ECONOMIC AND LOCATION ACTIVITY IMPACT STUDY: MODERN TRANPSORT SYSTEM

Final Report

April 2003

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1. INTRODUCTION

Economic Activity and Location Impacts

1.1 The aim of this Economic Activity and Location Impact (EALI) analysis is to describe the impacts of the Modern Transport System on the economy using the measuring rods of income and employment which are used in the formulation and evaluation of macro, regional and micro economic policy.

1.2 Impacts are assessed at the local and Scotland levels so that the use of Scottish resources can be assessed at the level of Scotland as a whole. The former has been undertaken at the level of the North East incorporating Aberdeenshire and Aberdeen as the impacts likely to be accrued affect the whole area.

1.3 For the purposes of this study, a STAG[1] Part 1 has been undertaken, which comprises an Appraisal Summary Table accompanied by relevant text.

Structure of this Report

1.4 Sections of this report will form part of the overall STAG appraisal. The report is structured as follows:

- Chapter 1 Introduction;
- Chapter 2 Review of Economic Problems and Objectives;
- Chapter 3 Spatial Analysis;
- Chapter 4 Sectoral Analysis; and
- Chapter 5 Summary of Impacts.

[1] Scottish Transport Appraisal Guidance.

2. REVIEW: ECONOMIC PROBLEMS AND OBJECTIVES

Introduction

2.1 This Chapter reviews economic issues at the regional level and considers the specific economic objectives of the Modern Transport System. This section draws on NESTRANS' objectives as defined for the Modern Transport System and relevant studies that have been commissioned or undertaken by NESTRANS.

Economic Issues: An Overview

2.2 Table 2.1 presents our overview of the economic problems and opportunities facing the region. This highlights in particular the extent to which key sectors in the region are undergoing transition, including the oil & gas / oil & gas services industry and traditional manufacturing and processing sectors including food, fish and paper; issues of location and peripherality; and short term constraints on the development of the North East.

Review of the Economic Problems of the Modern Transport System

2.3 As part of the process of defining objectives of the Modern Transport System in terms of impacts on the economy, three key economic problems have been identified:

- EC1: Current transport network is limiting competitiveness; the North East is not competing on a level playing field due to congested links through Aberdeen to reach external markets;
- EC2: Peripherality of the North East due to both the physical and the psychological distance to central Scotland, other UK destinations and overseas; and
- EC3: Poor communications affecting business efficiency.

Economic Objectives

2.4 We believe that, as a transport scheme, the Modern Transport System has clear transport objectives as required by STAG (and SACTRA Transport and the Economy). However, the links between poor transport infrastructure and the development of the economy have been properly recognised by NESTRANS and accordingly in the Modern Transport System strategy are to be found explicit economic objectives. These are:

- EA1: To deliver a transport system for the North East of Scotland which enhances the competitiveness of the area, its business sectors and constituent communities, and thereby supports the Scottish and UK economy; and

- EA2: To reduce the impact of peripherality by improving external links to the North East by rail, road, sea and air.

2.5 These objectives properly reflect the wider economic issues to be addressed in the region and accordingly can be used within the appraisal against local or planning objectives in a STAG appraisal.

TABLE 2.1 ECONOMIC PROBLEMS

Economic Problem	Description	Opportunity
Sectors in transition	The oil and gas sector is undergoing a transition due to the maturity of existing fields, the spatial focus of new exploration and the degree to which Aberdeen can retain the role it has developed as a major centre for oil and gas related activities and services.	Some scope for small number of major businesses with multiple locations to consolidate on single sites if large & prestigious sites can be made available.
	Many companies in the region's traditional manufacturing and processing industries face the challenge of securing higher added value by extending / upscaling the level of added value processing undertaken in the region and / or adopting higher value / more specialised product lines.	
	The fishing industry and its downstream on-shore service / supply / processing sectors face the short to medium term challenge of severely reduced catches of fresh fish being landed in the region.	Some processors will switch to imported foreign fish in order to sustain output; this might involve increased levels of road haulage.
Locational impacts on competitiveness of businesses in the North East	Companies based in the North East which are in sectors involving high volume / low value products (such as fish and paper) potentially suffer a disproportionate level of impact arising from increases in costs associated with their location. Such businesses operate on low gross margins but generally also need to transport high volumes of output over long distances to major UK markets. Consequently, factors which cause even marginal increases in costs have a disproportionate impact on gross margins and hence on profitability and the rate of return on investment in new capital equipment and plant.	Retain businesses in the North East through reducing the costs incurred by congestion. Ensure that companies in the North East remain competitive.
	Additional costs caused by congestion including extra fuel, driver costs and costs associated with failing to meet timed deliveries in JIT systems have potential to reduce already low margins as only a small proportion of any cost increase can be passed on to customers in highly competitive markets.	

Business clusters and peripherality of the North East	Apparent / perceived peripherality of Aberdeen and the North East is potentially an emerging disadvantage as industries such as oil and gas become more globally and technology focussed, and tend to become more strongly clustered in a few key locations. Aberdeen may suffer and companies may choose to relocate closer to main markets and better transportation links, such as worldwide air services. In terms of recruitment, relocating staff from outwith the North East is affected by the geographical location and the perception that people have of Aberdeen. Implementation of further working time directives will act as a further limitation on the competitiveness of businesses in high volume low added value sectors. There is some evidence that the North East is geographically where directives bite quite severely.	Scope to enhance Aberdeen / Aberdeenshire companies' links not only to the rest of the UK and overseas, but also to within the North East (especially to outlying parts) and minimise the effects of peripherality. Better air services will improve links with the global markets both allowing Aberdeen businesses to exploit overseas opportunities and also to allow more overseas companies to be attracted to Aberdeen. Encourage relocation of businesses to Aberdeen through creating a more efficient transport network.
Economic Expansion in Aberdeen	Current low unemployment and a tight skilled labour market, combined with limited available land for industrial development around Aberdeen and poor transportation links between areas of employment and sources of labour, currently limit economic expansion in some sectors in and around Aberdeen.	Potential to open up possibilities for future developable land on the periphery of the City. Currently sites in North Aberdeen cannot be developed due to congestion and traffic problems. The Western Peripheral Route will ease congestion and allow access to more sites while enabling other more environmentally significant areas to be sustained. Also potential to open up potential labour markets in outlying areas to the North, West and South of Aberdeen through park and ride schemes, enhanced rail services, and the Western Peripheral Route. Attract more commuters from outwith Aberdeen and the North East. Attract more people to work and live in the North East, by improving quality of life and expanding labour catchments into more affordable housing areas. Retain current employees through less stressful journeys to work and better quality of life.

Economic expansion in Aberdeenshire	Problems and opportunities vary by settlement / area, with some towns experiencing lack of employment opportunities and / or a narrow and vulnerable current economic base. Existing businesses in certain major sectors potentially vulnerable to any further increase in costs associated with goods movements.	Potential to assist some existing businesses remain / develop in the area by contributing significantly to cost reduction strategies for movement of inbound and / or outbound goods.
	Attraction of new investment is in some areas adversely affected by real or perceived peripherality alongside issues relating to skills and availability of other resources.	Potential to help address costs associated with peripheral location and to address some aspects of perceptions of peripherality which affect settlements especially in the north of the region.

2.6 In terms of the Western Peripheral Route a set of specific problems have been identified, which are:

- EC4: Low proportion of available brownfield sites for industrial development;
- EC5: Existing Trunk road is not fit for its purpose in several locations due to physical constraints such as the Bridge of Dee; actual and anticipated congestion gives rise to rat-running using rural routes in Aberdeenshire for both cars and HGV's which affect the capacity of these routes for non rat-run traffic, reduce the safety of these routes and at times cause serious congestion.
- EC6: Large number of at-grade junction on Anderson Drive / Parkway route which restrict capacity and increase journey times;
- EC7: Estimated that 15,000 journeys per day within Aberdeen are for through traffic;
- EC8: High level of congestion within the City; and
- EC9: A high speed, free flowing route around the City will reduce journey times between South and North Aberdeenshire.

2.7 The diversion of HGV's onto rural routes gives rise to important safety and environmental considerations and can be addressed only by attracting rat-running traffic back to the trunk network. This implies addressing the serious congestion on that network.

2.8 The other problems listed are generally of a traffic engineering nature and are in effect incorporated into the main economic problems for the Modern Transport System. However, as discussed below, in economic terms a key constraint on a few large and important sectors of the economy arises through congestion in the Aberdeen area which the Western Peripheral Route is intended to address.

3. ECONOMIC ACTIVITY AND LOCATION IMPACTS: SPATIAL LEVEL

Spatial aspects of the North East and overview of impacts by area

3.1 This Chapter looks in brief at the different impacts on a spatial basis. The types of constraints and economic impacts associated with transportation vary considerably within the region depending on location and the type, sector, ownership and size of business. Consequently the way the Modern Transport System will impact on different sub-regions also varies significantly.

3.2 In Aberdeenshire, for businesses in the more remote larger settlements north of Aberdeen such as Fraserburgh and Peterhead, the Western Peripheral Route is expected to be the source of most of the potential benefits from the Modern Transport System. Where industrial sectors in these areas are dependent on transport for the inward or outward movement of goods to the south of Aberdeen, there is, as discussed below, potential for real economic impacts arising from the Western Peripheral Route in respect of reductions in transit times and in the uncertainty of travel times, particularly for goods deliveries.

3.3 There are potentially other benefits from the Modern Transport System for businesses whose functions are dependent on business relationships with Aberdeen itself, for example businesses providing services to other firms or to individuals in the City. These benefits arise in part from reduced congestion on key roads and in some cases by use of other elements of the Modern Transport System. In addition, residents in settlements outside Aberdeen should potentially benefit from easier access to the City for a range of purposes, again in part due to the impacts of the Western Peripheral Route and in part from use of other Modern Transport System elements. It is likely that businesses closer to the City will benefit more from these transactional effects than businesses further from the City.

3.4 Benefits related to movements of goods will affect businesses in all settlements whose main routes involve a cross or round City movement. These include in particular businesses in Peterhead, Fraserburgh and Inverurie.

3.5 Aberdeenshire towns such as Ellon, Inverurie, Banchory and Stonehaven, which fall within the Aberdeen travel to work area (TTWA) and lie to the north, west and south of the City will experience impacts relating to the functioning of the labour market. Areas that have high pools of labour and limited public transport, for example, would benefit highly from a park & ride implemented in the vicinity or improved rail services connecting the areas to Aberdeen City and to other employment areas. Aberdeen residents who travel in the "opposite direction" to work in Aberdeenshire are also expected to benefit from reduced congestion.

3.6 It is also likely that the current TTWA will continue to extend outwards of Aberdeen as access to employment zones is increased. In 1991 around 29,000 people were commuting from Aberdeenshire into Aberdeen with the majority living within a 15-mile radius around the city, totalling 29% of employed residents in Aberdeenshire[2]. No further detailed data have been collected on travel to work patterns in terms of origin and destination. However, results from the 2001 Census[3] reveal that 71% of employed persons in Aberdeenshire travel to work by car, an increase of 10% since 1991. The percentage of employed persons in Aberdeen City travelling to work by car is also high, at 62% compared to 15% travelling by bus or taxi. Car ownership in both areas is also high, with 37% of households in Aberdeenshire owning 2 or more cars (highest in Scotland). Only 18% of households in Aberdeenshire do not have car (lowest in Scotland).

3.7 Within the greater Aberdeen sub-region, businesses located on the industrial sites to the north of Aberdeen will benefit through increased land-use development opportunities, increased access to pools of labour in particular those in the south of the City and easier access to the airport, harbour and city centre. Those located on the south side of Aberdeen will benefit in similar ways, thorough increased access to pools of labour, in particular those to the north and the west of the City and easier access to the airport, harbour and city centre.

Activity Locations

3.8 It was not possible to look at individual sectors on a spatial business, as these are spread across most areas and a larger sample would be required in order to look at this aspect. Table 3.1 presents a matrix showing a guide to where different industry sectors tend to be located. This is based on those businesses interviewed and gives an idea of where sectors are located and at how any geographical constraints will impact on each sector. The "ticks" indicate the degree of concentration of activity by area, with, for example a strong representation of retailing within the city centre.

[2] 1991 Census, General Register Office for Scotland.

[3] 2001 Census, General Register Office for Scotland.

TABLE 3.1 SECTORS BY GEOGRAPHICAL AREA

Sector	North of City Centre	South of City Centre	City Centre	Aberdeenshire
Oil & Gas Exploration	□□[4]	□□	□□□	
Oil Services	□□	□□	□□	□
Paper	□			□
Fish Processing	□[5]	□	□	□□
Food Processing / Manufacturing	□	□	□	□
IT	□	□	□	□
Retail			□□□□□	□
Health			□	
Hotels	□	□	□	□
Tourism	□□	□	□	□
Transportation	□□	□	□	□
Construction	□	□	□	□

Industrial Areas

3.9 Accessibility to areas of employment is key to the retention and attraction of both employers and employees. The main industrial areas are outwith the city centre and are located to the north of Aberdeen, in particular Dyce, Kirkhill, Farburn, Wellheads, Stoneywood, and to the south, including Altens, Tullos, and Peterseat. Around 26,000 employees work in the Dyce area and around 23,000 in Altens – these industrial sites provide important sources of employment for residents of both Aberdeen and Aberdeenshire, and hence generate large commuter flows including cross city flows where people live south of the city and work north of it, or vice versa.

3.10 Currently many companies in these areas are involved in oil-related business and there is a large throughput of equipment by truck to Aberdeen and Peterhead Harbours, as well as intra-company and other movements between different industrial sites. Common constraints in these areas are:

[4] □ - companies interviewed (note that some had offices in different locations which are counted here).

[5] □ - it is likely that companies are located in these areas.

- Lack of sufficient public transport for employees;
- Lack of available land space for industrial development;
- Heavily congested routes within and around each of the sites;
- Difficulties recruiting staff from opposite side of the City;
- Difficulties moving goods from one industrial site to another;
- Access to the airport: large companies located to the south of the City use the airport regularly and have to travel through Aberdeen to reach it; and
- Both sites are delivering large tonnages to harbours.

Aberdeen City Centre

3.11 The City Centre plays a vital role in the sustainability and vitality of Aberdeen and the North East as a whole. Comprising an area of 1.5 square kilometres, of which the shopping area makes up 23%, residential 19% and green open space 4%. The remainder comprises mixed uses including the railway, education and health uses. The population of the City Centre has increased by 57% since 1991 to 7759 (estimated in March 1999) with 1600 new residential properties erected over that period.

3.12 Visitors to the City Centre generally travel by car, as access from outlying towns by other modes is limited and car ownership is relatively high, reflecting both income levels and the fact that the hinterland to the City is rural in character rather than suburban. It has been suggested that rising congestion levels and increased controlled parking will stop people using the City Centre as their main shopping base. Retailers are concerned with this and believe that it is highly important to retain the vitality of the City Centre not only for shoppers but for tourists and day visitors (whose main purpose is not shopping or work) also. However, such is the mass of retail and other attractions in the centre that, as in other major centres, people and especially shoppers will continue to be attracted. Congestion is more likely to result in shops opening longer and on Sundays and people using public transport rather than switching retail spending to rural centres or making long trips to other large centres.

3.13 A current £100 million planning application for a mixed use retail / leisure development on Guild Street shows increased confidence in the vitality of the City Centre, but will be dependent on good transport access to the area for shoppers and visitors.

3.14 Investment Property Databank (IPD) analysis ranks UK cities based upon rental values and yields over three year periods. Between 1994 and 1998 Aberdeen's ranking fell (in comparison to other UK cities) by 13 places, reflecting perhaps a combination of growth in other cities and a lack of growth in Aberdeen.

Land Constraints

3.15 The boundaries of the Aberdeen Green Belt and Strategic Reserve Land are subject to review by both Councils. The Structure Plan, 'North East Scotland together', supports a strong Green Belt policy around the City of Aberdeen but sees the review as an opportunity to ensure sufficient development land is identified. Policy 28 of the Structure Plan states that 'no development will be permitted in the Green Belt for purposes other than those essential for agriculture, forestry, recreation, mineral extraction or restoration or landscape renewal'. However, given that the current boundaries of the Green Belt are to be reviewed by both Councils, it is in our opinion not possible to comment on the impacts on new developments that would or would not arise as a direct result of the Western Peripheral Route.

3.16 There is, however, a shortage of available employment / industrial land in Aberdeen and in the periphery of the City and companies are experiencing difficulties in finding sites to expand within or relocate to. Given the confidential nature of the surveys undertaken with businesses, evidence is not at this stage available on individual companies experiencing such difficulties.

3.17 Land-take up in Aberdeen is around 8 hectares per annum and around 12 hectares per annum in Aberdeenshire. This is due to the shortage of suitable sites in Aberdeen and activity has been strong in areas such as Westhill, Badentoy and Portlethen for example. Aberdeenshire holds the bulk of established land supply with 69% of the total. Constrained land has reduced by 10% over the last year following consent for proposals for developments at Altens East and Peterseat. Two other major proposals, one at Airport South West and one at Moss-side are currently under consideration but are affected by ownership and infrastructure constraints. 52% of established land supply in Aberdeen is constrained whilst only 37% in Aberdeenshire. This perhaps reflects the difficulties associated with infrastructure for large sites located in urban areas. Table 3.2 presents established, constrained, marketable and immediately available land supply for Aberdeen and Aberdeenshire.

TABLE 3.2 LAND SUPPLY FOR DEVELOPMENT (2002)[6]

Sector	North of City Centre	South of City Centre	City Centre	Aberdeenshire
Aberdeen	145	76	51	24
Aberdeenshire	327	122	205	65

[6] Employment Land Audit Aberdeen and Aberdeenshire, 2002. Aberdeen City Council et al.

Deprived & Social Inclusion Partnership Areas

Aberdeen

3.18 A key objective of Aberdeen Council's Transportation Strategy is to maximise accessibility for all, through the regeneration of poorer communities and areas in the North East in terms of access to training, employment and social services. Unemployment is generally very low in Aberdeen, where the market for labour, skilled and non-skilled, is very tight. The highest unemployment is concentrated in certain areas: Torry, Ferryhill and Crown Street (AB11); Northfield and Mastrick (AB16); and Tillydrone and Seaton (AB24). These areas comprise 56% of all unemployment in the City. In Aberdeenshire Peterhead and Fraserburgh comprise 42% of unemployment.

3.19 The Great Northern Partnership (GNP) was established in 1996 to address social exclusion issues in four areas within Aberdeen and is a designated Social Inclusion Partnership. The main objectives of the partnership are to identify the priority issues and concerns of those areas in Aberdeen, which suffer high levels of deprivation. The GNP identified community needs, such as greater cohesion and social identity; increasing the capacity of individuals and community groups; improving safety, housing, local environment and health and improving educational achievement and training / employment opportunities.

3.20 The four areas covered by the GNP are located along Great Western Road (A96) in the north of the City. A Regeneration Partnership has also been set up for Tillydrone, an area adjacent to the areas covered by GNP. The SIP area covers Printfield, Alexander / Hayton, Ferrie / Sandilands and Middlefield. These areas cover those mentioned above with high unemployment in Aberdeen. Features of the areas include:

- Higher proportion of unemployed people and those reliant on benefits than other parts of Aberdeen;
- High percentage of youth unemployment and unemployed school-leavers;
- Low rates of participation in Further or Higher Education;
- Higher rates of illnesses (stroke, heart disease, etc) and long-term ill;
- Large number of council rented property;
- Many empty dwellings; and
- High incidence of crime.

3.21 The main issues concerning people throughout the GNP are:

- Housing;

- Local access to primary care services;
- Local access to fresh affordable food;
- Transport;
- Mental health;
- Drug and alcohol abuse;
- Crime;
- Condition of physical environment; and
- Safe places for children to play.

Aberdeenshire

3.22 Aberdeenshire also has areas of significant deprivation and unemployment. Wards in Fraserburgh and Peterhead are the most deprived areas within Aberdeenshire, with an SIMD of just above 30 (The average SIMD score for Aberdeenshire is 9.58). At the local authority level, Aberdeenshire is however among the least deprived areas in Scotland.[7] The rate of unemployment in Aberdeenshire was around 1.3% in 2002 – the lowest of all local authorities in Scotland. The number of unemployed persons in Aberdeenshire increased by 13% in the last quarter of 2002, with Fraserburgh experiencing a 30% increase and Banff a 17% increase. It is possible that unemployment in these areas will rise further due to current restrictions affecting the fishing sector.

3.23 The Modern Transport System will benefit these deprived areas in a number of ways. For those settlements within the Aberdeen travel to work area (TTWA), accessibility will be better through improved public transport, such as the park & ride network, giving residents access to more areas both within and outwith Aberdeen and the park & ride scheme, for example will open up direct routes to the north, west and south of the City.

3.24 For settlements outwith the TTWA the main benefits will arise due to the impacts of the Western Peripheral Route on key industries located in these settlements, of which fish processing and related activities are the most important sectors expected to be affected positively by the Western Peripheral Route.

3.25 Through providing better transport infrastructure, the aims and objectives of the social inclusion partnership areas can be met more easily:

- Unemployed residents in SIP areas will have greater access to possible employment locations further afield;

[7] Scottish Indices of Multiple Deprivation 2003, University of Oxford.

- Youths and school leavers will have more opportunities to continue education through access to more areas and more colleges and institutions;
- Employed SIP area residents will possibly have more access to training services and to better / more skilled jobs;
- Improved accessibility of employed SIP area residents to training services and to better / more skilled jobs; and
- Improved access to health services, given the high incidences of illnesses in these areas will be beneficial (park & ride network will link in with main hospital site).

3.26 Therefore, for Aberdeenshire's areas of deprivation, those areas within the TTWA are expected to enjoy many of the accessibility benefits noted above, especially through better access to training and employment opportunities. However, the benefits for settlements outside the TTWA are likely to arise indirectly, depending on the direct impacts of the Modern Transport System (and particularly the Western Peripheral Route) in securing and developing the employment base in these areas.

4. ECONOMIC ACITIVITY AND LOCATION IMPACTS: SECTOR LEVEL

Introduction

4.1 Although it is necessary to analyse impacts at a spatial level, it is also important to look at impacts within each sector.

4.2 This Chapter analyses the benefits which based on the study we expect would be experienced by each sector. Table 4.1 presents the **scale** of impacts across sector, based on the results of the business interviews undertaken. It also shows the scale of impacts relevant to the Modern Transport System as a whole and to the Western Peripheral Route on its own.

4.3 Table 4.2 looks at the **significance** of each impact within each sector on a scale of Low to High, as to whether or not there will be economic benefits which have the potential to alter the economic / business decisions of companies and their workforce as a result of these impacts.

4.4 Outcomes in terms of economic impacts depend upon a combination of scale and significance. Here scale indicates the size of any effect on factors affecting the performance of an economic sector, while significance indicates whether the particular factor is important or significant for the future performance of that sector. For example working time savings will be large for the retail sector, but are such a small component of costs that their significance for that sector is very small, and hence are not expected to result in a change in economic behaviour by that sector. This is not to say that there will be no impact, rather that as all of these economic impacts are difficult to predict the scale of the expected impacts are within the "noise" or margins of error of the estimates of impact.

4.5 Following the tables which show scale and significance of transport changes, we present a short description of each sector, outlining constraints and impacts. We then discuss the likely overall impacts, which are a combination of scale and significance effects.

TABLE 4.1 IMPACTS BY SECTOR

Sector	Work time saved	Recruitment / Retention Local	Recruitment / Retention Other	Transport Cost of Goods (Outward)	Transport Cost of Goods (Inward)	Increased Customer Base	Modern Transport System	WPR only
Oil & Gas Exploration	▲▲▲	▲▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲	▲▲▲▲	▲
Oil Services	▲	▲▲▲	▲▲▲▲	▲▲▲	▲▲▲	▲	▲▲▲▲	▲
Fish Processing	▲	▲	▲	▲▲▲▲	▲▲▲▲	▲	▲▲▲▲	▲▲▲▲
Food Processing & Manufacture	▲▲▲▲	▲	▲	▲▲▲▲	▲▲▲▲	▲▲▲	▲▲▲▲	▲▲▲
Paper	▲	▲▲▲	▲	▲▲▲▲	▲▲▲▲	▲	▲▲▲▲	▲▲▲▲
Retail	▲▲▲▲	▲▲▲▲	▲	▲	▲	▲▲▲▲	▲▲▲▲	▲
IT	▲▲▲	▲▲▲	▲	▲	▲	▲	▲▲▲▲	▲
Construction	▲▲▲	▲	▲	▲	▲	▲	▲▲▲▲	▲▲▲
Transportation	▲▲▲▲	▲	▲	▲▲▲▲	▲▲▲▲	▲	▲▲▲▲	▲▲▲
Tourism	▲	▲▲▲▲	▲	▲	▲	▲▲▲	▲▲▲▲	▲
Hotels	▲	▲▲▲▲	▲	▲	▲	▲▲▲	▲▲▲▲	▲
Health	▲▲▲▲	▲▲▲▲	▲	▲	▲	▲	▲▲▲▲	▲

Key: No Impact; Slight impact; Moderate impact; Large impact.

TABLE 4.2 SIGNIFICANCE OF IMPACTS BY SECTOR

Sector	Work time saved	Recruitment / Retention Local	Recruitment / Retention Other	Transport Cost of Goods (Outward)	Transport Cost of Goods (Inward)	Increased Customer Base
Oil & Gas Exploration		Medium	Medium			
Oil Services	Low	Medium	Medium	Medium	Medium	
Fish Processing				High	High	
Food Processing & Manufacture				Medium	Medium	
Paper				High	High	
Retail		Low				High
IT			Low			
Construction	Low					
Transportation	Low					
Tourism						High
Hotels						High
Health		Low				

Impacts by Sector

Oil and Gas Exploration and Production

4.6 The oil and gas industry has been the core sector in the North East for several decades and Aberdeen has long been recognised as the Energy Capital of Europe. The sector (including operators and services) accounts for around 23,000 onshore jobs in the North East, as well as a further 18,000 jobs offshore.

4.7 As the North Sea is seen more and more as a mature province, the role of the North East is changing. Companies originally established in the area to extract from the North Sea are targeting areas globally, such as Nigeria, the Caspian Sea, Russia and Africa. Aberdeen is becoming a centre for management and expertise on a global scale rather than dedicated to the North Sea area alone. The retention of large oil and gas operators is vital to the economy of the North East. As new technologies are explored, both to progress the oil and gas industry and to promote renewable energies, it is paramount that the skills base that has emerged in the area remains and that businesses are retained and attracted. Smaller exploration companies have recently relocated to Aberdeen and utilise the smaller wells in the North Sea that are deemed unprofitable by the larger players in the market.

4.8 Maintaining the North East as a global centre and encouraging smaller independent operators to continue exploration in the North Sea are the main elements necessary to retain the vitality of the sector.

4.9 There has recently been an indication that perhaps the North Sea oil reserves could last potentially for another 30 years, much longer than previously thought, with government officials estimated that untapped supplies in the North Sea are around 42 - 44 billion barrels which is considerably more than the 32 billion barrels extracted since 1967 (2.5 billion tonnes). However, the extraction of this oil and the consequent continuation of locally driven employment in this sub-sector of the industry, will depend on technological developments, which will facilitate the economic viability of extraction.

4.10 There are three elements within the sector that can affected by transportation constraints in the North East:

- Movement of goods by road / sea[8];
- Movement of people (employees); and

[8] There is at present only very limited use of rail within this sector.

- Ability to expand (lack of available land for expansion).

4.11 The larger exploration companies do not experience any direct impacts in terms of delays caused by congestion in the North East and in Aberdeen, and although transportation costs are high, they comprise only a small percentage of total costs. On average, marine costs comprise 80%, base costs 15% and land transport costs 5%. A large tonnage of oil-related equipment is transport by truck from depots and factories around Aberdeen to the harbours in Peterhead and Aberdeen, where it is then shipped to the rigs. One major company ships 100,000 cargo container tonnes per year, which originate in the industrial sites to the North and the South of the City. 75% of this tonnage returns from offshore. As most exploration companies have contracted hauliers on a form of contract, the companies do not feel that these costs would be lower, and if they were, they would not have a substantial impact. Delivery windows are such that congestion and delays are taken into consideration.

4.12 Employees are the main concern within the sector, in terms of transportation impacts[9]. Given the global nature of the industry, the number of business trips made to and from Aberdeen is considerable, estimated to be well over 1000 (outgoing) trips per week, with a large proportion of these having international destinations, in particular Houston. Good interconnecting and direct flights are an essential element of retaining businesses in this sector, as well as good access to the airport. If a company can do its business from any location theoretically, it will choose a location from where its markets can be easily accessed.

4.13 Access and retention of skilled labour is a potential constraint to the sector and one that transport features highly in. Main points highlighted from the business interviews are:

- Limited public transport for employees;
- Increased employee stress and lost working time due to delays caused by congestion;
- Attracting senior employees from outwith the North East either to commute or relocate is difficult – commuters from the central belt are becoming more common, but are deterred by the delays entering and leaving Aberdeen at peak hours; and
- Aberdeen has to be attractive to people considering relocation – their quality of life has to be acceptable and the perception of Aberdeen has to be altered.

4.14 Lack of available industrial land accompanied by congestion levels could prohibit expansion possibilities in existing industrial areas. If the North East continues to play a global management role, then this restriction could deter companies from expanding in the area, resulting in relocation elsewhere.

[9] Excluding offshore workers.

4.15 Based on our research, it is expected that the Western Peripheral Route will improve accessibility and by addressing congestion for cross city travel (including commuting), improve factors such as quality of life for employees in this sector, and potentially could enhance the prospects for single site consolidation of activities by one or two major players in the region, provided suitable sites are made available. The other components of the Modern Transport System will contribute to labour market accessibility and hence help to improve the functioning of the labour market.

Oil Services

4.16 Given the nature of industry in the North East and the prominence of the oil and gas sector, it was deemed appropriate to incorporate a sector to cover the services provided for the oil and gas operators. This comprises a range of activities including drilling, mud supply, engineering, construction distribution, catering sea / air / road transport and business and professional services. These activities account for around 18,000 employees onshore in the North East, as well as around 16,000 offshore[10]. The growth within this sector is inextricably linked to the performance of the oil operators and any relocation away from the North East will impact on those providing these services.

4.17 In terms of impacts, it is apparent that the oil service companies are more receptive to economic impacts in relation to transport than the oil operators themselves, as one of the core activities is the movement of goods and equipment on and off shore, which generally involves haulage travelling from industrial sites on the edge of the city to either Aberdeen or Peterhead Harbours. Whilst a derived demand to a high degree, these companies still require to retain and attract employees, often skilled in the field of engineering and the costs incurred through congestion and delays may impact upon this. The other issue is that by reducing costs caused by congestion, competition between companies will result in lower haulage costs for the oil operators.

4.18 The main benefits to oil service companies in relation to transport are:

- Reduction in delays and lost working time caused by congestion in and around Aberdeen: one large company estimated that delays and lost working time costs around £5,000 per week;
- Access for employees: a large proportion of oil service companies are located in industrial areas at the edge of town – public transport is limited and congestion around these areas is heavy;
- Attracting more employees from further afield: given the tight labour market in the area, companies are seeking senior staff from other areas;

[10] Oil and Gas Prospects 2001 Update.

- Ability to move heavy goods and equipment in and around Aberdeen more easily; and
- Improve access to and competitiveness of Peterhead Harbour for goods entering the area from the south.

4.19 Another issue affecting the service companies involved in the movement of goods is the imminent move from Peterhead to Aberdeen by a major oil operator. A significantly larger proportion of goods will be moving through Aberdeen Harbour than previously which will result in heavier traffic flows entering and exiting the City Centre. Currently around 1.4 million tonnes of offshore support passes through Aberdeen Harbour.

Paper

4.20 The Paper industry, which includes pulp, paper and paper products accounted for £366.4 million in 2001 (export from Scotland). The North East accounted for £139.1 million, totalling 38% of total paper exports in Scotland[11]. Paper exports account for 39.7% of total exports from the North East[12].

4.21 While the overall GDP contribution of the sector to the North East economy is quite small, it does provide important employment opportunities in Aberdeenshire, and it is also responsible for supporting part of the important indigenous road haulage industry in the region. The paper industry is experiencing heavy competition from overseas manufacturers and is suffering as a result of "commoditisation", with bulk products such as office paper now being produced and marketed globally and with quality from different origins virtually indistinguishable. Accordingly such goods are sold largely on price and ability to meet delivery requirements.

4.22 Within the region the great majority of paper production is for high volume / low value markets such as office paper, which as noted above has effectively become a commodity product where source is now irrelevant to purchasers.

4.23 Accordingly for some of the companies in the North East, which are not producing value-added paper products, the impact of costs due to congestion and delays is reducing margins to an almost unviable level and beginning to impact on ability to meet buyers' delivery needs due to unpredictable trip times.

4.24 For one company in the office paper sector, it was estimated that congestion related costs represented between 20 and 25% of the plant's annual gross margin; as part of a

[11] Scottish Council Development and Industry, 2001.

[12] Survey of Grampian Manufacturing and Exports in 1999/00.

larger group that plant has to compete for investment within the group, and its low returns are reported to be making large-scale investment unlikely in the medium term. The direct plus indirect and induced impacts of a closure of that plant would be of the order of 1,000 jobs: however, given that other cost and market related factors also impact on this particular business it would be inaccurate to attribute potential closure to transport costs alone, although it is clear that local congestion costs do add significantly to costs and erode already tight margins to the point of undermining medium term viability. The company also expected that additional costs would arise as call off times from production are brought forward in order to allow additional contingency times for timed deliveries in the south east of England, which is the major market for office paper.

4.25 The Western Peripheral Route is viewed as being essential for the company interviewed, in order to reduce costs and improve the predictability of goods movements. It is suggested that this sector should be explored in greater depth in order to examine the potential impacts of the Western Peripheral Route and the other elements of the Modern Transport System on all the main players in this sector.

Fish Processing

4.26 A prominent sector in the North East is fish catching and processing, with around 50% of tonnage in Scotland landed in Aberdeen, Peterhead, Fraserburgh and Buckie (see Table 4.3). There are around 4,700 employees in the fish processing sector in the North East comprising around 60% of sector employment in Scotland as a whole. The industry has been declining in recent years with a reduction of around 15% in volume and also in value between 1998 and 2000.

TABLE 4.3 FISHING SECTOR IN THE NORTH EAST 2000[13]

Area	Volume (tonnes)	Value (£000)
Aberdeen	27,002	£21,694
Peterhead	87,935	£70,563
Fraserburgh	34,892	£26,955
Buckie	2,940	£4,105

4.27 The main constraints currently within the sector focus around the shortage of raw material. It is at present widely expected that the ability to source inputs from traditional fishing areas will be seriously affected by reduced fishing times at sea which are being implemented as a key measure intended to conserve fragile fish stocks in parts of the North Sea. With an increasingly scarce commodity there is a need to maximise value and reduce overhead costs, and to survive there is a need to source frozen fish from other sources at low costs. To the extent that these can be

[13] Landings by UK vessel. Aberdeenshire Council Key Statistics, 2002.

landed by sea within the region costs can be sustained at current levels, but the costs of transporting fish landed in the Humber could be prohibitive. It is unclear whether the marginal but allegedly significant costs added by congestion around Aberdeen would be a deal breaker in this context.

4.28 Processed fish is a high volume / low value commodity and companies are running with low margins, which are easily affected. The peripherality of the North East is another constraint as often markets are located either in England, in Humberside or London, or overseas, often in France. Fish is transported by road to these markets and given the nature of the product and costs incurred through congestion in and around Aberdeen there is a severe impact on these businesses.

4.29 For parts of this sector, transport factors add directly to the cost of moving product in an industry where, like paper, margins are very tight; however, in addition the unreliability of journey times increasingly leads to failure to meet timed delivery slots, for example to supermarkets, which can result in product being sold off at lower values, which again undermines margins.

4.30 This in tandem with the current proposal to reduce white fishing in the North Sea could result in relocation of added value activities away from the North East closer to markets in the North East of England, for example. For the towns of Fraserburgh, Peterhead and Buckie, this would have major implications for the vitality and sustainability of each town, given that this sector provides the main source of employment for local people.

4.31 Some processors are likely to switch to imported frozen fish, which might be imported through Aberdeen or Peterhead but possibly the Humber; the transportation implications of this require further investigation.

4.32 It is also possible that some businesses in value added processing will slim down operations because of transport factors, and the impact of transport on margins.

4.33 In the absence of the changes in quotas, the Western Peripheral Route would arguably have an important impact on this sector in a similar manner to that indicated for the paper sector. However, the quota effect is likely to swamp or disguise transport effects at least in the short term, and hence some consideration needs to be given to undertaking a more detailed review of this sector once businesses have absorbed the potential impacts of quotas.

Food Processing and Manufacturing

4.34 The food industry is a key sector in the North East and had an export value of £101.8 million in 2001. This constitutes 24% of food exports from Scotland (SCDI, 2001).

There are two elements to the sector – those businesses selling value-added products with a North East 'branding' (such as Baxters, Grampian Chickens), and those selling non-branded goods. Those with branded goods are less likely to suffer from costs related to congestion as they are not in competition with other non-branded producers throughout the UK.

4.35 Peripherality is one of the main constraints to businesses in this sector, whose main markets are located in the South East of England. In terms of costs incurred related to congestion, it is difficult to estimate the significance of the problem in the North East, as journeys are commencing here and companies have no real handle on how much delay is caused by congestion in this area as opposed to congestion in other parts of the UK. Another main constraint is competition with overseas producers.

4.36 The main benefits will be generated by the Western Peripheral Route and include greater efficiency, better reliability on delivery times and lower transport costs.

Information Technology

4.37 Information Technology is becoming an increasingly important sector in the North East, especially as the oil sector is facing decline and new technologies and research will become more important to the economy. There are few direct benefits to this sector, other than access to, and quality of life of, employees. Finding skilled staff in a tight labour market and attracting employees from outwith the area are key benefits. Attracting IT companies to Aberdeen is essential and quality of transport infrastructure plays a role in this issue.

Retail

4.38 Aberdeen is an important regional shopping centre for the North East and the sustainability of its vitality is essential for the growth of the economy. Around 60% of Aberdeenshire residents' comparison goods expenditure and 35% of convenience goods expenditure takes place in Aberdeen[14]. Union Street forms the main retail thoroughfare, particularly in the Eastern section. The proposed developments at Guild Street will further increase the vitality and range of retail opportunities available in the City Centre, and the proposed pedestrianisation of some parts will create a better ambience and quality for shoppers.

4.39 Currently the majority of shoppers travel to Aberdeen City by car. Given car parking charges and congestion, it is suggested that people are being deterred from shopping in the City Centre and choosing to shop locally instead. A continuation of factors

[14] Retail and Leisure Planning Information, Autum 2002, Aberdeen City Counil.

deterring travel to the City centre combined with growth in rural living especially by higher income groups could result in some retailers choosing not to locate or expand in the city centre but in the towns around the periphery instead. This would have a negative impact on the City Centre, but against this there are both agglomeration factors which tend to drive growth in established major centres and the impact of other elements of the Modern Transport System which will tend to enhance accessibility to the centre especially for people living in and close to the City.

4.40 The Modern Transport System will provide more public transport links to the City Centre and will also reduce congestion so that car journeys that are necessary are not deterred. The catchment area for customers of large department stores, for example, extends to Fraserburgh and even to just north of Dundee. The retail businesses in the City Centre can only grow if the number of shoppers visiting the City Centre increases. However, it must be noted that the Western Peripheral Route would also perhaps allow car borne shoppers greater opportunities for shopping outwith the City Centre. This is not a negative impact, but distributional.

4.41 Again, as with other sectors, access to pools of labour is important and will be improved through the park & ride schemes proposed. The majority of employees in retail are low paid unskilled and generally have lower car ownership; therefore improvements in public transport will improve this issue.

4.42 The effect of allowing congestion to increase, leading to more shopping and other service spending in rural centres is however, merely a redistribution of activity which is arguably beneficial to the rural area, provided such changes do not result in any sort of critical mass effect on the centre. In the short to medium term the prospects for a critical mass effect look remote, but in the medium to long term it is a possibility if congestion becomes such that activity re-locates to peripheral centres on a large scale, which would have a knock on effect on visitors / tourists. The Modern Transport System and especially public transport measures is expected to contribute positively here.

Construction

4.43 Activity in the construction sector is a derived demand – that is activity is driven by other sectors' requirements for new industrial, commercial and residential buildings. Construction presently remains buoyant as a direct consequence of the strength of the economy in the area. However, it is evident that current on the ground activity could be higher as the current lack of available land for industrial and residential development is restricting the ability of this sector to fully meet demand. These constraints can potentially be relaxed with the implementation of the Western Peripheral Route, as more land could be freed for development.

4.44 The industry certainly believes that there are very few alternatives for new industrial and commercial development that would not be dependant on the Western Peripheral Route. The review of land use and development potential undertaken as part of this study suggests that there are potentially some locations which could be developed, but the potential for development would be limited without the Western Peripheral Route. However, our interviewees also qualified their views on this point with regard to the nature of constraints and suggested that a key additional / complementary measure would be to remove planning restrictions. Therefore while there appears to be scope to enable new development to take place, this needs further more detailed consideration as there appears to be some risk that some developments could add to congestion elsewhere. Thus the development of alternative sites would involve both planning / environmental costs and transport (congestion) related costs, while the benefits without the Western Peripheral Route could potentially be limited.

4.45 Other constraints are associated with access to staff and lack of journey time reliability. Late arrivals on site by managers and supervisors delay productivity, as health and safety regulations prevent work from commencing unless the designated supervisor or manager is present. Lack of public transport provision for employees is also an issue, especially as construction is occurring throughout the North East and travel to work journeys are widened.

4.46 Although there are no direct impacts on the sector, again, if there is a downturn in the economy as a result of oil-related companies or manufacturing companies relocating away from the North East, the construction sector will mirror this downturn.

Freight Transport and Logistics

4.47 Freight transport and logistics is, like construction, a derived demand – it depends on the level of activity in other sectors and on the structure of economic activity in the region. Movement of goods is important to a large proportion of businesses in the North East, and the remoteness of the region has lead to the development of a large regionally based freight sector, especially in refrigerated transport which is critical for the food sector. Thus any impacts on these industry sectors will directly affect the local freight industry which has grown up to support businesses such as meat and fish production and paper.

4.48 Whilst the freight transport industry is currently incurring large costs as a result of congestion in and around Aberdeen City, these do not have a direct impact on employment or income – the impacts arise through the effects of transport and other costs on the primary sectors such as manufacturing and the oil sector. Indirectly, the transportation sector will lose out if those businesses, which require the transportation of high bulk / low value items relocate from the area or if the focus on Aberdeen as a management and expertise centre within the oil and gas industry diminishes. However, a reduction in costs related to congestion will have a positive impact on the competitiveness within the sector.

4.49 Transportation of goods revolves around the oil, paper and fish sectors. One company estimated costs of £170 per day in terms of lost productive time, wear and tear of vehicles and extra fuel costs, as a result of congestion around Aberdeen. As much of the customer base is local, the key issue is the extent to which the customers can bear paying these extra costs. To the extent that they are unable to do so, there will be a combination of impacts on the manufacturing sector and on the locally based freight sector, where some locally based activity might be replaced by "importing" freight services from businesses located outside the region. However, there was no evidence that this is happening at present, as locally based providers appear to be best placed to try to overcome current problems arising from congestion.

4.50 Other issues are access to labour – there is a shortage of truck drivers, as the oil industry tends to capture the employment market. Extension of the TTWA and easier access to employees could help to alleviate this issue.

4.51 The main benefits will be cost savings from reduced congestion, better customer relations and better working conditions for staff.

Health

4.52 Easy, fast and reliable access to health services is necessary for patients requiring treatment. Grampian NHS Trust has a wide catchment area covering the whole of Grampian region, and the main site, Forrester Hill Hospital, which is located in the north west of the City, experiences 500,000 patients episodes per year.

4.53 These episodes comprise in / out patients and long / short stays. Patients tend to drive or be driven to hospital, partially due to the fact that they are ill (or elderly / young) and also due to the fact that the catchment area incorporates rural and remote areas, where access to public transport is limited.

4.54 Acute services are to be concentrated at the Forresterhill site and two departments in other locations are to be closed and relocated to this site. This will result in an extra 50,000 patient episodes per year at Forresterhill.

4.55 Inpatients are generally visited while in hospital – this adds considerably to the number of trips in and out of the hospital site, the majority of which are currently by car.

4.56 The NHS Trust is also one of the largest employers in the area, with around 7,000 employees at the Forrester Hill site alone. The site is currently experiencing major problems with car parking for employees. There are currently only 2,000 spaces available and charges are now being implemented, the revenue from which will be spent on transportation measures. The Trust is actively involved in promoting public

transport use by employees through a transport strategy which looks at various initiatives, such as car pooling schemes, cycle locker provision, promoting bus services, and other measures.

4.57 As a large proportion of hospital staff are low paid, it is possible that they are deterred from travelling across town and relocate to other employment in peripheral areas. Similarly, skilled specialist staff may be deterred from relocating to Aberdeen. Access to staff, both low skilled and specialist, is limited and there is generally a high turnover of low paid employees.

4.58 The main benefits will be:

- Better access to public transport for patients and employees living outwith Aberdeen (i.e. in the vicinity of Park & Ride sites);
- Low paid employees will be more retainable and specialists will be more accessible;
- Better quality of life for patients and employees; and
- Emergency services will have less congestion inhibiting journeys.

Hospitality Sector - Hotels & Restaurants

4.59 Tourism is a significant sector in both Aberdeen and in Aberdeenshire, and in relative terms, tourism is believed to be a more significant income and employment generator in Aberdeenshire than it is in the City. The business base differs by area however, and in some areas tourism is highly dependent on discretionary travel, which makes its markets vulnerable to factors which could make travel to a particular area unappealing to the potential customer. Transport accessibility is potentially a factor in travel decisions within the discretionary travel sectors.

4.60 The hotel industry in Aberdeen predominantly benefits from and relies on oil-related custom; for example, around 80% of custom at hotels near the airport arises from the oil and related sectors. Any reduction in the size of the oil and gas industry would have an impact on business. Hotels situated in the vicinity of the airport are almost solely dedicated to such business and experience very few leisure tourist stays. Accordingly this element of activity within the hospitality sector can be regarded as a derived demand, and is affected in a similar manner to the freight sector.

4.61 Turning to discretionary areas of business, hotels situated in the centre of Aberdeen accommodate a large number of 1 night stay coach parties during the summer months,

which comprise tours of Aberdeenshire and the Highlands. Bedroom occupancy rates are slightly higher than the Scotland average at around 60%[15].

4.62 There is a lack in the number of high quality hotels in the City and surrounding area, which does not accommodate attendees of high profile conferences and exhibitions held in Aberdeen.

4.63 The main constraints in relation to transport are competition, access to labour, staff stress and the image portrayed to visitors. Congestion causing delays between the airport and City Centre present an unattractive image to first time visitors and may deter them from returning. Stress and delays for employees travelling to work is an issue, especially for low paid employees, who can easily choose to change jobs.

4.64 Tourism in the North East is emerging as an important economic sector, as it is estimated that it injects around £450 million[16] (combined day visitor and tourist markets) into the Aberdeen and Aberdeenshire economies annually. Around 20,000 people are directly employed in tourism-related activities. Grampian received 1.67 million trips, 6.3 million overnight stays in 2001, of which 92% were from UK-based visitors.

4.65 **Business tourism** injects approximately £125 million into the economy annually. A survey of business tourists (240 in total) undertaken in 2000 revealed that around 50% of all business trips were associated to the oil and gas sector[17]. 73% of those visiting in relation to this sector came from overseas and 79% were attending a conference or exhibition. The most common origin for business trips is England, with around 50% of business trips to the North East originating from here. A quarter of trips originate in Scotland and 22% from overseas. The average length of stay was in 1999 2.3 nights for business trips and 65% of visitors travelled by air to Aberdeen. The majority of business tourists visit and stay in the City of Aberdeen. When asked to state weaknesses of the area, transport problems received a number of responses, although 48% of interviewees felt that they disliked nothing. See Table 4.4, which presents some of the main responses.

TABLE 4.4 BUSINESS VISITORS' DISLIKES

Item	% of Surveyed Business Tourists
Weather	13%
Inadequate road system	7%
Towns too congested/crowded/traffic	5%

[15] Tourism in Aberdeen and Grampian (2000), VisitScotland.

[16] ONS, UK Tourism Survey, International Passenger Survey and Leisure Day Visits Survey estimates.

[17] Grampian Visitor Survey 2000, Scottish Enterprise Grampian.

Poor public transport	2%

4.66 79% of those surveyed had already visited the area whilst 21% were on their first visit to the area. Business tourists spend an average of £93.00 per person day (in comparison to an average spend of £36.00 per person day for all visitors).

4.67 The North East possesses many attractions for **leisure visitors / tourists**, such as castle and whisky trails, sports and the unspoilt countryside and environment. Around 40% of leisure visitors originated in Scotland and 30% in England, with overseas visitors totalling 23%. People visiting friends and relatives amounted to 23%, and on average this segment accounts for £60 million towards the local economy.

4.68 On average visitors spend 5.4 nights in Grampian and spend around £36.00 per person per day. The main form of transport for leisure visitors was the private car, with 67% of those interviewed using this mode. Visitors to Aberdeen City alone were more likely to use other modes, with 35% using air, 15% train and 11% bus. Once in the area 72% of visitors used the private car.

Impacts on Tourism

4.69 Current constraints to tourism are:

- Lack of good quality 5 star hotels:
  - Visiting business tourists from overseas do not have a great choice of good quality accommodation;
  - Conferences and exhibitions many be deterred from using Aberdeen as a venue;
- Congestion in and around Aberdeen City Centre:
  - As most leisure tourists are car-borne, the transport infrastructure does not facilitate movement in and around Aberdeen;
  - Aberdeen appears less attractive to first time visitors;
- Lack of public transport:
  - A lack of public transport between peripheral towns and the City Centre results in extra car trips.

4.70 While transport does play a role, and in particular could affect the discretionary markets, the work undertaken in the study did not confirm that access is presently causing hotels and other businesses to lose potential custom. However, it is extremely difficult to research such impacts as it involves finding out about visitors who did not come to the region: this was beyond the scope of the STAG 1 work.

4.71 The implementation of the Modern Transport System will have the following impacts:

- Better access to Aberdeen City through improved public transport (Park & Ride sites, improved rail services and other bus priority measures, both for visitors on holiday in the surrounding areas and for inhabitants in the surrounding areas;
- Less congestion in the City Centre as a result of the Western Peripheral Route, which will ease congestion;
- Pedestrianisation of some City Centre areas will make Aberdeen more attractive to visitors, especially for shopping purposes; and
- Increase the number of day visitors from within the North East into Aberdeen City Centre.

4.72 As the oil and gas industry prepares for a steady although slow decline, tourism will become one of the main sectors in the area. It is therefore essential that the future of this sector is maintained and enhanced in every way possible – a sufficient and reliable transport network, both in terms of road infrastructure and public transport, is a necessary element in this process.

4.73 The current strategy for the area is geared toward a 15% increase in all-year round tourism by 2007, with investment of over £3 million over a period of 3 years. Two of the main target areas are:

- High quality short breaks for +45 visitors; and
- Business conference market: through capitalising on the region's oil, gas and science expertise.

4.74 To be able to attract more visitors, in particular business visitors through international conferences and exhibitions will hinge on Aberdeen remaining an 'attractive' location and able to compete with Glasgow, Edinburgh and locations in England.

5. SUMMARY OF IMPACTS

Introduction

5.1 Chapter 4 presented the scale and significance of impacts by sector followed by a short description of each economic sector. This Chapter presents a summary of the main impacts and which sectors are prominently affected.

Impacts on Economic Sectors

5.2 The analysis concludes that 6 economic sectors are most likely to be impacted upon through the implementation of the **Modern Transport System** as a whole. These, and the main impacts relevant to each, are:

- Oil & Gas / services (recruitment);
- Fish (movement of goods);
- Paper (movement of goods);
- Retail (increasing customer base); and
- Hospitality (increasing customer base).

5.3 It is our judgement that much of the food processing sector and other parts of the manufacturing sector would also be likely to experience the same types of impacts as other manufacturing and processing industries such as fish and paper. However, the surveys undertaken with companies in this sector did not identify either large impacts in terms of scale or in terms of significance for business / economic behaviour. This could reflect the responses of individual companies selected for the survey; however, it could also reflect the fact that logistics within the food sector are generally highly sophisticated, and as a consequence add-on costs due to local congestion might be largely "planned out" by companies in this sector. It is suggested that additional research would be useful in this regard at STAG 2 level.

5.4 Table 5.1 presents a matrix of impacts by sector, which shows to what extent each impact affects each sector.

TABLE 5.1 SCALE AND SIGNIFICANCE COMBINED

Sector	Work time saved	Recruitment / Retention Local	Recruitment / Retention Other	Transport Cost of Goods (Outward)	Transport Cost of Goods (Inward)	Increased Customer Base	Modern Transport System	WPR only
Oil & Gas Exploration								
Oil Services								
Fish Processing								
Food Processing & Manufacture								
Paper								
Retail								
IT								
Construction								
Transportation								
Tourism								
Hotels								
Health								

Significance of Western Peripheral Route Only / Modern Transport System

5.5 The Western Peripheral Route by itself is significant to sectors that require movement of goods either within the North East or for movements between the North East and other areas. It is especially significant to those that will be impacted on as a result of the costs associated with movement of goods. Sectors which would benefit from the implementation of the Western Peripheral Route **alone** are:

- Fish;
- Paper;
- Food Processing; and
- Oil services.

5.6 It is likely that other parts of manufacturing would also benefit from the Western Peripheral Route directly, and other sectors such as haulage providers would also potentially benefit indirectly

5.7 In addition, 3 sectors where demand is at least in part derived from other sectors *would potentially also benefit primarily from the Western Peripheral Route, namely*

- Transportation;
- Construction; and
- Hospitality.

5.8 Other sectors would benefit more from the implementation of the Modern Transport System as a whole. This is due to the need for integrated and efficient public transport, which is related especially to staff retention and relocation, which are the key issues for some sectors. This will depend on the location of companies within the travel to work area and accessibility to the various elements of the Modern Transport System. Key sectors in this instance include public services, where large numbers of people are employed and access to a wide pool of labour is essential.

5.9 No real preferences were indicated during the surveys with regard to particular legs of the Western Peripheral Route.

Role of the Modern Transport System

Extension of Labour Market

5.10 As mentioned previously, the labour market in the North East and in Aberdeen in particular is extremely tight. The implementation of the Modern Transport System as a whole will first enable additional / longer distance / more flexible car commuting

which will effectively expand the labour catchment area and the choice available within it for employers; in addition it will both increase access to jobs and training for residents in socially excluded areas, and also open up greater opportunities for job search and work for people currently in jobs at the lower end of the wage spectrum.

5.11 Unemployed and employees in lower paid jobs will gain greater access to a wider range of employment possibilities primarily through the elements of the Modern Transport System other than the Western Peripheral Route. From the employer perspective, this will reduce the pressures on recruiting and retaining employees in sectors such as hospitality, retail and the health sector, which employ large numbers of low paid low-skilled staff.

5.12 This will not necessarily expand the number of jobs on offer but should help to reduce costs such as recruitment and loss of output due to unfilled vacancies.

Quality of Life / Stress / Image

5.13 Many companies felt that quality of life and the image of the North East would be improved through better transport infrastructure. Whilst this does not in itself result in any direct impacts in terms of additional jobs, it does enhance the overall image of the North East and of Aberdeen in particular, especially for those people and businesses that might consider relocating to the area.

5.14 It is also strongly linked to retention of local staff and many companies stressed that the quality of life for their employees was an essential element in retaining them as employees. The benefits here are similar to those noted above.

Qualitative / Quantitative Impacts

5.15 It is possible to offer an initial quantitative assessment of two economic sectors, namely fish processing and paper. These impacts are based on a comparison of what is likely to arise if the Modern Transport System is implemented compared with what would happen if it is not implemented (ie the do-minimum scenario), and show how the Modern Transport System will impact on employment and income. For other sectors it is possible to present only qualitative impacts.

5.16 Table 5.2 presents a summary of impacts by sector for the Modern Transport System as a whole, both qualitative and quantitative.

5.17 It should be noted that the principal quantitative impacts, which accrue mainly from safeguarding jobs in the (relatively fragile) paper and fish processing sectors are due primarily to the Western Peripheral Route element of the Modern Transport System.

The other, smaller qualitative impacts, which are more positive in that they represent potential new employment and / or an enhanced distribution of employment, arise from the other elements of the Modern Transport System, which impact particularly through the labour market.

5.18 There are also potential land use impacts which according to our interviewees depend not only on transport investment but also on planning decisions regarding green belt development and use of land accessed by the Western Peripheral Route. The development industry typically seeks to develop the easiest and potentially most profitable options first and it is understandable that they are keen on greenfield sites at major transport nodes. While development would not automatically follow development of the Western Peripheral Route, therefore, it is likely that there would be additional interest in sites at Western Peripheral Route junctions provided planning and local access issues are addressed.

5.19 The sectoral and land use impacts are areas for further investigation when taking the appraisal to the STAG 2 stage.

TABLE 5.2 MODERN TRANSPORT SYSTEM: QUALITATIVE AND QUANTITATIVE IMPACTS

Economic Actor	Qualitative Impacts	Quantitative Impacts
Manufacturing		
- Paper	Congestion adds significantly to costs of businesses located north of the city. Gross margins are low in much of this industry (accounting for approximately 1000 – 1500 direct jobs in this industry) and additional transport costs due to local congestion account for a sizeable proportion (15 – 20%) of gross margin in companies surveyed. Accordingly businesses are under threat of lower future investment by parent / group organisations due to poor and falling margins. Even without transport costs margins and employment are under threat due to foreign and English competition and therefore the base case is one of decline in employment but sustained GAV.	Potentially the Western Peripheral Route element of the Modern Transport System could safeguard 1000 – 1500 direct jobs plus 500 – 750 indirect and induced jobs: sector generates large demand for goods transport which is met largely by locally based businesses.
- Fish Processing	Congestion adds to operating costs and reduces gross margins of companies in this sector, which is also currently coming under pressure from potential catch limits. The catching scenario makes establishing a base case here very problematic, as there is some scope for diversification of fish types / sources and for some businesses to move up the added value chain. It is clear that costs added by congestion will worsen whatever the future scenario will be, but only very rough ballpark quantification of this is possible at this time. Currently there are 4,000 direct jobs in processing: if 15 - 20% were at risk because of costs / margins factors this would represent 600 - 800 direct jobs and potentially a further 300 - 500 indirect and induced jobs.	Potentially the Western Peripheral Route element of the Modern Transport System could safeguard 600 - 800 direct jobs plus 300 - 500 indirect and induced jobs: this sector generates a large demand for refrigerated goods transport which is met largely by locally based businesses.
- Food Processing	The survey did not identify impacts as businesses selected for survey were in high added value segments of this sector. At the aggregate level it is likely that large segments of the industry suffer from similar problems to those in fish processing. Therefore although the survey did not identify any potential impacts, it is likely that there will be impacts similar to those in the fish processing and paper sectors. Impact is difficult to quantify without further survey data. Where added value products are produced, there is little impact as profit margins are higher and branded goods can command higher prices which enable added transport related costs to be absorbed more readily.	Not quantified: sector employs 4,700 in 120 companies.

Oil Exploration & Production	Impact on recruitment both locally and externally. Local pools of labour will be more easily accessed, especially to the south and to the north of Aberdeen – medium impact. Less congestion and accessible public transport will benefit those considering relocating to the area, through increased quality of life, more choice of dwelling and less time spent travelling to work – minimum impact. Although transport costs are high as much equipment is transported to and from offshore platforms, the land transport costs are small in comparison to marine and base costs. Therefore companies saw little impact on business performance. Given the changes occurring in the industry, it may be that local managers are reluctant to accept that costs incurred may have a detrimental effect on business and are at all costs trying to remain in control of operations in the area. Lack of available land is presenting a barrier to several large companies who are wishing to relocate or reconsolidate within Aberdeen. This would be relaxed through the implementation of the Western Peripheral Route and it is likely that land for further development would be opened up. Whether or not current constraints on expansion could lead to companies choosing another location is not known. This would require discussion with senior managers of the companies in other locations, probably Houston or London.	Minor benefits in terms of reduced costs associated with recruitment. Potential medium term impacts in retaining higher level business functions in Aberdeen, which require efficient consolidation of activities to single sites.
Oil Services	This is largely a derived demand as activity depends on the production and exploration sector. Impact on recruitment both locally and externally, as with large oil companies. Transport costs impact on this sector as they incur loss of working time and extra overtime costs as a result of goods being delayed in congestion. However, this cost is usually borne by service providers within fixed price contracts with the oil companies and does not have any impact on business performance other than an incurred cost – medium impact.	No employment impacts.
Locally Traded Services (excluding retail)	Number of customers with access to city centre will increase through better public transport and less congestion. Access to low skilled labour will increase through better public transport. This will help retention of staff and possibilities for the unemployed to become employed – high impact.	Scope for mainly distributional impacts with city centre gaining at expense of peripheral areas; also some limited scope for reduced leakage of expenditure to neighbouring regions.

Day trips / Shoppers	Additional research required: impacts are expected to be largely distributional and will depend upon the scale and type of developments which take place at current and potential sites around the Western Peripheral Route. Large-scale development of retail especially at Western Peripheral Route junctions would tend to attract trade from both city centre and peripheral towns. Very limited impacts in terms of reduced leakage of expenditures to other regions.	Mainly distributional impacts, dependent on new developments associated with sites on / near Western Peripheral Route.
Tourism	The North East relies on business tourism more heavily than other areas in Scotland, as a result of the oil related activities in the area. Any adverse impacts on industries in the area will affect business tourism in the North East, which currently injects over £100 million into the economy each year. Such tourism is therefore a derived (non discretionary) demand. Leisure tourism is generally related to activities around Aberdeenshire and tends to attract car borne visitors, with around 80% of visitors arriving in the area by car. The Modern Transport System will improve access to the city centre from outlying areas, and the Western Peripheral Route will provide better transport infrastructure for these car borne visitors. Improvements in public transport and congestion levels will assist in improving the image of the North East and its ability to attract repeat visits. Current strategies aim at the short break market and attracting international business conferences and exhibitions to the area. Businesses north and east of Aberdeen seeking to attract short breaks might benefit from an expanded geographic catchment area, as a high proportion of business comes from within 2 –3 hours drive time area.	Marginal potential benefits arising from expansion in short break catchment / drive zone.
Inward / Mobile Investment	This is an increasingly competitive market in which numbers of projects has declined while competition has increased. The Western Peripheral Route might enable more attractive sites to be developed but this is also geared to green belt and other policies as well as to regional development strategy and the activities of Scottish Enterprise Grampian. The Modern Transport System might also facilitate some relocations / retentions of existing businesses to new sites which are more readily tailored to needs of businesses already in the region but seeking to re-locate / consolidate activity.	Positive impacts but quantitative assessment not practical.
Transportation	Derived demand. Survey of providers confirms findings from other interviews and impacts are covered by sector reviews.	
Construction	Derived demand – level of activity covered within other sectors.	

Social Areas	Inclusion	Better public transport for areas of high unemployment will enable other programmes aimed at reducing social exclusion to deliver more, mainly by expanding labour catchments within the city and its immediate hinterland.

The area below this line is reserved for Appendices and the Control Sheet

CONTROL SHEET

Project/Proposal Name:	ECONOMIC AND LOCATION ACTIVITY IMPACT STUDY
Document Title:	Final Report
Client Contract/Project Number:	
SDG Project/Proposal Number:	205097
Document Number:	

Originator:	AMG	
Other Contributors:		
Review By:	Print:	JBS (PROJECT DIRECTOR)
	Sign:	

ISSUE HISTORY

Issue No.	Date	Details
2	April 2003	

DISTRIBUTION

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