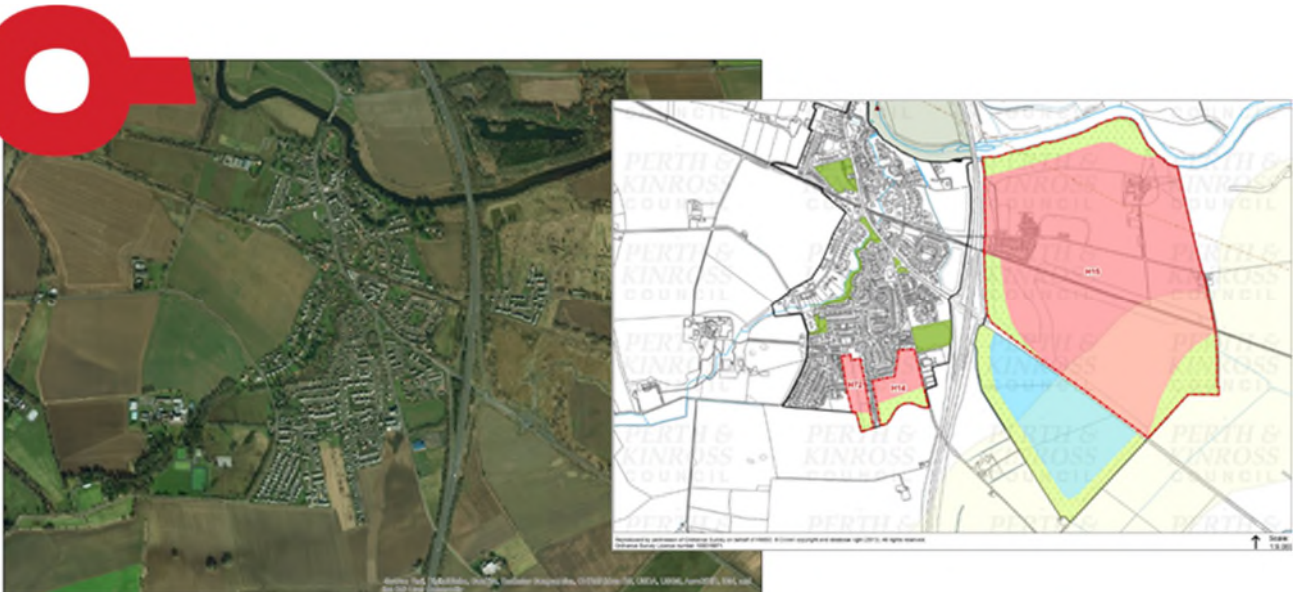


## PRELIMINARY OPTIONS APPRAISAL



# BRIDGE OF EARN TRANSPORT APPRAISAL

## PRELIMINARY OPTIONS APPRAISAL

### IDENTIFICATION TABLE

<b>Client/Project owner</b>	Tactran
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<b>Study</b>	Preliminary Options Appraisal
<b>Type of document</b>	STAG Report
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## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>5</b>
<b>1. INTRODUCTION</b>	<b>9</b>
1.1 BACKGROUND	9
1.2 INITIAL APPRAISAL: CASE FOR CHANGE	10
<b>2. SUMMARY OF OPTIONS</b>	<b>14</b>
2.1 OVERVIEW	14
2.2 IMPACT OF COVID-19 RESTRICTIONS	16
<b>3. METHODOLOGY</b>	<b>18</b>
3.1 SCOTTISH TRANSPORT APPRAISAL GUIDANCE (STAG)	18
3.2 APPRAISAL OF THE OPTIONS	19
3.3 STAG CRITERIA	19
3.4 TRANSPORT PLANNING OBJECTIVES	20
3.5 FEASIBILITY, AFFORDABILITY AND PUBLIC ACCEPTABILITY	20
3.6 ENGAGEMENT	21
<b>4. PRELIMINARY OPTIONS APPRAISAL</b>	<b>22</b>
4.1 OVERVIEW	22
<b>5. SUMMARY &amp; RECOMMENDATIONS</b>	<b>49</b>
5.1 SUMMARY	49
5.2 RECOMMENDATIONS	49



## LIST OF TABLES

Table 1.	Core Options	14
Table 2.	Complementary Options	16
Table 3.	Option 1 – New and/or Improved Active Travel Connections	22
Table 4.	Option 2 – Improve Local Bus/S to Destinations in Perth	26
Table 5.	Option 3 – Improve and Increase Strategic Bus and Coach Services	31
Table 6.	Option 4 – New Rail Stations at Newburgh and Bridge of Earn/Oudenarde	35
Table 7.	Option 5 – New Bus-Based Park & Ride in Oudenarde	39
Table 8.	Option 6 – New Railway Station at Oudenarde or Bridge of Earn	44
Table 9.	Summary of Appraisal – Core Options	50
Table 10.	Summary of Appraisal - Complementary Options	52



## EXECUTIVE SUMMARY

SYSTRA Ltd (SYSTRA) was commissioned by regional transport partnership Tactran to collate the evidence behind a Case for Change to undertake a transport appraisal of Bridge of Earn/Oudenarde. The study has a particular focus on sustainable travel to Perth, Edinburgh and Fife.

Improving sustainable transport to/from Bridge of Earn has been the focus for a number of recent studies, and this transport appraisal seeks to collate, review, and progress this agenda. The Local Rail Development Fund is a £2 million Scottish Government fund with the aim of providing funding to consider community led options to improve local rail connections. The Bridge of Earn study has been awarded a proportion of this fund.

This report presents the findings of the Preliminary Options Appraisal stage of the Bridge of Earn Transport Appraisal, and follows the Initial Appraisal: Case for Change stage which was approved in early 2020.

### Recommendations

The options identified in the Case for Change have been assessed qualitatively against the study TPOs and STAG Criteria. In addition, the deliverability of the options were considered against Feasibility, Affordability and Public Acceptability.

This qualitative appraisal of the options has resulted in four options being recommended for further investigation as part of the Detailed Options Appraisal. The options and rationale for progressing is detailed in the following table.

Bridge of Earn Transport Appraisal	
Preliminary Options Appraisal	107754
STAG Report	22/01/2021



### Summary of Appraisal

OPTION	TPO1	TPO2	ENVIRONMENT	SAFETY	ECONOMY	INTEGRATION	ACCESS	TECH FEASIBILITY	OP FEASIBILITY	AFFORDABILITY	PUBLIC ACCEPTABILITY	PROGRESSED/ NOT PROGRESSED
<b>Option 1:</b> New and/or improved active travel routes	✓	✓	✓	✓	✓	✓ ✓	✓ ✓	Min	Min	Min	Min	<b>Complementary</b> Potential impact on behaviour change and modal shift is anticipated to be minor in comparison to the problems and issues identified in the Case for Change.
<b>Option 2:</b> Improve & increase local bus/services from Bridge of Earn and Oudenarde to destinations in Perth	✓ ✓	✓ ✓	✓	✓	✓	✓ ✓	✓ ✓	Min	Mod	Mod	Min	<b>Progressed</b> Positive performance against the TPOs and STAG criteria and relatively minor feasibility considerations.
<b>Option 3:</b> Improve and increase strategic bus and coach services on the corridor	✓ ✓	✓	✓	✓	✓	✓ ✓	✓	Min	Mod	Mod	Min	<b>Progressed</b> Positive performance against the TPOs and STAG criteria and the minor and moderate implementability considerations.



OPTION	TPO1	TPO2	ENVIRONMENT	SAFETY	ECONOMY	INTEGRATION	ACCESS	TECH FEASIBILITY	OP FEASIBILITY	AFFORDABILITY	PUBLIC ACCEPTABILITY	PROGRESSED/ NOT PROGRESSED
<b>Option 4:</b> New stations at Newburgh and Bridge of Earn/Oudendarde and operation of a shuttle service between Newburgh and Perth	✓	✓	X	✓	✓	✓ ✓	✓	Mod	Maj	Maj	Mod	<b>Not progressed</b> Due to the limited benefits associated with this option and the significant implementability considerations, this option is not selected
<b>Option 5:</b> New bus-based Park & Ride site at Oudendarde	✓ ✓	✓ ✓	X	✓	✓ ✓	✓ ✓	✓	Min	Mod	Mod	Mod	<b>Progressed</b> Option would provide improved access to the strategic bus network and would improve the level of service residents currently have to key services
<b>Option 6:</b> New station at Oudendarde or Bridge of Earn	✓ ✓	✓ ✓	X	✓	✓ ✓	✓ ✓	✓	Mod	Maj	Maj	Mod	<b>Progressed</b> Option would provide improved access to the strategic rail network and would improve the level of service residents currently have to key services



Bridge of Earn Transport Appraisal	
Preliminary Options Appraisal	107754
STAG Report	22/01/2021





# 1. INTRODUCTION

## 1.1 Background

- 1.1.1 SYSTRA Ltd (SYSTRA) was commissioned by regional transport partnership Tactran to collate the evidence behind a Case for Change to undertake a transport appraisal of Bridge of Earn/Oudendarde. The study has a particular focus on sustainable travel to Perth, Edinburgh and Fife.
- 1.1.2 Improving sustainable transport to/from Bridge of Earn has been the focus for a number of recent studies, and this transport appraisal seeks to collate, review, and progress this agenda. The Local Rail Development Fund is a £2 million Scottish Government fund with the aim of providing funding to consider community led options to improve local rail connections. The Bridge of Earn study area has been awarded a proportion of this fund.
- 1.1.3 This report presents the findings of the Preliminary Options Appraisal stage of the Bridge of Earn Transport Appraisal. This follows the Initial Appraisal: Case for Change stage which was approved in early 2020.
- 1.1.4 As the Case for Change developed and evolved, so did the geographical scope of the study. At the outset, the study area was considered to be the Bridge of Earn area with cognisance given to movements passing by/through Bridge of Earn. The evidence gathering stage of the study highlighted that widening the study area to include the A912/M90 corridor south of Perth would increase the understanding of transport choices, problems, opportunities, issues and constraints between Bridge of Earn and Perth city centre, Fife and towards Edinburgh. The study area has therefore been identified as including this corridor to ensure data consistency and is shown in Figure 1.



Figure 1. Study Area

## 1.2 Initial Appraisal: Case for Change

- 1.2.1 The Case for Change established the baseline for the study by identifying evidenced transport problems and opportunities within the study area which were reflected in the Transport Planning Objectives (TPOs) (Figure 2). Based on the problems, opportunities, issues and



constraints identified through this process, two Transport Planning Objectives were identified:

- TPO 1: Improve transport access to healthcare, employment, education and training
- TPO2: Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.

- 1.2.2 The development of the TPOs took into consideration established policy directives. Following the publication of the National Transport Strategy 2 in early 2020, the TPOs have been reviewed and considered to align with the objectives of NTS2.
- 1.2.3 Following the development of the Transport Planning Objectives, a range of options were generated which could alleviate the identified problems and address the potential opportunities across the study area. Thirty-seven options were generated at this stage.
- 1.2.4 Options were generated across all modes of transport and geographically across the study area, and beyond. Following the development of an initial long list, the options were developed and cleaned. This involved clarifying the options to provide further detail and to remove duplicates. Where appropriate, options were also grouped by mode. At this stage, 10 options remained.
- 1.2.5 After refining and collating these options, an initial, high level sifting determined the suitability for further assessment. The appraisal was a qualitative assessment against the TPOs and determined if the option would have a positive, negative or neutral impact against the TPO.
- 1.2.6 At this stage some options were identified as *Complementary* options. These options were not considered to significantly impact on the TPOs as a standalone option but as a package they would contribute.
- 1.2.7 Six *Core* options were identified for initial appraisal, along with three *Complementary* options.
- 1.2.8 To maintain a focus on the core options, the appraisal of the complementary options is not detailed in the main body of the report.
- 1.2.9 Appendix A presents the Appraisal Summary Tables (ASTs) for the Core options, and Appendix B the ASTs for the Complementary options.



IronsideFarrar  
Environmental Consultants

SYSTRA

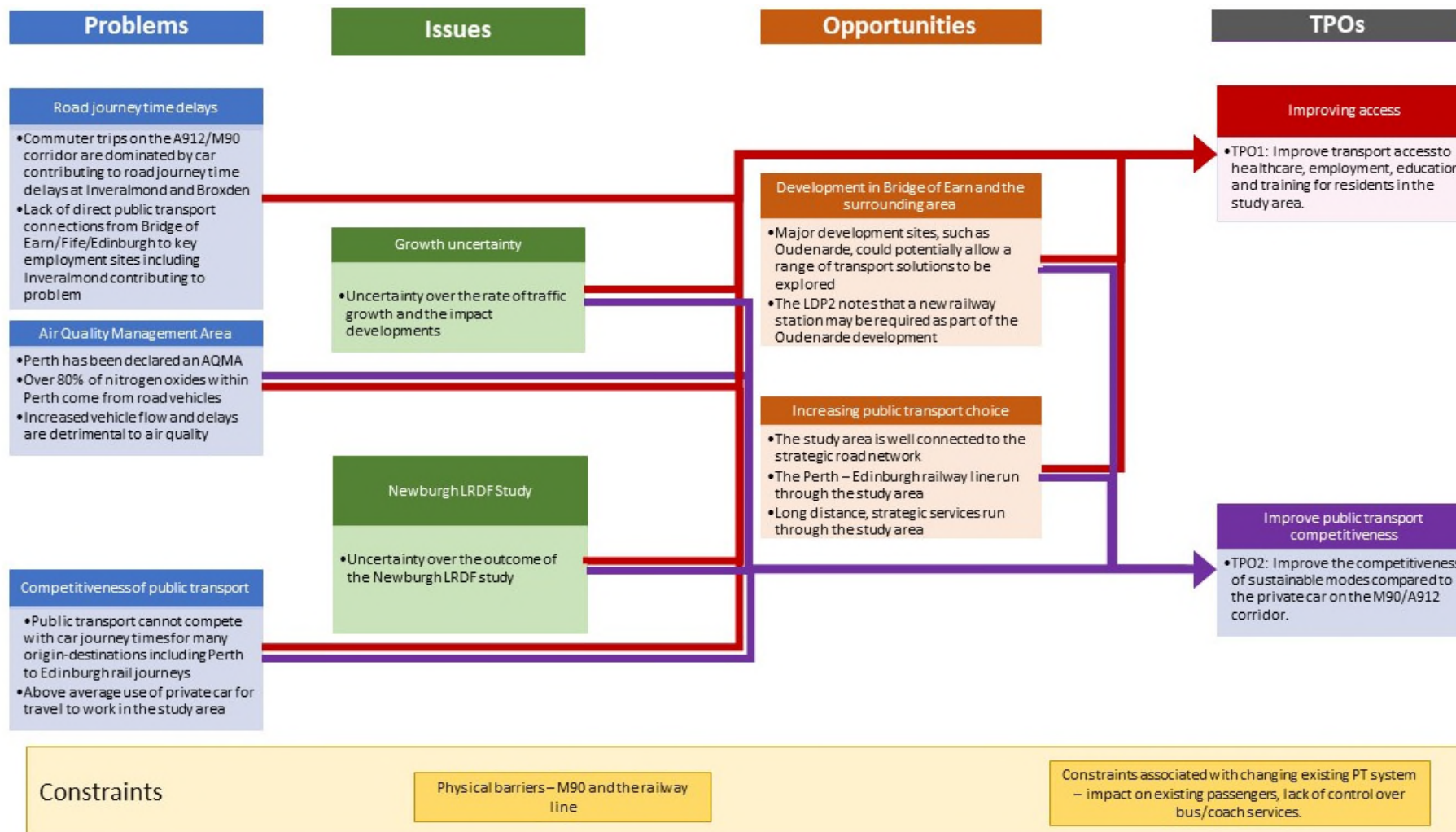


Figure 2. TPO Mapping to Problems, Issues, Opportunities and Constraints





## 2. SUMMARY OF OPTIONS

### 2.1 Overview

2.1.1 The generated options have been developed further and are detailed in Table 1.

2.1.2 To focus the appraisal on the Core options (Table 1), the options identified here as Complementary (Table 2) have been summarised in Appendix B.

**Table 1. Core Options**

ID	MODE	OPTION	DESCRIPTION
1	Active Travel	New and/or improved active travel routes	Active travel improvements including: <ul style="list-style-type: none"> <li>• Improve the Tay Corridor active link identified in the TayPlan for recreational journeys;</li> <li>• Develop the Perth to Bridge of Earn cycle route;</li> <li>• Junction improvements at the M90 slips (Junction 9) to benefit pedestrians and cyclists;</li> <li>• Cycle parking at bus stops/interchanges;</li> <li>• Public cycle hire; and</li> <li>• Improved signage.</li> </ul>
2	Bus	Improve & increase local bus/services from Bridge of Earn and Oudenarde to destinations in Perth	Enhanced bus service provision to Perth to enable public transport access to key services and markets i.e. employment, places of study, and wider health care and leisure facilities, and to help increase public transport choice. The option includes the provision of greater frequencies of bus services and hours of operation, as well as improving connectivity with train services to help facilitate onward travel.
3	Bus/Coach	Improve and increase strategic bus and coach services on the corridor	Enhanced strategic bus/coach provision southbound to Fife and Edinburgh and northbound to Perth and beyond to enable public transport access to key services and markets i.e. employment, places of study, and wider health care and leisure facilities, and to help increase public transport





ID	MODE	OPTION	DESCRIPTION
			choice. The option includes the provision of greater frequencies of bus services and hours of operation and new connections.
4	Rail	New stations at Newburgh and Bridge of Earn/Oudenarde and operation of a shuttle service between Newburgh and Perth	This option includes the reopening of a train station in Newburgh and Bridge of Earn or Oudenarde and operation of a shuttle service between Newburgh and Perth order to help increase public transport choice for trips to and from Newburgh, Oudenarde and Bridge of Earn, increase connectivity, as well as help facilitate access to key services and markets.
5	Park & Ride	New bus-based Park & Ride site at Oudenarde	This option includes the development of a Park & Ride site to the east of Bridge of Earn, with access taken from the A912 and northwards connections to Perth and southbound towards Edinburgh. This option would increase connectivity, as well as help facilitate access to key services and markets. The site would be served by local bus services to create a connection between Bridge of Earn and the P&R site.
6	Rail	New station at Oudenarde or Bridge of Earn	This option includes the opening of a train station at Oudenarde or Bridge of Earn and a stopping Edinburgh to Perth service in order to help increase public transport choice for trips to and from Oudenarde and Bridge of Earn, increase connectivity, as well as facilitate access to key services and markets.

**Table 2. Complementary Options**

ID	MODE	OPTION	DESCRIPTION
7	Travel Planning	Car Sharing and Travel Plans	<p>Introduce initiatives to support more sustainable ways of travelling:</p> <ul style="list-style-type: none"> <li>• improve car sharing offering and other initiatives in the study area by incentivising car sharing;</li> <li>• promoting and encouraging more car clubs; and</li> <li>• support the development of business travel plans.</li> </ul>
8	Ticketing	Multi-modal ticketing system and optimise pricing structure	Create a multi-modal ticketing system and optimise pricing structure
9	Bus	Investment in bus fleet and facilities	Measures to increase the attractiveness of public transport including investment in new buses and live bus feed information at stops

## 2.2 Impact of Covid-19 Restrictions

- 2.2.1 The Preliminary Appraisal of the options has been undertaken during a period of great uncertainty and change in society due to the impacts of the Covid-19 virus.
- 2.2.2 The restrictions put in place by both UK and Scottish governments has impacted on how people, work, study and socialise. This in turn has impacted on how travel is viewed and undertaken.
- 2.2.3 At this stage, the medium to long-term impacts of the virus have not been considered as a factor in appraisal. As the picture becomes clearer, these will be discussed further with key stakeholders at the Detailed Appraisal stage.







### 3. METHODOLOGY

#### 3.1 Scottish Transport Appraisal Guidance (STAG)

3.1.1 As required by the conditions of the LRDF, the study has been undertaken in accordance with the Scottish Transport Appraisal Guidance (STAG) process which provides a framework to assess the performance of different transport options to address identified problems and present the results in a consistent manner to inform decision makers. The STAG process comprises four stages as outlined below:

- **Pre-Appraisal (Initial Appraisal: Case for Change):** where the problems, opportunities, issues and constraints are identified and scoped. Study-specific Transport Planning Objectives (TPOs) are then identified and an 'optioneering' and sifting process undertaken to provide a list of possible options to address the problems;
- **Initial Appraisal (Preliminary Options Appraisal):** potential options are appraised against the TPOs, five STAG criteria and factors concerning deliverability, to ensure that they are likely to fulfil the study's requirements;
- **Detailed Appraisal (Detailed Options Appraisal):** involving more detailed consideration of potential options taken forward following the Initial Appraisal, and presenting the outcomes to inform investment decision makers. The Detailed Options Appraisal also includes proposals for monitoring and evaluation; and
- **Post-Appraisal:** key elements of this stage involve the application of the monitoring and evaluation proposals developed as part of the appraisal.

3.1.2 This stage is the **Preliminary Options Appraisal**. This report details the performance of the options against the TPOs and against the five STAG criteria (Environment, Safety, Economy, Integration and Accessibility, and Social Inclusion), and feasibility, affordability and likely public acceptability.

3.1.3 In line with STAG, the appraisal has been completed on a largely qualitative basis and draws on the quantitative data collected as part of the Case for Change and previous studies where appropriate. The Appraisal Summary Tables (ASTs) that form Appendix A provide further information on the different aspects of the appraisal for the options identified.



## 3.2 Appraisal of the Options

3.2.1 The performance of an option against each criteria follows the seven-point scale of assessment as recommended in STAG, and has therefore been adopted for this part of the appraisal:

- Major benefit (✓✓✓): these are benefits or positive impacts which, depending on the scale of benefit or severity of impact, the practitioner feels should be a principal consideration when assessing an option's eligibility for funding;
- Moderate benefit (✓✓): the option is anticipated to have only a moderate benefit or positive impact. Moderate benefits and impacts are those which taken in isolation may not determine an option's eligibility for funding, but taken together do so;
- Minor benefit (✓): the option is anticipated to have only a small benefit or positive impact. Small benefits or impacts are those which are worth noting, but the practitioner believes are not likely to contribute materially to determining whether an option is funded or otherwise.
- No benefit or impact (-): the option is anticipated to have no or negligible benefit or negative impact.
- Small minor cost or negative impact (✗): the option is anticipated to have only a moderate cost or negative impact. Moderate costs/negative impacts are those which taken in isolation may not determine an option's eligibility for funding, but taken together could do so.
- Moderate cost or negative impact (✗✗): the option is anticipated to have only a moderate cost or negative impact. Moderate costs/negative impacts are those which taken in isolation may not determine an option's eligibility for funding, but taken together could do so; and
- Major cost or negative impacts (✗✗✗): these are costs or negative impacts which, depending on the scale of cost or severity of impact, the practitioner should take into consideration when assessing an option's eligibility for funding.

## 3.3 STAG Criteria

3.3.1 The appraisal of the options against the STAG criteria includes:

- Environment:
  - Noise and vibration;
  - Global air quality - carbon dioxide (CO<sub>2</sub>);
  - Local air quality - particulates (PM<sub>10</sub>) and nitrogen dioxide (NO<sub>2</sub>);
  - Water quality, drainage and flood defence;
  - Geology;
  - Biodiversity and habitats;
  - Landscape;
  - Visual amenity;
  - Agriculture and soils;
  - Cultural heritage; and
  - Physical Fitness.



- Safety:
  - Accidents; and
  - Security.
- Economy:
  - Transport Economic Efficiency (TEE); and
  - Wider Economic Impacts.
- Integration:
  - Transport integration;
  - Transport and land-use integration; and
  - Policy integration.
- Accessibility and Social Inclusion:
  - Community Accessibility; and
  - Comparative Accessibility.

### 3.4 Transport Planning Objectives

3.4.1 The Transport Planning Objectives for this study are as follows:

- TPO 1: Improve transport access to healthcare, employment, education and training
- TPO2: Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.

### 3.5 Feasibility, Affordability and Public Acceptability

3.5.1 The implementation potential of the options was appraised in terms of feasibility, affordability and public acceptability as follows:

- Feasibility – a preliminary assessment of the feasibility of construction or implementation and operation (if relevant) of an option and the status of its technology (e.g. proven, prototype, in development, etc.) as well as any cost, timescale or deliverability risks associated with the construction or operation of the option, including consideration of the need for any departure from design standards that may be required;
- Affordability – the scale of the financing burden on the promoting authority and other possible funding organisations and the risks associated with these should be considered together with the level of risk associated with an option's ongoing operating or maintenance costs and its likely operating revenues (if applicable); and
- Public Acceptability – the likely public response at this initial appraisal phase.

3.5.2 For this appraisal, we have assessed these criteria over three levels: minor, moderate or major considerations. By 'consideration' it is meant that there may be potential negative or problematic issues which will require a certain level of investigation.



- 3.5.3 As this analysis highlights ‘potential’ issues, the scorings of ‘major’ in this section of the appraisal have not led to an outright rejection of these options. The scoring has been considered in the overall context of the appraisal and further analysis of these issues will need to be explored if the option is taken forward.
- 3.5.4 Further analysis in the Detailed Appraisal will allow more detailed scoring (i.e. in relation to a seven-point scale for example), however, at present it is felt that doing this would be misrepresentative, creating an unfairly negative score where details of considerations are unconfirmed.

### 3.6 Engagement

- 3.6.1 To inform the understanding of public acceptability of the proposed options a public engagement exercise was developed. The timing of the Preliminary Options Appraisal during the Covid-19 pandemic limited the opportunities to engage with the public face to face and an online survey was developed to capture views instead.
- 3.6.2 The survey was disseminated through local social media and elected members; however, the response rate was low, and the emphasis placed on the data should be limited. The data does give a useful overview of views but should not be considered to represent the community. Further details of the survey can be found in Appendix C.

## 4. PRELIMINARY OPTIONS APPRAISAL

### 4.1 Overview

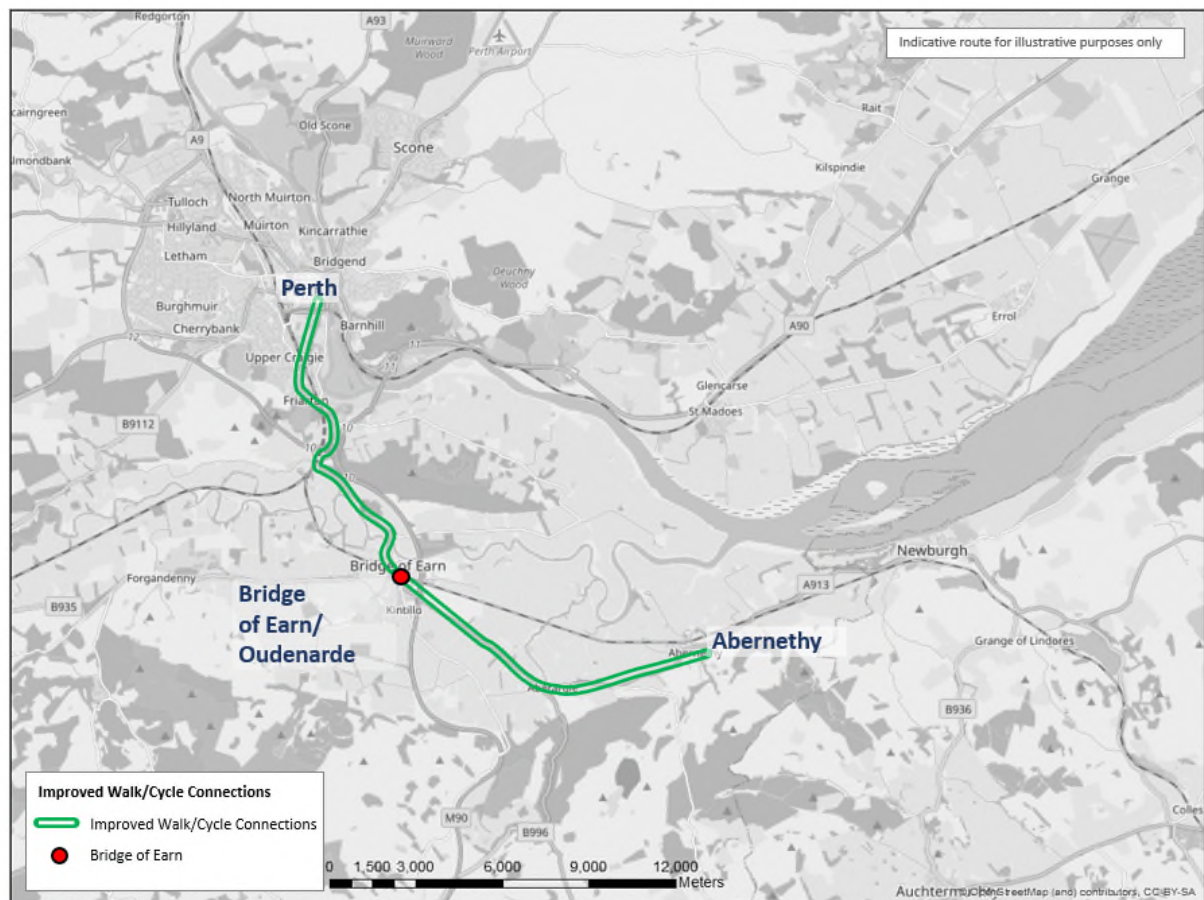
- 4.1.1 This chapter summarises the performance of the options against the criteria described in Chapter 0 and the recommendations to further investigate an option in the Detail Appraisal or reject at this stage. This includes the rationale for rejection or selection of an option.
- 4.1.2 The tables presented here are summaries of the Appraisal Summary Tables (ASTs). For complete ASTs, please refer to Appendix A.

**Table 3. Option 1 – New and/or Improved Active Travel Connections**

#### OPTION 1 – NEW AND/OR IMPROVED ACTIVE TRAVEL CONNECTIONS

Active travel improvements including:

- Improve the Tay Corridor active link identified in the TayPlan for recreational journeys;
- Develop the Perth to Bridge of Earn cycle route;
- Junction improvements at the M90 slips (Junction 9) to benefit pedestrians and cyclists;
- Cycle parking at bus stops/interchanges;
- Public cycle hire; and
- Improved signage.





## OPTION 1 – NEW AND/OR IMPROVED ACTIVE TRAVEL CONNECTIONS

### Performance Against Transport Planning Objectives

Criteria	Score	Rationale
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	✓	Improving connectivity to Perth will enhance opportunities for active mode use for access to healthcare, education, employment and training. Better information and physical active travel connectivity would enhance accessibility to key services and markets for residents. This would also benefit those using public transport, and have a positive impact for active travel movements as a by-product.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	✓	This option has the potential to increase active travel within the local area, by connecting Bridge of Earn to Perth and neighbouring communities. By better connecting sustainable transport nodes throughout Bridge of Earn with active travel improvements, this option would open up sustainable modes to more users, make them more competitive and increase the likelihood of their use.

### Summary of Performance against STAG Criteria

Environment	✓	The physical changes associated with this option would be relatively minor but may make a slight positive contribution to landscape and cultural heritage. It is assumed the option will produce moderate positive impacts on cultural heritage, with the potential for slight negative effects on geology and the water environment. However, in respect of operation, irrespective of location and assuming increased uptake of more sustainable and active forms of transport, there could be slight positive impacts on noise and vibration, run-off, air quality and physical fitness.
Safety	✓	Better active travel infrastructure to Perth and at the M90 slip roads would improve safety cyclists and pedestrians. Better active travel infrastructure would improve safety within the town and has the potential to reduce the chance of accidents to a minor extent. Active travel improvements can include elements which improve security, such as lighting and visibility and appropriate mapping and signage gives information





## OPTION 1 – NEW AND/OR IMPROVED ACTIVE TRAVEL CONNECTIONS

		which ensures that users are aware of which routes are safe and secure to use.
Economy	✓	There would be some minor user benefits from improved accessibility and small-scale changes to sustainable transport mode share. Through the delivery of a high quality improved active travel route from Perth to Abernethy, the proposal increases the attractiveness for recreational riding, and progresses the potential for a branded route encouraging cycling around the Tay which would bring an economic benefit. The costs of improvements would be relatively low and generally this would result in a good benefit to cost ratio. Further consideration would be required at the Detailed Appraisal to quantify the economic impact of this option.
Integration	✓ ✓	Infrastructure, wayfinding and information aspects would all improve integration of sustainable modes. Improvements to active travel would include the crossings over the M90 slips which would connect to the Oudenarde development. By ensuring that the planned development is well connected to public transport via active travel, this would support transport and land use integration. This would include effective information provision, which is particularly important for the proposed developments in the town, and capturing sustainable transport mode share from the outset. This option would complement those proposed as part of the Oudenarde development. This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
Accessibility and Social Inclusion	✓ ✓	Effective connectivity to the public transport network via active travel and information has the potential to improve the catchment for access to these services. While not all users can travel far to public transport, for those who can walk or cycle further, this option may encourage them to do so. General local accessibility would also be improved through this option through the expansion of the active travel catchment of the area, by providing suitable active travel infrastructure and relevant information





## OPTION 1 – NEW AND/OR IMPROVED ACTIVE TRAVEL CONNECTIONS

		Ensuring that active travel links are provided to a good design standard may facilitate access by groups with mobility issues and by improving access to public transport, non-car owners and other groups which rely on public transport would benefit.
Implementability Appraisal		
Technical Feasibility	Minor consideration	This option is technically feasible with providing active travel solutions being a well-established part of transport planning. While some design issues may be raised upon detailed design, including the specification of the bridge over the railway which may not accommodate segregated cycling infrastructure (identified in the Perth Cycle Network Plan), the range of technical solutions available to practitioners is wide and effective. Funding and the cost of solutions would likely be the largest factor influencing improvements, along with any need to reallocate road space/ensure effective footway/cycleway space is available to meet standards.
Operational Feasibility	Minor consideration	No operational issues are anticipated. It is understood that the improvements proposed at the junction of the M90/A912 will include for provision for non-motorised users allowing safe crossing of the slip roads.
Affordability	Minor consideration	Active travel improvements and information provision are relatively low cost compared to other transport solutions, and generally present positive benefit to cost ratios. Securing an appropriate funding stream, however, would be key to delivery.
Public Acceptability	Minor consideration	Generally, this option is considered to be widely welcomed by the general public and this was reflected with 83% of respondents to the public survey being supportive or very supportive of the measures, however, there may be areas where road space or parking is impacted by cycle routes which may lead to a negative response. In particular, improved walking and cycling facilities to public transport stops, Abernethy and Perth were identified as popular amongst survey respondents. Please note ,however, that the survey had a very low response rate.

## Select/Reject Rationale

## OPTION 1 – NEW AND/OR IMPROVED ACTIVE TRAVEL CONNECTIONS

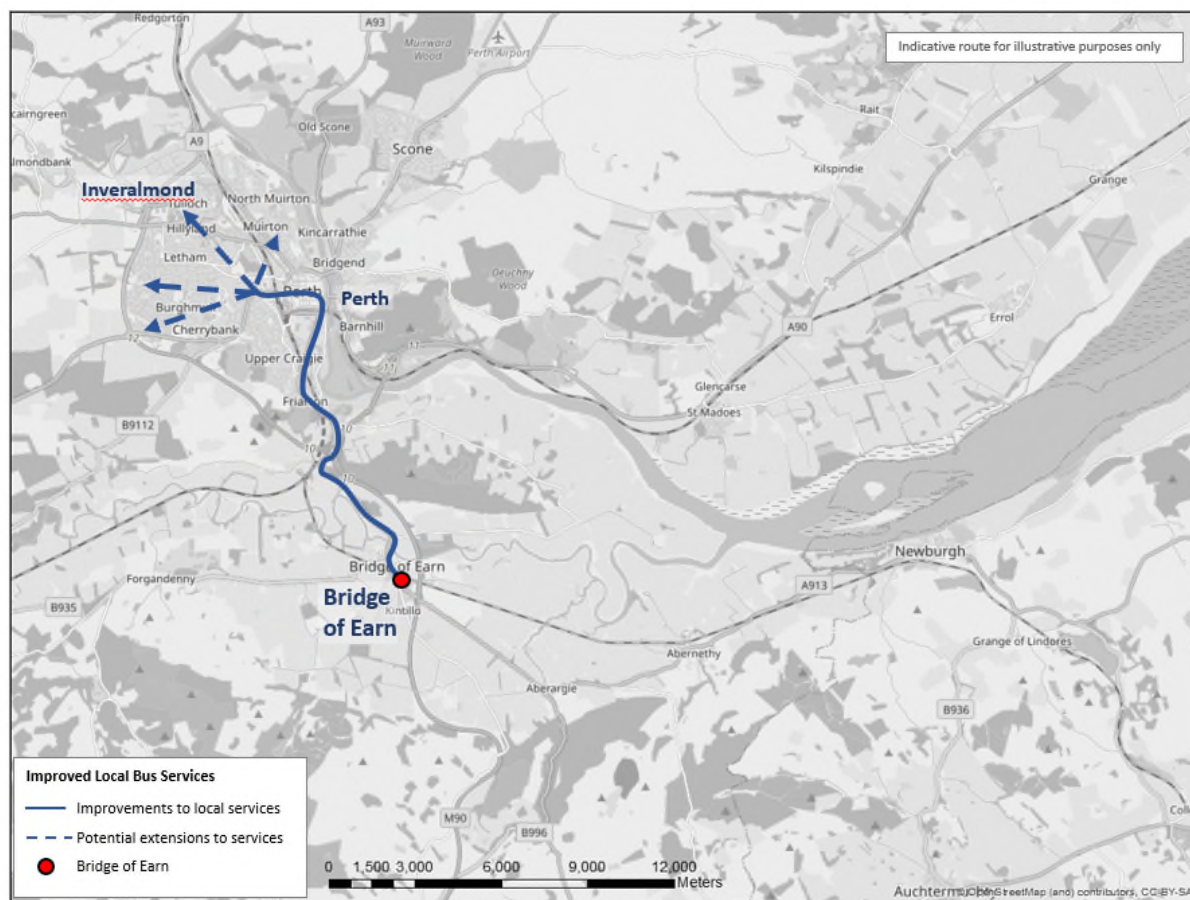
Improvements to active travel connections would have a minor positive impact on both TPOs by improving access to services in Perth and providing connections to existing public transport services. This is also supported by the minor and moderate positive impacts against the STAG criteria. Although the option is scored positively, the potential impact on behaviour change and modal shift associated with this option is anticipated to be relatively minor in comparison to the problems and issues identified in the Case for Change. The option would support and enhance other interventions as a package and is therefore considered a Complementary Option.

**Progressed to Detailed Appraisal as a Complementary Option.**

**Table 4. Option 2 – Improve Local Bus/S to Destinations in Perth**

## OPTION 2 – IMPROVE & INCREASE LOCAL BUS/SERVICES FROM BRIDGE OF EARN AND OUDENARDE TO DESTINATIONS IN PERTH

Enhanced bus service provision to Perth to enable public transport access to employment, health and training opportunities, and to help increase public transport choice. The option includes the provision of greater frequencies of bus services and hours of operation, as well as improving connectivity with train services to help facilitate onward travel.



## Performance Against Transport Planning Objectives



## OPTION 2 – IMPROVE & INCREASE LOCAL BUS/SERVICES FROM BRIDGE OF EARN AND OUDENARDE TO DESTINATIONS IN PERTH

Criteria	Score	Rationale
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	✓ ✓	This option would improve access for existing and new users in the area by introducing better frequency of service and by extending the period of operation. Connectivity to key employment sites in Perth would also be considered and would improve direct access to employment. These changes allow users more ready access to key services and markets in Perth, and allows for transfer to other transport options for other areas. By improving hours of operation, the potential to use public transport is expanded by facilitating travel when it is most required and to accommodate variable working patterns/shifts.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	✓ ✓	This option has the potential to facilitate greater use of sustainable transport modes, by improving accessibility by bus to and from Bridge of Earn and potentially encouraging a shift from car to bus use. This option would increase accessibility in terms of destination choice, frequency and hours of operation perspective, which would be of benefit to residents, businesses and visitors and would reduce journey times by providing a direct connection to employment sites. This would make public transport more competitive.

### Summary of Performance against STAG Criteria

Environment	✓	No tangible effects from physical infrastructure changes associated with this option. However, if it increases the uptake of a more sustainable form of transport and reduces private car usage, there would be minor improvements in some environmental
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## OPTION 2 – IMPROVE & INCREASE LOCAL BUS/SERVICES FROM BRIDGE OF EARN AND OUDENARDE TO DESTINATIONS IN PERTH

		factors such as air quality and run-off and potentially in, landscape, visual amenity and physical fitness
Safety	✓	This option could produce a minor benefit for safety due to reduced accident rates, resulting from the reduction of private cars on the road network, and increased natural surveillance from increased passenger numbers at stops and on services.
Economy	✓	<p>There are likely to be some user benefits from improved public transport frequency, improved journey times due to more direct services, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and a minor improvement in traffic due to modal shift. Combined these may produce a minor overall benefit to transport economic efficiency.</p> <p>There may be minor benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth. Benefits however are likely to be local in nature with little impact on the national economy.</p> <p>Further consideration would be required at the Detailed Appraisal to quantify the economic impact of this option.</p>
Integration	✓ ✓	<p>There is likely to be some minor benefit to the integration with other transport services, including connections at Perth rail and bus stations, through greater frequency of service (potential to link journeys) and hours of operation (access to onward services).</p> <p>The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.</p> <p>This option also aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by</p>



## OPTION 2 – IMPROVE & INCREASE LOCAL BUS/SERVICES FROM BRIDGE OF EARN AND OUDENARDE TO DESTINATIONS IN PERTH

		improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
Accessibility and Social Inclusion	✓ ✓	Public transport network coverage would be improved as connections to key employment sites would be considered and the option includes extended hours. Public transport improvements also provide benefits to socially excluded groups, such as those without a car and the mobility impaired.

### Implementability Appraisal

Technical feasibility	Minor consideration	There would be no known technical feasibility issues as this option would use existing infrastructure.
Operational feasibility	Moderate consideration	Commercial bus operations require sufficient revenue to support the operational costs of the service.
Affordability	Moderate consideration	There would be additional capital expenditure related to the buses required to operate the enhanced frequency. Ongoing operational costs would also be required and if demand is not in line with operational costs, the service could require subsidy.
Public Acceptability	Minor consideration	It is anticipated that improvements to local bus services would be well received and this is supported by the public survey which shows that this would be the preferred option of 55% of respondents, albeit from a low survey response rate. Real time information at stops, services to Perth Royal Infirmary, environmentally friendly buses and an improved Sunday frequency were all considered improvements which would be supported by respondents.

### Select/Reject Rationale

This option would make a positive contribution to both of the study TPOs including providing improved connections to Perth and the existing rail network. The appraisal against the STAG criteria has identified no negative impacts and shows significant benefits associated with Integration and Accessibility.

In terms of implementability, this option would require negotiations with bus operators and potentially an increased bus fleet. An ongoing operating subsidy may also be required. From a public acceptability perspective, this option was considered the preferred option by the majority of respondents.



## OPTION 2 – IMPROVE & INCREASE LOCAL BUS/SERVICES FROM BRIDGE OF EARN AND OUDENARDE TO DESTINATIONS IN PERTH

Given the positive performance against the TPOs and STAG criteria and relatively minor implementability considerations this option has been recommended for further appraisal.

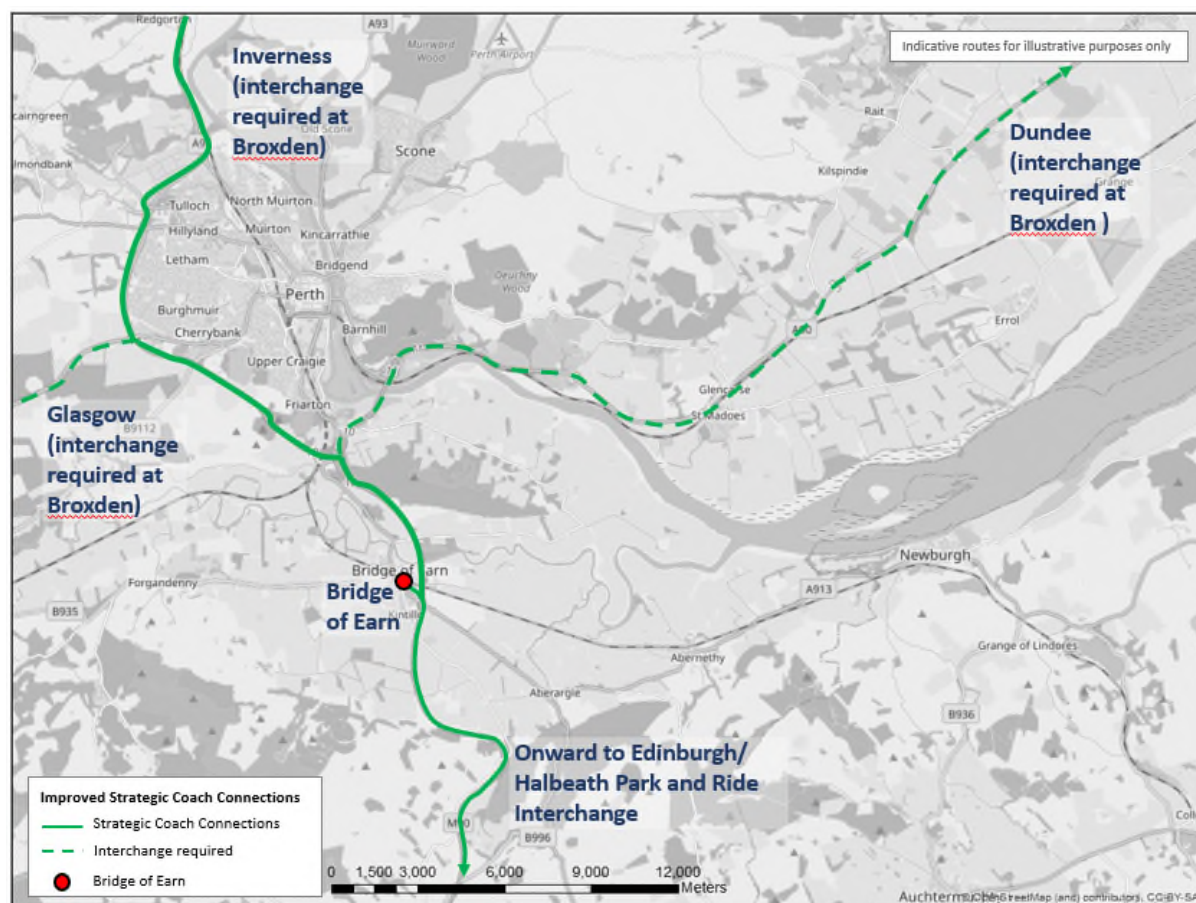
**Progressed to Detailed Appraisal.**



**Table 5. Option 3 – Improve and Increase Strategic Bus and Coach Services**

**OPTION 3 – IMPROVE AND INCREASE STRATEGIC BUS & COACH SERVICES ON THE CORRIDOR**

Enhanced strategic bus/coach provision southbound to Fife and Edinburgh and northbound to Perth and beyond to enable public transport access to key services and markets i.e. employment, places of study, and wider health care and leisure facilities, and to help increase public transport choice. The option includes the provision of greater frequencies of bus services and hours of operation and new connections.



**Performance Against Transport Planning Objectives**

Criteria	Score	Rationale
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	✓ ✓	This option would improve access for existing and new users in the area by introducing a better frequency of service on the existing Perth to Edinburgh express service. Improved connectivity to Perth and Edinburgh would improve direct access to employment, education, health and training opportunities. These changes allow users more ready access to key



### OPTION 3 – IMPROVE AND INCREASE STRATEGIC BUS & COACH SERVICES ON THE CORRIDOR

		services and markets in Perth and Edinburgh and connections to Dundee.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	✓	This option has the potential to facilitate greater use of sustainable transport modes, by improving accessibility by coach to and from Bridge of Earn and potentially encouraging a shift from car to bus use. This option would increase accessibility in terms of frequency, however southbound movements would have a minimal impact on the M90/A912 corridor between Perth and Bridge of Earn.

#### Summary of Performance against STAG Criteria

Environment	✓	No tangible effects from physical infrastructure changes associated with this option. However, if it increases the uptake of a more sustainable form of transport and reduces private car usage, there would be minor improvements in some environmental factors such as air quality and run-off and potentially in biodiversity, landscape, visual amenity, cultural heritage and physical fitness.
Safety	✓	This option could produce a minor benefit for safety due to reduced accident rates, resulting from the reduction of private cars on the road network, and increased natural surveillance from increased passenger numbers at stops and on services.
Economy	✓	<p>There are likely to be some user benefits from improved public transport frequency, improved journey times due to more direct services, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and a minor improvement in traffic due to modal shift. Combined these may produce a minor overall benefit to transport economic efficiency.</p> <p>There may be minor benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Edinburgh. Benefits however are likely to local in nature with little to no impact on the national economy. Further consideration would be required at the Detailed Appraisal to quantify the economic impact of this option.</p>





### OPTION 3 – IMPROVE AND INCREASE STRATEGIC BUS & COACH SERVICES ON THE CORRIDOR

Integration	✓✓	<p>An increased number of services and destinations would allow for more service integration both on coach and with other modes such as rail and bus.</p> <p>The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.</p> <p>Improvements to the strategic coach network aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment. Overall this option would have a moderate positive impact on integration.</p>
Accessibility and Social Inclusion	✓	<p>Public transport network coverage would be improved as the frequency of service would be significantly improved and there would be increased destinations served.</p> <p>Public transport improvements also provide benefit to socially excluded groups, such as those without a car and the mobility impaired which would be a positive impact on accessibility.</p>
Implementability Appraisal		
Technical Feasibility	Minor consideration	There are no known technical feasibility issues as this option would be largely using existing infrastructure.
Operational Feasibility	Moderate consideration	Additional stops to an existing long-distance service would have minor impacts on deliverability, however, new destinations and services would require changes to existing bus timetables and additional coach fleets. This would require negotiation with operators regarding the level of service, where routing should be prioritised and investigations of any potential subsidies available. Operationally, this would be a moderate consideration.
Affordability	Moderate consideration	The patronage associated with this option is expected to be low to medium at the outset, with comparably low operating revenue. This option, therefore, may be reliant on public sector revenue funding as it may not be commercially viable to offer such a service. This public sector revenue funding may be in the form of an ongoing operating subsidy or a fund to initiate the service prior to



### OPTION 3 – IMPROVE AND INCREASE STRATEGIC BUS & COACH SERVICES ON THE CORRIDOR

		developing a customer base and associated operating revenue. In particular, the potential requirement to subsidise a national coach network may require investigation.
Public Acceptability	Minor consideration	It is anticipated that improving the frequency and destinations of coach services would be well received by the public and this is supported by the survey results showing 100% of respondents are supportive or very supportive of this option, albeit from a survey with a very low response rate. Additional stops and services may impact on existing passengers, in particular, where stops have to be removed to accommodate a new stop and this would be negatively perceived by affected communities.

#### Select/Reject Rationale

This option would make a positive contribution to both of the study TPOs including providing improved connections to Perth and southbound to Fife and Edinburgh. The appraisal against the STAG criteria has identified no negative impacts and shows significant benefits associated with Integration and Accessibility.

In terms of implementability, this option would require negotiations with coach operators and potentially an increased size of bus fleet. An ongoing operating subsidy may also be required depending on the level of service introduced. From a public acceptability perspective, this option was supported by the respondents, but consideration would have to be given to those who would potentially be impacted by a potential reduction in service provision elsewhere in order to increase the service for Bridge of Earn.

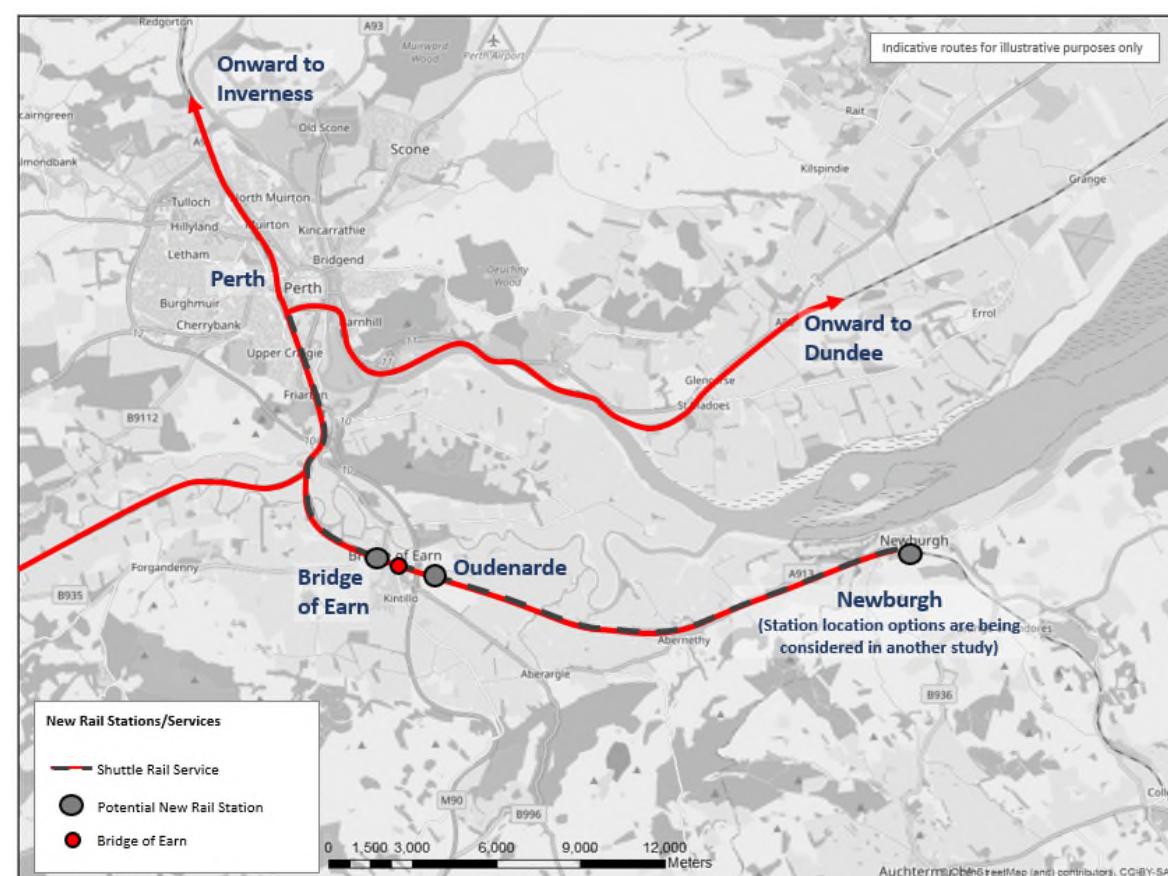
Given the positive performance against the TPOs and STAG criteria and the minor and moderate implementability considerations, this option has been recommended for further appraisal.

**Progressed to Detailed Appraisal.**

**Table 6. Option 4 – New Rail Stations at Newburgh and Bridge of Earn/Oudenarde**

**OPTION 4 – NEW RAIL STATIONS AT NEWBURGH AND BRIDGE OF EARN/ODENARDE AND OPERATION OF A SHUTTLE SERVICE BETWEEN NEWBURGH AND PERTH**

This option includes the reopening of a train station in Newburgh and Bridge of Earn or Oudenarde and operation of a shuttle service between Newburgh and Perth order to help increase public transport choice for trips to and from Newburgh, Bridge of Earn/Oudenarde and Bridge of Earn, increase connectivity, as well as help facilitate access to key services and markets.



**Performance Against Transport Planning Objectives**

Criteria	Score	Rationale
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	✓	This option would improve access from the study area for existing and future developments. Opening a station would provide an additional mode option by facilitating access to the rail network. This would enhance journey times to key services and markets in Perth however travel to southbound amenities and opportunities would still require going to Perth. A direct connection to Perth is already served by local bus however this option would provide access to the wider rail network. The direct access to rail services also

# **OPTION 4 – NEW RAIL STATIONS AT NEWBURGH AND BRIDGE OF EARN/LOUDENARDE AND OPERATION OF A SHUTTLE SERVICE BETWEEN NEWBURGH AND PERTH**

		increases the overall public transport frequency of service.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	✓	Direct journey times along the rail line to Perth would be reduced for residents, business, and visitors. The location of the station in Oudenarde would limit the journey time benefits for those in Bridge of Earn, and decrease direct access catchments via walking and cycling but rail is generally considered to be an attractive public transport mode with a greater propensity to travel to access the network, and has the potential to encourage modal shift from car.

## Summary of Performance against STAG Criteria

Environment	✗	Minor positive benefits in global and local air quality as a result of modal shift / reduction in traffic into Perth. However, environmental impacts of introducing this option would produce minor to moderate adverse impacts to noise and vibration, water environments, geology, landscape, visual amenity agricultural soils and cultural heritage are likely. Further environmental assessment and mitigation will be required based on more detailed design.
Safety	✓	Minor mode shift to rail would reduce vehicle kilometres as the new station would capture car trips from Bridge of Earn/Oudenarde and Newburgh and provide the opportunity to travel to Perth by rail. A new rail station would be built to minimum safety requirements with regards to entrances and exits, surveillance (CCTV and on platform call and information services) and lighting. This option would have a minor positive impact on Safety.
Economy	✓	There are likely to be minor user benefits from improved journey times, public transport frequency, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and an improvement in traffic due to modal shift. Mode shift is considered to be minor as although it provides an additional mode it doesn't improve the public transport coverage significantly as bus currently serves this route. To deliver this option there would be significant costs, including the construction of two stations and potentially the requirement for additional rolling stock and train operating staff. Combined, these may produce a minor overall benefit to transport economic efficiency.



### OPTION 4 – NEW RAIL STATIONS AT NEWBURGH AND BRIDGE OF EARN/LOUDENARDE AND OPERATION OF A SHUTTLE SERVICE BETWEEN NEWBURGH AND PERTH

		<p>There may be minor benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth. Benefits however are likely to be local in nature with little impact on the national economy. Further consideration would be required at the Detailed Appraisal to quantify the economic impact of this option.</p>
Integration	✓ ✓	<p>This option would provide a new mode, allowing integration of rail with active travel, car and by bus. The additional mode adds new ticketing options for public transport at Bridge of Earn, by connecting to the rail network (including smartcard ticketing options and rail season tickets etc) and real-time rail information boards on the station platform would enhance user information for public transport users at the rail station.</p> <p>There would be benefits associated with integrating transport and land use by providing connections to both existing and new development planned in the study area including Loudendarde, giving enhanced public transport access to residents, businesses, and visitors.</p> <p>This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.</p>
Accessibility and Social Inclusion	✓	<p>There would be some overall change to the local public transport catchment, as some users may be more willing to walk further to a rail service than bus. However, the station location may still place the site out of walking reach of many users. The addition of direct access to rail services would open up this mode to those previously put off or unable to use rail due to the need to drive or take the bus to other stations. Public transport improvements provide benefit to socially excluded groups, such as those without a car and the mobility impaired.</p>
<b>Implementability Appraisal</b>		
Technical Feasibility	Moderate consideration	<p>New/re-opening of the station from a technical perspective is likely to be feasible, with design standards being followed without departure. Building on an active line may represent some technical challenges, however, these will be understood</p>



# **OPTION 4 – NEW RAIL STATIONS AT NEWBURGH AND BRIDGE OF EARN/LOUDENARDE AND OPERATION OF A SHUTTLE SERVICE BETWEEN NEWBURGH AND PERTH**

		and expected from recent station openings in Scotland. A turnback facility may also be required at Newburgh.
Operational Feasibility	Major consideration	Physical operation of the shuttle service is feasible as the line is active, however, ScotRail have noted that the current single line section through Bridge of Earn is a constraint for them presently and that an extra service on the line would need reviewed for impact. In particular, the possibility of delivering the service without negatively impacting on the timetabling of existing services would require investigations. In addition, there may be a requirement for additional rolling stock and staff to deliver this service.
Affordability	Major consideration	There would be significant costs associated with reopening/new stations and operating a new service (additional rolling stock and staff), which would need to be weighed against the overall benefits. Funding would be required from national government.
Public Acceptability	Moderate consideration	Improved connections to Perth and Newburgh are considered to be positively received with 92% supporting the option, albeit from a survey with a very low response rate. However, the requirement to travel to Perth to travel southbound may not be considered by the community to address the problems identified in the Case for Change and is therefore a moderate consideration.

## **Select/Reject Rationale**

This option would provide a rail link between Newburgh, Bridge of Earn/Oudenarde and Perth and this represents a minor positive impact for both TPOs. The benefits associated with the option are limited as the shuttle option would not provide a link southbound to amenities and opportunities identified as part of TPO1 and although an additional mode would be available, the route is currently served by a local bus.

In terms of implementability, there are a number of considerations including the timetabling of an additional service (on a single track), stabling, and rolling stock availability to deliver the service.

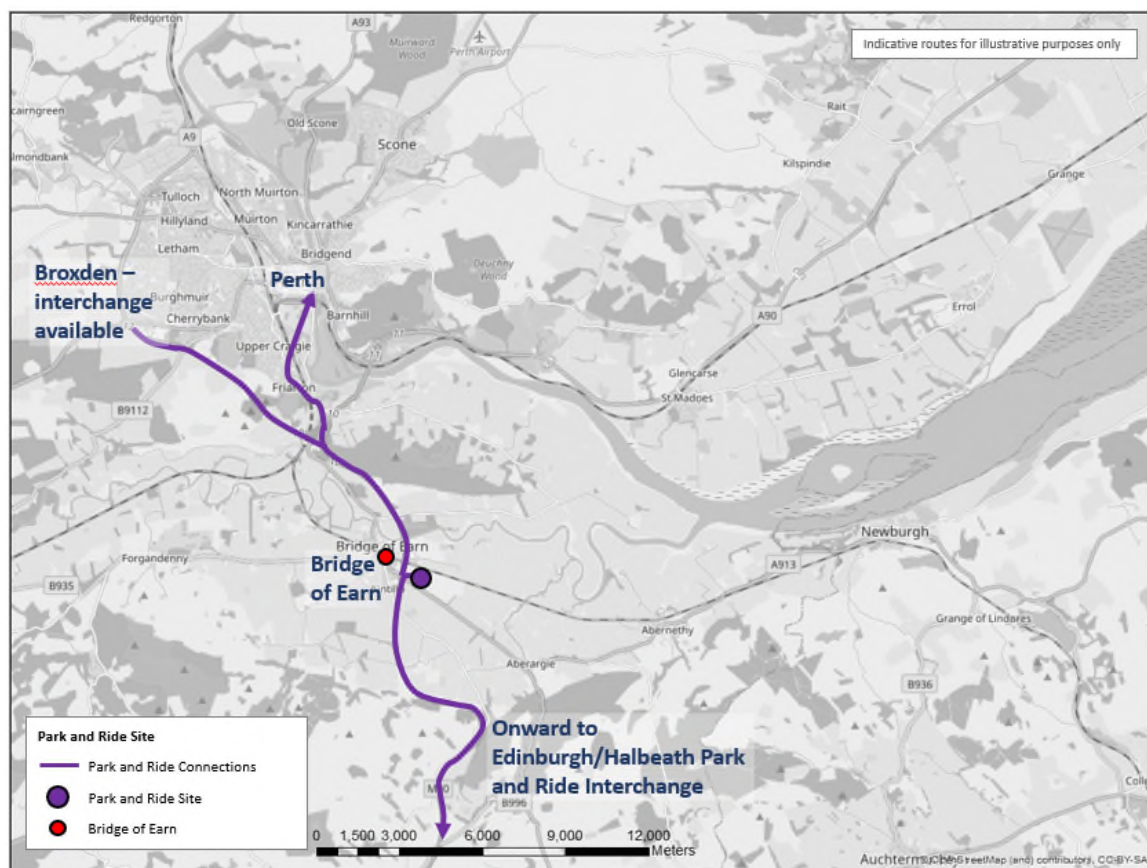
Due to the limited benefits associated with this option and the significant implementability considerations, this option is not recommended for further investigation.

**Not progressed for Detailed Appraisal.**

**Table 7. Option 5 – New Bus-Based Park & Ride in Oudenarde**

**OPTION 5 – NEW BUS-BASED PARK & RIDE IN OUDENARDE**

This option includes the development of a Park & Ride site to the east of Bridge of Earn, south of the A912, with connections to Perth and southbound towards Edinburgh. This option would increase connectivity, as well as help facilitate access to key services and markets. The site would be served by local bus services to create a connection between Bridge of Earn and the P&R site.



**Performance Against Transport Planning Objectives**

Criteria	Score	Rationale
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	✓ ✓	This option would improve access from Bridge of Earn for existing and future planned developments. Establishing a Park & Ride site would provide improved access to the strategic bus network. This would improve the level of service residents currently have to key services and markets in Perth, Fife, Edinburgh and links to Dundee. The location of the Park & Ride site in Oudenarde limits the journey time benefits for those in Bridge of Earn, and decreases direct access catchments via walking and cycling.

## OPTION 5 – NEW BUS-BASED PARK & RIDE IN OUDENARDE

TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	✓ ✓	The Park & Ride site at Oudendarde would provide an alternative mode for those currently travelling by car on the corridor to and from Fife/Edinburgh. A regular Park & Ride service to Perth and Edinburgh would improve the competitiveness of sustainable modes on the corridor and may make it an attractive mode for those travelling Perth to/from Edinburgh/Fife. Re-routing the existing local service to the site would provide access to those without a car.
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### Summary of Performance against STAG Criteria

Environment	✗	No material changes in traffic flows, associated emissions or biodiversity within the study area are expected from this option. Implementation would produce minor improvements on global and local air quality. Several impacts ranging from minor to moderate would also be produced during construction on visual amenity, water environments, geology, landscape and cultural heritage. However, assuming appropriate steps are followed with regards to design and mitigation, operation of the option would yield minor positive outcomes for visual amenity, water environments, geology, landscape and cultural heritage.
Safety	✓	<p>This option would provide a minor benefit for accidents as the Park &amp; Ride site would capture car trips to/from Perth. This would reduce the modal share of cars and vehicle kilometres which would reduce the level of accidents.</p> <p>A new Park &amp; Ride site would be built to minimum safety requirements with regards to entrances and exits, surveillance (CCTV of the car park and waiting area), information services, help buttons and lighting.</p> <p>This would represent a minor benefit for security.</p>
Economy	✓ ✓	<p>There are likely to be minor user benefits from improved journey times, public transport frequency, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and an improvement in traffic due to modal shift. These benefits would be offset against construction costs and, potentially, subsidy costs to support the services.</p> <p>There may be benefits related to the improved access to jobs and businesses in the area, by being better connected to labour</p>



## OPTION 5 – NEW BUS-BASED PARK & RIDE IN OUDENARDE

		<p>markets, businesses and tourism in Perth, Edinburgh, Fife and Dundee.</p> <p>This would represent a moderate positive benefit for Economy. Further consideration would be required at the Detailed Appraisal to quantify the economic impact of this option.</p>
Integration	✓ ✓	<p>This option supports transport integration by providing a site where users can switch from car to public transport. The facilities would be designed with transport integration at the centre of the proposal. This option may generate new ticketing options for public transport at Bridge of Earn, by connecting to the strategic coach network and real-time information boards at the site would enhance user information for public transport users. Active travel integration is weakened partly due the location in Oudenarde which may be outwith the walking/cycling distance of some residents.</p> <p>The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.</p> <p>A Park &amp; Ride site would align with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.</p>
Accessibility and Social Inclusion	✓	<p>There would be improvements to public transport access as the strategic coach links would remove the need to interchange to access Edinburgh and there would be improved services to Perth. The location at Oudenarde may be out of walking reach of many residents of Bridge of Earn but well located for the planned Oudenarde development and rerouting local services to the site would address this, however, there would be an additional interchange which would reduce the attractiveness for these users. The new Park &amp; Ride site may impact on existing long-distance services in Bridge of Earn and relocate that service to the Park &amp; Ride site which would represent a reduction in public transport coverage.</p> <p>Public transport improvements provide benefits to socially excluded groups, such as those without a car and the mobility impaired. Rerouting the local bus service to access the site would ensure access is available for those without a car.</p>



## OPTION 5 – NEW BUS-BASED PARK & RIDE IN OUDENARDE

Implementability Appraisal		
Technical Feasibility	Minor consideration	Note that the specific site location has not been confirmed. Technical risks associated with the construction of a new bus and coach based Park & Ride are expected to be a minor consideration with minimal departure from design standards.
Operational Feasibility	Moderate consideration	The requirement to work with bus and coach operators to rework new routes, potentially source additional bus and coach fleet and market the new services is a moderate consideration. This would require negotiation with operators regarding the level of service, where routing should be prioritised and investigations of any potential subsidies available, if required. Consideration would also have to be given to the impacts a new Park & Ride and services would have on communities currently served by the coach network and any changes to the timetable, in particular, the X56B which currently serves Bridge of Earn and could be impacted by the changes.
Affordability	Moderate consideration	Moderate consideration should be given to the costs associated with the construction of the Park & Ride site. Revenue costs for operating buses would vary depending on the model used; however, at the initial stages the patronage associated with this option is expected to be low to medium, with comparably low operating revenue. This option, therefore, may be reliant on public sector revenue funding as it may not be commercially viable to offer such a service. This public sector revenue funding may be in the form of an ongoing operating subsidy or a fund to initiate the service prior to developing a customer base and associated operating revenue.
Public Acceptability	Moderate consideration	The development of a P&R is considered to be positively received with 92% supporting the option, albeit from a survey with a very low response rate. The option would provide improved transport connections to Perth and southbound to Edinburgh (highlighted in the survey as being important connections), however, the impacts on the community of increased traffic in the vicinity should be considered further.



## OPTION 5 – NEW BUS-BASED PARK & RIDE IN OUDENARDE

### Select/Reject Rationale

This option would improve access from Bridge of Earn for existing and future planned developments. Establishing a Park & Ride site would provide improved access to the strategic bus network and would improve the level of service residents currently have to key services and markets in Perth, Fife, Edinburgh and links to Dundee. It would also make sustainable travel more attractive for potential users. This is a moderate benefit for both TPOs and for the economy and integration STAG criteria.

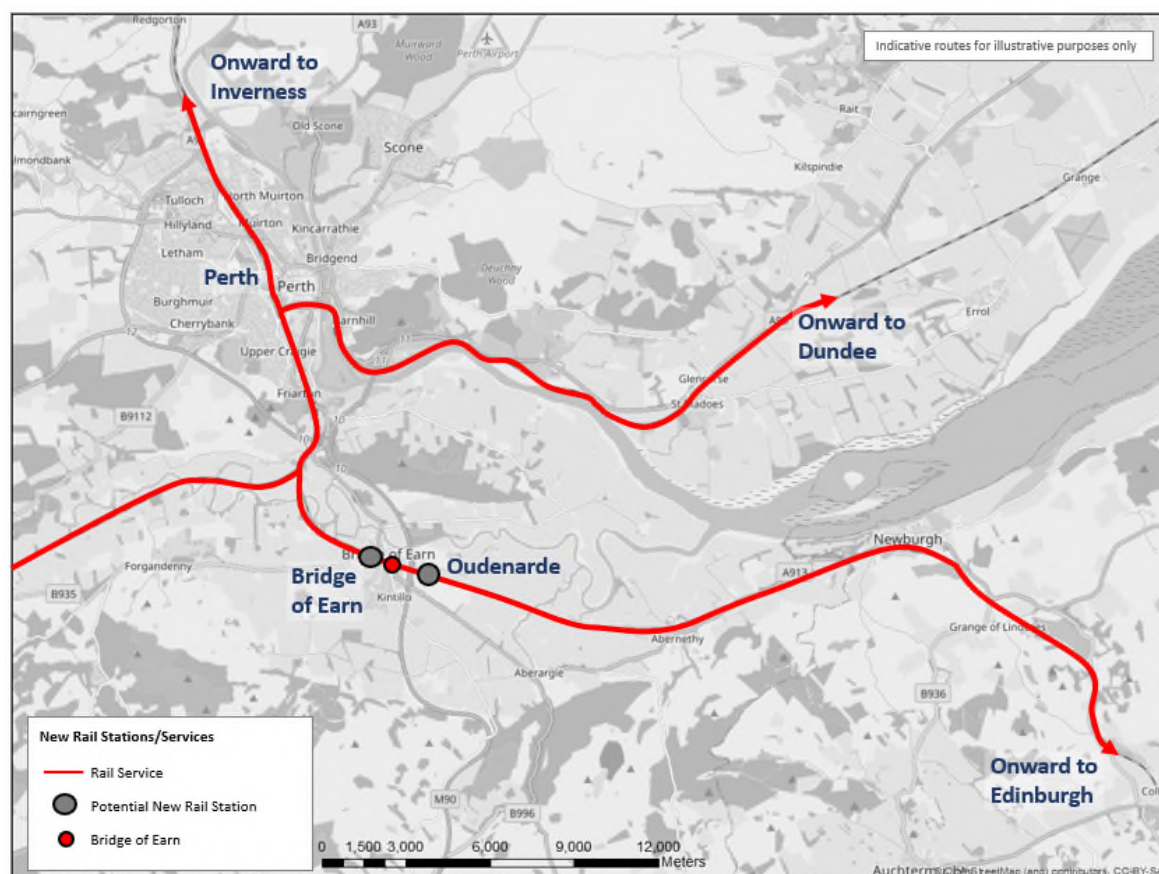
There are a number of considerations for implementation, including the requirement to work with bus and coach operators to rework new routes, potentially source additional vehicles for the bus and coach fleet, and market the new services; however, the benefits are such that this option is recommended for further investigation, during which these implementation issues can be looked at further.

**Progressed to Detailed Appraisal.**

**Table 8. Option 6 – New Railway Station at Oudenarde or Bridge of Earn**

**OPTION 6 – NEW RAILWAY STATION AT OUDENARDE OR BRIDGE OF EARN**

This option includes the opening of a train station at Oudenarde or Bridge of Earn and a stopping Edinburgh to Perth service in order to help increase public transport choice for trips to and from Oudenarde and Bridge of Earn, increase connectivity, as well as facilitate access to key services and markets.



**Performance Against Transport Planning Objectives**

Criteria	Score	Rationale
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	✓ ✓	This option would improve access from Bridge of Earn and for existing and planned developments. Opening a station would provide an additional mode option by facilitating access to the rail network. This would enhance journey times to key services and markets in Perth and Edinburgh. The direct access to rail services also increases the overall public transport frequency of service. Improved active travel connections could mitigate this



### OPTION 6 – NEW RAILWAY STATION AT OUDENARDE OR BRIDGE OF EARN

		impact and planned housing development in the Oudenarde vicinity would increase the local catchment.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	✓ ✓	<p>Direct journey times for access to Perth and Edinburgh city centres would be reduced for residents, business, and visitors. Access to the rail network also allows for onward travel to Scotland's other cities and beyond. If the location of the station is Oudenarde then there would be limits to the journey time benefits for those in Bridge of Earn which may make the option less competitive, however this option would also provide an alternative, competitive mode for those travelling into and out of Perth to use as a Park &amp; Ride service. The location close to the M90 would be attractive to those in West Perth wishing to travel south as well as residents of Abernethy and Newburgh.</p> <p>Rail is generally considered to be an attractive public transport mode, and has the potential to encourage modal shift from car. The addition of rail as a mode is likely to increase sustainable travel to and from Bridge of Earn for trips to locations along the line. There may, however, be some abstraction from existing bus services.</p>

### Summary of Performance against STAG Criteria

Environment	✗	A station at Bridge of Earn or Oudenarde would require construction of significant infrastructure in flat open agricultural land, with broadly adverse environmental effects, particularly on landscapes and visual amenity, as potential sites are overlooked by houses on the other side of the railway line. However, in respect of operation, assuming decreased use of private cars in favour of a more sustainable form of transport, there could also be
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## OPTION 6 – NEW RAILWAY STATION AT OUDENARDE OR BRIDGE OF EARN

		slight positive impacts on noise and vibration, air quality and physical fitness.
Safety	✓	Mode shift to rail would reduce vehicle kilometres as a new station would capture car trips from Bridge of Earn/Oudendarde and provide the opportunity to travel to Perth or Fife/Edinburgh by rail. A new rail station would be built to required safety requirements with regards to entrances and exits, surveillance (CCTV and on platform call and information services) and lighting. This option would have a minor positive impact on Safety.
Economy	✓ ✓	<p>There are likely to be moderate user benefits from improved journey times, public transport frequency, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and an improvement in traffic due to modal shift for new users. There would, however, be impacts on journey times for existing users due to the additional stop. Mode shift is considered to be moderate as it provides an additional mode and improved frequency to Edinburgh and Perth. The service may also be attractive for those travelling between West Perth and Edinburgh/Fife given the proximity to the M90. Previous modelling of a station at Oudendarde showed annual entries and exits of approximately 250,000 by 2025 assuming full build out of the Oudendarde development and an opening year of 2020.<sup>1</sup> Combined, these may produce a moderate overall benefit to transport economic efficiency.</p> <p>The addition of rail as a mode, would improve access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth and other towns and cities. Being closer to these markets is likely to increase the opportunity for investment in the area, and capitalise on businesses already there. Further consideration would be required at the Detailed Appraisal to quantify the economic impact of this option.</p>
Integration	✓ ✓	This option would provide a new mode, allowing integration of rail with active travel, car and by bus. The inclusion of a car park at the site would allow for Park &

<sup>1</sup>[https://www.sestran.gov.uk/wp-content/uploads/2017/01/20151201\\_Oudendarde\\_and\\_Newburgh\\_Study\\_Final\\_Report\\_Combined\\_v6.pdf](https://www.sestran.gov.uk/wp-content/uploads/2017/01/20151201_Oudendarde_and_Newburgh_Study_Final_Report_Combined_v6.pdf)



## OPTION 6 – NEW RAILWAY STATION AT OUDENARDE OR BRIDGE OF EARN

		<p>Ride and integration between car and rail. The additional mode adds new ticketing options for public transport by connecting to the rail network (including smartcard ticketing options and rail season tickets etc). Real-time rail information boards on the station platform would enhance user information for public transport users at the rail station.</p> <p>The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors and aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment. It does however, impact on the Scottish Government policy to reduce intercity journey times.</p>
Accessibility and Social Inclusion	✓	<p>There would be some overall change to the local public transport catchment, as some users may be more willing to walk further to a rail service than bus. However, the location of the station may place the site out of walking reach of many users. The addition of direct access to rail services would open up this mode to those previously put off or unable to use rail due to the need to drive or take the bus to other stations.</p> <p>Public transport improvements provide benefit to socially excluded groups, such as those without a car and the mobility impaired.</p>

### Implementability Appraisal

Technical Feasibility	Moderate consideration	Opening of the station from a technical perspective is likely to be feasible, with design standards being followed without departure. Building on an active line may represent some technical challenges, however, these will be understood and expected from recent station openings in Scotland.
Operational Feasibility	Major consideration	Physical operation of the service is feasible as the line is active, however, ScotRail have noted that the current single line section through Bridge of Earn is a constraint for them presently and that an extra service on the line would need reviewed for impact. In particular, the



## OPTION 6 – NEW RAILWAY STATION AT OUDENARDE OR BRIDGE OF EARN

		possibility of delivering the service without negatively impacting on the timetabling of existing services and increasing journey times would require investigations.
Affordability	Major consideration	There will be significant costs associated with reopening the station, which will need to be weighed against the overall benefits. Costs to be considered include land purchase, signalling, overhead line and track costs, station and platform builds and car park construction and maintenance. Recent station re-openings would provide a good understanding of the outturn costs of similar projects. Funding would be required from national government.
Public Acceptability	Moderate consideration	The opening of a station with connections to Edinburgh and Perth is considered to be well received and this is reflected in the 92% who were supportive or very supportive of the option, albeit from a survey with a very low response rate. In addition, this option was the second preferred option. Although there would be a positive impact on the community, consideration to existing passengers would also be considered as they would experience longer journey times due to the introduction of a new stop.

### Select/Reject Rationale

This option would improve access from Bridge of Earn and for nearby existing and planned developments. Opening a station would provide an additional mode option for travellers by facilitating access to the rail network. This would also enhance journey times to key services and markets in Perth and Edinburgh. This is a moderate benefit for both TPOs and for the Economy and Integration STAG criteria.

There are a number of considerations for implementation, including the construction of the station, timetabling on a single-track line, the impact additional journey time will have on existing passengers, and commitments to reduced inter-city journey times. The benefits, however, are such that this option is recommended for further investigation.

### Progressed to Detailed Appraisal



## 5. SUMMARY & RECOMMENDATIONS

### 5.1 Summary

- 5.1.1 The options identified in the Case for Change have been assessed qualitatively against the study TPOs and STAG Criteria. In addition, the deliverability of the options were considered against Feasibility, Affordability and Public Acceptability.
- 5.1.2 The outcome from the appraisal of the Core options is summarised in Table 9, with appraisal of the Complementary options summarised in Table 10.

### 5.2 Recommendations

- 5.2.1 This qualitative appraisal of the options has resulted in four options being recommended for further investigation as part of the Detailed Options Appraisal.
- 5.2.2 In the Case for Change, some options were identified as Complementary. These options were not considered to significantly impact on the TPOs as a standalone option but as a package they would contribute. These complementary options have been appraised and reported in Appendix B and those to be considered in the Detailed Appraisal as part of a package are also identified below.



Table 9. Summary of Appraisal – Core Options

OPTION	TPO1	TPO2	ENVIRONMENT	SAFETY	ECONOMY	INTEGRATION	ACCESS	TECH FEASIBILITY	OP FEASIBILITY	AFFORDABILITY	PUBLIC ACCEPTABILITY	PROGRESSED/ NOT PROGRESSED
<b>Option 1:</b> New and/or improved active travel routes	✓	✓	✓	✓	✓	✓ ✓	✓ ✓	Min	Min	Min	Min	<b>Complementary</b> Potential impact on behaviour change and modal shift is anticipated to be minor in comparison to the problems and issues identified in the Case for Change.
<b>Option 2:</b> Improve & increase local bus/services from Bridge of Earn and Oudenarde to destinations in Perth	✓ ✓	✓ ✓	✓	✓	✓	✓ ✓	✓ ✓	Min	Mod	Mod	Min	<b>Progressed</b> Positive performance against the TPOs and STAG criteria and relatively minor feasibility considerations.
<b>Option 3:</b> Improve and increase strategic bus and coach services on the corridor	✓ ✓	✓	✓	✓	✓	✓ ✓	✓	Min	Mod	Mod	Min	<b>Progressed</b> Positive performance against the TPOs and STAG criteria and the minor and moderate implementability considerations.



OPTION	TPO1	TPO2	ENVIRONMENT	SAFETY	ECONOMY	INTEGRATION	ACCESS	TECH FEASIBILITY	OP FEASIBILITY	AFFORDABILITY	PUBLIC ACCEPTABILITY	PROGRESSED/ NOT PROGRESSED
<b>Option 4:</b> New stations at Newburgh and Bridge of Earn/Oudendarde and operation of a shuttle service between Newburgh and Perth	✓	✓	X	✓	✓	✓ ✓	✓	Mod	Maj	Maj	Mod	<b>Not progressed</b> Due to the limited benefits associated with this option and the significant implementability considerations, this option is not selected
<b>Option 5:</b> New bus-based Park & Ride site at Oudendarde	✓ ✓	✓ ✓	X	✓	✓ ✓	✓ ✓	✓	Min	Mod	Mod	Mod	<b>Progressed</b> Option would provide improved access to the strategic bus network and would improve the level of service residents currently have to key services
<b>Option 6:</b> New station at Oudendarde or Bridge of Earn	✓ ✓	✓ ✓	X	✓	✓ ✓	✓ ✓	✓	Mod	Maj	Maj	Mod	<b>Progressed</b> Option would provide improved access to the strategic rail network and would improve the level of service residents currently have to key services

**Table 10. Summary of Appraisal - Complementary Options**

OPTION ID	MODE	OPTION	DESCRIPTION	SELECT/REJECT
7	Travel Planning	Car Sharing and Travel Plans	<p>Introduce initiatives to support more sustainable ways of travelling:</p> <ul style="list-style-type: none"> <li>• improve car sharing offering and other initiatives in the study area by incentivising car sharing;</li> <li>• promoting and encouraging more car clubs; and</li> <li>• support the development of business travel plans.</li> </ul>	Progressed - positive contribution to TPOs by providing access to car sharing/clubs which would improve access for communities with low car ownership.
8	Ticketing	Multi-modal ticketing system and optimise pricing structure	Create a multi-modal ticketing system and optimise pricing structure	Not progressed – this option is being progressed at a Scottish level by Transport Scotland. This option would contribute to the TPOs but is not appropriate for this study
9	Bus	Investment in bus fleet and facilities	Measures to increase the attractiveness of public transport including investment in new buses and live bus feed information at stops	Progressed – deliverability considerations would need to be addressed, however the option would support the core options and TPOs





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## Appendix A – Core Options



**Table 1. New and/or Improved Active Travel Routes**

Appraisal Summary Table	
Option number	1
Option name	New and/or Improved active travel routes
Option description	<p>Active travel improvements including:</p> <ul style="list-style-type: none"> <li>• Improve the Tay Corridor active link identified in the TayPlan for recreational journeys;</li> <li>• Develop the Perth to Bridge of Earn cycle route;</li> <li>• Junction improvements at the M90 slips (Junction 9) to benefit pedestrians and cyclists;</li> <li>• Cycle parking at bus stops/interchanges;</li> <li>• Public cycle hire; and</li> <li>• Improved signage.</li> </ul>
Background Information	
Geographic Context	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>

<b>Social Context</b>	Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel. Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the ‘Geographical Access’ domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.  In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.	
<b>Economic Context</b>	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).	
<b>Performance against Transport Planning Objectives</b>		
<b>TPOs</b>	<b>Scoring</b>	<b>Rationale for scoring</b>
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	<b>+1</b>	Improving connectivity to Perth will enhance opportunities for active mode use for access to healthcare, education, employment and training. Better information and physical active travel connectivity would enhance accessibility to key services and markets for residents. This would also benefit those using public transport, and have a positive impact for internal active travel movements as a by-product.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	<b>+1</b>	This has the potential to increase active travel within the local area, by connecting Bridge of Earn to Perth and neighbouring communities. By better connecting sustainable transport nodes throughout Bridge of Earn with active travel

			improvements, this would open up sustainable modes to more users, make them more competitive and increase the likelihood of their use.
<b>Performance against STAG criteria</b>			
<b>Criterion</b>	<b>Sub-criterion</b>	<b>Sub-criterion score</b>	<b>Rationale for scoring</b>
<b>Environment</b>	Noise and Vibration	0 but could be -1 depending on routes.	The construction and operation of infrastructure improvements to promote active travel and public transport would lead to changes in noise and vibration levels in the surrounding environment. The scale of potential impacts would depend on the physical location of any required infrastructure and proximity to sensitive receptors e.g. existing residential development. The option could reduce use of private vehicles particularly Single Occupancy Vehicles in the area, achieve a modal shift to sustainable modes of traffic and reduce noise and vibration for the long term. Further assessment is likely to be required.
	Global Air Quality (CO2)	+1	In terms of transport integration, active travel infrastructure would provide connectivity between neighbouring settlements and is anticipated to have a positive impact on global (carbon) emission reduction. Improvements regarding walking access to transport hubs and stops are also anticipated to have a positive impact.
	Local Air Quality (PM10 and NO2)	+1	In terms of transport integration, active travel infrastructure would provide connectivity between neighbouring settlements and is anticipated to have a positive impact on localised emission reduction and emissions reduction to the wide network by promoting sustainable mode of transport and modal shift. Improvements regarding walking access to transport hubs and stops are also anticipated to have a positive impact.
	Water quality, Drainage and Flood defence	-1 and +1	Upgrades to pedestrian and cycling routes are unlikely to have significant impacts on water quality, drainage and flood defence. Any impacts are likely to be easily mitigated, although further assessment will be required once the scope of the upgrades and improvements is known. Encouraging walking and cycling may result in a decrease in the overall use of private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.



	Geology	-1 potential for -2 (moderate cost impact) if remediation required	Minor upgrades to pedestrian and cycling routes are unlikely to have significant impacts on geology and soils, although appropriate mitigation including management of any waste soils will be required. Some limited site investigation may be required dependent on the scope of the upgrades and improvements.
	Biodiversity and Habitats	0	There would be no effects on biodiversity and habitats.
	Landscape	-1 and +1	The proposed improvements would have the potential for minor townscape improvements including signage and paving in settlements and improvements to rural route sections, including surfacing, gates and signage.
	Visual Amenity	+2 assuming successful design (integration / mitigation)	The proposed improvements would have the potential for minor visual improvements in the fabric of the area including paving, surfacing, gates and signage on routes; as well as encouraging people's appreciation of the landscape through increased access to the countryside.
	Agriculture and Soils	0	Travel improvements are unlikely to have a significant effect on agricultural land and soils.
	Cultural Heritage	+1	The proposed improvements would have the potential to encourage more access which would increase the opportunity to appreciate cultural heritage assets on the route from Bridge of Earn to Perth. Physical proposals may have the potential to affect as yet unknown archaeology, depending on location. Assuming suitable mitigation through site investigation, location and design there are unlikely to be significant effects on unknown cultural heritage.
	Physical Fitness	0, potentially +1 if option results in more walking	Improvements to active travel routes between settlements has the potential to encourage modal shift with people preferring active travel and public transport to private vehicles. This would result in increased walking and cycling which would lead to improvements in physical fitness. Increased use of longer sections of route between settlements for both commuting and recreation may have a more significant effect for a small number of people.

<b>Safety</b>	Accidents	+2	Better active travel infrastructure to Perth and at the M90 slip roads would improve safety cyclists and pedestrians. Better active travel infrastructure would improve safety within the town and has the potential to reduce the chance of accidents to a minor extent.
	Security	+1	Active travel improvements can include elements which improve security, such as lighting and visibility and appropriate mapping and signage gives information which ensures that users are aware of which routes are safe and secure to use
<b>Economy</b>	TEE	+1	There would be some minor user benefits from improved accessibility and small-scale changes to sustainable transport mode share. Through the delivery of a high quality improved active travel route from Perth to Abernethy, the proposal increases the attractiveness for recreational riding, and progresses the potential for a branded route encouraging cycling around the Tay which would bring an economic benefit The costs of improvements would be relatively low and generally this would result in a good benefit to cost ratio.
	Wider Economic Impacts	0	Benefits are likely to be local in nature and insubstantial, with little to no impact on the regional or national economy.
<b>Integration</b>	Transport	+2	This option is strongly focused on improving integration of active travel and public transport modes. Infrastructure, wayfinding and information aspects would all improve integration of these sustainable modes.
	Transport/Land Use	+2	By ensuring that development is well connected to public transport via active travel, this would support transport and land use integration. This would include effective information provision, which is particularly important for the proposed developments in the town, and capturing sustainable transport mode share from the outset. Improved connections to Oudenarde planned development - M90 slip improvements to Oudenarde.

	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
Accessibility	Community	+2	Effective connectivity to the public transport network via active travel and information has the potential to improve the catchment for access to these services. While not all users can travel far to public transport, for those who can walk or cycle further, this option may encourage them to do so. General local accessibility would also be improved through this option through the expansion of the active travel catchment of the area, by providing suitable active travel infrastructure and relevant information
	Comparative	+2	Ensuring that active travel links are provided to a good design standard may facilitate access by groups with mobility issues. By improving access to public transport, this would also help non-car owners and other groups which rely on public transport.
Implementability Appraisal			
Feasibility	Technical	This option is technically feasible with providing active travel solutions being a well-established part of transport planning. While some design issues may be raised upon detailed design, including the specification of the bridge over the railway which may not accommodate segregated cycling infrastructure (identified in the Perth Cycle Network Plan), the range of technical solutions available to practitioners is wide and effective. Funding and the cost of solutions would likely be the largest factor influencing improvements, along with any need to reallocate road space/ensure effective footway/cycleway space is available to meet standards.	
	Operational	No operational issues are anticipated, should effective design and construction be achievable. It is understood that both Perth & Kinross Council and Transport Scotland are working with the developer of the Oudenarde site to bring forward a signalised junction arrangement that includes provision for non-motorised users	
Affordability	Financial	Active travel improvements and information provision are relatively low cost compared to other transport solutions, and generally present positive benefit to cost ratios. Securing an appropriate funding stream would be key to delivery, however.	

<b>Public acceptability</b>	Generally, this option will be supported by the general public and 83% of respondents were supportive or very supportive of the measures, , albeit from a survey with a very low response rate. There may, however, be areas where road space or parking is impacted by cycle routes which may lead to a negative response. In particular, improved walking and cycling facilities to public transport stops, Abernethy and Perth were identified as popular amongst survey respondents.
<b>Taken forward to next stage? (Rationale for selection or rejection)</b>	
<p>Improvements to active travel connections would have a minor positive impact on both TPOs by improving access to services in Perth and providing connections to existing public transport services. This is also supported by the minor and moderate positive impacts against the STAG criteria. Although the option is scored positively, the potential impact on behaviour change and modal shift associated with this option is anticipated to be relatively minor in comparison to the problems and issues identified in the Case for Change. For this reason, this option is recommended as a Complementary Option which may support other interventions.</p> <p><b>Progressed to Detailed Appraisal as a Complementary Option.</b></p>	

**Table 2. Improve & Increase Local Bus/Services from Bridge of Earn and Oudenarde to Destinations in Perth**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	<b>2</b>
<b>Option name</b>	<b>Improve &amp; increase local bus/services from Bridge of Earn and Oudenarde to destinations in Perth</b>
<b>Option description</b>	Enhanced bus service provision to Perth to enable public transport access to key services and markets i.e. employment, places of study, and wider health care and leisure facilities, and to help increase public transport choice. The option includes the provision of greater frequencies of bus services and hours of operation, as well as improving connectivity with train services to help facilitate onward travel.
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>

<b>Social Context</b>	Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel. Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the ‘Geographical Access’ domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.  In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.	
<b>Economic Context</b>	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).	
<b>Performance against Transport Planning Objectives</b>		
<b>TPOs</b>	<b>Scoring</b>	<b>Rationale for scoring</b>
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	<b>+2</b>	This option would improve access for existing and new users in the area by introducing better frequency of service and by extending the period of operation. Connectivity to key employment sites in Perth would also be considered and would improve direct access to employment. These changes allow users more ready access to key services and markets in Perth, and allows for transfer to other transport options for other areas. By improving hours of operation, the potential to use public transport are expanded, by facilitating travel when it is most required. This responds to a need identified in the case for change.



TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	<b>+2</b>	This option has the potential to facilitate greater use of sustainable transport modes, by improving accessibility by bus to and from Bridge of Earn and potentially encouraging a shift from car to bus use. This option would increase accessibility in terms of destination choice, frequency and hours of operation perspective, which would be of benefit to residents, businesses and visitors and would reduce journey times by providing a direct connection to employment sites.
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### Performance against STAG criteria

Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
<b>Environment</b>	Noise and Vibration	0 but could be -1 depending on routes.	Impacts depend on the nature of proposals. Any significant service increase/ new routeing could introduce new noise sources if it generates bus traffic in areas close to sensitive noise receptors (i.e. residential areas) which are not currently served by bus or subject to significant noise impacts. Wider vehicle noise impacts may also be mitigated if the option results in modal shift from cars to bus.
	Global Air Quality (CO <sub>2</sub> )	0, potentially +1 if option achieves modal shift.	Potential for modal shift with people preferring public transport to private vehicles along proposed improved bus routes, resulting in decreased number of cars in the settlement centre of Perth and better global air quality. Potential for modal shift to more sustainable modes for longer distance journeys would also result in reduced emissions of CO <sub>2</sub> on the wider network.
	Local Air Quality (PM <sub>10</sub> and NO <sub>2</sub> )	0, potentially +1 if option achieves modal shift.	Designated Air Quality Management Areas have been declared in Perth, and are largely attributed to the impact of traffic. If the option resulted in reduced numbers of private cars on the proposed routes, then there is minor potential for positive effects on air quality in the immediate vicinity of these locations. Modal shift is a positive change.
	Water quality, Drainage and Flood defence	+1 (slight positive effect)	Improved bus services may encourage increased use of services with the potential for small changes in use of other modes such as private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.

	Geology	-1 potential for -2 (moderate cost impact) if remediation required	Improved bus services may encourage increased use of services with the potential for small changes in use of other modes such as private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.
	Biodiversity and Habitats	0	Improved public transport provision has little potential for effects to local habitats or species as construction and development works would be minimal or none. No significant effects on biodiversity and habitats are predicted from this option.
	Landscape	-1 and +1	No significant effects on landscape or townscape are predicted for this option, although a consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Visual Amenity	+2 assuming successful design (integration / mitigation)	No significant effects on visual amenity are predicted for this option, although a consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Agriculture and Soils	0	No significant effects on agriculture and soils are predicted for this option.
	Cultural Heritage	0	No significant effects on cultural heritage are predicted for this option
	Physical Fitness	0, potentially +1 if option results in more walking	Potential for modal shift with people preferring public transport to private vehicles would result in increased walking at either end of the journey
<b>Safety</b>	Accidents	+1	This option could produce a minor benefit to accident rates, resulting from the reduction of private cars on the road network. This reduction will be a modal shift from car to bus due to increased public transport coverage.
	Security	0	There are not anticipated to be any significant improvements to security associated with this option. Natural surveillance from increased passenger numbers at stops and on services could have a positive impact on real and perceived improvements to security and reduced waiting times and connections to make the journey, however, this is considered to be marginal.

<b>Economy</b>	TEE	+1	There are likely to be some user benefits from improved public transport frequency, improved journey times due to more direct services, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and a minor improvement in traffic due to modal shift. Combined these may produce a minor overall benefit to transport economic efficiency.
	Wider Economic Impacts	0	There may be minor benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth. Benefits however are likely to be local in nature with little impact on the national economy.
<b>Integration</b>	Transport	+1	There is likely to be some minor benefit to the integration with other transport services, including connections at Perth Rail and Bus Station, through greater frequency of service (potential to link journeys) and hours of operation (access to onward services). No notable change to ticketing, infrastructure, or information etc.
	Transport/Land Use	+2	The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.
	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
<b>Accessibility</b>	Community	+2	Public transport network coverage would be improved as connections to key employment sites would be considered the option includes extended hours enhancement.
	Comparative	+2	Public transport improvements also provide benefit to socially excluded groups, such as those without a car and the mobility impaired.

Implementability Appraisal		
<b>Feasibility</b>	Technical	No known technical feasibility issues. The option would be using existing infrastructure (i.e. bus stops and road).
	Operational	Enhancements to frequency and operational hours would incur additional operational cost, and should be considered in relation to demand at detailed appraisal.
<b>Affordability</b>	Financial	There would be additional capital expenditure related to the buses required to operate the enhanced frequency. Ongoing operational costs would also be required and if demand is not in line with operational costs, the service could require subsidy.
<b>Public acceptability</b>		It is anticipated that improvements to local bus services would be well received and this is supported by the public survey which shows that this would be the preferred option of 55% of respondents. Real time information at stops, services to Perth Royal Infirmary, environmental buses and an improved Sunday frequency were all considered improvements which would be supported by respondents.
Taken forward to next stage? (Rationale for selection or rejection)		
<p>This option would make a positive contribution to both of the study TPOs including providing improved connections to Perth and the existing rail network. The appraisal against the STAG criteria has identified no negative impacts and shows significant benefits associated with Integration and Accessibility.</p> <p>In terms of implementability, this option would require negotiations with bus operators and potentially an increased bus fleet. An ongoing operating subsidy may also be required. From a public acceptability perspective, this option was considered the preferred option by the majority of respondents.</p> <p>Given the positive performance against the TPOs and STAG criteria and relatively minor implementability considerations this option has been recommended for further appraisal.</p> <p><b>Progressed to Detailed Appraisal.</b></p>		

**Table 3. Improve and Increase Strategic Bus and Coach Services on the Corridor**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	<b>3</b>
<b>Option name</b>	<b>Improve and increase strategic bus and coach services on the corridor</b>
<b>Option description</b>	Enhanced strategic bus/coach provision southbound to Fife and Edinburgh and northbound to Perth and beyond to enable public transport access to key services and markets i.e. employment, places of study, and wider health care and leisure facilities, and to help increase public transport choice. The option includes the provision of greater frequencies of bus services and hours of operation and new connections.
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>

<b>Social Context</b>	Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel. Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.  In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.	
<b>Economic Context</b>	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).	
<b>Performance against Transport Planning Objectives</b>		
<b>TPOs</b>	<b>Scoring</b>	<b>Rationale for scoring</b>
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	<b>+2</b>	This option would improve access for existing and new users in the area by introducing a better frequency of service on the existing Perth to Edinburgh express service. Improved connectivity to Perth and Edinburgh would improve direct access to employment, education, health and training opportunities. These changes allow users more ready access to key services and markets in Perth and Edinburgh and connections to Dundee.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	<b>+1</b>	This option has the potential to facilitate greater use of sustainable transport modes, by improving accessibility by coach to and from Bridge of Earn and potentially encouraging a shift from car to bus use. This option would increase accessibility in terms of frequency, however southbound movements would have a minimal impact on the M90/A912 corridor between Perth and Bridge of Earn.

## Performance against STAG criteria

Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
<b>Environment</b>	Noise and Vibration	0 but could be -1 depending on routes.	No material changes in traffic flows on key roads in the study area are expected from this option as offset by modal shift / increased patronage of bus networks. However, any significant service increase/ new routeing could introduce new noise sources if it generates bus traffic in areas close to sensitive noise receptors (i.e. residential areas) which are not currently served by bus or subject to significant noise impacts. Wider vehicle noise impacts may also be mitigated if the option results in modal shift from cars to bus.
	Global Air Quality (CO2)	0, potentially +1 if option achieves modal shift.	Potential for modal shift with people preferring public transport to private vehicles along proposed improved bus routes, resulting in decreased number of cars in the settlement centres (i.e. Inchtute and Longforgan) and better global air quality. Potential for modal shift to more sustainable modes for longer distance journeys would also result in reduced emissions of CO <sub>2</sub> on the wider network.
	Local Air Quality (PM10 and NO2)	+1	Designated Air Quality Management Areas have been declared in Perth, and are largely attributed to the impact of traffic. If the option resulted in reduced numbers of private cars on the proposed routes, then there is minor potential for positive effects on air quality in the immediate vicinity of these locations. Modal shift is a positive change.
	Water quality, Drainage and Flood defence	+1	Improved bus services may encourage increased use of services with the potential for small changes in use of other modes such as private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.
	Geology	-1 potential for -2 (moderate cost impact) if remediation required	No significant effects on geology or geological/material resources are predicted for this option.



	Biodiversity and Habitats	0, potentially +1 if option achieves modal shift.	Improved public transport provision has little potential for effects to local habitats or species as construction and development works would be minimal or none. No significant effects on biodiversity and habitats are predicted from this option.
	Landscape	-1 and +1	No significant effects on landscape or townscape are predicted for this option, although a consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Visual Amenity	+2 assuming successful design (integration / mitigation)	No significant effects on visual amenity are predicted for this option, although a consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Agriculture and Soils	0 (neutral impact)	No significant effects on agriculture and soils are predicted for this option.
	Cultural Heritage	0, potentially +1 if option achieves modal shift.	No significant effects on cultural heritage are predicted for this option
	Physical fitness	0, potentially +1 if option results in more walking	Potential for modal shift with people preferring public transport to private vehicles would result in increased walking at either end of the journey
<b>Safety</b>	Accidents	+1	This option could produce a minor benefit to accident rates, resulting from the reduction of private cars on the strategic road network and therefore lower vehicle kilometres. This reduction will be a modal shift from car to coach.
	Security	0	There are not anticipated to be any significant improvements to security associated with this option. Natural surveillance from increased passenger numbers at stops and on services as well as requiring a reduced number of connections to complete a journey could have a positive impact on real and perceived improvements to security, however, this is considered to be marginal.

<b>Economy</b>	TEE	+1	There are likely to be some user benefits from improved public transport frequency, improved journey times due to more direct services, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and a minor improvement in traffic due to modal shift. Combined these may produce a minor overall benefit to transport economic efficiency.
	Wider Economic Benefits	0	There may be minor benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Edinburgh. Benefits however are likely to be local in nature with little to no impact on the national economy.
<b>Integration</b>	Transport	+1	An increased number of services and destinations would allow for more service integration, this would be a minor benefit for transport integration.
	Transport/Land Use	+2	The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.
	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
<b>Accessibility</b>	Community	+1	Public transport network coverage would be improved as the frequency of service would be significantly improved and there would be increased destinations served.
	Comparative	+1	Public transport improvements also provide benefit to socially excluded groups, such as those without a car and the mobility impaired which would be a positive impact on accessibility.

Implementability Appraisal		
Feasibility	Technical	There are no known technical feasibility issues as this option would be largely using existing infrastructure.
	Operational	Additional stops to an existing long-distance service would have minor impacts on deliverability, however, new destinations and services would require changes to existing bus timetables and additional coach fleets. This would require negotiation with operators regarding the level of service, where routing should be prioritised and investigations of any potential subsidies available. Additional stops and services may impact on existing passengers, in particular, where stops have to be removed to accommodate a new stop. Operationally, this would be a moderate consideration.
Affordability	Financial	The patronage associated with this option is expected to be low to medium at the outset, with comparably low operating revenue. This option, therefore, may be reliant on public sector revenue funding as it may not be commercially viable. This public sector revenue funding may be in the form of an ongoing operating subsidy or a fund to initiate the service prior to developing a customer base and associated operating revenue. In particular, the potential requirement to subsidise a national coach network may require investigation.
Public acceptability		It is anticipated that improving the frequency and destinations of coach services would be well received by the public and this is supported by the survey results showing 100% of respondents are supportive or very supportive of this option, albeit from a survey with a very low response rate.
Taken forward to next stage? (Rationale for selection or rejection)		
<p>This option would make a positive contribution to both of the study TPOs including providing improved connections to Perth and southbound to Fife and Edinburgh. The appraisal against the STAG criteria has identified no negative impacts and shows significant benefits associated with Integration and Accessibility.</p> <p>In terms of implementability, this option would require negotiations with coach operators and potentially an increased size of bus fleet. An ongoing operating subsidy may also be required depending on the level of service introduced. From a public acceptability perspective, this option was supported by the respondents, but consideration would have to be given to those who would potentially be impacted by a potential reduction in service provision elsewhere in order to increase the service for Bridge of Earn.</p> <p>Given the positive performance against the TPOs and STAG criteria and the minor and moderate implementability considerations, this option has been recommended for further appraisal.</p> <p><b>Progressed to Detailed Appraisal.</b></p>		

**Table 4. New Stations at Newburgh and Bridge of Earn/Oudenarde and Operation of a Shuttle Service between Newburgh and Perth**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	<b>4</b>
<b>Option name</b>	<b>New stations at Newburgh and Bridge of Earn/Oudenarde and operation of a shuttle service between Newburgh and Perth</b>
<b>Option description</b>	This option includes the reopening of a train station in Newburgh and Bridge of Earn or Oudenarde and operation of a shuttle service between Newburgh and Perth order to help increase public transport choice for trips to and from Newburgh, Bridge of Earn/Oudenarde and Bridge of Earn, increase connectivity, as well as help facilitate access to key services and markets.
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>
<b>Social Context</b>	<p>Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel. Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in</p>

	<p>Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.</p> <p>In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.</p>	
Economic Context	<p>The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).</p>	
Performance against Transport Planning Objectives		
TPOs	Scoring	Rationale for scoring
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	+1	This option would improve access from the study area for existing and future developments. Opening a station would provide an additional mode option by facilitating access to the rail network. This would enhance journey times to key services and markets in Perth. A direct connection to Perth is already served by local bus however this option would provide access to the wider rail network. The direct access to rail services also increases the overall public transport frequency of service. The location of the station in Oudenarde would limit the journey time benefits and catchments via walking and cycling.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	+1	Direct journey times along the rail line to Perth would be reduced for residents, business, and visitors and would supplement the local bus service. The location of the station in Oudenarde would limit the journey time benefits catchments via walking and cycling but rail is generally considered to be an attractive public transport mode with a greater propensity to travel to access the network, and has the potential to encourage modal shift from car.
Performance against STAG criteria		

Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
<b>Environment</b>	Noise and Vibration	0 but could be -1 depending on routes.	Potential for noise impact during construction and operation. Significant new infrastructure is likely to introduce new noise sources that may pass close to residential areas through locations that are not currently subject to significant noise impacts (although impact depends on ambient noise levels and level of vehicle movements already occurring). Changes in noise levels could be anticipated as a result from increased routeing of private car / buses along existing routes. The option would change traffic volumes into and out of Bridge of Earn/Oudendarde via private car, promote modal shift to train connection and reduce congestion. Development of a station at Newburgh has been assessed separately and effects are very dependent on location. Further assessment is likely to be required.
	Global Air Quality (CO2)	+1	If the option achieved a modal shift to sustainable modes for longer distance journeys it would result in reduced emission of CO <sub>2</sub> and other pollutants on the wider network. Minor benefits to global air quality. Development of a station at Newburgh has been assessed separately and effects are very dependent on location
	Local Air Quality (PM10 and NO2)	+1	Designated Air Quality Management Areas have been declared in Perth, and are largely attributed to the impact of traffic. If the option resulted in reduced numbers of private cars on the proposed routes, then there is minor potential for positive effects on air quality in the immediate vicinity of these locations. Modal shift is a positive change. Development of a station at Newburgh has been assessed separately and effects are very dependent on location
	Water quality, Drainage and Flood defence	-1	The proposed sites at Bridge of Earn and Oudendarde lie on the Bridge of Earn (bedrock) groundwater body - classified by SEPA as of 'good' status in 2018. The nearest surface water body to the proposed Oudendarde site is the River Earn ('good' status) approximately 600m north from the site. The nearest surface water to the proposed Bridge of Earn site is the Deich Burn ('moderate' status), a tributary to the River Earn. With appropriate SUDS design and associated mitigation/ compliance with SEPA and Scottish Water guidance and authorisations, constructing a station at either site is unlikely to have significant adverse effects on water quality and drainage. According to SEPA's Flood Risk Map, neither site lies in an area at high risk from river, surface water or coastal flooding, although the Bridge of

			Earn site is situated near to Deich Burn and further assessment of flood risk will be required here. Development of a station at Newburgh has been assessed separately and effects are very dependent on location
	Geology	-1 potential for - 2 (moderate cost impact) if remediation required	Geology likely to comprise superficial alluvium or raised tidal flat deposits (silt and clay) overlying sandstone of the Glenvale Sandstone Formation. Bedrock is anticipated to be at least 30m below ground level. Made ground is likely to be present at the Bridge of Earn site due to the former development of the former station. With adequate mitigation in place it is anticipated that the construction of a station at either site would not have significant adverse effects on geology and soils. However, the brownfield nature of the Bridge of Earn site means that a comprehensive site investigation will be required to inform on ground conditions relating to contamination and allow detailed geotechnical design, potentially leading to a requirement for remedial action. Development of a station at Newburgh has been assessed separately and effects are very dependent on location
	Biodiversity and Habitats	-1	There would be a level of habitat loss as a result of any new infrastructure. It is assumed that appropriate surveys for habitats and protected species would be undertaken as part of detailed route design and recommended mitigation integrated into the designs such that potential impacts would be reduced to an acceptable level. Development of a station at Newburgh has been assessed separately and effects are very dependent on location
	Landscape	-1 and +1	Development of a station with platform(s) and potentially bridge, shelters, car parking and lighting at Bridge of Earn or Oudenarde is unlikely to lead to significant loss or fragmentation of rural fringe character in the Broad Valley Lowlands LCT or on the townscape of the settlements. Both potential areas lie on the edge of the settlements on flat, open agricultural land. The development may provide the opportunity to create a positive entrance feature and the established tree and scrub could be incorporated into further measures for landscape integration on the rural edge. Development of a station at Newburgh has been assessed separately and effects are very dependent on location. An overall reduction in vehicular traffic may lead to a small positive effect on townscape in urban areas at peak traffic times.
	Visual Amenity	+2 assuming successful design	The potential sites are overlooked by houses on the other side of the railway line. There is the potential for minor to moderate adverse visual effects on residents due to alteration of the rural outlook including loss of existing trees and introduction of station



		(integration / mitigation)	infrastructure and night time lighting. Development of a station at Newburgh has been assessed separately and effects are very dependent on location.
	Agriculture and Soils	-1	Land Capability for Agricultural data from the MacAulay Land Use Research Institute suggests that the Oudenarde site comprises Class 3.2 agricultural land, which is "land capable of average production though high yields of barley, oats and grass". The Bridge of Earn site is located within urban land and does not have agricultural capability. The overall impact on agriculture and soils is considered to be low, although there is some potential loss of agricultural land at Oudenarde. Development of a station at Newburgh has been assessed separately and effects are very dependent on location
	Cultural Heritage	0	There are no nearby national or local designations. The proposals have the potential to affect as yet unknown archaeology, depending on location. Assuming suitable mitigation through site investigation, location and design there are unlikely to be significant effects on cultural heritage. Development of a station at Newburgh has been assessed separately and effects are very dependent on location.
	Physical fitness	0, potentially +1 if option results in more walking	Potential for modal shift with people preferring public transport to private vehicles would result in increased walking at either end of the journey. However, facilities for parking would result in car use for some travellers with no net benefit
<b>Safety</b>	Accidents	+1	This option would provide a minor benefit for accidents as the new station would capture car trips from Bridge of Earn and Newburgh and provide the opportunity to travel to Perth by rail. This would reduce the modal share of cars and vehicle kilometres which would reduce the level of accidents.
	Security	+1	A new rail station would be built to minimum safety requirements with regards to entrances and exits, surveillance (CCTV and on platform call and information services) and lighting.

<b>Economy</b>	TEE	+1	There are likely to be minor user benefits from improved journey times, public transport frequency, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and an improvement in traffic due to modal shift. Mode shift is considered to be minor as although it provides an additional mode it doesn't improve the public transport coverage significantly as bus currently serves this route. To deliver this option there would be significant costs, including the construction of two stations and potentially the requirement for additional rolling stock and train operating staff. Combined, these may produce a minor overall benefit to transport economic efficiency.
	Wider Economic Impacts	+1	There may be minor benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth. Benefits however are likely to local in nature with little impact on the national economy.
<b>Integration</b>	Transport	+2	This option would provide a new mode, allowing integration of rail with active travel, car and by bus. The additional mode adds new ticketing options for public transport at Bridge of Earn, by connecting to the rail network (including smartcard ticketing options and rail season tickets etc) and real-time rail information boards on the station platform would enhance user information for public transport users at the rail station. Active travel integration would be weakened partly with an Oudenarde location however planned housing and therefore population growth at Oudenarde may balance this.
	Transport/Land Use	+2	The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.
	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.

Accessibility	Community	+1	There would be some overall change to the local public transport catchment, as some users may be more willing to walk further to a rail service than bus. However, the station may still place the site out of walking reach of many users. The addition of direct access to rail services would open up this mode to those previously put off or unable to use rail due to the need to drive or take the bus to other stations.
	Comparative	+1	Public transport improvements provide benefit to socially excluded groups, such as those without a car and the mobility impaired.
Implementability Appraisal			
Feasibility	Technical	New/re-opening of the station from a technical perspective is likely to be feasible, with design standards being followed without departure. Building on an active line may represent some technical challenges, however, these will be understood and expected from recent station openings in Scotland.	
	Operational	Physical operation of the shuttle service is feasible as the line is active, however, Scotrail have noted that the current single line section through Bridge of Earn is a constraint for them presently and that an extra service on the line would need reviewed for impact. In particular, the possibility of delivering the service without negatively impacting on the timetabling of existing services would require investigations. In addition, there may be a requirement for additional rolling stock and staff to deliver this service.	
Affordability	Financial	There would be significant costs associated with reopening/new stations and operating a new service (additional rolling stock and staff), which would need to be weighed against the overall benefits. Funding would be required from national government.	
Public acceptability		Improved connections to Perth and Newburgh are considered to be positively received with 92% supporting the option, albeit from a survey with a very low response rate. However, the requirement to travel to Perth to travel southbound may not be considered by the community to address the problems identified in the Case for Change and is therefore a moderate consideration.	
Taken forward to next stage? (Rationale for selection or rejection)			

This option would provide a rail link between Newburgh, Bridge of Earn/Oudenarde and Perth and this represents a minor positive impact for both TPOs. The benefits associated with the option are limited as the shuttle option would not provide a link southbound to amenities and opportunities identified in TPO1 and although an additional mode would be available, the route is currently served by a local bus.

In terms of implementability, there are a number of considerations including the timetabling of an additional service (on a single track), stabling, and rolling stock availability to deliver the service.

Due to the limited benefits associated with this option and the significant implementability considerations, this option is not recommended for further investigation.

**Not progressed for Detailed Appraisal.**

**Table 5. New bus based park & ride site south of A912**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	5
<b>Option name</b>	<b>New bus based park &amp; ride site south of A912</b>
<b>Option description</b>	This option includes the development of a Park and Ride site to the east of Bridge of Earn, south of the A912, with connections to Perth and southbound towards Edinburgh. This option would increase connectivity, as well as help facilitate access to key services and markets. The site would be served by local bus services to create a connection between Bridge of Earn and the P&R site.
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>
<b>Social Context</b>	Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel. Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none

	of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.  In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.	
Economic Context	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).	
Performance against Transport Planning Objectives		
TPOs	Scoring	Rationale for scoring
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	+2	This option would improve access from Bridge of Earn for existing and future planned developments. Establishing a park and ride site would provide improved access to the strategic bus network. This would improve the level of service residents currently have to key services and markets in Perth, Fife, Edinburgh and links to Dundee. The location of the park and ride site in Oudenarde limits the journey time benefits for those in Bridge of Earn, and decreases direct access catchments via walking and cycling.
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	+2	The park and ride site at Oudenarde would provide an alternative mode for those currently travelling by car on the corridor to and from Fife/Edinburgh. A regular park and ride service to Perth and Edinburgh would improve the competitiveness of sustainable modes on the corridor and may make it an attractive mode for those travelling into Perth from Edinburgh/Fife. Re-routing the existing local service to the site would provide access to those without a car.

## Performance against STAG criteria

Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
<b>Environment</b>	Noise and Vibration	0 but could be -1 depending on routes.	The construction and operation of new park and ride sites could lead to changes in noise and vibration levels in the surrounding environment. The scale of potential impacts would depend on the physical location of the park and ride site and proximity to sensitive receptors e.g. existing residential development. Changes in noise levels could also result from increased routeing of buses and coaches along existing routes. The option would change traffic volumes around the Bridge of Earn via private car and would promote modal shift to bus / coach connection with Perth City Centre and reduce congestion. Further assessment is likely to be required once details are known.
	Global Air Quality (CO2)	+1	Potential for modal shift with people preferring public transport to private vehicles along proposed improved bus routes, resulting in decreased number of cars in the settlement centres (Bridge of Earn, Perth etc) and better global air quality. Potential for modal shift to more sustainable modes for longer distance journeys would also result in reduced emissions of CO <sub>2</sub> on the wider network.
	Local Air Quality (PM10 and NO2)	+1	Designated Air Quality Management Areas have been declared in Perth, and are largely attributed to the impact of traffic. If the option resulted in reduced numbers of private cars on the proposed routes, then there is minor potential for positive effects on air quality in the immediate vicinity of these locations. Modal shift is a positive change.
	Water quality, Drainage and Flood defence	-2	The proposed P&R site south of the A912 lies on the Bridge of Earn (bedrock) groundwater body - classified by SEPA as of 'good' status in 2018. The nearest surface water body to the site is an unnamed tributary to the River Earn ('good' status) which runs south to north adjacent to the south of the site. With appropriate SUDS design and associated mitigation/ compliance with SEPA and Scottish Water guidance and authorisations, constructing a P&R facility at this location is unlikely to have significant adverse effects on water quality and drainage. However, according to SEPA's Flood Risk Map, the site lies in an area at high risk from surface water flooding and Google Streetview (image capture March 2019) shows areas of standing water.



			Therefore, a Flood Risk Assessment and consideration of flood risk with respect to drainage and SUDS design will be required.
	Geology	-1 potential for -2 (moderate cost impact) if remediation required	Geology likely to comprise raised tidal flat deposits (silt and clay) overlying sandstone of the Glenvale Sandstone Formation. Bedrock is likely to be greater than 30m below ground level. With adequate mitigation in place it is anticipated that the construction of a P&R at the site would not have significant adverse effects on geology and soils. However, ground investigation will be required to inform on ground conditions relating to any contamination and allow detailed earthworks and geotechnical design.
	Biodiversity and Habitats	0	Improved public transport provision has little potential for effects to local habitats or species as construction and development works would be minimal or none. No significant effects on biodiversity and habitats are predicted from this option.
	Landscape	-1 and +1	Development of a P&R facility with extensive hard standings, shelters and lighting east of the M90 and south of the A912 and Oudenarde would lead to minor loss and fragmentation of rural edge character in the Broad Valley Lowlands LCT east of Bridge of Earn. Depending on the location, the two intersecting roads and overbridge embankments with planting could provide an opportunity for landscape integration. Assuming that further landform and/or planting are used to screen/ integrate the P&R into the wider landscape, effects can be largely mitigated. An overall reduction in vehicular traffic may lead to a small positive effect on townscape in urban areas at peak traffic times.
	Visual Amenity	+2 assuming successful design (integration / mitigation)	The site is screened from Bridge of Earn by the M90 embankment and separated from the dwellings in Oudenarde by the railway and a field with tree planting belts. Therefore, visual effects will be minor at most.
	Agriculture and Soils	-1	Land Capability for Agricultural data from the MacAulay Land Use Research Institute suggests that the proposed P&R site comprises Class 3.2 agricultural land, which is "land capable of average production though high yields of barley, oats and grass". Development of the P&R site will lead to loss of agricultural land, however the overall impact on agriculture and soils is considered to be low.

	Cultural Heritage	0	There are no nearby national or local designations. The proposals have the potential to affect as yet unknown archaeology, depending on location. Assuming suitable mitigation through site investigation, location and design there are unlikely to be significant effects on cultural heritage.
	Physical Fitness	0, potentially +1 if option results in more walking	Potential for modal shift with people preferring public transport to private vehicles would result in increased walking at either end of the journey
<b>Safety</b>	Accidents	+1	This option would provide a minor benefit for accidents as the park and ride site would capture car trips to/from Perth. This would reduce the modal share of cars and vehicle kilometres which would reduce the level of accidents.
	Security	+1	A new park and ride site would be built to minimum safety requirements with regards to entrances and exits, surveillance (CCTV of the car park and waiting area), information services, help buttons and lighting. This would represent a minor benefit for security.
<b>Economy</b>	TEE	+2	There are likely to be minor user benefits from improved journey times, public transport frequency, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and an improvement in traffic due to modal shift. These benefits would be offset against construction costs and, potentially, subsidy costs to support the services. Combined these may produce a minor overall benefit to transport economic efficiency.
	Wider Economic Impacts	+2	There may be benefits related to the improved access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth, Edinburgh, Fife and Dundee.
<b>Integration</b>	Transport	+2	This option supports transport integration by providing a site where users can switch from car to public transport. The facilities would be designed with transport integration at the centre of the proposal. This option may generate new ticketing options for public transport at Bridge of Earn, by connecting to the strategic coach network and real-time information boards at the site would enhance user information for public transport users. Active travel integration is weakened partly due the location in Oudenarde compared to a more central location.

	Transport/Land Use	+2	The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.
	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
<b>Accessibility</b>	Community	+1	There would be improvements to public transport access as the strategic coach links would remove the need to interchange to access Edinburgh and there would be improved services to Perth. The location at Oudenarde may be out of walking reach of many residents of Bridge of Earn but well located for the planned Oudenarde development and rerouting local services to the site would address this, however, there would be an additional interchange which would reduce the attractiveness for these users. The new park and ride site may impact on existing long-distance services in Bridge of Earn and relocate that service to the park and ride site which would represent a reduction in public transport coverage.
	Comparative	+1	Public transport improvements provide benefit to socially excluded groups, such as those without a car and the mobility impaired. Rerouting the local bus service to access the site would ensure access is available for those without a car.
<b>Implementability Appraisal</b>			
<b>Feasibility</b>	Technical	Note that the specific site location has not been confirmed. Technical risks associated with the construction of a new bus and coach based park and ride are expected to be a minor consideration with minimal departure from design standards.	
	Operational	The requirement to work with bus and coach operators to rework new routes, potentially source additional bus and coach fleet and market the new services is a moderate consideration. This would require negotiation with operators regarding the level of service, where routing should be prioritised and investigations of any potential subsidies available, if required. Consideration would also have to be given to the impacts a new park and ride and services would have on communities currently served by the coach network and any changes to the timetable, in particular, the X56B which currently serves Bridge of Earn and could be impacted by the changes.	

<b>Affordability</b>	Financial	Moderate consideration should be given to the costs associated with the construction of the park and ride site. Revenue costs for operating buses would vary depending on the model used; however, at the initial stages the patronage associated with this option is expected to be low to medium, with comparably low operating revenue. This option, therefore, may be reliant on public sector revenue funding as it may not be commercially viable to offer such a service. This public sector revenue funding may be in the form of an ongoing operating subsidy or a fund to initiate the service prior to developing a customer base and associated operating revenue.
<b>Public acceptability</b>		The development of a P&R is considered to be positively received with 92% supporting the option, albeit from a survey with a very low response rate. The option would provide improved transport connections to Perth and southbound to Edinburgh (highlighted in the survey as being important connections), however, the impacts on the community of increased traffic in the vicinity should be considered further.
<b>Taken forward to next stage? (Rationale for selection or rejection)</b>		
<p>This option would improve access from Bridge of Earn for existing and future planned developments. Establishing a Park &amp; Ride site would provide improved access to the strategic bus network and would improve the level of service residents currently have to key services and markets in Perth, Fife, Edinburgh and links to Dundee. It would also make sustainable travel more attractive for potential users. This is a moderate benefit for both TPOs and for the economy and integration STAG criteria.</p> <p>There are a number of considerations for implementation, including the requirement to work with bus and coach operators to rework new routes, potentially source additional vehicles for the bus and coach fleet, and market the new services; however, the benefits are such that this option is recommended for further investigation, during which these implementation issues can be looked at further.</p> <p><b>Progressed to Detailed Appraisal.</b></p>		

**Table 6. New station at Oudenarde or Bridge of Earn**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	<b>6</b>
<b>Option name</b>	<b>New station at Oudenarde or Bridge of Earn</b>
<b>Option description</b>	This option includes the opening of a train station at Oudenarde or Bridge of Earn and a stopping Edinburgh to Perth service in order to help increase public transport choice for trips to and from Oudenarde and Bridge of Earn, increase connectivity, as well as facilitate access to key services and markets.
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>
<b>Social Context</b>	<p>Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel. Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth</p>

	<p>City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.</p> <p>In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.</p>	
<b>Economic Context</b>	<p>The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).</p>	
<b>Performance against Transport Planning Objectives</b>		
<b>TPOs</b>	<b>Scoring</b>	<b>Rationale for scoring</b>
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	<b>+2</b>	<p>This option would improve access from Bridge of Earn and for existing and planned developments. Opening a station would provide an additional mode option by facilitating access to the rail network. This would enhance journey times to key services and markets in Perth and Edinburgh. The direct access to rail services also increases the overall public transport frequency of service. If the location of the station is Oudenarde then there would be limits to the journey time benefits and limit the catchment via walking and cycling. Improved active travel connections could mitigate this impact and planned housing development in the Oudenarde vicinity would increase the local catchment.</p>

TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	+2	Direct journey times for access to Perth and Edinburgh would be reduced for residents, business, and visitors. Access to the rail network also allows for onward travel to Scotland's other cities and beyond. If the location of the station is Oudenarde then there would be limits to the journey time benefits for those in Bridge of Earn which may make the option less competitive, however this option would also provide an alternative, competitive mode for those travelling into and out of Perth to use as a Park & Ride service. The location close to the M90 would be attractive to those in West Perth wishing to travel south as well as residents of Abernethy and Newburgh. This option would also provide an alternative, competitive mode for those travelling into and out of Perth to use as a park and ride service.
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#### Performance against STAG criteria

Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
<b>Environment</b>	Noise and Vibration	0 but could be -1 depending on routes.	The construction and operation of updated /new structures to support option 6 could lead to changes in noise and vibration levels in the surrounding environment. The scale of potential impacts would depend on the physical location of the permanent sites and their proximity to sensitive receptors e.g. existing residential developments at Bridge of Earn and Oudenarde (although impacts depends on ambient noise levels and level of vehicle movements already occurring). Changes in noise levels could be anticipated as a result from increased routeing of private car / buses along existing routes. The option would change traffic volumes into and out of Kintillo via private car, promote modal shift to train connection and reduce congestion. Further assessment is likely to be required.
	Global Air Quality (CO2)	+1	If the option achieved a modal shift to sustainable modes for longer distance journeys it would result in reduced emission of CO <sub>2</sub> and other pollutants on the wider network. Minor benefits to global air quality.
	Local Air Quality (PM10 and NO2)	+1	Designated Air Quality Management Areas have been declared in Perth, and are largely attributed to the impact of traffic. If the option resulted in reduced numbers of private cars



			on the proposed routes, then there is minor potential for positive effects on air quality in the immediate vicinity of these locations. Modal shift is a positive change.
	Water quality, Drainage and Flood defence	-1	The proposed sites at Bridge of Earn and Oudenarde lie on the Bridge of Earn (bedrock) groundwater body - classified by SEPA as of 'good' status in 2018. The nearest surface water body to the proposed Oudenarde site is the River Earn ('good' status) approximately 600m north from the site. The nearest surface water to the proposed Bridge of Earn site is the Deich Burn ('moderate' status), a tributary to the River Earn. With appropriate SUDS design and associated mitigation/ compliance with SEPA and Scottish Water guidance and authorisations, constructing a station at either site is unlikely to have significant adverse effects on water quality and drainage. According to SEPA's Flood Risk Map, neither site lies in an area at high risk from river, surface water or coastal flooding, although the Bridge of Earn site is situated near to Deich Burn and further assessment of flood risk will be required here.
	Geology	-1 potential for -2 (moderate cost impact) if remediation required	Geology likely to comprise superficial alluvium or raised tidal flat deposits (silt and clay) overlying sandstone of the Glenvale Sandstone Formation. Bedrock is anticipated to be at least 30m below ground level. Made ground is likely to be present at the Bridge of Earn site due to the former development of the former station. With adequate mitigation in place it is anticipated that the construction of a station at either site would not have significant adverse effects on geology and soils. However, the brownfield nature of the Bridge of Earn site means that a comprehensive site investigation will be required to inform on ground conditions relating to contamination and allow detailed geotechnical design, potentially leading to a requirement for remedial action.
	Biodiversity and Habitats	-1	There would be a level of habitat loss as a result of any new infrastructure. It is assumed that appropriate surveys for habitats and protected species would be undertaken as part of detailed route design and recommended mitigation integrated into the designs such that potential impacts would be reduced to an acceptable level.
	Landscape	-1 and +1	Development of a station with platform(s) and potentially bridge, shelters, car parking and lighting at Bridge of Earn or Oudenarde is unlikely to lead to significant loss or fragmentation of rural fringe character in the Broad Valley Lowlands LCT or on the townscape of the settlements. Both potential areas lie on the edge of the settlements on flat, open agricultural land. The development may provide the opportunity to create a

			positive entrance feature and the established tree and scrub could be incorporated into further measures for landscape integration on the rural edge. An overall reduction in vehicular traffic may lead to a small positive effect on townscape in urban areas at peak traffic times.
	Visual Amenity	+2 assuming successful design (integration / mitigation)	The potential sites are overlooked by houses on the other side of the railway line. There is the potential for minor to moderate adverse visual effects on residents due to alteration of the rural outlook including loss of existing trees and introduction of station infrastructure and night time lighting.
	Agriculture and Soils	-1	Land Capability for Agricultural data from the MacAulay Land Use Research Institute suggests that the Oudenarde site comprises Class 3.2 agricultural land, which is "land capable of average production though high yields of barley, oats and grass". The Bridge of Earn site is located within urban land and does not have agricultural capability. The overall impact on agriculture and soils is considered to be low, although there is some potential loss of agricultural land at Oudenarde.
	Cultural Heritage	0	There are no nearby national or local designations. The proposals have the potential to affect as yet unknown archaeology, depending on location. Assuming suitable mitigation through site investigation, location and design there are unlikely to be significant effects on cultural heritage.
	Physical Fitness	0, potentially +1 if option results in more walking	Potential for modal shift with people preferring public transport to private vehicles would result in increased walking at either end of the journey. However, facilities for parking would result in car use for some travellers with no net benefit
<b>Safety</b>	Accidents	+1	This option would provide a minor benefit for accidents as the new station would capture car trips from Bridge of Earn and provide the opportunity to travel to Perth, Edinburgh and beyond by rail. This would reduce the modal share of cars and vehicle kilometres which would reduce the level of accidents.
	Security	+1	A new rail station would be built to minimum safety requirements with regards to entrances and exits, surveillance (CCTV and on platform call and information services) and lighting.

<b>Economy</b>	TEE	+2	There are likely to be moderate user benefits from improved journey times, public transport frequency, changes in trip mode to public transport, improved access to key locations by public transport (including reduced car dependency), and an improvement in traffic due to modal shift for new users. There would, however, be impacts on journey times for existing users due to the additional stop. Mode shift is considered to be moderate as it provides an additional mode and improved frequency to Edinburgh and Perth. Combined these may produce a moderate overall benefit to transport economic efficiency.
	Wider Economic Impacts	+2	The addition of rail as a mode, will improve access to jobs and businesses in the area, by being better connected to labour markets, businesses and tourism in Perth and other towns and cities. Being closer to these markets is likely to increase the opportunity for investment in the area, and capitalise on businesses already there.
<b>Integration</b>	Transport	+2	This would provide a new mode, allowing integration of rail with active travel, car and by bus. The inclusion of a car park at the site would allow for park and ride and integration between car and rail. The additional mode adds new ticketing options for public transport at Bridge of Earn, by connecting to the rail network (including smartcard ticketing options and rail season tickets etc). Real-time rail information boards on the station platform would enhance user information for public transport users at the rail station.
	Transport/Land Use	+2	The option integrates transport and land use by providing connections to both existing and new development planned in the study area including Oudenarde, giving enhanced public transport access to residents, businesses, and visitors.
	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.

<b>Accessibility</b>	Community	+1	There would be some overall change to the local public transport catchment, as some users may be more willing to walk further to a rail service than bus. However, if the location progressed is Oudenarde then the service may place the site out of walking reach of many users. The addition of direct access to rail services would open up this mode to those previously put off or unable to use rail due to the need to drive or take the bus to other stations.
	Comparative	+1	Public transport improvements provide benefit to socially excluded groups, such as those without a car and the mobility impaired.
<b>Implementability Appraisal</b>			
<b>Feasibility</b>	Technical	Re-opening of the station from a technical perspective is likely to be feasible, with design standards being followed without departure. Costs may be significant and would require appropriate funding to be accessed. There could be technical challenges to build a new station on the line, however these will be understood and G12 expected from recent station openings in Scotland. Active rail line	
	Operational	Physical operation is feasible, as the line is active; however, there would be timetable impacts on users along the line from the additional stop, and Scotrail have noted that the current single line section through Oudenarde is a constraint for them presently and that an extra call would need reviewed for impact. This should be considered further at detailed appraisal.	
<b>Affordability</b>	Financial	There will be significant costs associated with reopening the station, which will need to be weighed against the overall benefits. Costs to be considered include land purchase, signalling, overhead line and track costs, station and platform builds and car park construction and maintenance. Recent station re-openings would provide a good understanding of the outturn costs of similar projects. Funding would be required from national government.	
<b>Public acceptability</b>		The opening of a station with connections to Edinburgh and Perth is considered to be well received and this is reflected in the 92% who were supportive or very supportive of the option, albeit from a survey with a very low response rate. In addition, this option was the second preferred option. In addition to the positive impact on the community consideration to existing passengers would also be considered as they would experience longer journey times due to the introduction of a new stop.	

**Taken forward to next stage? (Rationale for selection or rejection)**

This option would improve access from Bridge of Earn and for nearby existing and planned developments. Opening a station would provide an additional mode option for travellers by facilitating access to the rail network. This would also enhance journey times to key services and markets in Perth and Edinburgh. This is a moderate benefit for both TPOs and for the Economy and Integration STAG criteria.

There are a number of considerations for implementation, including the construction of the station, timetabling on a single-track line, the impact additional journey time will have on existing passengers, and commitments to reduced inter-city journey times. The benefits, however, are such that this option is recommended for further investigation.

**Progressed to Detailed Appraisal.**







## Appendix B – Complementary Options



**Table 1. Initiatives – Car Share & Car Clubs**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	<b>1 - Complementary</b>
<b>Option name</b>	<b>Initiatives – Car Share &amp; Car Clubs</b>
<b>Option description</b>	<p>Introduce initiatives to support more sustainable ways of travelling:</p> <ul style="list-style-type: none"> <li>• improve car sharing offering and other initiatives in the study area by incentivising car sharing;</li> <li>• promoting and encouraging more car clubs; and support the development of business travel plans.</li> </ul>
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>
<b>Social Context</b>	<p>Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel.</p> <p>Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.</p>

	In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.		
Economic Context	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).		
Performance against Transport Planning Objectives			
TPOs	Scoring	Rationale for scoring	
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	+1	This option would provide access to car sharing and/or car club for those who do not currently have access to cars. For those that do have access to a car, these services may provide a stepping stone to reducing private car ownership/use dependency. Car Sharing, in particular, is considered to be of greater benefit for regular journeys and may improve access to employment and education opportunities. This is considered a minor benefit for TPO1.	
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	+1	Benefits of car sharing include reduced fuel costs and parking fees. Car clubs also reduce the costs of car ownership. These savings contribute towards making car sharing more competitive compared to private car use and a minor benefit for TPO2. Over time, this service may reduce private car ownership.	
Performance against STAG criteria			
Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
Environment	Noise and Vibration	0 but could be -1 depending on routes.	Measures which lead to an overall reduction in vehicular traffic may lead to a minor positive effect in terms of noise and vibration levels along key routes. The option could reduce the use of private vehicles particularly in the area and achieve shift to more sustainable modes and reduce noise and vibration for the long term. Further assessment is likely to be required.

	Global Air Quality (CO2)	0	Measures which lead to an overall reduction in vehicular traffic may lead to a minor positive effect in terms of global air quality.
	Local Air Quality (PM10 and NO2)	+1	Measures which lead to an overall reduction in vehicular traffic may lead to a minor positive effect in terms of local air quality along key routes
	Water quality, Drainage and Flood defence	+1	Encouraging car sharing may result in a decrease in the overall use of private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.
	Geology	-1 potential for -2 (moderate cost impact) if remediation required	No significant effects on geology or geological/material resources are predicted for this option.
	Biodiversity and Habitats	0	No significant effects on biodiversity or habitats are predicted for this option.
	Landscape	-1 and +1	No significant effects on landscape or townscape are predicted for this option, although any consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Visual Amenity	+2 assuming successful design (integration / mitigation)	No significant effects on visual amenity are predicted for this option, although any consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Agriculture and Soils	0	No significant effects on agriculture and soils are predicted for this option.
	Cultural Heritage	0	No significant effects on cultural heritage are predicted for this option
	Physical Fitness	0, potentially +1 if option results in more walking	Measures which support existing and promote wider access to walking and cycling routes and travel choices e.g. rail and bus will increase levels of overall physical fitness through modal shift choice

<b>Safety</b>	Accidents	0	Improving the car sharing offering and encouraging car drivers to consider the move could result in a reduction in cars being used the study area. This would result in reduced vehicle kilometres and therefore accidents. However, the scale of change seen in overall vehicle use is likely to be relatively low, and therefore the effect on accidents negligible. Vehicle sharing options will have less potential for impact in the period during and following the COVID-19 pandemic, but may begin to become more viable in the medium to longer term.
	Security	-1	Car sharing sites are aware of concerns regarding car sharing and provide advice on approaches to take to minimise risk. This advice includes not sharing personal details until the relationship is established and making use of secure messaging. Following the recommended guidance should minimise any risks but there is likely to still be a level of perceived risk.
<b>Economy</b>	TEE	+1	There is the potential to provide user benefits for individuals using the service in terms of accessibility, and some potential to reduce traffic on the road network; however, adoption is unlikely to be large scale. If a car club car is offered as part of the option, this could expand modal choice for non-car owners who can afford to use the service. Impact is likely to be minor overall.
	Wider Economic Benefits	0	This option is unlikely to generate notable WEI impacts. Benefits are likely to be local in nature and insubstantial, with no impact on the regional or national economy.
<b>Integration</b>	Transport	+1	Some minor benefit to the integration with other transport services may be achieved if car sharing can be linked to access other modes, such as to rail stations or Park and Ride services towards Perth, for example.
	Transport/Land Use	+1	Being area based, the option aligns well with land-use, with the aim of reducing use / increasing car occupancy, and can serve both existing development and planned development at Oudenarde.
	Policy	+1	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car ownership/use by improving mode choice. This supports a more sustainable travel choice over single occupant private car trips, improving access to opportunities, inclusiveness and provides benefits for health and the environment without the need to own a car.
<b>Accessibility</b>	Community	+1	This has the potential to open up access to car as a mode across the Bridge of Earn, enhancing the catchment of transport access.

	Comparative	+2	This option has the potential positively serve groups who have no access to their own car, have limited mobility, etc. It can also enhance access to areas underserved by public transport and generally have the options to operate as a door-to-door service.
Implementability Appraisal			
Feasibility	Technical	There are well established lift share schemes operating in the area, and these are generally deliverable from a technical perspective. Were a car club car to be included within the scheme, there may be some commercial feasibility issues around critical mass of users within Bridge of Earn, as typically these schemes exist in higher density, larger population areas (major towns and cities).	
	Operational	From an operational perspective, critical mass will be one of the issues to consider around feasibility. For the car share, or car club, to work there will need to be enough users signed up to the service for trips to be matched, or for a car club car to be viable.	
Affordability	Financial	The service would be low cost to deliver, in particular for the car share service, as existing platforms can be built upon. A car club could require some public funding support should the service not be self-sustaining for a commercial operator.	
Public acceptability		The option would likely be publicly acceptable.	
Taken forward to next stage? (Rationale for selection or rejection)			
This option would contribute positively to TPOs by providing access to car sharing/clubs which would improve access for communities with low car ownership. Longer term, the provision of alternatives to private car ownership can help to unseat embedded car use, encouraging the use of a wider range of sustainable modes.			
Progressed to Detailed Appraisal as a Complementary option			

**Table 2. Initiatives – Multimodal Ticketing**

Appraisal Summary Table	
Option number	2 – Complementary
Option name	Initiatives – Multimodal Ticketing
Option description	Create a multi-modal ticketing system and optimise pricing structure
Background Information	
Geographic Context	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>
Social Context	<p>Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel.</p> <p>Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.</p>



	In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.		
Economic Context	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).		
Performance against Transport Planning Objectives			
TPOs	Scoring	Rationale for scoring	
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	+1	The provision of a multi-modal ticketing system and optimised pricing structure would improve access to the transport network, and therefore access to healthcare, employment, education and training in the study area. This would be a minor positive impact.	
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	+1	Creating a ticketing system which is more affordable will make it more competitive in terms of cost compared to the private car. The multi-modal component would also ensure it is usable for both the bus and rail. This would be a minor positive impact on TPO2.	
Performance against STAG criteria			
Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
Environment	Noise and Vibration	0 but could be -1 depending on routes.	Measures which lead to an overall reduction in vehicular traffic may lead to a minor positive effect in terms of noise and vibration levels along key routes
	Global Air Quality (CO2)	0	Measures which lead to an overall reduction in vehicular traffic may lead to a minor positive effect in terms of global air quality.

	Local Air Quality (PM10 and NO2)	+1	Measures which lead to an overall reduction in vehicular traffic may lead to a minor positive effect in terms of local air quality along key routes
	Water quality, Drainage and Flood defence	+1 (minor positive impact)	Initiatives around ticket pricing may encourage increased use of services with the potential for small changes in use of other modes such as private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.
	Geology	-1 potential for -2 (moderate cost impact) if remediation required	No significant effects on geology or geological/material resources are predicted for this option.
	Biodiversity and Habitats	0	There would be no effects on biodiversity and habitats.
	Landscape	-1 and +1	No significant effects on landscape or townscape are predicted for this option, although any consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Visual Amenity	+2 assuming successful design (integration / mitigation)	No significant effects on visual amenity are predicted for this option, although any consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Agriculture and Soils	0	Initiatives around ticket pricing may encourage increased use of services with the potential for small changes in use of other modes such as private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.
	Cultural Heritage	0	No significant effects on geology or geological/material resources are predicted for this option.
	Physical Fitness	0, potentially +1 if option results in more walking	Measures which support and promote integration with a range of travel options will increase levels of overall physical fitness through modal shift choice / walking or cycling at either ends of a journey

<b>Safety</b>	Accidents	0	Potential modal shift from car to public transport could reduce vehicle kilometres and therefore accidents. However, this is likely to be to a minor extent and have a negligible impact on accidents levels.
	Security	0	There are not anticipated to be any significant improvements to security associated with this option. Natural surveillance from increased passenger numbers at stops and on services could have a positive impact on real and perceived improvements to security; however, this is considered to be marginal in scale.
<b>Economy</b>	TEE	0	An integrated ticketing system would likely increase patronage on bus and rail networks, however, this may be offset by any reductions in ticket prices associated with optimising the pricing structure. Notable costs may offset increases in farebox revenue from patronage. User benefits from improved interchange/quality of service are likely however. Overall the impact may be neutral in terms of TEE.
	Wider Economic Benefits	0	This option is unlikely to generate notable WEI impacts. Benefits are likely to be local in nature and insubstantial, with no impact on the regional or national economy.
<b>Integration</b>	Transport	+2	The purpose of a multi-modal ticketing system is to promote integration between modes. This option would streamline the ticketing system for those wishing to travel on more than one mode and would be a notable benefit to transport integration.
	Transport/Land Use	0	This option would have a neutral impact on Transport and Land Use Integration
	Policy	+2	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car by improving mode choice. This supports sustainable travel choice over the private car, improving access to opportunities, inclusiveness and provides benefits for health and the environment.
<b>Accessibility</b>	Community	0	This option would have no impact on community accessibility in terms of direct public transport or active travel coverage.
	Comparative	+1	Optimising the pricing structure, and therefore potentially reducing the cost of travel, may have a benefit to low income households. This would provide improved access to the public transport network and be a minor benefit.

Implementability Appraisal		
Feasibility	Technical	This option would involve existing technologies readily available or already installed on all buses and at rail stations.
	Operational	Negotiations with, and agreements between, operators would be required to ensure buy-in the scheme and agree shared revenue and data (if appropriate). Bus operations in the study area are commercial and fares are not regulated. Reductions in bus fares would require negotiations with bus operators and a financial impact on the operators. Rail fares are currently regulated by the existing franchise agreement, however, there has been no recent review of the existing fares these regulations rely upon. The review of wider rail fares would require a national approach and is outwith the scope of this study.
Affordability	Financial	This option would require regular maintenance and management of a back office and ticketing machines. A wide marketing campaign would also be required to maximise the effectiveness of the project.
Public acceptability		Generally, this option is expected to be well received by the general public.
Taken forward to next stage? (Rationale for selection or rejection)		
<p>This option is being progressed at a Scottish level by Transport Scotland. This option would contribute to the TPOs but its delivery is not appropriate for this study scope.</p> <p><b>Not Progressed to Detailed Appraisal</b></p>		

**Table 3. Initiatives – New Buses and Live Feeds**

<b>Appraisal Summary Table</b>	
<b>Option number</b>	<b>3 – Complementary</b>
<b>Option name</b>	<b>Initiatives – New Buses and Live Feeds</b>
<b>Option description</b>	Measures to increase the attractiveness of public transport including investment in new buses and live bus feed information at stops
<b>Background Information</b>	
<b>Geographic Context</b>	<p>Bridge of Earn and Oudenarde lie approximately 5 miles south of Perth, with a population of close to 3,000. Bridge of Earn is located to the west of the M90, and Oudenarde lies on the opposite side and is a strategic development area. The considerable growth of Bridge of Earn during the 1980s expanded the settlement to the south and west away from its original form along what was the main road to Edinburgh.</p> <p>The M90 runs from Edinburgh to Perth passing through Fife. The road severs Bridge of Earn from Oudenarde where there are slip roads onto the local road network. The M90 is currently used by the coach network. The A912 is a local road connecting Fife and Perth and passing through Bridge of Earn and is used by the local bus network.</p> <p>The Adopted LDP 2 identifies Bridge of Earn and Oudenarde as part of the Tier 1 Perth Core area, and suggests that good connections to Perth and the wider area, and to Edinburgh/Fife to the South, make the area attractive for new development. It identifies the potential for significant expansion in the area through the Oudenarde Masterplan.</p>
<b>Social Context</b>	<p>Across the study area of Perth, the Wider Perth Area and Bridge of Earn there are varying socio-demographic patterns. Focusing on Bridge of Earn, there is a higher proportion of under 16 and 16-64 population compared to the national average, suggesting a concentration of families in the area and the number of households with no access to a car is significantly below the Scottish average in Bridge of Earn, 12% compared to 34% suggesting a reliance on car for travel.</p> <p>Across the three study area sectors there are 92 zones, and in 2020 nine of those zones were within the 20% most deprived in Scotland. These zones were concentrated in Perth City, with none of the zones in and around Bridge of Earn being within the 20% most deprived. When looking at the 'Geographical Access' domain data zones covering Bridge of Earn, these range from being ranked in the lowest 20% in terms of access up to 60%.</p>

	In August 2019, the medical centre in Bridge of Earn closed and patients were redistributed to practices across Perth which has impacted on access to healthcare in the area.		
Economic Context	The study area has a range of large employers attracting employees into the area and this is shown in the travel to work Census 2011 data. Analysis of this data shows that 26,088 people work in Perth City with 50% of those workers coming from within Perth City, 4% from Bridge of Earn, 6% from Fife and 1 % from Edinburgh. The flow of commuters from Bridge of Earn to Perth City represents 38%/955 of all employees living in Bridge of Earn (note 23% of employees work from home or have no fixed place of work).		
Performance against Transport Planning Objectives			
TPOs	Scoring	Rationale for scoring	
TPO1 - Improve transport access to healthcare, employment, education and training in the study area	0	Improved investment in buses and real time passenger information (RTPI) would make public transport more attractive to users but would not create a physical improvement access to services. Perceived access could be improved if perceptions are currently lower than reality. This option would have a neutral impact on TPO1 overall.	
TPO2 - Improve the competitiveness of sustainable modes compared to the private car on the M90/A912 corridor.	+1	This option would make buses more attractive, potentially improving perceived competitiveness with car. This, and the provision of better information through RTPI could provide a more comparable quality of journey compared to car than present. From a journey time perspective, this is unlikely to improve competitiveness compared to car. This option would have a minor positive impact for TPO2.	
Performance against STAG criteria			
Criterion	Sub-criterion	Sub-criterion score	Rationale for scoring
Environment	Noise and Vibration	0 but could be -1 depending on routes.	Modern vehicles, particularly those which are electric or hybrid are quieter than older models and use technology such as stop/start which reduces noise and vibration, particularly in built up areas.
	Global Air Quality (CO2)	+1	Modern vehicles produce no (electric) or less emissions (e.g. latest EURO engines or hybrid) and so will be a minor positive effect overall on global air quality

	Local Air Quality (PM10 and NO2)	+1	Modern vehicles produce no (electric) or less emissions (e.g. latest EURO engines or hybrid) and so will be a minor positive effect overall on local air quality
	Water quality, Drainage and Flood defence	+1	Improvements to public transport may encourage increased use of services with the potential for small changes in use of other modes such as private cars, resulting in the potential for very small improvement of water runoff quality from roads and urban areas.
	Geology	-1 potential for -2 (moderate cost impact) if remediation required	No significant effects on geology or geological/material resources are predicted for this option.
	Biodiversity and Habitats	0	There would be no effects on biodiversity and habitats.
	Landscape	-1 and +1	No significant effects on landscape or townscape are predicted for this option, although any consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Visual Amenity	+2 assuming successful design (integration / mitigation)	No significant effects on visual amenity are predicted for this option, although any consequent reduction in private vehicular traffic may lead to minor townscape improvements in urban areas at peak traffic times
	Agriculture and Soils	0	No significant effects on cultural heritage are predicted for this option
	Cultural Heritage	0	No significant effects on agriculture and soils are predicted for this option.
	Physical Fitness	0, potentially +1 if option results in more walking	Measures which support and promote integration with a range of travel options will increase levels of overall physical fitness through modal shift choice / walking or cycling at either ends of a journey
<b>Safety</b>	Accidents	0	The impact this option is likely to have on modal shift, and therefore change in vehicle kilometres, and accident rates is negligible.

	Security	0	There are not anticipated to be any significant improvements to security associated with this option. Natural surveillance from increased passenger numbers at stops and on services improved facilities on the buses could have a positive impact on real and perceived improvements to security, however, this is considered to be negligible.
<b>Economy</b>	TEE	+1	Option would result in reduced operating and maintenance costs from more fuel-efficient vehicles. Journey quality would also be improved. This would be a minor benefit for TEE.
	Wider Economic Benefits	0	This option is unlikely to generate notable WEI impacts. Benefits are likely to be local in nature and insubstantial, with no impact on the regional or national economy.
<b>Integration</b>	Transport	0	This option may improve perceived integration of transport, with better information for passengers. However, without physical improvements to services, this benefit is likely to be negligible.
	Transport/Land Use	0	This option would have a negligible impact on Transport and Land Use Integration.
	Policy	+1	This option aligns with transport policy from national to local level, particularly in relation to promoting sustainable mode use over private car. This supports sustainable travel choice over the private car.
<b>Accessibility</b>	Community	0	Although this option would improve the attractiveness of bus travel, physical public transport coverage would not be improved by this option and it is therefore considered neutral.
	Comparative	0	Buses designed to carry over 22 passengers on local and scheduled routes must comply with the Public Service Vehicles Accessibility Regulations (PSVAR), and coaches must comply from 1st January 2020. This option would therefore not make any changes likely to improve access for socially excluded groups as the services should already be compliant with regards to accessibility. The provision of RTPi is unlikely to benefit any particular disadvantaged group.
<b>Implementability Appraisal</b>			
<b>Feasibility</b>	Technical		Technically the purchase of buses, and the systems involved in RTPi are common. However, this is dependent on appropriate stakeholders agreeing to this course of action. Discussions with bus operators will be required in relation to fleet renewal. This will include investigations into funding availability and identifying suitable options for routes. This is considered a moderate consideration.



	Operational	Operationally there should be minimal implementability issues once the fleet is introduced or RTPi infrastructure provided.
<b>Affordability</b>	Financial	There would be initial capital expenditure for buses, and infrastructure, and ongoing maintenance costs for each. The requirement for public funding for vehicles would need to be considered at detailed appraisal should this be progressed, and following consultation with operators.
<b>Public acceptability</b>		This option is expected to be widely welcomed by the public.
<b>Taken forward to next stage? (Rationale for selection or rejection)</b>		
This option would require deliverability consideration to be addressed but would support the Core options and the TPOs.		
<b>Progressed to the Detailed Appraisal as a Complementary option</b>		



# Appendix C – Stakeholder Engagement

## 1. STAKEHOLDER ENGAGEMENT

### 1.1 Introduction

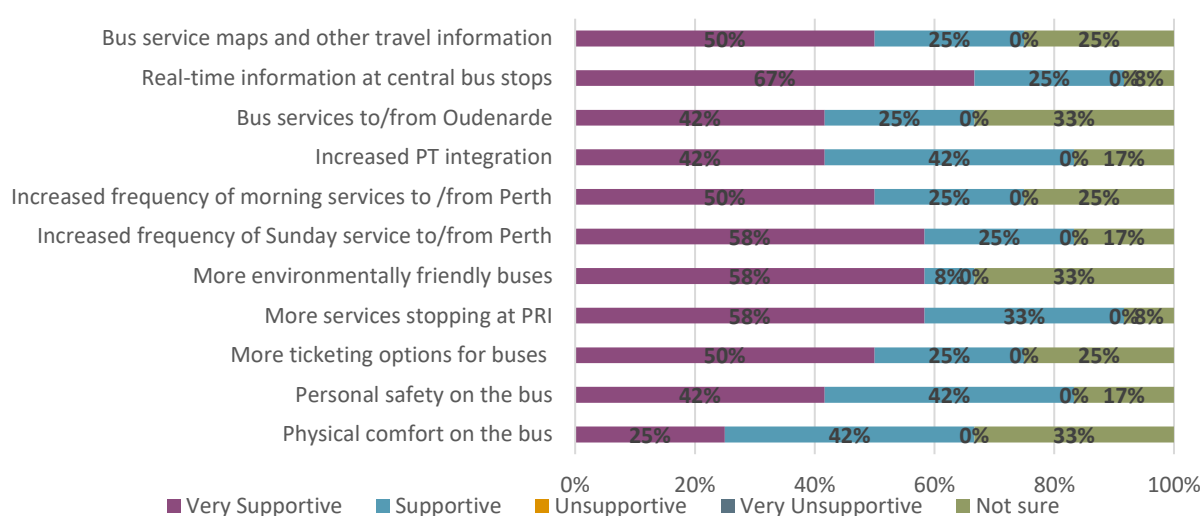
1.1.1 To inform the understanding of public acceptability of the proposed options, a public engagement exercise was undertaken.

1.1.2 The timing of the Preliminary Options Appraisal during the 2020 Covid-19 pandemic limited the opportunities to engage with the public face to face, and an online survey was developed to capture views instead.

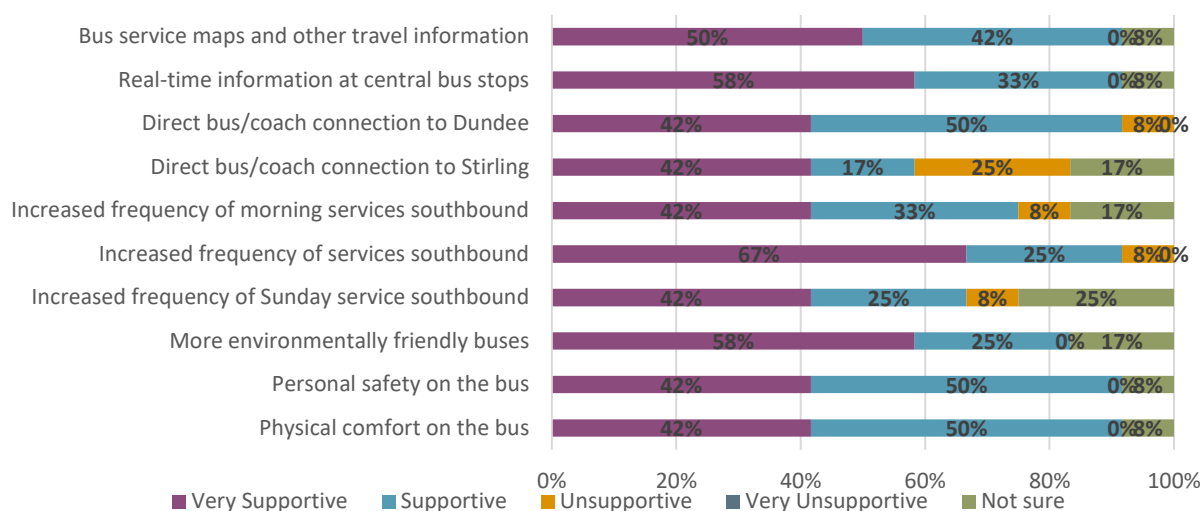
1.1.3 The survey was disseminated through local social media and elected members; however, the response rate was low, and the emphasis placed on the data should be limited. The data does give a useful overview of views but should not be considered to represent the views of the wider community given the response rate of twelve responses.

### 1.2 Key Outputs

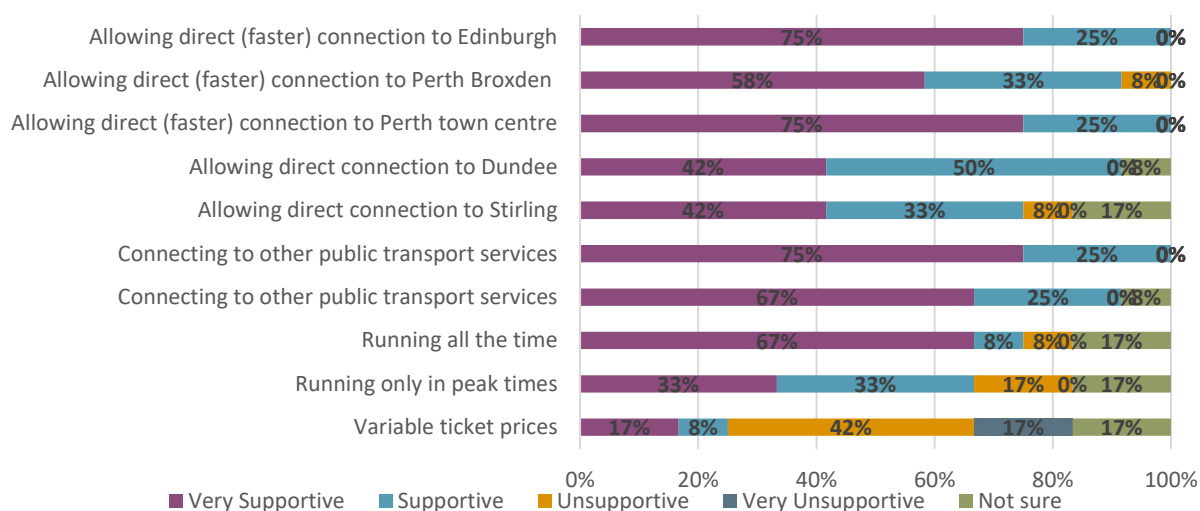
1.2.1 Respondents were asked for views on the six core options and support for various aspects of the options. For example, support for increased services to Perth Royal Infirmary or morning services. The following section presents the key outputs graphically.



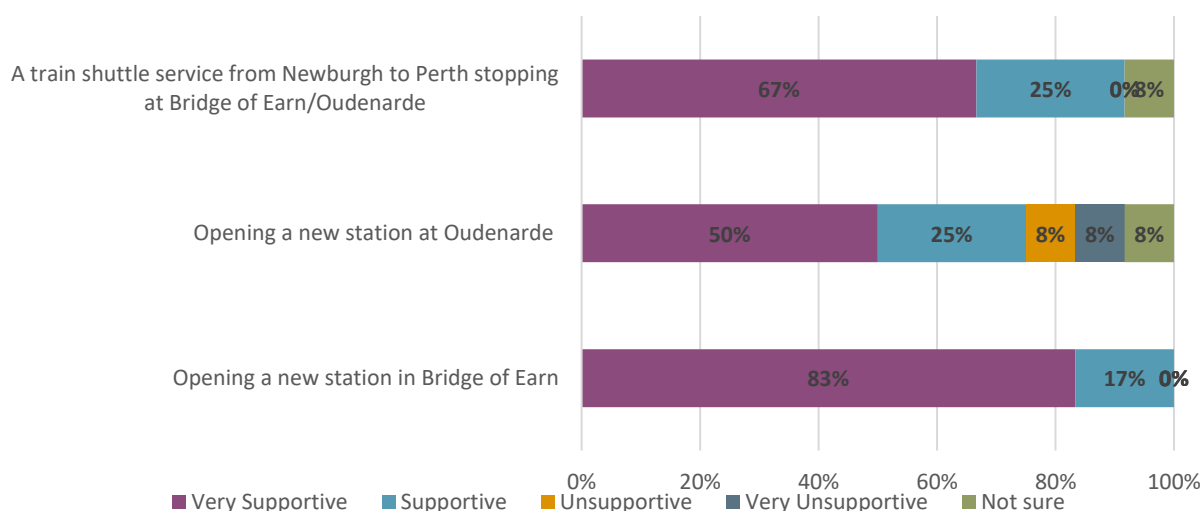
**Figure 1. If improvements were made to the existing bus services to/from Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the improvements in the following areas:**



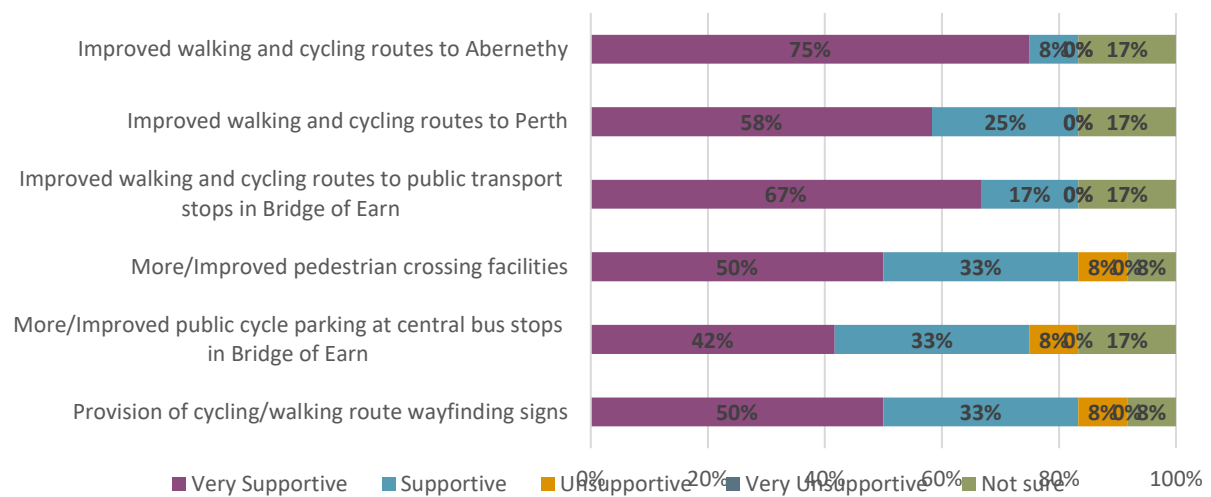
**Figure 2. If improvements were made to strategic bus and coach services to/from Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the improvements in the following areas**



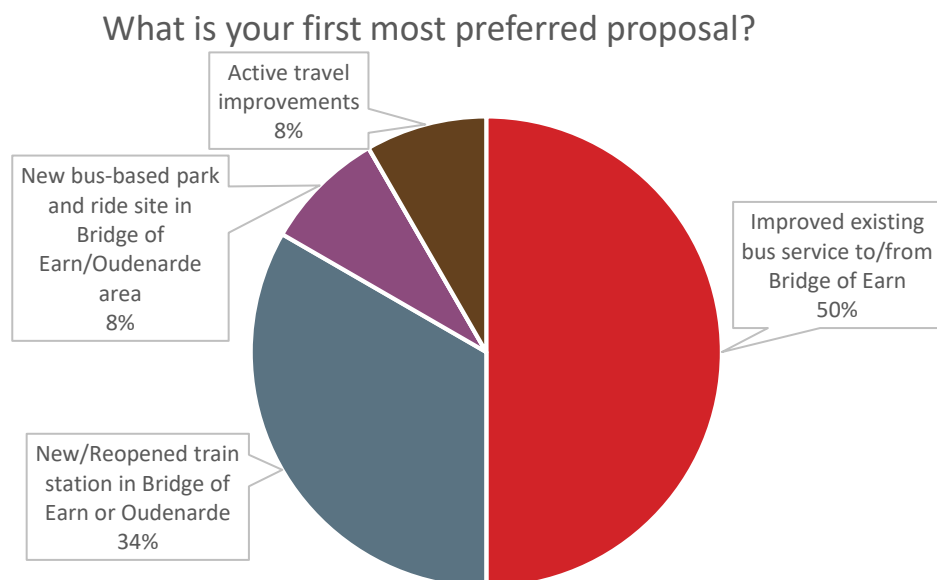
**Figure 3. If a park and ride was developed, would you be very supportive, supportive, unsupportive or very unsupportive of the following**



**Figure 4. If a train station was re-instated in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the following**



**Figure 5. If improvements were made to walking and cycling in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the following**



**Figure 6. What is your first most preferred proposal?**

# Bridge of Earn Transport Study

## Introduction

Thank you for your interest in taking part in this survey. It should only take about 15 minutes to complete.

SYSTRA Ltd, a transport consultancy, are undertaking this survey on behalf of Tactran (Regional Transport Partnership for Angus, Dundee City, Perth & Kinross and Stirling).

Tactran were awarded money from Transport Scotland's Local Rail Development Fund to work with Perth and Kinross Council to identify opportunities to improve sustainable transport in the Bridge of Earn area with a focus on movements to Perth, Edinburgh, and Fife.

We appreciate that life is not normal just now and that includes how we are travelling and how we feel about travelling. As much as possible, we are interested in understanding your views on travel before any Covid-19 travel restrictions.

You are able to provide a response to this survey from now until July 8th.

The findings from the survey will be used by SYSTRA Ltd in the Bridge of Earn Transport Appraisal.

The research complies with the General Data Protection Regulation (GDPR) (2018). All responses to this survey are completely confidential and responses will be reported anonymously. You have lots of rights in relation to how we treat your personal data and you can find full details by [clicking here](#).

Please click '**Next**' to start the survey.

## About you

We now have a few questions about you. We are asking these questions to help us to understand how views may differ across various sections of the local community. The personal data you provide will only be used for the analysis of this survey and we fully adhere to GDPR guidelines when processing personal data.

**Which age group are you in?**

- ☐ 15 or under
- ☐ 16-18 years old
- ☐ 19-30 years old
- ☐ 31-64 years old
- ☐ 65 or older
- ☐ Prefer not to say

**Are your day-to-day activities limited because of a health problem or disability?**

- ☐ Yes, limited a lot
- ☐ Yes, limited a little
- ☐ No
- ☐ Prefer not to say

**What is your name?**

*We ask for your name to help ensure that all responses to the survey are genuine. In accordance with GDPR, this information will only be used for this purpose and your details will not be kept.*

**Are you responding on behalf of an organisation, business or campaign group, or as an individual?**

- ☐ Responding as an individual
- ☐ Responding on behalf of an organisation or business
- ☐ Responding in behalf of a campaign group
- ☐ Other

**Please specify**

**What is the name of the organisation, business or campaign group you are responding on behalf of?**

**Please provide your full postcode.**

**If you are responding as an individual, please provide your home address postcode. If you are responding on behalf of a business, organisation or campaign group, please provide the postcode of this business/organisation.**

*We are asking for your full postcode to make sure we get feedback from people living across the area. Your postcode will only be used for this purpose. As a reminder, we adhere to GDPR guidelines when processing personal data.*

**With which gender do you most identify?**

- ☐ Male
- ☐ Female
- ☐ Prefer not to say
- ☐ Prefer to identify as:

**What is your relationship to Bridge of Earn or Oudenarde?**

- ☐ I am a Bridge of Earn resident
- ☐ I work in Bridge of Earn
- ☐ I live in Bridge of Earn but travel to elsewhere for work
- ☐ I travel to Bridge of Earn to visit my friends and family
- ☐ I travel to Bridge of Earn for leisure
- ☐ I am an Oudenarde resident
- ☐ I work in Oudenarde
- ☐ I live in Oudenarde but travel to elsewhere for work
- ☐ I travel to Oudenarde to visit my friends and family
- ☐ I travel to Oudenarde for leisure
- ☐ Other

Please specify



## Transport in Bridge of Earn/Oudendarde

The next question is about your travel in and around Bridge of Earn and Oudendarde. Please can you answer thinking about the journeys you were making before any Covid-19 travel restrictions.

**Usually, how do you travel for the following reasons in and around Bridge of Earn/Oudendarde?**

***Please think about your whole journey, from door to door. If your typical journey includes more than one type of transport, then tick all that apply (e.g. a bus and then walking)***

***Please think about your situation before any changes due to Covid-19.***

	Car/ Van, as driver	Car/ Van, as passenger	Car sharing	Taxi	Bus	Motor cycle/ Moped/ Scooter	Bicycle	Walking	Other (please specify)	Not applicable, I do not travel for this reason
Commute to work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
School/nursery drop off/pick up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Travelling to college	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping/personal business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health appointment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caring for dependents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visiting family or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leisure purpose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please specify which other reason you travel in and around Bridge of Earn/Oudendarde

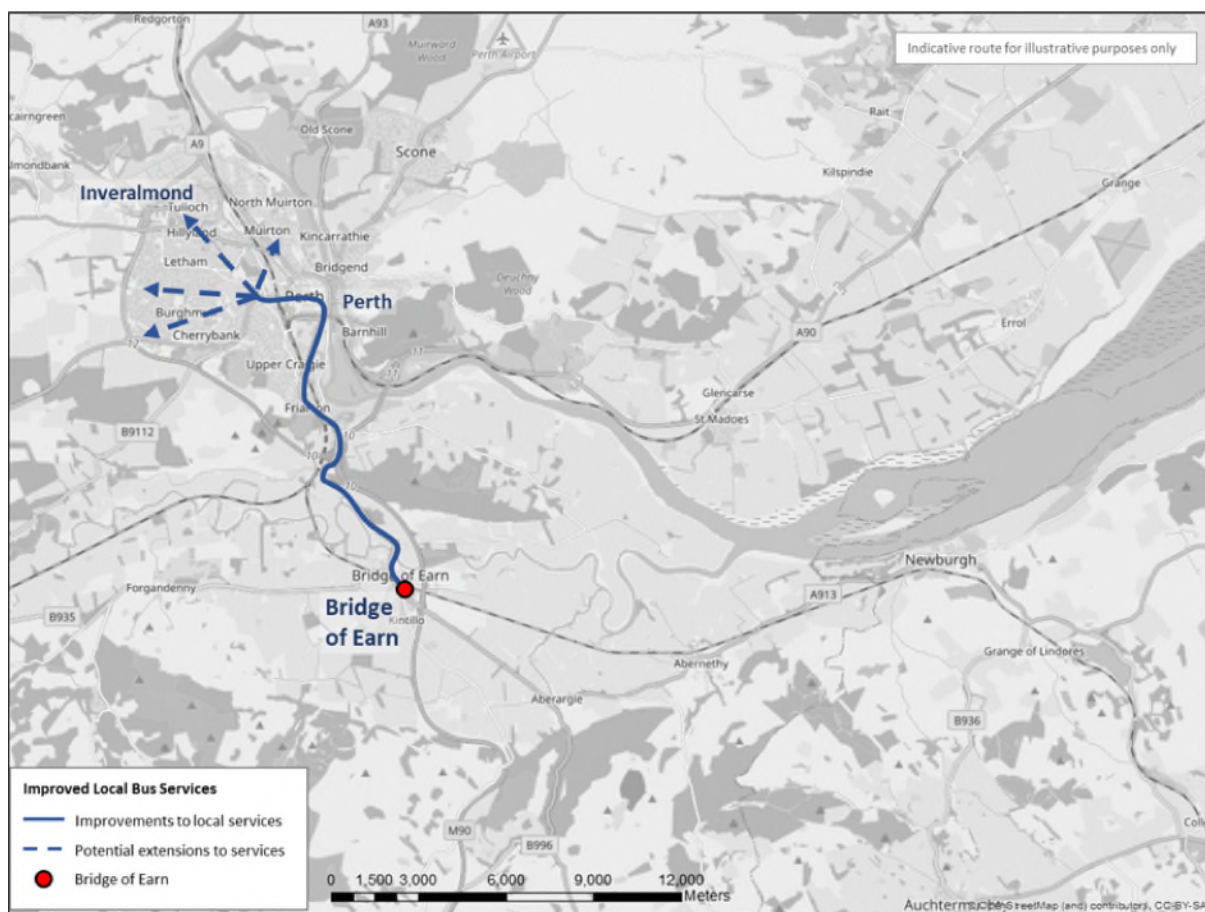
**Please also specify which other type of transport you use to...**

Commute to work

School/nursery drop off/pick up	
Travelling to college	
Shopping/personal business	
Health appointment	
Caring for dependents	
Visiting family or friends	
Leisure purpose	
Other reason	

The next set of questions are about your views toward proposals aiming to improve transport services in Bridge of Earn.

## Existing Bus Service Improvements



**When thinking about transport in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of improved existing bus services to/from Bridge of Earn?**

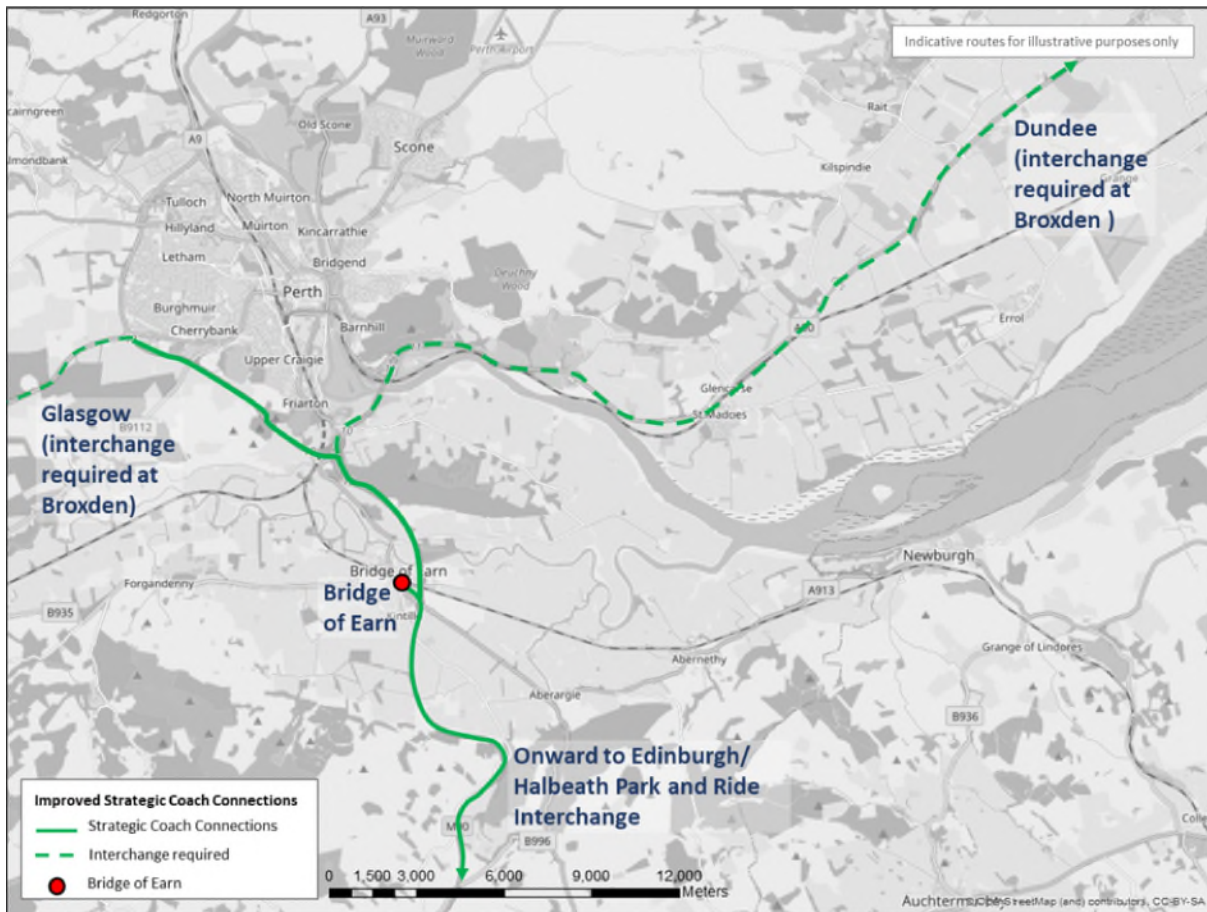
- ☐ Very Supportive
- ☐ Supportive
- ☐ Unsupportive
- ☐ Very Unsupportive
- ☐ Not sure

**If improvements were made to the existing bus services to/from Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the improvements in the following areas:**

	Very Supportive	Supportive	Unsupportive	Very Unsupportive	Not sure
More services stopping at Perth Royal Infirmary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More environmentally friendly buses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased frequency of morning services to /from Perth (e.g. between 6am-9am)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased frequency of Sunday service to/from Perth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased connectivity with other types of transport (i.e. train services)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More ticketing options for buses (i.e. smartcards, integrated ticketing, online payments)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of real-time information at central bus stops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of bus service maps and other travel information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal safety on the bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical comfort on the bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus services to/from Oudenarde	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please specify**

## Strategic Bus and Coach Improvements



When thinking about transport in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of improving and increasing strategic bus and coach services to/from Bridge of Earn?

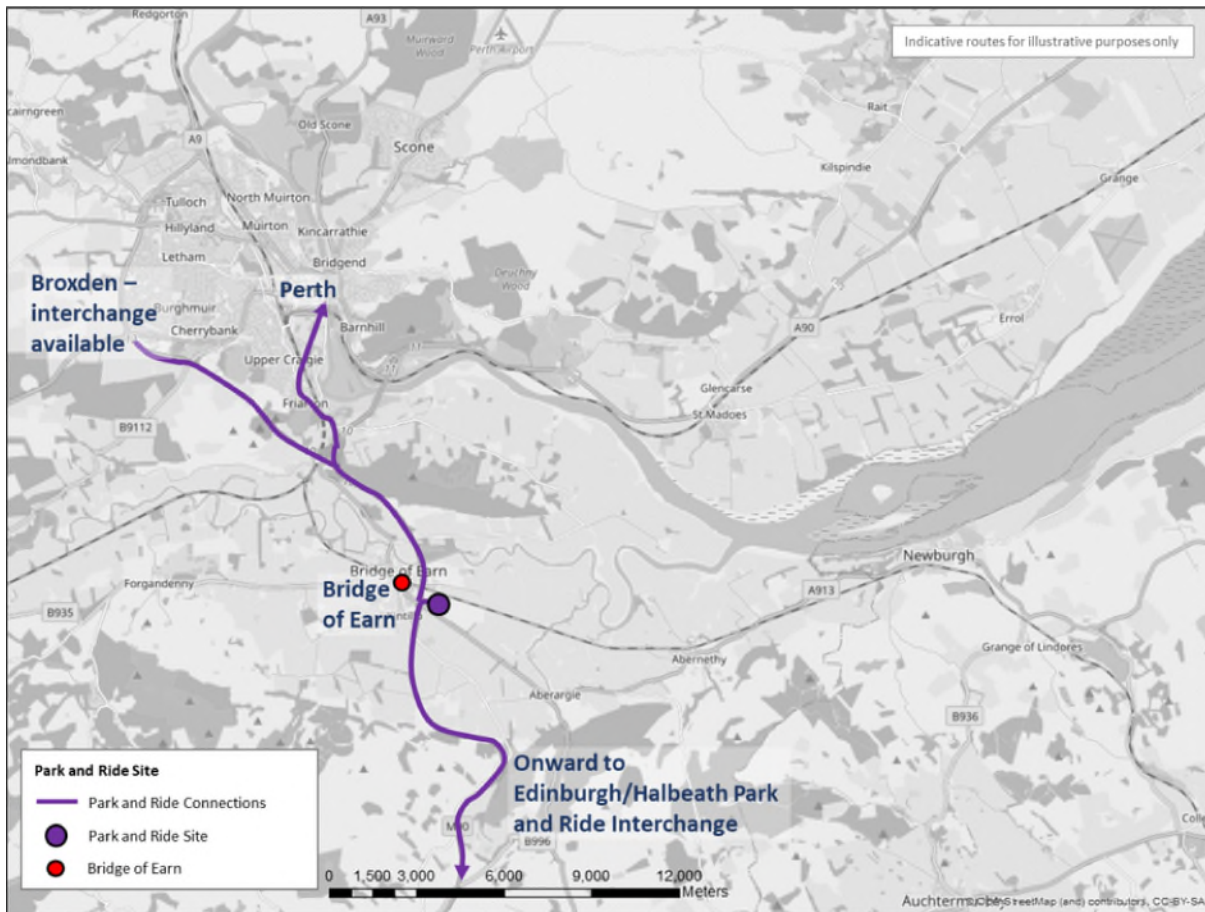
- ☐ Very Supportive
- ☐ Supportive
- ☐ Unsupportive
- ☐ Very Unsupportive
- ☐ Not sure

If improvements were made to strategic bus and coach services to/from Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the improvements in the following areas:

	Very Supportive	Supportive	Unsupportive	Very Unsupportive	Not sure
Increased frequency of services to/from Edinburgh/Halbeath	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Increased frequency of morning services to /from Edinburgh/Halbeath (e.g. between 6am-9am)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased frequency of Sunday service to/from Edinburgh/Halbeath	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct bus/coach connection to Dundee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct bus/coach connection to Stirling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of real-time information at central bus stops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of bus service maps and other travel information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal safety on the bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical comfort on the bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More environmentally friendly buses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please specify	<input type="text"/>				

## New Bus/Coach Park and Ride Site



**When thinking about transport in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of a bus and coach park and ride site located near Oudenarde with connections to Perth and southbound to Edinburgh?**

- ☐ Very Supportive
- ☐ Supportive
- ☐ Unsupportive
- ☐ Very Unsupportive
- ☐ Not sure

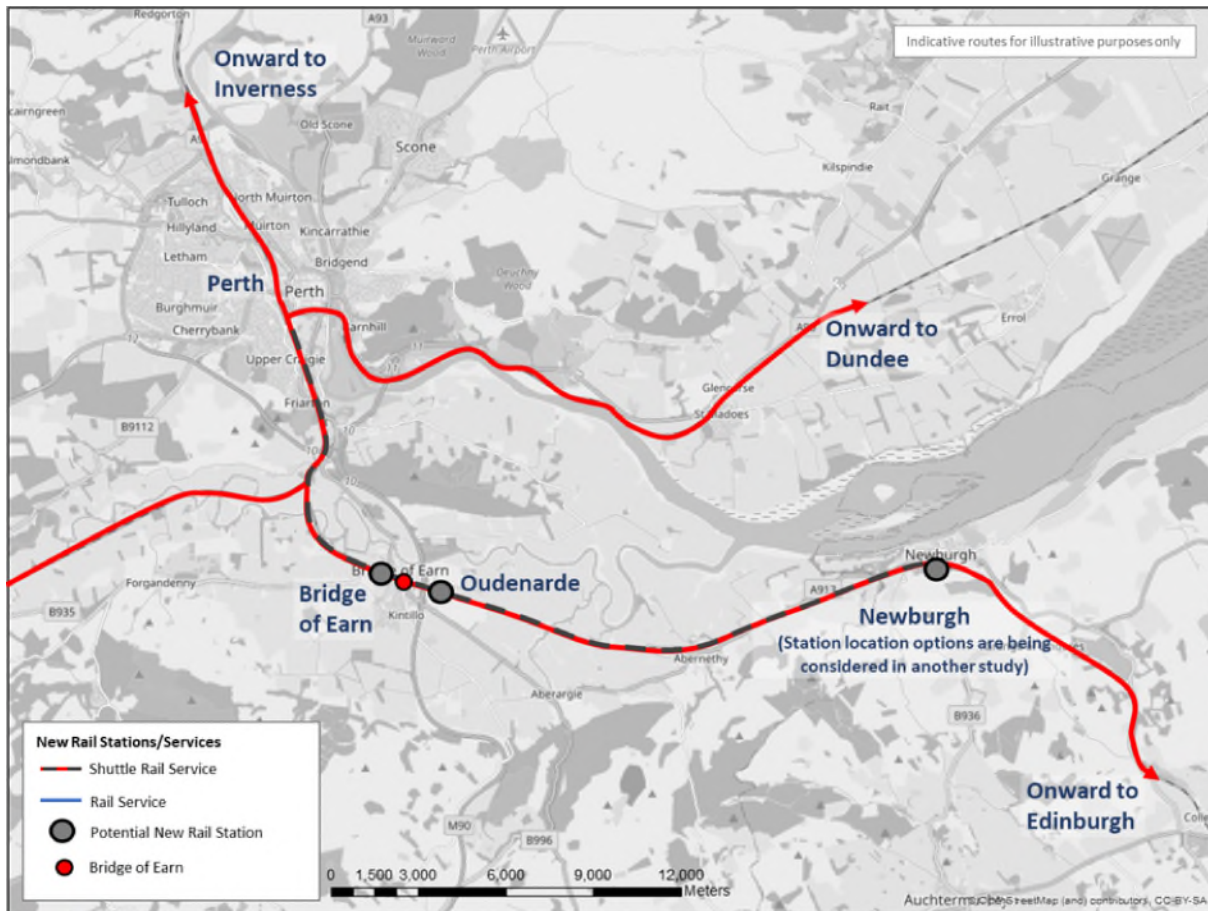
**If a park and ride was developed, would you be very supportive, supportive, unsupportive or very unsupportive of the following:**

	Very Supportive	Supportive	Unsupportive	Very Unsupportive	Not sure
Connecting to other public transport services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allowing direct (faster) connection to Edinburgh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Allowing direct (faster) connection to Perth town centre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allowing direct (faster) connection to Perth Broxden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connecting to other public transport services (e.g. rail stations)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Running only in peak times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Running all the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allowing direct connection to Stirling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allowing direct connection to Dundee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tickets on the park and ride services being more expensive than the standard bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Please specify</b>	<div></div>				

## Train Service Improvements



When thinking about transport in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of reinstating a train station in Bridge of Earn?

- ☐ Very Supportive
- ☐ Supportive
- ☐ Unsupportive
- ☐ Very Unsupportive
- ☐ Not sure

If a train station was re-instated in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the following:

	Very Supportive	Supportive	Unsupportive	Very Unsupportive	Not sure
Opening a new station in Bridge of Earn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opening a new station at Oudenarde	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



A train shuttle service from Newburgh to Perth stopping at Bridge of Earn/Oudendarde

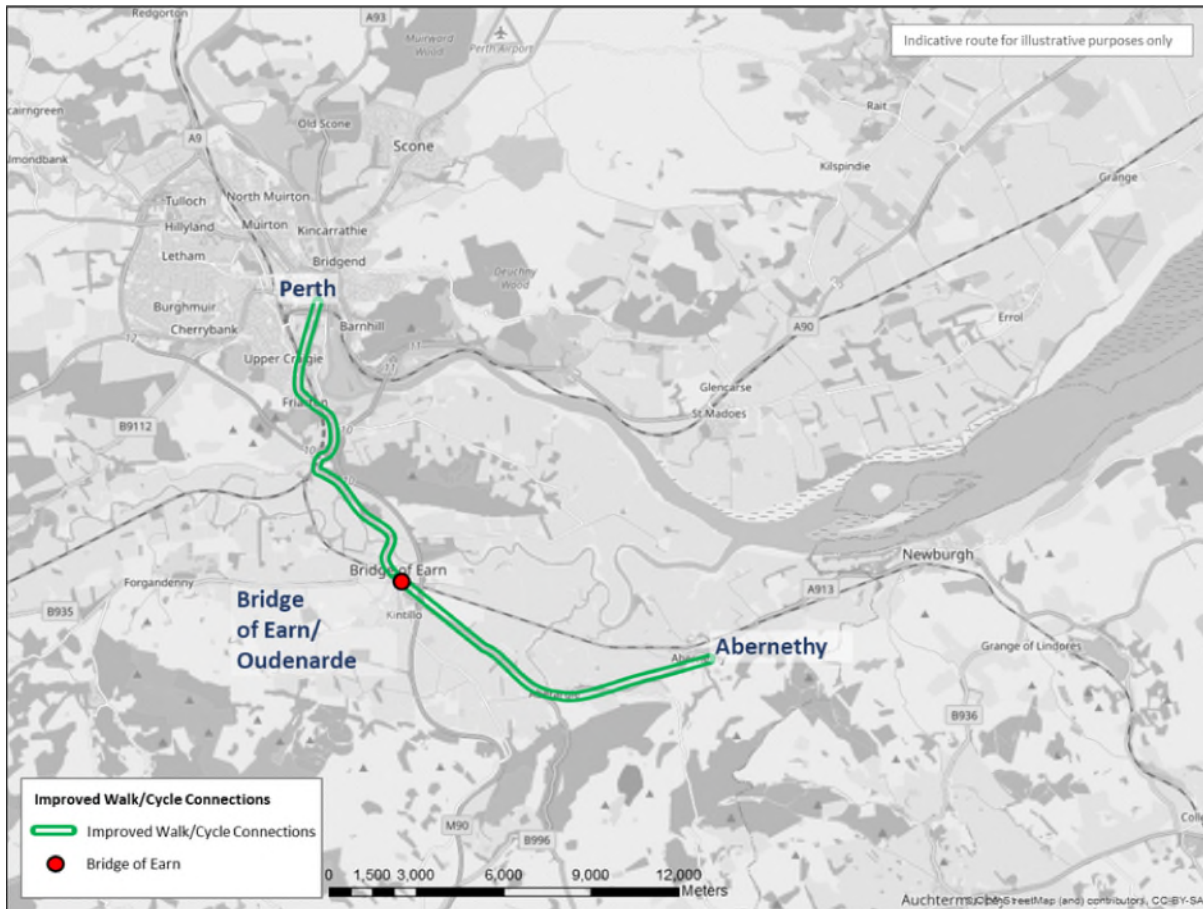
☐☐☐☐☐

Other

☐☐☐☐☐

Please specify

## Walking and Cycling



When thinking about transport in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of improvements to walking and cycling?

- ☐ Very Supportive
- ☐ Supportive
- ☐ Unsupportive
- ☐ Very Unsupportive
- ☐ Not sure

**If improvements were made to walking and cycling in Bridge of Earn, would you be very supportive, supportive, unsupportive or very unsupportive of the following:**

	Very Supportive	Supportive	Unsupportive	Very Unsupportive	Not sure
Improved walking and cycling routes to public transport stops in Bridge of Earn (e.g. better footways/ cycleway surfacing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improved walking and cycling routes to Perth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provision of cycling/walking route wayfinding signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More/Improved public cycle parking at central bus stops in Bridge of Earn (e.g. more locations/ better security)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More/Improved pedestrian crossing facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improved walking and cycling routes to Abernethy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Please specify</b>	<input type="text"/>				

**The next set of questions are about your top three preferred proposals**

**What is your first most preferred proposal?**

- ☐ Improved existing bus service to/from Bridge of Earn
- ☐ Improve and increase strategic bus and coach services on the corridor
- ☐ New/Reopened train station in Bridge of Earn or Oudendarde
- ☐ New bus-based park and ride site in Bridge of Earn/Oudendarde area
- ☐ Shuttle train from Perth to Newburgh
- ☐ Active travel improvements

**What is your second most preferred proposal?**

- ☐ Improved existing bus service to/from Bridge of Earn
- ☐ Improve and increase strategic bus and coach services on the corridor
- ☐ New/Reopened train station in Bridge of Earn or Oudenarde
- ☐ New bus-based park and ride site in Bridge of Earn/Oudenarde area
- ☐ Shuttle train from Perth to Newburgh
- ☐ Active travel improvements

**What is your third most preferred proposal?**

- ☐ Improved existing bus service to/from Bridge of Earn
- ☐ Improve and increase strategic bus and coach services on the corridor
- ☐ New/Reopened train station in Bridge of Earn or Oudenarde
- ☐ New bus-based park and ride site in Bridge of Earn/Oudenarde area
- ☐ Shuttle train from Perth to Newburgh
- ☐ Active travel improvements

**Do you have anything else you would like to add regarding the potential transport interventions?**

**Would you like to be kept informed on the project as it progresses?**

- ☐ Yes
- ☐ No

**Please enter your contact details below. These details will only be used to notify you of updates to the project.**

Email Address

**That's the end of the survey!**

Thank you for your time.

Should you have any questions about the project please contact  
[bridgeofearnsurvey@systra.com](mailto:bridgeofearnsurvey@systra.com)

Please click the '**Submit**' button to finish the survey.

Thank you for your time, but you are outside of the age group we are interested  
in.

Please click the '**Submit**' button to finish the survey.