Levenmouth STAG Update
Reference number 103405




LEVENMOUTH SUSTAINABLE TRANSPORT STUDY - STAG REPORT APPENDICES


SYSTRA

APPENDICES

APPENDIX A – Initial Appraisal (Part 1) Consultation Note

INFO NOTE

LEVENMOUTH STAG

STAKEHOLDER WORKSHOP

IDENTIFICATION TABLE	
Client/Project owner	Fife Council
Project	Levenmouth STAG
Title of Document	Stakeholder Workshop
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1. INTRODUCTION

1.1.1 Participation and consultation are key elements of a STAG study and ensure the interests of stakeholders are considered in an inclusive, open, transparent and appropriate manner. In particular consultation is useful in the identification and analysis of transport problems and opportunities which forms the starting point of any STAG study.

1.1.2 For this purpose, a stakeholder workshop was held with representatives from Fife Council, Transport Scotland and SEStran. Fife Council attendees included representatives from Economic Programmes and Policy, Town Centre Development, Area Services, Structures Asset Management, and Transport. In addition, a public and employer's consultation exercise will also be held to include comments from the public and other local stakeholders.

1.1.3 The half day workshop was held on Friday 12th June 2015 at the Fife Renewables Innovation Centre (FRIC) in Methil. Following a brief introduction to the study the attendees were encouraged to discuss Strengths, Weaknesses, Opportunities and Threats under various topics: Land Use and Development, Road, Public Transport and Freight. The following section summarises the points raised under these headings and these will contribute to the identification of problems, opportunities and transport planning objectives. Options which were discussed at the workshop have also been included.

1.1.4 This note also provides analysis of one-to-one consultation, the public survey and business survey.

2. LAND USE AND DEVELOPMENT

2.1 Strengths

- Major employers in the area include Fife Council, Diageo and Sainsbury's. Sainsbury's accounts for 76% of Convenience Turnover in the wider Leven town centre area[1].
- The area benefits from proximity to East Neuk (e.g. tourism).
- Leven is the amenity centre for Buckhaven, Methil and the surrounding settlements serving a catchment population of at least 38,000, and a large part of the East Neuk to the North East.
- The whole of Fife benefits when the golf Open is held at St Andrews.
- There are active mode connections to Diageo site – supported by Diageo.
- Half a million people access the coastal path network.

[1] Source: Fife Retail Capacity Study 2014, MF Planning/ CH2M Hill, Appdx B

2.2 Weaknesses

- Diageo expanded site in Kirkcaldy, not Levenmouth. Diageo expanded its bonded warehouse/distribution provision off the A92 North of Kirkcaldy.
- Limited range of industrial units and workshops available, which could be limiting expansion of businesses.
- There is not a big enough draw/critical mass to attract tourists to area.
- Recent increase in vacant space on High Street.
- Social deprivation disparities in local area – Levenmouth vs. Lundin Links/Lower Largo[2].
- St Andrews and North Fife set to benefit from V&A Museum in Dundee, Levenmouth unlikely to benefit.
- Transient workforce in Energy Park largely commuting into the area by car for short periods of time.
- Current skills of labour market in Levenmouth not suitable for the Energy Park leading to influx of skilled professionals.
- Shift working at Diageo and other local employers means that travel to work times do not necessarily match with standard public transport peak provision. This means that services may not be attractive to these users.
- Limited inward movement of population to housing; most movement of residence is by people already living in the area.
- Health links to social deprivation.
- Low housing vacancy rate.

2.3 Opportunities

- Energy Park is the main draw for employers.
- Power station site – long term potential as a recreation/activity site, although this is currently contaminated land.
- Potential benefits from Edinburgh City Deal.
- Connections to the airport key to employers and residents.
- Fife College campus focusing on improving local skills suitable for Energy Park employers.
- Leven offers peripheral support for Aberdeen (oil industry).
- Access to the East Coast Mainline and Aberdeen in particular would be beneficial to local economy.
- The tourism and energy industries are growth sectors in Fife. The Levenmouth area has aspirations for growth in both the sectors, with the opening of the Energy Park and the abundance of leisure and recreation resources in the area, in particular towards the East Neuk.
- New Levenmouth joint high school and Fife College campus to replace Buckhaven and Kirkland High Schools.
- Low Carbon Investment Park – investment site located in Buckhaven offering industrial and commercial land as part of the Levenmouth Strategic Development Area. Funded under Scottish Government's Tax Incremental Financing initiative.[3]

[2] Whilst Levenmouth has pockets of relative wealth, and has seen significant commercial investment by Diageo & in the Fife Energy Park in recent years, poverty & inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland

[3] Follow-on research found that this will offer 15ha of industrial and commercial land. Funded by Fife Council, Scottish Enterprise, and the European Regional Development Fund.

2.4 Threats

- Diageo is streamlining their workforce resources; workforces are smaller yet turnover is increasing.
- Traditionally Leven town centre has a low vacancy rate, however, there has been a recent change in profile.
- A high level of skill sets required for the employment available at the Energy Park.
- Employment and educational skills in the area are declining.
- The area is losing independent retailers.
- There may be a perception that Levenmouth is 'out of the way' both for residential and commercial purposes. It is likely that major changes will be required to break this perception.

3. ROAD

3.1 Strengths

- The A92 provides a strong connection to the south.
- Easy access to Markinch station (by car) and parking.

3.2 Weaknesses

- Generally poor connectivity across River Leven between Methil and Leven (in particular, weak bridges).
- Bawbee Bridge, which extends over the river Leven between Leven and Methil is one of the biggest road issues in the area:
    - An 18T weight restriction is in place for crossing vehicles.
    - This therefore restricts the movement of many HGVs and buses.
    - This weight restriction is an issue for local businesses moving freight.
    - Restrictions impact on road, economy and public transport provision.
    - Solutions for the bridge are very expensive and would absorb a large proportion of the locally available budget.
    - One of the remedies for the bridge would be to lower its arch, which would write off rail access underneath as an option via the discontinued Levenmouth rail line.
- Poor access onto A92/A915.
- Congestion at Kennoway when events are on.
- Traffic congestion impacting on public transport reliability and journey times.
- Parking locations don't suit current town centre operations.
- Standing Stane Road issues – high level of HGVs leads to reduced speeds, frustration and accidents ultimately.
- Congestion at Kirkcaldy East (commuter flow).
- Farm traffic on the road network impacting on speeds.
- Abnormal loads routing through residential area.
- Congestion coming through Levenmouth en-route to East Neuk.
- Parking for contractors.

3.3 Opportunities

- Levenmouth Link Road (road identified in the LDP to link economic regeneration sites).
- All day parking at the promenade for use as an unofficial P&R for bus services.

- Potential car park site at former Gasometer near Riverside/Burnmill.
- There has been discussion of provision of a shared space traffic arrangement at the shorehead carpark, this could encourage use for farmers markets and other community uses, for taxi use, and for links to the bus station.
- The Forth Replacement Crossing may improve connectivity to Edinburgh.
- Location of Stagecoach depot.

3.4 Threats

- High cost of repairs to Bawbee Bridge.
- If Bawbee Bridge gets weaker the weight restriction will be lower.

4. PUBLIC TRANSPORT

4.1 Strengths

- 50p concessionary single rail fare available within Fife, £1 return (with National Entitlement Card).
- Few complaints about local bus network.
- TaxiCard – mobility service.
- Free station parking at Kirkcaldy and Glenrothes[4].
- Direct bus access to Markinch and Kirkcaldy rail stations.
- Express buses stop near rail stations.
- Real time information available (on apps, not at bus stops).
- Good supply of Park and Ride facilities in Fife.
- Local buses are regarded as providing a reasonable service.

4.2 Weaknesses

- There are connectivity issues through Buckhaven and Methil, as heavier buses (>18T) cannot cross Bawbee Bridge, due to weight restrictions, and route along the A915.
- Fife rail fares are higher than the Scottish average, and while Markinch is the closest connection to the rail network from Levenmouth, fares are far more expensive than Kirkcaldy for trips to Edinburgh in peak periods.
- Reliability of journey time is an issue for existing bus services, as they are impacted by general traffic across the network. This is a particular issue for long journeys where connections may be required.
- There is also poor public visibility of timetabling information, and access to real time passenger information (RTPI) is no on-street or on bus; however, the SEStran RTPI is available via smartphone, but is just not well known.
- Pricing structure of rail fares in Fife.
- No rail network.
- Quality and suitability of buses for the network.
- No Levenmouth park and ride facilities; this is disappointing given the good provision across the rest of Fife.
- Poor connections to Cupar.
- Access to major employment sites in Fife, such as the Amazon facility at Dunfermline are difficult to access by public transport.
- Poor public transport access to Edinburgh airport.

[4] Parking occupancy is nearing capacity at Kirkcaldy station (Fife Council parking counts. 86% and 72% occupancy at station car parks – Friday, June 2015)

- Although there are connections to Edinburgh via express bus, these are affected by peak traffic and have a long journey time. The journey times are much poorer than the comparative rail times via interchange with rail at Markinch, Thornton or Kirkcaldy.

4.3 Opportunities

- Establishment of a Quality Bus Partnership is an avenue for exploration.
- There are negative perceptions about interchanging which could be addressed through education.
- Potential Levenmouth bus park and ride.
- Current investment in bus stock.
- Poor promotion/use of ticket integration which could be improved through education.
- The existing infrastructure from the discontinued Levenmouth rail line represents an opportunity for rail provision to the area:
    - Land has been identified as suitable for a rail freight halt.
    - There may also be the opportunity for passenger rail provision to the area, with potential sites existing along the discontinued line.
    - Rail may make the area more attractive, and make access to jobs (in particular better paid jobs) in Edinburgh more viable.
- Maritime link to Edinburgh.
- Park and ride to access existing express bus routes.
- Better promotion of public transport routing and timetable information.
- Use of the real time information app could be used to improve service reliability.
- Public transport connections across the Forth will be enhanced by the Replacement Forth Crossing, allowing bus priority over the existing Forth Road Bridge.

4.4 Threats

- Stagecoach are investing in bus stock, but the move to double axle buses means fewer services can cross the Bawbee Bridge with the current weight restrictions.
- Bawbee Bridge weight restrictions could become tighter.
- Competition from other local areas for attractive services to stop in the area and for investment in public transport in the area.

5. FREIGHT

5.1 Strengths

- Diageo consolidate loads and operate a two way freight movement (raw materials in, product out). Each of these makes rail freight more viable.

5.2 Weaknesses

- Diageo operate two sites with different logistical planning requirements.
- A large amount of HGV traffic is routed along the A915.
- Limited overnight HGV parking available (closest stop is Kirkcaldy).
- There are high capital costs of freight handling.
- If freight is outsourced then it can be difficult to influence.
- Farm traffic on the local network impacts of road speeds and congestion.
- Commercial confidentiality issues may limit discussions on freight movements.

- Abnormal loads produced by the Energy Park make standardised freight planning difficult.

5.3 Opportunities

- Diageo operate long distance freight movement which could benefit from rail.
- Freight currently operates to Earl Seat however only one path per day is available on the north circle.
- Abnormal loads cannot cross Bawbee Bridge.
- WH Malcolm have previously engaged in rail freight discussions.
- Potential maritime link from Methil to Grangemouth.
- Methil Docks are currently underused.
- There may be potential for freight movement by other companies besides Diageo, such as Donaldson's Timber or Sainsburys.

5.4 Threats

- Previous discussions on rail freight between Diageo, WH Malcolm and Network Rail ended due to costs associated with bridge repairs and the cost of crane provision.
- Freight train paths are limited on the Fife Circle.

6. BEYOND TRANSPORT

6.1 Strengths

6.2 Weaknesses

- 90 minute DWP travel sanctions - public transport journey times affecting the available job market.
- Costs and journey times associated with accessing Job Centre in Kirkcaldy (for East Wemyss residents)
- Low car ownership in the area means that individuals are reliant on the public transport system to meet their needs.
- High youth unemployment rates.

6.3 Opportunities

- None raised due to time constraints.

6.4 Threats

- None raised due to time constraints.

7. ACTIVE MODES

7.1 Strengths

- Core path network - both coast and inland routes which bring people through the area.
- Distances not too great for internal movements.

7.2 Weaknesses

- Some foot/cycle connections in the areas are incomplete, meaning that on some stretches of road with fast travelling traffic, people can be seen walking on grassy banks at the side of the road where no footbath exists.

7.3 Opportunities

- Investigate use of cycle parking at stations.
- SUSTRAN investigating a cycle link between Leven and Cameron Bridge along the riverside.
- Pilgrim Path is in the 2nd round of funding. Kennoway is the closest intersection.
- There is the opportunity to establish resources at Silverburn Park, on the edge of Leven, as a comfort stop on the Coastal Route.

7.4 Threats

- None raised due to time constraints.

8. FURTHER COMMENTS

- All day parking available – no charge
- What is the level of infrastructure funding available across Fife? Is Leven getting its fair share?

9. FURTHER STAKEHOLDER MEETINGS

9.1 Fife Chamber of Commerce - Eric Byiers

9.1.1 Ralph Anderson and Claire Mackay met with Eric Byiers of Fife Chamber of Commerce on June 30th. The following key points were raised in the discussions:

- Fife Chamber of Commerce is particularly interested in improving physical and electronic connections for businesses.
- Connections to Edinburgh Airport important psychologically and for businesses.
- Levenmouth businesses and residents have a sense of being removed from the network. The psychological impact of improving the connection to other parts of Fife, Edinburgh and Dundee is important.
- Options:
  - Improved road network. Full dualling would be required but this would be an expensive option.
  - Reinstatement of rail connection with a depot located in Levenmouth.
- Training residents to work in the industries currently in the renewable park is not necessarily the correct approach.
- Resilience and diversity in the labour market is important to protect against any large, local, business closures.
- Recent hotel closures in East Neuk could provide an opportunity for Levenmouth to exploit.
- Connections to Dundee are also important and may open up tourism opportunities.
- People movement regarded as more important than freight movement.
- Potential maritime freight movement from the docks. Need to consider the sea boundary and the requirements for different vessels.

9.2 Network Rail

9.2.1 Network Rail provided written contribution to the consultation and proposed further contact if a rail option is taken forward. The key points from Network Rail's submission included the following:

- A review was undertaken of the previous STAG which highlighted a number of points:
  - The line of route was only reviewed to the limits of the freight facility
  - There are a number of structures on the route which require full assessment
- The reinstated freight line is for 1 train working only on the branch line at 20mph
- Currently only the mainline connection is signalled
- Track only designed and built for freight traffic, would need rebuilt for passenger traffic to run

9.3 Stagecoach

9.3.1 Claire Mackay and Ralph Anderson met with Stagecoach on July 7th. The following key points were raised in the discussions:

- The local number 7 service and express services are well used in the area.
- Unlike other areas in East Scotland the Levenmouth area has not seen a recent decline in patronage on local services.
- The Glasgow express service has recently been moved to the A915 due to Bawbee Bridge weight restriction issues.
- No regular journey time reliability issues (other than roadworks) although Redhouse roundabout at peak times can cause issues for Markinch and Glenrothes services.
- Local services have been tweaked over the years to regularly improve them.
- Recent growth on the network has been with Glasgow, Edinburgh and Glenrothes. Fife to Edinburgh West services have been trialled over the years with low demand but travel to central Edinburgh continues to grow strongly.
- Planned investment in the buses/coaches may impact on routing over the Bawbee Bridge. The Bawbee Bridge has a weight restriction of 18 tonnes and new express coaches may be over this weight. If the new coaches are assigned to services through Levenmouth then this could impact on routing. Currently the Edinburgh express service is the only one on the network which doesn't offer toilets.
- Double decker and single decker local services are below the weight restriction and can operate on the local services.
- Journey time technology is currently being installed on Stagecoach services and data will be available in September.
- Speed bumps though Wemyss impact on journey times but no major concerns.
- No crowding issues on express services at Levenmouth although crowding may occur on approach to Forth Bridge.
- Would expect the express network to develop further.
- The Stagecoach website will be relaunched shortly. This will be followed by an app which will provide real time information, journey times, bus arrivals and the ability to buy tickets through the app.
- Stagecoach are planning on raising the profile of the One Ticket travel scheme and potentially investigating including Dundee in the scheme.
- Bus shelters in disrepair, especially west of Bawbee Bridge.

9.4 Abellio

9.4.1 Abellio provided a written response to the request for input to the study. The key points put forward by Abellio are detailed below:

- Current Edinburgh – Fife service (as specified in the Transport Scotland Service Agreement including the mandated start and end of work services to and from Tayside):
  - Four trains each hour operate between Edinburgh and Fife.
  - Two Fife Circular services each hour, one clockwise, and one anti-clockwise;
  - One Edinburgh – Cowdenbeath service each hour, and
  - One Edinburgh – Kirkcaldy service each hour which actually operates through to Glenrothes for operational reasons
- The start of work services mainly commence their day on Tayside, providing early journey opportunities from Dundee and Perth. Similarly, at the end of the day, the services from Edinburgh are extended to Dundee / Perth; again affording late night opportunities to travel home.
- Services are currently operated by a mixture of Class 158 and class 170 Diesel multiple Units (DMU) supplemented by 2 off loco-hauled trains operated in the morning and evening peaks.
- The DMU are currently maintained at Haymarket depot in Edinburgh. The trains are serviced (washed, cleaned and fuelled) at Edinburgh (Haymarket) and Perth each night. Dundee only has facilities to undertake internal carriage cleaning.
- All services in Fife are worked by traincrews based at Edinburgh, Perth, Dundee and Aberdeen. This is likely to remain the case going forward to ensure our staff competency on the routes and diversionary routes is applicable to being able to work trains through Fife.
- Abellio are keen to be informed of any detailed demand travel to/from any proposed new stations including time of day, day of the week, and origin /destination etc. In particular Abellio are keen to understand the proposed journeys to and from Kirkcaldy.
- Abellio have no requirement/commitment to provide new services, and these would be subject to a Franchise Variation as instructed by Transport Scotland.
- Abellio propose that service provision would be based on providing a new service or extending/diverting an existing service.
- Abellio confirm that all existing peak services from Fife are at capacity and therefore any additional passenger numbers from station(s) on the Leven branch travelling to and from Edinburgh in the peak periods would need to be accommodated in additional rolling stock procured for the service.
- An estimate of the additional rolling stock and crews required would need to be undertaken.
- There are no current plans to provide a Fife based traincrew / stabling facility – this has been reviewed previously, and was found not to be economically viable. Should any change to this be required on the basis of services being introduced on the Leven line, these changes would need to be funded (both Capex and Opex) from the line opening proposals (and this would include any facilities required at Leven station for train servicing).

9.5 Savills – Simon Heriot

9.5.1 Claire Mackay spoke with Simon Heriot of Savills regarding the Wemyss Estate. Savills is advising the Wemyss Estate on major housing proposals in Fife. Two separate proposals will

see nearly 2,000 houses delivered over a 15 year period, alongside new business facilities, a new community high school, retail and leisure facilities. Savills advised that they are also currently at the consultation stage and provided details of the Strategic Framework which gives an indication of phasing.

9.6 Fife Council Structures team

9.6.1 Fife Council structures team have a site visit to Bawbee Bridge planned for July 29th. There are two potential outcomes:

- Bridge standard is as before and weight restriction will remain the same
- Further degradation which may result in a further lowering of the limit and potential repair works

9.6.2 The bridge is not capable of transporting HGVs (44t) however repair works or a new structure may allow this restriction to be removed to allow the new Stagecoach buses to travel over the bridge. This will be considered by the Fife Council structures team.

9.7 WH Malcolm

9.7.1 David Prescott spoke to Ronnie McCrone of Malcolms regarding the possible operation of a freight terminal to serve freight users in the Levenmouth area. A lot of work has been carried out to assess what is required to serve this market and terminal designs and locations have been explored. Progress is currently stalled because of the need to develop a commercially viable train operation, which has not yet been achieved. However on-going work is taking place which it is anticipated will deliver the required viability. A service level of two trains a day is suggested, which should be possible on the Leven branch as long as appropriate signalling is installed.

9.8 Business survey

9.8.1 22 businesses responded to the business survey which was distributed using the Fife Council and Fife Chamber of Commerce business contact details for businesses in Levenmouth and East Neuk. 65% of the companies responding are based in Leven or Methil with the remaining businesses located in Lundin Links/Lower Largo/Upper Largo and rest of Fife. The businesses cover a wide range of activities including finance, retail, training, education and transport. 96% of respondents represented businesses with fewer than 50 employees, 35% are sole traders.

9.8.2 9.8.2 presents the views on the existing public transport options within the Levenmouth area. Respondents were asked for their views on the existing public transport options within the Levenmouth area and particularly employee access, supplier access and customer access to the business Thirty percent or more respondents strongly disagree or disagree with each statement that existing public transport services meets the needs of the business. In particular, 65% of respondents disagreed with the statement that public transport services allow access to existing or potentially a new, customer base and a further 47% disagreed that existing public transport allowed for connections between the business and customer base. 31% agreed that public transport services limit the business's ability to expand.

9.8.3 Views of existing public transport options

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE	N/A
Public transport meets my needs for staff commuting to/from work.	30%	0%	13%	22%	4%	30%
Public transport meets my needs for customers accessing the business.	30%	17%	13%	22%	4%	13%
Public transport meets my needs for contacting suppliers.	26%	9%	26%	9%	0%	30%
Public transport meets my needs for travelling to other branches of my organisation.	26%	9%	17%	4%	0%	43%
Public transport meets my needs for the movement of goods/ products.	39%	13%	17%	4%	0%	26%

9.8.4 Respondents were asked further questions on the existing public transport services including the impact it has on competitiveness, access to customer base, staff and the impact public transport has on ability to grow the business. Similarly to 9.8.2, Table 1 shows that public transport services are viewed negatively from the business point of view with 65% of respondents disagreeing with the statement that public transport services allow access to existing or potentially a new, customer base and 31% agreeing that public transport services limit the business's ability to expand.

Table 1. Impact of public transport on business

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE	N/A
Existing public transport services allow access to key services in Fife and further afield. Key services refers to access to existing and potentially new suppliers and markets or other business functions.	35%	26%	17%	4%	0%	17%
Existing public transport services allow access to existing, or potentially a new, customer base.	30%	35%	17%	4%	0%	13%
Existing public transport services make our business competitive with other similar businesses.	30%	26%	22%	4%	0%	17%
Existing public transport services give my business the ability to recruit/retain adequately skilled staff.	26%	22%	26%	4%	4%	17%
Existing public transport services meet our business's overheads needs (e.g. travel costs).	26%	17%	22%	4%	0%	30%
Existing public transport services inhibit inward investment in the Levenmouth area.	9%	13%	13%	26%	22%	17%
Existing public transport service provision had a major influence on our decision of business location.	17%	13%	26%	13%	4%	26%
Existing public transport limits the ability to expand our business.	13%	22%	26%	22%	9%	9%

9.8.5 When asked to provide further information regarding how existing public transport options in the Levenmouth area affect their business the majority of responses (seven) related to the importance of rail travel to the area. Other areas of concern for respondents related to the cost of fares and the impact this has on low income persons/benefit recipients accessing key services, the impact of new housing development on the transport network and inappropriate bus timetabling connecting to schools.

9.8.6 Services to Edinburgh were ranked as the most important service improvement required and improvements to local services within Levenmouth ranked as the least important improvement.

9.8.7 26% of respondents report that their company relies on freight movement with 13% reporting that rail could potentially be used to move freight for their business. Movements included intra-Fife transfers of goods and Northern Ireland to Fife movements. It should be noted that this business survey does not represent some of the larger businesses within the Levenmouth area which may rely more heavily on freight movements.

9.8.8 Businesses were asked for any further information which relating to transport and their business. The comments have been summarised below:

- Rail link benefits:
  - connect Levenmouth to Edinburgh and rest of Scotland;
  - make Levenmouth more accessible;
  - attract investment to Levenmouth;
  - make it easier to recruit staff;
  - reduce journey times;
  - better for the environment;
  - better connectivity to client market in Edinburgh; and
  - economic benefits to Levenmouth.
- Improved public transport would improve tourism within the area;
- Convert all transport to run on Hydrogen;
- Improve access to Methil Docks (route bus through Docks);
- Reduce public transport fares; and
- Improve cycling facilities (e.g. parking) in Levenmouth area.

9.9 Public Survey

9.9.1 The public survey was a short online survey distributed through Fife Direct and the Fife Council's People's Panel. Paper and large print copies were available on request. Seventy-seven responses were received. This section summarises those responses.

9.9.1 The survey focused on existing transport modes and journey purposes for residents of the Levenmouth and East Neuk area to understand the key requirements for transport in the area. Figure 1 shows the mode most recently used for a number of journey purposes including travel to work, education and health services. Respondents were asked for details of their most recent trip for each journey purpose. Please note, education responses were low due to the timing of the survey over the summer months and targeting of over-16s. Education responses have been removed from the analysis. The results show car passenger and driver represent the greatest mode share for all purposes, with bus mode share around 10-20% over the journey purposes. The rail mode share is dependent on journey purpose, with an increased share for journeys which normally incur a longer distance including short breaks and visiting friends and family, the majority of respondents reported making these trips once per week for visiting friends and family (25%) and less than once a month for short breaks (49%). The most regular journey is the journey to work with the majority of respondents (24%) reporting making this journey four times or more per week.

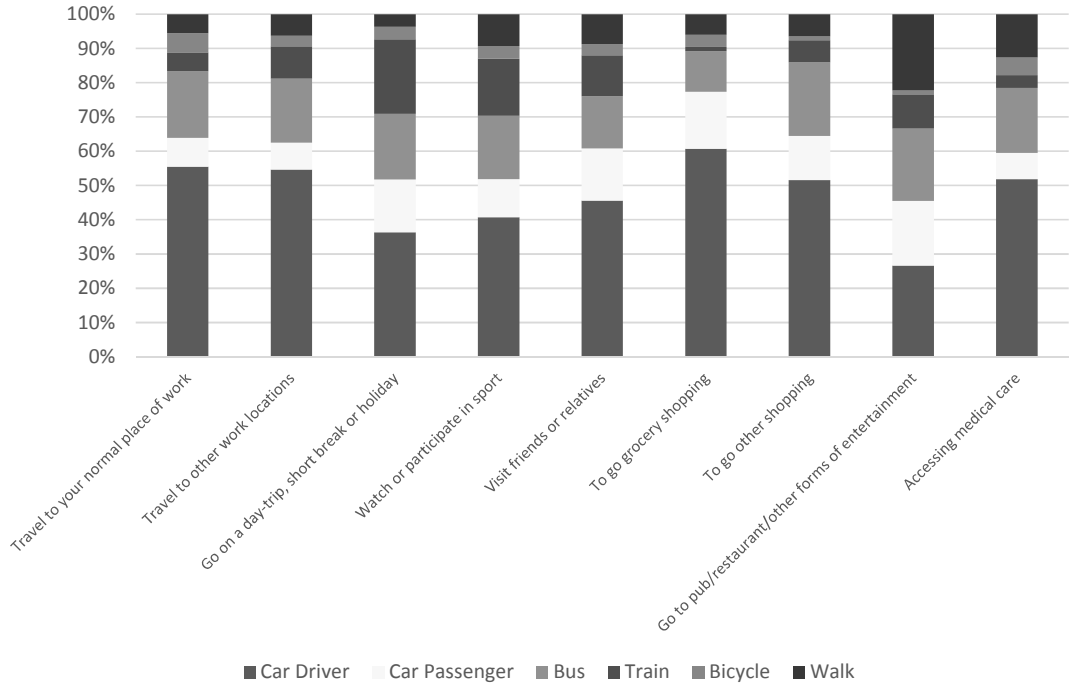

Figure 1. Journey purpose and mode

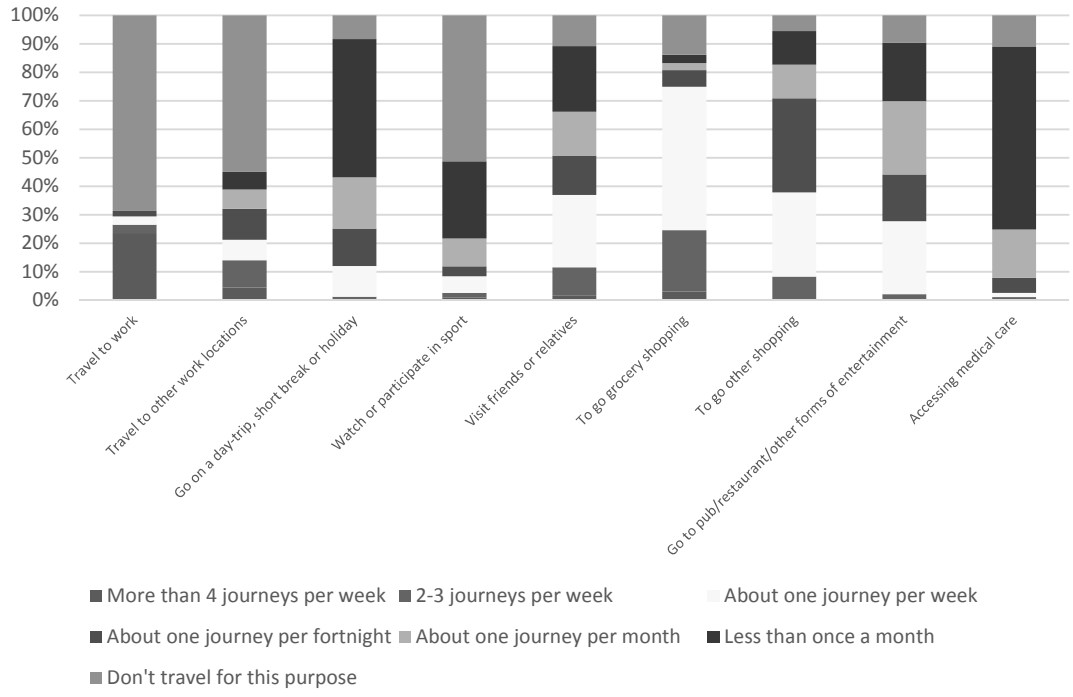

Figure 2. Journey purpose and frequency

9.9.2 To further understand how transport is used by the Levenmouth residents the survey asked if they combine journey purposes in one trip and how often this happens. Travelling to work and grocery shopping were the most commonly referred to journey purposes which were combined with other purposes. This follows on from the journey purpose/mode answers

which identified that these two purposes also have the highest reliance on car passenger and driver mode.

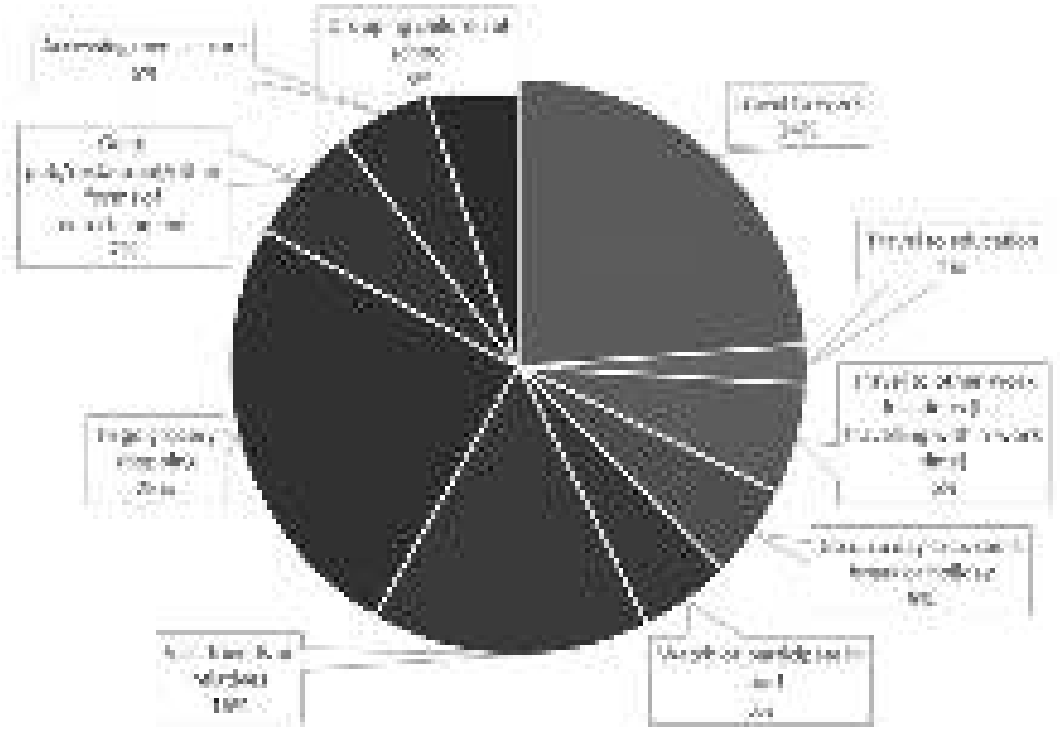

Figure 3. Combination of journey purposes

9.9.3 To understand how useful the current public transport services are at meeting everyday transport needs respondents were asked to what extent they agreed/disagreed that the existing local public transport options met their needs for a variety of purposes. Figure 4 presents the results which show that for the majority of journey purposes (all excluding entertainment trips) over 50% respondents disagree that the existing public transport services meet their needs. Accessing medical care and entertainment show the highest levels of satisfaction relating to public transport services with approximately 25% of respondents agreeing that public transport meets their needs.

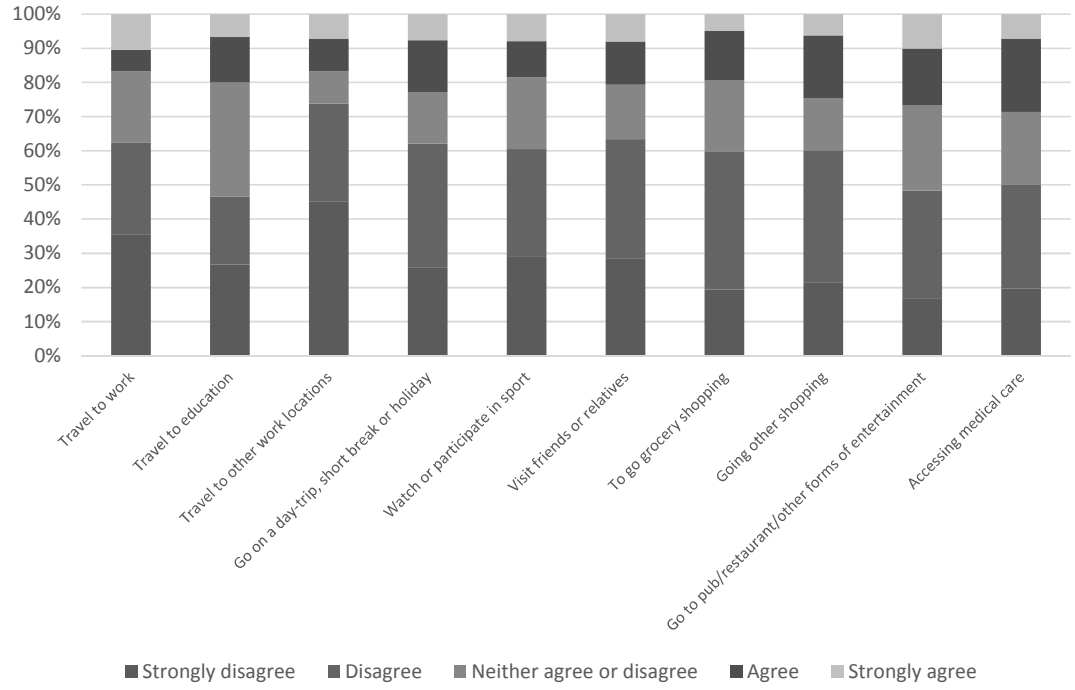

Figure 4. The existing local public transport options (bus, rail etc.) meet my travel needs for the journey purposes

9.9.4 In addition to asking respondents their views on transport services relating to various journey purposes respondents were asked to rate their agreement on a selection of statements relating to choice of workplace, views on frequency and safety. As above, the responses show a negative view of transport within the area, particularly in relation to access to employment opportunities which shows 81% disagree that the current public transport allows for access. Compared to car journey times (57% disagree) and journey times in general (70%) the existing public transport services are viewed as inadequate competition. Although service frequencies, fares and journey times are viewed negatively by respondents the majority do agree that the services feel safe and secure (38%) and have enough seats available (41%).

Table 2. Opinions on existing transport services

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE
They have positively influenced my decision to live in the Levenmouth area	50%	26%	19%	3%	2%
They have positively influenced my decision to work in the Levenmouth area	47%	27%	18%	6%	2%
They allow me to access employment opportunities	57%	24%	12%	3%	3%

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE
They allow me to socialise and/or meet people	28%	36%	25%	9%	1%
They are frequent enough for my requirements	28%	42%	13%	14%	3%
They are fast enough for my requirements	37%	33%	16%	11%	3%
They are affordable compare to car	32%	25%	15%	19%	10%
They have enough seats available when I want to travel	4%	19%	35%	34%	7%
I feel safe and secure	7%	21%	33%	34%	4%
They are close enough to my place of residence/employment/education	34%	16%	15%	27%	7%

9.9.5 Respondents were asked for any additional relevant information relating to existing services in the Levenmouth area. Detailed below are the points raised grouped where appropriate. The most commonly raised issues relate to the reliability and convenience of connections to the rail network and how poorly bus journey times compare to car trips in the area.

- Rail would reduce the number of interchanges 8
- Poor connections between bus and rail 8
- Bus journey times significantly greater than car for longer distance trips 7
- Buses infrequent 5
- Public transport is expensive 5
- Rail is more attractive 5
- Access to Glenrothes isn't convenient 4
- Bus services poor at school times 4
- Buses unreliable 3
- Walking distance between bus stops and rail station in Kirkcaldy 3
- Buses do not accept bikes which limits onward connections 3
- Cross Forth buses subject to congestion 2
- Access to Kirkcaldy isn't problematic 1
- Access to Edinburgh isn't problematic 1
- Public transport poor in Levenmouth 1
- Missed connections due to unreliable journey times 1
- Rail would help with travelling longer distance 1
- Hovercraft to Edinburgh would reduce journey times 1
- Rail would increase transport options 1
- Bus service to Victoria Hospital needs to serve more local areas 1

- No regular bus service from Windygates to Bankhead Glenrothes and express services do not stop 1
- No public transport in Coldstream 1
- No suitable connection from Windygates to Leven to meet start of work 1
- Bus frequency from Windygates to Kirkcaldy poor 1
- No direct service to Dundee 1
- Kirkcaldy station car park sometimes full 1
- Withdrawal of direct express buses to Glasgow (from Buckhaven & Methil) 1
- Local bus service reasonably good 1
- Poor bus information at stops 1
- No connections between BiFab and Methilhill 1
- Poor bus services to Dundee 1
- Buses uncomfortable 1
- Rail line would help local economy 1
- Few job opportunities in Levenmouth 1
- Limited weekend service to Cameron Hospital 1
- Bus connections from Leven to East Neuk are patchy 1
- Bus services poor outwith peak hours 1
- Bus services leaving Edinburgh often full 1
- Rail expensive 1
- No rail service in Levenmouth increases reliance on car 1
- No bus stop close to house 1

9.9.6 Respondents were asked to rank how important improvements to certain public transport services are. Local Levenmouth services and services to cities other than Edinburgh were ranked as the least important with services to the rest of Fife and Edinburgh ranked as the most pressing improvement required. In addition a number of respondents also raised the importance of connections to Glasgow, Perth, Dundee and Aberdeen for Levenmouth residents and the importance of a rail connection to the community.

9.9.7 Similar to the previous question respondents were asked to rank their views on specific aspects of travel including comfort and interchanges. The improvements were ranked as follows:

- Services which do not require you to change vehicles to get to your destination
- The cost of the service compared to other options
- More frequent services
- A service which can be accessed near your local town centre
- Services which stop less, but may offer less choice of where to get on/off
- Shorter journey times
- A service which can be accessed within walking distance of your home
- More comfortable services in terms of quality of ride
- The availability of car parking at the starting point
- Better public transport information

9.9.8 As suggested in section 9.9.5, there is strong support for reducing the number of connections required and the public transport fares in the area. This is reinforced when respondents were asked what would encourage them to use public transport more regularly. The points raised below have been grouped and show that reduced fares and a direct connection to the rail network are sought by a number of respondents.

- Rail service 16
- Reduced fares 7
- Fewer connections 3
- Reduced journey times 3

- Better reliability 3
- More direct services 2
- Improved frequencies 2
- Services close to home 2
- Better PT information 1
- Improved frequency to Cupar 1
- More services 1
- Improved access to Glenrothes 1
- Improved bus/rail connections 1
- More peak services 1
- Levenmouth circular service which links all of Lower Methil (including the Bifab area) to Methilhill and Methil 1
- Access to more modes 1
- More comfortable services 1

APPROVAL					
Version	**Name**		**Position**	**Date**	**Modifications**
1	Author	Claire Mackay	Principal Consultant	18/06/2015	Draft reviewed by Fife Council
	Checked by	Ralph Anderson	Senior Consultant	22/06/2015	
	Approved by	Ralph Anderson	Senior Consultant	17/08/2015	
2	Author	Claire Mackay	Principal Consultant	14/08/2015	
	Checked by	Ralph Anderson	Senior Consultant	17/08/2015	
	Approved by	Ralph Anderson	Senior Consultant	17/08/2015	

APPENDIX B – Rail Fare Analysis

1. SUMMARY

1.1.1 Fife Council analysed the standard day return fare for 94 stations in Central Scotland travelling to Glasgow or Edinburgh stations. The analysis shows that the price of a standard day return from Markinch to Edinburgh (£19.60 in 2016) is much higher than would be predicted by the current (2016) Scottish average £/mile cost of travel to Edinburgh or Glasgow. Standard day return fares for 94 stations in the central belt were analysed and compared to the average fare.

1.1.2 This analysis suggests that the current (2016) £19.60 fare for the 33¼ mile round trip from Markinch to Edinburgh is £5.41 higher than predicted by the average cost of a standard day return to/from Edinburgh or Glasgow from the 94 Scottish central-belt stations included in this analysis. The boarding fare is calculated as £3.22 plus 0.33p/mile (Figure 1). This £5.41 'excess' is higher for Markinch than any of the other 93 Scottish central belt stations included in this analysis.

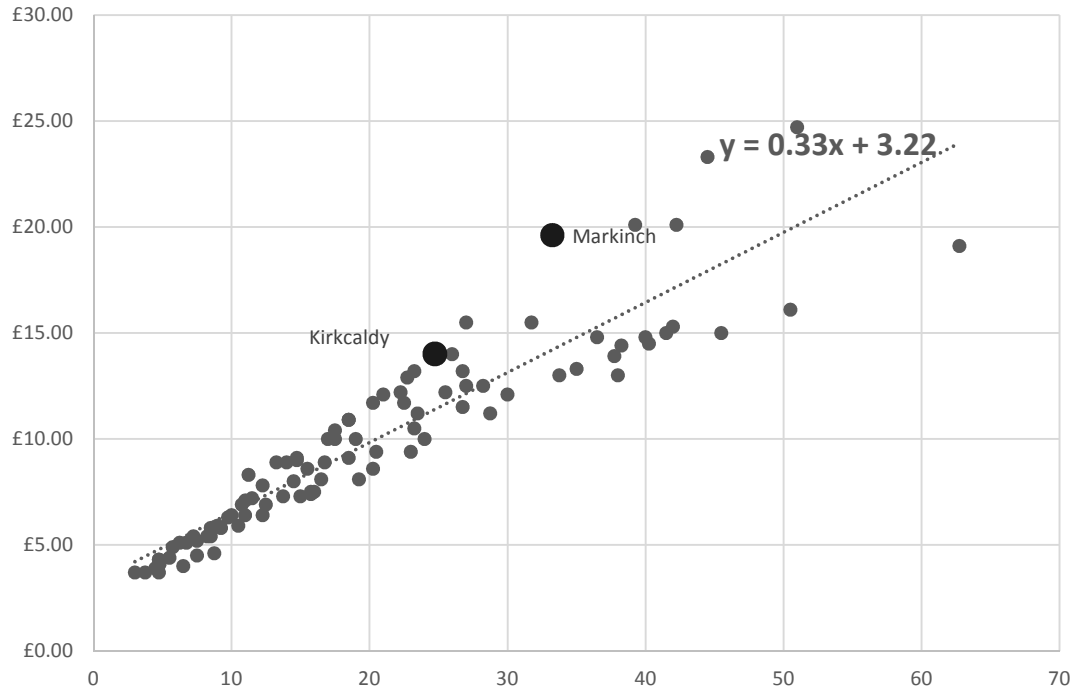

Figure 1. Comparative Rail Travel Costs to Edinburgh/Glasgow (Fife Council, 2016)

1.1.3 0 ranks the 94 stations by difference to average fare and shows that Markinch, and many other Fife stations, rank as having the greatest difference from the expected fare based on the calculation detailed above.

Table 1. Difference from average fare

STATION	COST OF DAY RETURN	EXPECTED FARE	DIFFERENCE
Markinch	£19.60	£14.19	£5.41
Cupar	£23.30	£17.91	£5.40
Leuchars	£24.70	£20.05	£4.65
Ladybank	£20.10	£16.17	£3.93
Cardenden	£15.50	£12.13	£3.37
Springfield	£20.10	£17.16	£2.94
Lochgelly	£14.00	£11.39	£2.61
Fauldhouse	£13.20	£10.89	£2.31
Kirkcaldy	£14.00	£11.80	£2.20
Kinghorn	£12.90	£10.73	£2.17
Breich	£12.10	£10.15	£1.95
Glenrothes with Thornton	£15.50	£13.70	£1.80
Burntisland	£11.70	£9.90	£1.80
Polmont	£12.20	£10.56	£1.64
Dunfermline Queen Margaret	£10.90	£9.33	£1.58
Addiewell	£10.90	£9.33	£1.58
Aberdour	£10.40	£9.00	£1.41
North Queensferry	£8.30	£6.93	£1.37
Inverkeithing	£8.90	£7.59	£1.31
Dunfermline	£10.00	£8.83	£1.17
Shotts	£13.20	£12.05	£1.15
Livingston South	£8.90	£7.84	£1.06
Cowdenbeath	£11.70	£10.65	£1.06
Dalgety Bay	£9.10	£8.09	£1.01
Linlithgow	£10.00	£9.00	£1.01
Rosyth	£9.00	£8.09	£0.91
Falkirk Grahamston	£12.20	£11.64	£0.56
Uphall	£7.80	£7.26	£0.54
Drem	£10.00	£9.49	£0.51
Camelon	£12.50	£12.13	£0.37
Livingston North	£8.60	£8.34	£0.26
Kirknewton	£7.10	£6.85	£0.25
North Berwick	£11.20	£10.98	£0.22
Milliken Park	£7.20	£7.02	£0.19
West Calder	£8.90	£8.75	£0.15
Johnstone	£6.90	£6.77	£0.13
Longniddry	£8.00	£8.01	-£0.01
Larbert	£12.50	£12.54	-£0.04
Coatbridge Central	£6.40	£6.52	-£0.12
Prestonpans	£6.30	£6.44	-£0.14
Newton	£5.10	£5.28	-£0.18
Paisley Gilmour Street	£5.40	£5.61	-£0.21
Easterhouse	£4.90	£5.12	-£0.22
Blairhill	£5.80	£6.03	-£0.23
Bathgate	£9.10	£9.33	-£0.23
Coatbridge Sunnyside	£5.90	£6.19	-£0.29

Drumchapel	£5.10	£5.45	-£0.35
Dalry	£10.50	£10.89	-£0.39
Motherwell	£6.90	£7.35	-£0.45
Airdrie	£6.40	£6.85	-£0.45
Shieldmuir	£7.30	£7.76	-£0.46
Stirling	£14.80	£15.27	-£0.47
Dalmuir	£5.80	£6.27	-£0.47
Cambuslang	£4.30	£4.79	-£0.49
Garrowhill	£4.30	£4.79	-£0.49
Drumry	£5.20	£5.70	-£0.50
Slateford	£3.70	£4.21	-£0.51
Uddingston	£5.40	£5.94	-£0.54
Kilwinning	£11.50	£12.05	-£0.55
Lochwinnoch	£8.10	£8.67	-£0.57
Glengarnock	£9.40	£9.99	-£0.59
Singer	£5.40	£6.03	-£0.63
Westerton	£4.40	£5.04	-£0.64
Edinburgh Park	£4.10	£4.80	-£0.70
Kingsknowe	£3.70	£4.46	-£0.76
Kilpatrick	£5.90	£6.69	-£0.79
South Gyle	£3.90	£4.71	-£0.81
Bowling	£6.40	£7.26	-£0.86
Dumbarton East	£7.30	£8.17	-£0.87
Wishaw	£7.50	£8.42	-£0.92
Dalreoch	£7.50	£8.50	-£1.00
Dumbarton Central	£7.40	£8.42	-£1.02
Irvine	£12.10	£13.12	-£1.02
Wester Hailes	£3.70	£4.79	-£1.09
Helensburgh Central	£10.00	£11.14	-£1.14
Curriehill	£4.50	£5.70	-£1.20
Carluke	£8.60	£9.90	-£1.30
Barassie	£13.00	£14.36	-£1.36
Musselburgh	£4.00	£5.37	-£1.37
Craigendoran	£9.40	£10.81	-£1.41
Prestwick	£14.40	£15.84	-£1.44
Troon	£13.30	£14.77	-£1.47
Cardross	£8.10	£9.57	-£1.47
Wallyford	£4.60	£6.11	-£1.51
Lanark	£11.20	£12.71	-£1.51
Bridge of Allan	£14.80	£16.42	-£1.62
Prestwick Internat'nl Airport	£13.90	£15.68	-£1.78
Dunblane	£15.30	£17.08	-£1.78
Ayr	£15.00	£16.92	-£1.92
Newton-on-Ayr	£14.50	£16.50	-£2.00
Auchinleck	£13.00	£15.76	-£2.76
New Cumnock	£15.00	£18.24	-£3.24
Maybole	£16.10	£19.89	-£3.79
Girvan	£19.10	£23.93	-£4.83

APPENDIX C – Environmental Baseline

LEVENMOUTH TRANSPORT STUDY

Environmental Baseline and Constraints

Quality Management

	Version 1	Version 2	Version 3	Version 4
Date	5.08.15	17.08.15		
Prepared by	T. Bienfait	T. Bienfait		
Signature				
Checked by	H. Collin	H. Collin		
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Table of Contents

Levenmouth Transport Study –Environmental Baseline and Constraints

1 Introduction

1.1 Purpose

1.1.1 This note presents a review of key environmental designations and constraints in the study area for the Levenmouth Transport Study. The information has been prepared to underpin the Part 1 and 2 appraisal stages of the project and in particular to:

- provide an overview of the main constraints and designations in the study area;
- to support identification of problems and opportunities relating to the environment which can be linked with transport issues;
- to record key feedback from environmental consultation; and
- to inform the evidence base which supports the analysis of overall study problems and opportunities and to inform the appraisal of options in the STAG appraisal.

1.1.2 The information presented in this note has been informed by review of relevant strategies and reports[1], collation of baseline data from publicly available sources and those made available by the client team, and from the feedback from consultations with environmental stakeholders. A visit to the study area was also made by a member of the environmental appraisal team in June 2015.

1.2 Study Area Context

1.2.1 The study area is a broad corridor up to 15km in width extending between the Levenmouth area[2] in the north east and Kirkcaldy in the south west. The corridor broadly follows the A915 road along a south west to north east alignment and encompasses approximately 15km of the coastline of Fife. There are three key built up areas in the corridor formed by the towns of Glenrothes (in the north west), Kirkcaldy in the south west and the closely grouped settlements of Leven, Methil and Buckhaven in the east which are collectively referred to as Levenmouth.

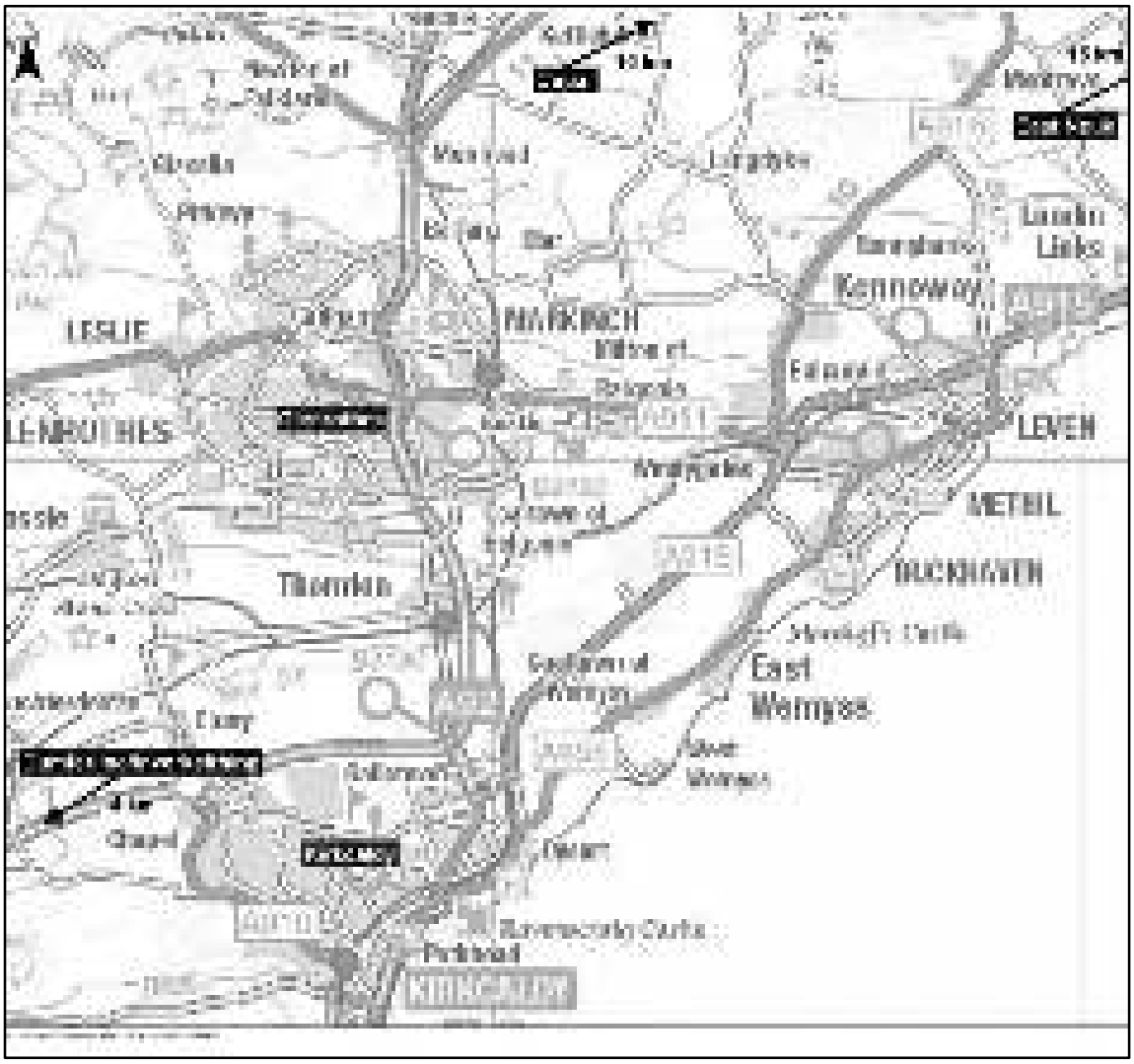
1.2.2 The landform of the study area is typically of relatively flat topography and slopes gradually towards the Firth of Forth from north west to south east. Agricultural land uses predominate outwith the main settlements in particular for arable farming and a number of small woodlands are scattered throughout the area. The corridor is crossed by a number of watercourses generally flowing west to east and draining to the Firth of Forth at the Fife coast.

[1] These are referred to throughout the document and footnote references provided

[2] Levenmouth refers collectively to the towns of Leven, Methil and Buckhaven

1.2.3 Figure 1 presents the study area which has been used to define the area of search for baseline environmental constraint and designation information. It also shows the principal settlements in the corridor.

Figure 1 Levenmouth Study Area



2 Environmental Baseline and Evidence

2.1 Introduction

2.1.1 This findings of the review of environmental baseline information which has been used to inform the STAG process are presented in Sections 2.2 to 2.10. Figure 2.1 provides an overview of key designated sites in the study area.

Figure 2.1 Key Designations within the Study Area

2.2 Noise and Vibration

Sources of Information

- Planning and Advice Note (PAN) 1/2011: Planning and Noise;
- Scottish Planning Policy (SPP);
- The Environmental Noise (Scotland) Regulations 2006;
- Transportation Noise Action Plan, Transport Scotland (July 2014); and
- Local Planning Policy: The Mid-Fife Local Plan (January 2012).

Consultation

- No specific consultation feedback has been given by consultees.

Environmental Baseline and Evidence

- The Scottish Government has prepared a Transport Noise Action Plan implementing the requirements of the EC Directive on Environmental Noise. This covers roads, rail and airport noise outwith the four city agglomerations[3]. The Action Plan identifies areas called Candidate Noise Management Areas (CNMAs) within which people are most likely to be annoyed by transport noise and where future noise management measures may be needed. It also identifies Candidate Quiet Areas (CQAs) where it is considered important to preserve relatively low levels of ambient noise.
- Forty one Candidate Noise Management Areas (CNMAs) have been designated in Fife in the Action Plan as part of the noise management planning process (24 for road, 17 for rail). The 15 CNMAs included within the study area are set out in Table 2.1.

Table 2.1 Candidate Noise Management Areas within the Study Area

CNMA	Road	Rail
Glenrothes	• A911, Queensway at Auchmuty Drive	• Near Main street
	• A92 near Laverock Avenue	
	• A92 at Woodside Road	
Kirkcaldy	• A921, Nether Street at Flesh Wynd	• Near Boreland Road at Boreland Place
		• Near St Clair Street
	• A921, High Street at Lord Gambier Wharf	• Near Den Road
		• Near Rosebery Terrace
	• A910, Nicol Street at Halley's Court	• Near Nicol Street
		• Near Abbotshall Road
		• Near Pratt Street
		• Near Invertiel Road

- There are no candidate Quiet Areas (cQA) associated with transport noise from the Action Plan within the study area.

Constraints and Uncertainties (Issues)

- Transport options for the study should consider the potential to affect Candidate Noise Management Areas identified in the Noise Action Plan within this part of Fife.

[3] The agglomerations cover the four cities of Glasgow, Edinburgh, Aberdeen and Dundee

- Future revisions to the noise mapping and analysis process to comply with the Environmental Noise Directive may need to be taken into account in the future development and appraisal of transport options.

Summary of Key Evidence

- In Fife, the Scottish Government's Transport Noise Action Plan sets out a total of 41 Candidate Noise Management Areas (15 of which are within the study area: see Table 2.1) within which people are most likely to be annoyed by transport noise.

2.3 Global Air Quality

Sources of Information

- The National Air Quality Information Archive (NAQIA) (see www.airquality.co.uk);
- Air Quality in Scotland (see http://www.scottishairquality.co.uk/latest/site-info?site_id=Kir#site_info);
- The SESTRANS Regional Transport Strategy 2015 – 2025 Refresh (July 2015);
- Reducing Emissions in Scotland: 2014 Progress Report (https://www.theccc.org.uk/wp-content/uploads/2014/03/1871_CCC_Scots_Report_bookmarked.pdf);
- DECC (2014) Local Authority Carbon Dioxide Emissions Estimates 2012 (and full emissions dataset);
- Climate Change (Scotland) Act 2009;
- Fife Environmental Partnership Climate Change Strategy 2014 – 2020; and
- Feedback from consultees.

Consultation

- SEPA responded (20.07.15) that road transport was the second most significant source of greenhouse gas emissions and they encourage the introduction of measures that would reduce car dependency and the uptake and/or use of more sustainable transport options. SEPA also stated that localised increases in car journeys may appear insignificant but could overall undermine the achievement of Scotland targets' to reduce emissions of greenhouse gases.

Environmental Baseline and Evidence

- Gross Scottish greenhouse gas emissions fell by 9.9% (5.6MtCO_2) to 51.3MtCO_2 between 2010 and 2011, and there has been a downward trend since 1995[4].
- Transport emissions accounted for 21% of Scotland's total greenhouse gas emissions in 2012. Transport emissions were dominated by emissions from road transport (89% of all transport emissions in 2012, with 49% of transport emissions from cars alone)[5]. In Fife, transport emissions made up 16% of all greenhouse gas emissions in 2012.
- Data from DECC provide CO_2 emissions per capita on a local authority basis (for 2013). Key summary information is presented in Table 2.2. Fife has consistently higher than average CO_2 emissions than those for Scotland however these are declining and the latest data[6] (2013) indicate annual per capita emissions now stand at 9.2tCO_2. Because of Fife's

[4] Reducing Emissions in Scotland: 2014 Progress Report

[5] Source: NAEI (2014) Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland, 1990 – 2012
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/318096/da_ghgi_1990_2012_report.pdf

[6] DECC Local Authority and Regional Carbon Dioxide Emissions National Statistics 2005-2013
https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2013

industrial structure, there is still more to do to reduce emissions by industry and commerce[7].

- The SESTRANS RTS 2025 recognises the importance of transport's contribution to greenhouse gas emissions and the need for real reductions in emissions to address climate change.
- Fife Council reduced carbon emissions by 5% between 2013-2014 by upgrading street lights and aims to become a centre of excellence in the low carbon economy to meet the Scottish Government's 2020 target of reducing carbon (including reducing energy use, more sustainable transport and less waste) by 42%.

Table 2.2 Local Authority and Scottish CO_2 Emissions Data (2013,Tonnes CO_2)

Criteria	Fife	Scotland
Transport CO_2 emissions per capita	1.6	1.9
Domestic CO_2 emissions per capita	2.3	2.3
Total per capita emissions	9.2	6.6
Total transport emissions (k tonnes)	599.2	10,310.0

- Fife is expected to become warmer and wetter in the winter as a result of climate change, with hotter and drier summers. Though difficult to predict, more extreme weather events such as localised heavy rainfall are likely[8].

Constraints and Uncertainties (Issues)

- Public bodies are required under the Climate Change (Scotland) Act 2009 to reduce emissions by 42% by 2020, 50% by 2030 and 80% by 2050, based on 1990 levels.

Summary of Key Evidence

- SEPA encourages the uptake and/or use of more sustainable transport options.
- Fife had consistently higher than average per capita CO_2 emissions than for the Scotland average between 2005 and 2012. These have reduced in line with national trends between 2008 and 2012 but are still higher than the national average.
- Carbon dioxide emissions from the transport sector in Fife (in 2013) are estimated as 599.2k tonnes (kt).
- The Regional Transport Strategy recognises the need for reductions in emissions from transport to address climate change.
- Fife Council reduced carbon emissions by 5% between 2013-2014 by upgrading street lights.
- The Council aims to become a centre of excellence in the low carbon economy to meet the Scottish Government's 2020 target of reducing carbon by 42%.

[7] Fife Council (2013) Fife's Community Plan 2011 – 2020 http://www.gov.scot/Resource/0043/00435434.pdf

[8] http://www.fifedirect.org.uk/minisites/index.cfm?fuseaction=page.display&pageid=E2A8E526-65BF-00F7-DA6238F1EB3894F6&siteID=430EB347-005B-8681-1629D8206303D4C8

2.4 Local Air Quality

Sources of Information

- Air Quality in Scotland (see http://www.scottishairquality.co.uk/latest/site-info?site_id=Kir#site_info);
- Fife Environmental Partnership Climate Change Strategy 2014 – 2020 http://www.fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=88A71A10-C202-5E7A-A55DB40D2D627E85;
- Fife Council Air Quality Progress Report, 2014; and
- Feedback from consultees.

Consultation

- No specific consultation feedback has been raised by consultees.
- As part of the project inception workshop it was confirmed that no Air Quality Management Areas (AQMAs) are located within the study area.

Environmental Baseline and Evidence

- There are no Air Quality Management Areas (AQMAs) within the study area.
- A broad indication of background concentrations of nitrogen dioxide (NO_2) and particulate matter (PM_{10}) across Scotland is presented in Figure 2.2[9]. Figure 2.3 shows projections of background concentrations for these pollutants for 2030. The data indicate that current background levels are within the relevant standards for both pollutants and that concentrations are predicted to reduce slightly in future potentially due to projected reductions in emissions from industry, transport and/or energy generation.
- Fife Council operates four automatic air quality monitoring stations. There is one air pollution monitoring site within the study area which is located in Kirkcaldy (St Clair Street) (329143, 692986). Data in Table 2.3 below have been extracted from the automatic monitoring point.
- There are no recorded exceedences of NO_2 or PM_{10} at the Kirkcaldy site from measurements for 2014. It is noted that the PM_{10} concentration for St Clair Street, Kirkcaldy have been consistently below the air quality objective since monitoring began.
- Fife Council has also undertaken ambient monitoring of NO_2 using diffusion tubes at 48 locations within Fife.
- As part of the Fife Environmental Partnership Climate Change Strategy, the Council has developed six medium term outcomes which it aims to achieve over the next seven years, working closely with communities, organisations and other partnership groups to reduce emissions. These outcomes include more sustainable transport and travel including reducing the need to travel.
- The Fife Environmental Partnership Climate Change Strategy (2014 – 2020) identifies that measures will be taken to encourage more sustainable transport and travel including

[9] Sourced from modelled background concentration maps at http://www.scottishairquality.co.uk

working with SEStran Freight Quality Partnership in support of the Scottish Freight Action Plan, making improvements to the public transport network, promoting use of low carbon and electric vehicles, establishing a network of electric charging points across Fife, supporting projects to encourage walking and cycling as a mode of transport and promoting sustainable travel choices in local areas.

Table 2.3 Background Air Quality in the Study Area[10]

Pollutant	Year	
	2011	2014
PM_{10}	13 µg/m3	11 µg/m3
NO_2	19 µg/m3	18 µg/m3
NOx	7 µg/m3	10 µg/m3

Constraints and Uncertainties (Issues)

- The future growth in business and industry at development sites in the Levenmouth area may present constraints on traffic related options for the study as a result of changes in local emissions depending on their effects on traffic distribution and emissions.

Summary of Key Evidence

- No Air Quality Management Areas (AQMAs) have been designated in the Levenmouth area or within the study area.
- PM_{10} levels within the study area have been consistently well below the air quality objective. There is no recorded exceedance of NO_x and NO_2 within the study area.
- The background concentrations of PM_{10} and NO_2 are predicted to slightly decrease by 2030.
- The Fife Environmental Partnership Climate Change Strategy (2014 – 2020) identifies that measures will be taken to encourage more sustainable transport and travel including support for projects to encourage walking and cycling as a mode of transport and promote sustainable travel choices in local areas.

[10] Source http://www.scottishairquality.co.uk/data/data-selector

Figure 2.2 Background NO_2 and PM_{10}[11] (Modelled 2011 Concentrations)

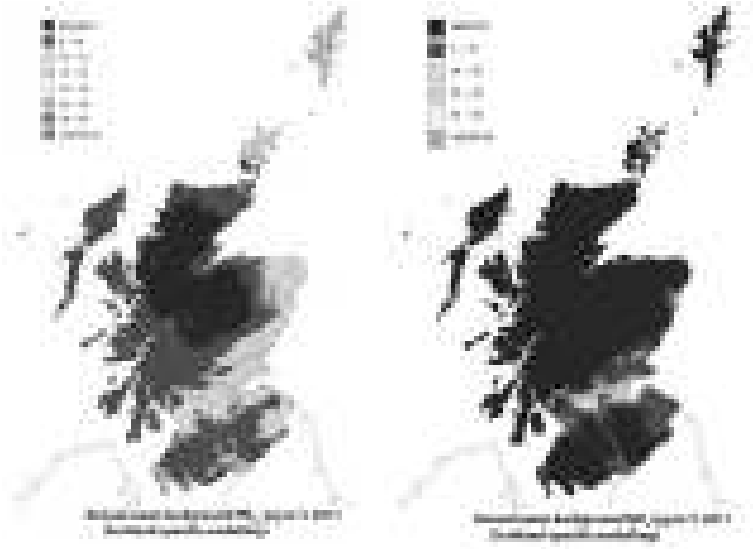
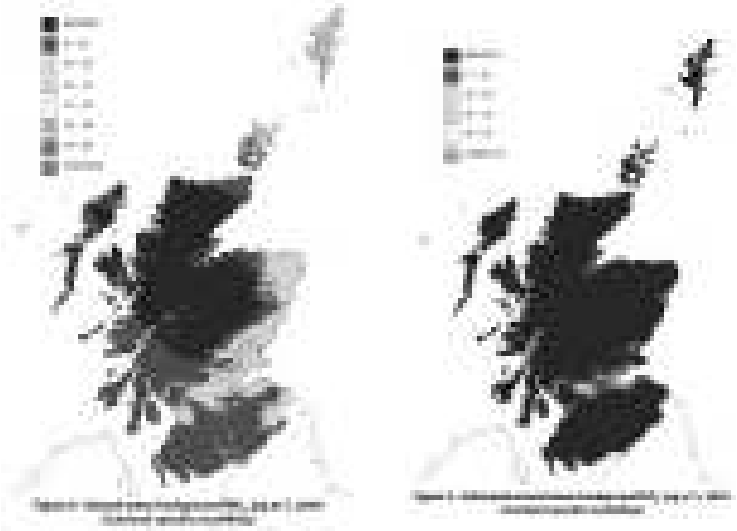


Figure 2.3 Projection of Background NO_2 and PM_{10}[12] (Modelled 2030 Concentrations)



[11] Source Air Quality Scotland Website http://www.scottishairquality.co.uk/data/mapping?view=pm10 accessed 03.08.15

[12] Source Air Quality Scotland Website http://www.scottishairquality.co.uk/data/mapping?view=pm10 accessed 03.08.15

2.5 Water Quality, Drainage and Flood Defence

Sources of Information

- SEPA Flood Maps Website http://map.sepa.org.uk/floodmap/map.htm;
- SEPA River Basin Management Planning (RBMP) Interactive Map: http://gis.sepa.org.uk/rbmp/;
- Water body status and classification information from Scotland's Environment website http://map.environment.scotland.gov.uk/seweb/map.htm; and
- Feedback from consultees.

Consultation

- SEPA provided (9.07.15) a list of key issues relevant to transport appraisals including: air quality, carbon balance, flood risk, protection of water environment (River Basin Management Plans, waste water drainage, surface water drainage), pollution prevention and environment management, engineering activities in the water environment, disruption to wetlands (GWDTE), disturbance and re-use of excavated peat, existing groundwater abstractions, water abstractions, waste management, forest removal and waste, borrow pits, decommissioning and re-powering.
- Scottish Water responded (10.07.15) that the study area does not fall within any Scottish Water drinking water protected areas and therefore no particular protection measures are required in relation to source quality. However, there are kilometres of sewers along the River Leven and various rising mains that will need to be taken into consideration when any work is being planned.

Environmental Baseline and Evidence

- The main watercourses running though the study area are the River Leven and the River Ore. The River Leven flows from west to east across the study area and meets the coast between Methil and Leven. The River Ore is the principal tributary of the Leven and the watercourses meet approximately 2km west of Methil. The River Leven catchment is protected for freshwater fish (salmonid) under the typology developed for the Water Framework Directive[13] (formerly the Freshwater Fish Directive).
- The water quality of the River Leven is generally classified by SEPA as Bad due to pressures such as sewage disposal, mixed farming activities releasing phosphorus, whisky production causing depletion of base flow from the groundwater body and changing natural flow conditions. The River Ore has an overall status of Moderate mainly caused by pressures such as discharges from food production and mining and quarrying of coal.
- The study area includes approximately 15km of coastline where the land meets the Firth of Forth. This coastal waterbody is classed by SEPA[14] as having Moderate overall status with moderate water quality and is susceptible to diffuse pollution from nitrates.

[13] Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive)

[14] Source: SEPA Water body information sheet for water body 200048 in Forth accessed via http://map.environment.scotland.gov.uk/seweb/map.htm?menutype=1

- Consultation identified the need to follow best practice guidance, codes of conduct and mitigation measures to ensure impacts of development on the water environment are avoided or reduced. Scottish Water indicated that the offset distance of all structures and ground disturbance must be a minimum of 10 metres (m) from the nearest raw water main or water main and must be a minimum distance of either 3m of depth plus 1m whichever is greater from the nearest sewer.
- South Fife Coastal and Leven Coastal Sand and Gravel groundwaters are located within the study area. These areas are designated by SEPA under the Water Framework Directive as drinking water protection areas[15]. Both groundwater bodies are currently classified as having Poor status.
- The study area is located within the Strathmore/Fife Nitrate Vulnerable Zone (NVZ) which includes the River Leven and its tributaries.
- Key pressures on the water environment include diffuse pollution, abstraction, and abstraction for agricultural uses and for mining and quarrying coal.
- There are some areas potentially vulnerable to flooding within the vicinity of the coast within the study area[16]. Most vulnerable to flooding are the areas and immediate surroundings of the key watercourses in the study area, particularly along the lower reaches of the Rivers Leven and Ore.

Constraints and Uncertainties (Issues)

- The Water Framework Directive as implemented through Scottish legislation sets important standards and requirements relating to the water environment which future development will be required to comply with.
- There are sensitive watercourses, catchments and water bodies within the study area indicating that water quality will be an important issue for the environmental appraisal of options.

Summary of Key Evidence

- Consultation feedback identified the potential constraint from an extensive sewage network to development in some parts of the study area.
- The principal surface watercourses running though the study area are the River Leven and main tributary the River Ore and the study area borders the Firth of Forth.
- Groundwater in the study area is designated a Drinking Water Protected Area and is sensitive to pollution.
- The quality of surface watercourses in the study area is predominantly poor although some reaches of the Leven and some tributaries of the Ore are of moderate quality.
- Areas vulnerable to flooding include the immediate surroundings of the key watercourses and water bodies in the study area, particularly along the coast.

[15] http://data.gov.uk/dataset/drinking-water-protected-areas-ground

[16] Source: SEPA flood maps at http://map.sepa.org.uk/floodmap/map.htm

2.6 Geology, Soils and Agriculture

Sources of Information

- Scotland's Soils: Land Capability for Agriculture Map (1:250,000) http://www.soils-scotland.gov.uk/data/lca250k;
- SNHi website http://www.snh.gov.uk/publications-data-and-research/snhi-information-service/map/; and
- Feedback from consultees.

Consultation

- SNH indicated that the Firth of Forth coastline within the study area is a designated Site of Special Scientific Interest (SSSI) for biological and geological interests including coastal geomorphology.

Environmental Baseline and Evidence

- There is one designated geological SSSI along the coastline (Firth of Forth SSSI[17]) within the study area and three Geological Conservation Review (GCR) sites[18] (at East Wemyss to Buckhaven Coast; the Lomond Hills and East Fife Coast). These are shown on Figure 2.1.
- The study area is underlain by a range of generally sedimentary formation solid geology including coal measures and limestone formations. The superficial geology comprises marine deposits (silts, sands and gravels) near to the coast and along valleys with glacial till in other areas.
- The majority of agricultural land within the study area is classed as either 2, 3.1 or 3.2. The classifications are defined as follows:
  - Class 2: Prime agricultural land with minor climate limitations. Wide range of crops, except those harvested in winter.
  - Class 3.1: Prime agricultural land with moderate climate limitations. Moderate range of crops, with good yields for some (cereals and grass) and moderate yields for others (potatoes, field beans, other vegetables).
  - Class 3.2: Non-prime land with moderate climate limitations. Moderate range of crops, with average production, but potentially high yields of barley, oats and grass.
- The predominant farming and land use types on the land are arable, improved grassland (for grazing) and (in the more marginal areas) woodlands or forests. The intensive agricultural land uses in the study area mean that much of the land has been improved for productive use. There is, however, one small area of carbon rich soils, located in the Star Moss SSSI (see Section 2.8) site which is designated for its wetland habitat to the north east of Markinch close to the railway station, where peat may be present.

[17] SNH designates SSSIs under the Nature Conservation (Scotland) Act 2004 as areas of land and water that best represent the natural heritage. SSSIs can be designated for biological and geological criteria

[18] Geological Conservation Review Series provide a public record of the features of interest and importance at localities already notified or being considered for notification as 'Sites of Special Scientific Interest' (SSSIs)

- No sites of potentially contaminated land have been identified at this stage although there may be areas of brownfield land across the study area, particularly in the urban centres associated with former industrial uses.

Constraints and Uncertainties (Issues)

- Prime agricultural land is extensive in the corridor and agriculture is an important part of the land use economy which may constrain development proposals in some locations.

Summary of Key Evidence

- The Firth of Forth coastline is designated as a geological (and biological) Site of Special Scientific Interest (SSSI) within the study area. There are 3 Geological Conservation Review (GCR) sites: East Wemyss to Buckhaven Coast; the Lomond Hills and East Fife Coast.
- There are large areas of prime quality agricultural land throughout the study area.
- Agriculture is the predominant land use and an important influence on the local landscape.
- Carbon rich soils are very limited and only one site has been identified located in the Star Moss SSSI site near the Markinch railway station.

2.7 Landscape and Visual Amenity

Sources of Information

- Fife Local Landscape Designation Review Prepared for Fife Council by Land Use Consultants in association with Carol Anderson and the Small Town and Rural Development Group, 2008[19];
- FIFEPlan Proposed Local Development Plan (October 2014), (http://www.fifedirect.org.uk/topics/index.cfm?fuseaction=page.display&p2sid=8E4FDA75-DE92-7F88-58587D1BB5658375&themeid=2B482E89-1CC4-E06A-52FBA69F838F4D24);
- Scotland's Environment website (http://map.environment.scotland.gov.uk/seweb/map.htm?menutype=0&layers=5); and
- Feedback from consultees.

Consultation

- SNH identified (2.07.15) the importance of quality and connectivity of greenspaces and green networks in urban areas.
- Fife Council (Environmental Planning) provided guidance information such as the Making Fife's Places SPG on green infrastructure and green networks and raised the importance of identifying opportunities for habitat and green network enhancement.

Environmental Baseline and Evidence

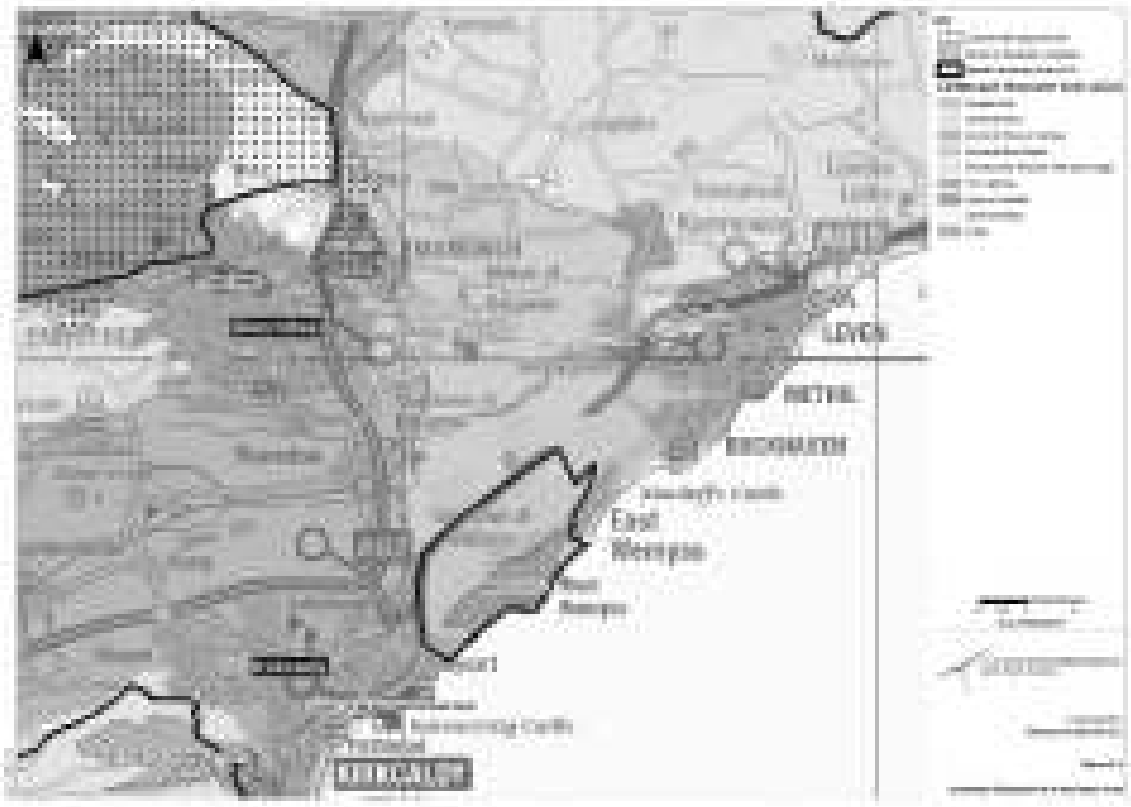
- There are no National Scenic Areas (NSAs) in the study area or within 50km. However, there is one regional landscape designation within the study area for the Levenmouth transport study which is the Lomond Hills Regional Park located north west of the study area on the edge of Glenrothes. The park is important for recreation and for its high landscape value (see Figure 2.4 for further details).[20]
- There are four local landscape designations identified in the 2008 Landscape Review which lie fully or partly within the study area. These Special Landscape Areas (SLAs[21]) include parts of Lomond Hills SLA (north west of Glenrothes), Cullaloe Hills and Coast SLA (south of Kirkcaldy), Wemyss Coast SLA along the coast between Kirkcaldy and Leven and the southern tip of East Neuk SLA (see Figure 2.4 for details).
- There are no Country Parks within the study area. There are six Gardens and Designed Landscapes (GDL) within the study corridor (See Figures 2.1 and 2.4 and further discussion in Section 2.9, Cultural Heritage).

[19] This study reviews and updates the previous SNH 1999 Landscape Character Assessment for Fife

[20] FIFEPlan Proposed Local Development Plan (October 2014)

[21] SLAs are local landscape designations which reflect areas where scenery is highly valued locally to ensure that the landscape is not damaged by inappropriate development

Figure 2.4 Local Landscape Designations within the Study Area



- The study area encompasses a range of landscapes which are influenced by the more rolling topography of the inland (western) areas and the flatter coastal areas. The corridor incorporates a wide variety of landscape character areas with the following general landscape character types identified in the Fife Landscape Character Assessment report (See Figure 2.4):
  - Lowland River Basin
  - Coastal Hills
  - Pronounced Volcanic Hills and Craig
  - Upland slopes
  - Upland Foothills

- Lowland Hills and Valleys
- Lowland Dens
- Urban

- The predominant character areas in the study corridor are the Lowland River Basin (which occupies much of the area between the towns of Kirkcaldy, Levenmouth and Glenrothes) and the Coastal Hills character area which follows the coastal strip between Kirkcaldy and Levenmouth. The landscape is particularly sensitive along the rolling coastal area between Kirkcaldy and Buckhaven and part of this coastline includes the Wemyss Special Landscape Area.
- A number of areas of greenspace have been identified around the main urban areas of Levenmouth, Kirkcaldy and Glenrothes (see Figure 2.5). Connection to these areas is important from a local landscape perspective as well as providing opportunities for access to countryside for amenity and recreation, particularly for communities in urban areas.

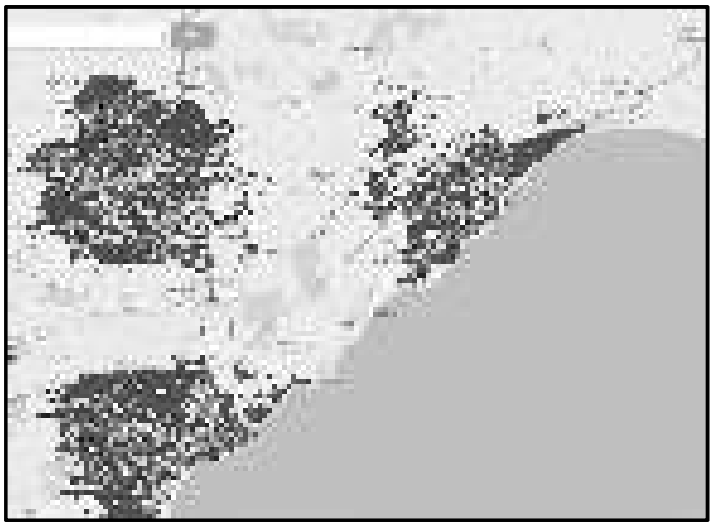


Figure 2.5 Locations of Greenspace in the Study Area[22]

Constraints and Uncertainties (Issues)

- Retention of woodlands and green spaces has been identified as particularly important aspects of the landscape and as areas important for community wellbeing which need to be protected as far as possible.
- Local landscape designations and other important sites such as Gardens and Designed Landscapes are important constraints to be taken into account in the development of new transport infrastructure.

Summary of Key Evidence

- Consultation feedback identified the importance of greenspace (SNH) and green network improvements.

[22] Source **http://map.environment.scotland.gov.uk/seweb/map.htm?menutype=0&layers=5**

- The study area is characterised by several distinct landscape character types in particular the Lowland River Basin and Coastal Hills character areas.
- There are no nationally designated landscapes in the study area but one regional park north of Kirkcaldy (Lomond Hills Regional Park). There are four locally designated landscape areas (Special Landscape Areas) north of Glenrothes, south of Kirkcaldy and along the coast between Kirkcaldy and Leven.
- There are no Country Parks in the corridor.
- Six Gardens and Designed Landscapes and several areas of local greenspace contribute to local landscape character and provide opportunities for access to the countryside, particularly from towns and the urban fringes of Glenrothes, Kirkcaldy and Methil/Leven.

2.8 Biodiversity and Habitats

Sources of Information

- SNHi website http://www.snh.gov.uk/publications-data-and-research/snhi-information-service/map/;
- The Making Fife's Places Supplementary Guidance: Green Network in Fife (2014);
- FIFEPlan Proposed Local Development Plan (October 2014), interactive map (http://arcgisweb.fife.gov.uk/LocalViewExt/Sites/ldpPROPOSED/#);
- Fife Local Biodiversity Action Plan (LBAP) (2013-2018) http://publications.1fife.org.uk/uploadfiles/publications/c64_FBLAP-final.pdf;
- NBN Gateway Interactive map: https://data.nbn.org.uk/imt/#4-3.730,56.370,-2.411,56.742!18yT; and
- Feedback from consultation.

Consultation

- SNH highlighted the need to consider the Firth of Forth (SPA, SSSI and RAMSAR). They advised (2.07.15) that information on designated sites, and protected species are available at http://www.snh.gov.uk/publications-data-and-research/snhi-information-service/map/. One of SNH's key aims is to improve quality and accessibility to greenspaces and green networks in urban areas.
- Fife Council (Environmental Planning, 26.06.15) provided guidance information including the Making Fife's Places SPG on green infrastructure and green networks and advised that their aspiration would be that opportunities for habitat and green network enhancement will be identified within the appraisal.
- The RSPB (19.06.15) consulted Tayside Raptor Study Group records and advised that there are no records of Schedule 1 birds breeding within the study area. The RSPB highlighted the importance of the populations of wintering waders and wildfowl within the Firth of Forth SPA and SSSI.

Environmental Baseline and Evidence

- The principal designated sites for ecology and nature conservation are typically located around coastal and estuarine areas and are associated with a range of habitat types and wintering and breeding birds. Table 2.4 summarises the Natura[23] sites in the study area and their qualifying interests. A map of all designated areas is shown in Figure 2.1.

Table 2.4 Natura Site Designations

Designated Site	Location	Qualifying Features
Firth of Forth SPA	Along the coast from Leven to Kirkcaldy	**Non-breeding:** Pink-footed Goose (*Anser brachyrhyncus)*, waterfowl assemblage, Curlew (*Numenius arquata*), Dunlin (*Calidris alpina alpina*), Goldeneye (*Bucephala clangula*), Great crested grebe (*Podiceps cristatus*), Knot

[23] Natura is the term given to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These internationally important sites are designated under the European Habitats and Birds Directives respectively

Designated Site	Location	Qualifying Features
		(*Calidris canutus*), Lapwing (*Vanellus vanellus*), Mallard (*Anas platyrhynchos*), Red-breasted merganser (*Mergus serrator*), Ringed plover (*Charadrius hiaticula*), Sandwich tern (*Sterna sandvicensis*), Slavonian grebe (*Podiceps auritus*), Turnstone (*Arenaria interpres*), Wigeon (*Anas penelope*), Common scoter (*Melanitta nigra*), Golden plover (*Pluvialis apricaria*), Long-tailed duck (*Clangula hyemalis*), Redshank (*Tringa totanus*), Shelduck (*Tadorna tadorna*), Bar-tailed godwit (*Limosa lapponica*), Cormorant (*Phalacrocorax carbo*), Eider (*Somateria mollissima*), Grey plover (*Pluvialis squatarola*), Oystercatcher (*Haematopus ostralegus*), Red-throated diver (*Gavia stellata*), Scaup (*Aythya marila*), Velvet scoter (*Melanitta fusca*)
Firth of Forth Ramsar	Along the coast from Leven to Kirkcaldy	**Non-breeding:** Waterfowl assemblage, Pink-footed Goose, Goldeneye, Redshank, Slavonian grebe, Turnstone, Bar-tailed godwit, Knot and Shelduck **Passage:** Sandwich tern (*Sterna sandvicensis*)

- Table 2.5 lists the SSSIs located within the study area and the key features for which they are designated.

Table 2.5 SSSI Designations

SSSI	Location	Key Features
Firth of Forth	Coastline from Leven to Kirkcaldy	Aggregations of breeding and non-breeding birds, butterflies, fen, marsh and swamp, geomorphology, igneoous petrology, inshore sublittoral sediment (marine), mineralogy, neutral grassland, other invertebrates, palaeontology, Quarternary of Scotland geology and geomorphology, stratigraphy, supralittoral rock and sediment (coast), vascular plants
Camilla Loch	West of Kirkcaldy, 8.17ha	Fen, marsh and swamp, standing water and canals
Carriston Reservoir	North East of Glenrothes, 11.8ha	Standing water and canals
Star Moss	North East of Glenrothes, 62.94ha	Upland birch woodland, transition grassland and lowland neutral grassland
Craigmead Meadows	North West of Glenrothes, 53.9ha	Calcareous grassland (Upland)
Ballo and Harperleas Reservoirs	North West of Glenrothes, 95.56ha	Standing water and canals, Aggregations of breeding and non-breeding birds
Holl Meadows	North West of Glenrothes, 5.02ha	Neutral grassland

- The Firth of Forth is also designated as a nature conservation Marine Protected Area (MPA) for its banks complex including: moraines, shelf bank and mounds, offshore subtidal sands and gravels and ocean quahog aggregations.
- There is one regional park located within the Lomond Hills north west of Glenrothes which is mainly designated for its upland ecosystem (LBAP).
- There is one Local Nature Reserve (LNR) located in the study area, the Coul Den LNR which is located north-west of Glenrothes (see Figure 2.1). There is also one local wildlife site, Windygates-Kennoway Wildlife Site identified in the Proposed FIFEPlan (2014) which runs

along the Kennoway Burn on the Duniface hills and along the dismantled railway in Kirkland.

- Fife Local Development Plan (LDP) identifies several green network areas through the study area. These have been identified to indicate opportunities for habitat and green network enhancement (see Section 2.7). They include areas in Glenrothes, Kirkcaldy and the Levenmouth area.
- Figure 2.6 illustrates the extent and distribution of ancient woodland and native woodland in the study area. Woodland provides an important habitat in the study area for a range of biodiversity and helps to provide connectivity between otherwise fragmented habitats. The LDP also identifies a small number of Tree Preservation Orders[24] (TPOs) within the study area. Reference to the NBN Gateway indicates that there are a number of European Protected Species[25] that have previously been recorded within the study area including red squirrel and bats. These particular species records emphasise the importance of woodland habitat in the area.

Figure 2.6 Woodland Cover

[24] TPOs may be designated by local authorities for the purposes of preservation of amenity and/or where trees are of cultural or historical significance

[25] European protected species are animals and plants (those species listed on Annex IV of the Habitats Directive whose natural range includes Great Britain) afforded statutory protection under the Habitats Regulations 1994 (as amended)

- The area also has importance for key wildlife including birds of conservation concern[26] and the habitats on which these species rely. The patchwork of farmland, natural and semi-natural habitats across the area provide important connectivity for species including birds.

Constraints and Uncertainties (Issues)

- The designated SPA/Ramsar site and SSSIs could impose constraints on construction of new infrastructure depending on proximity and connectivity to these sensitive areas.
- Declining natural and semi-natural habitats and species are a concern for local authorities and nature conservation agencies and it will be important to ensure options for the study avoid adverse effects on biodiversity wherever possible and takes opportunities for enhancement

Summary of Key Evidence

- Consultation feedback identified that the study area contains a number of sites which are nationally and locally important areas for birds and wetlands. These include one Special Protection Area (SPA) and RAMSAR site at:
  - Firth of Forth SPA (non-breeding birds); and
  - Firth of Forth RAMSAR (non-breeding and passage birds).
- The Firth of Forth is also designated as a nature conservation Marine Protected Area (MPA) for its seabed habitats complex.
- There is one Regional Park (Lomond Hills) designated for its upland ecosystem.
- Other designated areas in the study area which may act as a constraint include seven SSSIs, a Local Nature Reserve (Coul Den LNR) and a local wildlife site (Kennoway-Windygates).
- Small woodland areas are scattered throughout the study area from which there are several records of red squirrels and bats.
- Consultation feedback also identified the importance of green infrastructure and green network protection and improvement in urban areas.

[26] Birds of Conservation Concern (BoCC) listings reflect each bird species' global and European status as well as that within the UK, and additionally measure the importance of the UK population in international terms

2.9 Cultural Heritage

Sources of Information

- PASTMAP Website : http://pastmap.org.uk/; and
- Feedback from consultees.

Consultation

- Historic Scotland (HS) advised (23.06.15) that historic environment interests at the national level include: Scheduled Monuments and their setting, Category A listed buildings and their setting, and Gardens and Designed Landscapes and battlefields included in their respective Inventories. HS advised to also seek information and advice in relation to any issues for unscheduled archaeology and category B and C listed buildings from Fife Council's archaeology and conservation advisors. Baseline data available at:
  - http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2100:10:0#
  - http://www.historic-scotland.gov.uk/setting-2.pdf
- Fife Council Archaeology Department identified (17.06.15) that there are no particularly sensitive archaeological sites in this general area although this would need to be confirmed with reference to specific development proposals.

Environmental Baseline and Evidence

- There are several Scheduled Monuments[27] (SMs) found throughout the study area, commonly occurring as isolated features. All SMs are mapped in Figure 2.7.
- There are 11 Conservation Areas[28] located throughout the area. Table 2.6 details their location. Listed buildings[29] are also present in a small number across the area mainly within the main urban areas of Kirkcaldy, Kennoway and Glenrothes. The Category A buildings are shown in Figure 2.7.

Table 2.6 Conservation Areas in the Study Area

Conservation Area	Location
Cadham Village	North of Glenrothes
Coaltown of Wemyss	Approximately 1 km south west of Wemyss
Dysart	Kirkcaldy
Falkland	Approximately 7km north of Glenrothes
Kennoway	Approximately 3km north west of Leven
Kirkcaldy	Kirkcaldy
Kirkcaldy Harbour and Port Brae	Kirkcaldy
Leslie	On the north western edge of Glenrothes
Links Road, Leven	Leven

[27] Scheduled monuments are monuments of national importance designated by Scottish Ministers under the Ancient Monuments and Archaeological Areas Act 1979

[28] Conservation areas are designated by local authorities in locations considered to be of special architectural or historic interest

[29] Listed buildings are buildings or structures of special historic interest which are listed by Historic Scotland through the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997

Markinch	Markinch
West Wemyss	West Wemyss

- Six Gardens and Designed Landscapes[30] (GDLs) are located within the study area (also see Section 2.7):
  - House of Falkland, Falkland;
  - Balbirnie, adjacent to Glenrothes;
  - Leslie House, Glenrothes;
  - Raith Park and Beveridge Park, South of Kirkcaldy;
  - Wemyss Castle, Wemyss; and
  - Dysart House and Ravenscarft Park, Kirkcaldy.
- There are no inventory battlefields in the study area.

Figure 2.7 Garden and Designed Landscapes and Conservation Areas

[30] Historic Scotland compiles and maintains an Inventory of nationally important gardens and designed landscapes on behalf of Scottish Ministers under the terms of the Ancient Monuments and Archaeological Areas Act 1979.

Constraints and Uncertainties (Issues)

- There is an extensive distribution of important cultural heritage designations across the study area including scheduled monuments, listed buildings, GDLs and conservation areas which may act to constrain transport proposals in some areas.

Summary of Key Evidence

- Scheduled monuments are located throughout the study area (more than 20 in total).
- There are 11 Conservation Areas identified within the corridor and a small number of Category A listed buildings mainly within the main urban areas of Kirkcaldy, Kennoway and Glenrothes.
- Six Gardens and Designed Landscapes (GDLs) are located in the study area at Falkland, Glenrothes, Wemyss and Kirkcaldy.
- Other cultural heritage assets are distributed throughout the corridor and may present localised constraints to development as a result of the potential for direct effects or indirect impacts on their setting.

2.10 Physical Fitness

Sources of Information

- Fife Council Core paths interactive data: maphttp://www.fifedirect.org.uk/topics/index.cfm?fuseaction=page.display&p2sid=EE849D41-1CC4-E06A-52EAF844E1C36C00&themeid=98A56687-9A34-4494-A43C-68E07CCAE64E ; and
- Feedback from consultation.

Consultation

- Relevant feedback from consultation included that from the RSPB who welcomed any measures to improve accessibility by bike and public transport through the inclusion of increased cycle infrastructure and park and ride facilities.
- SNH identified (2.07.15) the importance of quality and connectivity of greenspaces and green networks in urban areas.

Environmental Baseline and Evidence

- There is an extensive network of core paths and known rights of way in the study area.
- There are particular concentrations of core paths in the study area around Leven, Kirkcaldy and Glenrothes.
- The Fife Coastal Path runs along the Fife coastline for 117 miles between the Forth and Tay estuaries and follows the line of the coast through the study area.
- There are no National Cycle Network routes passing through the study area.

Constraints and Uncertainties (Issues)

- A key constraint will be crossings and other accommodation works for transport measures which affect core paths, long distance routes such as the Fife Coastal Path and other routes used for walking, cycling and horse riding.
- An important aspect in the design stage will be to mitigate the effects of crossing such facilities for pedestrians, cyclists and equestrians or make other provision and take opportunities to improve access

Summary of Key Evidence

- There is an extensive number of local paths within the study area which afford opportunities for access to countryside around towns and opportunities for formal and informal recreation which may benefit physical fitness.
- A long distance coastal trail is located within the study area.

Registered Address:

7 Dundas Street

Edinburgh

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+44 (0) 131 557 8325

Appendix D – Initial (Part 1) Appraisal Summary Tables

Table 1. Appraisal Summary Table – Option 1

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	1. Maintain existing bus services to Kirkcaldy and beyond while improving public transport facilities and information.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option focuses on the maintenance of the existing level of bus service connecting the Levenmouth area to Kirkcaldy and beyond while improving service information and ticketing. This option would involve the upgrade of vehicles operating express services between St Andrews, East Neuk, Leven, Kirkcaldy to Edinburgh. Depending on the final vehicle specification 18t weight restriction at Bawbee / Leven Railway Bridge poses a consideration. The biggest impact would be on express services routing to the southern side of the River Leven. . This option would also look at the impact planning applications may have on congestion hotspots within the area and mitigating these where appropriate in relation to providing for and encouraging travel by alternatives to the private car. Improvements to facilities will include on street enhancements such as improved bus shelters, as well as the improved access to digital and at-stop information.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		

Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland

Transport Planning Objectives		
Objective:	**Performance Against Transport Planning Objective:**	**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	This option should have a journey time benefit for Levenmouth as a whole, however, particular benefits would be made south of the River Leven to Kirkcaldy and beyond.	✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	Benefit can be expected to be produced in terms of sustainable travel mode share with this option. The alternative of future deterioration of service to the areas south of the River Leven would likely increase car use from this area to Kirkcaldy and beyond, or potentially restrict non-car owners' ability to travel.	✓
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	Maintaining these connections and improving transport facilities and information would allow users to continue to access Kirkcaldy and beyond and vice versa serve employment opportunities in Levenmouth such as the Energy Park. It is not expected however that this option would have a notable impact on attracting inward investment.	-
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	While this option maintains connections to the southern side of Levenmouth it is likely to have little impact on tourist travel to and from the area, assuming overall service levels to the town centre are maintained even if this option is not implemented.	-

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	Potential for short term noise effects during bridge construction works would be temporary and not predicted to be significant. No material change in traffic flows on key roads in the study area or beyond are expected from this option. No significant effects on transport noise or vibration for receptors adjacent to bus routes or facilities are predicted.	-
Global Air Quality - Carbon Dioxide C02	No material change in traffic flows or associated emissions on key roads in the study area or beyond are expected from this option. No significant effects on global (carbon) emissions are predicted.	-
Local Air Quality - PM10 and NO2	If the option resulted in changes in routing of buses and layouts of bus terminals in the urban areas of Methil/Leven and Kirkcaldy there is minor potential for positive or negative effects on air quality in the immediate vicinity of these locations. No significant effects on local air pollutant emissions are predicted.	✓/ ×
Water Quality, Drainage, and Flood Defence	Construction works to upgrade Bawbee Bridge have potential to affect the River Leven but are assumed to be mitigated with good construction practice and adoption of sustainable drainage measures. Improved facilities and information may encourage increased use of bus services with the potential for small changes in use of other modes (e.g. reduced use of private car) with the potential for very small impacts on run-off quality from roads and urban areas. No significant effects on water quality, drainage and flood defence are predicted from this option taking account of assumed design and mitigation.	✓/ ×
Geology	No significant effects on geology or geological/material resources are predicted for this option.	-
Biodiversity and Habitats	Improved public transport facilities including Bawbee Bridge works have potential for minor changes to local habitats from construction and permanent development works which it is assumed would be mitigated with good construction practice. No significant effects on biodiversity and habitats are predicted from this option taking account of assumed design and mitigation.	✓/ ×
Landscape	Improved public transport facilities including Bawbee Bridge works have potential for minor changes to landscape and townscape from construction and permanent development works which it is assumed would be of modest scale and designed in a manner appropriate to the townscape character.	✓/ ×

	No significant effects on landscape and townscape are predicted from this option taking account of assumed design and mitigation.	
Visual Amenity	Improved public transport facilities including upgrading of Bawbee Bridge have potential for minor changes to visual receptors and key views during construction and from permanent development works which it is assumed would be of modest scale and designed in a manner appropriate to the townscape character. No significant effects on visual amenity are predicted from this option taking account of assumed design and mitigation.	✓/ ×
Agriculture and Soils	No significant effects on agriculture and soils are predicted for this option.	-
Cultural Heritage	Improved public transport facilities including upgrading of Bawbee Bridge have potential for minor changes to historic townscapes from construction and permanent development works which it is assumed would be of modest scale and designed in a manner appropriate to the townscape character (particularly if these were within Conservation Areas). No significant effects on cultural heritage are predicted from this option taking account of assumed design and mitigation.	✓/ ×

Safety		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Accidents	While this option supports continued travel by alternatives to the private car, it is unlikely to generate additional mode switch to a level which would result in a material impact on accident rates.	-
Security	Any improvements to security associated with this option are likely to be minor. Real and perceived improvements to security will be in relation to improvements to bus facilities, such as lighting at stops, and increased natural surveillance from increased passenger numbers on-board and at stops. Improved information can also lead to increased perceptions of safety.	✓

Economy		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
TEE	*Travel time savings:* Travel time benefits are expected for travel to Kirkcaldy and beyond. Particular benefits are expected for those in the Methil/ Buckhaven area, East Wemyss and the Coaltown of Wemyss. Failure to maintain existing express services between these areas, due to the Bawbee Bridge weight restrictions limiting bus routing options south of the River Leven, would mean that additional interchange, or use of slower services, be required without the implementation of this option. *User charges including fares, parking charges and tolls:* This option is not likely to impact on this sub-criteria. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* Quality benefits would be expected from this option, as high quality buses (coach standard for express services, including on-board toilet) would be able to service areas south of the River Leven directly, including Methil/ Buckhaven area, East Wemyss and the Coaltown of Wemyss. *Reliability benefits to transport users:* There is likely to be a minor benefit to reliability of services relating to relief of traffic impacts related to development along bus routes. *Investment costs:* There is likely to be little impact on private sector operator investment costs as this will merely facilitate planned roll-out of improved bus fleet. *Operating and maintenance costs:* This option is not likely to impact on this sub-criteria. *Revenues:* Improved services provision and increased passenger numbers may provide benefit to revenues. *Grant and subsidy payments:* Minor increased subsidy revenue from increased patronage.	✓

EALI	The majority of benefits of this option would be at a local rather than national level for this option. This option has a strong spatial drive, in that it arises from the need to maintain connectivity on the southern side of the River Leven, namely Methil, Methilhill, Buckhaven, East Wemyss and Coaltown of Wemyss. Maintaining these connections and improving transport facilities and information would allow users to access Kirkcaldy and beyond and vice versa to serve employment opportunities in Levenmouth such as the Energy Park. This is extremely important for encouraging both inward investment and new investment. This in turn plays an important role in promoting Levenmouth as a place to live and work. Access to education, healthcare, employment and social opportunities in Kirkcaldy and beyond, is of particular importance to the areas that this option would benefit, as these are some of the areas with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. Access to healthcare and social opportunities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce.	✓
Cost to Government	Improvements to on-street bus facilities would be a cost to government. Any associated works specific to allow heavier buses to use the Bawbee Bridge / Leven Railway Bridge would be additional cost. Ongoing repair and maintenance would maintain the status quo and not present a direct cost associated with this option.	

Integration		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Transport Integration	Services and ticketing: There will be a minor beneficial impact to this criteria from this option, provided by a greater geographical network balance of services between Levenmouth, Kirkcaldy and beyond. This allows for more service integration opportunities. Infrastructure and information: There will be a minor benefit to infrastructure, through on-street facility improvements. Information provision via this option will also be improved for users.	✓
Transport and Land Use Integration	This option utilises existing services but also involves transport mitigations in response to development planned. As well as potential improvements for public transport the transport mitigations junction capacity improvements are also likely to improve car conditions.	✓
Policy Integration	This option is fully aligned with transport policy from national to local level, particularly in terms of: sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use.	✓

Accessibility and Social Inclusion		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Community Accessibility	This proposal helps protect and improve public transport connections across the southern side of Levenmouth, in particular Methil, Buckhaven, East Wemyss and Coaltown of Wemyss areas. This maximises access to public transport services on foot and by bicycle across this area. It does not directly improve walking and cycling connections, but helps facilitate car independent access to services and facilities.	✓✓
Comparative Accessibility	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	✓✓

Implementability: Feasibility, Affordability, and Public Acceptability		
Sub- Criteria	**Performance Against STAG Criteria**	**Rating**
Feasibility	Were heavier vehicles introduced on express services operated by Stagecoach there would be a need to consider requirements to either upgrade Bawbee / Leven Railway Bridge to address the 18t weight restriction or alternatively services would require re-routing within the Levenmouth area with particular impact on settlements to the west of the River Leven.	Moderate Consideration
Affordability	Costs for this option will involve upgrades to on-street facilities and information which are expected to be relatively minor. However, maintenance costs relating to Bawbee Bridge are still a consideration until the outcome of investigation into repair works and whether this is accommodated under existing budgets or further work would be required.	Moderate Consideration
Public Acceptability	Public opposition to this option would not be expected. However, it is noted that implementation of this option alone may come under criticism as it may not be seen to be doing enough, but simply perpetuating the current situation. It is also likely that not implementing this option would result in deterioration of the existing public transport offering in southern Levenmouth and would meet public criticism particularly around reducing access and opportunities for non-car owning households in deprived areas.	Moderate Consideration

Rationale of Selection or Rejection	Outcome
This option performs well across the majority of Transport Planning Objectives and STAG Criteria with particular benefits for residents and businesses south of the River Leven by maintaining existing connections in this area. If this option is not taken forward, there would be an immediate loss of public transport connectivity to and from the Levenmouth area.. This option is one of the more easily implemented options studied, is relatively low cost compared (subject to the specification of future vehicles used to operate bus services in the area and scope of any potential works required to upgrade Bawbee Bridge/Leven Railway Bridge) to the other options considered, does not have the potential for any significant environmental impacts, and scores positively in term of economic benefit. Due to the above factors, this option has been selected as a preferred option for detailed appraisal.	Option **taken forward** to STAG Part 2 Appraisal.

Table 2. Appraisal Summary Table – Option 2

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	2. Integration of bus services at Levenmouth and existing rail provision at Markinch	Name of Planner:	SYSTRA Ltd.
Proposal Description:	Bus and rail integration from Levenmouth to Markinch has recently been improved to provide a link to the rail network, largely via the X4 service. This option would entail further improved provision of bus services from Methil, Methilhill and Buckhaven to Markinch station through the re-branding and timetable adjustments to service 44B to meet rail services at Markinch. The existing X4 service connecting Leven town centre, Markinch station and Glenrothes will also form part of this re-branding exercise. Rail fare re-balancing across Fife is also key to this option in terms of increasing the attractiveness of rail options at Markinch to address the higher fare for rail travel from Markinch to Edinburgh in comparison to services from Kirkcaldy.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland		

Transport Planning Objectives		
Objective:	**Performance Against Transport Planning Objective:**	**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network.	✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	Improved access to the rail network would promote sustainable transport use, and the branding campaign associated with this option will be targeted at modal shift.	✓
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	This option would provide improved access to and from the national rail network (via Markinch), Glenrothes, and Whitehall Industrial Estate, providing improved access to jobs outwith Levenmouth and also supporting access to the area.. It is though not expected that this option would have a notable impact on direct investment opportunities in the area.	-
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	This option will improve access to the rail network, enhancing potential tourist access to the area.	✓

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	Potential for short term noise effects during construction of the hub would be temporary and not predicted to be significant. No material change in traffic flows on key roads in the study area or beyond are expected from this option. No significant effects on transport noise or vibration for receptors adjacent to bus routes are predicted.	-
Global Air Quality - Carbon Dioxide C02	No material change in traffic flows or associated emissions on key roads in the study area or beyond are expected from this option. No significant effects on global (carbon) emissions are predicted.	-
Local Air Quality - PM10 and NO2	If the option resulted in changes in routeing of buses in the urban areas of Buckhaven/Methil/Leven and Markinch there is minor potential for positive or negative effects on air quality in the immediate vicinity of these locations.	✓/ ✖

	No significant effects on local air pollutant emissions are predicted.	
Water Quality, Drainage, and Flood Defence	No significant effects on water quality, drainage and flood defence are predicted from this option.	-
Geology	No significant effects on geology or geological/material resources are predicted for this option.	-
Biodiversity and Habitats	No significant effects on biodiversity and habitats are predicted from this option, subject to choice of the hub location/building.	- / ✓
Landscape	No significant effects on landscape and townscape are predicted from this option assuming that design of the new hub integrates well with its surroundings.	-
Visual Amenity	No significant effects on visual amenity are predicted from this option assuming that design of the new hub integrates well with its surroundings.	-
Agriculture and Soils	No significant effects on agriculture and soils are predicted for this option.	-
Cultural Heritage	No significant effects on cultural heritage are predicted from this option assuming that design of the new hub integrates well with the local townscape.	-

Safety		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Accidents	This option is likely to produce a minor benefit to accident rates, resulting from the reduction of the number of motorists on the road network. This reduction will come from people switching from car to the bus and rail link. As well as trips previously undertaken entirely by car, the option will likely also reduce the number of people driving to both Markinch and Kirkcaldy rail stations to access rail services, with people instead using the branded bus link. Particular areas of benefit will include the Methil/Buckhaven area, the A955 between Markinch and Levenmouth, and the A915/A955 between Kirkcaldy and Levenmouth.	✓
Security	Any improvements to security associated with this option are likely to be minor. Real and perceived improvements to security will be in relation to improvements to bus facilities, such as lighting at stops, and increased perceived safety resulting from increased passenger numbers on-board and at stops. Passengers will also benefit from reduced wait times for services on-street and reduced number of connections required to make the journey, in particular in the Methil/ Buckhaven area which will see an improved direct link to rail and therefore negate the need for additional interchange at Leven Bus Station.	✓

Economy		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
TEE	*Travel time savings:* Travel time benefits are expected for public transport trips via the rail network at Markinch. These travel time benefits include particular improvements to journeys from Methil, Methilhill Buckhaven and Fife Energy Park in terms of point to point travel and reduced interchange/wait time *User charges including fares, parking charges and tolls:* This option includes the re-evaluation and likely reduction of rail fares at Markinch and integration of bus and rail fares from Levenmouth, providing benefit to public transport users. *Vehicle operating cost changes for road vehicles:* There will be increased vehicle operating costs associated with new bus services. *Quality benefits to transport users:* Quality benefits would be expected from this option, as high quality rail link branded buses would be used for links to Markinch Rail Station from Levenmouth, including additional improved direct services to the station from Methil, Methilhill, Buckhaven and Fife Energy Park. *Reliability benefits to transport users:* Reliability for access to the rail network will be improved for access to Methil, Methilhill, Buckhaven and Fife Energy Park via the provision of improved direct services. *Investment costs:* Additional fleet may be required, as will a branding exercise for the new service. *Operating and maintenance costs:* Additional service operating and maintenance running costs. *Revenues:* Revenue reduction may be possible for the rail operator in terms of the proposed reduced fares. *Grant and subsidy payments:* Minor increased subsidy revenue from increased patronage and potential fare compensation.	✓✓

EALI	The majority of benefits for this option would be at a local rather than national level for this option. This option includes improvements of integration of bus and rail from both Leven town centre, with a branded bus services, as well as the areas of Methil (including the Energy Park), Methilhill, Buckhaven and Windygates. This would provide improved access to the national rail network (via Markinch), Glenrothes, and Whitehall Industrial Estate, providing improved access to jobs outwith Levenmouth and the potential for jobs to be created in the area through investment. In particular, access to the Energy Park and the Cameron Bridge (Distillery and Hospital) employment areas would be improved. There may be some additional benefit to tourism and business from a more clearly branded link from the rail network to Levenmouth.	✓✓
Cost to Government	It is likely that fare compensation may form part of any agreement to restructure rail fares to address the differential between Markinch and Kirkcaldy.	

Integration		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Transport Integration	This option looks at the integration of bus services with rail options, and so scores well on this criteria in terms of both services and ticketing and infrastructure of information. Timetable matching and information and branding exercises on this option are particularly effective for this.	✓✓
Transport and Land Use Integration	This option includes improvements of integration of bus and rail from both Leven town centre, with a branded bus services, as well as the areas of Methil (including the Energy Park), Methilhill, Buckhaven and Windygates. This would provide improved access to the Energy Park and the Cameron Bridge (Distillery and Hospital) employment areas, both of which are identified in the Mid-Fife LDP as planned areas of development.	✓✓
Policy Integration	This option is fully aligned with transport policy from national to local level, particularly in terms of: sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use.	✓✓

Accessibility and Social Inclusion		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Community Accessibility	This proposal helps improve public transport connections across Levenmouth, in particular central Leven, Methil, Methilhill and Buckhaven. This maximises access to public transport services on foot and by bicycle across this area. It does not directly improve walking and cycling connections, but helps facilitate car independent access to services and facilities.	✓✓
Comparative Accessibility	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	✓✓

Implementability: Feasibility, Affordability, and Public Acceptability		
Sub- Criteria	**Performance Against STAG Criteria**	**Rating**
Feasibility	This option is expected to be technically feasible, however, this would require discussion with public transport operators regarding provision. Fare equalisation proposals for this option, while not representing technical feasibility issues, will require effort in terms of negotiation and agreement.	Moderate Consideration
Affordability	This option would be relatively affordable, although there would be costs associated with improved service frequency and maintenance of the branding exercise. Fare equalisation may also incur a cost in terms of a reimbursement agreement.	Moderate Consideration
Public Acceptability	Public opposition to this option would not be expected in terms of it serving to enhance the current bus network, although it is anticipated it would not fulfil aspirations around the public transport offering for the area	Moderate Consideration

Rationale of Selection or Rejection	Outcome
Option 2 benefits areas south of the River Leven through improved connections to the rail network and Glenrothes, providing particular benefit to accessibility and social inclusion. Connections to the town centre are also reinforced through the branding exercise, and particular benefits are seen for integration and journey time through improved timetabling and fare rebalancing. This option has relatively low costs with little or no impact to environment, other than a minor impact on local air quality, and a potential improvement to biodiversity and habitats. The combination of improvements to services, the branding exercise, and fare rebalancing are likely to make this an attractive public transport option for the residents and workforce of the Levenmouth area. The above factors, coupled with positivescoring of this option across the study objectives and criteria means that this option has been selected as a preferred option for detailed appraisal.	Option **taken forward** to STAG Part 2 Appraisal.

Table 3. Appraisal Summary Table – Option 3

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	3. Provision of rail freight link to Cameron Bridge and Methil Docks along the alignment of the existing, but currently out-of-use line between Thornton North Junction and Methil Docks.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option involves opening the existing out-of-use rail line at Methil Docks to Cameron Bridge and onwards to the mainline for freight only. The current rail alignment joins the Markinch to Kirkcaldy line halfway between Markinch and Kirkcaldy. Freight facilities would be provided at Methil Docks and Cameron Bridge. Option 3 has been identified as a standalone freight only option due to the difference in costs associated with freight and passenger standard lines.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland		

Transport Planning Objectives		
Objective:	**Performance Against Transport Planning Objective:**	**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	Negligible improvement may be seen in terms of journey time from reduced numbers of HGV vehicles on the road network.	-
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	No impact expected. Improvements to journey times on the road network, resultant from a reduction in HGV levels, would impact both motorists and public transport users and so the effect of this factor is seen to be neutral.	-
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	This option would help employment in the area by supporting industry, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. This, coupled with potential links with the docks could potentially improve inward and external investment levels.	✓
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	No expected impact.	-

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	It is predicted that noise and vibration effects will be experienced during construction which could be significant for short periods of intensive activity (e.g. scraping of formation, ballast laying). During operation freight train movements are predicted to result in noise effects for adjacent residential receptors which may be significant if trains are operated on a regular frequency. A slight reduction in HGV traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these routes.	✓/ ✖✖
Global Air Quality - Carbon Dioxide C02	A slight reduction in HGV traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on emissions from reduced overall HGV vehicle kilometres. No significant effects on global (carbon) emissions are predicted overall.	✓

Local Air Quality - PM10 and NO2	It is predicted that local air quality effects (primarily from dust) will be experienced during construction but these would not be significant. During operation freight train movements are predicted to result in some emissions of local air pollutants but these are not predicted to significantly affect background concentrations of local air pollutants A slight reduction in HGV traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to key routes used for freight traffic.	✓/ ✖
Water Quality, Drainage, and Flood Defence	It is predicted that with mitigation measures in place the reinstatement of the freight railway and its operation would not have significant effects on water quality and drainage taking account of assumed design and mitigation. There is a potential for significant effects on flooding (or as a result of flooding on the railway) and this would require more detailed assessment at later design stages.	✖ / ✖✖
Geology	It is predicted that with mitigation measures in place the reinstatement of the freight railway and its operation would not have significant effects on geology. There is a potential for construction to affect areas of potentially contaminated land associated with the former industrial areas through which the route passes and this would require more detailed investigation, assessment and if appropriate remediation at later design stages.	✖ / ✖✖
Biodiversity and Habitats	Construction disturbance works close to the coast have the potential to indirectly affect the qualifying interests (wintering and passage bird populations) of the Firth of Forth SPA/Ramsar site and SSSI and mitigation measures would need to be employed to ensure that disturbance did not adversely affect the Natura site. It is predicted that with mitigation measures in place the reinstatement of the freight railway and its operation would not have significant effects on biodiversity and habitats taking account of assumed design and mitigation. The potential for effects would need to be confirmed at later stages based on field surveys of the development area.	✖ / ✖✖
Landscape	It is predicted that with mitigation measures in place the reinstatement of the freight railway and its operation would generally not have significant effects on landscape character of the route although there is potential for significant effects on landscape and townscape dependent on the final form and design of railway infrastructure and its connection with the port at Methil.	✖ / ✖✖
Visual Amenity	Significant adverse effects on visual amenity are predicted from the permanent development and operation of this option in some locations where receptors or views are particularly close to the railway route (including areas of housing on the edge of Windygates and Leven). It may be possible to mitigate some of these effects in the longer term through measures such as screen planting. Some minor	✓/ ✖✖

	positive effects are predicted for visual receptors close to roads where HGV movements are reduced as a result of the freight railway's operation.	
Agriculture and Soils	It is predicted that with mitigation measures in place the reinstatement of the freight railway and its operation would not have significant effects on agriculture or soils. No new areas of agricultural land are assumed to be required for the proposals and much of the redevelopment of the line would be on land which has already been developed in the past for original railway construction.	✘
Cultural Heritage	No significant effects on cultural heritage are predicted from this option taking account of assumed design and mitigation.	✘

Safety		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Accidents	This option will likely have a minor impact on accident rates by lowering the number of HGV vehicles on the road network that were previously travelling to and from the Levenmouth area.	✓
Security	This option is unlikely to have any impact on security.	-

Economy		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
TEE	*Travel time savings:* Minor improvements may be seen for road traffic from the reduction of HGV vehicles on the road. *User charges including fares, parking charges and tolls:* This option is not likely to impact on this sub-criteria. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* Potential improvements to road travel quality, including public transport, from reduction in road freight traffic. *Reliability benefits to transport users:* Potential improvements to road travel reliability, including public transport, from reduction in road freight traffic. *Investment costs:* Investment costs covered by cost to Government, below however, private investment potential would be explored at detailed appraisal. *Operating and maintenance costs:* maintenance and operation of line and freight facilities. *Revenues:* This option is not likely to impact on this sub-criteria. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Stage 2 if option is taken forward.	✓
EALI	EALI issues for this option revolve around the provision of benefits to large scale industry in the area, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. Linkages between the national rail network and the dock facilities may have a wider strategic benefit to the local and national economy if utilised. The addition of a rail freight link for the area opens up the types and scale of industry which can operate in the Levenmouth area potentially impacting on inward and external investment levels.	✓✓
Cost to Government	Investment costs associated with the reopening of this line including, but not limited to, signalling, structure strengthening, line clearance, and freight facility development. Freight facility private investment potential would be explored at detailed appraisal.	

Integration		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Transport Integration	This option is likely to have a neutral impact on this criteria.	-
Transport and Land Use Integration	This option revolves around the provision of benefits to large scale industry in the area, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park both of which are identified in the Mid-Fife LDP as planned areas of development.	✓✓
Policy Integration	This option is aligned with economic policy at a local level and will support the aims to encourage inward investment to the Levenmouth area by increasing freight options within the area. This would be of particular importance to the development of the Energy Park further.	✓✓

Accessibility and Social Inclusion		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Community Accessibility	This option is likely to have a neutral impact on this criteria.	-
Comparative Accessibility	This option is likely to have a neutral impact on this criteria.	-

Implementability: Feasibility, Affordability, and Public Acceptability		
Sub- Criteria	**Performance Against STAG Criteria**	**Rating**
Feasibility	While this option would be technically feasible, it would rely on upgrade to the out of use line. This line is subject to a Short Term Network Change.	Moderate Consideration
Affordability	Aside from the costs associated with bringing this line into use (which are captured in TEE), there would also be costs associated with maintenance and operation of line. Financial risks include reliance on a small number of freight users to maintain viability of the line in terms of costs and benefit from the level of freight movement.	Moderate Consideration
Public Acceptability	Consultation has noted support for the re-opening of the rail line. This is with the expectation a new rail line would provide for both passenger and freight. A freight only operation would likely attract public interest for inclusion of a passenger service offering.	Moderate Consideration

Rationale of Selection or Rejection	Outcome
Although Option 3 contributes positively to TPO 3 (*ensure that transport infrastructure and services encourage investment in Levenmouth, and attract jobs and people to the area*) the minimal or neutral benefits for the remaining TPOs as a result of the freight only offering, and the negative environmental appraisal, limited this option's potential for selection when compared to the other rail options presented. Due to the limited benefits of this option compared to the other rail options presented, some of which also include rail freight provision as sub options, this option is not recommended for detailed appraisal.	Option **not taken forward** to STAG Part 2 Appraisal.

Table 4. Appraisal Summary Table – Option 4

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	4. Provision of a rail line along the alignment of the existing, but out-of-use, rail line between Thornton North Junction and Methil Docks.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option involves opening the existing, but out-of-use, rail line to freight and passenger services between Methil and the existing mainline with stations provided at Cameron Bridge and Leven. The current rail alignment joins the mainline half-way between Markinch and Kirkcaldy. It is the intention that passenger services would be fulfilled by new services or the extension/diversion of existing rail services. The feasibility of potential service extensions would be considered further as part of the Detailed Appraisal if this option is taken forward. Sub-options include the development of a rail station at Leven and Cameron Bridge and the inclusion of rail freight facilities and can be summarised as follows: - 4a. Passenger rail only option, with a station provided at Leven only. - 4b. Passenger rail only option, with stations provided at Leven and Cameron Bridge. - 4c. Passenger and freight rail option, with a station provided at Leven only, and freight facilities provided at Cameron Bridge and Methil Docks. - 4d. Passenger and freight rail option, with stations provided at Leven and Cameron Bridge, and freight facilities provided at Cameron Bridge and Methil Docks.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to		

	2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland		
Transport Planning Objectives			
Objective:	**Performance Against Transport Planning Objective:**		**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	4a	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network. Comparatively to other one station options it also retains the opportunity to serve both sides of the Fife Circle thereby augmenting access opportunities.	✓✓
	4b	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network. While the journey time of the rail journey will be increased by the additional stop on the line, a higher percentage of the Levenmouth population will have access to these rail services.	✓✓
	4c	As Option 4a, with some small minor additional benefit seen in terms of journey time from reduced numbers of HGV vehicles on the road network.	✓✓
	4d	As Option 4b, with some minor additional benefit seen in terms of journey time from reduced numbers of HGV vehicles on the road network.	✓✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	4a	This rail option will improve public transport mode choice for the residents and workers of Levenmouth and will likely be seen as an attractive option for travel outwith the area, therefore, promoting sustainable transport use. Comparatively to other one station options it also retains the opportunity to serve both sides of the Fife Circle.	✓✓
	4b	As Option 4a with further benefits for those able to access the additional station.	✓✓
	4c	As Option 4a. Additionally, improvements to journey times on the road network, resultant from a reduction in HGV levels, would impact both motorists and public transport users and so the effect of this particular additional factor is seen to be neutral.	✓✓
	4d	As Option 4b. Additionally, improvements to journey times on the road network, resultant from a reduction in HGV levels, would impact both motorists and public transport users and so the effect of this particular additional factor is seen to be neutral.	✓✓

TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.		Improved access to employment and other services would encourage people to live in Levenmouth.	
	4a	Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. A skilled active workforce may, in turn, support investment in the area.	✓
	4b	As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
	4c	As Option 4a, with additional benefits from freight, which would help employment in the area by supporting industry, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. This, coupled with potential links with the docks could potentially improve inward and external investment levels.	✓✓
	4d	As Option 4b, with additional benefits from freight, which would help employment in the area by supporting industry, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. This, coupled with potential links with the docks could potentially improve inward and external investment levels.	✓✓
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	4a	This option will improve access to the rail network, enhancing potential tourist access to the area including potential access to Edinburgh Airport.	✓✓
	4b	As Option 4a. The additional station is unlikely to create a large change in tourist behaviour but may be of some minor additional benefit.	✓✓
	4c	As Option 4a.	✓✓
	4d	As Option 4b.	✓✓

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	It is predicted that noise and vibration effects will be experienced during construction which could be significant for short periods of intensive activity (e.g. from station, structures and track construction) During operation passenger and freight train movements are predicted to result in noise effects for adjacent residential receptors which may be significant dependent on the timetabling and frequency of rail operations A slight reduction in HGV and car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these routes	✓/ ✖✖

Global Air Quality - Carbon Dioxide C02	A slight reduction in HGV and car traffic flows on key roads in the study area or beyond are predicted to have up to minor beneficial effects on emissions from reduced overall HGV and car vehicle kilometres	✓
Local Air Quality - PM10 and NO2	It is predicted that local air quality effects (primarily from dust) will be experienced during construction but these would not be significant During operation train movements are predicted to result in some emissions of local air pollutants but these are not predicted to significantly affect background concentrations of local air pollutants A slight reduction in HGV and car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to key routes used for freight traffic	✓/ ✖
Water Quality, Drainage, and Flood Defence	It is predicted that with mitigation measures in place the reinstatement of the railway/stations and its operation would not have significant effects on water quality and drainage taking account of assumed design and mitigation There is a potential for significant effects on flooding (or as a result of flooding on the railway) and this would require more detailed assessment at later design stages	✖ / ✖✖
Geology	It is predicted that with mitigation measures in place the reinstatement of the railway/stations and its operation would not have significant effects on geology There is a potential for construction to affect areas of potentially contaminated land associated with the former industrial areas through which the route passes and this would require more detailed investigation, assessment and if appropriate remediation at later design stages	✖ / ✖✖
Biodiversity and Habitats	It is predicted that the reinstatement of the railway and construction of stations and its operation has the potential for significant effects on biodiversity as a result of habitat loss (eg scrub woodland), potential effects on protected species and effects on a local wildlife site Construction disturbance works close to the coast have the potential to indirectly affect the qualifying interests (wintering and passage bird populations) of the Firth of Forth SPA /Ramsar site and SSSI and mitigation measures would need to be employed to ensure that disturbance did not adversely affect the Natura site The potential for effects would need to be confirmed at later stages based on field surveys of the development area	✖ / ✖✖
Landscape	It is predicted that with mitigation measures in place the reinstatement of the railway, construction of stations and train operations would not generally have significant effects on landscape and townscape character of the route	✖ / ✖✖

	There is potential for significant effects on landscape and townscape dependent on the final form and design of railway and station infrastructure and its connection with the port at Methil	
Visual Amenity	Significant adverse effects on visual amenity are predicted from the permanent development and operation of this option in some locations where receptors or views are particularly close to the railway route (including areas of housing on the edge of Windygates and Leven) It may be possible to mitigate some of these effects in the longer term through measures such as screen planting. Some minor positive effects are predicted for visual receptors close to roads where HGV and other traffic movements are reduced as a result of the railway's operation	✓/ ✖✖
Agriculture and Soils	It is predicted that with mitigation measures in place the reinstatement of the railway, construction of new stations and railway operations would not have significant effects on agriculture or soils No new areas of agricultural land are assumed to be required for the proposals and much of the redevelopment of the line would be on land which has already been developed in the past for original railway construction	✖
Cultural Heritage	No significant effects on cultural heritage are predicted from reinstatement of the railway taking account of assumed design and mitigation Development of new stations has potential to affect the setting of a number of listed buildings, depending on the final form and location of the structures	✖

Safety			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Accidents	4a	This option is likely to produce a minor benefit to accident rates, resulting from the reduction of the number of motor vehicles on the road network from drivers switching from car travel to public transport.	✓
	4b	As Option 4a, with improved access from current and future developments in the Cameron Bridge area. This would likely support a higher modal shift and, therefore, a greater potential reduction in accident rates.	✓✓
	4c	As Option 4a with added benefit from a reduction in HGV vehicles on the road network that were previously travelling to and from the Levenmouth area.	✓✓
	4d	As Option 4b with added benefit from a reduction in HGV vehicles on the road network that were previously travelling to and from the Levenmouth area.	✓✓
Security	4a	Provision of new rail station facilities will likely improve security for public transport users as these will be built to at least minimum safety requirements for factors such as site perimeters, entrances and exits, and lighting. Stations of this scale are likely to include periods of staff	✓

		presence as well as the provision of formal surveillance (CCTV) and on-platform emergency call/information facilities.	
	4b	As Option 4a, with additional benefits for those accessing services at the station at Cameron Bridge.	✓✓
	4c	As Option 4a.	✓
	4d	As Option 4b.	✓✓

Economy		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**

TEE	4a	*Travel time savings:* Travel time savings are dependent on the speed achieved along the rail link.[1] It is expected that travel time savings may be made for users travelling to/from the vicinity of the rail station, with particular savings being made from removal of interchange penalties. *User charges including fares, parking charges and tolls:* It is unlikely that this option would produce fare benefits i.e. fares are unlikely to be lower than equivalent bus fares or rail fares from Kirkcaldy and Markinch. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* Improvements to modal choice from the Levenmouth area, including direct access to the rail network from the new station at Leven. However, competition from rail to bus could lead to reduction in bus route viability and therefore the reduction of bus services. *Reliability benefits to transport users:* Improved reliability for access to the rail network. Reliability is likely to be improved for access to destinations on the rail network as rail travel is not directly impacted by road congestion. *Investment costs:* Investment costs covered by cost to Government, below. *Operating and maintenance costs:* Consultation with Abellio Scotrail has noted that existing passenger rail services across the Forth Estuary are at capacity and that additional rolling stock, servicing and maintenance would be required for any passenger rail serving Levenmouth. Operating and maintenance costs will be required for the station at Leven. *Revenues:* It is likely that there will be additional revenue gained from increased public transport patronage related to rail transport (rail services and buses serving this), however, there may be revenue lost for bus operators on services which will receive competition new passenger rail services. Overall this option is likely to be of net benefit. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓

[1] The 1969 Sectional Appendix notes the Permissible Line Speed of the now unused rail line as 40mph.

	4b	*Travel time savings:* As with Option 4a, this is expected to benefit journey times. However, the journey time will be comparatively longer due to the additional stop at the additional station. This additional stop will, however, allow a greater proportion of the Levenmouth population to benefit from this travel time saving. *User charges including fares, parking charges and tolls:* As Option 4a. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth area population i.e. those able to access the station at Cameron Bridge. *Reliability benefits to transport users:* As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. *Investment costs:* As Option 4a. *Operating and maintenance costs:* As Option 4a, but with the cost of operation and maintenance of an additional station at Cameron Bridge. *Revenues:* As with Option 4a, a net benefit is expected. The expected increased revenue for rail, but also the increased potential for lost revenue via competition for bus is further emphasised with this option as a larger percentage of the Levenmouth population will have access to the new rail link. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓

	4c	*Travel time savings:* As Option 4a. *User charges including fares, parking charges and tolls:* As Option 4a. *Vehicle operating cost changes for road vehicles:* As Option 4a. *Quality benefits to transport users:* As Option 4a. *Reliability benefits to transport users:* As Option 4a. *Investment costs:* As Option 4a, however, private investment potential for freight facilities would be explored at detailed appraisal. *Operating and maintenance costs:* As Option 4a with the addition of costs related to maintenance of freight facilities. However, this is likely to be accompanied by benefits to private sector logistical operational costs to rail freight users. *Revenues:* As Option 4a. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓
	4d	*Travel time savings:* As Option 4b. *User charges including fares, parking charges and tolls:* As Option 4b. *Vehicle operating cost changes for road vehicles:* As Option 4b. *Quality benefits to transport users:* As Option 4b. *Reliability benefits to transport users:* As Option 4b. *Investment costs:* As Option 4b, however, private investment potential for freight facilities would be explored at detailed appraisal. *Operating and maintenance costs:* As Option 4b with the addition of costs related to maintenance of freight facilities. However, this is likely to be accompanied by benefits to private sector logistical operational costs to rail freight users. *Revenues:* As Option 4b. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓✓

EALI	4a	This option would provide benefits to the Levenmouth area in terms of facilitating access to education, healthcare, employment and social opportunities, supporting people to live and work in the area. Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. Together with increased access to jobs, these factors are likely to increase the opportunity for the people of Levenmouth to be economically active, in turn supporting inward and external investment in the area. This option does, however, provide the most benefit to those who can reach Leven town centre easiest. These individuals are more likely to already be benefitting from the transport services in the area, such as bus services on offer at Leven Bus Station.	✓✓
	4b	As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. For the consideration of EALIs, this spatial context is of particular note.	✓✓
	4c	As Option 4a along with benefits associated with rail freight, specifically benefits to large scale industry in the area, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. Linkages between the national rail network and the dock facilities may have a wider strategic benefit to the local and national economy if utilised. The addition of a rail freight link for the area opens up the types and scale of industry which can operate in the Levenmouth area potentially impacting on inward and external investment levels.	✓✓
	4d	As Option 4b, with the benefits of freight facility provision outlined in Option 4c.	✓✓✓
Cost to Government	4a	Investment costs associated with the reopening of this line including signalling, structure strengthening, line clearance and upgrade. Network Rail have indicated that the line is currently not suitable for passenger transport and would require redesign and construction.	
	4b	As Option 4a, with addition of Cameron Bridge.	
	4c	As Option 4a, with additional costs associated with the handling of freight operation of the line. Freight depots would require to be provided at Methil Docks and Cameron Bridge at significant cost. Freight facility private investment potential would be explored at detailed appraisal.	
	4d	As Option 4b, with additional costs associated with the handling of freight operation of the line. Freight depots would require to be provided at Methil Docks and Cameron Bridge at significant cost. Freight facility private investment potential would be explored at detailed appraisal.	

Integration			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Transport Integration	4a	This option is likely to improve the integration of the transport network. Services and ticketing: direct access would be provided to the rail network allowing easier access to a range of services options. The new rail station at Leven would be situated within walking distance of the existing Leven Bus Station and so integration of these modes will be improved. Infrastructure and information: new rail infrastructure would be provided for this option, this should be designed to incorporate high quality user information.	✓✓
	4b	As Option 4a, with additional benefit of integration of services near Cameron Bridge.	✓✓
	4c	As Option 4a.	✓✓
	4d	As Option 4a, with additional benefit of integration of services near Cameron Bridge.	✓✓
Transport and Land Use Integration	4a	The reopening of the Leven rail link is identified in the Mid-Fife LDP and land safeguarded for stations with accessibility benefits for planned employment and residential developments in the Leven town centre area including Riverside Road and Methil Docks.	✓
	4b	As Option 4a, with additional benefits of improved services to planned housing and employment developments in the Windygates/Cameron Bridge vicinity, including the Levenmouth Strategic Development Area.	✓
	4c	As Option 4a, with additional freight benefits for planned developments in Methil Docks and Cameron Bridge.	✓✓
	4d	As Option 4a, with additional freight benefits for planned developments in Methil Docks and Cameron Bridge and improved services to planned housing and employment developments in the Windygates/Cameron Bridge vicinity including the Levenmouth Strategic Development Area.	✓✓
Policy Integration	4a	This option is fully aligned with transport policy from national to local level, particularly in terms of: sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use. This option also offers the potential for improving tourist access to/from Levenmouth supporting the Mid-Fife LDP aim to attract tourism to the area.	✓✓
	4b	As Option 4a, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓✓

	4c	As Option 4a, with additional economic benefits by supporting the aims to encourage inward investment to the Levenmouth area by increasing freight options within the area. This would be of particular importance to the development of the Energy Park further.	✓✓
	4d	As Option 4c, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓✓

Accessibility and Social Inclusion			
Sub- Criteria	**Performance Against STAG Criteria**		**Score**
Community Accessibility	4a	This proposal helps improve public transport connections across Levenmouth, in particular near the rail station. This option is likely to benefit access to key destinations for employment, further education, healthcare and social activities. The provision of an additional mode option for Levenmouth is likely also to help improve the perception of disconnectedness that was raised in the analysis of problems and opportunities. While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	✓✓
	4b	As Option 4a, but inclusive of some additional benefit for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
	4c	As Option 4a.	✓✓
	4d	As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
Comparative Accessibility	4a	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	✓✓
	4b	As Option 4a, but inclusive of some additional benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
	4c	As Option 4a.	✓✓

	4d	As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓

Implementability: Feasibility, Affordability, and Public Acceptability			
Sub- Criteria	**Performance Against STAG Criteria**		**Rating**
Feasibility	4a	Network Rail have highlighted that works would involve re-design and construction of the line to provide passenger rail. While not an insignificant undertaking, bringing an out of use line back into operation is considered technically feasible.	Moderate Consideration
	4b	As Option 4a, with further feasibility investigation required for an additional station.	Moderate Consideration
	4c	As Option 4a, with consideration of freight facility provision and operational considerations.	Moderate Consideration
	4d	As Option 4b, with consideration of freight facility provision and operational considerations.	Moderate Consideration
Affordability	4a	Aside from the significant costs associated with bringing this line into use, including design and construction (which are captured in TEE) there would be significant costs associated with maintenance and operation of line. Changes to rail franchise agreements would also need to be considered.	Major Consideration
	4b	As Option 4a, with further costs associated with an additional station.	Major Consideration
	4c	As Option 4a, with further costs associated with freight facilities.	Major Consideration
	4d	As Option 4b, with further costs associated with freight facilities.	Major Consideration
Public Acceptability	4a	Consultation has noted support for the re-opening of the rail line. It is expected that there would be support for this proposal from the local community.	Minor Consideration
	4b	As Option 4a.	Minor Consideration
	4c	As Option 4a with further consideration of freight traffic along the line and freight facility operations and construction.	Minor Consideration
	4d	As Option 4b with further consideration of freight traffic along the line and freight facility operations and construction.	Minor Consideration

Rationale of Selection or Rejection	Outcome
Option 4 presents significant potential benefits for the Levenmouth area, in particular in relation to the potential to attract investment and improve connectivity and accessibility from the area to key destinations for employment, education, healthcare, and social activities. Option 4 offers particular benefit for this as the connection point with the existing Fife Circle Line/East Coast Main Line which offers operational flexibility in relation to the possibility for providing passenger services along both sides of the Fife Circle. Option 4 scores positively overall across the majority of the Government Objectives, with the highest scorings seen for options/sub-options including the provision of two stations and freight facilities. The environmental appraisal highlighted some significant potential impacts (noting the scale is to be determined subject to further appraisal and potential mitigation options), however, given the performance in relation to the other Objectives, it has been recommended that Option 4 – inclusive of its four sub-options – is taken forward for detailed appraisal.	Option taken forward to STAG Part 2 Appraisal.

Table 5. Appraisal Summary Table – Option 5

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	5. Provision of a new passenger only rail alignment from Leven to Kirkcaldy.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option involves the reopening of the out-of-use rail line from Leven as far as Cameron Bridge and then construction of a new rail alignment to join the Markinch to Kirkcaldy line. It is the intention that passenger services would be fulfilled by a new service or the extension/diversion of existing rail services. The feasibility of potential service extensions would be considered further as part of the Detailed Appraisal if this option is taken forward. This option has a number of sub-options detailed below: - 5a. Passenger rail station, provided at Leven only. - 5b. Passenger rail station, provided at Leven and Cameron Bridge.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland		

Transport Planning Objectives			
Objective:	**Performance Against Transport Planning Objective:**		**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	5a	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network. This option will have the greatest impact on journeys to settlements on the Kirkcaldy side of the Fife circle and beyond.	✓
	5b	Similar to Option 5a, however, while the journey time of the rail journey will be increased by the additional stop on the line, a higher percentage of the Levenmouth population will have access to these rail services. The limitation of likely journey time improvements to destinations on the Kirkcaldy side of the Fife circle means that this option only receives a minor improvement for this TPO.	✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	5a	This rail option will improve public transport mode choice for the residents and workers of Levenmouth and will likely be seen as an attractive option for travel outwith the area. However, the alignment to Kirkcaldy makes journeys north and around the far side of the Fife circle less attractive than those on the Kirkcaldy side and beyond.	✓
	5b	As Option 5a with further benefits for those able to access the additional station.	✓✓
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	5a	Improved access to employment and other services would encourage people to live in Levenmouth. Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. A skilled active workforce may, in turn, support investment in the area.	✓
	5b	As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	5a	This option will improve access to the rail network, enhancing potential tourist access to the area including potential access to Edinburgh Airport.	✓✓
	5b	As Option 5a. The additional station is unlikely to create a large change in tourist behaviour but may be of some benefit.	✓✓

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	It is predicted that noise and vibration effects will be experienced during construction which are likely to be significant for some periods (e.g. from station, structures and track construction). During operation passenger train movements are predicted to result in noise effects for adjacent residential receptors which may be significant dependent on timetabling . A slight reduction in car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these key routes.	✓/ ✖✖
Global Air Quality - Carbon Dioxide C02	A slight reduction in car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on emissions from reduced vehicle kilometres . No significant effects on global (carbon) emissions are predicted overall.	✓
Local Air Quality - PM10 and NO2	It is predicted that local air quality effects (primarily from dust) will be experienced during construction but these would not be significant. During operation train movements are predicted to result in some emissions of local air pollutants but these are not predicted to significantly affect background concentrations of local air pollutants. A slight reduction in car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to key routes used for freight traffic.	✓/ x
Water Quality, Drainage, and Flood Defence	Permanent development of the new rail line between Kirkcaldy and Cameron Bridge has the potential to significantly affect local drainage and water quality through changes in hydrology and watercourse crossings. It is predicted that the reinstatement of the railway section between Windygates and Methil (including stations) would not have significant effects on water quality and drainage taking account of assumed design and mitigation. There is a potential for significant effects on flooding (or as a result of flooding on the railway) between Cameron Bridge and Leven and this would require more detailed assessment at later design stages.	✖ / ✖✖
Geology	It is predicted that with mitigation measures in place the construction and reinstatement of the railway/stations and its operation would not have significant effects on geology. There is a potential for construction to affect areas of potentially contaminated land associated with the former industrial (and mining) areas through which the route passes and this would require more	✖ / ✖✖

	detailed investigation, assessment and if appropriate remediation at later design stages.	
Biodiversity and Habitats	Permanent development of a new rail line between Kirkcaldy and Cameron Bridge would result in loss of habitats including areas of ancient woodland and agricultural land and has the potential to affect a range of species. Effects have the potential to be significant. It is predicted that reinstatement of the former sections of railway (and construction of stations) will result in habitat loss (eg scrub woodland), and with potential effects on protected species and effects on a local wildlife site. Construction disturbance works close to the coast have the potential to indirectly affect the qualifying interests (wintering and passage bird populations) of the Firth of Forth SPA /Ramsar site and SSSI and mitigation measures would need to be employed to ensure that disturbance did not adversely affect the Natura site. The potential for effects would need to be confirmed at later stages based on field surveys of the development area.	✗ / ✗✗✗
Landscape	Permanent development of a new rail line between Kirkcaldy and Cameron Bridge would change the character of the Wemyss Special Landscape Area and is predicted to have a significant landscape effect. It is predicted that with mitigation measures in place the reinstatement of the railway (between Cameron Bridge and Leven), construction of stations and train operations would not generally have significant effects on landscape and townscape character of the route. There is potential for significant effects on landscape and townscape dependent on the final form and design of railway and station infrastructure.	✗ / ✗✗✗
Visual Amenity	Significant adverse effects on visual amenity are predicted from the permanent development and operation of this option in some locations where receptors or views are particularly close to the railway route (including areas of housing on the edge of Kirkcaldy, Windygates and Leven) and from isolated properties in the coastal area between Kirkcaldy and Cameron Bridge. It may be possible to mitigate some of these effects in the longer term through measures such as screen planting and by careful rail design. Some minor positive effects are predicted for visual receptors close to roads where traffic movements are reduced as a result of the railway's operation.	✓/ ✗✗✗
Agriculture and Soils	Permanent development of a new rail line between Kirkcaldy and Cameron Bridge would result in loss of prime agricultural land and would affect a number of farm units with the potential for significant adverse effects.	✗ / ✗✗

	It is predicted that with mitigation measures in place the reinstatement of the railway between Cameron Bridge and Leven, and construction of new stations would not have significant effects on agriculture or soils since much of the redevelopment of the line would be on land which has already been developed in the past for original railway construction.	
Cultural Heritage	Permanent development of a new rail line between Kirkcaldy and Cameron Bridge has the potential to affect as yet unknown archaeology and to affect the setting of the Wemyss Castle Garden and Designed Landscape, a Conservation Area at Coaltown of Wemyss and a number of listed buildings, depending on detailed alignment. No significant effects on cultural heritage are predicted from reinstatement of the railway (between Cameron Bridge and Leven) taking account of assumed design and mitigation. Development of new stations has potential to affect the setting of a number of listed buildings, depending on the final form and location of the structures.	- / ---

Safety			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Accidents	5a	This option is likely to produce a minor benefit to accident rates, resulting from the reduction of the number of motor vehicles on the road network from drivers switching from car travel to public transport.	✓
	5b	As Option 5a, with improved access from current and future developments in the Cameron Bridge area. This would likely support a higher modal shift and, therefore, a greater potential reduction in accident rates.	✓✓
Security	5a	Provision of new rail station facilities will likely improve security for public transport users as these will be built to at least minimum safety requirements for factors such as site perimeters, entrances and exits, and lighting. Stations of this scale are likely to include periods of staff presence as well as the provision of formal surveillance (CCTV) and on-platform emergency call/information facilities.	✓
	5b	As Option 5a, with additional benefits for those accessing services at the station at Cameron Bridge.	✓✓

Economy			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
TEE	5a	*Travel time savings:* Travel time savings are dependent on the speed achieved along the rail link.[1] It is expected that travel time savings may be made for users travelling to/from the vicinity of the rail station, with particular savings being made from removal of interchange penalties. *User charges including fares, parking charges and tolls:* It is unlikely that this option would produce fare benefits i.e. fare are high unlikely to be lower than equivalent bus fares or rail fares from Kirkcaldy and Markinch. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* Improvements to modal choice from the Levenmouth area, including direct access to the rail network from the new station at Leven. However, competition from rail to bus could lead to reduction in bus route viability and therefore the reduction of services. *Reliability benefits to transport users:* Improved reliability for access to the rail network. Reliability is likely to be improved for access to destinations on the rail network as rail travel is not directly impacted by road congestion. *Investment costs:* Investment costs covered by cost to Government, below. *Operating and maintenance costs:* Consultation with Abellio Scotrail has noted that existing passenger rail services across the Forth Estuary are at capacity and that additional rolling stock, servicing and maintenance would be required for any passenger rail serving Levenmouth. Operating and maintenance costs will be required for the station. *Revenues:* It is likely that there will be additional revenue gained from increased public transport patronage related to rail transport (rail services and buses serving this), however, there may be revenue lost for bus operators on services which will receive competition from new passenger rail services. Overall this option is likely to be of net benefit. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Stage 2 if option is taken forward.	✓✓

	5b	*Travel time savings:* As with Option 5a, this is expected to benefit journey times. However, the journey time will be comparatively longer due to the additional stop at the additional station. This additional stop will, however, allow a greater proportion of the Levenmouth population to benefit from this travel time saving. *User charges including fares, parking charges and tolls:* As Option 4a. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* As Option 5a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. *Reliability benefits to transport users:* As Option 5a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. *Investment costs:* As Option 5a. *Operating and maintenance costs:* As Option 5a, but with the cost of operation and maintenance of an additional station at Cameron Bridge. *Revenues:* As with Option 5a, a net benefit is expected. The expected increased revenue for rail, but also the increased potential for lost revenue via competition for bus is further emphasised with this option as a larger percentage of the Levenmouth population will have access to the new rail link. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Stage 2 if option is taken forward.	✓✓
EALI	5a	This option would provide benefits to the Levenmouth area in terms of facilitating access to education, healthcare, employment and social opportunities, supporting people to live and work in the area. Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. Together with increased access to jobs, these factors are likely to increase the opportunity for the people of Levenmouth to be economically active, in turn supporting inward and external investment in the area. This option does, however, provide the most benefit to those who can reach Leven town centre easiest. These individuals are more likely to already be benefitting from the transport services in the area, such as bus services on offer at Leven Bus Station.	✓
	5b	As Option 5a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. For the consideration of EALIs, this spatial context is key.	✓✓

Cost to Government	5a	Major investment costs associated with the reopening and construction of this line to Cameron Bridge including, but not limited to, signalling, structure strengthening and line clearance. Network Rail have indicated that the existing line is currently not suitable for passenger transport and would require redesign and construction. In addition there would be major costs associated with full feasibility, land costs, track laying and infrastructure costs for the new rail alignment section.
	5b	As Option 5a, but with the cost of an additional station at Cameron Bridge.

Integration			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Transport Integration	5a	This option is likely to improve the integration of the transport network. Services and ticketing: direct access would be provided to the rail network allowing easier access to a range of service options. The new rail station at Leven would be situated within walking distance of the existing Leven Bus Station and so integration of these modes will be improved. Infrastructure and information: new rail infrastructure would be provided for this option, this should be designed to incorporate high quality user information.	✓✓
	5b	As Option 5a, with additional benefit of integration of services near Cameron Bridge.	✓✓
Transport and Land Use Integration		The reopening of the Leven rail link is identified in the Mid-Fife LDP and land safeguarded for stations. This option has the reopening of the line to Cameron Bridge followed by a realignment to Kirkcaldy.	
	5a	This option offers accessibility benefits for planned employment and residential developments in the Leven town centre area including Riverside Road and Methil Docks. The route realignment potentially conflicts with a planned development at Coaltown of Wemyss North, and so this will require to be managed, and there are likely to be other conflicts with existing developments and land uses.	-
	5b	As Option 5a, with additional benefits of improved services to planned housing and employment developments in the Windygates/Cameron Bridge vicinity, including the Levenmouth Strategic Development Area.	✓
Policy Integration	5a	This option is fully aligned with transport policy from national to local level, particularly in terms of: sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use. This option also offers the potential for improving tourist access to/from Levenmouth supporting the Mid-Fife LDP aim to attract tourism to the area.	✓✓

	5b	As Option 5a, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓✓

Accessibility and Social Inclusion			
Sub- Criteria	**Performance Against STAG Criteria**		**Score**
Community Accessibility	5a	This option helps improve public transport connections across Levenmouth, in particular near the rail station. This option is likely to benefit access to key destinations for employment, education, healthcare and social activities. The provision of an additional mode option for Levenmouth is likely also to help improve the perception of disconnectedness that was raised in the analysis of problems and opportunities. While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	✓✓
	5b	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	✓✓
Comparative Accessibility	5a	As Option 5a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
	5b	As Option 5a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓

Implementability: Feasibility, Affordability, and Public Acceptability			
Sub- Criteria	**Performance Against STAG Criteria**		**Rating**
Feasibility	5a	Major consideration is required of the feasibility of this option, with any alignment requiring more detailed consideration at a later date. Particular issues include interaction with existing infrastructure, existing and planned development, and land issues such as known mining grounds.	Major Consideration
	5b	As Option 5a, with further feasibility investigation required for an additional station.	Major Consideration
Affordability	5a	Aside from the significant costs associated with bringing this line into use, including design and construction (which are captured in TEE) there would be significant costs associated with maintenance and operation of line. Changes to rail franchise agreements would also need to be considered.	Major Consideration
	5b	As Option 5a, with further costs associated with an additional station.	Major Consideration
Public Acceptability	5a	While consultation has noted support for provision of rail provision to the Levenmouth area, it is expected that there would be significant resistance from some members of the local population in relation to the alignment options for this line, in particular in relation to conflict with development.	Major Consideration
	5b	As Option 5a.	Major Consideration

Rationale of Selection or Rejection	**Outcome**
As Option 4, Option 5 presents significant potential benefits for the Levenmouth area, in particular in relation to the potential to improve connectivity and accessibility from the area to key destinations for employment, education, healthcare, and social activities. These benefits are, however, more limited due to the connection point to the existing operating line removing the possibility to provide passenger services along both sides of the Fife Circle. The connection also inhibits the potential to provide freight operations due to there being no capacity on the mainline to/from Kirkcaldy. Option 5 scores positively overall across the majority of the Government Objectives, with the highest scorings seen for options/sub-options including the provision of two stations. Due to the additional works associated with the new rail alignment alongside the scope of the passenger and freight offering outlined above, Option 5 does not perform as well as Option 4 in the economic case. The environmental appraisal also highlighted some significant potential impacts in relation to the new rail alignment as well as potential acceptability and feasibility concerns. For these reasons it has been recommended that Option 5 is not taken forward for detailed appraisal.	Option **not taken forward** to STAG Part 2 Appraisal.

Table 6. Appraisal Summary Table – Option 6

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	6. Provision of a new rail alignment from Leven to Markinch.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option involves the reopening of the out-of-use rail line from Leven towards Cameron Bridge. From Cameron Bridge the rail link will follow a new rail alignment with new track built to join the Markinch to Kirkcaldy line at Markinch. It is the intention that passenger services would be fulfilled by a new service or the extension/diversion of existing rail services. The feasibility of potential service extensions would be considered further as part of the Detailed Appraisal if this option is taken forward. This option has a number of sub-options as detailed below: - 6a. Passenger rail only option, with a station provided at Leven only. - 6b. Passenger rail only option, with stations provided at Leven and Cameron Bridge. - 6c. Passenger and freight rail option, with a station provided at Leven only, and freight facilities provided at Cameron Bridge and Methil Docks. - 6d. Passenger and freight rail option, with stations provided at Leven and Cameron Bridge, and freight facilities provided at Cameron Bridge and Methil Docks.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the		

	52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland

Transport Planning Objectives			
Objective:	**Performance Against Transport Planning Objective:**		**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	6a	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network.	✓
	6b	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network. While the journey time of the rail journey will be increased by the additional stop on the line, a higher percentage of the Levenmouth population will have access to these rail services.	✓✓
	6c	As Option 6a, with some minor additional benefit seen in terms of journey time from reduced numbers of HGV vehicles on the road network.	✓
	6d	As Option 6b, with some minor additional benefit seen in terms of journey time from reduced numbers of HGV vehicles on the road network.	✓✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	6a	This rail option will improve public transport mode choice for the residents and workers of Levenmouth and will likely be seen as an attractive option for travel outwith the area, therefore, promoting sustainable transport use.	✓
	6b	As Option 6a with further benefits for those able to access the additional station.	✓✓
	6c	As Option 6a. Improvements to journey times on the road network, resultant from a reduction in HGV levels, would impact both motorists and public transport users and so the effect of this factor is seen to be neutral.	✓✓
	6d	As Option 6b. Improvements to journey times on the road network, resultant from a reduction in HGV levels, would impact both motorists and public transport users and so the effect of this factor is seen to be neutral.	✓✓
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	6a	Improved access to employment and other services would encourage people to live in Levenmouth. Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. A skilled active workforce may, in turn, support investment in the area.	✓
	6b	As Option 4a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓

	6c	As Option 4a, with additional benefits from freight, which would help employment in the area by supporting industry, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. This, coupled with potential links with the docks could potentially improve inward and external investment levels.	✓✓
	6d	As Option 4b, with additional benefits from freight, which would help employment in the area by supporting industry, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. This, coupled with potential links with the docks could potentially improve inward and external investment levels.	✓✓✓
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	6a	This option will improve access to the rail network, enhancing potential tourist access to the area including access to Edinburgh Airport.	✓✓
	6b	As Option 6a. The additional station is unlikely to create a large change in tourist behaviour but may be of some benefit.	✓✓
	6c	As Option 6a.	✓✓
	6d	As Option 6b.	✓✓

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	It is predicted that noise and vibration effects will be experienced during construction which are likely to be significant for some periods (e.g. from station, structures and track construction) During operation passenger and freight train movements are predicted to result in noise effects for adjacent residential receptors which may be significant dependent on the timetabling of rail operations A slight reduction in HGV and car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these routes	✓/ ✖✖
Global Air Quality - Carbon Dioxide CO2	A slight reduction in HGV and car traffic flows on key roads in the study area or beyond are predicted to have up to minor beneficial effects on emissions from reduced overall HGV and car vehicle kilometres No significant effects on global (carbon) emissions are predicted overall	✓
Local Air Quality - PM10 and NO2	It is predicted that local air quality effects (primarily from dust) will be experienced during construction but these would not be significant During operation train movements are predicted to result in some emissions of local air pollutants but these are not predicted to significantly affect background concentrations of local air pollutants A slight reduction in HGV and car traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to key routes	✓/ ✖
Water Quality, Drainage, and Flood Defence	Permanent development of the new rail line between Windygates and Markinch has the potential to significantly affect local drainage and water quality through changes in hydrology and watercourse crossings It is predicted that the reinstatement of the railway between Windygates and Methil (including stations) would not have significant effects on water quality and drainage taking account of assumed design and mitigation There is a potential for significant effects on flooding (or as a result of flooding on the railway) between Windygates and Leven and this would require more detailed assessment at later design stages	✖ / ✖✖
Geology	It is predicted that with mitigation measures in place the construction and reinstatement of the railway/stations and its operation would not have significant effects on geology There is a potential for construction to affect areas of potentially contaminated land associated with the former industrial (and mining) areas through which the route partly passes and this would require more	✖ / ✖✖

	detailed investigation, assessment and if appropriate remediation at later design stages	
Biodiversity and Habitats	Permanent development of a new rail line between Windygates and Markinch would result in loss of habitats including areas of ancient woodland and agricultural land and has the potential to affect a range of species. It would also cross the Kennoway – Windygates Local Wildlife Site. Effects have the potential to be significant It is predicted that reinstatement of the former sections of railway (and construction of stations) will result in habitat loss (e.g. scrub woodland), and with potential effects on protected species and effects on the local wildlife site Construction disturbance works close to the coast have the potential to indirectly affect the qualifying interests (wintering and passage bird populations) of the Firth of Forth SPA /Ramsar site and SSSI and mitigation measures would need to be employed to ensure that disturbance did not adversely affect the Natura site The potential for effects would need to be confirmed at later stages based on field surveys of the development area	✖ / ✖✖✖
Landscape	Permanent development of a new rail line between Windygates and Markinch would change the character of the local landscape which is predominantly low lying farmland It is predicted that with mitigation measures in place the reinstatement of the railway (between Windygates and Leven), construction of stations and train operations would not generally have significant effects on landscape and townscape character of the route There is potential for significant effects on landscape and townscape dependent on the final form and design of railway and station infrastructure and its integration with the local built environment	✖ / ✖✖✖
Visual Amenity	Significant adverse effects on visual amenity are predicted from the permanent development and operation of this option in some locations where receptors or views are particularly close to the railway route (including areas of housing on the edge of Markinch, Windygates and Leven) and from isolated properties in the area between Markinch and Windygates It may be possible to mitigate some of these effects in the longer term through measures such as screen planting and by careful rail design Some minor positive effects are predicted for visual receptors close to roads where traffic movements are reduced as a result of the railway's operation	✓/ ✖✖✖
Agriculture and Soils	Permanent development of a new rail line between Markinch and Windygates would result in loss of agricultural land and would affect a number of farm units with the potential for significant adverse effects	✖ / ✖✖

	It is predicted that with mitigation measures in place the reinstatement of the railway between Windygates and Leven, and construction of new stations would not have significant effects on agriculture or soils since much of the redevelopment of the line would be on land which has already been developed in the past for original railway construction	
Cultural Heritage	Permanent development of a new rail line between Markinch and Windygates has the potential to affect as yet unknown archaeology and to affect the setting of a number of listed buildings, depending on detailed alignment No significant effects on cultural heritage are predicted from reinstatement of the railway (between Windygates and Leven) taking account of assumed design and mitigation Development of new stations has potential to affect the setting of a number of listed buildings, depending on the final form and location of the structures	- / --

Safety			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Accidents	6a	This option is likely to produce a minor benefit to accident rates, resulting from the reduction of the number of motor vehicles on the road network from drivers switching from car travel to public transport.	✓
	6b	As Option 6a, with improved access from current and future developments in the Cameron Bridge area. This would likely support a higher modal shift and, therefore, a greater potential reduction in accident rates.	✓✓
	6c	As Option 6a with added benefit from a reduction in HGV vehicles on the road network that were previously travelling to and from the Levenmouth area.	✓✓
	6d	As Option 6b with added benefit from a reduction in HGV vehicles on the road network that were previously travelling to and from the Levenmouth area.	✓✓
Security	6a	Provision of new rail station facilities will likely improve security for public transport users as these will be built to at least minimum safety requirements for factors such as site perimeters, entrances and exits, and lighting. Stations of this scale are likely to include periods of staff presence as well as the provision of formal surveillance (CCTV) and on-platform emergency call/information facilities.	✓
	6b	As Option 6a, with additional benefits for those accessing services at the station at Cameron Bridge.	✓✓
	6c	As Option 6a.	✓
	6d	As Option 6b.	✓✓

Economy			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
TEE	6a	*Travel time savings:* Travel time savings are dependent on the speed achieved along the rail link.[1] It is expected that travel time savings may be made for users travelling to/from the vicinity of the rail station, with particular savings being made from removal of interchange penalties. *User charges including fares, parking charges and tolls:* It is unlikely that this option would produce fare benefits i.e. fares are high unlikely to be lower than equivalent bus fares or rail fares from Kirkcaldy and Markinch. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* Improvements to modal choice from the Levenmouth area, including direct access to the rail network from a new station at Leven. However, competition from rail to bus could lead to reduction in bus route viability and therefore the reduction of services. *Reliability benefits to transport users:* Improved reliability for access to the rail network. Reliability is likely to be improved for access to destinations on the rail network as rail travel is not directly impacted by road congestion. *Investment costs:* Investment costs covered by cost to Government, below. *Operating and maintenance costs:* Consultation with Abellio Scotrail has noted that existing passenger rail services across the Forth Estuary are at capacity and that additional rolling stock, servicing and maintenance would be required for any passenger rail serving Levenmouth. *Revenues:* It is likely that there will be additional revenue gained from increased public transport patronage related to rail transport (rail services and buses serving this), however, there may be revenue lost for bus operators on services which will receive competition new passenger rail services. Overall this option is likely to be of net benefit. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓

	6b	*Travel time savings:* As with Option 6a, this is expected to benefit journey times. However, the journey time will be comparatively longer due to the additional stop at the additional station. This additional stop will, however, allow a greater proportion of the Levenmouth population to benefit from this travel time saving. *User charges including fares, parking charges and tolls:* As Option 6a. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron bridge. *Reliability benefits to transport users:* As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron bridge. *Investment costs:* Investment costs covered by cost to Government, below. *Operating and maintenance costs:* As Option 6a, but with the cost of operation and maintenance of an additional station at Cameron Bridge. *Revenues:* As with Option 6a, a net benefit is expected. The expected increased revenue for rail, but also the increased potential for lost revenue via competition for bus, is further emphasised with this option as a larger percentage of the Levenmouth population will have access to the new rail link. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓
	6c	*Travel time savings:* As Option 6a. *User charges including fares, parking charges and tolls:* As Option 6a. *Vehicle operating cost changes for road vehicles:* As Option 6a. *Quality benefits to transport users:* As Option 6a. *Reliability benefits to transport users:* As Option 6a. *Investment costs:* Investment costs covered by cost to Government, below, however, private investment potential for freight facilities would be explored at detailed appraisal.	✓✓

		Operating and maintenance costs: As Option 6a with the addition of costs related to maintenance from freight use. However, this is likely to be accompanied by benefits to private sector logistical operational costs to rail freight users. *Revenues:* As Option 6a. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Stage 2 if option is taken forward.	
EALI	6d	*Travel time savings:* As Option 6b. *User charges including fares, parking charges and tolls:* As Option 6b. *Vehicle operating cost changes for road vehicles:* As Option 6b. *Quality benefits to transport users:* As Option 6b. *Reliability benefits to transport users:* As Option 6b. *Investment costs:* Investment costs covered by cost to Government, below, however, private investment potential for freight facilities would be explored at detailed appraisal. *Operating and maintenance costs:* As Option 6b with the addition of costs related to maintenance from freight use. However, this is likely to be accompanied by benefits to private sector logistical operational costs to rail freight users. *Revenues:* As Option 6b. *Grant and subsidy payments:* Expected Scottish Government funding for this option, to be determined at Part 2 if option is taken forward.	✓✓✓
	6a	This option would provide benefits to the Levenmouth area in terms of facilitating access to education, healthcare, employment and social opportunities, supporting people to live and work in the area. Access to these healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. Together with increased access to jobs, these factors are likely to increase the opportunity for the people of Levenmouth to be economically active, in turn supporting inward and external investment in the area. This option does, however, provide the most benefit to those who can reach Leven town centre easiest. These individuals are more likely to already be benefitting from the transport services in the area, such as bus services on offer at Leven Bus Station.	✓
	6b	As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. For the consideration of EALIs, this spatial context is key.	✓✓

	6c	As Option 6a along with benefits associated with rail freight, specifically benefits to large scale industry in the area, in particular at the Cameron Bridge and Methil Docks sites in the form of Diageo and the Fife Energy Park. Linkages between the national rail network and the dock facilities may have a wider strategic benefit to the local and national economy if utilised. The addition of a rail freight link for the area opens up the types and scale of industry which can operate in the Levenmouth area potentially impacting on inward and external investment levels.	✓✓
	6d	As Option 6b, with the benefits of freight facility provision outlined in Option 6c.	✓✓✓
Cost to Government	6a	Major investment costs associated with the reopening and construction of this line to Cameron Bridge including , but not limited to, signalling, structure strengthening and line clearance. Network Rail have indicated that the existing line is currently not suitable for passenger transport and would require redesign and construction. In addition there would be major costs associated with full feasibility, land costs, track laying and infrastructure costs for the new rail alignment section.	
	6b	As Option 6a, but with the cost of an additional station at Cameron Bridge	
	6c	As Option 6a, with additional costs associated with the handling of freight operation of the line. Freight depots would require to be provided at Methil Docks and Cameron Bridge at significant cost. Freight facility private investment potential would be explored at detailed appraisal.	
	6d	As Option 6b, with additional costs associated with the handling of freight operation of the line. Freight depots would require to be provided at Methil Docks and Cameron Bridge at significant cost. Freight facility private investment potential would be explored at detailed appraisal.	

Integration			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Transport Integration	6a	This option is likely to improve the integration of the transport network. Services and ticketing: direct access would be provided to the rail network allowing easier access to a range of services options. The new rail station at Leven would be situated within walking distance of the existing Leven Bus Station and so integration of these modes will be improved. Infrastructure and information: new rail infrastructure would be provided for this option, this would be designed to incorporate high quality user information, such as Real Time Passenger Information (RTPI).	✓✓
	6b	As Option 6a, with additional benefit of integration of services near Cameron Bridge.	✓✓
	6c	As Option 6a.	✓✓
	6d	As Option 6a, with additional benefit of integration of services near Cameron Bridge.	✓✓
Transport and Land Use Integration	6a	The reopening of the Leven rail link is identified in the Mid-Fife LDP and land safeguarded for stations. This option has the reopening of the line to Cameron Bridge followed by a realignment to Markinch. This option offers accessibility benefits for planned employment and residential developments in the Leven town centre area including Riverside Road and Methil Docks. Although the route realignment does not appear to conflict with any planned development in the Mid-Fife LDP there are likely to be some conflicts with infrastructure and existing land uses.	✓
	6b	As Option 6a, with additional benefits of improved services to planned housing and employment developments in the Windygates/Cameron Bridge vicinity including the Levenmouth Strategi Development Area.	✓
	6c	As Option 6a, with additional freight benefits for planned developments in Methil Docks and Cameron Bridge.	✓
	6d	As Option 6a, with additional freight benefits for planned developments in Methil Docks and Cameron Bridge and improved services to planned housing and employment developments in the Windygates/Cameron Bridge vicinity including the Levenmouth Strategic Development Area.	✓
Policy Integration	6a	This option is fully aligned with transport policy from national to local level in terms of sustainable mode use over private motorised vehicles, environmental and health considerations and improving accessibility and inclusion via the availability of alternative modes to car use. This option also offers the potential for improving tourist access to/from	✓✓

		Levenmouth supporting the mid-Fife LDP aim to attract tourism to the area.	
	6b	As Option 6a, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓✓
	6c	As Option 6a, with additional economic benefits by supporting the aims to encourage inward investment to the Levenmouth area by increasing freight options within the area. This would be of particular importance to the development of the Energy Park further.	✓✓
	6d	As Option 6c, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓✓

Accessibility and Social Inclusion			
Sub- Criteria	**Performance Against STAG Criteria**		**Score**
Community Accessibility	6a	This proposal helps improve public transport connections across Levenmouth, in particular near the rail station. This option is likely to benefit access to key destinations for employment, education, healthcare and social activities. The provision of an additional mode option for Levenmouth is likely also to help improve the perception of disconnectedness that was raised in the analysis of problems and opportunities. While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	✓✓
	6b	As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
	6c	As Option 6a.	✓✓
	6d	As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
Comparative Accessibility	6a	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	✓✓

	6b	As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
	6c	As Option 6a.	✓✓
	6d	As Option 6a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓

Implementability: Feasibility, Affordability, and Public Acceptability			
Sub- Criteria	**Performance Against STAG Criteria**		**Rating**
Feasibility	6a	Major consideration is required of the feasibility of this option, with any alignment requiring more detailed consideration at a later date. Particular issues include interaction with existing infrastructure, existing and planned development, and land issues such as known mining grounds.	Major Consideration
	6b	As Option 6a, with further feasibility investigation required for an additional station.	Major Consideration
	6c	As Option 6a, with consideration of freight facility provision and operational considerations.	Major Consideration
	6d	As Option 6b, with consideration of freight facility provision and operational considerations.	Major Consideration
Affordability	6a	Aside from the significant costs associated with bringing this line into use, including design and construction (which are captured in TEE) there would be significant costs associated with maintenance and operation of line. Changes to rail franchise agreements would also need to be considered.	Major Consideration
	6b	As Option 6a, with further costs associated with an additional station.	Major Consideration
	6c	As Option 6a, with further costs associated with freight facilities.	Major Consideration
	6d	As Option 6b, with further costs associated with freight facilities.	Major Consideration
Public Acceptability	6a	While consultation has noted support for provision of rail provision to the Levenmouth area, it is expected that there would be significant resistance from some members of the local population in relation to the alignment options for this line, in particular in relation to conflict with development.	Major Consideration
	6b	As Option 6a.	Major Consideration
	6c	As Option 6a with further consideration of freight traffic along the line and freight facility operations and construction.	Major Consideration
	6d	As Option 6b with further consideration of freight traffic along the line and freight facility operations and construction.	Major Consideration

Rationale of Selection or Rejection	Outcome
As Option 4, Option 6 presents significant potential benefits for the Levenmouth area, in particular in relation to the potential to attract investment and improve connectivity and accessibility from the area to key destinations for employment, education, healthcare, and social activities. Option 6 offers particular benefit for this as the connection point with the existing Fife Circle Line/East Coast Main Line which offers operational flexibility in relation to the possibility for providing passenger services along both sides of the Fife Circle. Option 6 scores positively overall across the majority of the Government Objectives, with the highest scorings seen for options/sub-options including the provision of two stations. The environmental appraisal highlighted some significant potential impacts in relation to the new rail alignment as well as potential acceptability and feasibility concerns. For these reasons it has been recommended that Option 6 is not taken forward for detailed appraisal.	Option **not** taken forward to STAG Part 2 Appraisal.

Table 7. Appraisal Summary Table – Option 7

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	7. Provision of a new passenger Bus Rapid Transit alignment from Leven to Markinch.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option would include a segregated Bus Rapid Transit (BRT) route from Leven to Markinch Rail Station, providing a traffic free, high quality bus link to the station. The following two sub-options have been considered: This option has a number of sub-options detailed below: - 7a. Station provided at Leven only. - 7b. Stations provided at Leven and Cameron Bridge.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland		

Transport Planning Objectives			
Objective:	**Performance Against Transport Planning Objective:**		**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	7a	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network and BRT link.	✓
	7b	This option should have a journey time benefit for Levenmouth, with access improved to settlements via the rail network and BRT link. While the journey time of the BRT journey will be increased by the additional stop on the route, a higher percentage of the Levenmouth population will have access to these services.	✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	7a	Improved access to the rail network via this link would promote sustainable transport use.	✓
	7b	As Option 7a with further benefits for those able to access the additional station.	✓
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	7a	It is not expected that this option would have a material impact on investment opportunities in the area. While the BRT would increase access, it would still involve interchange at Markinch.	-
	7b	As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the terminal at Cameron Bridge.	-
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	7a	This option will improve access to the rail network, enhancing potential tourist access to the area.	✓
	7b	As Option 7a. The additional station is unlikely to create a large change in tourist behaviour but may be of some benefit.	✓

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	It is predicted that noise and vibration effects will be experienced during construction which are likely to be significant for some periods (eg from bus station, structures and busway construction). During operation bus movements are predicted to result in noise effects for adjacent residential receptors which may be significant dependent on the timetabling and frequency of operations. A slight reduction in traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these routes.	✓/ ✖✖
Global Air Quality - Carbon Dioxide C02	A slight reduction in traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on emissions from reduced vehicle kilometres. No significant effects on global (carbon) emissions are predicted overall.	✓
Local Air Quality - PM10 and NO2	It is predicted that local air quality effects (primarily from dust) will be experienced during construction but these would not be significant. During operation bus movements are predicted to result in some emissions of local air pollutants but these are not predicted to significantly affect background concentrations of local air pollutants. A slight reduction in traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to key routes.	✓/ ✖
Water Quality, Drainage, and Flood Defence	Permanent development of the new bus route between Windygates and Markinch has the potential to significantly affect local drainage and water quality through changes in hydrology and watercourse crossings. It is predicted that the construction of the busway on the former railway line between Windygates and Methil (including stations) would not have significant effects on water quality and drainage taking account of assumed design and mitigation . There is a potential for significant effects on flooding (or as a result of flooding on the busway) between Windygates and Leven and this would require more detailed assessment at later design stages.	✖ / ✖✖
Geology	It is predicted that with mitigation measures in place the construction of the busway/stations and its operation would not have significant effects on geology. There is a potential for construction to affect areas of potentially contaminated land associated with the former industrial (and mining) areas through which the route partly passes and this would require more	✖ / ✖✖

	detailed investigation, assessment and if appropriate remediation at later design stages.	
Biodiversity and Habitats	Permanent development of a new busway between Windygates and Markinch would result in loss of habitats including areas of ancient woodland and agricultural land and has the potential to affect a range of species. It would also cross the Kennoway – Windygates Local Wildlife Site. Effects have the potential to be significant. It is predicted that construction of the busway on former sections of railway (and construction of bus stations) would result in habitat loss (eg scrub woodland), and with potential effects on protected species and effects on the local wildlife site. Construction disturbance works close to the coast have the potential to indirectly affect the qualifying interests (wintering and passage bird populations) of the Firth of Forth SPA /Ramsar site and SSSI and mitigation measures would need to be employed to ensure that disturbance did not adversely affect the Natura site. The potential for effects would need to be confirmed at later stages based on field surveys of the development area.	✖ / ✖✖✖
Landscape	Permanent development of a new busway between Windygates and Markinch would change the character of the local landscape which is predominantly low lying farmland. It is predicted that with mitigation measures in place the construction and permanent development of the busway on the former railway (between Windygates and Leven) would not generally have significant effects on landscape and townscape character of the route. There is potential for significant effects on landscape and townscape dependent on the final form and design of bus station infrastructure.	✖ / ✖✖
Visual Amenity	Significant adverse effects on visual amenity are predicted from the permanent development and operation of this option in some locations where receptors or views are particularly close to the busway route (including areas of housing on the edge of Markinch, Windygates and Leven) and from isolated properties in the area between Markinch and Windygates. It may be possible to mitigate some of these effects in the longer term through measures such as screen planting and by careful route design. Some minor positive effects are predicted for visual receptors close to roads where traffic movements are reduced as a result of the busway's operation.	✓/ ✖✖✖
Agriculture and Soils	Permanent development of a new busway between Markinch and Windygates would result in loss of agricultural land and would affect a number of farm units with the potential for significant adverse effects. It is predicted that with mitigation measures in place the permanent development of the busway on the former rail line between Windygates	✖ / ✖✖

	and Leven, and construction of new bus stations, would not have significant effects on agriculture or soils since much of the redevelopment of the route would be on land which has already been developed in the past for railway construction.	
Cultural Heritage	Permanent development of a busway between Markinch and Windygates has the potential to affect as yet unknown archaeology and to affect the setting of a number of listed buildings, depending on detailed alignment. No significant effects on cultural heritage are predicted from development of the busway on the former rail line (between Windygates and Leven) taking account of assumed design and mitigation. Development of new bus stations has potential to affect the setting of a number of listed buildings, depending on the final form and location of the structures.	- / --

Safety			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Accidents	7a	This option is likely to produce a minor benefit to accident rates, resulting from the reduction of the number of motor vehicles on the road network from drivers switching from car travel to public transport.	✓
	7b	As Option 7a, with improved access from current and future developments in the Cameron Bridge area. This would likely support a higher modal shift and, therefore, a greater potential reduction in accident rates.	✓
Security	7a	Provision of new BRT terminal facilities will likely improve security for public transport users as these will be built to at least minimum safety requirements for factors such as site perimeters, entrances and exits, and lighting. The main BRT terminal is likely to include the provision of formal surveillance (CCTV) and on-platform emergency call/information facilities.	✓
	7b	As Option 7a, with additional benefits for those accessing services at the station at Cameron Bridge.	✓✓

Economy			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
TEE	7a	*Travel time savings:* Travel time savings are dependent on the speed achieved along the BRT link; however, it is expected that travel time savings may be made for users travelling to/from the vicinity of the BRT station, with particular savings being made from removal of interchange penalties. BRT can generally achieve higher running speeds than conventional bus. *User charges including fares, parking charges and tolls:* It is expected that this service be provided at a cost to user which encourages its use as a connector to the rail link at Markinch. An integrated ticketing solution would provide value for money to the user. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria, assuming delivery of the option without significant reduction in road capacity for route sections along existing road. It should be noted that that the majority of this route would be a new segregated route. *Quality benefits to transport users:* Improvements to modal choice from the Levenmouth area, including improved access to the rail network from new stations at Leven and Cameron Bridge. BRT can provide much higher quality of service than conventional bus. *Reliability benefits to transport users:* The segregated running of the BRT system will allow for more reliable connections to the rail network, minimising conflict with other road users along the majority of the route. *Investment costs:* Investment costs covered by cost to Government, below. *Operating and maintenance costs:* Operational and maintenance costs would be required in terms of vehicle and route maintenance, and operation of the BRT terminal at Leven. *Revenues:* It is likely that there will be additional revenue gained from increased public transport patronage related to the BRT - rail transport link, however, there may be revenue lost for bus operators on services which will receive competition from passengers gaining improved access to onward rail services. Overall this option is likely to be of net benefit. *Grant and subsidy payments:* Potential grant or subsidy payment to be determined at Stage 2 if option is taken forward.	✓

	7b	*Travel time savings:* As with Option 7a, this is expected to benefit journey times. However, the journey time will be comparatively longer due to the additional stop at the additional station. This additional stop will, however, allow a greater proportion of the Levenmouth population to benefit from this travel time saving. *User charges including fares, parking charges and tolls:* As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. *Vehicle operating cost changes for road vehicles:* As Option 7a. *Quality benefits to transport users:* As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. *Reliability benefits to transport users:* As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. *Investment costs:* As Option 7a. *Operating and maintenance costs:* As Option 7a, but with the cost of operation and maintenance of an additional terminal at Cameron Bridge. *Revenues:* As with Option 7a, a net benefit is expected. There is expected increased revenue for rail and the connecting link, but also the increased potential for lost revenue via competition for bus is further emphasised with this option as a larger percentage of the Levenmouth population will have access to the new BRT link and onward rail services. *Grant and subsidy payments:* Potential grant or subsidy payment to be determined at Stage 2 if option is taken forward. *Investment cost to government:* As Option 7a, but with the cost of an additional terminal at Cameron Bridge.	✓
EALI	7a	This option would provide benefits to the Levenmouth area in terms of facilitating access to education, healthcare, employment and social opportunities, supporting people to live and work in the area. Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. Together with increased access to jobs, these factors are likely to increase the opportunity for the people of Levenmouth to be economically active, in turn supporting inward and external investment in the area. This option does, however, provide the most benefit to those who can reach Leven town centre easiest. These individuals are more likely to already be benefitting from the transport services in the area, such as bus services on offer at Leven Bus Station.	✓

Cost to Government	7b	As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge. For the consideration of EALIs, this spatial context is key.	✓✓
	7a	This option would involve significant investment, requiring full feasibility, design and construction costs of the segregated BRT line. Additional, potentially specialised, BRT vehicles would also be required.	
	7b	As Option 7a, but with the cost of an additional terminal at Cameron Bridge.	

Integration			
Sub-Criteria	**Performance Against STAG Criteria**		**Score**
Transport Integration	7a	This option is likely to improve the integration of the transport network. Services and ticketing: this BRT link would improve access to the rail network. The BRT station at Leven would be situated within walking distance of the existing Leven Bus Station and so integration of these modes will be provided. Infrastructure and information: new BRT terminal infrastructure would be provided for this option, this would be designed to incorporate high quality user information, such as RTPI.	✓✓
	7b	As Option 7a, with additional benefit of integration of services near the additional terminal.	✓✓
Transport and Land Use Integration	7a	The reopening of the Leven rail link is identified in the Mid-Fife LDP and land safeguarded for stations. This option has the construction of BRT on the line to Cameron Bridge followed by a realignment to Markinch. This option offers accessibility benefits for planned employment and residential developments in the Leven town centre area including Riverside Road and Methil Docks. Although the route realignment does not appear to conflict with any planned development in the Mid-Fife LDP there are likely to be some conflicts with infrastructure and existing land uses.	✓
	7b	As Option 7a, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓
Policy Integration	7a	This option is fully aligned with transport policy from national to local level, particularly in terms of: sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use. This option also offers the potential for improving tourist access to/from Levenmouth supporting the Mid-Fife LDP aim to attract tourism to the area.	✓✓
	7b	As Option 7a, with additional benefit of more sustainable transport options for users close to Cameron Bridge.	✓✓

Accessibility and Social Inclusion			
Sub- Criteria	**Performance Against STAG Criteria**		**Score**
Community Accessibility	7a	This proposal helps improve public transport connections across Levenmouth, in particular near the BRT terminal. This option is likely to benefit access to key destinations for employment, education, healthcare and social activities. The provision of an additional mode option for Levenmouth is likely also to help improve the perception of disconnectedness that was raised in the analysis of problems and opportunities. While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	✓✓
	7b	As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓
Comparative Accessibility	7a	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	✓✓
	7b	As Option 7a, but inclusive of benefits for a greater proportion of the Levenmouth population i.e. those able to access the station at Cameron Bridge.	✓✓

Implementability: Feasibility, Affordability, and Public Acceptability			
Sub- Criteria	**Performance Against STAG Criteria**		**Rating**
Feasibility	7a	Consideration is required of the feasibility of this option, with any alignment requiring more detailed consideration at a later date. Particular issues include interaction with existing infrastructure, existing and planned development, and land issues such as known mining grounds. A BRT bused system would offer more flexibility to address engineering issues that may arise and therefore posed for moderate consideration in relation to technical feasibility.	Moderate Consideration
	7b	As Option 7a, with further feasibility investigation required for an additional terminal.	Moderate Consideration
Affordability	7a	Aside from the significant costs associated with bringing this route into use, including design and construction (which are captured in TEE) there would be significant costs associated with maintenance and operation of the dedicated BRT route. Operational costs of the service, and maintenance of the vehicles would need to be considered if not fully covered by the operator (i.e. forming part of any agreement with the operator with regards to providing new fleet to deliver the service).	Major Consideration
	7b	As Option 7a, with further costs associated with an additional terminal.	Major Consideration
Public Acceptability	7a	While it is expected that a BRT link would generally be met positively, it is expected that there would be significant resistance from some members of the local population in relation to the potential alignment of this option, in particular in relation to conflict with development.	Major Consideration
	7b	As Option 7a.	Major Consideration

Rationale of Selection or Rejection	Outcome
While Option 7 performs relatively well against all the STAG criteria other than for the environment, it does not perform as well against the Transport Planning Objectives as the rail options. This option also has significant costs associated with it and presents major potential issues across feasibility, affordability and public acceptability. The option also does not provide the opportunity to provide a non-road based freight alternative to serve the Levenmouth area. This impacts on the benefits, particularly the economic potential offered by this option in supporting current and future investment. The significant relative costs compared to benefit across the Government Objectives and Transport Planning Objects, coupled with the major potential	Option **not taken forward** to STAG Part 2 Appraisal.

environmental impacts, and implementability considerations leads to this option not being recommended to be taken forward.	

Table 8. Appraisal Summary Table – Option 8

Proposal Details			
Name and address of authority or organisation promoting the proposal:		Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH	
Proposal Name:	8. Hovercraft triangle between Levenmouth, Kirkcaldy, and Edinburgh.	Name of Planner:	SYSTRA Ltd.
Proposal Description:	This option would provide a hovercraft link between Methil Docks, Kirkcaldy, and Edinburgh. This option builds upon the Kirkcaldy to Edinburgh link concept noted in the Proposed FIFEplan Local Development Plan (2014) adding an additional connection to the Levenmouth area. This would include a new passenger terminal at Methil Docks.	Estimated Costs:	To be determined through STAG Part 2 assessment if taken forward.
Funding Sought From (if applicable)	-	Amount of Application (if applicable)	-
Background Information			
Geographic Context	The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.		
Social Context	While population in the area grew from 2003 to 2008 (1.6%), a fall in population from 2008 onwards balanced this out to show no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period.		
Economic Context	While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of the 52 Social Index of Multiple Deprivation (SIMD) 2016 data zones in Levenmouth's area are among the 20% most-deprived in Scotland, twelve (=23%) of these are in the 10% most deprived and six (=12%) of these are among the 5% most-deprived data zones in Scotland		

Transport Planning Objectives		
Objective:	**Performance Against Transport Planning Objective:**	**Score**
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	Journey time benefits may be seen for access to Kirkcaldy and Edinburgh for the access of services at these locations. This may be limited by requirements to connect to the terminal.	✓
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	Provision of additional mode choice for travel to Kirkcaldy and Edinburgh would likely capture some trips currently carried out by car.	✓
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	This option is not expected to have a significant impact on investment opportunities in the local area.	-
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	This option represents an opportunity for direct links between Edinburgh and the Levenmouth area, which could potentially be used as leisure travel for tourists. Marketing around this option could encourage tourist travel to the Levenmouth area. A number of leisure and tourism boat trips operate on the Forth Estuary, and the coastal position of the terminal could link well to the Fife Coastal Path.	✓✓

Environmental		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Noise and Vibration	It is predicted that noise and vibration effects will be experienced during construction of terminal works at Levenmouth which are likely to be significant for some periods. During operation hovercraft movements have some potential for short term significant noise effects for receptors close to the terminals, dependent on the timetabling and frequency of operations. A slight reduction in traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these routes	✓/ ✖✖
Global Air Quality - Carbon Dioxide C02	A slight reduction in traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on emissions from reduced vehicle kilometres No significant effects on global (carbon) emissions are predicted overall.	✓
Local Air Quality - PM10 and NO2	It is predicted that local air quality effects (primarily from dust) may be experienced during construction of the terminal but these would not be expected to be significant. During operation hovercraft movements are not predicted to result in significant emissions of local air pollutants. A slight reduction in traffic flows on key roads in the study area or beyond is predicted to have up to minor beneficial effects on communities adjacent to these routes.	✓/ -
Water Quality, Drainage, and Flood Defence	Construction of a new hovercraft terminal has potential to result in accidental pollution to the marine environment however with good construction practices these are not predicted to be significant. Operation of the terminal and hovercraft activity has some potential for discharges to the marine environment however it is assumed these would be controlled and no significant effects are predicted.	✖
Geology	It is predicted that with mitigation measures in place the construction of the terminal and its operation would not have significant effects on geology. There is a potential for construction to affect areas of potentially contaminated land associated with former industrial areas at the port and this would require more detailed investigation, assessment and if appropriate remediation at later design stages.	✖ / ✖✖

Biodiversity and Habitats	Construction disturbance works from the terminal development have the potential to indirectly[2] affect the qualifying interests (wintering and passage bird populations) of the Firth of Forth SPA/Ramsar site and SSSI. Mitigation measures would need to be employed to ensure that disturbance did not adversely affect these sites. Hovercraft operations have the potential to disturb birds and their habitats in the Firth of Forth. The potential for effects would need to be confirmed at later stages based on surveys of the development area.	✖ / ✖✖
Landscape	There is potential for some change on townscape from development of the terminal dependent on the final form and design of the building although this is not predicted to be significant. Hovercraft operations would not be predicted to change the character of the landscape.	✖ / -
Visual Amenity	There is potential for some minor visual effects from the new terminal and hovercraft operations which may be perceived as adverse by some receptors. Some minor positive effects are predicted for visual receptors close to roads where traffic movements are reduced as a result of the option.	✓/ ✖
Agriculture and Soils	It is predicted that with mitigation measures in place the permanent development of the terminal would not have significant effects on agriculture or soils.	-
Cultural Heritage	Permanent development of the terminal may slightly change the setting of listed buildings at Methil Docks however these are not predicted to be significant in the context of a commercial harbour.	✖ / -

[2] Reference to maps of Methil Docks and the designated area for the SPA/Ramsar site indicate construction works would not be required within the designated area

Safety		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Accidents	This option is likely to produce a minor benefit to accident rates, resulting from the reduction of the number of motor vehicles on the road network from drivers switching from car travel to public transport.	✓
Security	Provision of new docking terminal facilities will likely improve security for public transport users as these will be built to at least minimum safety requirements for factors such as site perimeters, entrances and exits, and lighting. The terminal is likely to include periods of staff presence as well as the provision of formal surveillance (CCTV) and emergency call/information facilities.	✓

Economy		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
TEE	*Travel time savings:* Travel time savings are dependent on the speed achieved on the services and timetable. It is expected that travel time savings may be made for users travelling to/from the vicinity of the docking station to Kirkcaldy and Edinburgh, with particular savings being made from removal of interchange penalties, however, onward travel to Edinburgh city centre would require a further interchange. *User charges including fares, parking charges and tolls:* It is unlikely that this option would produce fare benefits i.e. fares are unlikely to be notably lower than equivalent bus fares from the Levenmouth area or rail fares between Kirkcaldy and Edinburgh. *Vehicle operating cost changes for road vehicles:* This option is not likely to impact on this sub-criteria. *Quality benefits to transport users:* Improvements to modal choice from the Levenmouth area, including direct access to Edinburgh. *Reliability benefits to transport users:* This option may be subject to reduced reliability due to external factors, such as weather conditions, however, the Stagecoach Cross-Forth Passenger Ferry Study reported only two cancellations in the trial period of two weeks. *Investment costs:* Investment costs covered by cost to Government, below. *Operating and maintenance costs:* This option would generate operating and maintenance costs including craft depreciation, accruals for interior and engine refits and maintenance. *Revenues:* As part of the Stagecoach Cross-Forth Passenger Ferry Study the revenue and costs associated with the service were assessed and 2,305 passengers per day would be required to break-even on the service (Kirkcaldy to Seafield). It is unlikely this service would generate patronage sufficient to meet the equivalent point for a Levenmouth service. *Grant and subsidy payments:* Potential grant or subsidy payment to be determined at Stage 2 if option is taken forward.	×
EALI	This option would provide better access to Kirkcaldy and Edinburgh, more specifically providing more opportunities for employment in these areas and potentially attracting investment to Levenmouth. This option also offers the potential for improving tourist access to/from Levenmouth and supporting day shopping trips to Kirkcaldy and Edinburgh. Benefits will be weighted towards those with easy access to and from the Terminal.	✓

Cost to Government	Capital costs required for port and terminal infrastructure.	

Integration		
Sub-Criteria	**Performance Against STAG Criteria**	**Score**
Transport Integration	Services and ticketing: this link would provide an additional mode accessing both Kirkcaldy and Edinburgh, allowing integration with additional services in these settlements. Infrastructure and information: new hovercraft terminal infrastructure would be provided for this option, this would be designed to incorporate high quality user information.	✓✓
Transport and Land Use Integration	This option involves the development of docking terminal facilities which may conflict with planned developments of Methil port facilities however the improved access to the Edinburgh labour market may contribute towards plans to expand employment land in the Methil Energy Park.	✓
Policy Integration	This option is fully aligned with transport policy from national to local level, particularly in terms of: sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use. This option also offers the potential for improving tourist access to/from Levenmouth supporting the Mid-Fife LDP aim to attract tourism to the area.	✓✓

Accessibility and Social Inclusion		
Sub- Criteria	**Performance Against STAG Criteria**	**Score**
Community Accessibility	This link would provide an additional public transport mode accessing both Kirkcaldy and Edinburgh, allowing integration with additional services in these settlements. This is likely to benefit access to key destinations for employment, education, healthcare and social activities. The provision of an additional mode option for Levenmouth is likely also to help improve the perception of disconnectedness that was raised in the analysis of problems and opportunities. While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	✓✓
Comparative Accessibility	This option is expected to improve accessibility for a number of socially excluded groups. It was highlighted in the analysis of the problems and opportunities for this study that the areas affected by this option are some of the areas within Levenmouth and, to an extent, Fife with the greatest	✓✓

	health issues, lowest levels of educational attainment, highest levels of unemployment, and highest levels of social exclusion. This option helps reduce reliance on the car as a mode of transport, helping those without access to a car.	

Implementability: Feasibility, Affordability, and Public Acceptability		
Sub- Criteria	**Performance Against STAG Criteria**	**Rating**
Feasibility	While technical feasibility is not expected to be a major issue for this option, the deliverability of this option for Levenmouth is dependent on the implementation of a Kirkcaldy -Edinburgh service. While a trial of this service has taken place in recent history, this was not taken forward.	Major Consideration
Affordability	There would be costs associated with the running of the service, operation of the terminal, and maintenance of the craft. Commercial viability of the option may also be a major risk.	Major Consideration
Public Acceptability	Public opposition to this option would not be expected in the Levenmouth area. The hovercraft would largely be provided away from the residential population, and so would not require as much public disruption in the provision of its supporting infrastructure.	Minor Consideration

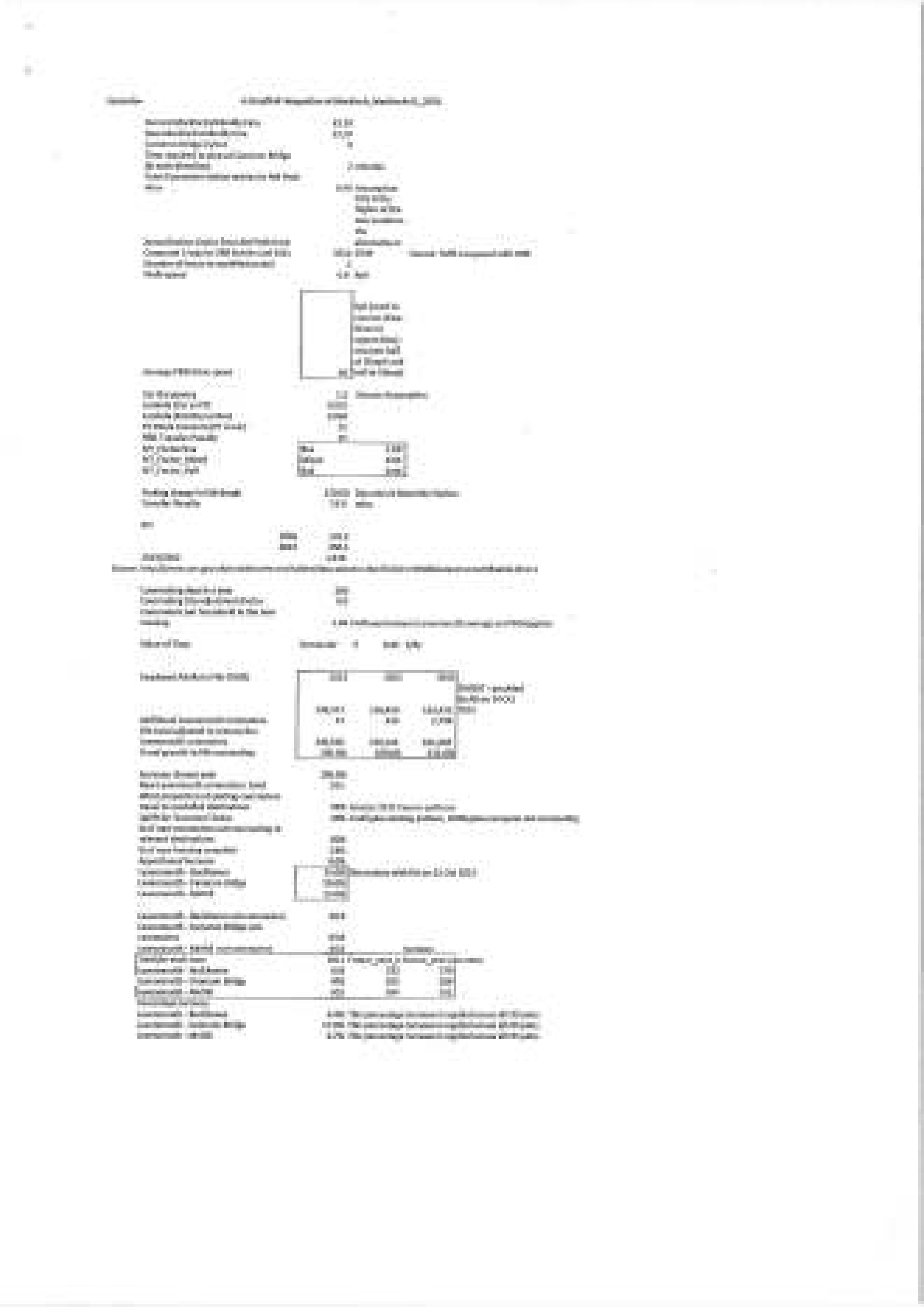
Rationale of Selection or Rejection	**Outcome**
Option 8 scores relatively well against all the Government Objectives other than for the Environmental appraisal. It does not perform as well against the accessibility and sustainable travel Transport Planning Objectives as the rail options do; however, in relation to TPO 4 (*enhance Levenmouth's role as a tourist destination and a gateway to East Neuk*), Option 8 8 scores positively. The option also does not provide the opportunity to provide a non-road based freight alternative to serve the Levenmouth area. This impacts on the benefits, particularly the economic potential offered by this option in supporting current and future investment. Despite the benefits offered by this option, it has significant costs associated with it and presents major potential issues across feasibility and affordability. This option is not recommended for selection for detailed appraisal.	Option **not taken forward** to STAG Part 2 Appraisal.

APPENDIX E – Initial Appraisal (Part 1) Summary Scoring Table

		Option 1	Option 2	Option 3	Option 4			
					4 a)	4 b)	4 c)	4 d)
Transport Planning Objectives	TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the Levenmouth population.	✓	✓	-	✓✓	✓✓	✓✓	✓✓
	TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of Levenmouth.	✓	✓	-	✓✓	✓✓	✓✓	✓✓
	TPO 3 – Ensure that transport infrastructure and services encourage investment in Levenmouth, and attract jobs and people to the area.	✓	✓	✓	✓	✓✓	✓✓	✓✓
	TPO 4 – Enhance Levenmouth's role as a tourist destination and a gateway to East Neuk.	-	✓	-	✓✓	✓✓	✓✓	✓✓
Environment	Noise and Vibration	-	-	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx
	Global Air Quality - Carbon Dioxide C02	-	-	✓	✓	✓	✓	✓
	Local Air Quality - PM10 and NO2	✓/ x	✓/ x	✓/ x	✓/ x	✓/ x	✓/ x	✓/ x
	Water Quality, Drainage, and Flood Defence	✓/ x	-	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx
	Geology	-	-	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx
	Biodiversity and Habitats	✓/ x	-/ ✓	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx
	Landscape	✓/ x	-	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx
	Visual Amenity	✓/ x	1`	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx
	Agriculture and Soils	-	-	x	x	x	x	x
	Cultural Heritage	✓/ x	-	x	x	x	x	x
Safety	Accidents	-	✓	✓	✓	✓✓	✓✓	✓✓
	Security	✓	✓	-	✓	✓✓	✓	✓✓
Economy	TEE	✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓✓
	EALI	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓
Integration	Transport	✓	✓✓	-	✓✓	✓✓	✓✓	✓✓
	Transport & Land-use	✓	✓✓	✓✓	✓	✓	✓✓	✓✓
	Policy	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Accessibility and Social Inclusion	Community Accessibility	✓✓	✓✓	-	✓✓	✓✓	✓✓	✓✓
	Comparative Accessibility	✓✓	✓✓	-	✓✓	✓✓	✓✓	✓✓
Feasibility, Affordability, and Public Acceptability	Feasibility	Moderate Consideration	Moderate Consideration	Moderate Consideration	Moderate Consideration	Moderate Consideration	Moderate Consideration	Moderate Consideration
	Affordability	Moderate Consideration	Moderate Consideration	Moderate Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration
	Public Acceptability	Moderate Consideration	Moderate Consideration	Moderate Consideration	Minor Consideration	Minor Consideration	Minor Consideration	Minor Consideration

		Option 5		Option 6				Option 7		Option 8
		5 a)	5 b)	6 a)	6 b)	6 c)	6 d)	7 a)	7 b)	
Transport Planning Objectives	TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the Levenmouth population.	✓	✓	✓✓	✓✓	✓✓	✓✓	✓	✓	✓
	TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of Levenmouth.	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓	✓
	TPO 3 – Ensure that transport infrastructure and services encourage investment in Levenmouth, and attract jobs and people to the area.	✓	✓✓	✓	✓✓	✓✓	✓✓	✓	✓	✓
	TPO 4 – Enhance Levenmouth's role as a tourist destination and a gateway to East Neuk.	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓	✓✓
Environment	Noise and Vibration	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx	✓/ xx
	Global Air Quality - Carbon Dioxide C02	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Local Air Quality - PM10 and NO2	✓/x	✓/x	✓/x	✓/x	✓/x	✓/x	✓/ x	✓/ x	✓/-
	Water Quality, Drainage, and Flood Defence	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x
	Geology	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx
	Biodiversity and Habitats	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xx
	Landscape	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xxx	x/ xx	x/ xx	x/-
	Visual Amenity	✓/ xxx	✓/ xxx	✓/ xxx	✓/ xxx	✓/ xxx	✓/ xxx	✓/ xxx	✓/ xxx	✓/ x
	Agriculture and Soils	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	-
	Cultural Heritage	x/ xxx	x/ xxx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/ xx	x/-
Safety	Accidents	✓	✓✓	✓	✓✓	✓✓	✓✓	✓	✓	✓
	Security	✓	✓✓	✓	✓✓	✓	✓✓	✓	✓✓	✓
Economy	TEE	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓	✓	×
	EALI	✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓	✓✓	✓
Integration	Transport	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	Transport & Land-use	-	✓	✓	✓	✓	✓	✓	✓	✓
	Policy	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Accessibility and Social Inclusion	Community Accessibility	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	Comparative Accessibility	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Feasibility, Affordability, and Public Acceptability	Feasibility	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Moderate Consideration	Moderate Consideration	Major Consideration
	Affordability	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration
	Public Acceptability	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Major Consideration	Minor Consideration

APPENDIX F - Key Demand Forecasting Assumptions



Unit: [illegible]

Stations	Number of trains in each direction	Travel time (min)		Distance (km)	
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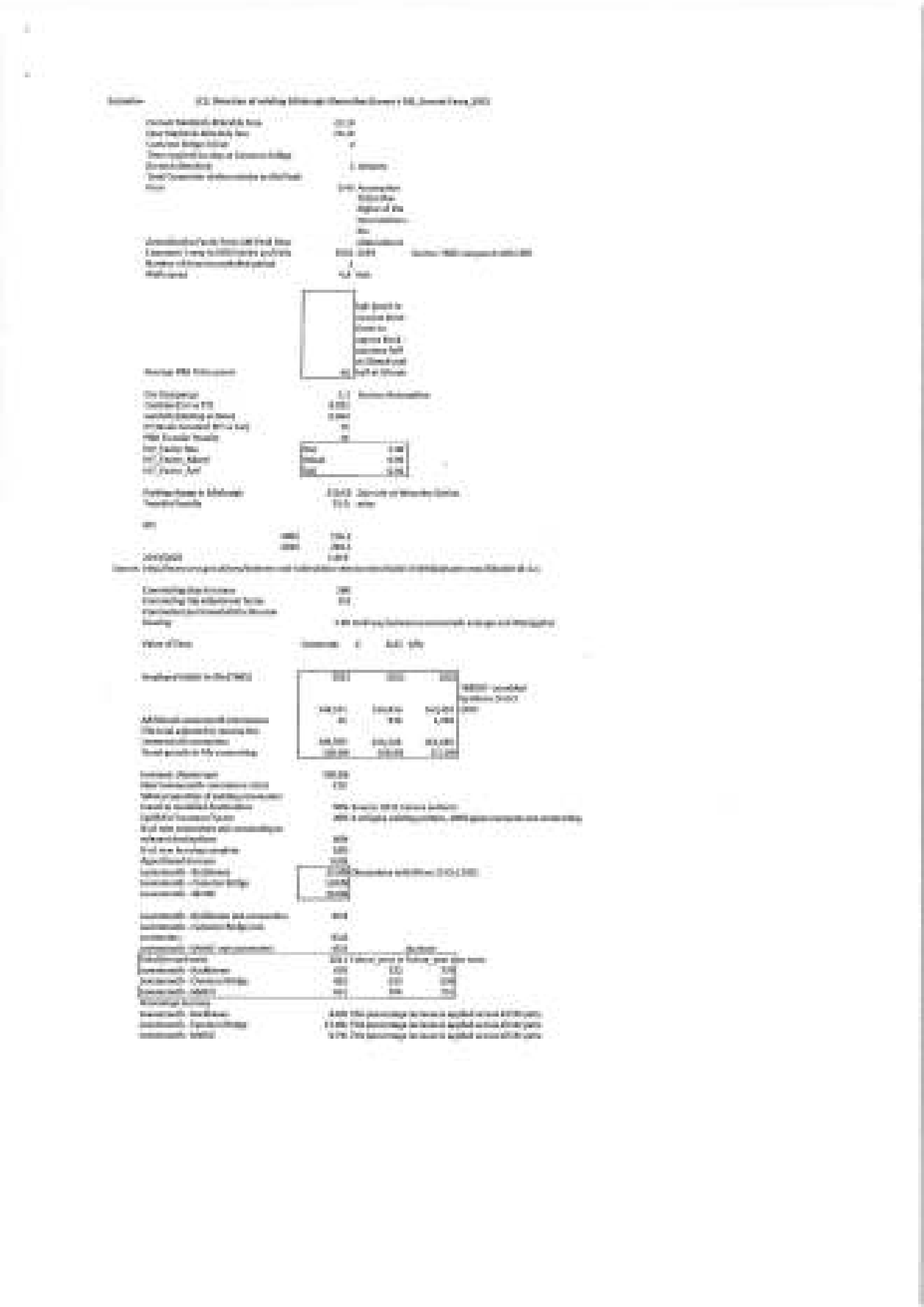
[illegible]					
[illegible]					



APPENDIX G - Daily Commuter Travel Demand by OD Pair

Number of Commuter Return Trips per day

OD	2012	2021	2031
Levenmouth - Windygates and Coaltown_Glenrothes	381	422	526
Levenmouth - Leven_Glenrothes	329	305	357
Levenmouth - Kennoway and Bonnybank_Glenrothes	260	286	296
Levenmouth - Buckhaven_Glenrothes	244	270	300
Glenrothes_Levenmouth - Leven	228	238	248
Levenmouth - Methil_Glenrothes	206	230	313
Levenmouth - Cameron Bridge_Glenrothes	176	228	373
Levenmouth - Leven_Kirkcaldy - Dysart	158	162	168
East Neuk_Kirkcaldy Central	148	162	167
Levenmouth - Methil_Kirkcaldy - Dysart	143	165	217
East Neuk_Glenrothes	136	147	151
Glenrothes_Levenmouth - Windygates and Coaltown	133	140	151
Levenmouth - Buckhaven_Kirkcaldy - Dysart	131	151	157
Levenmouth - Methilhill_Glenrothes	117	137	161
Levenmouth - Windygates and Coaltown_Kirkcaldy - Dysart	120	130	140
Glenrothes_Levenmouth - Methil	118	121	133
Levenmouth - Kennoway and Bonnybank_Kirkcaldy - Dysart	116	125	130
East Neuk_City of Edinburgh	96	104	107
Levenmouth - Cameron Bridge_Kirkcaldy - Dysart	91	129	295
Levenmouth - Methil_Kirkcaldy Central	88	101	134
Levenmouth - Buckhaven_Kirkcaldy Central	83	96	125
Levenmouth - Leven_City of Edinburgh	78	84	87
Levenmouth - Leven_Kirkcaldy Central	77	83	86
Glenrothes_Levenmouth - Buckhaven	76	80	85
Levenmouth - Kennoway and Bonnybank_Dunfermline	75	77	79
Levenmouth - Methilhill_Kirkcaldy - Dysart	68	73	78
Levenmouth - Kennoway and Bonnybank_Kirkcaldy Central	66	71	74
East Neuk_Dunfermline	65	70	73
Levenmouth - Leven_Dunfermline	64	68	72
Levenmouth - Kennoway and Bonnybank_City of Edinburgh	62	66	70
Levenmouth - Windygates and Coaltown_Kirkcaldy Central	61	65	66
Levenmouth - Windygates and Coaltown_City of Edinburgh	60	61	63
Levenmouth - Buckhaven_Dunfermline	59	64	64
Levenmouth - Methil_Dunfermline	56	60	80
Kirkcaldy Other West_Levenmouth - Leven	54	58	60
Levenmouth - Buckhaven_City of Edinburgh	53	61	65
Dunfermline_Levenmouth - Leven	52	56	58
Levenmouth - Leven_Dundee City	52	56	58
Levenmouth - Cameron Bridge_Dunfermline	48	61	115
Levenmouth - Windygates and Coaltown_Dunfermline	47	51	53
Kirkcaldy Other West_Levenmouth - Methil	45	48	68
Levenmouth - Cameron Bridge_Kirkcaldy Central	45	57	98
Levenmouth - Methil_City of Edinburgh	44	52	67
Kirkcaldy - Dysart_Levenmouth - Leven	42	45	47
Levenmouth - Kennoway and Bonnybank_Dundee City	39	42	44
Levenmouth - Windygates and Coaltown_Dundee City	38	42	44
Markinch and Star_Levenmouth - Leven	38	41	43
Glenrothes_Levenmouth - Kennoway and Bonnybank	37	40	41
Dunfermline_Levenmouth - Methil	34	39	45
Levenmouth - Methil_[illegible] and Ladybank	34	42	53
Levenmouth - Methilhill_Kirkcaldy Central	33	35	40
Perth and Kinross_Levenmouth - Leven	33	37	39
Kirkcaldy Central_Levenmouth - Leven	32	35	37
Thornton and [illegible]_Levenmouth - Leven	32	35	36

Levenmouth - Cameron Bridge_City of Edinburgh	31	28	64
Dunfermline_Levenmouth - Buckhaven	30	28	41
Dunfermline_Levenmouth - Windygates and Coaltown	30	33	33
Levenmouth - Cameron Bridge_Dundee City	29	57	43
Levenmouth - Warehouses_City of Edinburgh	29	31	33
Kirkcaldy Other - West_Levenmouth - Windygates and Coaltown	28	30	31
Leslie and Markinch_Levenmouth - Leven	28	30	31
Levenmouth - Kennoway and Bonnybank_Perth and Kinross	28	30	33
Levenmouth - Kennoway and Bonnybank_Kettle and Ladybank	27	22	35
Kirkcaldy - Dysart_Levenmouth - Methil	26	33	29
Kirkcaldy Central_Levenmouth - Methil	25	28	29
Levenmouth - Buckhaven_Dundee City	25	28	58
Levenmouth - Cameron Bridge_Kettle and Ladybank	25	30	52
Levenmouth - Leven_Perth and Kinross	25	26	33
Levenmouth - Leven_Rosyth	24	26	27
Levenmouth - Methil_Rosyth	24	28	30
Markinch and Star_Levenmouth - Windygates and Coaltown	23	25	27
City of Edinburgh_Levenmouth - Windygates and Coaltown	23	25	33
Levenmouth - Buckhaven_Rosyth	23	26	31
Markinch and Star_Levenmouth - Methil	23	25	35
Levenmouth - Cameron Bridge_Rosyth	22	38	40
Levenmouth - Kennoway and Bonnybank_Rosyth	22	24	31
City of Edinburgh_Levenmouth - Leven	22	20	31
Levenmouth - Buckhaven_Kettle and Ladybank	22	24	52
Levenmouth - Methil_Dundee City	22	24	43
Levenmouth - Warehouses_Dundee City	22	30	55
Levenmouth - Warehouses_Dunfermline	21	21	29
Levenmouth - Windygates and Coaltown_Thornton and Kinglassie	21	21	25
Kirkcaldy - Dysart_Levenmouth - Windygates and Coaltown	20	22	20
Levenmouth - Windygates and Coaltown_Rosyth	20	22	23
Kirkcaldy Other - South_Levenmouth - Leven	19	21	22
Kirkcaldy Other - West_Levenmouth - Buckhaven	19	21	22
Kirkcaldy - Dysart_Levenmouth - Buckhaven	18	20	22
Levenmouth - Warehouses_Perth and Kinross	18	19	30
Perth and Kinross_Levenmouth - Windygates and Coaltown	18	20	30
Leslie and Markinch_Levenmouth - Buckhaven	17	18	31
Levenmouth - Windygates and Coaltown_Perth and Kinross	17	18	30
Kirkcaldy Central_Levenmouth - Buckhaven	16	17	18
Kirkcaldy Central_Levenmouth - Windygates and Coaltown	16	17	18
Levenmouth - Buckhaven_Perth and Kinross	16	18	24
Markinch and Star_Levenmouth - Buckhaven	16	17	18
Levenmouth - Leven_Thornton and Kinglassie	15	15	17
Levenmouth - Cameron Bridge_Perth and Kinross	14	14	53
Levenmouth - Leven_Kirkcaldy Other - West	14	15	16
Levenmouth - Methil_Thornton and Kinglassie	14	16	23
Levenmouth - Windygates and Coaltown_Kettle and Ladybank	14	21	14
Levenmouth - Windygates and Coaltown_Kirkcaldy Other - West	14	20	14
Levenmouth - Buckhaven_Kirkcaldy Other - West	13	15	28
Levenmouth - Kennoway and Bonnybank_Kirkcaldy Other - West	13	14	17
Levenmouth - Kennoway and Bonnybank_Thornton and Kinglassie	13	16	15
Glenrothes_Levenmouth - Cameron Bridge	12	13	13
Kirkcaldy Other - South_Levenmouth - Methil	12	13	13
Levenmouth - Buckhaven_Thornton and Kinglassie	12	14	18
Levenmouth - Methil_Perth and Kinross	12	14	18
Perth and Kinross_Levenmouth - Methil	12	13	12
Thornton and Kinglassie_Levenmouth - Methil	12	13	15

Glenrothes_Levenmouth - Warehouses	11	11	12
Thornton and Kinglassie_Levenmouth - Buckhaven	11	11	12
Thornton and Kinglassie_Levenmouth - Windygates and Coaltown	11	11	12
Leslie and Newcastle_Levenmouth - Methil	10	11	12
Leslie and Newcastle_Levenmouth - Windygates and Coaltown	10	11	12
Levenmouth - Warehouses_Kirkcaldy Other - West	10	11	12
Kirkcaldy Other - South_Levenmouth - Windygates and Coaltown	9	10	10
Perth and Kinross_Levenmouth - Buckhaven	9	10	10
Levenmouth - Warehouses_Rosyth	8	9	9
City of Edinburgh_Levenmouth - Buckhaven	7	8	8
Dunfermline_Levenmouth - Kennoway and Bonnybank	7	8	8
Kirkcaldy - Dysart_Levenmouth - Kennoway and Bonnybank	7	8	8
Kirkcaldy Other - South_Levenmouth - Kennoway and Bonnybank	7	8	8
Levenmouth - Cameron Bridge_Kirkcaldy Other - West	7	8	12
Levenmouth - Methil_Kirkcaldy Other - West	7	8	11
Levenmouth - Windygates and Coaltown_Kirkcaldy Other - South	7	8	8
Levenmouth - Kennoway and Bonnybank_Kirkcaldy Other - South	6	6	7
Levenmouth - Leven_Kettle and Ladybank	6	6	7
City of Edinburgh_Levenmouth - Kennoway and Bonnybank	5	5	6
City of Edinburgh_Levenmouth - Methil	5	5	6
Leslie and Newcastle_Levenmouth - Kennoway and Bonnybank	5	5	6
Levenmouth - Cameron Bridge_Thornton and Kinglassie	5	5	11
Levenmouth - Leven_Kirkcaldy Other - South	5	5	6
Levenmouth - Warehouses_Kettle and Ladybank	5	5	6
Levenmouth - Warehouses_Thornton and Kinglassie	5	5	6
Thornton and Kinglassie_Levenmouth - Cameron Bridge	5	5	6
City of Edinburgh_Levenmouth - Warehouses	4	4	4
Dunfermline_Levenmouth - Cameron Bridge	4	4	4
Kirkcaldy Central_Levenmouth - Cameron Bridge	4	4	4
Kirkcaldy Other - South_Levenmouth - Buckhaven	4	4	4
Kirkcaldy Other - West_Levenmouth - Cameron Bridge	4	4	4
Kirkcaldy Other - West_Levenmouth - Kennoway and Bonnybank	4	4	4
Markinch and Star_Levenmouth - Kennoway and Bonnybank	4	4	4
City of Edinburgh_Levenmouth - Cameron Bridge	3	3	3
Dunfermline_Levenmouth - Warehouses	3	3	3
Kirkcaldy - Dysart_Levenmouth - Cameron Bridge	3	3	3
Kirkcaldy Central_Levenmouth - Kennoway and Bonnybank	3	3	3
Kirkcaldy Central_Levenmouth - Warehouses	3	3	3
Levenmouth - Buckhaven_Kirkcaldy Other - South	3	3	3
Levenmouth - Methil_Kirkcaldy Other - South	3	3	3
Markinch and Star_Levenmouth - Warehouses	3	3	3
Perth and Kinross_Levenmouth - Warehouses	3	3	3
Thornton and Kinglassie_Levenmouth - Warehouses	3	3	3
Kirkcaldy - Dysart_Levenmouth - Warehouses	2	2	2
Kirkcaldy Other - South_Levenmouth - Cameron Bridge	2	2	2
Levenmouth - Warehouses_Kirkcaldy Other - South	2	2	2
Kirkcaldy Other - West_Levenmouth - Warehouses	1	1	1
Levenmouth - Cameron Bridge_Kirkcaldy Other - South	1	1	1
Perth and Kinross_Levenmouth - Kennoway and Bonnybank	1	1	1
Thornton and Kinglassie_Levenmouth - Kennoway and Bonnybank	1	1	1
Kirkcaldy Other - South_Levenmouth - Warehouses	0	0	0
Leslie and Newcastle_Levenmouth - Cameron Bridge	0	0	0
Leslie and Newcastle_Levenmouth - Warehouses	0	0	0
Markinch and Star_Levenmouth - Cameron Bridge	0	0	0
Perth and Kinross_Levenmouth - Cameron Bridge	0	0	0

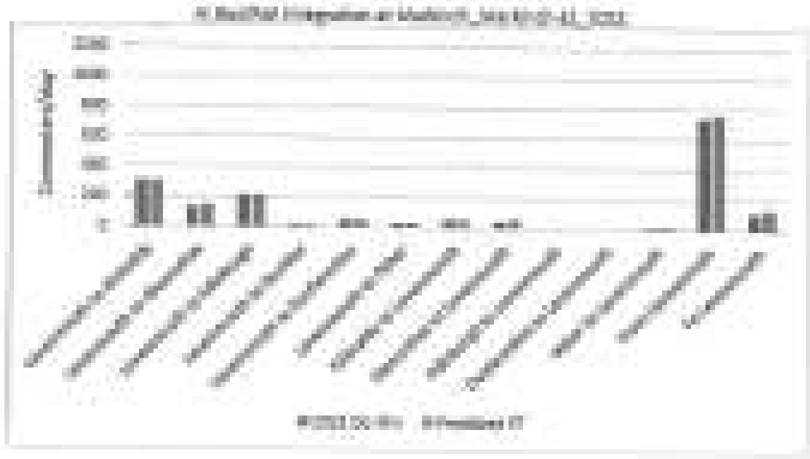
APPENDIX H - Representative Postcodes Used for Traveline Data Searches

Modelled Zone	Postcode used in Traveline Scotland Searches
Levenmouth - Leven	KY8 4HE
Levenmouth - Cameron Bridge	KY8 2DR (NB This is used for the population - it is not the new station location)
Levenmouth - Warehouses	KY8 5GY
Levenmouth - Buckhaven	KY8 1HY
Levenmouth - Methil	KY8 3BP
Kirkcaldy Central	KY1 2RL
Kirkcaldy - Dysart	KY1 2XN
Kirkcaldy Other - South	KY1 1TD
Kirkcaldy Other -West	KY2 6YA
Levenmouth - Windygates and Coalto	KY8 5DQ
Levenmouth - Kennoway and Bonnyb	KY8 5FE
Glenrothes	KY7 5RA
City of Edinburgh	EH1 3JR
Dunfermline	KY12 7JA
Dundee City	DD1 5RW
Rosyth	KY11 2QL
Perth and Kinross	PH2 7DT
Kettle and Ladybank	KY15 7JU
Thornton and Kinglassie	KY5 0XA
Markinch and Star	KY7 6BD
Leslie and Newcastle	KY6 3EN
East Neuk	Anstruther

APPENDIX I - Predicted Demand by Travel to Work Corridor

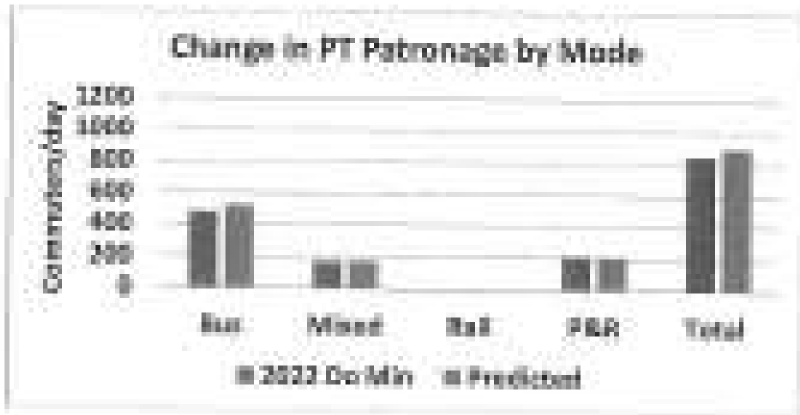
A: Bus/Rail Integration at Markinch_Markinch-E1_2022

	Predicted PT	2022 Do Min	Change	%Change
Levenmouth to Kirkcaldy	304	302	2	0.3%
Levenmouth to Glenrothes	148	130	[illegible]	12.7%
Levenmouth to Edinburgh	211	207	4	1.9%
Levenmouth to Dundee	13	13	[illegible]	0.0%
Levenmouth to Dunfermline	35	35	[illegible]	0.0%
Levenmouth to Other	27	27	[illegible]	1.0%
Kirkcaldy to Levenmouth	33	33	[illegible]	0.0%
Glenrothes to Levenmouth	59	42	[illegible]	42.9%
Edinburgh to Levenmouth	6	8	2	33.3%
Dunfermline to Levenmouth	4	3	[illegible]	3.3%
Other to Levenmouth	17	9	[illegible]	80.4%
From Levenmouth	752	738	13	2.1%
To Levenmouth	156	130	28	21.7%
Total				
Total	909	849	48	5.8%



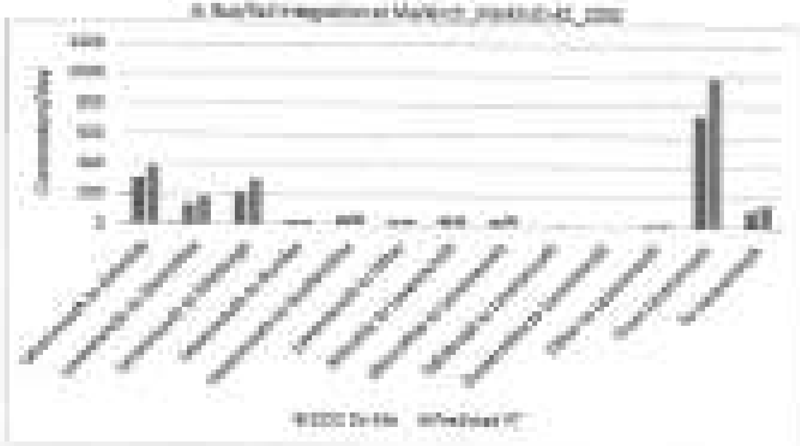
A: Bus/Rail Integration at Markinch_Markinch-E1_2022

Total Modelled PT Demand (Commuter Return Trips per Day)	Predicted	2022 Do Min	Change	% Change
Bus	524	477	47	9.9%
Mixed	168	165	4	2.5%
Rail	0	0	0	n/a
P&R	170	208	-2	-0.8%
Total	909	849	48	5.8%



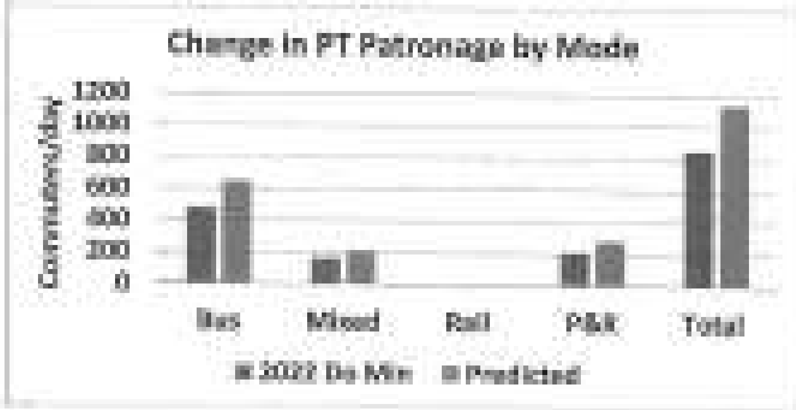
a Bus/Rail Integration at Markinch_Markinch-41_2031

	Predicted PT	2022 Do Min	Change	%Change
Levenmouth to Kirkcaldy	385	303	[illegible]	25.0%
Levenmouth to Glenrothes	185	120	[illegible]	42.3%
Levenmouth to Edinburgh	292	207	[illegible]	42.2%
Levenmouth to Dundee	28	19	[illegible]	50.0%
Levenmouth to Dunfermline	58	48	11	28.6%
Levenmouth to Other	37	27	[illegible]	34.0%
Kirkcaldy to Levenmouth	55	53	[illegible]	4.2%
Glenrothes to Levenmouth	68	47	22	51.0%
Edinburgh to Levenmouth	6	3	[illegible]	100.7%
Dunfermline to Levenmouth	4	3	[illegible]	11.2%
Other to Levenmouth	18	9	[illegible]	84.8%
From Levenmouth	989	759	230	30.8%
To Levenmouth	148	112	36	32.0%
Total				
Total	1,136	869	266	30.7%



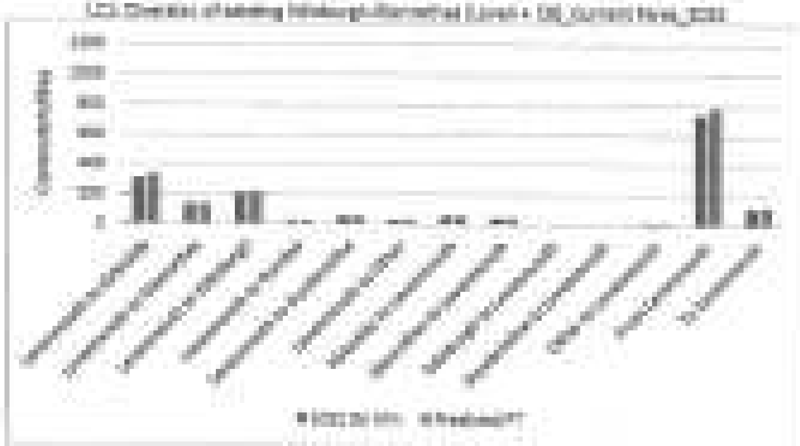
a Bus/Rail Integration at Markinch_Markinch-41_2031

Total Modelled PT Demand (Commuter Return Trips per Day)	Predicted	2022 Do Min	Change	% Change
Bus	640	477	168	35.4%
Mixed	212	165	47	28.8%
Rail	0	0	0	n/a
P&R	278	208	70	33.8%
Total	1130	849	280	32.2%



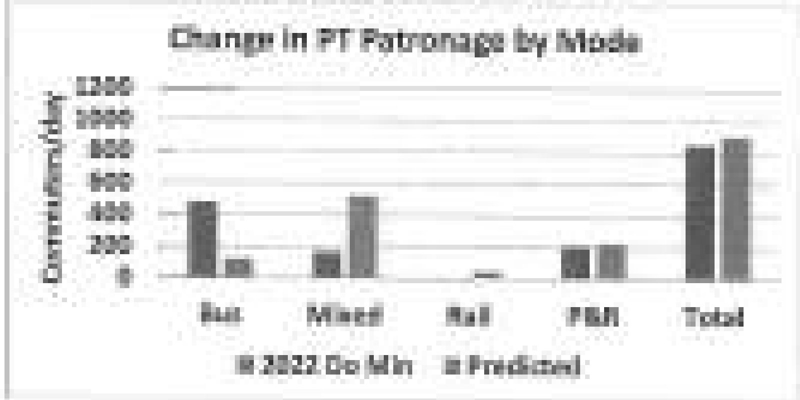
LC1: Diversion of existing Edinburgh-Glenrothes (Leven + CB)_Current Fares_2022

	Predicted PT	2022 Do Min	Change	% Change
Levenmouth to Kirkcaldy	304	303		13.0%
Levenmouth to Glenrothes	148	140		2.5%
Levenmouth to Edinburgh	217	207	10	4.0%
Levenmouth to Dundee	13	10		3.0%
Levenmouth to Dunfermline	54	53		2.4%
Levenmouth to Other	18	17		6.2%
Kirkcaldy to Levenmouth	56	53		7.3%
Glenrothes to Levenmouth	44	41		5.8%
Edinburgh to Levenmouth	4	3		45.8%
Dunfermline to Levenmouth	5	4		12.5%
Other to Levenmouth	13	9		3.0%
From Levenmouth	798	758	47	6.4%
To Levenmouth	118	110	8	7.4%
Total				
Total	903	849	55	6.5%

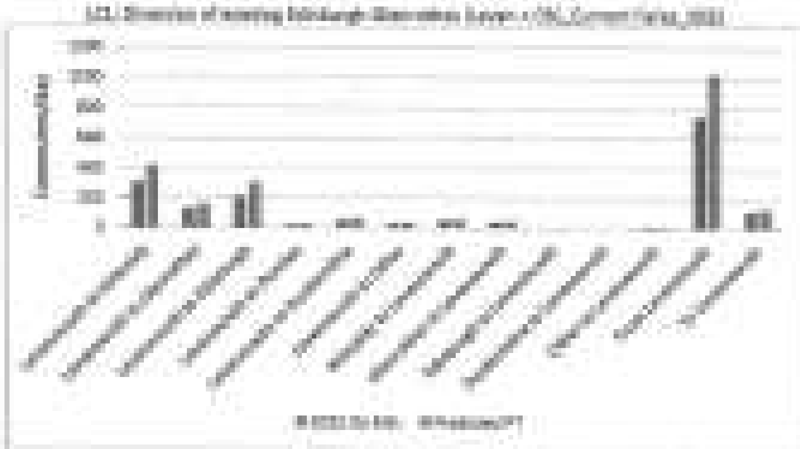


LC1: Diversion of existing Edinburgh-Glenrothes (Leven + CB)_Current Fares_2022

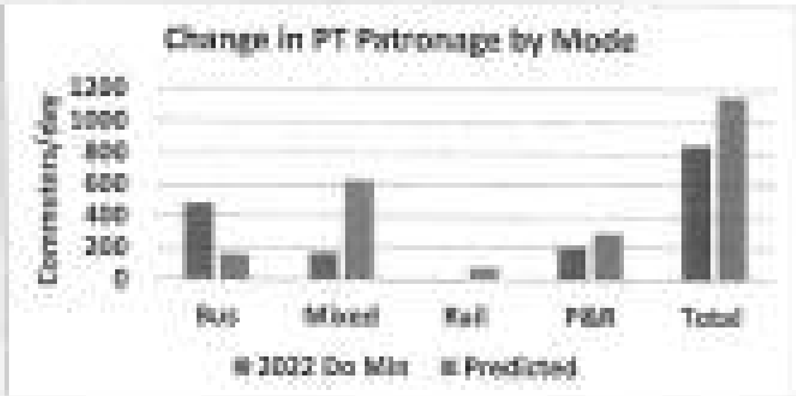
Total Modelled PT Demand (Commuter Return Trips per Day)	Predicted	2022 Do Min	Change	% Change
Bus	111	477	-334	-76.0%
Mixed	617	108	509	104.5%
Rail	41	0	48	n/a
P&R	220	208	12	5.7%
Total	903	849	55	6.5%



	Predicted PT	2022 Do Min	Change	% Change
Levenmouth to Kirkcaldy	419	310	[illegible]	35.2%
Levenmouth to Glenrothes	165	130	[illegible]	27.1%
Levenmouth to Edinburgh	325	227	[illegible]	47.4%
Levenmouth to Dundee	29	18	7	61.2%
Levenmouth to Dunfermline	73	52	[illegible]	41.2%
Levenmouth to Other	58	37	[illegible]	43.2%
Kirkcaldy to Levenmouth	59	53	6	11.8%
Glenrothes to Levenmouth	67	62	8	12.9%
Edinburgh to Levenmouth	8	3	[illegible]	166.7%
Dunfermline to Levenmouth	4	3	1	33.3%
Other to Levenmouth	12	9	[illegible]	8.0%
From Levenmouth	1,022	750	364	36.4%
To Levenmouth	129	118	16	14.0%
Total				
Total	1,151	849	302	35.6%

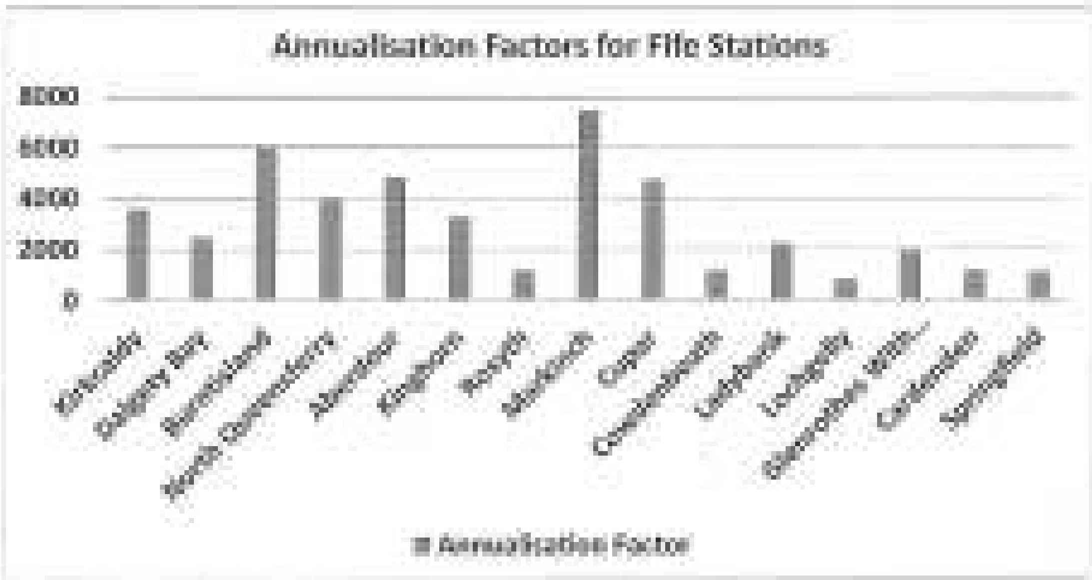


Total Modelled PT Demand (Commuter Return Trips per Day)	Predicted	2022 Do Min	Change	% Change
Bus	159	477	-318	-66.7%
Mixed	625	165	461	279.0%
Rail	75	0	75	n/a
P&R	294	208	86	40.2%
Total	1151	849	302	35.6%



APPENDIX J - Estimation of Annualisation Factors

Relevant Fife Stations	TMfS12 Commuter Demand	Total Annual Station Patronage (All Purposes) - ORR	Annualisation Factor	Fife Coast
Kirkcaldy	[illegible]	[illegible]	[illegible]	1
Dalgety Bay	[illegible]	[illegible]	[illegible]	1
Burntisland	[illegible]	[illegible]	[illegible]	1
North Queensferry	[illegible]	[illegible]	[illegible]	1
Aberdour	[illegible]	[illegible]	[illegible]	1
Kinghorn	[illegible]	[illegible]	[illegible]	1
Rosyth	[illegible]	[illegible]	[illegible]	0
Markinch	[illegible]	[illegible]	[illegible]	0
Cupar	[illegible]	[illegible]	[illegible]	0
Cowdenbeath	[illegible]	[illegible]	[illegible]	0
Ladybank	[illegible]	[illegible]	[illegible]	0
Lochgelly	[illegible]	[illegible]	[illegible]	0
Glenrothes With Thornton	[illegible]	[illegible]	[illegible]	0
Cardenden	[illegible]	[illegible]	[illegible]	0
Springfield	[illegible]	[illegible]	[illegible]	0
Total	[illegible]	[illegible]	[illegible]	
Total Fife Coast	[illegible]	[illegible]	[illegible]	



APPENDIX K - Detailed (Part 2) Appraisal Summary Tables

Part 2 Appraisal Summary Table

<table>
<tr><th colspan="4">Proposal Details</th></tr>
<tr><td colspan="2">Name and address of authority or organisation promoting the proposal:

(Also provide name of any subsidiary organisations also involved in promoting the proposal)</td><td colspan="2">Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH</td></tr>
<tr><td>Proposal Name:</td><td>Integration of bus services in the Levenmouth area with existing rail provision at Markinch.</td><td>Name of Planner:</td><td>SYSTRA Ltd</td></tr>
<tr><td rowspan="3">Proposal Description:</td><td rowspan="3">Timetable adjustments and re-branding of 44B service to improve access from Methil, Methillhill and Buckhaven to Markinch Station. Rebranding of x4 service connecting Leven to Markinch Station.</td><td rowspan="3">Total Public Sector Funding Requirement:</td><td>Capital costs/grant (undiscounted)
£2.9M (2010)</td></tr>
<tr><td>Annual revenue support
£100k (2010)</td></tr>
<tr><td>Present Value of Cost to Government – £6.1M</td></tr>
<tr><td>Funding Sought From: (if applicable)</td><td>Unknown at this time.</td><td>Amount of Application:</td><td>Unknown at this time.</td></tr>
<tr><th colspan="4">Background Information</th></tr>
<tr><td>Geographic Context:</td><td colspan="3">The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.</td></tr>
</table>

Social Context:	Population in the area grew from 2003 to 2008 (1.6%), but this has been off-set by a fall in population from 2008 onwards and no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period. While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of Levenmouth's 52 Scottish Index of Multiple Deprivation (SIMD) 2016 data zones (44%) are in the 20% most deprived in Scotland. A further 12 data zones are in the 10% most deprived. Six data zones are in the 5% most deprived in Scotland.
Economic Context:	Historically the area was heavily dependent on the mining industry and heavy industry sectors, and the area's economic performance has worsened since the decline of these sectors. Current major employers in the area include Fife Council, Diageo and Sainsbury's. 2011 Census data identified unemployment levels in Buckhaven, Methil, Methilhill were 3% greater than the Scottish average rate and four times the Lower Largo and Lundin Links rate of unemployment. Similarly, participation in further education is lower than the Scottish average by approximately 3%. A key future development proposal for the area is the Levenmouth Strategic Development Area which comprises 1,650 houses and 54ha of commercial land use alongside local amenities. Following on from the Energy Park development, there are further plans to develop a Low Carbon Investment Park at Buckhaven.

Planning Objectives	
Objective:	Performance against planning objective:
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	Improvement of bus services for some of the most deprived areas of Levenmouth providing access within the local area to employment sites at Cameron Bridge, Fife Energy Park, Glenrothes and community and education facilities proposed as part of the Levenmouth SDA as well as rail connections at Markinch.
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	Supportive of improving the public transport network and access to key employment sites within the local areas as well as onward connections to/from the area by rail.
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	Supportive of improving the public transport network and access to key employment sites within the local areas as well as onward connections to/from the area by rail. It is not expected that this option would have a significant impact in terms of attracting new investment to the area.
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	Improved access to and public transport integration, supportive of tourist access to the area by public transport.

Rationale for Selection or Rejection of Proposal:	This option was progressed to Detailed Appraisal as: This option benefits areas south of the River Leven through improved connections to the rail network and Glenrothes, providing particular benefit to accessibility and social inclusion. Connections to the town centre are also reinforced through the branding exercise, and particular benefits are seen for integration and journey time through improved timetabling and fare rebalancing. This option has relatively low costs with little or no impact to environment, other than a minor impact on local air quality, and potential improvement to biodiversity and habitats. The combination of improvements to services, the branding exercise, and fare rebalancing are likely to make this an attractive public transport option for the residents and workforce of the Levenmouth area. For these reasons, this option was short-listed to be taken forward to Detailed Appraisal.
Implementability Appraisal	
Technical:	Bus and rail integration, is expected to be technically feasible to implement and within a short timeframe. However, it would require discussion with public transport operators regarding provision of the services. Fare rebalancing proposals for this option, while not representing technical feasibility issues, will also require effort in terms of negotiation and agreement
Operational:	The service would be delivered by the existing bus fleet supplemented by new vehicles to serve the additional 44B equivalent services. At present, the X4 and 44B vehicles are used across multiple routes. As such, there would be a requirement to review the fleet scheduling so branded vehicles were operated only on their dedicated route.
Financial:	The proposal would be relatively low-cost to implement - £2.9M over the 60-year appraisal period (in 2010 prices, undiscounted). An operating subsidy would be required to cover costs. This is estimated at £100k per annum.
Public:	Public opposition is not expected. However, implementation of this option alone may come under criticism as it may not be seen to be doing enough to improve access to and from the Levenmouth area by alternatives to the private car.
Environment	
Mitigation Options Included: (Costs & Benefits)	Use of very low emissions bus vehicles to operate the additional services provides the potential for minor beneficial effects on local air quality.

Sub-criterion	Qualitative Information	Quantitative Information	Significance of Impact
Noise and Vibration	Some minor benefits in terms of reduced roadside noise levels are predicted. No physical works are required. The Candidate Noise Management Areas in Kirkcaldy and Glenrothes are not predicted to be affected.	No significant traffic noise or vibration effects are predicted from these changes.	Minor positive.
Global Air Quality – CO_2	Small potential for a reduction of use of private car on key roads such as those between Leven and Markinch (e.g. A911) with associated minor benefits in terms of reduced global emissions.	No significant effects on global air quality are predicted from these changes.	Minor positive. £0.3M.
Local Air Quality – PM_{10} and NO_2	Changes in bus operations in the urban areas of Buckhaven/Methil/Leven and Markinch is predicted to have the potential for minor benefit effects on air quality in the immediate vicinity of these locations.	No significant effects on local air quality are predicted from these changes.	Minor positive.
Water Quality, Drainage and Flood Defence	Potential for a very small impact on run-off quality from the existing roads and urban areas.	No significant effects on water quality, drainage defence are predicted.	Neutral.
Geology	No physical works are predicted for this option and would therefore not involve works affecting geological	No significant effects on geology or geological/material resources are predicted.	Neutral.

	sites or resources.		
Biodiversity	Potential for very small beneficial impacts on habitat and species disturbance and wildlife collisions associated with road traffic in the study area.	No significant effects on biodiversity and habitats are predicted.	Neutral.
Visual Amenity	A small change in visual impacts associated with traffic reduction on key transport routes for local and roadside receptors is predicted	No significant effects on visual amenity are predicted.	Neutral.
Agriculture and Soils	No physical works are predicted for this option and it would therefore not require works affecting agricultural land.	No significant effects on agriculture and soils are predicted.	Neutral.
Cultural Heritage	Very small beneficial impacts on the setting of cultural heritage such as Balbernie (GDL, SM and A listed Building), Links Road (Leven), Markinch and Cadham Village Conservation Areas associated with traffic reduction.	No significant effects on cultural heritage are predicted.	Neutral.
Landscape	No new infrastructure is proposed for this option and there are no predicted effects on landscape or townscape.	No significant effects on landscape and townscape are predicted.	Neutral.
Physical Fitness	Services within walking distance of current and future residential areas.	No significant effects on physical fitness are predicted.	Neutral.
Monetised summary	= £0.3M		

Monetary Impact Ratio	0.05		
Safety			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Accidents	Change in Annual Personal Injury Accidents	Not assessed - an assessment of the accident benefits arising from the options and the resulting change in traffic levels was calculated as part of Marginal External Benefits for both car-km and HGV-km.	Not assessed
	Change in Balance of Severity	Not assessed – see above.	Not assessed.
	Total Discounted Savings		£0.9M
Security		Users are likely to benefit from reduced wait times for services on-street and a reduction in the number of connections required to access rail services at Markinch, particularly from the Methil, Buckhaven and Methilhill areas. An increase in patronage would serve to also support natural surveillance by passengers.	Minor positive.
Monetised summary		£0.9M	
Monetary Impact Ratio		0.15	
Economy (Transport Economic Efficiency)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
User Benefits	Travel Time	Travel time savings would result from improved connectivity from the south of Levenmouth to Markinch Station, removing the need to route via Leven. Additional services would improve bus-rail integration and thereby reduce wait times for onward connections.	£28.8M

	Travel Time savings by size	Not assessed.	Not monetised.
	User Charges	An adjustment of the rail fares from Markinch to Edinburgh to provide greater parity with the equivalent fare from Kirkcaldy and address anomalies would benefit users.	£3.2M
	Vehicle Operating Costs		£0
	Quality / Reliability Benefits	Improved connectivity between bus-rail services can be expected to improve the journey quality for passengers through reducing waiting times and providing a more integrated journey experience.	Not monetised.
Private Sector Operator Impacts	Investment Costs	Additional three vehicles required, as will a branding exercise for the new service. This would be provided by the public sector so is not reflected as a cost to the private sector.	£0
	Operating & Maintenance Costs	Operating costs would be incurred primarily in the form of fuel and driver wages.	- £8.4M
	Revenues	Additional fare box revenue.	£4.6M
	Grant/Subsidy payments	Subsidy required to cover additional costs incurred by the operator.	£3.8M
Monetised summary		£32.0M	
Monetary Impact Ratio		5.25	

Economy (Wider Economic Benefits)			
Sub-criterion	Item	Qualitative information	Quantitative information
Wider Economic Benefits	Agglomeration economies (WB1)	Not applicable.	Not applicable.
	Increased output in perfectly competitive markets (WB3)	Not applicable.	Not applicable.
	Wider benefits arising from improved labour supply (WB4)	Not applicable.	Not applicable.
Monetised summary		Not applicable.	
Monetary Impact Ratio		Not applicable.	

Economy (Economic Activity and Location Impacts)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Economic Activity and Location Impacts	Local Economic Impacts	As well as improving service provision to Markinch Station, this option would strengthen links to key employment sites at Cameron Bridge, Fife Energy Park, and the proposed Levenmouth Strategic Development Area, including community and new educational facilities.	Qualitative assessment only.

	National Economic Impacts	Strengthening of bus services from south Levenmouth, including some of the most deprived parts of the area, to local employment sites as well as the wider rail network.	Qualitative assessment only.
	Distributional Impacts	Strengthens links to key employment sites at Cameron Bridge, Fife Energy Park, and the proposed Levenmouth Strategic Development Area, including housing and new educational facilities. Improved bus services for some of the most deprived areas of Levenmouth, including settlements south of the River Leven.	Qualitative assessment only.
Integration			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Transport Interchanges	Services & Ticketing	Improved integration between bus and rail services at Markinch Station.	Bus-rail integration with all peak services at Markinch. Off-peak hourly service.
	Infrastructure & Information	Dedicated branding would help promote service and links to rail network. Option complemented by wider measures being progressed by Fife Council and Stagecoach to improve on-street infrastructure and provision of information.	Not applicable.
Land-use Transport Integration		No conflict with local plans and services would complement access to future development sites.	Not applicable.

Policy Integration		Improved bus services would promote and encourage sustainable travel and therefore align with national, regional and local transport policy as well as wider policy drivers such as movement towards a lower carbon transport network.	Not applicable.
Accessibility & Social Inclusion			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Community Accessibility	Public Transport Network Coverage	Connections enhanced to Methil, Windygates and Buckhaven, while boosting access to the rail network at Markinch and through to Glenrothes. The local routing of this service maximises its accessibility (and the onward rail network) by foot and by bicycle, helping to facilitate non-car access to services and facilities.	*Access to Edinburgh Park and South Gyle* 95% and 37% of the population in Windygates and Methil would see between 2 and 10 minutes of journey time improvement, respectively/ 17% of the population of Methil would see more 10 minutes of journey time improvement. Buckhaven would see a marginal improvement of 9% of the population receiving a >0 to 5 minute journey time benefit. *Access to Central Edinburgh* 85% of the population of Windygates and 17% of Methil would see a journey time benefit of between 5 and 10 minutes. Buckhaven would see negligible benefits, with only 2% of the population showing any journey time benefit across the area. No benefit was shown to Dunfermline or Kirkcaldy, and negligible benefit would be seen to Dundee (<2% with any journey time benefit across the area).

			Access to educational facilities In terms of colleges within Fife, access to the Dundee School of Nursing and Midwifery (Kirkcaldy Campus) would see journey time improvement of up to 2 minutes for 9% and 40% of the population of Methil and Windygates respectively. No improvement would be seen for other campuses, e.g. Fife College St Brycedale in Kirkcaldy or Halbeath Campus in Dunfermline compared to existing public transport services. No improvement would be seen for access to healthcare facilities at Victoria Hospital.
	Access to Other Local Services	While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	Not applicable.
Comparative Accessibility	Distribution/Spatial Impacts by Social Group	Bus services improved for areas with some of the highest levels of deprivation in Levenmoouth. Fare rebalancing as part of this option may also improve access, in terms of affordability, for some segments of the population.	See above accessibility analysis.
	Distribution/Spatial Impacts by Area	No direct bearing on policies relating to retaining and improving the vitality of rural communities.	See above accessibility analysis.

Strategic Environmental Assessment (SEA)		
Summary of SEA outcome where appropriate	Not applicable.	
Cost to Public Sector		
Item	**Qualitative information**	**Quantitative information**
Public Sector Investment Costs	Vehicle purchase including renewal costs every 12 years.	-£2.9M (2010, undiscounted) / -£1.2M (2010, discounted)
Public Sector Operating & Maintenance Costs	Infrastructure savings from less veh-km.	£0.1M
Grant/Subsidy Payments	An annual subsidy would be required to operate the additional bus services.	-£100k per annum / -£3.8M total.
Revenues	Loss in revenue from parking charges as a result of modal shift and people travelling by public transport rather than private car.	-£1.1M
Taxation impacts	Indirect tax revenue impact as a result of change in mode shift.	-£1.4M
Cost to Funding Agency	N/A.	N/A

Monetised Summary	
Present Value of Transport Benefits	=0.3+0+0.9+32+(-1.4) = £31.7M*
Present Value of Cost to Government	=(-1.2)+0.1+(-3.8)+(-1.1) = -£6.1M*
Net Present Value	31.7+(-6.1) = £25.6M
Benefit-Cost to Government Ratio	=31.7/(-6.1*-1) 5.19
Benefit-Cost to Government Ratio (including WEBs)	N/A
Benefit-Cost to Funding Agency Ratio	N/A

*Total values correct. Small difference due to rounding.

Part 2 Appraisal Summary Table

<table>
<tr><th colspan="4">Proposal Details</th></tr>
<tr><td colspan="2">Name and address of authority or organisation promoting the proposal:

(Also provide name of any subsidiary organisations also involved in promoting the proposal)</td><td colspan="2">Fife Council, Bankhead Central, 1 Bankhead Park, Glenrothes, KY7 6GH</td></tr>
<tr><td>Proposal Name:</td><td>Provision of a rail line along the alignment of the existing, but out-of-use, rail line between Thornton North Junction and Leven.</td><td>Name of Planner:</td><td>SYSTRA Ltd</td></tr>
<tr><td rowspan="3">Proposal Description:</td><td rowspan="3">Re-opening the existing, but out-of-use, rail line to freight and passenger services between Leven and the existing mainline with stations provided at Cameron Bridge and Leven.</td><td rowspan="3">Total Public Sector Funding Requirement:</td><td>Capital costs/grant (undiscounted)
£78.4M (2010)</td></tr>
<tr><td>Annual revenue support
£0</td></tr>
<tr><td>Present Value of Cost to Government – £61.0M</td></tr>
<tr><td>Funding Sought From: (if applicable)</td><td>Unknown at this time.</td><td>Amount of Application:</td><td>Unknown at this time.</td></tr>
<tr><th colspan="4">Background Information</th></tr>
<tr><td>Geographic Context:</td><td colspan="3">The Levenmouth area is approximately six miles east of Markinch and the same distance north-east from Kirkcaldy in Fife. The area is an amalgamation of coastal and inland settlements centred around the core urban areas of Leven, Methil, Buckhaven, Methilhill, Windygates and Kennoway. Most local amenities are provided in Leven, serving a catchment population of approximately 38,000 in the Levenmouth area plus a large part of the East Neuk to North East Fife.</td></tr>
</table>

Social Context:	Population in the area grew from 2003 to 2008 (1.6%), but this has been off-set by a fall in population from 2008 onwards and no overall change from 2003 to 2012. This is in contrast to the total Fife estimated growth of 4.2%, and Scottish growth of 4.8%, across this period. While the Levenmouth area has pockets of relative wealth, and has seen significant commercial investment by Diageo and in the Fife Energy Park in recent years, poverty and inequality in some neighbourhoods is persistent and severe. 23 of Levenmouth's 52 Scottish Index of Multiple Deprivation (SIMD) 2016 data zones (44%) are in the 20% most deprived in Scotland. A further 12 data zones are in the 10% most deprived. Six data zones are in the 5% most deprived in Scotland.
Economic Context:	Historically the area was heavily dependent on the mining industry and heavy industry sectors, and the area's economic performance has worsened since the decline of these sectors. Current major employers in the area include Fife Council, Diageo and Sainsbury's. 2011 Census data identified unemployment levels in Buckhaven, Methil, Methilhill were 3% greater than the Scottish average rate and four times the Lower Largo and Lundin Links rate of unemployment. Similarly, participation in further education is lower than the Scottish average by approximately 3%. A key future development proposal for the area is the Levenmouth Strategic Development Area which comprises 1,650 houses and 54ha of commercial land use alongside local amenities. Following on from the Energy Park development, there are further plans to develop a Low Carbon Investment Park at Buckhaven.

Planning Objectives	
Objective:	Performance against planning objective:
TPO 1 – Improve access to employment, education, healthcare and leisure destinations, both within and outwith the area, for the population of the Levenmouth area.	Increased public transport access to key destinations within Fife and the wider city – region.
TPO 2 – Encourage increased sustainable travel mode share for the residents and workforce of the Levenmouth area.	Improved public transport mode choice for the residents and workers of the Levenmouth area will likely be seen as an attractive option for travel outwith the area, therefore, promoting sustainable transport use. Improvements to journey times on the road network, resultant from a reduction in HGV levels, would impact both motorists and public transport users.
TPO 3 – Ensure that transport infrastructure and services encourage investment in, and attract jobs and people to, the Levenmouth area.	Improved access to employment and other services would encourage people to live in Levenmouth. Access to healthcare and social activities promotes a physically and mentally healthy workforce, and access to education helps build a skilled and qualified workforce. A skilled and active workforce may, in turn, support investment in the area. Provision for freight would further help employment in the area by supporting industry,

	in particular at Cameron Bridge in the form of Diageo and the Fife Energy Park. This could potentially improve inward and external investment levels.
TPO 4 – Enhance the Levenmouth area's role as a tourist destination and a gateway to East Neuk.	Improved connectivity to the main line rail network would enhance potential tourist access to the area including Edinburgh Airport via the Edinburgh Gateway Station on opening.
Rationale for Selection or Rejection of Proposal:	This option was selected for the Detailed Appraisal for the following reasons: This option presents significant potential benefits for the Levenmouth area, in particular in relation to the potential to attract investment and improve connectivity and accessibility from the area to key destinations for employment, education, healthcare, and social activities. The option offers particular benefit for this as the connection point with the existing Fife Circle Line/East Coast Main Line which offers operational flexibility in relation to the possibility for providing passenger services along both sides of the Fife Circle. It scored positively overall across the majority of the STAG criteria, with the highest scorings seen for options/sub-options including the provision of two stations and freight facilities. The environmental appraisal highlighted some significant potential impacts (noting the scale is to be determined subject to further appraisal and potential mitigation options), however, given the performance in relation to the other Objectives, Option 4 – inclusive of its four sub-options – was taken forward for Detailed Appraisal.
Implementability Appraisal	
Technical:	Re-opening of the existing out-of-use rail line to passenger rail and potentially freight rail use would require re-design and construction of the line to bring it up to passenger rail standard. While this is a major undertaking, the option is technically feasible with a live line having operated previously and circumstances known (subject to full detailed investigation of the existing line were this option taken forward). Existing maintenance budgets for Leven Railway Bridge involve the propping of the structure, however, the re-instatement of the rail track (as per Option B) would preclude this action. If Option B were to be taken forward, consideration of the structure would form part of the detailed design work undertaken, as would the consideration of all structures along the extent of the rail line. For the purpose of this appraisal, deck replacement has been assumed as required.

Operational:	The Levenmouth area could be served by the diversion/extension of existing rail services or introduction of a new service. A high-level assessment identified potential service patterns. These are only indicative of the types of services that may be feasible within the scope of current timetables and operating circumstances. At this stage, operations have been based on diversion of the Edinburgh to Glenrothes with Thornton terminating service without an extended layover in Leven. If this were not achievable, there would be a related impact on operating costs due to the unrecoverable "dead time". Current AM peak services could be retimed to provide peak services in the morning. PM peak services would require wider timetable modifications. If a rail option were progressed, detailed timetabling would be required as part of the Governance to Rail Investment Process (GRIP) in consultation with Abellio and Network Rail in order to understand the resilience within the network to accommodate a rail operation to Leven. Furthermore, future proposals, including the opening of the Edinburgh Gateway Station, enhanced signalling between Edinburgh and Inverkeithing, and replacement of the Class 170 diesel-multiple units with high speed units on express services, all have the potential to impact on what service operations are feasible in the future. The Strategic Transport Projects Review (STPR) included proposals committing to electrification of the rail network. Longer-term proposals, extending into the period beyond STPR, include electrification of routes between Edinburgh, Perth and Dundee which would incorporate the Fife Circle. Associated impacts on journey times would have a direct consequence on service operations within the Fife area. If a rail option were progressed, operational considerations and future timetables should be advanced in the context of wider changes that would have a direct impact on the operation of a rail service to and from Levenmouth.
Financial:	Investment costs would be high and require Government funding. Operating costs would be covered (on the basis of serving Levenmouth by diversion of the existing Edinburgh – Glenrothes with Thornton terminating service and adjustment to negate the requirement for an extended layover in Leven). Were this not feasible, subsidy may be required to cover operating costs in addition to existing franchise agreements. Provision of rail freight facilities may also incur ongoing associated costs. Maximising the number of freight users would support the viability of the line in terms of costs and benefit from the level of freight movement occurring.
Public:	This option would involve re-opening of an existing rail line that is safeguarded in local development plans, negating much of the additional land take requirements that would be required with the opening of a completely new line. Consultation responses noted support for the re-opening of the rail line, but there was also note of the importance of bus services and rail was not an attractive option to some segments of the local population, due mainly to the higher associated fares.

Environment			
Mitigation Options Included: (Costs & Benefits)	• Good construction practices would be deployed and would help to mitigate construction nuisance and help prevent pollution risks to nearby watercourses; • Permanent railway drainage would deploy sustainable drainage techniques; • Any excavated material would be reused for fill in earthworks and landscaping and remaining material transferred off site for reuse if of suitable quality; • Construction works which could affect areas of potentially contaminated land associated with former industrial uses would require more detailed investigation, assessment and if appropriate remediation at later design stages; • Industrial or urban land such as disused rail lines have the potential to contain invasive species therefore an ecological walkover survey would be carried out pre-reinstatement works, to confirm presence of any of these species and further define any necessary mitigation; • Site specific surveys would be required to ascertain the potential for effects on bats taking account of the extent of any required bridge works; • Appropriate landscaping and measures to enhance local biodiversity would be incorporated into the detailed designs of the proposals; and • New railway infrastructure and buildings would be designed sympathetically to fit with the local landscape and townscape.		
Sub-criterion	**Qualitative Information**	**Quantitative Information**	**Significance of Impact**
Noise and Vibration	Noise and vibration effects would be predicted during construction which could be significant for short periods of intensive activity (e.g. from station, structures and track construction). Reduction in HGV and car traffic flows on key roads is predicted to have up to minor beneficial effects on communities adjacent to these routes. During operation, passenger and freight train movements are predicted to result in noise effects for adjacent residential receptors which may be significant dependent on the timetabling and frequency of rail operations. Increase of rail freight movements have potential to increase rail noise in the rail-based Candidate Noise Management Areas close to the railway route in	Significant adverse effects on noise and vibration would be predicted during construction for short periods. Potential for some significant operational effects from railway noise on lineside properties.	Minor positive.

	Kirkcaldy, depending on the number and timing of movements.		
Global Air Quality – CO_2	Predicted increase in carbon emissions due to fuel (or electricity) use for railway during operation, depending on the frequency of trains operations. Reduction in HGV and car traffic flows on key roads from modal shift is predicted to have up to minor beneficial effects on carbon emissions.	Minor beneficial effects are predicted on global air quality.	Minor Positive. £7.4M
Local Air Quality – PM_{10} and NO_2	Potential increase in local air pollutant emissions due to fuel (or electricity) use for the railway during operation, however the impact would depend on the frequency of train operations. The background concentrations of local air pollutants for receptors within 200m of the line are not predicted to significantly change. Reduction in HGV and car traffic flows on key roads in the study area is predicted to have up to minor beneficial effects on local air quality for communities adjacent to these routes.	Minor beneficial effects are predicted on local air quality.	Minor Positive.
Water Quality, Drainage and Flood Defence	Local change hydrology along the railway corridor, however effects are assumed to be mitigated through measures such as sustainable drainage of the permanent design. Crossings of the River Ore and River Leven and land (downstream of Cameron Bridge) alongside the River Leven lie within the high risk flood area and railway design would need to accommodate potential inundation during flood events. Operational impacts from track drainage and leaks/spills from trains would be predicted from train movements, the impacts of which would be dependent on the frequency of railway operations but are not predicted to be significant.	Taking account of assumed design and mitigation, no significant effects on water quality and drainage are predicted.	Minor Negative.
Geology	Potential effects on geological resources are	The reinstatement of	Minor Negative.

	effectively mitigated given the existing presence of the (former) railway route and its infrastructure. There is a potential for construction to affect areas of potentially contaminated land associated with former industrial areas along the eastern part of the route.	the railway/stations and rail operation would not be predicted to have significant effects on geology. Any potential contaminated land would require more detailed investigation, assessment and if appropriate remediation at later design stages.	
Biodiversity	Railway redevelopment would result in the loss of c.0.6ha of riparian habitat from the Windygate - Kennoway Wildlife Site. Surveys would be required to ascertain any presence of protected and invasive species along the rail corridor and to specify any necessary measures for their protection/eradication. Construction works are predicted to affect protected species such as breeding birds and mammals by disturbance, and from fragmentation or direct loss of habitat such as scrubby areas and woodlands but are not predicted to be significant (with mitigation). By adopting good construction practice, reinstatement works are not predicted to have any significant effects on fish or aquatic ecology.	A further c.2.9ha of habitat of woodland would be lost for sub-option B1 and c.3.1 ha for sub-option B2. Total habitat loss would total c3.7ha (Option B1) and c3.9ha (Option B2).	Minor Negative.
Visual Amenity	Potential for minor to moderate impacts to visual receptors and key views during construction and from permanent development works. Potential for small beneficial visual impacts associated with reduced traffic on key transport routes for local and roadside receptors.	Significant Adverse effects on visual amenity are predicted from the permanent development and operation of this option in locations where	Minor Negative.

		receptors or views are particularly close to the railway route.	
Agriculture and Soils	Potential for minor changes to soil resources from construction works and permanent development but this would be mitigated with good construction practice and limited due to the existing presence of the rail line and its engineered structure.	No significant effects on agriculture and soils are predicted.	Minor Negative.
Cultural Heritage	No direct or setting effect are predicted on any cultural heritage or archaeology sites, however there is a potential for minor indirect setting effects from construction and permanent development work. In particular, development of the new station at Cameron Bridge would slightly affect the setting of the B listed buildings associated with the distillery.	No significant adverse effects on cultural heritage are predicted.	Minor Negative.
Landscape	Direct or indirect impacts affecting any regionally or locally designated landscape areas are not predicted. Potential to locally but permanently change landscape character along the railway corridor primarily through removal of vegetation which has established in the corridor and through new development. With mitigation, re-instatement of the railway, construction of new infrastructure and train operations would generally not be predicted to have significant effects on landscape and townscape character.	The reinstatement of the railway, construction of new infrastructure and train operations are not generally predicted to have significant effects on landscape and townscape character of the route.	Minor Negative.
Physical Fitness	Loss of amenity along parts of the disused track that are currently used for walking, although a significant impact is not expected. Stations within walking distance of current and future residential areas, supportive of promoting access by walking and	No significant adverse effects on physical fitness are predicted	Neutral.

	cycling.		
Monetised summary	£7.4M		
Monetary Impact Ratio	= 0.12		
Safety			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Accidents	Change in Annual Personal Injury Accidents	Not assessed - an assessment of the accident benefits arising from the options and the resulting change in traffic levels was calculated as part of Marginal External Benefits for both car-km and HGV-km.	Not assessed
	Change in Balance of Severity	Not assessed – see above.	Not assessed.
	Total Discounted Savings		£4.1M
Security		Provision of new rail station facilities will improve security for public transport users as these will be built to at least minimum safety standards. The stations would include the provision of formal surveillance (CCTV) and on-platform emergency call/information facilities.	Moderate Benefit.
Monetised summary		**=** £4.1M	

Monetary Impact Ratio		**=** 0.07	
Economy (Transport Economic Efficiency)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
User Benefits	Travel Time	Direct rail link to destinations and opportunity for rail-rail interchange to access onward connections to other routes. Transfer of passenger and freight journeys from road to rail would result in decongestion with associated journey time savings.	£85.0M
	Travel Time savings by size	Not assessed.	Not assessed.
	User Charges	Higher rail fares would result in more expensive travel costs.	-£3.0M
	Vehicle Operating Costs		£0
	Quality / Reliability Benefits	Removal of the need to interchange for some rail journeys. Stations and infrastructure implemented to meet minimum standards.	Not assessed.
Private Sector Operator Impacts	Investment Costs	Re-opening of the rail line would be funded by public sector budgets.	£0
	Operating & Maintenance Costs	Additional operating costs.	-£11.8M
	Revenues	Additional fare box revenue.	£22.1M

	Grant/Subsidy payments	Additional revenue would cover the extra operating costs.	£0
Monetised summary		£92.3M	
Monetary Impact Ratio		1.51	

Economy (Wider Economic Benefits)			
Sub-criterion	Item	Qualitative information	Quantitative information
Wider Economic Benefits	Agglomeration economies (WB1)	Not applicable.	Not applicable.
	Increased output in perfectly competitive markets (WB3)	Not applicable.	Not applicable.
	Wider benefits arising from improved labour supply (WB4)	Not applicable.	Not applicable.

Monetised summary		Not applicable.	
Monetary Impact Ratio		Not applicable.	
Economy (Economic Activity and Location Impacts)			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Economic Activity and Location Impacts	Local Economic Impacts	Improved connectivity to markets for businesses and enhanced access to employment and education opportunities for the local population. Key considerations in terms of rail freight include the provision of benefits to large-scale industry in the area, in particular Diageo operations. The addition of a rail freight link for the area may open up the type and scale of industry which can operate in the Levenmouth area potentially impacting on inward and external investment levels.	Qualitative assessment only.
	National Economic Impacts	Support to sustainable economic development and transition to a lower carbon economy. Transition to rail freight supportive of operations for key businesses within the local area and with national significance also.	Qualitative assessment only.

	Distributional Impacts	This option would likely provide the most benefit to those who can reach Leven town centre easiest. These individuals are more likely to already be benefitting from the transport services in the area, such as bus services on offer at Leven Bus Station. Access to employment opportunities within the wider Fife region and other parts of the wider SEStran city-region.	Qualitative assessment only.
Integration			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Transport Interchanges	Services & Ticketing	Benefits from direct access to the rail network, simplification of ticketing requirements compared to multiple modes, and improved infrastructure and information from new stations. Furthermore, inclusion of a station situated within walking distance of the existing Leven Bus Station would improve integration of bus and rail.	Hourly rail service introduced.
	Infrastructure & Information	New rail services and associated infrastructure developed in line with at least minimum design standards. Option complemented by wider measures to promoted an integrated transport network in the area.	Not applicable.

Land-use Transport Integration		The re-opening of the rail line is identified in the Mid-Fife LDP and land safeguarded. The line would complement access to future development sites within the area.	Not applicable.
Policy Integration		This option is aligned with transport policy from national to local level, particularly in terms of promoting sustainable mode use over private motorised vehicles, environmental and health considerations, and improving accessibility and inclusion via the availability of alternative modes to car use. This option also offers the potential for improving tourist access to/from Levenmouth supporting the Mid-Fife LDP aim to attract tourism to the area. There is also alignment with policies to transfer freight from road to rail.	Not applicable.
Accessibility & Social Inclusion			
Sub-criterion	**Item**	**Qualitative Information**	**Quantitative Information**
Community Accessibility	Public Transport Network Coverage	Diversification of public transport options to include direct rail link from Levenmouth to other destinations in Fife and the wider area as well as onward connections at other stations, in particular Kirkcaldy and Inverkeithing.	Windygates and Methil would see the largest benefit in public transport journey time benefits (accessed via walking) to employment sites and educational facilities. This is in line with the expected catchments, given the requirement for people to access the new rail services at either Cameron Bridge or Leven Rail Stations (i.e. no local routings, as with bus). The relatively small changes seen for Leven relate to the relatively long walk

			distance to the station for the majority the population in this area. No journey time improvements were shown for Buckhaven or Kennoway, again, in relation only to pure public transport and walk catchments, tested in order to inform the appraisal. Journey time Improvements are seen for Kirkcaldy, with 59% of the population seeing a up to 2 minutes improvement, and 14% seeing a 2 to 5 minute improvements from Windygates; these figures are 6% and 1%, and 5% and 9% for Methil and Leven respectively. Journey time improvements would be seen for Edinburgh Park and South Gyle in the order of 21% of the Windygates population seeing a 2 to 10 minute benefit, and 6% seeing a >10% benefit. Small improvements would also be seen from central Leven with 2% of the population seeing 5 to 10 minute benefits, and 4% seeing >10 minute benefits. For Central Edinburgh, Windygates would see the larges improvement with 7% of the population seeing a 5 to 10 minute improvement, and 20% seeing a >10 minute improvement. For access to Dundee, only Windygates shows and improvement, with 14% of the population seeing up to 2 minutes improvements in journey time. Access to educational facilities would see the largest benefit in Methil and Windygates and Leven. In terms of colleges within Fife, access to the Fife College St Brycedale Campus would see

			journey time improvement of up to 5 minutes for 7% and 29% of the population of Methil and Leven respectively. 14% of the Windygates population would also see an improvement of up to 2 minutes for both the Fife College St Brycedale Campus, in Kirkcaldy, and the Halbeath Campus in Dunfermline. Access to the Dundee School of Nursing and Midwifery (Kirkcaldy Campus) would see journey time improvement of up to 5 minutes for 25%, and 5 to 10 minutes for 16%, of the Methil population. No improvement would be seen for pure public transport and walking catchment access to healthcare facilities at Victoria Hospital.
	Access to Other Local Services	While this option does not directly improve walking and cycling connections, it helps facilitate car independent access to services and facilities.	Not applicable.
Comparative Accessibility	Distribution/Spatial Impacts by Social Group	This option helps reduce reliance on the car as a mode of transport. Higher cost of rail travel a potential barrier for some, especially areas with particularly high levels of deprivation in the study area.	See above accessibility analysis.
	Distribution/Spatial Impacts by Area	No direct bearing on policies relating to retaining and improving the vitality of rural communities.	See above accessibility analysis.

Strategic Environmental Assessment (SEA)		
Summary of SEA outcome where appropriate	Not applicable.	
Cost to Public Sector		
Item	**Qualitative information**	**Quantitative information**
Public Sector Investment Costs	Investment costs to reinstate the rail line for passenger and freight use.	-£78.4M (2010, undiscounted) / -£65.0M (2010, discounted)
Public Sector Operating & Maintenance Costs	Maintenance savings resulting from less wear and tear on the road network.	£8.1M
Grant/Subsidy Payments	No subsidy requirements.	£0
Revenues	Parking revenue loss from modal shift.	-£4.0M
Taxation impacts	Loss in indirect taxation as a result of modal shift from road to rail.	-£24.1M
Cost to Funding Agency	N/A	N/A

Monetised Summary	
Present Value of Transport Benefits	=7.4+0+4.1+92.3+(-24.1) = £79.8M*
Present Value of Cost to Government	=(-65)+(8.1)+0+(-4) = -£61.0M*
Net Present Value	£18.8M*
Benefit-Cost to Government Ratio	1.31
Benefit-Cost to Government Ratio (including WEBs)	N/A
Benefit-Cost to Funding Agency Ratio	N/A

*Total value correct. Small difference due to rounding.

APPENDIX L - Transport Economic Efficiency (TEE) Tables

60-year benefits	Option A (2017)					Price base	RPI Adjustment factor	2010 factor prices	Market Prices (2010 Prices & Values)
	Car Urban/ Congested	Car Rural/ Uncongested	HGVs	Total					
Change in Vehicle Kms	-56.7	-71.1	0.0	-127.8	M Veh Kms				
Congestion	3.0	1.2	0.0	4.1	£M	2015	0.861	3.0	3.6
Accidents	0.8	0.3	0.0	1.1	£M	2015	0.861	0.8	0.9
Greenhouse Gases	0.1	0.2	0.0	0.3	£M	2015	0.861	0.2	0.3
Total Non-user Benefits	**3.9**	**1.6**	**-**	**5.5**				**4.0**	**4.8**
User benefits - Time				23.7	£M	2013	0.894	21.2	25.2
User benefits - Money				3.0	£M	2013	0.894	2.7	3.2
Total User Benefits								**23.9**	**28.4**
Total PT Revenue				4.3	£M	2013	0.894	3.8	4.6
Operating Costs				-7.0	£M	2010	1.000	-7.0	-8.4
Grant Subsidy from Government				3.2	£M	2010	1.000	3.2	3.8
Total Operator Benefits								**0.0**	**0.0**
Indirect taxation impacts	-0.7	-1.0	0.0	-1.7	£M	2015	0.861	-1.2	-1.4
Total Benefits (PVB)							**(a)**	**26.7**	**31.7**
Costs to Government				Total					
PVC - Capital Cost				0.0	£M	2010	1.000	0.0	0.0
Bus purchase and renewal				1.0	£M	2010	1.000	1.0	1.2
Grant Subsidy to PT Operator				3.2	£M	2010	1.000	3.2	3.8
Infrastructure	0.0	0.0	0.0	-0.1	£M	2015	0.861	-0.1	-0.1
Parking Revenue_Total				1.1	£M	2013	0.894	1.0	1.1
Total Cost to Government (PVC)							**(b)**	**5.1**	**6.1**
NPV (PVB - PVC)					£M		**(a - b)**	**21.5**	**25.6**
BCR (PVB / PVC)								**5.19**	**5.19**

SYSTRA

60-year benefits	Option B (2022)					Price base	RPI Adjustment factor	2010 factor prices	Market Prices (2010 Prices & Values)
	Car Urban/ Congested	Car Rural/ Uncongested	HGVs	Total					
Change in Vehicle Kms	-206.2	-149.8	-413.8	-769.8	M Veh Kms				
Congestion	9.6	2.1	29.6	41.3	£M	2015	0.861	29.8	35.5
Accidents	2.6	0.5	1.7	4.8	£M	2015	0.861	3.4	4.1
Greenhouse Gases	0.4	0.3	7.9	8.6	£M	2015	0.861	6.2	7.4
Total Non-user Benefits	**12.7**	**2.9**	**39.1**	**54.6**				**39.5**	**47.0**
User benefits - Time				46.6	£M	2013	0.894	41.6	49.5
User benefits - Money				-2.8	£M	2013	0.894	-2.5	-3.0
Total User Benefits								**39.1**	**46.6**
Total PT Revenue				20.7	£M	2013	0.894	18.5	22.1
Operating Costs				-9.9	£M	2010	1.000	-9.9	-11.8
Grant Subsidy from Government				0.0	£M	2010	1.000	0.0	0.0
Total Operator Benefits								**8.6**	**10.2**
Indirect taxation impacts	-2.2	-1.6	-24.2	-28.0	£M	2015	0.861	-20.2	-24.1
Total Benefits (PVB)							**(a)**	**67.0**	**79.8**
Costs to Government				Total					
PVC - Capital Cost				54.6	£M	2010	1.000	54.6	65.0
Bus purchase and renewal				0.0	£M	2010	1.000	0.0	0.0
Grant Subsidy to PT Operator				0.0	£M	2010	1.000	0.0	0.0
Infrastructure	-0.1	-0.1	-9.2	-9.4	£M	2015	0.861	-6.8	-8.1
Parking Revenue_Total				3.8	£M	2013	0.894	3.4	4.0
Total Cost to Government (PVC)							**(b)**	**51.2**	**61.0**
NPV (PVB - PVC)					£M		**(a - b)**	**15.8**	**18.8**
BCR (PVB / PVC)								**1.31**	**1.31**

SYSTRA

60-year benefits	Combination of Option A (2017) and Option B (from 2022 onwards) @ -£1 Fare Re-balancing					Price base	RPI Adjustment factor	2010 factor prices	Market Prices (2010 Prices & Values)
	Car Urban/ Congested	Car Rural/ Uncongested	HGVs	Total					
Change in Vehicle Kms	-215.1	-184.0	-413.8	-813.0	M Veh Kms				
Congestion	10.9	2.9	30.6	44.4	£M	2015	0.861	32.1	38.2
Accidents	3.0	0.6	1.8	5.4	£M	2015	0.861	3.9	4.7
Greenhouse Gases	0.5	0.5	8.5	9.4	£M	2015	0.861	6.8	8.1
Total Non-user Benefits	**14.3**	**4.0**	**41.0**	**59.2**				**42.8**	**51.0**
User benefits - Time				61.8	£M	2013	0.894	55.3	65.8
User benefits - Money				0.5	£M	2013	0.894	0.5	0.6
Total User Benefits								**55.7**	**66.3**
Total PT Revenue				21.5	£M	2013	0.894	19.2	22.9
Operating Costs				-17.7	£M	2010	1.000	-17.7	-21.0
Grant Subsidy from Government				0.0	£M	2010	1.000	0.0	0.0
Total Operator Benefits								**1.6**	**1.9**
Indirect taxation impacts	-2.5	-2.3	-27.0	-31.8	£M	2015	0.861	-23.0	-27.3
Total Benefits (PVB)							**(a)**	**77.2**	**91.8**
Costs to Government				Total					
PVC - Capital Cost				54.6	£M	2010	1.000	54.6	65.0
Bus purchase and renewal				1.0	£M	2010	1.000	1.0	1.2
Grant Subsidy to PT Operator				0.0	£M	2010	1.000	0.0	0.0
Infrastructure	-0.1	-0.1	-10.0	-10.3	£M	2015	0.861	-7.4	-8.8
Parking Revenue_Total				4.2	£M	2013	0.894	3.8	4.5
Total Cost to Government (PVC)							**(b)**	**52.0**	**61.9**
NPV (PVB - PVC)					£M		**(a - b)**	**25.2**	**29.9**
BCR (PVB / PVC)								**1.48**	**1.48**

SYSTRA

APPENDIX M - Option B Investment Cost Breakdown

OPTION B Investment Cost Breakdown (2015 Prices)

Cost	**Total (£K)**
Site clearance	£559
Earthworks	£1,298
Permanent way	£7,521
Fencing	£780
Structures	£10,490
Junction Costs	£2,781
Signalling	£1,511
Stations	£8,451
Roadworks	£290
Land acquisition	£745
Management and design	£6,120
Possessions and Compensation	£1,675
Sub-Total Cost	£42,221
Risks	£7,726
Sub-Total Cost (including risk)	£49,947
Plus OB (50% sub-total inclusive of risk)	£74,920
Plus Network Rail Design Cost (12.5% sub-total inclusive of risk & OB))	£84,286
Rail inflation above base inflation to 2021 (1.3% per annum)	**£91,077**

APPENDIX N - Levenmouth Railway Economic Vision

The Levenmouth Railway – Economic Vision

1. Overview

The Levenmouth Railway represents a once in a generation opportunity to deliver lasting economic change to deliver jobs, skills and opportunity to one of the most deprived communities in Fife.

Historically a community built on heavy industry and an early tourist destination linking workers across Scotland with recreation on Fife's east coast, the town has suffered economic stagnation and decline since the removal of the railway link in 1969.

Despite major investment from businesses such as Diageo, whose bottling plant now exports the equivalent of 32,500 lorries' volume of product from Leven annually, and employs over 1,500 people, access to jobs locally and regionally remains a key barrier to growth. The area remains within the top 20% of most deprived communities in Scotland, with several areas within the top 5% most deprived, as set out in the most recent SIMD data.

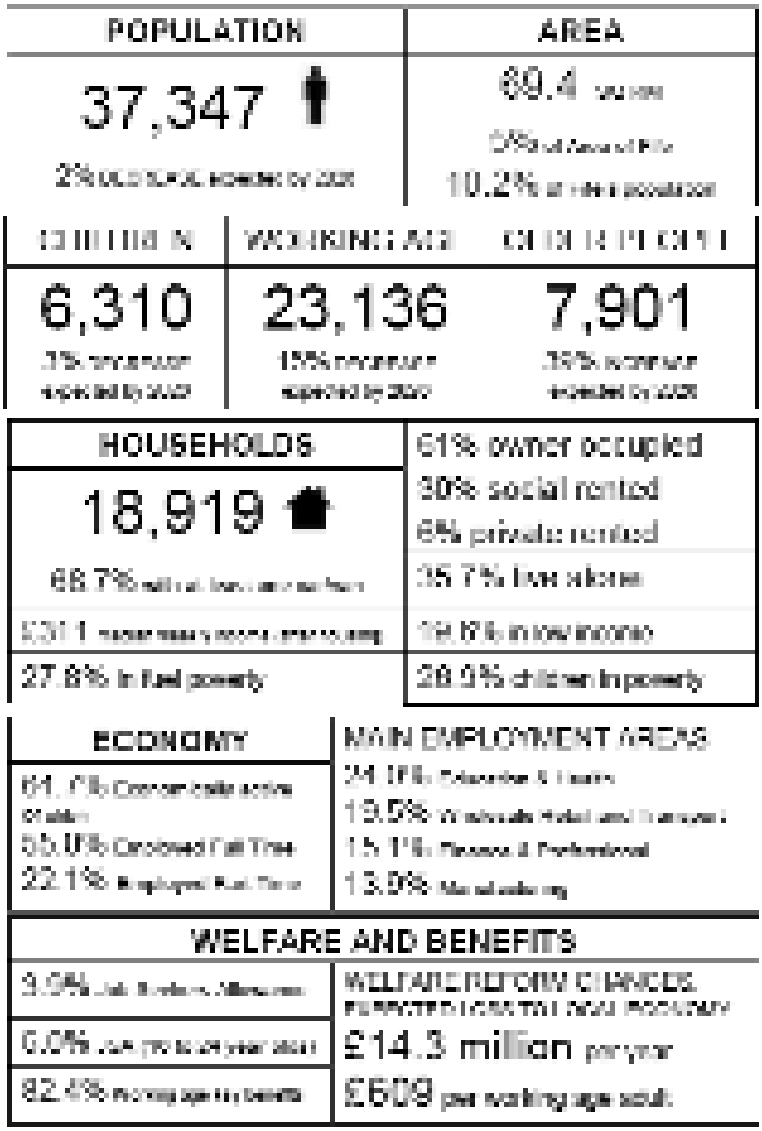
Fife Council has been working with the Levenmouth Rail Campaign to progress the case for the recommissioning of five miles (8km) of railway linking Leven to the Fife Circle network, enabling passenger and freight transport by rail.

The purpose of this non-technical economic vision is to demonstrate the opportunity, in economic and investment terms, of the reopening of the line to meet the following objectives:

- Create opportunities for investment in an area underserved by major employment opportunities.
- Secure ready access to Edinburgh's growing labour market.
- Promote inclusive growth by providing access to opportunities for learning, employment and key services in an area where nearly one-third of the population has no access to private transport
- Increase access to Levenmouth from Dundee, central Fife, the East Neuk and Edinburgh for tourism
- Create a lower carbon transport infrastructure through the reduction of freight and car journeys into and out of Levenmouth and central Fife.

2. Demographics of the Levenmouth Area

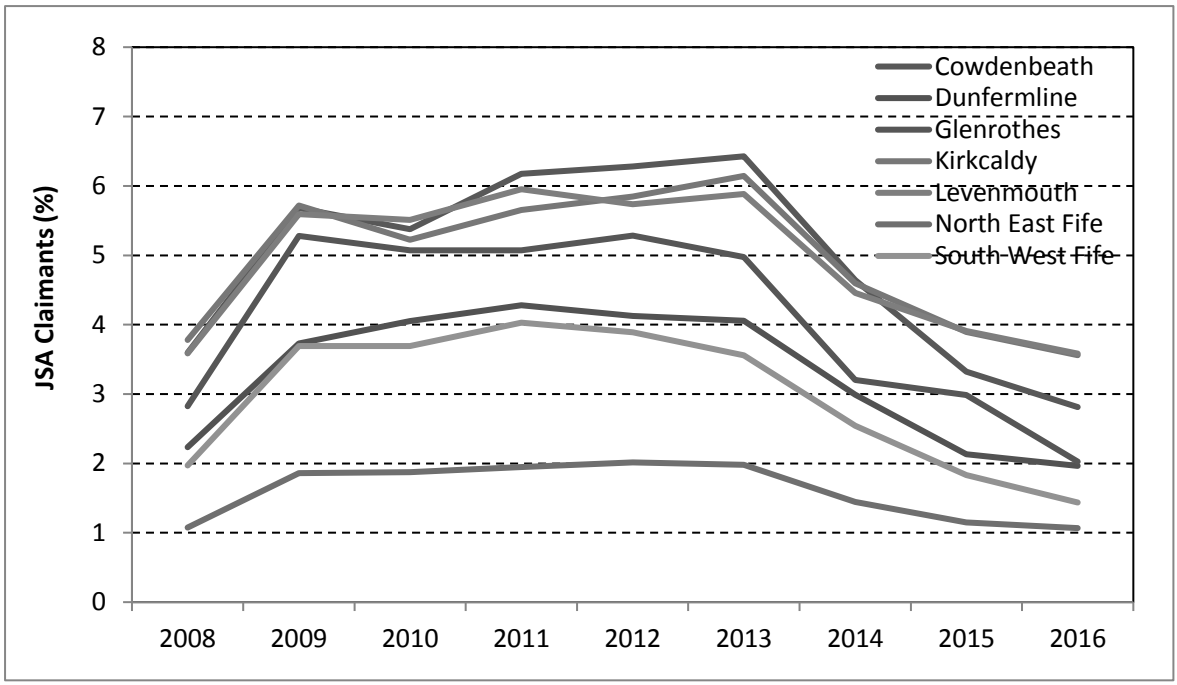
Levenmouth's population was estimated at 37,347 in 2015. Between 2015 and 2025, the population is projected to decrease by 2 per cent. This compares with a projected population growth of 1.7% for Fife as a whole. Levenmouth's population will continue to age with the share of population aged 75+ expected to increase by 30% by 2025. A changing older population is a challenge as identified by the Levenmouth Local Strategic Assessment 2016.



Levenmouth persistently has one of the highest proportions of working age people claiming Jobseekers Allowance (JSA) in Fife. The JSA rate peaked at 6% in 2011 (compared to the Fife and Scottish averages of 4.6% and 4.1% respectively), but in line with other areas Levenmouth's JSA claimant rate has slowly declined to an average of 3.9% in 2016, 1.7% higher than the Scottish average. This decline is, however, slower and less steep a decline than any other part of Fife, as set out in *Figure One*, below.

Youth unemployment is persistent. In Levenmouth, the JSA rate amongst young people aged 16-24 year old averaged 5% in 2016, over one percentage point higher than the population as a whole.

Figure One: Jobseekers Allowance Claimant Rate by Fife Area Committee area.



The Levenmouth area suffers greater deprivation than most other areas within Fife and Scotland. The area was recorded as being within the most deprived quintile of communities by the Scottish Index of Multiple Deprivation (2016).

Heather's Story

Heather Gardner from Lower Methil is fighting cancer but there is one thing that could make her life much easier - a rail link from Leven.

Heather has to attend appointments at both the Royal Infirmary and the Western General hospitals in Edinburgh and this means a bus to Kirkcaldy then a train to Edinburgh.

As she is registered disabled and walks with the aid of a stick, even the distance between the bus stop and Kirkcaldy train station is an obstacle.

Heather says "I often have a heavy suitcase when going for my treatment and so the walking for the bus and train can really drain me as well as the time it takes for the whole trip." she explained. "In my state of health that's a big ask."

Matters are even more difficult when she wants to visit her daughter and grandchildren in Ballingry.

"I need four buses from my home to hers and that takes a lot out of me as well as meaning a journey of over two hours. If we had the train back at Leven life would so much easier. I'd be able to get to my medical appointments much easier and see my family more "

For the Leven area, this worsens to within the top 5% of deprivation by the same measure, as highlighted in *Figure Two*, below. Three areas – Buckhaven South, Methil Memorial Park and Lower Methil, despite recent investment (see section 3) fall into this SIMD level. Data analysis indicates that Buckhaven South continues to worsen in terms of deprivation decline.

Figure Two: SIMD top 5% most deprived areas within Levenmouth

Levenmouth accounts for 7% of Fife's total employment, a total of 8,800 jobs. Whilst largely a service-based economy (see *Figure Three*, below), 31 per cent of all employment in the area is accounted for by three sectors – manufacturing, tourism and energy. Whilst all three are – within a wider Fife context – growth sectors, Levenmouth has a lower share of jobs in tourism (5.7%) than the Fife (7.4%) and Scottish (7.7%) averages. Similarly, energy (including renewables) – a major focus of recent investment in the area – is still significantly lower than the Scottish average (2.8%). In part, this reflects the recent downturn in the oil and gas sector, and demonstrates the effect of this on slowed growth in central Fife's engineering and manufacturing economies over recent years. Manufacturing, however, remains strong in the area, largely accounted for by major investment from Diageo in the bottling facility at Leven. Diageo has invested almost £400m in its Fife facilities in the last 8 years. This includes the £105m expansion of Cameronbridge distillery in 2013, and £86m investment at the bottling facility at Banbeath in 2012. Diageo has also invested in warehouses at Cluny in Fife, making Fife the major centre of operations in Scotland.

Kirsteen's Story

Kirsteen held a job in central Edinburgh from January 2016 until May 2016. However I had to give up this job as she couldn't make the transport arrangements work.

Although the work itself involved only a standard 37.5 hour week, public transport connections meant over 60 hours per week away, meaning she could not secure childcare arrangements.

Kirsteen is currently looking at new positions as a legal trainee and if Leven or Methil had a train station, it would open up many more options for work as most of these positions are found in Edinburgh, Glasgow and Aberdeen.

The economy has a strong reliance on public sector employment, which is at risk of diminishing as new technologies and approaches are introduced, and budget reductions across the sector introduced.

Figure 3: Top Three Employment Sectors in Levenmouth

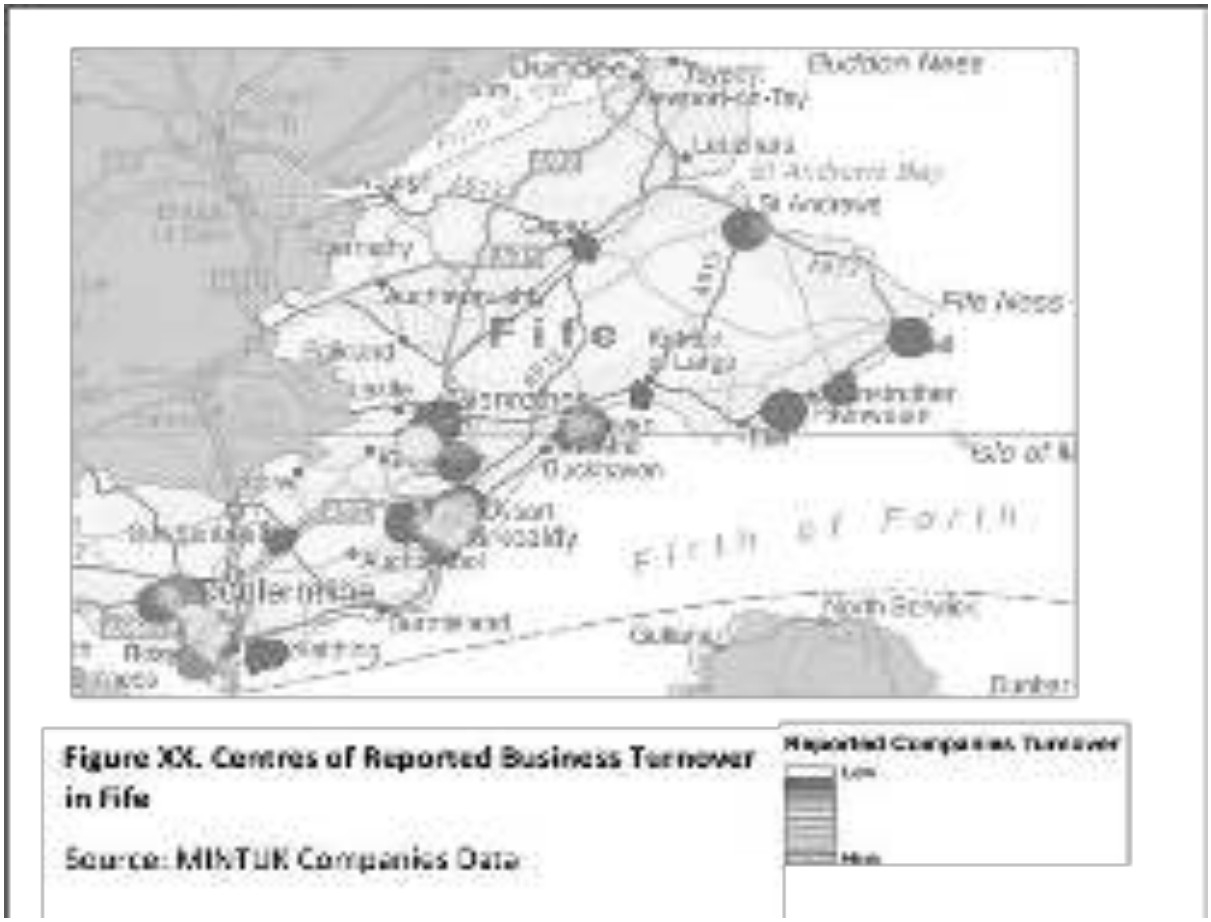
	Levenmouth	Fife	Scotland
Public sector	32% (3,800)	34%	31%
Wholesale and retail	20% (2,300)	17%	15%
Manufacturing	16% (1,900)	12%	7%

Source: BRES 2015

The Levenmouth area is also under-represented in business growth, with the lowest business birth rate of any area in Fife (64 in 2014/15, representing 8% of the total business start-ups in the Kingdom). 13% of employment land is immediately available in the Levenmouth area, however – and positively –a high occupancy rate of commercial premises is evident. Levenmouth's Strategic Development Area provides an additional 33.6 hectares of employment land, bringing the total allocation to 45.6 hectares.

When compared to other areas of Fife in terms of business turnover, Levenmouth has an average to poor reported company turnover. This is further diminished when major employers are removed from figures (see *Figure Four*)

Figure Four: Business Turnover in Fife



3. Travel Constraints and Opportunities

Levenmouth's position without a station presents key challenges to delivering strong, fair and inclusive growth.

32 buses per day run to Edinburgh from the area. However, these do not provide direct access to planned and growing employment areas, such as Edinburgh's western expansion, Dundee Waterfront, Dunfermline and Forth bridgehead and Edinburgh Airport.

Journey times are lengthy and variable. For example, a direct bus from Leven to Edinburgh takes approximately 2 hours for a distance of 35 miles. A journey to Dundee requires at least one change, and takes between 1 hour 30 minutes and 2 hours, for a distance of 23 miles.

Those working non-standard hours and shifts have limited choices for current public transport. Those unemployed residents seeking work outside the area cannot receive travel assistance for journeys over 1 hour and 45 minutes, debarring access to major employers in Dunfermline and Edinburgh.

Connectivity to Levenmouth remains amongst the poorest in Fife for employment connectivity, as shown in *Figure Five*, below:

Figure Five, Employment Connectivity

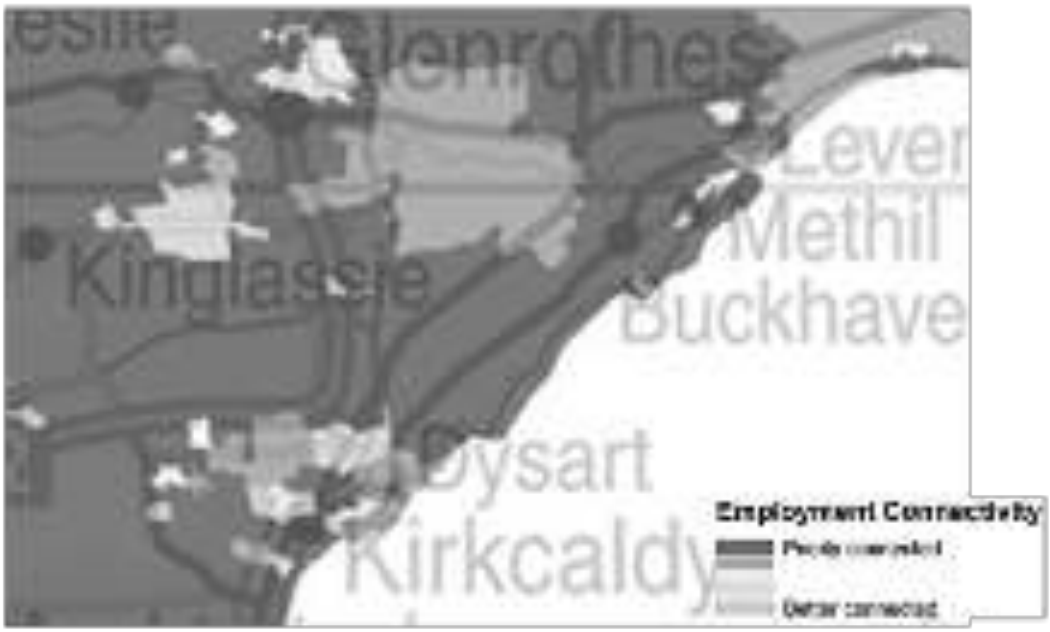


Figure XX. Employment Connectivity

Based on average turnover and distance. The figure shows the proximity to individual businesses, adjusted for turnover and the population of datazones. The bottom map shows the key areas of central Fife

The nearest current stations at Markinch, Kirkcaldy and Glenrothes-with-Thornton are between 15 and 25 minutes' drive time from Levenmouth, and assume access to a car. 31

per cent of households in Levenmouth have no access to a car, restricting opportunities for travelling outside the immediate area for further and higher education, work and leisure.

A new railway would provide direct access to employment, with reliable, consistent travel times including:

- 65 minutes to Edinburgh Waverley
- 60 minutes to Edinburgh Haymarket
- 55 minutes to Edinburgh Gateway (opened December 2016), providing direct access to Edinburgh Airport and onward connection to Edinburgh Park and South Gyle, and the Transport for Lothian tram network.

This connectivity would provide access to growing employment opportunities at the Airport, major employers such as Royal Bank of Scotland and onward connections to opportunities across Scotland.

Alistair's Story

Alistair has been unemployed for some time and has found it difficult to access work due to a speech impediment. After being referred to an employment and job-training agency locally, Alistair sought work in the locality, as he was finding difficuly in finding a job because of public transport issues.

Alistair had previously been forced to give up a job in Glenrothes last year due to unexpected changes to bus timetables and timings which did not align with his hours of work.

Since then, more bus timetable changes have made other places of potential employment places - for example the Central Fife Retail Park on the north side of Kirkcaldy - much harder to get to.

Alistair says "Service number 95 is the only bus via my home, yet this was retimed twelve minutes later last November and I miss the direct X27 Leven - Glasgow bus which runs past the Retail Park, which previously let me make the journey smoothly. So much for the bus as an alternative."

4. Opportunities for Investment

The reopening of the Levenmouth railway will accelerate Fife's ambition to be the Best Place to do Business in Scotland.

In addition to major investment from the private sector, including £400m in Diageo's Fife facilities, principally within the Leven area, a number of key initiatives have been developed in Levenmouth to support business growth, greater educational outcomes and pride of place, including:

- The opening of Levenmouth Community Campus in Autumn 2016 – a co-located primary, secondary and tertiary education facility, combing school and college education. The 2,500 square ft., STEM-led college facility provides real working

environments, enabling school and college learners to develop their enterprise and business skills with real customers, using the most up to date learning tools.

- A £1.5 million investment in Leven town centre, to create a new civic hub. Working with the community through a design charrette process, the project will deliver a new multi-purpose civic space, and improve the connectivity of the town centre and edge of centre retail, providing an incentive for tourism, high quality retail and events.
- A centre for global innovation and research. ORE Catapult, the largest wind turbine in Europe, provides a focal point for universities across Scotland, and the energy industry, to test, model and develop new technologies, with virtual and live training.
- Nearby, the Hydrogen Office and Fife Renewable Innovation Centre, aprt of Enegry Park Fife, provide a hub for the delivery and development of new, low carbon technologies and energy storage. Energy Park Fife provides 54 hectares of employment land, with a focus on renewable energy manufacture and development.
- The Fife Low Carbon Investment Park provides 16 hectares of serviced investment land, focused on supply chain opportunities.
- The Levenmouth Community Energy project is nearing completion, providing a facility for making hydrogen to supply vehicle fleets, including new refuse vehicles manufactured in Fife – believed to be the first of their kind in the world.
- Access to an energy supply chain which has the expertise and marine capability to play a major role in the growth sector of decommissioning, across the decom process. The port has experience of managing large structures and complex delivery.

The Investor's Story: The Hydrogen Office

The Hydrogen Office was attracted to Fife for a variety of reasons. One of the main attractions was the academic expertise of the University of St Andrews in Fife who has a first class Chemistry department who are world experts in fuel cell technology.

The land availability in the right location, within the greater boundaries of Energy Park Fife, meant it had a different but relevant offering in the area. The encouraging support and "can do" attitude from both Scottish Enterprise and Invest in Fife made the decision to locate easier. Locating to Energy Park Fife meant they were eligible for ERDF funding.

Derek Mitchell, the Hydrogen Office Project Manager, notes the importance of place and "the discussions with the numerous teams within the Council that have had to be involved due to the complexity of developing the first project of its kind to deploy renewable, hydrogen and fuel cell technologies in a urban setting in Scotland"

Some of the other companies which have invested in Levenmouth already include:

- Diageo
- Sainsbury's
- Silberline
- Toshiba
- JD Timber
- BIFab
- The Crown Estate
- File College

5. **Opportunities for Freight**

The Levenmouth railway would see an opportunity to create an efficient and effective freight link to serve incoming and outgoing markets. Key benefits of a freight option include:

- The security of supply and distribution which does not rely on constricted routes such as the Forth Bridge.
- Creating a lower carbon transport infrastructure by diverting at least 32,500 lorry movements annually.
- Deliver a lower fuel cost distribution route, protecting against increasing road fuel/oil prices.
- Increased local employment within a rail freight facility
- A direct rail link to ports, including Grangemouth (and potentially Rosyth), and wider UK and European markets.

6. Opportunities for Tourism

Leven has historically been a place of leisure, as well as a hub for industry. Once a thriving resort for workers across Scotland, today the area is reshaping its future as a centre for tourism.

Tourism in Fife is worth £313m annually, supports 9,500 full time jobs and contributes around 9% to the Fife economy as a whole[1]. The tourism sector in Fife has seen year-on-year growth in expenditure since the onset of the economic recession whilst tourism expenditure in other parts of Scotland has shown decline. Success in Fife's tourism sector has been assisted by the strong focus on business collaboration. The introduction of Local Tourism Associations (LTA) has had a positive impact on local areas as tourism businesses have increasingly collaborated locally and with other areas across Fife to maximise tourism opportunities.

Fife's unique coast and outdoor space has been voted No.1 for outdoor recreation for eight consecutive years, attracting millions of visitors to its blue flag beaches and to the longest coastal walk in Scotland. This coupled with the myriad of fishing villages come together to create an unrivalled coastal experience and one which can be further developed, for example through the development of the Fife Pilgrim Way to act a key driver for tourism growth in Fife.

Fife needs to grow the number of jobs within the tourism sector; the target set for the Fife Tourism Strategy 2014-2024 is to increase tourism employment from 9,600 jobs to 10,700 by 2024; an increase of 900 jobs. This is in addition to jobs in hospitality and tourism, bith seasonal and permanent, being made available to residents of Levenmouth in Edinburgh, Dundee (particularly with the growth of Dundee Waterfront and the forthcoming V&A Dundee) and beyond, if the Levenmouth rail line is reopened.

Tourism jobs often depend on workers' ability to work non-standard hours. Current bus provision therefore inhibits access to these roles.

[1] Source: Scottish Tourism Economic Activity Monitor 2012.

The Pentlands' Story

The Pentlands from Buckhaven planned an outing for their family, two adults and four young children, to Edinburgh Zoo this summer. Like 31% of Levenmouth households, they have no car and did not want to face a two hour bus journey.

That trip never took place. They worked out that, although the family rail ticket return to Haymarket were reasonably affordable, by the time they had paid for bus fares to Kirkcaldy on top of that, the trip was becoming too expensive. Add to that the extra time waiting on bus then train connections in both directions, it would have taken too long.Eventually, a relative arranged to drive them to the zoo.

The Pentlands wonder why families from Levenmouth, a mere one hour drive from Edinburgh by car, should be deprived of fast and affordable public transport to Edinburgh?

Fife College

Our Ref: [illegible]

[illegible] December 2019

For the attention of Transport Scotland

Levenmouth Sustainable Transport Study – STAG Report

The Levenmouth Railway represents a once in a generation opportunity [illegible]

[illegible] the 5% most deprived places in Scotland.

With the railway this can change. [illegible]

Fife College therefore fully supports the Levenmouth Sustainable Transport Study – STAG Report, and considers that the Levenmouth Railway should be [illegible] by the Scottish Government.

Yours faithfully

Carol Scott
Vice Principal, Organisational Development and Change

Area 3D (Bridge), Victoria Quay, Edinburgh, EH6 6QQ, Tel: 0131 524 5150

Chairperson: Cllr Lesley Hinds Partnership Director: George Eckton

FAO Transport Scotland 8th December 2016

Levenmouth Sustainable Transport Study – STAG Report

The potential to deliver a Sustainable Transport route to Levenmouth represents a once in a generation opportunity to deliver lasting economic change to deliver jobs, skills and opportunity to one of the most deprived communities in Fife. The project represents an opportunity to deliver a step change in supporting investment, and access to jobs locally and in major growth areas, including Dundee and Edinburgh, which remain beyond reach for people without ready access to transport.

Levenmouth suffers greater deprivation than most other areas within Fife and Scotland. The area was recorded as being within the most deprived quintile of communities by the Scottish Index of Multiple Deprivation (2016). In some parts of the settlement, communities are within the 5% most deprived places in Scotland.

With a sustainable transport link, this can change. The area has already seen over £300m of investment by businesses in the last few years, and we support the delivery of an inclusive growth agenda for central Fife. The area has also seen the opening of a brand new campus combing school and college provision (alongside university courses). These young people, the business people of the future, should not have to choose between access to employment opportunities and remaining part of the Levenmouth community.

One of the key messages of recent reports form RSA, OECD and RTPI has been the need to invest in social as well as physical infrastructure. Specifically in a transport context, this debate focussed on the need to prioritise connecting people to economic opportunities, through better skills planning and provision, through the provision of better local transport services as much if not more so that traditional physical road network infrastructure improvements. The report clearly highlights that simply building transport links is not enough to change patterns of economic mobility and cultures.

For SESTRAN transport connectivity is important for realising the benefits of agglomeration, its effectiveness is predicated on connecting high-skilled workers with high-skilled jobs and investment to drive up productivity and growth. However, the reports highlights that there are numerous communities across the UK within a few miles of such improvements to transport opportunities that do not always benefit.

Whilst some communities and people will clearly benefit from places becoming, in effect, commuter towns for bigger city centre focussed labour markets, other people and places typically low skilled or economically inactive, risk being further excluded.

Therefore, transport services and accessibility can be a preventative measure as part of a wider integrated economic strategy if actions go beyond traditional capital-based transport investment. This type of approach for this study would enable a focus on the elusive business of prevention and early intervention, focussing on genuinely geographically inclusive place-based strategies tailored to the needs, ambitions and nuances of places' economic geography.

SESTRAN therefore fully supports the Levenmouth Sustainable Transport Study – STAG Report, and considers that a sustainable transport link should be considered a number one priority for future investment by the Scottish Government.

Yours faithfully

George Eckton
Partnership Director

University of St Andrews | FOUNDED 1413

Derek A Watson, FCCA
Quaestor and Factor

2 December 2016

For the attention of Transport Scotland

Levenmouth Sustainable Transport Study – STAG Report

The Levenmouth Railway represents a once in a generation opportunity to deliver lasting economic change to Levenmouth while also providing access to one of the most deprived communities in Fife. These five miles of railway represent an opportunity to deliver a step change in supporting investment, and access to the University and to major growth areas, including Dundee and Edinburgh, which remain beyond reach for people without ready access to transport.

Levenmouth suffers greater deprivation than most other areas within Fife and Scotland. The area was recorded as being within the most deprived quintile of communities by the Scottish Index of Multiple Deprivation (2016). In some parts of the settlement, communities are within the 5% most deprived places in Scotland.

With the railway, this can change. The area has already seen over £300m of investment by businesses in the last few years, and we support the delivery of an inclusive growth agenda for central Fife. The area has also seen the opening of a brand new campus combining school and college provision alongside university courses. These young people, the business people of the future, should not have to choose between access to employment opportunities and remaining part of the Levenmouth community.

The University of St Andrews therefore fully supports the Levenmouth Sustainable Transport Study – STAG Report and considers that the Levenmouth Railway should be considered a number one priority for future investment by the Scottish Government.

Yours faithfully,

Derek A Watson
Quaestor & Factor

University of St Andrews, College Gate, North Street, St Andrews, Fife, KY16 9AJ, Scotland
Telephone: [illegible] Fax: [illegible] Email: quaestor@st-andrews.ac.uk

For the attention of Transport Scotland

e-mail: info@fifevoluntaryaction.org.uk
web: www.fifevoluntaryaction.org.uk

02 December 2016

Dear Sir/Madam,

Levenmouth Sustainable Transport Study – STAG Report

I write in relation to the submission of the final STAG Report for the re-opening of the existing Levenmouth Railway.

Fife Voluntary Action (FVA) is an independent charity which supports and represents more than 3,500 community groups, charities and social enterprises, as well as over 80,000 volunteers in the Fife Council area. FVA, like many third sector organisations, has offices, outreach points, staff, volunteers and clients in the Levenmouth area. Our sector supports thousands of individuals and families every year in Levenmouth, often vulnerable and disadvantaged citizens who face considerable challenges of poverty, health inequality and lack of access to opportunities such as learning, health services, recreation and employment.

We are of the firm belief that the reopening of this rail link would be transformational for the local area and its citizens.

Fife is an area of strong partnership working and this rail link would support the significant work of the Community Planning Partnership (of which FVA is a member) and others to improve opportunities for local people. It aligns with many of our strategies and the recommendations of the independent Fairer Fife Commission, which all partners have fully endorsed. We are committed to tackling established trends of lack of access and opportunity which result in poor outcomes. Partnership working is essential in doing so and we seek the support of Transport Scotland and Scottish Government to help by reopening this rail link.

The transformation and impact achieved by the new Borders rail link serves as inspiration and indication of the economic benefit for local people, communities and businesses.

We understand that the level of investment required is significant and budgets are under pressure but this part of Fife has a strong evidence base for justifying, indeed requiring, such an investment. It features in some of the worst indices of deprivation by the Scottish Government's own measures. These five miles of railway represent an opportunity to deliver a step change in supporting investment, and access to jobs locally and in major growth areas, including Dundee and Edinburgh, which remain beyond reach for people without ready access to transport.

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FVA has attended and encouraged attendance at many of the community engagement activities undertaken in relation to the Levenmouth Rail Campaign, and have been impressed by the significant amount of work undertaken to evidence the need for this investment in one of Fife's most deprived areas. We believe it is a compelling case that cannot be ignored.

Fife Voluntary Action fully supports the Levenmouth Sustainable Transport Study – STAG Report, and considers that the Levenmouth Railway should be considered a number one priority for future investment by the Scottish Government.

Yours sincerely,

Kenny Murphy
Chief Executive

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Scottish Enterprise

FAO [illegible] Transport Scotland

2 December 2018

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The Levenmouth railway represents a once in a generation opportunity to deliver transformational economic change to [illegible] one of the most deprived communities in Fife. The return of the railway represents an opportunity to deliver a step change in supporting [illegible] and access to Fife locally and to major growth areas, including Dundee and Edinburgh, which remain beyond reach for people without ready access to transport.

Levenmouth has one of the greatest concentrations of [illegible] areas within Fife and Scotland. The area was identified as being within the most deprived [illegible] communities by the Scottish Index of Multiple Deprivation (2016). In some parts of the settlement communities are within the 5% most deprived places in Scotland.

With the railway, this can change. The area has already seen over £200m of investment by businesses in the last few years, and we support the delivery of an inclusive growth agenda for central Fife. The area has also seen the opening of a brand new campus combining school and college provision [illegible]. These young people, the business people of the future, should not have to choose between access to employment opportunities and remaining part of the Levenmouth community.

Scottish Enterprise therefore fully supports the Levenmouth Sustainable Transport Study – STAG Report, and considers that the Levenmouth railway should be considered a candidate for priority for future investment by the Scottish Government.

Yours faithfully

DANNY CUSICK
Senior Director, Food & Drink, Tourism & Textiles

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[illegible]