominic Browne	Leicester Regeneration Company
Elaine Ranyard	Lincoln City Council
Glenn Millar	British Waterways
Harj Dhaliwal	West Northamptonshire Development Company
James Cushing	NEL
Jeff Miller	Leicester City Council
John Cadwallader	Derby Cityscape
John Nicholls	Leicester Regeneration Company
John Nuttal	British Waterways
Jonathan Guest	Derby City Council
Julie Tanner	*emda*
Kevin Edwards	Derby and Derbyshire Economic Partnership
Liz Aspray	*emda*
Martin Cumbleton	Northampton Borough Council
Martin Gawith	Greater Nottingham Partnership
Mike Roberts	Lincoln City Council
Norman Stronach	Corby Borough Council
Paul Coathup	Lincolnshire County Council
Pete Boswell	Lincoln City Council
Phil Durban	The Welland SSP
Sajeeda Hajat	NEL
Sarah Hill	Greater Nottingham Partnership
Sarah Troman	Derby Cityscape
Spencer Gibbons	Network Rail
Steve Tough	NET1
Sue Flack	Northamptonshire County Council
Trevor Shardlow	*emda*
Will Bedford	Lincolnshire Enterprise
Will Wiseman	Government Office East Midlands