

**AECOM**



# Buchan Sustainable Transport Study

Initial Appraisal: Case for Change Report

Campaign for North East Rail and Aberdeen & Grampian Chamber of Commerce

AECOM in partnership with Stantec UK Limited

May 2024

Delivering a better world

## Quality information

<u>Prepared by</u>	<u>Checked by</u>	<u>Verified by</u>	<u>Approved by</u>
Rachel Thomas Associate Transport Planner	Richie Fraser Associate Director	Graham Bell Associate Transport Planner	Graham Bell Associate Transport Planner

## Revision History

<u>Revision</u>	<u>Revision date</u>	<u>Details</u>	<u>Authorized</u>	<u>Name</u>	<u>Position</u>
1	1/05/2024	Update following client group feedback	RF	Richie Fraser	Associate Director

## Distribution List

<u># Hard Copies</u>	<u>PDF Required</u>	<u>Association / Company Name</u>

© 2024 AECOM Limited. All Rights Reserved

AECOM Limited (“AECOM”) has prepared this document for the sole use of the Campaign for North East Rail and Aberdeen & Grampian Chamber of Commerce (“Client”) in accordance with the terms and conditions of appointment dated 29/08/2023 (“the Appointment”).

AECOM shall have no duty, responsibility and/or liability to any party in connection with this document howsoever arising other than that arising to the Client under the Appointment. Save as provided in the Appointment, no warranty, expressed or implied, is made as to the professional advice included in this document or any other services provided by AECOM.

This document should not be reproduced in whole or in part or disclosed to any third parties for any use whatsoever without the express written authority of AECOM. To the extent this document is reproduced in whole or in part or disclosed to any third parties (whether by AECOM or another party) for any use whatsoever, and whether such disclosure occurs with or without the express written authority of AECOM, AECOM does not accept that the third party is entitled to rely upon this document and does not accept any responsibility or liability to the third party. To the extent any liability does arise to a third party, such liability shall be subject to any limitations included within the Appointment, a copy of which is available on request to AECOM.

Where any conclusions and recommendations contained in this document are based upon information provided by the Client and/or third parties, it has been assumed that all relevant information has been provided by the Client and/or third parties and that such information is accurate. Any such information obtained by AECOM has not been independently verified by AECOM, unless otherwise stated in this document. AECOM accepts no liability for any inaccurate conclusions, assumptions or actions taken resulting from any inaccurate information supplied to AECOM from the Client and/or third parties

## Contents

<b>1</b>	<b>Introduction.....</b>	<b>1</b>
1.1	Background .....	1
1.2	Previous Studies.....	1
1.3	Study Approach .....	1
1.4	Structure of Report .....	3
<b>2</b>	<b>Established Policy Directives .....</b>	<b>4</b>
2.2	National policy .....	4
2.3	Regional policy .....	10
2.4	Local policy.....	14
<b>3</b>	<b>Study Area Context .....</b>	<b>18</b>
3.1	Introduction.....	18
3.2	Social Context .....	18
3.3	Economic Context .....	24
3.4	Environmental Context .....	40
3.5	Travel Patterns .....	42
3.6	Transport Context.....	46
<b>4</b>	<b>Stakeholder and Public Engagement .....</b>	<b>114</b>
4.1	Overview.....	114
4.2	Elected Representatives Seminar.....	114
4.3	Stakeholder Meetings.....	114
4.4	Resident and Business Survey .....	121
4.5	Stakeholder Drop in Session.....	124
<b>5</b>	<b>Summary of Problems and Opportunities .....</b>	<b>126</b>
5.1	Introduction.....	126
5.2	Problems .....	126
5.3	Opportunities .....	128
5.4	Constraints .....	129
5.5	Risk and Uncertainty .....	129
<b>6</b>	<b>Transport Planning Objectives .....</b>	<b>131</b>
6.1	Overview.....	131
6.2	Approach .....	131
6.3	Transport Planning Objectives .....	132
<b>7</b>	<b>Next Steps .....</b>	<b>139</b>
7.2	Preliminary Options Appraisal .....	139

## Figures

Figure 1-1:	STAG Process .....	2
-------------	--------------------	---

Figure 1-2: Study Area for this Buchan Sustainable Transport Study and the study area for the parallel A90(N) / A952 Appraisal.....	3
Figure 2-1: Sustainable Travel Hierarchy and Investment Hierarchy .....	6
Figure 3-1: Study Area showing 2020 population of National Records of Scotland defined settlements. ....	18
Figure 3-2: Percentage change in population between 2001 and 2021 .....	19
Figure 3-5: Study Area SIMD 2020 – Employment domain .....	21
Figure 3-4: Study Area SIMD 2020 – Income domain .....	21
Figure 3-3: Study Area SIMD 2020 .....	21
Figure 3-6: Study Area SIMD 2020 – Education domain .....	22
Figure 3-7: Study Area SIMD 2020 – Health domain.....	22
Figure 3-8: Datazones in the 20% Most Deprived Category in 2016 and 2020.....	23
Figure 3-9: Commodity of Traffic at Peterhead Port .....	25
Figure 3-10: Inward and Outward Traffic at Peterhead Port.....	26
Figure 3-11: Fraserburgh Harbour Expansion, Source: Fraserburgh Harbour Masterplan .....	28
Figure 3-12: Tonnage of Fish Landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022 (Source: Scottish Sea Fisheries Statistics) .....	29
Figure 3-13: Value of Fish Landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022 in thousands (Source: Scottish Sea Fisheries Statistics).....	29
Figure 3-14: Number of jobs in the study area in 2022.....	32
Figure 3-15: August 2023 Claimant Count Rate across the study area and comparator locations.....	34
Figure 3-16: Percentage of workplace jobs by sector within the study area and the comparator locations .....	35
Figure 3-17: Mean weekly gross pay by sector in Scotland, with purple bars denoting where mean pay is lower than the national average.....	37
Figure 3-18: Percentage of Workplace jobs in each of the SIC sectors reported in BRES in (i) Fraserburgh & Peterhead, (ii) the rest of the study area, (iii) the rest of Aberdeenshire and (iv) Aberdeen – with the SIC ordered from highest to lowest mean weekly pay.....	38
Figure 3-19: Percentage of jobs in sectors with a mean weekly gross pay of greater than £750, £600-£750, and less than £600 in Fraserburgh and Peterhead, the rest of the study area, the rest of Aberdeenshire and Aberdeen City .....	39
Figure 3-20: Median Household Income for each town in Aberdeenshire (2021).....	40
Figure 3-22: Method of travel to work from key localities in Aberdeenshire to Aberdeen Local Authority (Census 2011).....	44
Figure 3-23: Percentage of working-age population in each town who work in Aberdeen with the horizontal axis ordered by distance from Aberdeen.....	44
Figure 3-24: Percentage of working-age population in each town who commute to Aberdeen by public transport and the typical public transport travel time to Aberdeen - with green bars indicating settlements with a railway station and the horizontal axis ordered by distance from Aberdeen.....	45
Figure 3-25: Split of public transport-based commuting to Aberdeen by bus and train in each town... ..	46
Figure 3-26: Active travel provision within the study area.....	47
Figure 3-27: Strava Metro Heat Map - Cycling.....	49
Figure 3-28: Strava trip counts by month (2019-2023) .....	50
Figure 3-29: Location and severity of collisions involving pedestrians or cyclists between 2013 and 2022 .....	51
Figure 3-30: Bus routes operating on the A90 and A952 within the study area.....	52
Figure 3-31: Postcodes with or without convenient access (as defined above) to a bus stop.....	55
Figure 3-32: Frequency of bus services by stop - Weekday 0500-2359.....	57
Figure 3-33: Last Bus Service for each Bus Stop within the Study Area .....	59
Figure 3-34: Number of direct bus services to Aberdeen City Centre – Weekday 0500-2359 .....	61
Figure 3-35: Car Park Spaces and Occupancy Levels at Ellon Park and Ride .....	67
Figure 3-36: Stagecoach DayRider Zones .....	68
Figure 3-37: Grasshopper Zones (Source: grasshopperpass.com).....	69
Figure 3-38: Public transport journey times from Aberdeenshire to Aberdeen City Centre, AM .....	74
Figure 3-39: Hansen connectivity to high value employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM .....	76
Figure 3-40: Hansen connectivity to total employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM' .....	76

Figure 3-41: Hansen connectivity to total employment in Aberdeen Local Authority, weekday AM .....	77
.....	79
Figure 3-42: Hansen connectivity to tertiary education in Aberdeenshire and Aberdeen Local Authorities, weekday AM .....	79
Figure 3-43: Hansen connectivity to health in Aberdeenshire and Aberdeen Local Authorities, weekday AM .....	79
Figure 3-45: CDAT employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM .....	81
Figure 3-44: CDAT high value employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM .....	81
Figure 3-46: CDAT total employment in Aberdeen Local Authority, weekday AM .....	82
Figure 3-48: CDAT health in Aberdeenshire and Aberdeen Local Authorities, AM .....	84
Figure 3-47: CDAT education in Aberdeenshire and Aberdeen Local Authorities, AM .....	84
Figure 3-49: Key Road Network within the Study Area .....	86
Figure 3-50: Department for Transport Count Locations and AADT Flows (2022) .....	87
Figure 3-51: HGV Percentage of Total AADT flows in Aberdeenshire .....	88
Figure 3-52: HGV Percentage of Total AADT flows in the study area .....	89
Figure 3-53: Count locations .....	91
Figure 3-54: A90 Daily - All Vehicles - Northbound, 2023 .....	91
Figure 3-55: A90 Daily Profile - All Vehicles - Southbound, 2023 .....	92
Figure 3-56: A90 Daily Profile – HGVs - Northbound, 2023 .....	92
Figure 3-57: A90 Daily Profile – HGVs - Southbound, 2023 .....	93
Figure 3-58: Journey Time Variability on the A90 – south Ellon to North Ellon .....	96
Figure 3-59: Fatal and Serious Road Traffic Collisions recorded in the study area during the period 2013- 2023 .....	98
Figure 3-60: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Toll of Birness junction between 2013- 2023 .....	99
Figure 3-61: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Toll of Birness junction between 2013- 2023 .....	99
Figure 3-62: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Cortes junction between 2013- 2023 .....	100
Figure 3-63: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Cortes junction between 2013- 2023 .....	101
Annual Average Daily Traffic (AADT) volumes are presented in Table 3-19 to Table 3-22 for the 2019 Baseline and each forecast policy scenario .....	105
Figure 3-65: Combined 2-way AADT for Cars, LGVs and HGVs .....	108
Figure 6-1: Overview of logic mapping approach .....	131
Figure 6-2: Short-medium term responses .....	132
Figure 6-3: Logic Map showing the societal impacts of achieving the Safety Transport Planning Objective .....	133
Figure 6-4: Logic Map showing the societal impacts of achieving the journey time variability Transport Planning Objective .....	134
Figure 6-5: Logic Map – showing the societal impacts of achieving the Labour Markets Transport Planning Objective .....	136
Figure A-1: Employment Land Register 2021 and Housing land Audit 2023 sites within the Study Area .....	141
Figure B-1: Geographic extent of Study Area sub areas used in the reporting of selected socio-economic datasets .....	143
Figure D-1: Recreational Active Travel Routes within the Study Area .....	147
Figure H-1: ATC site locations .....	160
Figure H-2: Platoon Length Distribution, Percentage of Platoons in Platoon Length Category, Northbound and Southbound directions .....	162
Figure H-3: Platoon Length Distribution, Percentage of Vehicles in Platoon Length Category, Northbound and Southbound directions .....	162
Figure H-4: Percentage of Platoon Led by Slow Moving Vehicles .....	163
Figure M-1: Resident Survey response by location .....	184
Figure M-2: Which of the following age bands do you fall into? .....	185
Figure M-3: What is your current employment status? .....	185

Figure M-4: In the last seven days, on how many days did you make a walking / wheeling trip of greater than a ¼ mile?.....	186
Figure M-5: When walking / wheeling, in general how satisfied are you with the following? .....	187
Figure M-6: Please indicate the extent to which the following factors encourage you to cycle? .....	189
Figure M-7: In the last seven days, on how many days did you make a cycling trip? .....	190
Figure M-8: Why do you typically make cycling trips? .....	190
Figure M-9: When cycling, in general how satisfied are you with the following? .....	192
Figure M-10: How often have you travelled by bus to Aberdeen in the previous month? .....	194
Figure M-11: Where have you travelled to by local bus in the previous month? .....	195
Figure M-12: Why did you make these bus trips to Aberdeen local bus trips in the last month? .....	196
Figure M-14: When travelling local bus, in general how satisfied are you with the following? .....	197
Figure M-13: When travelling by bus to Aberdeen, in general how satisfied are you with the following? .....	197
Figure M-16: Please indicate the extent to which the following factors stop you from using the bus more often / as much as you would like? .....	199
Figure M-15: Please indicate the extent to which the following factors stop you from using the bus to travel to Aberdeen more often? .....	199
Figure M-17: How are you affected by not using the bus more often / as much as you would like? ..	201
Figure M-18: How often have you used rail services in the previous month? .....	203
Figure M-19: For what purpose did you make these journeys? .....	204
Figure M-20: There are currently no railway stations in the study area – how does this affect you? ..	205
Figure M-21: If there was a railway station closer to your home, how often do you think you would use the train? .....	205
Figure M-22: In the previous month, how often have you used a car or van (as a driver) to travel? ..	207
Figure M-23: Why did you make these car / van trips in the last month? .....	207
Figure M-24: Where have you travelled to in the last month by car? .....	208
Figure M-25: When travelling by car to Aberdeen, in general how satisfied are you with the following? ..	209
Figure M-26: When travelling by car to locations other than Aberdeen, in general how satisfied are you with the following? .....	209
Figure M-27: Where is your business located? .....	211
Figure M-28: How long have you operated from this location? .....	212
Figure M-29: How important to your business / organisation is the physical movement of supplies / goods? .....	213
Figure M-30: What is your principle means of moving supplies to your business / organisation at this location? .....	214
Figure M-31: What is your principle means of moving products from your business / organisation at this location? .....	214
Figure M-32: When transporting your products by road, do you move your products in your own vehicles or use a freight haulage firm? .....	215
Figure M-33: Please provide an outline of where your employees live. Please tick one option per row for the relevant locations. Include any contractors at your site .....	216
Figure M-34: What is the main mode of travel used by your employees to get to work in general? ..	216
Figure M-35: Why do you think these difficulties (with attracting and / or retaining staff) arise? .....	217
Figure M-36: If you indicated that problems with transport to / from the site affects your ability to attract and / or retain staff, please indicate the extent to which the following contribute to this? .....	218
Figure M-37: How do you primarily engage with your customers or users of the services you provide ... ..	219
Figure M-38: How important is it for customers to be able to access your premises? .....	219
Figure M-39: You indicated that problems with transport to / from the site affect your customers' ability to access your business premises, please indicate the extent to which the following contribute. ....	220
Figure M-40: What do you feel are the key weaknesses of your current location in terms of the operation of your business / organisation? .....	221

## Tables

Table 3-1: Fish Landing by Species at Peterhead Port and Fraserburgh Harbour (2014 and 2022) ...	30
--	----

Table 3-2: Change in the number of jobs between 2012 versus 2022 .....	32
Table 3-3: Split between rides undertaken on standard bikes and those undertaken on e-bikes 2019-2023 (Strava Metro).....	50
Table 3-4: Weekday Frequency of bus routes operating on the A90 and A952 corridors (as of January 2024) .....	52
Table 3-5: Combined weekday frequency of bus services operating between the origins and destinations shown .....	53
Table 3-6: A2B dial-a-ride services operating within the study area .....	53
Table 3-7: Number and Percentage of households in each location with convenient access (as defined above) to a bus stop .....	56
Table 3-8: Proportion of bus stops in each town at which the last service is before and after 1900 ....	59
Table 3-9: Journey time difference between car and public transport (public transport – car) (Source: Google API) .....	63
Table 3-10: Number of Bus Services departing Ellon P&R for Aberdeen City Centre, Peterhead, and Fraserburgh between 07:00 and 10:00, Monday to Friday .....	66
Table 3-11: DayRider Ticket zones in the study area and associated costs .....	69
Table 3-12: Cost of Adult Day and Week Relevant Grasshopper tickets by Zone .....	70
Table 3-13: Bus fares when travelling between key settlements in the corridor and onward to Aberdeen .....	70
Table 3-14: Number of households which can travel to Aberdeen City Centre by public transport journey time .....	74
Table 3-15: Proportion of population which fall in each Tier for the Study area and the remainder of Aberdeenshire – Education & Health .....	85
Table 3-16: Journey time variability (in minutes) along A90 / A952 within the project area .....	95
Table 3-17: Number of collisions and severity classification on the A90 / A952 and single carriageway A-roads elsewhere in Aberdeenshire and Scotland as a whole .....	97
Table 3-18: EV Charger Comparison .....	102
Table 3-19: 2030 AADT, Without Policy Scenario .....	106
Table 3-20: 2030 AADT, With Policy Scenario.....	106
Table 3-21: 2045 AADT, Without Policy Scenario .....	107
Table 3-22: 2045 AADT, With Policy Scenario.....	107
Table 3-23: 2019 Baseline and 2030 Road Journey Times (in minutes), Without Policy .....	109
Table 3-24: 2019 Baseline and 2030 Road Journey Times (in minutes), With Policy .....	109
Table 3-25: 2019 Baseline and 2045 Road Journey Times (in minutes), Without Policy .....	110
Table 3-26: 2019 Baseline and 2045 Road Journey Times (in minutes), With Policy .....	110
Table 3-27: AM Peak Hour, 2019 Baseline and 2030 PT Journey Times (in minutes), Without Policy ... ..	111
Table 3-28: AM Peak Hour, 2019 Baseline and 2030 PT Journey Times (in minutes), With Policy... ..	111
Table 3-29: AM Peak Hour, 2019 Baseline and 2045 PT Journey Times (in minutes), Without Policy ... ..	112
Table 3-30: AM Peak Hour, 2019 Baseline and 2045 PT Journey Times (in minutes), With Policy... ..	112
Table E-1: Selected Bus Services .....	148
Table H-1: Summary of Key Statistics, Platoons with 3 or More Vehicles .....	164
Table H-2: Summary of Key Statistics, Platoons with 5 or More Vehicles .....	164
Table M-1: Proportion of respondents who made walking trips in the last seven days as recorded via the survey sample and the 2021 Scottish Household Survey for Aberdeenshire .....	186
Table M-2: Proportion of respondents who made cycling trips in the last seven days as recorded via the survey sample and the 2021 Scottish Household Survey for Scotland .....	191

## Appendices

Appendix A	Housing Land Audit and Employment Land Register Sites
Appendix B	Geographic extent of Study Area Sub Areas
Appendix C	Environmental Constraints Mapping
Appendix D	Recreational Routes

Appendix E	Bus Journey Time Variability
Appendix F	Ellon Park and Ride Survey
Appendix G	Journey Time Variability
Appendix H	Platoon Analysis
Appendix I	Stakeholder Meetings
Appendix J	Schools Engagement Findings
Appendix K	Key Stakeholder Findings
Appendix L	Freight Stakeholders Findings
Appendix M	Public Survey Findings

This page is intentionally blank

# 1 Introduction

## 1.1 Background

1.1.1 The Campaign for North East Rail (CNER), in partnership with Aberdeen and Grampian Chamber of Commerce (AGCC) commissioned AECOM, in partnership with Stantec to undertake an appraisal of the strategic transport links between Dyce, Ellon, Fraserburgh and Peterhead in north east Aberdeenshire in line with Scottish Transport Appraisal Guidance (STAG). Grant funding was awarded through Phase 1 of the Scottish Government's Just Transition Fund.

## 1.2 Previous Studies

1.2.1 Several previous studies have considered options for improvements in the study area, including:

- **Fraserburgh and Peterhead to Aberdeen Strategic Transport Study Pre and Part 1 Appraisal<sup>1</sup>** (2014 - 2016) – this multi-modal study identified and appraised options for improving strategic transport connections between Fraserburgh, Peterhead and Aberdeen. The final report presented two option packages: a 'Road and Bus Option Package' and a 'Rail and Bus Option' Package.
- **Fraserburgh and Peterhead to Aberdeen Strategic Transport Study: STAG Part 1 Plus Road and Rail Studies** (2017) – following the completion of the above, separate road-based and rail-based studies further defined the respective Road and Rail Option Packages in preparation for a STAG Part 2 Appraisal and each included a review of the supporting data from the STAG Part 1, additional new data analysis, and a STAG appraisal of the Option Package.

1.2.2 Since these studies were completed, there have been wider changes that have affected travel in the area, including the opening of the Aberdeen Western Peripheral Route (AWPR) and Balmedie-Tipperty (B-T) Dualling in 2019; new housing and employment land allocated within the Aberdeenshire Local Development Plan (LDP); and significant changes in the policy landscape, including the commitments to work towards net zero emissions targets in the 2019 Climate Change Act.

## 1.3 Study Approach

1.3.1 This study is being undertaken in line with STAG methodology. There are five stages in the appraisal process as shown in Figure 1-1.

---

<sup>1</sup> now referred to as the Case for Change and Preliminary Options Appraisal

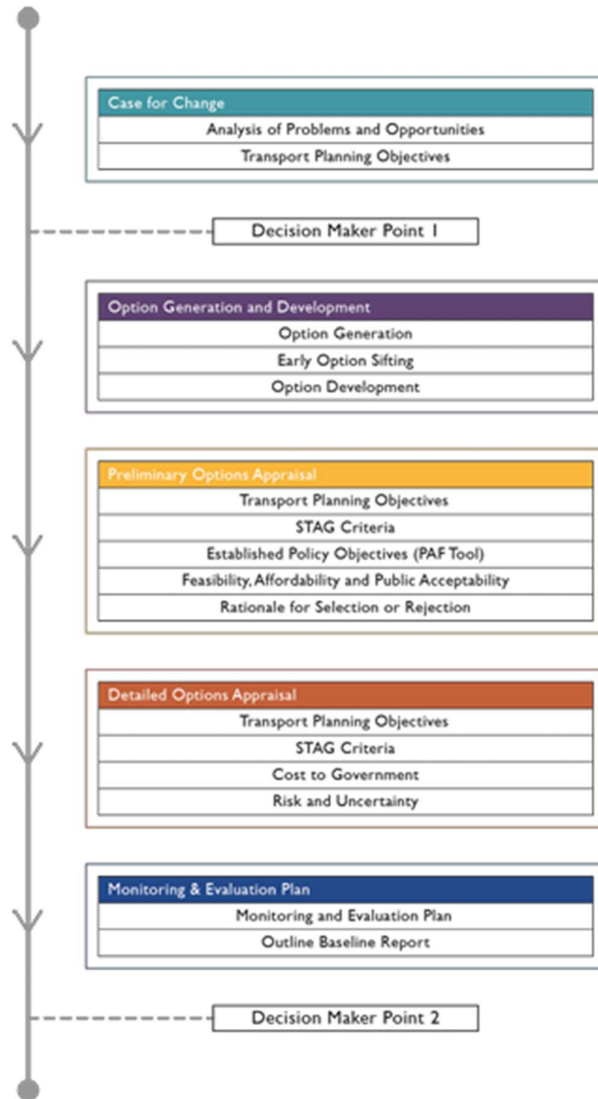


Figure 1-1: STAG Process

1.3.2 This report sets out the outcomes of Stage 1: **Initial Appraisal: Case for Change**. This stage forms the foundation of the appraisal and sets out the rationale for any potential improvements. It includes:

- the identification of **Problems and Opportunities**<sup>2</sup> with the transport system; and
- the development of a set of **Transport Planning Objectives** (TPOs) for the study which reflect the Problems and Opportunities identified and express the change sought without indicating (a) potential solution(s).

1.3.3 In line with STAG and wider policy, this Case for Change has considered all modes of transport, including active travel, public transport, freight, and car.

<sup>2</sup> Problems are defined in STAG as undesirable or harmful circumstances with the transport system and Opportunities are defined where a change to the transport system may lead to a positive outcome.

### Parallel studies

1.3.4 The study is being delivered in parallel with the A90(N) / A952 study, which is also an appraisal of transport accessibility and connectivity on the strategic transport links to and from Fraserburgh and Peterhead. The A90(N) / A952 appraisal is being taken forward by Nestrans and covers a similar study area to this commission (see Figure 1-2) and is focussed on short-to-medium improvement options. **This study is examining the potential of longer-term improvement options.**

1.3.5 There is, however, significant overlap between both studies, particularly at the Case for Change Stage. Therefore, to deliver efficiencies, relevant outputs from the data analysis have been shared and some aspects of the public and stakeholder engagement programme have been delivered jointly.

### 1.4 Structure of Report

1.4.1 The report consists of further chapters as follows:

- **Chapter 2** – provides a summary of the wider policy context with relevance for the Buchan Sustainable Transport Study corridor
- **Chapter 3** – describes the study area, including the socio-economic context; environmental baseline and a detailed profile of the transport network
- **Chapter 4** – provides a summary of the stakeholder and public engagement undertaken to inform the study, including several stakeholder meetings and a public and business survey
- **Chapter 5** – summarises the Problems, Opportunities and Constraints identified through the above data analysis and stakeholder and public engagement activities
- **Chapter 6** – sets out the TPOs for the study and a series of associated logic maps demonstrating how achievement of the TPOs would result in wider positive societal impacts in the study area, the wider north-east and Scotland as a whole
- **Chapter 7** – provides the next steps in terms of project delivery following the development of this Case for Change Report

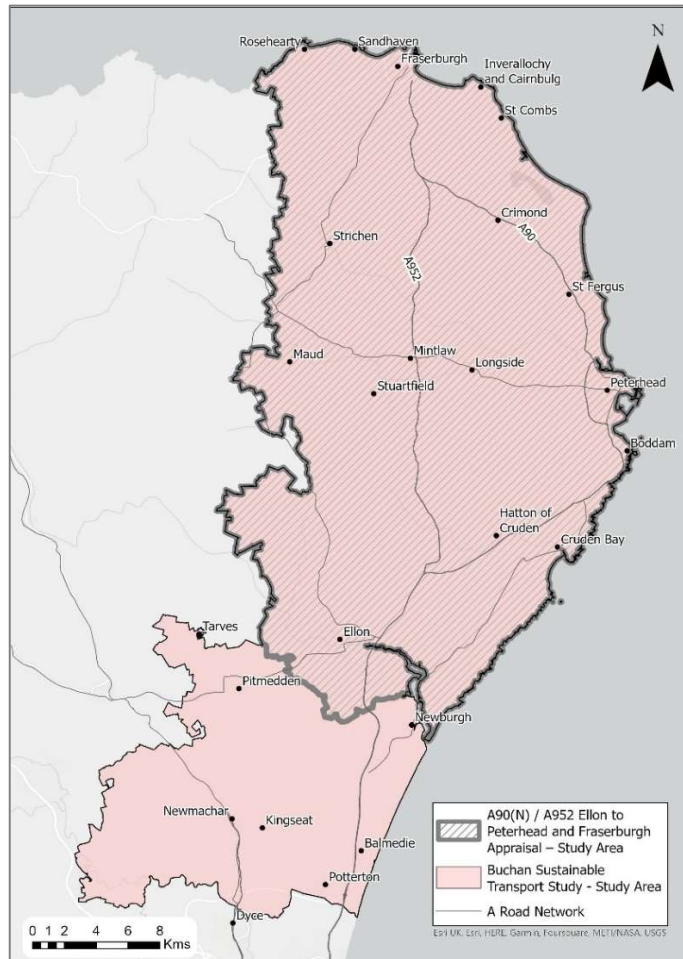


Figure 1-2: Study Area for this Buchan Sustainable Transport Study and the study area for the parallel A90(N) / A952 Appraisal

## 2 Established Policy Directives

2.1.1 This chapter provides a summary of the wider policy context with relevance for the Buchan Sustainable Travel Study corridor. The chapter reviews national, regional, and local policy documents and for each document, provides a brief summary of the purpose, aims and objectives before setting out a short commentary on its overall relevance for this appraisal.

### 2.2 National policy

#### Just Transition Funding

2.2.1 In 2021, the shared policy programme between the Scottish Government and Scottish Green Party established a 10-year £500 million Just Transition Fund (JTF) for the North East and Moray. This was announced in recognition of the particular need to transition the regional economy away from carbon-intensive industries and to capitalise on the opportunities, including jobs and prosperity, that the transition to net zero will bring.

2.2.2 The JTF promotes several outcomes, as follows:

- **Citizens, communities, and place:** support affected regions by empowering and invigorating communities and strengthening local economies;
- **Jobs, skills, and education:** equip people with the skills, education and retraining required to support retention and creation of access to green, fair, and high-value work;
- **Fair distribution of costs and benefits:** address existing economic and social inequality by sharing the benefits of climate action widely, while ensuring that the costs are distributed based on ability to pay;
- **Business and Economy:** support a strong, dynamic, and productive economy which creates wealth and high-quality employment across Scotland, upholds the UN Guiding Principles on Business and Human Rights, and continues to make Scotland a great place to do business;
- **Adaptation and resilience:** identify key risks from climate change and set out actions to build resilience to these risks, ensuring our economy is flexible, adaptable, and responsive to the changing climate;
- **Environmental protection and restoration:** commit to act within our planetary boundaries while protecting and restoring our natural environment;
- **Decarbonisation and efficiencies:** contribute to resource efficient and sustainable economic approaches that actively encourage decarbonisation, support low-carbon investment and infrastructure, and avoid carbon 'lock-in';
- **Further equality and human rights implementation and preventing new inequalities from arising:** address fuel poverty and child poverty in a manner consistent with Scotland's statutory targets on each, while furthering wider equality and human rights across all protected characteristics.

2.2.3 The Campaign for North East Rail (CNER) was successful in demonstrating the alignment of the proposals for reintroducing a passenger and freight rail service to the North East with the JTF objectives and funding criteria<sup>3</sup>, successfully securing funding to take forward a study into

<sup>3</sup> [https://www.campaignfornortheastrail.org/files/ugd/e902b3\\_9845380dbd154934b67bbd21e9e24c4a.pdf](https://www.campaignfornortheastrail.org/files/ugd/e902b3_9845380dbd154934b67bbd21e9e24c4a.pdf)

the railway reopening between Dyce and Ellon and Peterhead/Fraserburgh (as being addressed through this project).

### National Transport Strategy 2 (December 2020)

2.2.4 Transport Scotland published its National Transport Strategy 2 (NTS2) which sets out the national action plan for improving and developing transport in Scotland in February 2020. The NTS2 sets the following 'vision' for Scotland's transport system over the 20-years to 2040:

*"We will have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors."*

2.2.5 The Vision is underpinned by four 'Priorities,' namely:

- Reduce inequalities
- Take climate action
- Help deliver inclusive economic growth
- Improve our health and wellbeing

2.2.6 The NTS2 also establishes two 'hierarchies' which define how future transport investment decision making and services should be planned (see Figure 2-1). The **Sustainable Travel Hierarchy** defines the priority which will be given to each mode of transport in future investment planning, with walking and wheeling identified as the highest priority and single occupancy car travel the lowest priority. The Sustainable Travel Hierarchy is complemented by the **Sustainable Investment Hierarchy** which establishes a structured set of steps to be followed when planning investment in transport infrastructure, with 'targeted infrastructure improvements' afforded the lowest level of priority. The January 2022 update to STAG makes specific reference to the Sustainable Travel and Investment Hierarchies. It notes that the hierarchies should be used as a guide during the Option Generation and Development stage and that the Preliminary Options Appraisal should clearly identify where the options sit within the two hierarchies and include a supporting narrative. The guidance further notes that *"where only options at the bottom of these hierarchies are identified, ... an explanation as to why more sustainable options are not being progressed [should be provided]"*<sup>4</sup>.

<sup>4</sup> p16, [scottish-transport-appraisal-guidance-managers-guide.pdf](#)

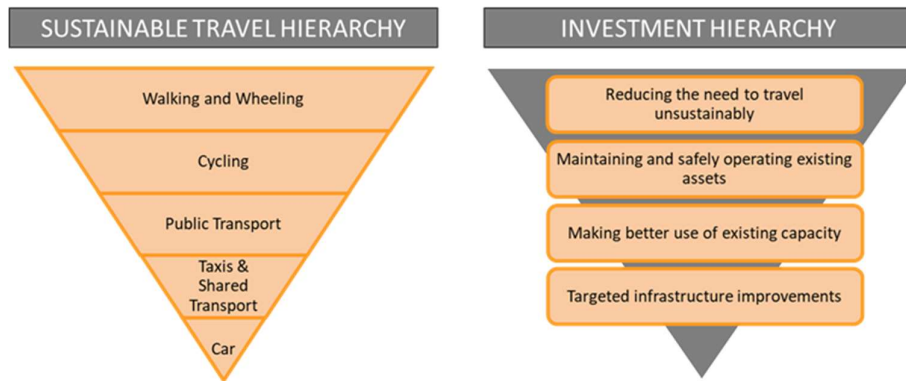


Figure 2-1: Sustainable Travel Hierarchy and Investment Hierarchy

**Key Point:** The generation and development of options through this study and their subsequent appraisal will need to be undertaken in line with the NTS and the Sustainable Travel and Investment Hierarchies, with where possible active and sustainable travel options and those which reduce the need to travel unsustainably prioritised above other options.

### Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and the subsequent Climate Change Plan Update (2020)

2.2.7 Under the 2019 Climate Change Act, the Scottish Government made a legally binding commitment to deliver **net-zero carbon emissions by 2045**. In addition, two interim targets were developed:

- A **75% reduction in greenhouse gas (GHG) emissions by 2030** relative to 1990 levels of carbon dioxide and 1995 levels of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.
- A **90% reduction in GHGs by 2040**, again relative to the 1990/95 baseline.

2.2.8 The Climate Change Plan Update also included two further commitments designed to support the delivery of the above targets:

- An aim to **reduce vehicle kilometres travelled by car by 20% by 2030**
- A **commitment to phase out the need for new petrol and diesel cars and vans** and for the conditions to be created to phase out the need for all new petrol and diesel vehicles in Scotland's public sector fleet by 2030

**Key Point:** The commitments set out in the Climate Change Act and subsequent Climate Change Plan Update are significant and, if achieved, will have a fundamental impact on traffic levels in Scotland. The implications for this study are twofold i) in terms of the transport problems identified, it will be important to consider the extent to which these may be exacerbated or reduced should a reduction in vehicle kilometres be achieved and ii) during Option Generation and Development and the subsequent appraisal, consideration will need to be given as to the extent to which the options contribute to reducing car kilometres.

### A Route Map to Achieve a 20 per cent Reduction in Car Kilometres by 2030 (2022)

2.2.9 This document sets out a route map of how Scotland will achieve a 20% reduction in car kilometres by 2030. The document presents a framework of sustainable travel behaviours (namely: reducing the need to travel; living well locally; switching modes to walk, wheel, cycle, or public transport where feasible; and combining trips or sharing journeys) and sets out a series of actions which will be taken to support each of these. The latter includes extending superfast broadband; improving town centres; increasing investment in active travel;

introducing LEZ; investing in the public transport network; and testing Mobility as a Service (MaaS).

**Key Point:** As above, should the travel behaviours set out in the Route Map be enacted in the study area, this could have important implications for future transport problems. In addition, any options which are generated will need to be appraised against wider policy, including the Route Map.

## Strategic Transport Projects Review 2 (2022)

2.2.10 The Strategic Transport Projects Review 2 (STPR2) sets out the Scottish Government's transport investment programme over the 20-year period 2022-2042, detailing how the government will deliver the Vision, Priorities and Outcomes of the NTS2. The document splits Scotland into 11 regions and includes recommendations which are relevant to all regions; recommendations which are general but have particular benefit for certain regions; and recommendations which are specific to each region<sup>5</sup>. The study area falls in the North East Region. The recommendations for this region with relevance to this study include:

### Recommendations relevant to all regions:

- **Changing road user behaviour** – improving road safety through the implementation of speed enforcement technology and national road safety behaviour change campaigns, education, and training initiatives (for example, Give Cycle Space and Road Safety Week) to enable all users to understand their road safety responsibilities.
- **Behaviour change and modal shift for freight** – the development of a network to facilitate behavioural change and modal shift
- **Trunk road and motorway safety improvements to progress towards 'Vision Zero'** – improvements across the trunk road and motorway network to help meet Scotland's Road Safety Framework vision and the long-term goal to achieve zero road fatalities and serious injuries by 2050.
- **Trunk road and motorway renewal for reliability, resilience, and safety** - continued and increased investment in the trunk road and motorway network over and above current maintenance levels to keep the network reliable and resilient for road users
- **Strategy for improving rest and welfare facilities for hauliers** – a national review of freight parking / rest areas to better understand barriers hampering their development, consider their financial stability and develop adequate standards. The review would indicate which routes have gaps in provision and support Transport Scotland in making future decisions on the need (or otherwise) to address market failure.
- **Speed management plan** - national review to establish appropriate speed limits for different road types within Scotland. The review would consider a range of measures such as speed management on motorways, speed limits through roadworks and rural settlements on trunk roads and reducing speed limits in urban environments and residential areas.

### Particular benefit for North East:

- **Rail freight terminals and facilities** - the provision of rail freight terminals to facilitate the modal shift of freight. The document notes that "*Transport Scotland supports industry partners in carrying out an updated market study for rail freight growth....linked to the Industry Growth Plan for Rail Freight, this would include a review of rail freight terminals and hubs to confirm how to meet long-term requirements to shift freight from road to rail*"<sup>6</sup>

<sup>5</sup> <https://www.transport.gov.scot/media/52681/final-summary-report-28-december-2022-stpr2.pdf>

<sup>6</sup> [final-summary-report-28-december-2022-stpr2.pdf \(transport.gov.scot\)](https://www.transport.gov.scot/media/52681/final-summary-report-28-december-2022-stpr2.pdf), p43

2.2.11 The second STPR Delivery Plan (2022-2023) notes that:

*“we will not build road infrastructure to cater for forecast unconstrained increases in traffic volumes and that new roads projects will normally only be taken forward where they reduce the maintenance backlog; address road safety concerns or adapt the network to deal with the impacts of climate change or benefit communities such as bypassing settlements.”*

2.2.12 The Delivery Plan also highlights the importance of improving road safety and delivering the outcomes of Scotland’s Road Safety Framework to 2030.

**Key Point:** While the recommendations within STPR2 are placed within the wider context set by the Sustainable Travel and Investment Hierarchies and the net zero emission targets and associated policy, the document does contain a range of recommendations with relevance to the trunk road network, including recommending ‘continued and increased investment in the trunk road network over and above current maintenance levels to keep the network reliable and resilient for road users’. The document also identifies rail freight terminals and facilities as being of particular benefit for the North East.

### National Planning Framework 4 (February 2023)

2.2.13 The Scottish Government published National Planning Framework 4 in February 2023. This sets out proposed priorities and policies for the planning system up to 2045. The document identifies six spatial principles which will guide the development of future places, namely:

- Just transition – ensuring the transition to net zero is fair and inclusive
- Conserving and recycling assets – making productive use of existing buildings, places, infrastructure, and services
- Living locally – support local liveability and ensure people can easily access services, greenspace, learning, work, and leisure locally
- Compact urban growth – limiting urban expansion
- Rebalanced development – targeting development in areas of past decline
- Rural revitalisation – encourage sustainable development in rural areas

2.2.14 The document also sets out a series of nationally important developments. Those with relevance for this study include:

- **Industrial Green Transition Zones** – supporting the decarbonisation of nationally important industrial sites in a way that ensures continued jobs, investment, and prosperity for these areas, including by putting in place the infrastructure needed to commercialise carbon capture and storage and decarbonise industry. The zones include a carbon capture and storage (CSS) projects network focused on several areas, including Peterhead

2.2.15 It is noted that since NPF4 was published, funding was announced by the UK Government in July 2023 for the Acorn Project, which will enable CCS at St Fergus, north of Peterhead.

2.2.16 NPF4 also identifies the following priorities for the North-East of Scotland:

- Plan infrastructure and investment to support the transition from oil and gas to net zero whilst protecting and enhancing blue and green infrastructure and decarbonising connectivity
- Focus on continued regeneration through the principles of local living and 20-minute neighbourhoods to sustain the skilled workforce and improve local liveability
- Support continued economic diversification and innovation

**Key Point:** The North East is in a period of transition from oil and gas to net zero and there are various investment and growth opportunities, many of which are centred around the ports

and harbours, including offshore renewables, hydrogen, and carbon capture and storage. It will be important to ensure that the transport network is sufficient to support these growth sectors.

### Scottish Ministers' High Level Output Specification - Control Period 7 - 2024 – 2029, 2023

- 2.2.17 The High-Level Output Specification (HLOS) 2024-2029 sets out what the Scottish Ministers require the rail industry to achieve with regard to Scottish railway activities during the review period covering 1 April 2024 to 31 March 2029.
- 2.2.18 The document notes that moving a growing proportion of goods by rail is a key priority of the Scottish Government and states that Network Rail should continue to deliver the objectives identified in the above 2019 Rail Freight Growth Plan. The specification includes the following specific targets for Network Rail:
- to facilitate an 8.7% growth in net tonne kilometres in rail freight on the Scottish network to be achieved on the existing capability of the rail network without further enhancements
  - to develop collaboratively and consult on a longer-term rail freight growth strategy by the halfway point of CP7
  - to aim to achieve a higher rail freight growth rate, based on experience of successful collaboration within the freight sector, with an expectation that a higher growth rate, closer to 10% may reasonably be achievable
- 2.2.19 In response to the above, Network Rail are scheduled to publish their final CP7 Price List with its CP7 Delivery Plan following in Spring 2024.

**Key Point:** The CP7 HLOS contains a specific target to growth net tonne kilometres of rail freight on the Scottish network by 8.7% in the period up to March 2029. However, while moving a growing proportion of goods by rail is a key priority of the Scottish Government, the HLOS notes that the 8.7% target should be achieved on the existing capability of the network without further enhancements.

### Union Connectivity Review, Department for Transport, 2021

- 2.2.20 The UK Government asked Sir Peter Hendy CBE to undertake a detailed review into how transport connectivity across the UK can support economic growth and quality of life. The document, published in 2021, contains a series of recommendations as to how transport connectivity between the nations of the UK could be improved.
- 2.2.21 The recommendations for the UK government which are relevant to this commission include:
- design and implement UKNET – a strategic transport network for the whole of the UK, and commit to providing additional funding to improve the network, in particular the parts that are not performing well
  - plan improvements to the network using multimodal corridors, which should be reviewed regularly and appraised on a wider economic basis to support government objectives, such as levelling up and net zero
- 2.2.22 In defining the UKNET, the review sought to identify transport connections which provide one or more of the following:
- direct linkages between major cities and economic regions
  - connections to major seaports and airports
  - discrete cross-border economic areas
  - freight hubs

**Key Point:** To support economic growth and quality of life, the Union Connectivity Review emphasises the need for a strategic transport network which provides direct linkages between major cities, economic regions, and major seaports. This is important in relation to this study given that the A90 and A952 provide the key strategic connections between Fraserburgh Harbour, Peterhead Port, and Aberdeen.

## 2.3 Regional policy

### Regional Transport Strategy for the North East of Scotland, RTS:2040 (2021)

- 2.3.1 The Nestrans Regional Transport Strategy (RTS) sets out a strategy for improving transport across the North-East region. The document sets out a Vision, four pillars, and six priorities around which the strategy is based as follows:

#### RTS Vision:

*“To provide a safer, cleaner, more inclusive, accessible and resilient transport system in the North East, which protects the natural and built environment and contributes to healthier, more prosperous and fairer communities.”*

#### RTS Pillars:

- Equality – promoting equality across the North East
- Climate – reducing our impact on climate change and protecting the environment
- Prosperity – helping to deliver inclusive economic growth across the North East
- Wellbeing – Improving health, safety, and wellbeing

#### Priorities:

- improved journey efficiencies and enhanced connectivity
- reduced carbon emissions to support net zero
- accessibility for all
- a step change in public and active transport **enabling a 50/50 modal shift** between car and sustainable travel
- air quality that is cleaner than World Health Organisation standards for emissions from transport
- zero fatalities on the road network

- 2.3.2 The RTS then sets out a range of policies and associated outcomes and actions. The policies relevant to this study include:

- Developing the rail network
- Managing demand (for car travel)
- Maintaining and improving the region’s transport network
- Facilitating the movement of freight
- Road safety and casualty reduction

- 2.3.3 Under the policy ‘**developing the rail network,**’ the document includes the following outcomes:

- Improved rail connections from the north east to the rest of Scotland and the UK

- Reduced and more reliable journey times by rail to key destinations, including Edinburgh, Glasgow and beyond
  - Increased capacity on the rail network to allow increased mode shift to rail
  - An enhanced and reliable local rail network.
- 2.3.4 This policy includes an action to provide improved access to the railway network “by considering opportunities for additional stations, better integration of local services with InterCity services, full access for all and improved access to stations by non-car modes.” Specific interventions include “Keep under review how changing circumstances may influence the case for rail line re-openings within the region.”
- 2.3.5 Regarding rail freight, “Nestrans current policy is to ensure that facilities, including freight paths and adequate rolling stock, are available to offer a rail freight option to and from the north east where appropriate.”
- 2.3.6 Under the policy ‘**maintaining and improving the region’s transport network,**’ the document includes the following outcomes:
- Manage our transport assets effectively and invest efficiently in the resources needed to maintain and safely operate them and to make better use of existing capacity
  - MI (b) Increase the resilience of the region’s transport network
  - MI (c) A strategic road network which offers high quality movements within, through, to and from the north east, offering efficient and reliable journey times in a safe and resilient manner
  - MI (d) Identify where upgrades and enhancements are required to fulfil the aspirations of the region in terms of economic development and growth, resilience, and casualty reduction targets
- 2.3.7 This policy also includes the action (Action MI 1) to deliver improvements on the A90(N) / A952 corridor. This sets out the following:
- A90(N) and Ellon to Peterhead and Fraserburgh route action:
    - a) Dualling the Ellon bypass to Toll of Birness including upgrades to roundabouts
    - b) Junction upgrade at Toll of Birness to an at-grade roundabout
    - c) Provision of sections of 2+1 lanes on the A90(N) and A952 between Toll of Birness and Peterhead and Fraserburgh respectively
    - d) Targeted safety improvements to the A952, including a roundabout at Cortes junction
- 2.3.8 Overall, the RTS notes that:
- “Future investment decisions should be based on the NTS2 Sustainable Investment Hierarchy which prioritises reducing the need to travel, maintaining and safely operating existing assets and making best use of existing capacity over targeted infrastructure improvements.”*
- 2.3.9 However, it is also noted that:
- “This needs to be balanced with the economic and accessibility requirements of our key industries. Delays on our transport system have a significant impact on businesses that rely on their produce being delivered on time, particularly farming and fishing sectors, where delays can significantly impact the quality of goods being transported. Some constraints on the network will still need to be addressed to facilitate the movement of goods and people and improvements to address safety issues will still be required.”*

**Key Point:** The RTS outlines a pragmatic approach to project delivery with future investment decisions set within the context of the Sustainable Travel and Investment Hierarchies but also recognising the need to address constraints which inhibit the economic and connectivity requirements of industry. The A90 and A952 are vital links for the farming and fishing industries and are important in providing connections to growth opportunities in areas such as offshore renewables, hydrogen, carbon capture, transport and storage, and decommissioning. Given this policy context, for this study, it will be important to demonstrate that there are safety issues on the network and / or transport problems which are affecting existing and / or emerging industries.

### **Draft Regional Economic Strategy (RES) 2035, May 2023**

2.3.10 The draft RES was approved by Aberdeen City Council in May 2023 and approved by Aberdeenshire Council in June 2023. It sets out a long-term plan of investment for North East Scotland to transform its economy over the next decade and beyond.

2.3.11 The document sets out five overarching objectives, as follows:

- Establish the North East as a pioneer of the energy transition, by delivering an 80% reduction in carbon emissions per head
- Maintain regional Gross Value Added (GVA) as a share of Scotland's overall GVA while increasing the share of regional GVA from region's growth sectors
- Maintain a healthy, sustainable, working age population through increasing economic participation rates
- Become a Real Living Wage region with 95% of overall employment offering a real living wage or higher
- Protect and enhance the natural capital of the region

2.3.12 Four programmes' areas are identified, namely 1) A thriving, innovation driven economy; 2) An outstanding natural environment; 3) A healthy and skilled population; and 4) A strong community and cultural identity. A range of Outcome Areas and Actions are identified under each of these. Of these, the following have relevance to this study:

#### **Outcome Areas:**

- Capitalising on the region's world-class reputation for offshore energy innovation, and drive growth and decarbonisation across wider regional industries
- Supporting the internationalisation of key growth sectors to maintain North East Scotland's share of overall Scottish exports
- Maintaining and growing the North East's role as a food, drink, agriculture, and fishing producer
- Creating an investment environment where businesses can flourish
- Maintaining levels of inward investment into the region that in turn will grow Scottish supply chain
- Delivering a step change in the number and take up of active travel schemes
- Reducing the proportion of income deprived households
- Getting more young people in lower Scottish Index of Multiple Deprivation (SIMD) deciles out of poverty by focussing relentlessly on closing the gap

- Driving interest in, and uptake of, educational pathways to deliver the future workforce for our key regional clusters
- Reducing the % of employers with a skills gap
- Narrowing disability, racial and gender-based inequalities

**Actions:**

- Support delivery of enhanced quayside infrastructure and expansion of Peterhead Port and Fraserburgh Harbour
  - Promote the case for the Acorn project to capture and store carbon
  - Maximise green energy production and decarbonisation from the North Sea Link, maintain the position as base for offshore subsea engineering and as a place for Offshore Wind (particularly floating offshore), green hydrogen and carbon capture utilisation and storage (CCUS)
  - Support delivery of Scotwind supplier development statements and creation of high value manufacturing facilities
  - Secure industrialisation and a competitive, commercially attractive supply chain servicing green energy opportunities
  - Support delivery of BP Aberdeen H2 Energy Production, Storage and Distribution Hub
  - Support delivery of the Eastern Green Link to install a sub-sea HVDC from Peterhead
- 2.3.13 In terms of transport the RES commits to implementing the RTS and the RTS Action Plan. The document also includes an appendix which sets out the actions identified in the 2016 Regional Economic Strategy which will continue to be taken forward.
- 2.3.14 It should be noted that since the production of the RES, the UK Government's Spring Budget 2023 committed to establishing 12 Investment Zones across the UK, with North East Scotland confirmed as one of the Scottish locations. As a result, the region will be supported by up to £80 million in targeted investment, tax reliefs and other incentives over a five-year period to boost the economy, stimulate business growth and create high-quality, well-paid jobs.

**Key Point:** The RES sets out a long-term plan to transform the North East Economy and diversify away from oil and gas to renewables, hydrogen, and carbon capture and storage. The RES also emphasises the importance of supporting non-energy markets, including food, drink and agriculture, tourism, and digital tech. In terms of transport problems and opportunities, it will be important to consider both current and future problems and how transport may support energy transition and economic growth.

### North East Scotland Bus Alliance

- 2.3.15 The North East Scotland Bus Alliance was established in 2018 as a voluntary partnership between Nestrans, Aberdeen City Council, Aberdeenshire Council, First Aberdeen, Stagecoach, and Bains Coaches. The objectives of the Alliance are to:
- Arrest the decline in bus patronage in the North East of Scotland by 2022
  - Achieve year on year growth in bus patronage to 2025
- 2.3.16 Sub-objectives exist around increasing modal share of bus patronage, improving operational performance and customer satisfaction, reducing bus emissions, and improving service accessibility. In April 2020, the Bus Alliance published a Bus Action Plan setting out the

priority actions of the partners over the next five years and an update of this was produced in 2022<sup>7</sup>. The document includes overarching actions covering each of the following:

- Journey times and reliability
- Information, marketing, and promotion
- Fares and ticketing
- Affordability and accessibility
- Interchange
- Bus stop infrastructure
- Quality of the fleet
- Managing demand

2.3.17 Under the journey times and reliability overarching action, there are individual actions covering improvements to an identified number of Priority Corridors as well as a more general action covering journey time and reliability improvements on other parts of the strategic network. The sub action regarding the latter notes “*ongoing monitoring and review of the network to identify problem areas affecting bus journey times and reliability.*”

2.3.18 It is noted that Ellon Park and Ride to Garthdee corridor is identified as a Priority Corridor with specific actions identified for this section. The Ellon Park and Ride Garthdee Transport Corridor Study was commissioned by Aberdeen City Council (ACC) and partners to appraise options for improving transport connections (particularly public transport and active travel connections) on this section using funding from the Bus Partnership Fund. A Preliminary Options Appraisal (POA) was completed in 2021 and the Detailed Options Appraisal (DOA) and Outline Business Case (OBC) is ongoing, including consideration of a long-distance active travel route between Ellon and Murcar.

**Key Point:** There are clear aspirations to improve bus connections, including improving journey times and reliability across the strategic network. There are also specific actions to improve journey time and reliability between Ellon and Aberdeen City Centre and onward to Garthdee. Part of this area is in the south of the study area up to Blackdog Roundabout however extends further south to Garthdee. Enhanced bus connections between Aberdeen and Ellon could lead to reductions in traffic on this section. However, given the P&R at Ellon, it could also conversely lead to an increase in traffic around Ellon and further north.

## 2.4 Local policy

### Aberdeenshire Local Development Plan 2023

2.4.1 The Aberdeenshire Local Development Plan (LDP) sets out development priorities at the local level. It includes the policies which will be used to determine planning applications and sets out exactly where development is expected to take place (by way of allocations). The 2023 LDP was initially envisaged to cover the period up to 2031. However, it was prepared prior to the planning reforms set out in the Planning (Scotland) Act 2019 and therefore Aberdeenshire is currently preparing a new LDP which it is anticipated will be adopted in or before 2028.

2.4.2 The 2023 LDP focuses development on three **Strategic Growth Areas**, including **Aberdeen to Peterhead**. The document also identifies **Fraserburgh and Peterhead as ‘Regeneration Priority Areas’** where a key priority is to promote and attract new business and skilled professionals to support the local economy.

<sup>7</sup> [https://www.nestrans.org.uk/wp-content/uploads/2022/11/Bus-Action-Plan\\_2022.pdf](https://www.nestrans.org.uk/wp-content/uploads/2022/11/Bus-Action-Plan_2022.pdf)

2.4.3 The tables below set out the employment and land allocations within the study area. A map showing these sites is also included in Appendix A.

Table 2-1: Employment Land Allocations within the Study Area

Settlement	Allocation (hectares)	Built	Strategic reserve – beyond 2032	Development restricted until improvements delivered on the A90	Present in 2012 LDP
Fraserburgh	30.8				✓
Cruden Bay	2				✓
Longside	126.36				
Mintlaw	8.36			✓	✓
Peterhead	102.6		42.6		✓
Ellon	31			✓	✓
<b>Total</b>	<b>301.12</b>		<b>42.6</b>		

Table 2-2: Housing Land Allocations within the Study Area

Settlement	LDP 2017 Allocation	Built by January 2019	Existing Supply 2019		LDP 2023 Allocation <sup>8</sup>	Development restricted until improvements delivered on the A90	Present in 2012 LDP
			Effective 2019	Constrained Supply 2019			
Fraserburgh	1190	189	761	240	1,190		✓
Ardallie	10	2	8	0	10		✓
Boddam	9			9	9		✓
Crimond					30		
Cruden Bay	241		200	41	231		✓
Hatton	76	2	49	40	87		✓
Maud	85	7	78	32	147		✓
Mintlaw	1,204	95	2,302	50	1,204	✓	✓
New Deer	42	1	41		42		✓
Peterhead	1,740	19	1,209	510	1,700		✓
St Combs			19		75		
St Fergus	55		25	30	38		✓
Strichen	40		40		40		
Stuartfield	75	32	43		75		✓
Ellon	985	1	1,041		990	✓	✓
<b>Total</b>	<b>5,752</b>	<b>348</b>	<b>5,816</b>	<b>952</b>	<b>5,868</b>		

2.4.4 Overall, just over 300ha of land has been allocated for employment land and nearly 5,900 homes. As set out in the tables, to progress the employment and housing allocations at both Mintlaw and Ellon, it is noted in the LDP that improvements to the A90 would be required. With respect to Mintlaw, the LDP notes:

*“Until the Toll of Birness junction is upgraded, new development in Mintlaw may be restricted. There is a limit on the number of houses which can be built and occupied in Mintlaw until such time as the A90(T) / A952 Toll of Birness junction has been improved and its capacity increased”*

2.4.5 With respect to Ellon, the LDP notes:

*Additional traffic movements arising from the sites allocated in Ellon will require transport mitigations to address their impact on the A90 trunk road at its junctions with the A948 and the B9005 and on the town centre. The Development Planning and Management Transport Appraisal Guidance (DPMTAG) assessment and the Ellon Traffic Modelling Study have identified potential mitigations. However, the Council would also consider alternative ...*

<sup>8</sup> The figures in this column may include homes built before 2019 and/or homes that are not anticipated to be built until after 2032.

*solutions to address the relevant impacts. Within the Plan period, traffic congestion and inadequate retail floorspace should begin to be addressed by the early provision of new road infrastructure (with options including a vehicular bridge over the River Ythan from the Cromleybank site and/or (preferably) the provision of an east-west road link from the B9005 at its junction with the A90 trunk road to the A920 at Wineburn)”*

- 2.4.6 It is noted that there are allocated sites within the LDP which may act as a constraint on some of the potential options which may emerge from this study, and which would need to be considered in the subsequent option development process.

**Key Point:** The 2023 LDP sets out significant employment and housing allocations within the study area. The allocated sites at Ellon and Mintlaw are reliant on improvements at the A90 junctions being taken forward to progress.

### Local Outcomes Improvement Plan and Peterhead and Fraserburgh Locality Plans

- 2.4.7 The Local Outcomes Improvement Plan (LOIP) 2017-27 is a ten-year plan produced by Aberdeenshire Community Planning Partnership (CPP) which sets out agreed priorities, to help improve local communities. The LOIP 2017-27 sets out four Priorities for Aberdeenshire as follows:

- Reducing Child Poverty
- Connected and Cohesive Communities
- Changing Aberdeenshire’s relationship with Alcohol
- Health and Wellbeing

- 2.4.8 With respect to connected and cohesive communities, it is noted that *“the more ‘connected’ a community is, particularly in terms of access to services and physical connections, such as broadband, road networks and transportation, to social connections and citizens, the greater the opportunity is for the community to be ‘cohesive’ with a common vision and sense of belonging ... i.e., addressing socio-economic inequalities”*<sup>9</sup>.

- 2.4.9 To help achieve this priority, Locality Plans were produced for three areas in Aberdeenshire identified as experiencing relative disadvantage. These include Peterhead and Fraserburgh. Each of these is discussed below.

#### Peterhead Locality Plan

- 2.4.10 Peterhead Locality Plan was produced in 2020 and sets out a range of local priorities for the town, including:

- Support Active Travel
- Develop a Community Wealth Building Approach
- Support projects and initiatives for regeneration of our communities
- Work to ensure there is affordable and reliable transport available in our communities.

- 2.4.11 The report notes that Peterhead performs less well than other areas on a range of socio-economic indicators and highlights that the town was identified as being particularly vulnerable to the consequences of Brexit in the Scottish Government’s Brexit Vulnerability study (2019). The importance of public transport connectivity to provide access to employment and opportunities is also emphasised, particularly in the context of the town having lower levels of car availability compared to other locations in Aberdeenshire.

<sup>9</sup> <https://www.ouraberdeenshire.org.uk/our-priorities/connected-and-cohesive-communities/>

### Fraserburgh Locality Plan

2.4.12 The Fraserburgh Locality Plan was produced in 2021 and includes a range of locally identified outcomes and priorities for the development of the town. The latter includes:

- Providing better access to services
- Inclusive growth supported by lifelong learning and more pathways to more choices
- Improve area transport, providing affordable, accessible transport for all
- Accessible and affordable joined up services in the right places

**Key Point:** The Aberdeenshire LOIP and associated Locality Plans identify a range of local priorities to help improve socio-economic outcomes in Peterhead and Fraserburgh. Each document highlights the importance of transport connectivity for providing access to employment, services and other opportunities and supporting the development of cohesive communities.

### 3 Study Area Context

#### 3.1 Introduction

3.1.1 This chapter provides a profile of the study area, including the wider socio-economic context, an environmental baseline, and a detailed summary of transport supply and demand. The chapter draws on a range of secondary data sources and analysis. Where relevant, key points from the stakeholder and public engagement are also referenced, with Chapter 4 providing a full account of the latter.

#### 3.2 Social Context

##### Population

3.2.1 The study area is rural in nature, with a total population of approximately 86,000 in 2021. This is equivalent to one-third of Aberdeenshire’s population which is higher than the study area land mass may imply (with the study area making up just 12% of Aberdeenshire’s total land mass).

3.2.2 The largest settlements in the study area are Peterhead (19,060), Fraserburgh (12,570), and Ellon (10,070) (see Figure 3-1). Together these three towns accounted for 61% of the total study area population in 2020. Peterhead is also the largest settlement in Aberdeenshire, with Fraserburgh the third largest (after Inverurie) and Ellon the sixth largest.

3.2.3 In terms of age profile, the study area is broadly reflective of the rest of Aberdeenshire.

**Key Point:** The study area accounts for a considerable portion of the Aberdeenshire population and is home to two out of the three largest settlements in the local authority area.

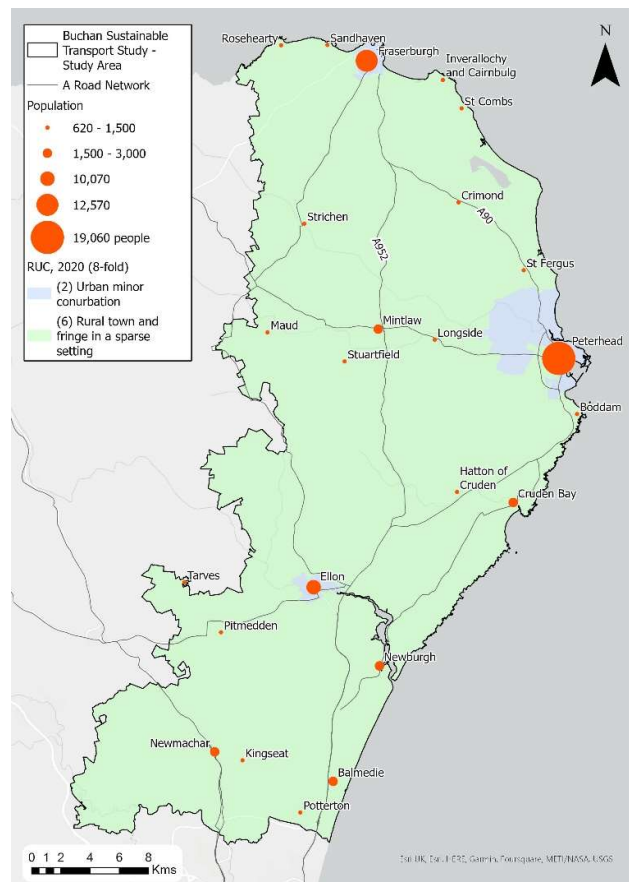


Figure 3-1: Study Area showing 2020 population of National Records of Scotland defined settlements

##### Population change

3.2.4 Figure 3-2 shows the change in population in the study area in the 20-year period between 2001 and 2021. For reporting this data, the study area has been split into five sub-areas, namely Fraserburgh, Peterhead, Ellon, Mid Rural, and Rural North. The geographic extent of each of these areas is shown in Figure B-1 in Appendix B The rest of Aberdeenshire, Aberdeen City and Scotland has been included for comparison purposes.

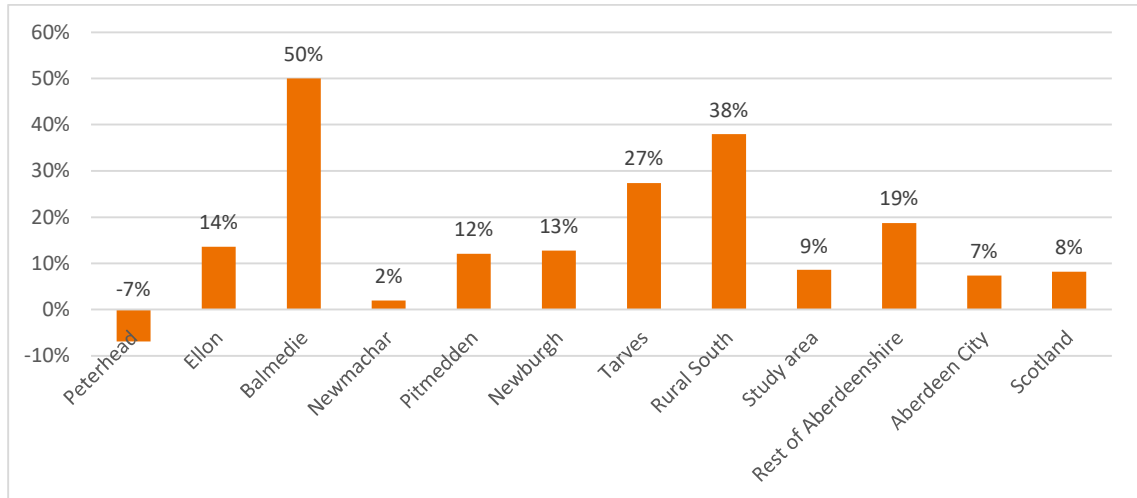


Figure 3-2: Percentage change in population between 2001 and 2021<sup>10</sup>

3.2.5 Overall, the study area population as a whole has increased by 9% over this period, compared to a 19% increase in the rest of Aberdeenshire. At the sub-area level, Peterhead and Fraserburgh have both seen declines in population, dropping by 7% (1,240) and 4% (450) respectively. In contrast, the Rural North has seen a growth in population which exceeds that of the rest of Aberdeenshire (24% compared to 19%).

**Key Point:** There has been a decline in the population of Peterhead and Fraserburgh since 2001. This is in contrast to the growth seen in the more rural locations in the study area and the rest of Aberdeenshire. It will be important to understand the factors contributing to this decline and the extent to which transport connectivity to and from the areas is a driver.

<sup>10</sup> National Records of Scotland Population estimates Mid 2001 and mid 2021

## Deprivation

- 3.2.6 The Scottish Index of Multiple Deprivation (SIMD) is the Scottish Government's official tool to identify areas of deprivation across Scotland.
- 3.2.7 SIMD provides a relative ranking of all data zones in Scotland from 1 (most deprived) to 6,976 (least deprived) based on a weighted combination of data for seven domains: **income, employment, health, education, skills and training, geographic access to services, crime, and housing.**
- 3.2.8 An overview of each domain is provided below.
- **Income:** percentage of people who are income deprived and receive certain benefits or tax credits
  - **Employment:** percentage of working age people who are employment deprived and receive certain benefits
  - **Education:** considers working age people with no qualifications; proportion of people aged 16-19 not in full-time education, employment, or training; and proportion of 17- to 21-year-olds entering full time higher education
  - **Health:** considers hospital stays related to alcohol and drugs misuse, emergency stays in hospital and proportion of population being prescribed drugs for anxiety, depression, or psychosis
  - **Access to Services:** considers average drive or public transport travel time to access services such as a GP surgery, retail centre or schools
  - **Crime:** recorded crimes of violence, sexual offences, domestic housebreaking, vandalism, drugs offences, and common assault per 10,000 people
  - **Housing:** percentage of people living in households that are overcrowded and/or have no central heating
- 3.2.9 The dataset includes ranks for the overall composite index and each individual domain. The generally accepted point at which a data zone is defined as deprived is when it is classified in the '20% most deprived' in Scotland (i.e., it is ranked within the first 1,395 of the 6,976 data zones in Scotland).
- 3.2.10 The figures below show the results for the overall SIMD composite index and the individual results for the employment, income, education, and health domains.

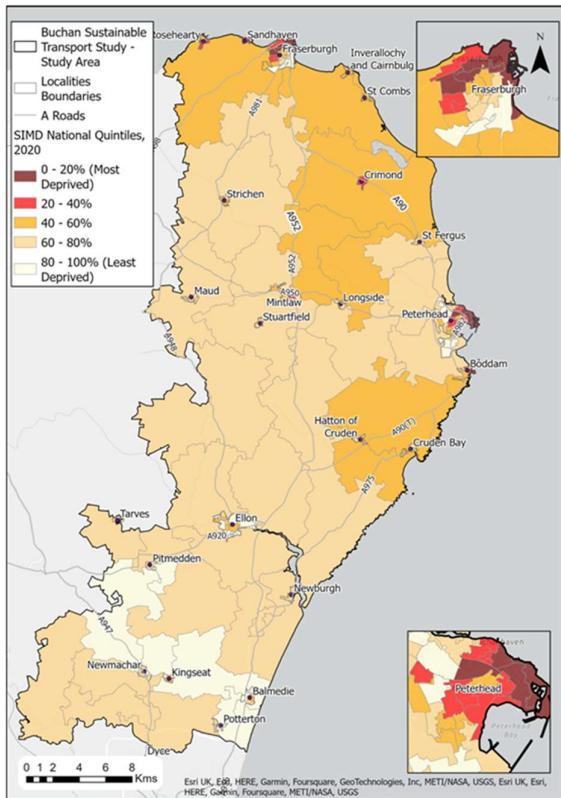


Figure 3-5: Study Area SIMD 2020

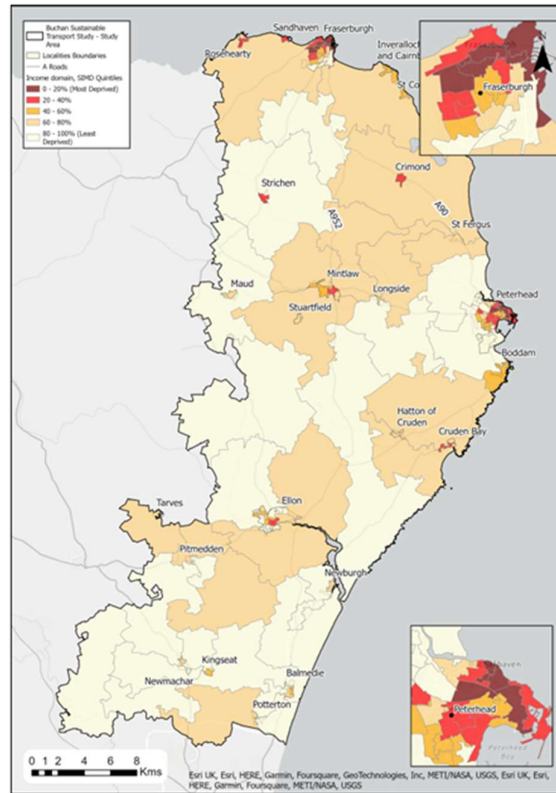


Figure 3-4: Study Area SIMD 2020 – Income domain

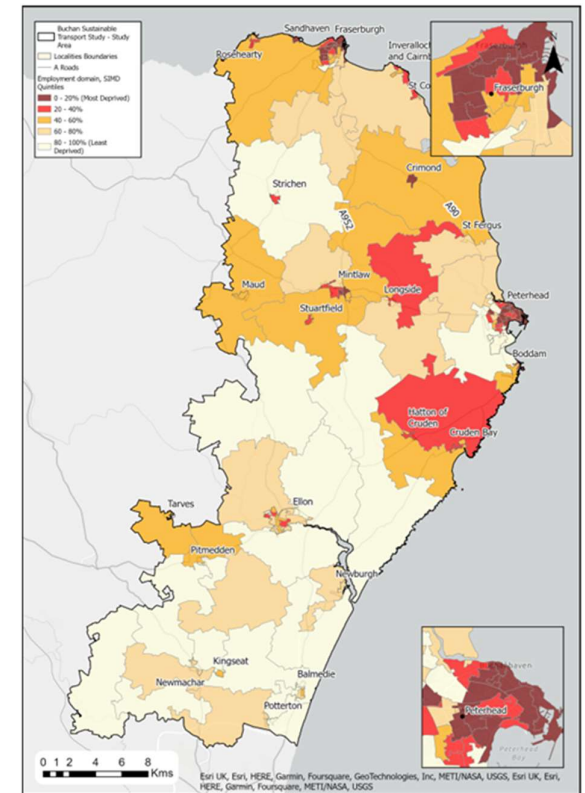


Figure 3-3: Study Area SIMD 2020 – Employment domain

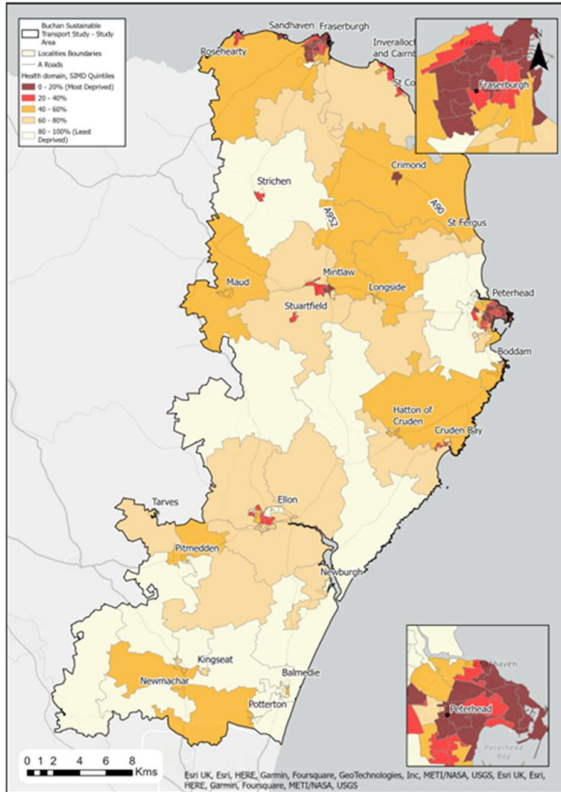


Figure 3-6: Study Area SIMD 2020 – Education domain

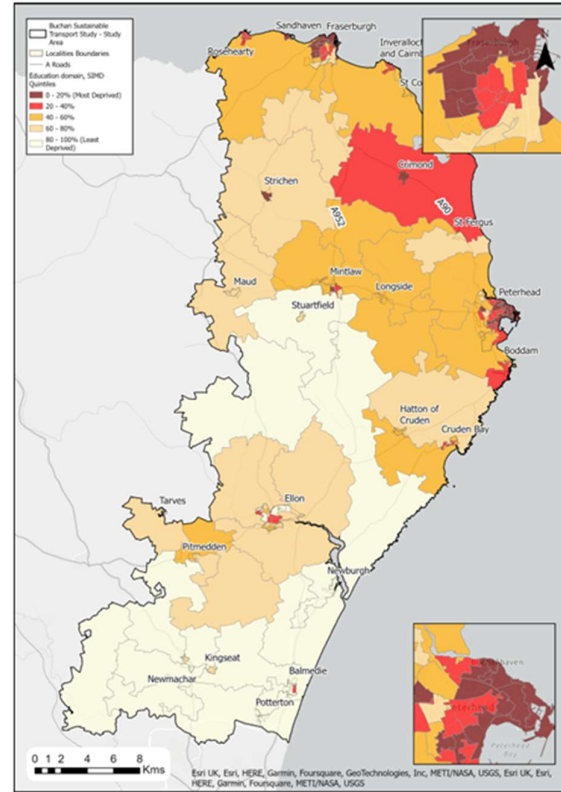


Figure 3-7: Study Area SIMD 2020 – Health domain

3.2.11 Key points with respect to the level of deprivation in the study area are as follows:

- Fraserburgh and Peterhead have the most deprived datazones in Aberdeenshire – in total across the local authority area, there are nine datazones which fall into the 20% most deprived in Scotland and all nine of these are in Fraserburgh and Peterhead
- In total, 29% of the datazones in Fraserburgh (5 out of the 17 which make up the town) and 17% of the datazones in Peterhead (4 out of the 23 which make up the town) fall into the 20% most deprived in Scotland
- Focusing only on Aberdeenshire, 58% of the datazones in Fraserburgh (10 of the 17) and 65% of the datazones in Peterhead (15 of the 23) fall into the 20% most deprived in Aberdeenshire

3.2.12 Figure 3-8 shows the proportion of datazones which fall within the 20% most deprived from SIMD 2016 and 2020<sup>11</sup> for the Study Area, Rest of Aberdeenshire, Aberdeen City. As shown, the number of datazones in the 20% most deprived category has grown in Fraserburgh, increasing from 12% in 2016 to 29% in 2020.

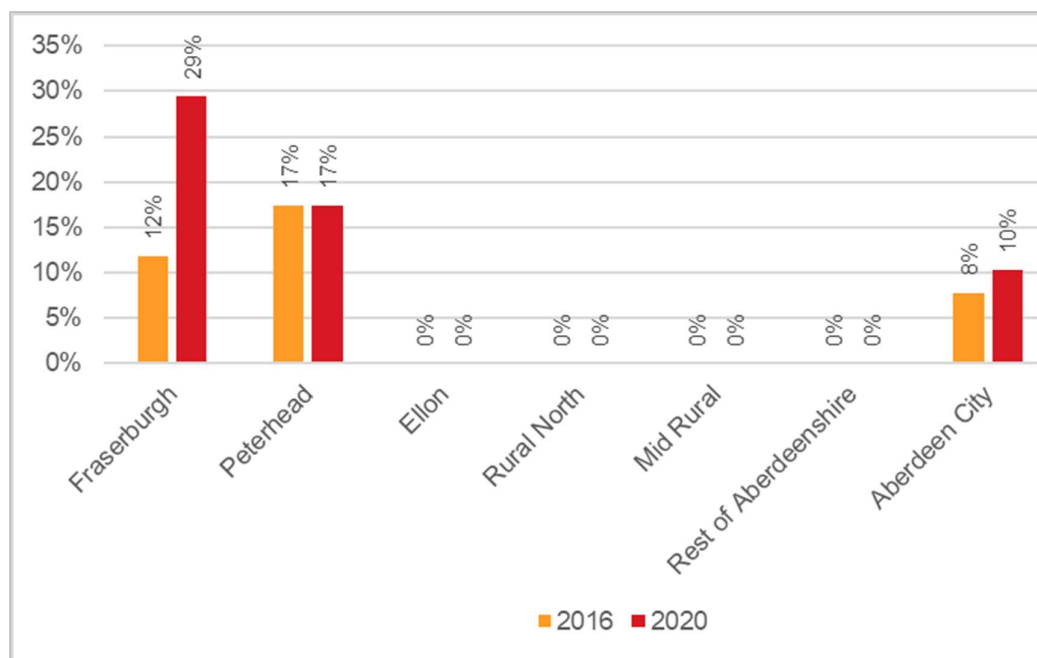


Figure 3-8: Datazones in the 20% Most Deprived Category in 2016 and 2020

**Key Point:** Fraserburgh and Peterhead are the most deprived areas in Aberdeenshire, with a significant concentration of datazones classified as being within the 20% most deprived in Scotland in each town. Peterhead has 17% of datazones in the most deprived quintile Fraserburgh has seen an increase in the number of areas which are classed within the 20% most deprived category in the period since 2016. As discussed in Chapter 2, Peterhead and Fraserburgh are identified as ‘Regeneration Priority Areas’ within the Aberdeenshire LDP. There is therefore a policy recognition of the need for regeneration in the towns and it could be argued that transport improvements could contribute to this.

<sup>11</sup> It is noted that 2012 SIMD data is only published using the 2001 Census boundaries (rather than 2011) and therefore it is not possible to make a comparison with this year and 2016 and 2020

### 3.3 Economic Context

#### Peterhead Port and Fraserburgh Harbour

3.3.1 Given their regional and national significance, this section provides more detail on both Peterhead Port and Fraserburgh Harbour, including the industries which operate from each site; vessel incomings and outgoings; and recent developments and future investment plans. The section also examines the fishing industry at both sites, including an analysis of fish landings by tonnage, value, and species; a review of the fish processing industry; and an assessment of the impact of the new UK-EU fishing rules on fish landings and exports.

#### Peterhead Port

3.3.2 Peterhead Port is an important base for servicing a varied range of commercial marine traffic within the energy, fishing, and commercial sectors. It is Europe's largest fishing port<sup>12</sup>. Peterhead Port accounts for 40% of the total value of fish landings and 53.6% of the total tonnage in Scotland<sup>13</sup>. The Port's processing capabilities and state-of-the-art fish market have enhanced the port's fishing industry as fishermen recognise the benefits of transferring their catches to Peterhead Port for sale as higher prices are more frequently secured.

3.3.3 Peterhead Port has been a major hub for the offshore oil, gas, and subsea sector for over 60 years. ASCO, the global integrated materials and logistics management company for the energy industry, opened its Peterhead offshore supply base in 1974. The Port remains the world's busiest private offshore support facility, handling 460,000 tonnes of deck cargo and more than 2,000 vessel turnarounds each year<sup>14</sup>. The Port will continue to play a major role in the oil and gas industry as the sector increases its decommissioning activities of North Sea platforms.

3.3.4 The facilities and skills gained from the oil and gas sector place the Port in a strong position to serve the increasing offshore renewables energy market, including playing a strategic role in carbon capture at industrial sites across Scotland to be stored at the Acorn site in the Moray Firth, and from 2030 there is an opportunity for the Port to increase its export capabilities of hydrogen and clean fuels by capitalising on the key building blocks already in place to enter the petrochemicals sector<sup>15</sup>. Peterhead is providing the base for Equinor's Hywind project – the world's first floating wind farm. The Port also serves the cruise ship industry by providing safe, sheltered, lock-free deep water for cruise ships and Peterhead is ideally located as a starting location to a host of visitor attractions in the North East of Scotland. Furthermore, Peterhead Port handles significant bulk shipments of fertilisers, grains, and other agricultural products.

#### Traffic Commodity

3.3.5 Figure 3-9 shows the trend in commodity of total traffic at Peterhead Port over the period 2014-2021.

<sup>12</sup> <https://www.aberdeenshire.gov.uk/business/business-support/industry-sectors/fishing/>

<sup>13</sup> <https://www.agcc.co.uk/news-article/value-of-fish-landings-at-peterhead-approaches-200million>

<sup>14</sup> [https://www.peterheadport.co.uk/site/assets/files/1382/peterhead\\_handbook\\_2021\\_72dpi.pdf](https://www.peterheadport.co.uk/site/assets/files/1382/peterhead_handbook_2021_72dpi.pdf)

<sup>15</sup> <https://www.nestrans.org.uk/wp-content/uploads/2023/09/Freight-Forum-Minute-14-September-2023.pdf>

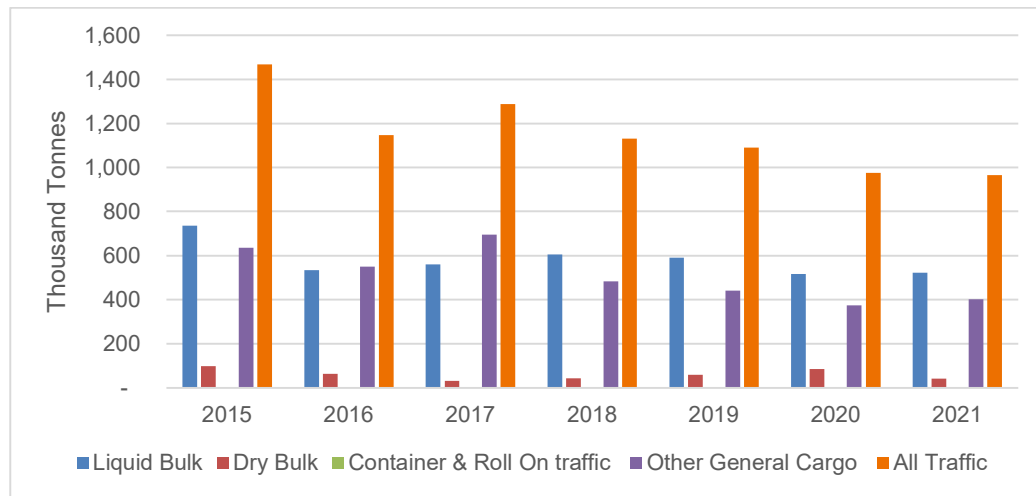


Figure 3-9: Commodity of Traffic at Peterhead Port<sup>16</sup>

3.3.6 In terms of 'Foreign and Domestic Freight Traffic by Port and Mode of Appearance (Major Ports Only),' the table above indicates that Liquid Bulk<sup>17</sup> and Other General Cargo are the two largest commodities by tonnage to enter and exit Peterhead Port, fluctuating approximately between 500,000 and 750,000 tonnes per annum, with slightly lower figures reported in 2020. Dry Bulk is the third next largest commodity at approximately 35,000 – 150,000 tonnes per annum. No Container & Roll-on Traffic was reported at Peterhead Port over the period.

Traffic Volumes

3.3.7 Figure 3-10 shows the trend in overall traffic at Peterhead Port over the period 2014-2021, alongside the overall Scottish Total.

<sup>16</sup> [Scottish Transport Statistics 2020, Chapter 9 Water Transport](#)

<sup>17</sup> DfT Maritime Statistics classify Liquid Bulk as crude oil, oil products, liquefied gas, and other liquid bulk products.

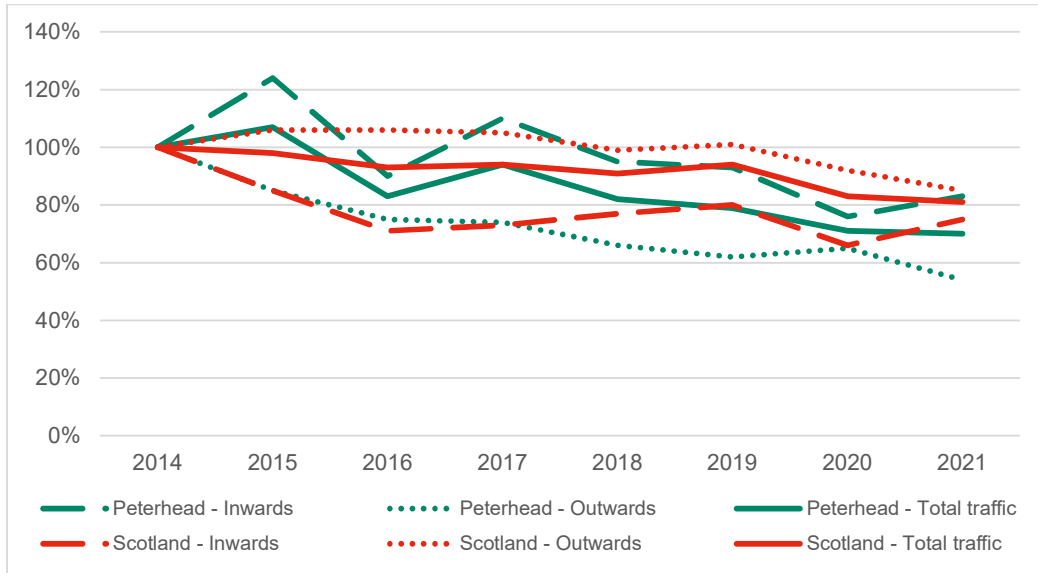


Figure 3-10: Inward and Outward Traffic at Peterhead Port<sup>18</sup>

3.3.8 Following two cycles of sharp increases and subsequent decreases in both inward and outward port traffic between 2014 and 2017, Peterhead Port experienced a continuing decline in both inward and outward traffic between 2017 and 2021, except for inward traffic in 2021 which showed an increase of 9.5% from 2020. Between 2017 and 2020 inward traffic reduced by 31% and outward traffic reduced by 26% between 2017 and 2021. During this same period (2017-2021) an increase of 2% inwards and a reduction of 19% outward traffic was observed at a national level. Between 2020 and 2021 Peterhead Port mirrored the same traffic patterns as observed at a national level with increases in inward traffic but a reduction in outward and total traffic.

Recent Redevelopment and Future Investment Plans

3.3.9 In 2016 Peterhead Port underwent a £51 million development to expand its activities within the fishing industry, offshore oil, and gas, decommissioning and renewable energy sectors. Central to this investment, was the opening of a new £9 million state-of-the-art fish market in 2018, which increased floor space by 80% and provided enhanced opportunities for the display and management of fish, helping sellers to secure top industry prices<sup>19</sup>.

3.3.10 Also included within the development was the strengthening of surrounding quaysides and dredging of the inner harbour to increase depth from 3.5m to 6.5m allowing fishing vessels to land fish at any tide. Removal of the old fish market at Merchants Quay increased the water depth to 7.5m to create a 180-metre deepwater and sheltered quay for commercial use. The inner harbour entrance was widened from 10.5m to 16.5 and the lengthening of the Queenie lift bridge has significantly improved access to and navigation of the inner harbour. The removed material was used to triple the onshore space at Smith Quay to 48,000 square meters, creating a larger working area for NorSea.

3.3.11 In May 2023, Peterhead Port Authority in conjunction with Scottish Enterprise and supported by port-based companies ASCO and NorSea, as well as key stakeholder Storegga, commissioned consultants to undertake a study to identify opportunities for Peterhead Port to capitalise on the increased energy transition including offshore wind, hydrogen, carbon capture and storage, alternative fuels, and decommissioning.

<sup>18</sup> [Scottish Transport Statistics 2022](#)

<sup>19</sup> [https://www.peterheadport.co.uk/site/assets/files/1382/peterhead\\_handbook\\_2021\\_72dpi.pdf](https://www.peterheadport.co.uk/site/assets/files/1382/peterhead_handbook_2021_72dpi.pdf)

### Fraserburgh Harbour

- 3.3.12 Fraserburgh Harbour provides services in the fishing, commercial, offshore renewables, and vessel repair sectors. Similar to Peterhead Port, fishing is the key industry at Fraserburgh Harbour. Alongside fish landings and fish sales, Fraserburgh Harbour provides all essential fishing services including an extensive supply chain, transport, fuel, ice, ships chandlery, quayside mending areas and net manufacturers. The harbour's 24-hour stevedores and crane operators and advanced modern cargo handling equipment allow for the handling of a variety of cargo including barley, oats, fertiliser, coal, sand, road salt, wood, fish products and large sections of equipment.
- 3.3.13 Fraserburgh Harbour has taken advantage of its proximity to offshore windfarms to establish itself as major hub in the offshore renewables sector. The Moray East Offshore Windfarm located in the Moray Firth is one of Scotland's largest offshore windfarm sites covering a total of 245km<sup>2</sup>. The site, which is expected to have the capability to power approximately one million homes<sup>20</sup> and selected Fraserburgh Harbour to be its Operations and Management (O&M) Port for the project. Fraserburgh Harbour will be the principal onshore base from which the windfarm will be operated, and where the routine maintenance activities will be undertaken. Moray East signed an agreement with Fraserburgh Harbour to secure the necessary land on which to construct the quayside O&M buildings and facilities including office space (co-ordination centre and operational control room); car parking; maintenance workshop and stores; birthing facility for windfarm support vessels; and ponton facility for Crew Transfer Vessels (CTV) access.
- 3.3.14 Fraserburgh Harbour boasts one of the best equipped ports for vessel repairs in Europe, with vessels travelling across the continent to use its facilities and local supply chain. The harbour's ship lift is one of the most advanced in Europe and is capable of lifting vessels up to 850 tonnes in weight, 35m in length and a 10.5m beam. Furthermore, the dry dock is one of the most superior facilities in the UK.

#### Future Investment Plans

- 3.3.15 Fraserburgh Harbour has significant plans for investment and expansion. The Harbour Masterplan<sup>21</sup> sets out the vision and strategic framework for developing the harbour over the next 20 years, noting the primary purpose is to secure the future of Fraserburgh Harbour through expanding facilities to meet the needs of current and future customers.
- 3.3.16 The Masterplan proposes to enhance the infrastructure within the existing harbour area by deepening Faithlie Harbour and improving access to the fish market, as well as widening the entrance to Balaclava Harbour and enhancing the ship lift facility. The strategic proposal also includes an extension to the existing breakwater, the construction of a new deepwater basin and an additional dry dock capable of handling vessels up to 100m length and 25m beam. The figure below illustrates the proposed infrastructure enhancements in orange.
- 3.3.17 The Masterplan aims to realise several benefits including, *'a port ready for the future with improved facilities and access for all our customers; safeguarding and creating new and high value-added employment opportunities, attracting in new people to North Aberdeenshire which will enhance population retention and growth; attracting new business to the area seeking access to the sea and growing maritime industries; and an increase in economic activity stimulating investment and further regeneration in the town and North Aberdeenshire'*.

<sup>20</sup> <https://www.morayeast.com/>

<sup>21</sup> <https://fraserburgh-harbour.co.uk/harbour-masterplan/>



Figure 3-11: Fraserburgh Harbour Expansion, Source: Fraserburgh Harbour Masterplan

### Fishing at Peterhead Port and Fraserburgh Harbour

- 3.3.18 As highlighted above, the fishing sector is the central industry of both Peterhead Port and Fraserburgh Harbour. Fish landings and fish sales represent the central cog in a large and thriving industry which includes fish processing, adding value, refrigeration and storage, and logistics and transportation.
- 3.3.19 Scottish Seas Fisheries Statistics 2022<sup>22</sup> reported that Peterhead had the largest tonnage of fish landings in Scotland in 2022 with 154,883 tonnes. For comparison purposes, Shetland was the next largest with 54,775. Fraserburgh Harbour was the fourth largest with landings of 11,951 tonnes. Peterhead also secured the largest value of landings in Scotland in 2022 with £191 million and Shetland while Fraserburgh secured £31.7 million of fish landings in 2022.
- 3.3.20 Value share is lower than tonnage share at Peterhead Port due to the bulk of fish landed at Peterhead Port being demersal and pelagic fish which is cheaper than other fish types such as shellfish which many of the smaller ports/districts specialise in. It should be noted that whilst Peterhead Port reported a rise in value of fish landed, much of the increase is accounted for by inflation and therefore when annual inflation value is deducted, the real increase is much lower. For example, a 10.5% increase in fish landings value between 2021 and 2022 at Peterhead is actually 1.9%<sup>23</sup> when taking inflation into account.

<sup>22</sup> [Scottish Sea Fisheries Statistics 2022](#)

<sup>23</sup> <https://www.agcc.co.uk/news-article/value-of-fish-landings-at-peterhead-approaches-200million>

3.3.21 The figure below shows the trend in tonnage of fish landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022.

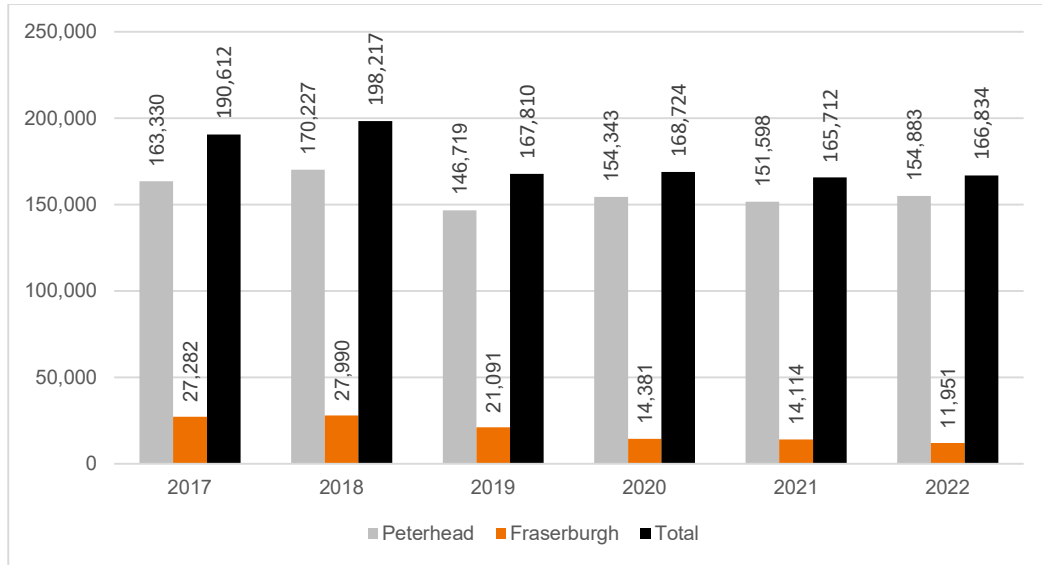


Figure 3-12: Tonnage of Fish Landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022 (Source: Scottish Sea Fisheries Statistics)

3.3.22 Both Peterhead and Fraserburgh achieved a peak in fish landings in 2018, with 2022 figures for both ports remaining below the equivalent 2018 figures. For Peterhead, tonnage has been increasing since 2019, with a growth of 6% over this period. In contrast, in Fraserburgh, there has been a continual decline since 2018, with overall tonnage dropping by 57% between 2018 and 2022 (and 43% between 2019 and 2022).

3.3.23 The figure below presents the trend in value of fish landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022 in nominal values.

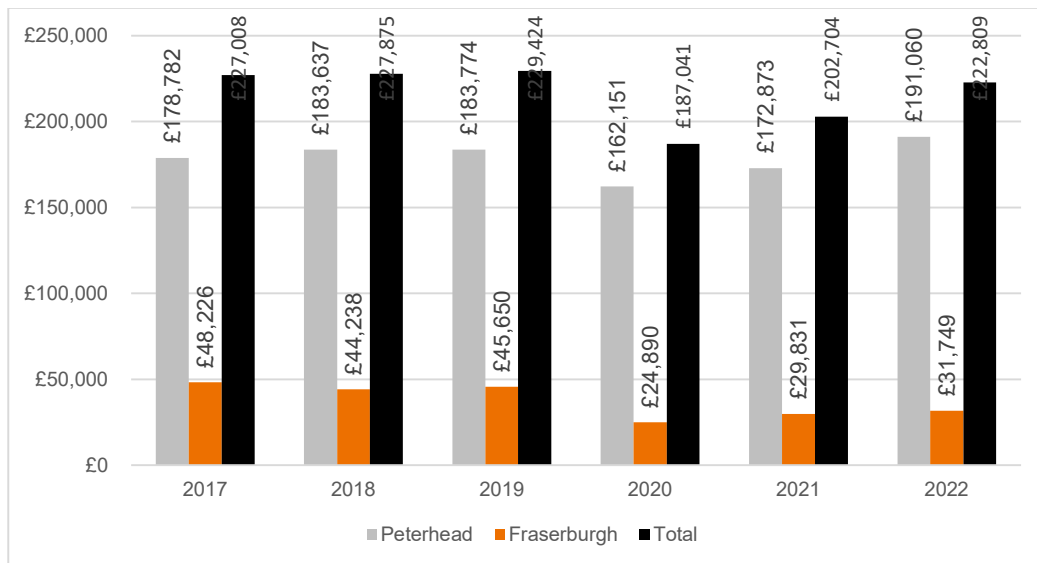


Figure 3-13: Value of Fish Landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022 in thousands (Source: Scottish Sea Fisheries Statistics)

- 3.3.24 Although the total tonnage of fish landings decreased at Peterhead Port between 2017 and 2022, the total value of fish landings increased by £12.3 million. The value of fish landings at recorded at Fraserburgh Harbour in 2022 was £16.5 million less than that recorded in 2017. The total value of fish landings at Peterhead Port and Fraserburgh Harbour between 2017 and 2022 decreased by £4.2 million. As reported earlier, value of fish landings is skewed by the inclusion of inflation within the price.
- 3.3.25 Initial figures show that Peterhead Port has set a record for annual fish landings in 2023. By the end of November 2023, the Port had recorded catches of 190,000 tonnes which equates to £226 million.<sup>24</sup>
- 3.3.26 Table 3-1 presents the trend in fish landings by species at Peterhead Port and Fraserburgh Harbour between 2014 and 2022.

Table 3-1: Fish Landing by Species at Peterhead Port and Fraserburgh Harbour (2014 and 2022)

	Demersal Tonnes		Pelagic Tonnes		Shellfish Tonnes	
	2014	2018	2014	2018	2014	2018
Peterhead	53,881	64,736	127,243	102,728	2,947	2,764
Fraserburgh	6,209	10,616	14,061	11,297	6,610	6,077

Fish Processing Industry

- 3.3.27 Alongside the fishing industry itself, the fish processing industry, which is the food manufacturing industry preparing and preserving fish for consumption, contributes £700 million to the region's £2.2 billion food and drink manufacturing turnover. More than 70 seafood processing, manufacturing and value-adding businesses operate in the North East, directly employing 4,000 full-time jobs. Fraserburgh hosts the UK's only manufacturer of canned seafood products.
- 3.3.28 In 2023, the UK government awarded £3 million towards the building of a world class Scottish Seafood Centre for Excellence in Fraserburgh. This award follows a recent £6.5 million investment to modernise and expand seafood processing facilities in the North East area. The Scottish Seafood Centre for Excellence aims to provide new science, research, and technology to be used across the seafood supply chain, whilst upskilling the existing workforce and helping to attract new entrants to the sector.
- 3.3.29 Opportunity North East is leading on the Seafood Transformation Project, a five-year, £75 million action and investment plan to provide a step-change in the seafood processing industry in the region. The Seafood Transformation Project aims to *'contribute to crucial sector growth and accelerate the transition to a low-carbon economy and net-zero. It will stimulate business investment, create a new seafood industry park to add much-needed capacity, enhance environmental performance, promote innovation, and market development, and address labour shortages and productivity through automation, process redesign and upskilling.'*
- 3.3.30 The Project is currently progressing through the business case development process and its partners include the Scottish Seafood Association, Seafood Scotland, Scottish Government, Scottish Enterprise, Aberdeenshire Council and Aberdeen City Council.

New UK-EU Fishing Rules

- 3.3.31 The UK's departure from the EU brought about a series of changes to the UK fishing industry. The new UK-EU fishing rules were introduced in January 2021 and included new quotas for around 100 fish species and the transfer of around 25% of the EU's overall share to the UK over the period 2021-2026 (15% in the first year and 2.5% every year for the following years).

<sup>24</sup> <https://www.pressandjournal.co.uk/fp/business/6293353/new-record-for-fish-landings-in-peterhead>

The new UK-EU fishing rules have had a varying impact on Peterhead Port and Fraserburgh Harbour due to the different types of fish caught at each location.

- 3.3.32 Peterhead Port in particular has benefitted from the new EU-UK rules as the Port was able to claim 83% of the extra available catch (shared with Lerwick) in 2021, a total of 25,000 of the 30,000 extra tonnes<sup>25</sup>. This is largely due to the new quota system being skewed towards a small number of species, benefitting those places where these species are fished. For example, western mackerel which is fished off the north coast of the UK and landed in Peterhead has accounted for 30% of the change in overall value. Fishing at Peterhead Port should continue to benefit from the increased quotas.
- 3.3.33 Problems with export of fish to EU markets has reportedly had a negative impact on Fraserburgh Harbour following the exit of the UK from the EU. As outlined above, Fraserburgh Harbour is the largest shellfish port in Scotland but new restrictions on imports from third countries (a country that is not a member of the European Union) has prevented the EU import of bivalve molluscs (oysters, mussels, scallops, crab etc.) unless they are harvested from areas with the cleanest water classification or have been purified prior to export<sup>26</sup>. This restriction did not apply to the UK before Brexit. To comply with the new rules, fisheries are required to adapt their businesses to provide increased purification or canning of goods.
- 3.3.34 Furthermore, there is now a customs and regulatory border between the UK and the EU. Providing the rules of origin are met, the goods still need to comply with new paperwork requirements including customs forms and sanitary documents. Some firms have had to reportedly employ additional staff to cover the extra admin including specialist customs agents. Delays to the export of fish, particularly shellfish which is time-sensitive, had a significant impact on the prices gained. During the end of the UK-EU transition phase (December 2021 and January 2022), UK shellfish exports to the EU fell by 92% but recovered slightly in the following months.

## Employment

- 3.3.35 Figure 3-14 shows the number of jobs per square kilometre (km<sup>2</sup>) within each data zone in the study area as recorded in the 2022 Business Register and Employment Survey (BRES).

<sup>25</sup> <https://www.bbc.co.uk/news/64430216>

<sup>26</sup> <https://researchbriefings.files.parliament.uk/documents/CDP-2023-0066/CDP-2023-0066.pdf>

3.3.36 The largest concentrations of employment are in Peterhead and Fraserburgh, with 7,300 and 5,790 jobs, respectively. In total, these towns account for 34% and 28% of the total jobs in the study area respectively and 9% and 8% of the jobs in Aberdeenshire in 2022.

3.3.37 In Peterhead, the highest concentration of jobs is in the datazones in the east and are mostly related to the port and the town centre.

3.3.38 Similarly, in Fraserburgh, the largest concentrations of jobs are in the data zones in the north east and are mostly related to the port.

3.3.39 In Ellon, the number of jobs per km<sup>2</sup> are lower (600 jobs per km<sup>2</sup>). Beyond Peterhead, Fraserburgh, and Ellon job numbers are far lower, with concentrations at Mintlaw, Cruden Bay, Stuartfield, Maud, and Strichen.

3.3.40 Table 3-2 shows the change in the number of jobs in the study area and the comparator areas between 2012 and 2022. Both aspects are based on data taken from BRES. It is noted that data prior to these dates is not available and therefore it is not possible to establish a longer-term trend.

3.3.41 Between 2012 and 2022, there was a 10% increase in the number of jobs within the study area while the number of jobs in the rest of Aberdeenshire declined by 0.6% over the same period. Despite the population falling since 2012<sup>27</sup>, Peterhead and Fraserburgh saw the largest absolute growth in jobs during this period, suggesting that the level of in-commuting to the towns has increased.

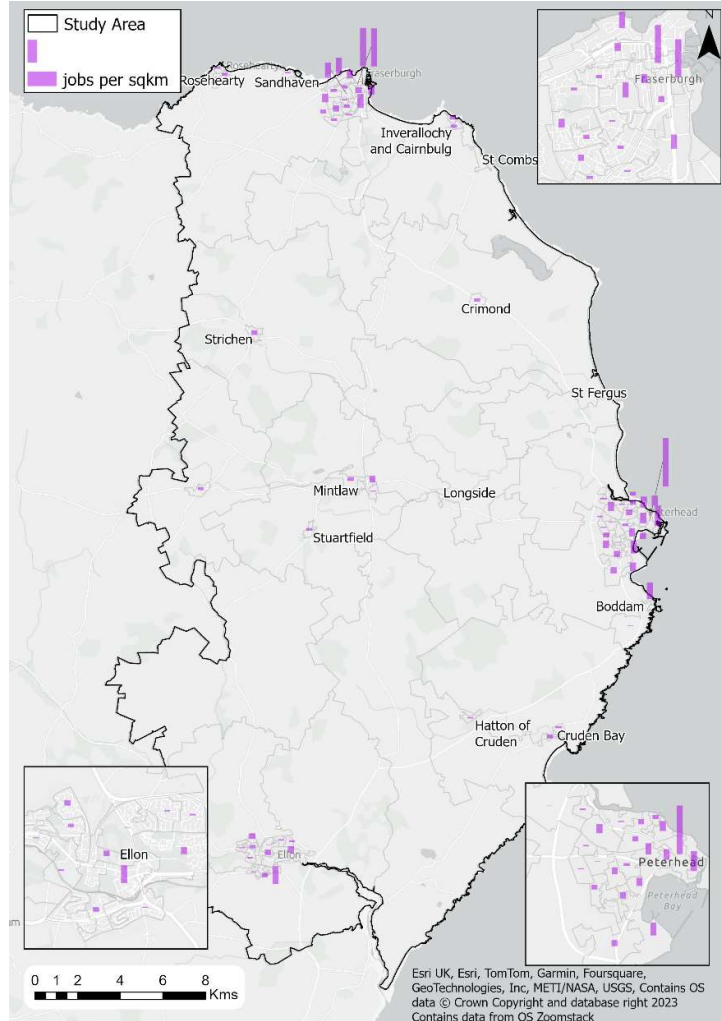


Figure 3-14: Number of jobs in the study area in 2022

Table 3-2: Change in the number of jobs between 2012 versus 2022<sup>28</sup>

Area	2012	2022	Percentage Difference
Peterhead	8,455	9,775	15.6%
Fraserburgh	7,305	8,250	12.9%
Mid Rural	1,700	2,320	36.5%

<sup>27</sup> There was a 10% fall Fraserburgh's population and a 7% fall in Peterhead's population between 2012 and 2021 (the most recent year for which population data is available)

<sup>28</sup> Business Register and Employment Survey (BRES)

Area	2012	2022	Percentage Difference
Rural North	5,665	5,875	3.7%
Rural South	1,800	2,600	44%
Ellon	3,020	2,800	-7.3%
Total Study Area	30,235	33,210	9.8%
Rest of Aberdeenshire	75,000	74,535	-0.6%
Aberdeen City	179,455	158,205	-11.8%
Scotland	2,359,000	2,622,000	11.1%

**Key Point:** There are large concentrations of employment in Fraserburgh and Peterhead. While the population of both towns has declined since 2012, the number of jobs in each has increased, implying an increase in the level of in-commuting.

## Unemployment

3.3.42 Figure 3-15 shows the claimant count rate in August 2023 in each of the sub-areas within the study area as well as the study area as a whole, the rest of Aberdeenshire, Aberdeen City, and Scotland.

3.3.43 Claimant count is a measure of unemployment in a location and measures the number of claimants of Job Seekers Allowance (JSA) plus those who claim Universal Credit and are required to seek work and be available for work. The claimant count rate shows this value as a proportion of the working population (age 16-64).<sup>29</sup>

3.3.44 It should be noted that:

- while a useful and up to date measure, the claimant count tends to underestimate total unemployment as it only counts those claiming unemployment benefits
- there have been a number of changes in the definition of the claimant count in the last 10 years which make comparisons over time difficult. As such, it is not possible to present trend data and therefore only the most recent data is presented below

<sup>29</sup> The rate is a function of the mid-year 2021 population count as this is the most up to date available data.

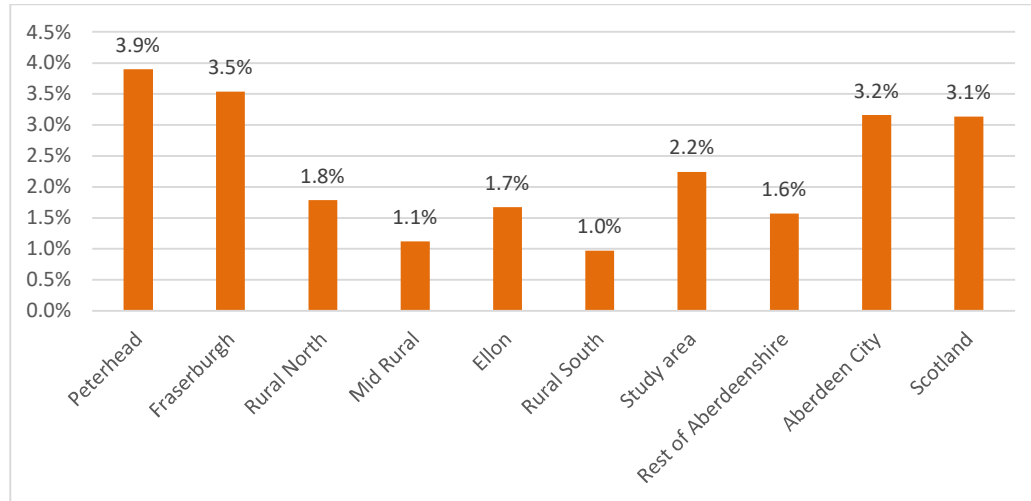


Figure 3-15: August 2023 Claimant Count Rate across the study area and comparator locations

- 3.3.45 In total, in August 2022, 2.2% of the working age population in the study area were unemployed based on the above definition. This compares to 1.6% in the rest of Aberdeenshire.
- 3.3.46 Unemployment levels in Peterhead and Fraserburgh were particularly high at 4% and 3.5% respectively, higher than both the national claimant count rate and considerably higher than the rate for the rest of Aberdeenshire.

**Key Point:** While there has been a growth in the number of jobs in Fraserburgh and Peterhead in the recent period, unemployment rates in both towns remain higher than the national claimant count rate and considerably higher than the rate for the rest of Aberdeenshire.

### Industrial Structure

- 3.3.47 Figure 3-16 shows the proportion of jobs by sector in each of the sub-areas within the study area as well as the study area as a whole, the rest of Aberdeenshire, Aberdeen City, and Scotland. The data is based on BRES data for 2022 and the sectors used are based on the Standard Industrial Classification (SIC).

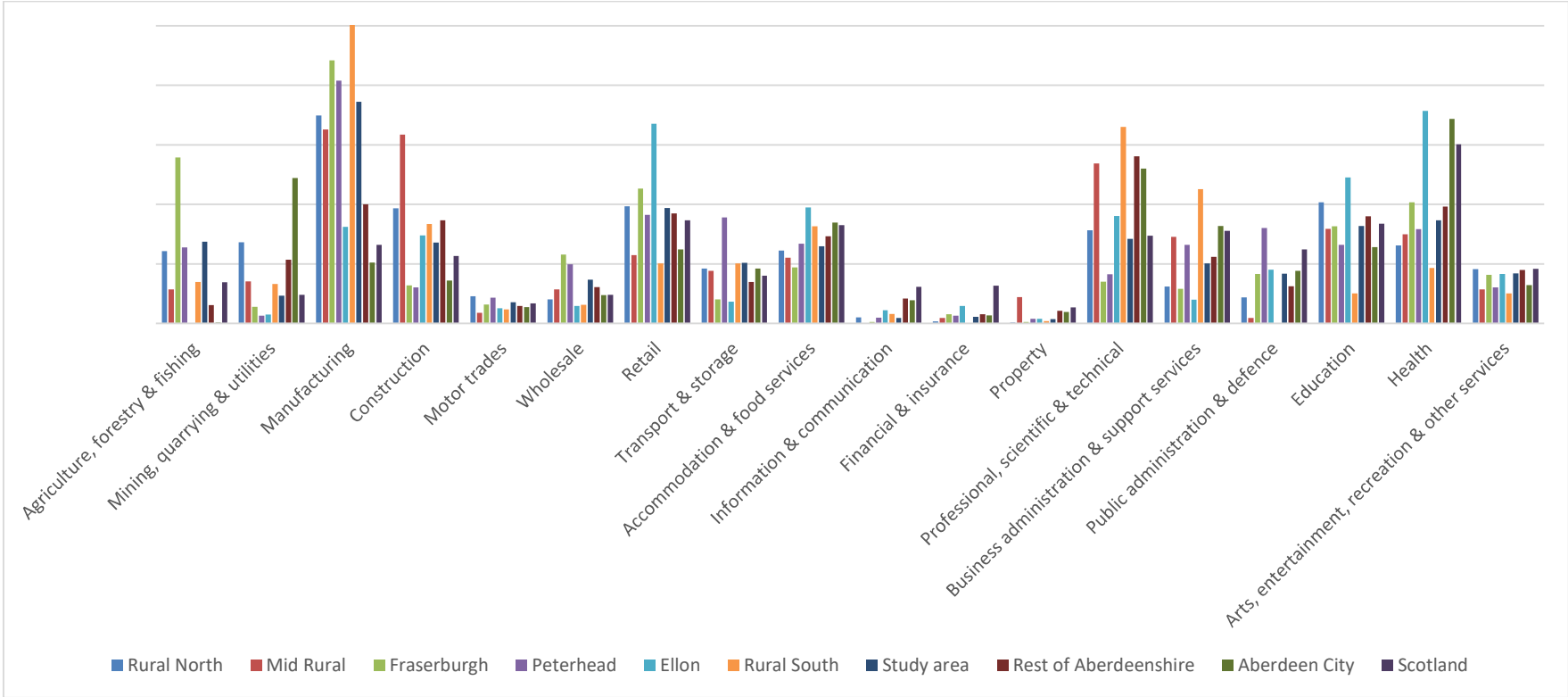


Figure 3-16: Percentage of workplace jobs by sector within the study area and the comparator locations

3.3.48 Key points from the graphs are as follows:

- Over a third of the jobs in **Fraserburgh** are in either 'Manufacturing' or 'Agriculture, Forestry, and Fishing' (22% and 14% respectively). This reflects the dominance of the fishing industry in the town and the extensive supply chain which supports this. There are also relatively high concentrations in 'Retail' (11%) and 'Health' (10%), with the latter reflecting the presence of Fraserburgh Hospital in the centre of the town. Reflecting its base in the primary sectors, the town has relatively few jobs in higher value employment including 'Information and Communication' (0%), 'Financial and Insurance' (1%), 'Professional, Scientific and Technical' (4%), and 'Business Administration and Support Services' (3%)
- **Peterhead** has a similar concentration of jobs in 'Manufacturing' to that of Fraserburgh (20%) but a lower proportion of jobs in 'Agriculture, Forestry, and Fishing' (6%). In recent years there has been a slight growth in the number of manufacturing jobs in Peterhead which may in part be a result of the Peterhead Fish Market which opened in mid-2018. In comparison to other locations, the town has a relatively high concentration in 'Transport and Storage' (9%) which is likely to be a direct reflection of the ASCO South Base and SCORE premises in the town. There is also a higher proportion of jobs in 'Public Administration and Defence' (8%) and 'Health' (8%) reflecting the presence of the HMP & YOI Grampian and Peterhead Community Hospital. Like Fraserburgh, there are relatively few jobs in higher value employment
- The **Rural North** has a high concentration in 'Manufacturing' (17%), 'Construction' (10%), 'Retail' (10%), and 'Education' (10%). In comparison to other parts of the study area, the Rural North also has a relatively high proportion of jobs in 'Agriculture, Forestry, and Fishing' (6%) which likely reflects the area's agricultural base
- The **Mid Rural** has a high concentration of jobs in both 'Manufacturing' and 'Construction' (16% respectively), with the former broadly equivalent to the proportion in the Rural North and the latter considerably higher (16% compared to 10%). The area also has the highest concentration of jobs in the 'Professional, Scientific, and Technical' sector (13%) of all the locations considered in the study area
- In **Ellon**, there is a particularly high concentration of jobs in 'Health' (18%), 'Retail' (17%), and 'education' (12%). The town also has the highest proportion of jobs in 'Accommodation and Food Services' (10%) of all the sub-areas within the study area

**Key Point:** There is a high concentration of employment in transport intensive industries in Fraserburgh, Peterhead and the more rural areas of the study area, including the primary sector, manufacturing, and construction. This is likely driven by the oil and gas, fishing and farming sectors as well as emerging and growing industries such as renewable energy and decommissioning. In contrast, Ellon has a more service centred profile. In general, there are relatively few jobs in higher value sectors, such as 'Information and Communication' and 'Finance and Insurance'.

3.3.49 Building on the above analysis, Figure 3-17 shows the mean weekly gross pay by sector in Scotland based on data from the Annual Survey of Hours and Earnings (ASHE). The purple bars represent sectors where mean pay is lower than the national average. It is noted that the ASHE reports at a slightly different aggregation of SIC categories than BRES (BRES combines 'Mining, & Quarrying', 'Electricity, Gas, Steam and Air Conditioning' and 'Water Supply, Sewerage and Waste Management' into 'Mining, quarrying and utilities', and 'Other Service Activities' and 'Arts, Entertainment and Recreation', whilst it splits out 'Wholesale, and Retail Trade, Repair of Motor Vehicles and Motorcycles'.

3.3.50 Figure 3-18 shows the percentage of workplace jobs in each of the BRES SIC sectors in (i) Fraserburgh & Peterhead, (ii) the rest of the study area, (iii) the rest of Aberdeenshire and (iv) Aberdeen, with the BRES SIC sectors re-ordered from highest to lowest mean weekly pay.

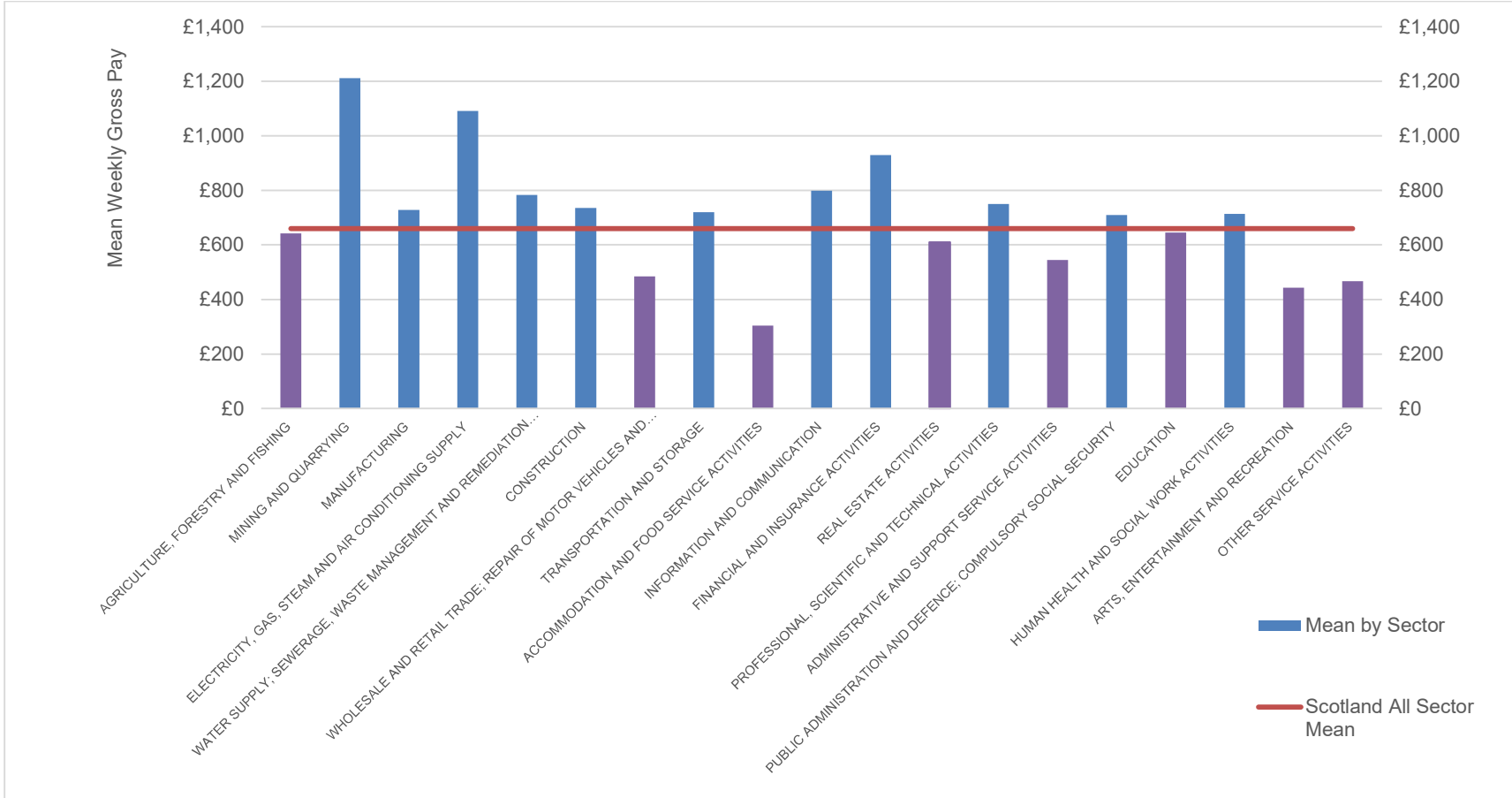


Figure 3-17: Mean weekly gross pay by sector in Scotland, with purple bars denoting where mean pay is lower than the national average<sup>30</sup>

<sup>30</sup> Annual Survey of Hours and Earnings (ASHE), SIC07 Work Region Industry Table 5.1a

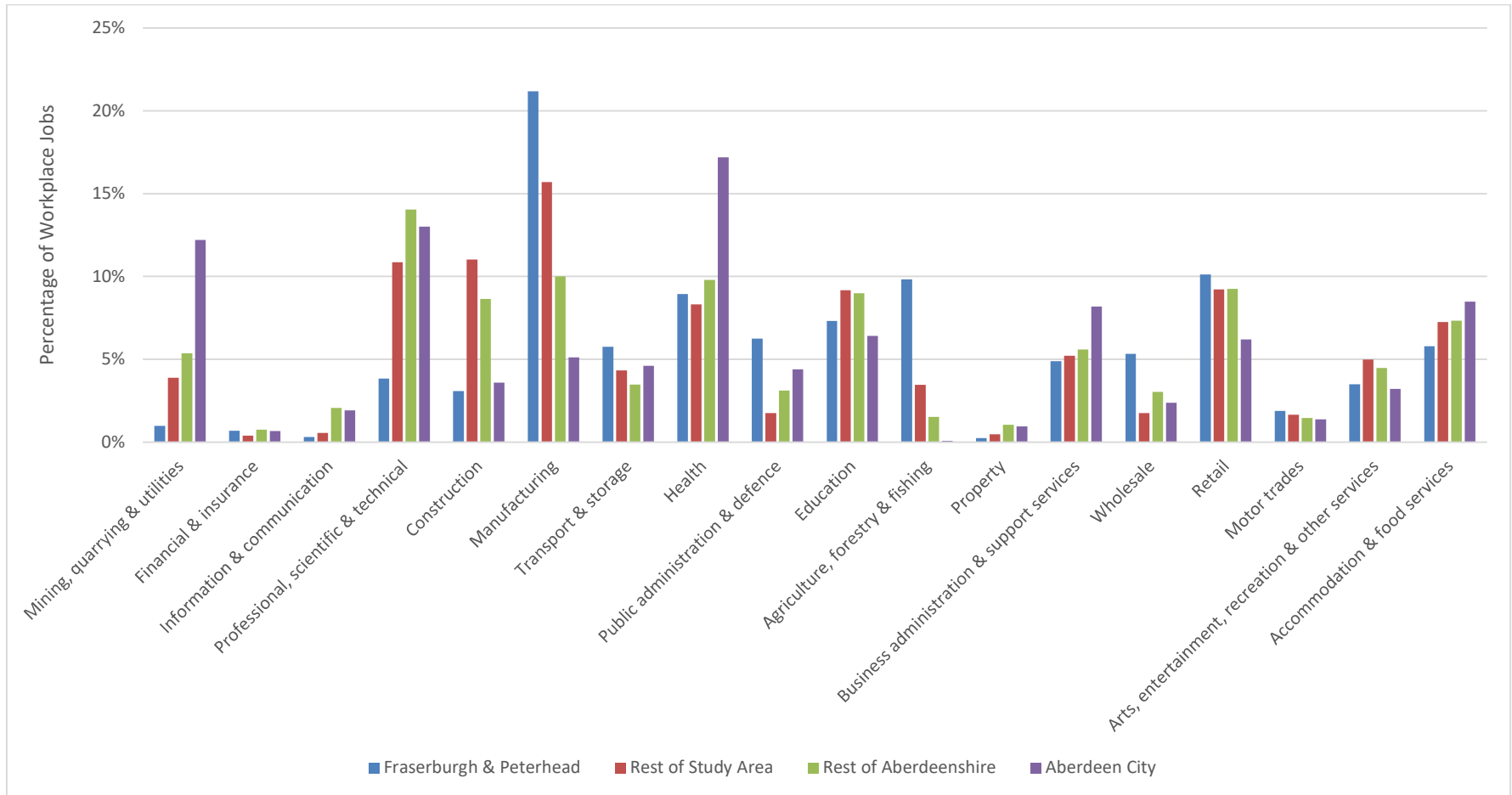


Figure 3-18: Percentage of Workplace jobs in each of the SIC sectors reported in BRES in (i) Fraserburgh & Peterhead, (ii) the rest of the study area, (iii) the rest of Aberdeenshire and (iv) Aberdeen – with the SIC ordered from highest to lowest mean weekly pay

- 3.3.51 Figure 3-18 clearly shows that the combined Fraserburgh/Peterhead economies have far lower proportions of jobs in the highest paying sectors, especially when compared to the rest of Aberdeenshire (outside the study area) and Aberdeen City. Indeed, only 9% of jobs in Fraserburgh/Peterhead are in the top five paying sectors, compared to 21% in the rest of the Study area and 31% in the rest of Aberdeenshire and Aberdeen.
- 3.3.52 To further illustrate this point, Figure 3-19 aggregates the percentage of jobs in sectors with a mean weekly gross pay of greater than £750, £600-£750, and less than £600.

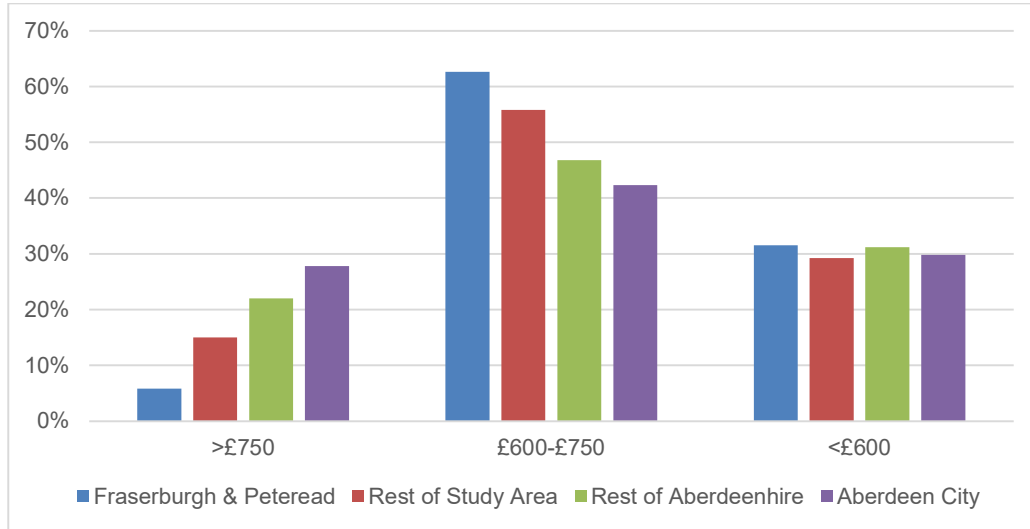


Figure 3-19: Percentage of jobs in sectors with a mean weekly gross pay of greater than £750, £600-£750, and less than £600 in Fraserburgh and Peterhead, the rest of the study area, the rest of Aberdeenshire and Aberdeen City

- 3.3.53 The above graphic confirms that, compared to the other geographies defined here, Fraserburgh and Peterhead has (i) a far lower proportion of the highest paying jobs (6% compared to 28% in Aberdeen), (ii) a higher proportion of jobs in the medium pay range and (iii) a similar proportion of the lowest paying jobs.

**Key Point:** Compared to elsewhere in the study area and the rest of Aberdeenshire, Peterhead and Fraserburgh have a far lower proportion of the highest paying jobs.

### Household Income

- 3.3.54 The findings from the industrial structure analysis are reflected in the median household income data reported by Aberdeenshire Council, with Fraserburgh and Peterhead exhibiting the lowest household incomes of all the towns in Aberdeenshire (see Figure 3-20).<sup>31</sup>

<sup>31</sup> Source: <http://publications.aberdeenshire.gov.uk/dataset/town-centre-health-checks-2022>

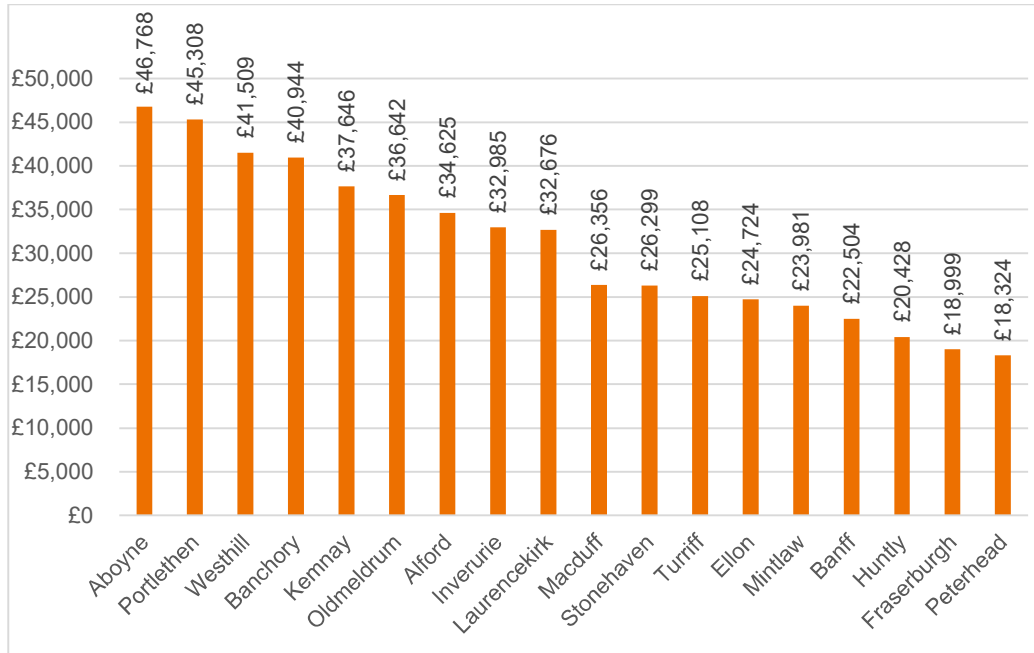


Figure 3-20: Median Household Income for each town in Aberdeenshire (2021)

**Key Point:** Based on data reported by Aberdeenshire Council, Peterhead and Fraserburgh have the lowest mean household income of all the towns in Aberdeenshire. This will be a combination of a range of factors linked to higher levels of deprivation including poor / expensive access to higher paying jobs, higher unemployment, lower educational attainment etc.

### 3.4 Environmental Context

- 3.4.1 This section provides an overview of the environmental context of the study area. It is supported by environmental constraints mapping which can be found in Appendix B .
- 3.4.2 The study area is characterised by a number of varying landscapes, extending from the undulating agricultural heartland landscape character type in the west, to the North Sea coastline on the east. While the primary landscape character is coastal agricultural plain, there are also areas of farmland and wooded policies; farmed strath; coastal farmland with ridges and valleys; beaches dunes and links; fragmented rocky coast; and cliffs and rocky coast.
- 3.4.3 There is scattered conifer woodland of varying maturity throughout the study area. There are also several areas of ancient woodland, including ancient (of semi-natural origin) and long-established (of plantation origin) woodland.
- 3.4.4 The majority of the study area is considered to have low flood risk, which is defined as having less than a 0.1% chance of flooding within any one year. Areas of high likelihood of river water flooding are primarily associated with the River Don, River Ythan, Water of Cruden, River Ugie (North Ugie Water and South Ugie Water), Loch of Strathbeg, and the Water of Philorth. Areas of high likelihood of surface water flooding are also scattered throughout the study area, including areas within Peterhead, Fraserburgh and other smaller settlements.
- 3.4.5 Along the entirety of the coastline within the study area, there is a high likelihood of coastal flooding (10% chance in any one year). It is considered that the majority of this relates to beaches and the foreshore and generally does not extend inland to communities due to the significant grade difference along substantial sections of the coastline. However, there are significant areas with a high likelihood of coastal flooding at the settlements of Peterhead and

Fraserburgh. Analysis of coastal erosion mapping indicates no specific coastal erosion issues within or immediately adjacent to the study area.

3.4.6 There are several designated sites for nature conservation within the study area, including:

- Loch of Strathbeg Special Protection Area (SPA) and Ramsar site
- Buchan Ness to Collieston Special Area of Conservation (SAC)
- Buchan Ness to Collieston Coast SPA
- Sands of Forvie SAC
- Ythan Estuary, Sands of Forvie and Meikle Loch SPA
- Ythan Estuary and Meikle Loch Ramsar site
- Troup, Pennan and Lion's Heads SPA
- Rosehearty to Fraserburgh Coast Site of Special Scientific Interest (SSSI) (mixed biological and geological)
- Cairnbulg to St Combs Coast SSSI (mixed)
- Loch of Strathbeg SSSI (mixed)
- Rora Moss SSSI (biological)
- Hill of Longhaven SSSI (mixed)
- Bullers of Buchan Coast SSSI (mixed)
- Meikle Loch and Kippet Hills SSSI (mixed)
- Collieston to Whinnyfold Coast SSSI (mixed)
- Foveran Links SSSI (mixed)
- Balmedie Quarry SSSI (mixed)
- Corby, Lily, and Bishops Lochs SSSI (biological)
- Sands of Forvie and Ythan Estuary SSSI (geological)
- Bellscamphie SSSI (geological)
- Moss of Cruden SSSI (geological)
- Kirkhill SSSI (geological)
- Philorth Valley (geological).

3.4.7 There are also several Local Nature Conservation Sites (LNCS) and Geological Conservation Review Sites (GCRS) located throughout the study area, including the Aberdeenshire LNCS which extends to the A90 at Sandfordhill just south of Peterhead.

3.4.8 There are a number of historical environmental records, including 13 conservation areas<sup>32</sup>. The highest concentration of listed buildings is in the settlements of Fraserburgh and Peterhead, both of which feature a variety of Category A, B and C listed buildings. There are approximately 80 scheduled monuments<sup>33</sup>. These range from ancient castles and chapels<sup>34</sup> to cairns<sup>35</sup>. In addition, there are four Garden and Designed Landscapes (GDL)<sup>36</sup>, all of which have 'high' to 'outstanding' artistic and historical interest, including the Crimonmogate GDL immediately to the north of the A90 at Crimonmogate.

**Key Point:** There are a range of environmental designations in the study area which would need to be taken account of during the option identification and development process.

### 3.5 Travel Patterns

3.5.1 In advance of setting out a baseline of transport supply and demand by mode, this section provides an overview of car availability and travel patterns within the study area, drawing on information from the 2011 Census. The Census provides the most comprehensive information on both car availability and commuting patterns. However, while comprehensive, the most recent data available is 2011 which is now somewhat dated and therefore a note of caution should be taken when interpreting the results. As well as the passage of time and the COVID-19 pandemic, there have also been material changes to the road network and bus and rail services in the area in addition to changes to the concessionary fares regime since 2011 which would be expected to influence travel patterns and the results of the analysis below

#### Car Availability

3.5.2 Figure 3-21 shows the proportion of households in each part of the study area with at least one car or van available as recorded in the 2011 Census.

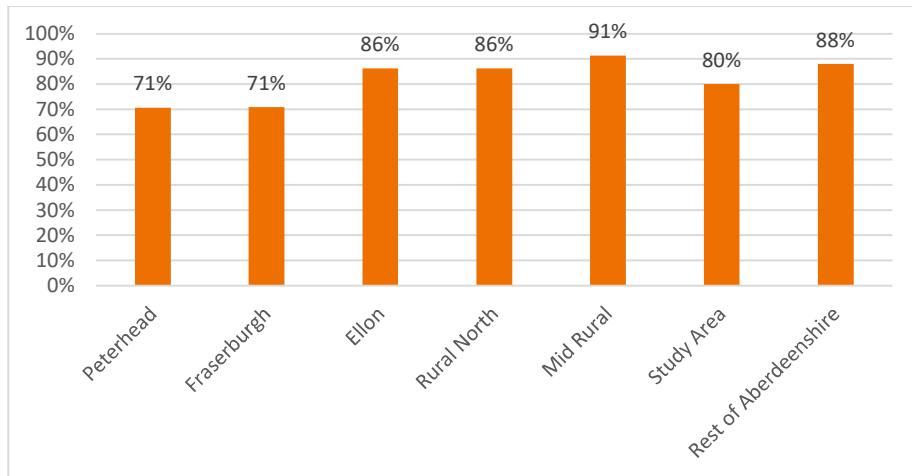


Figure 3-21: Proportion of households with at least one car or van available (Source: Census 2011)

3.5.3 Overall, 80% of households in the study area had access to at least one vehicle in 2011, compared to 88% of households in the rest of Aberdeenshire. As shown in the above figure,

<sup>32</sup> Kingseat Hospital; Udney Green; Tarves; Port Errol Cruden Bay; Boddam; Peterhead Central; Peterhead Roanheads; Peterhead Buchanhaven; Old Deer; Strichen; Crimonmogate; Fraserburgh Town Centre; and Broadsea Fraserburgh, with listed buildings concentrated in these areas

<sup>33</sup> monument or archaeological site of national or international importance

<sup>34</sup> St Mary's Chapel Rattray; Inverallochy Castle

<sup>35</sup> Knockmonean Cairn; Mormond Hill

<sup>36</sup> Cairness; Crimonmogate; Pitmedden; and Straloch

Peterhead and Fraserburgh have lower levels of car availability than elsewhere in the study area and Aberdeenshire. This likely reflects the higher levels of deprivation in these communities given the high cost of running a car, as well as their status as towns rather than some of the more rural locations in the study area and elsewhere.

- 3.5.4 The lower levels of car availability in the study area compared to elsewhere in Aberdeenshire were replicated in the results from the Comprehensive Travel Survey (CTS) undertaken by Nestrans in 2023 in partnership with Aberdeenshire Council and Aberdeen City Council. The study involved telephone interviews and focus groups with residents in North East Scotland with the aim of better understanding travel patterns and behaviours in the region. The CTS dataset includes data for the study area but due to sample sizes, individual data for Peterhead and Fraserburgh is not available.
- 3.5.5 Overall, the CTS found that 89% (n=81) of the households surveyed in the A90 / A952 study area had access to a car, van, motorbike, motorhome, or car club compared to 92% (n=498) of households in Aberdeenshire as a whole. Interestingly, the data also indicated that residents in the A90 / A952 study area travel by private car more often than those across the whole of Aberdeenshire, with 66% in the study area reporting they travel by car as a driver or passenger every day compared to 58% across Aberdeenshire.
- 3.5.6 Overall, the data therefore suggests that:
- car availability levels in the study area are lower than elsewhere in Aberdeenshire, with particularly low rates in Peterhead and Fraserburgh – a relatively high proportion of the population is therefore dependent on public transport to access opportunities and key services and will be excluded from these where public transport connectivity is poor, resulting in inequalities in access and potentially contributing to deprivation.
  - those who do have access to a vehicle use their car more frequently than people living in the rest of Aberdeenshire. This may be a reflection of there being more limited options in terms of public transport in the study area, resulting in higher car use amongst those with access to a vehicle.

**Key Point:** Car availability levels are lower in the study area than the rest of Aberdeenshire meaning that the population in this area are more dependent on public transport to access key services and opportunities.

### Commuting Patterns

- 3.5.7 Figure 3-22 shows the mode share for commuting to the City of Aberdeen council area from the largest 21 settlements in Aberdeenshire as recorded via the 2011 Census. The data is built up from Intermediate Zone centroids within each settlement boundary. Settlements are ordered in terms of study area settlements and other settlements' distance from Aberdeen (most distant first).

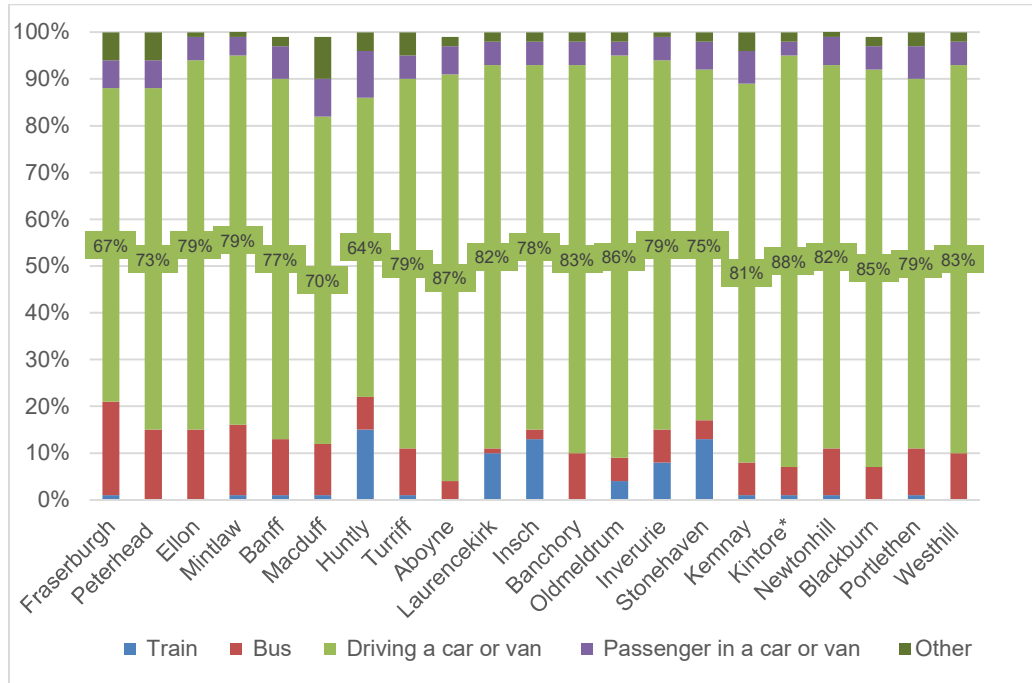


Figure 3-22: Method of travel to work from key localities in Aberdeenshire to Aberdeen Local Authority (Census 2011)

3.5.8 As would be expected car/van driver was the dominant mode for commuting to Aberdeen City from Aberdeenshire.

3.5.9 Figure 3-23 shows the percentage of each settlement’s working-age population who work in Aberdeen, ordered along the horizontal axis by distance from Aberdeen.

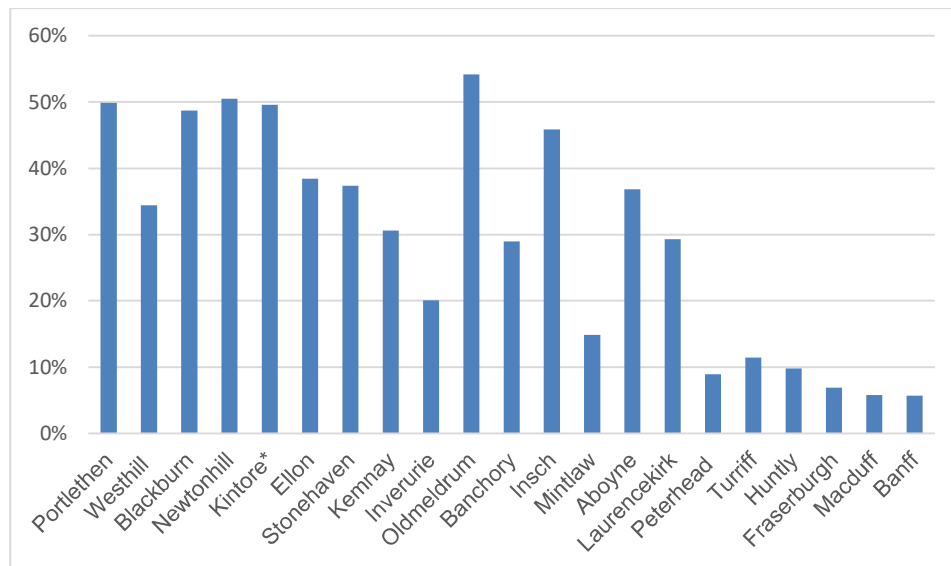


Figure 3-23: Percentage of working-age population in each town who work in Aberdeen with the horizontal axis ordered by distance from Aberdeen

3.5.10 As would be expected, the percentage of a settlement’s population who work in Aberdeen broadly reduces as the distance from Aberdeen increases. In some settlements, over 50% of working-age adults commuted to Aberdeen. The size of the settlement and by extension the

availability of jobs locally will also be a factor. Despite their relatively large local job markets, 9% and 7% of Peterhead and Fraserburgh working age adults respectively travelled to Aberdeen to work. This may be a reflection of the relative absence of higher paid jobs locally.

3.5.11 Figure 3-24 shows (i) the percentage of the settlement working-age population that commutes to Aberdeen **using public transport** and (ii) the typical travel time by public transport to Aberdeen. The green bars indicate those settlements with a railway station (noting that for Kintore the station has opened since the 2011 census). Again, the horizontal axis is ordered by distance from Aberdeen.

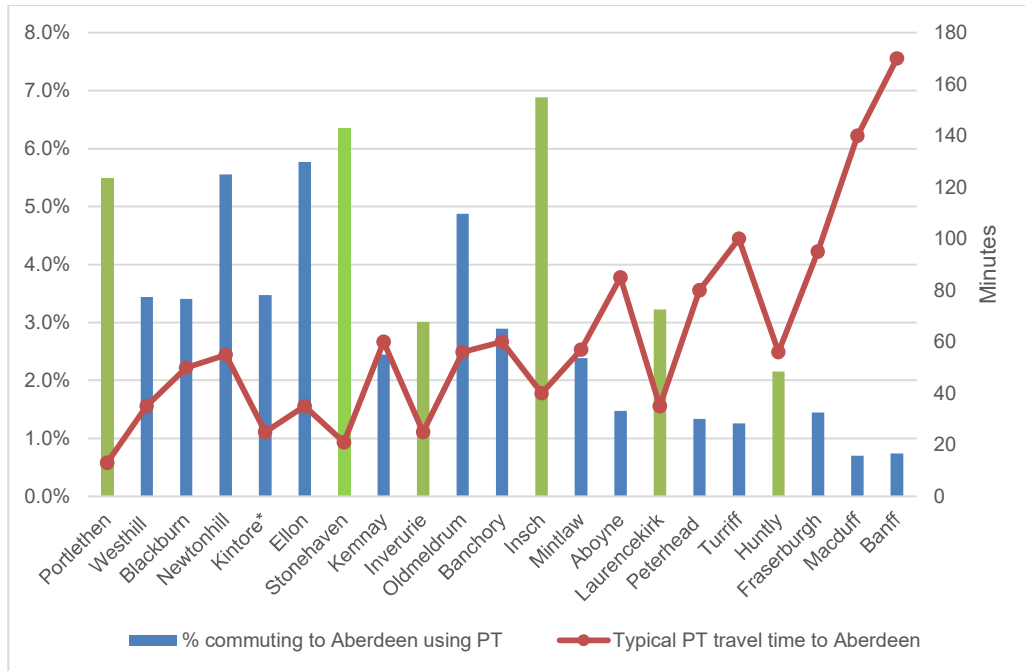


Figure 3-24: Percentage of working-age population in each town who commute to Aberdeen by public transport and the typical public transport travel time to Aberdeen - with green bars indicating settlements with a railway station and the horizontal axis ordered by distance from Aberdeen

3.5.12 As before, as the travel time increases, the proportion of a settlement's working-age population who commute to Aberdeen using public transport broadly declines. What is clear here though is that those settlements with far shorter travel times than other settlements a similar distance from Aberdeen have railway stations, and also have a greater proportion of their working-age population commuting to Aberdeen using public transport.

3.5.13 Further analysis of the data for these 21 settlements shows:

- The average public transport mode share of those commuting to Aberdeen for the five settlements with the shorter journey times associated with rail services was **15.2%** with car use at **76.2%**
- The average public transport mode share of those commuting to Aberdeen for the other settlements with the longer journey times associated with bus services was **11.3%** with car use at **79.9%**

3.5.14 This suggests that the longer journey times associated with bus rather than rail connections is (i) a deterrent to people commuting to Aberdeen by bus and (ii) a contributor to higher levels of car use.

3.5.15 Finally, the chart below shows the split of public transport-based commuting to Aberdeen by bus and train. So, for example, 22% of those who commuted to Aberdeen from Huntly did so using public transport – 15% by train and 7% by bus.

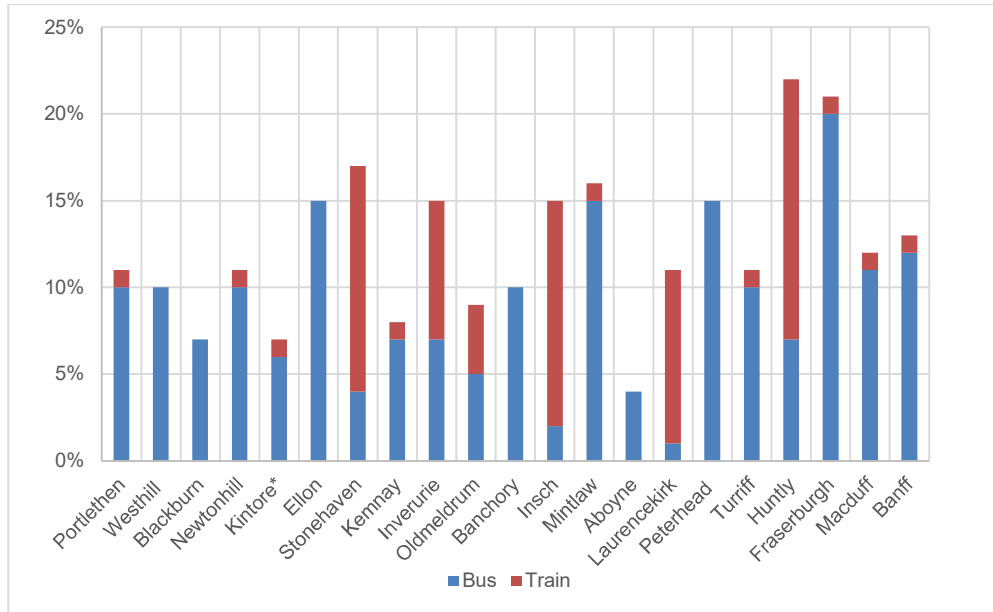


Figure 3-25: Split of public transport-based commuting to Aberdeen by bus and train in each town

3.5.16 These data suggest that, where people have a choice between bus and rail for commuting, rail-based travel is the choice for the large majority of public transport users.

**Key Point:** Aberdeen is a focus for employment for much of Aberdeenshire. Distance from Aberdeen is a key determinant of the likelihood of working in Aberdeen. Travel time by public transport to Aberdeen is a key determinant how much of this commuting is undertaken using public transport. Settlements with faster journey times associated with rail travel see a significantly higher proportion of commuting by public transport than settlements a similar distance away with travel times more typically associated with bus travel.

### 3.6 Transport Context

#### Overview

3.6.1 This section provides a baseline of transport supply and demand in the study area by mode. Drawing on a range of data and analysis, the chapter considers each mode in turn, examining active travel, public transport (bus and rail), and other road-based transport.

#### Active Travel

##### Existing Strategic Active Travel Connections

3.6.2 There are two principal strategic active travel routes in the study area, namely National Cycle Network Route 1 (NCN1) and the Formartine and Buchan Way (see Figure 3-26). Each of the strategic routes is discussed further below. There are also a range of recreational routes with information on these included in Appendix B

National Cycle Network Route 1

- 3.6.3 NCN1 is a long-distance cycle route connecting Dover and Shetland. The route forms the majority of the British section of the North Sea Cycle Route/EuroVelo Route 12, which connects Belgium, the Netherlands, Germany, Denmark, Sweden, Norway, England, and Scotland.
- 3.6.4 The section of the route within the Study Area extends from north west of Ellon to Maud. At Maud, the route diverts west via Castle Road for onward travel to Cuminestown and Turriff before heading north to Banff. The route is primarily on road but between Augnagatt and Maud the route follows the same track as the Formartine and Buchan Way (see below).

Formartine and Buchan Way

- 3.6.5 The Formartine and Buchan Way is an 85km off-road route which follows the alignment of the former Buchan Railway Line which closed to passengers in 1965. The route extends from Dyce on the edge of Aberdeen in the south, to the village of Maud where it splits into two routes; eastwards to Peterhead and northwards to Fraserburgh.
- 3.6.6 The route is open for walkers and cyclists with horse riders able to use sections of the track. The surface and width of the path varies along the length ranging from wide tarmacked sections to narrower gravel paths.
- 3.6.7 There is a long-term plan for the Formartine and Buchan Way to be made into NCN1 in its entirety (as opposed to only the short section which currently forms NCN1). There are a range of improvement works ongoing on the route, including a rolling programme of bridge replacement works and the removal of access barriers, with £1.3m of investment planned for financial year 2024/25.<sup>37</sup>

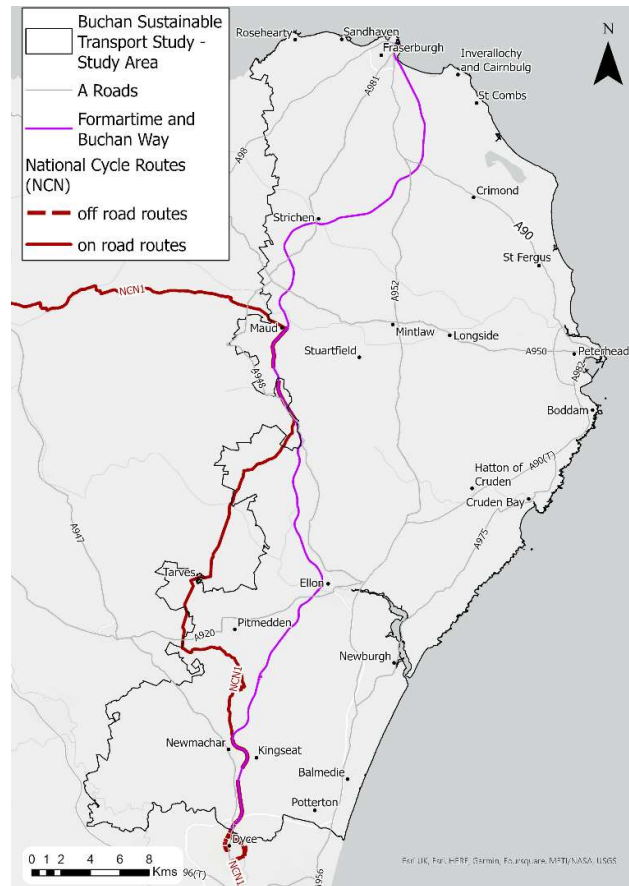


Figure 3-26: Active travel provision within the study area

**Developing the Strategic Active Travel Network**

- 3.6.8 In addition to enhancements to the Formartine and Buchan Way, there are also a number of ongoing related workstreams examining / progressing with active travel improvements. These are discussed below.

The Regional Active Travel Network

- 3.6.9 In June 2023, Nestrans commissioned Jacobs to develop and confirm proposals for an active travel network for North East Scotland which will encompass the Aberdeen City Council area, Aberdeenshire’s main towns, and strategic regional active travel routes across the Nestrans

<sup>37</sup> See North East of Scotland Transport Partnership, Agenda Pack for Board Meeting held on Wednesday 5<sup>th</sup> December 2023, <https://www.nestrans.org.uk/wp-content/uploads/2023/11/061223-Nestrans-Agenda-Pack.pdf>

area. The project aims to clearly define the network and identify delivery priorities. To date, initial draft plans have been developed and public consultation on these is scheduled for early 2024.<sup>38</sup>

#### Active Travel Improvements between Ellon and Aberdeen City Centre

- 3.6.10 While falling outside of the study area, plans to improve active travel provision between Ellon and Aberdeen City Centre which is immediately to the south of the study area are progressing. A design review of the link between Murcar and Blackdog in Aberdeen is nearing completion with a Strategic Business Case on this scheduled to be taken to Committee in Spring 2024. The section between Blackdog and Murcar is currently going through a design review which is nearing completion. South of this, the **Ellon to Garthdee Multi-Modal Corridor Study** which is anticipated to be finalised during summer 2024 will identify a preferred option(s) for improved active travel connections between the Bridge of Don and Aberdeen City Centre.

**Key Point:** There are several ongoing workstreams delivering and / or examining options for improvements to the strategic active travel network in the study area as well as plans for improvements in active travel provision immediately to the south of the study area. These workstreams and any relevant emerging outputs should be considered during the option development stage of this project.

#### **Walking, wheeling, and cycling in Peterhead, Fraserburgh and Ellon**

- 3.6.11 There are various existing active travel routes in the towns of Peterhead, Fraserburgh, and Ellon and several documents have previously been produced aimed at increasing the use of active travel modes.
- 3.6.12 In 2008, Peterhead was designated as a pilot Cycle Demonstration Town (CDT) by Aberdeenshire Council and a five-year masterplan was developed with the aim of increasing cycle trips. An Action Plan for the town was also developed in 2021 as part of the Sustaining Choices Project<sup>39</sup>. This includes general actions to improve internal walking and cycling connections but does not include specific reference to longer distance strategic connections.
- 3.6.13 In 2018, Fraserburgh and Ellon were designated as Integrated Travel Towns (ITT) and masterplans aimed at encouraging active travel trips were published in the same year. The plans include proposals for infrastructure improvements internal to each town. While the documents reference longer strategic connections, no improvements are proposed on the A90 in the study area or A952 other than a new shared use path on a short section of the A90/Machonichie Road in Fraserburgh itself. It is understood that this proposal is yet to be delivered.

**Key Point:** A range of proposals have previously been made to improve active travel provision within the towns of Peterhead, Fraserburgh and Ellon. However, these have focused on provision internal to each town rather than longer distance strategic connections linking the towns and other areas within the study area.

#### **Demand**

- 3.6.14 Data on walking, wheeling, and cycling rates is relatively limited. There are two primary sources in Aberdeenshire:
- Cycling Scotland Aberdeenshire Traffic Survey Results
  - Strava Metro

<sup>38</sup> Source: [061223-Nestrans-Agenda-Pack.pdf](#)

<sup>39</sup> <https://www.ouraberdeenshire.org.uk/wp-content/uploads/2021/10/Peterhead-Sustaining-Choices-Action-Plan.pdf>

3.6.15 Each of these is discussed below.

Cycling Scotland  
Aberdeenshire Traffic  
Survey Results

3.6.16 Cycling Scotland undertake counts at sites across Scotland as part of the National Monitoring Framework. However, there are only three sites within the study area covered by this programme, and all are within the key settlements rather than on the strategic links (South Road in Peterhead, Broad Street in Fraserburgh, and Bridge Street in Ellon). The data is also limited, focusing on a 48-hour period twice a year (May and September) over the period 2021-May 2023. It is therefore difficult to establish a long-term trend from the data.

Strava Metro

3.6.17 Strava Metro is a database of cycle trips developed from those recorded by Strava users. The dataset provides the most comprehensive source of data on cycling. However, it should be noted that Strava users are more likely to be 'committed' as opposed to 'casual' cyclists and therefore the data is not definitive.

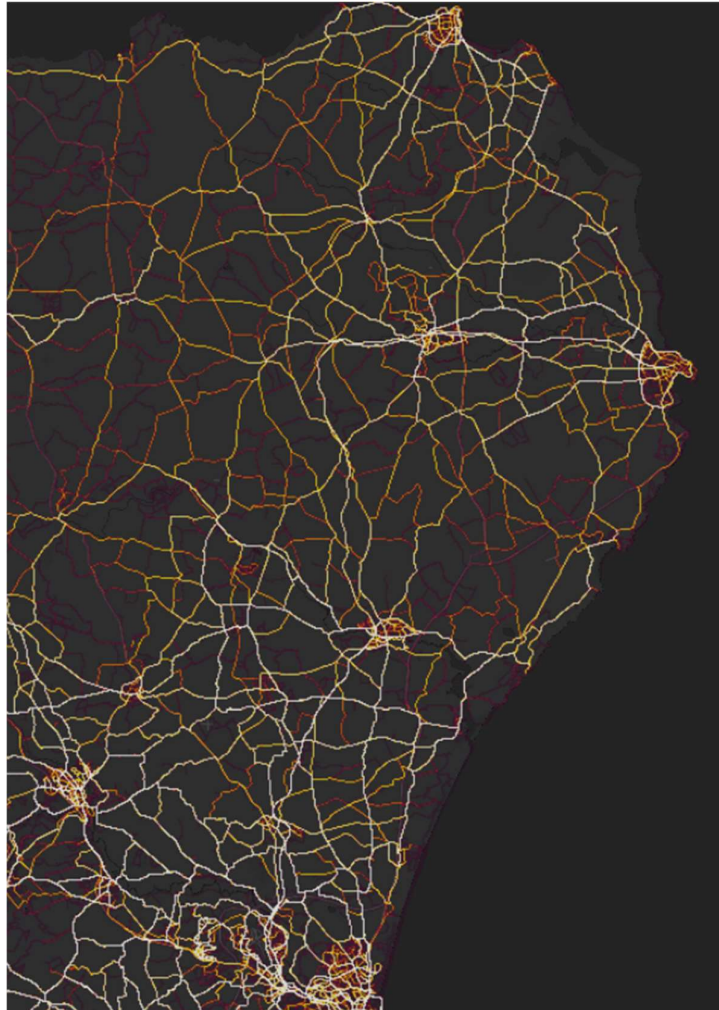


Figure 3-27: Strava Metro Heat Map - Cycling

3.6.18 Figure 3-27 shows the 'Strava Heat Map' showing cycling activity over the last year. This shows higher levels of activity within the main towns and on the Formartine and Buchan Way as well as some of the more minor roads in the study area and wider recreational routes (as discussed in Appendix D It is difficult to identify the A90 / A952 suggesting that few cyclists use these routes. This was reflected in the wider engagement undertaken to inform this study (see Chapter 4), with the links felt to be unsuitable for cycling. As noted by one respondent to the Resident Survey:

*"You really only see brave souls risking the A90 or Peterhead bypass as it is too intimidating sharing space on these local stretches of road".*

**Key Point:** Cycling activity as recorded via Strava is generally concentrated in the key towns and / or the main recreational routes. The A90 / A952 are generally not well used by cyclists.

3.6.19 Figure 3-28 shows the level of cycling trips in Aberdeenshire across the calendar year from 2019 to 2023 inclusive as recorded via Strava Metro. Data for 2023 covers the period from January to October only.

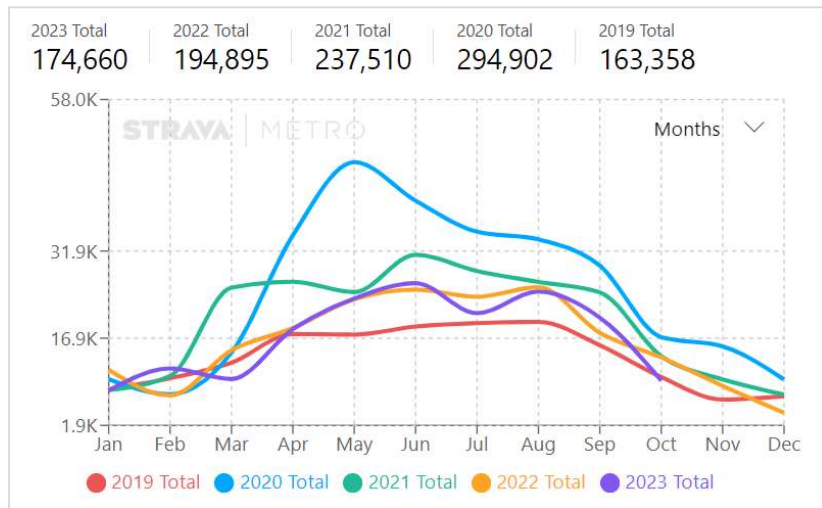


Figure 3-28: Strava trip counts by month (2019-2023)

3.6.20 As would be expected, there is a seasonal pattern to cycling trips with higher numbers during the summer months. Due to the COVID-19 pandemic, cycling trips were significantly higher in 2020.

3.6.21 Reflecting wider trends, the data from Strava Metro also suggests that there has been a considerable growth in the use of electric bikes (e-bikes) in Aberdeenshire in recent years. The number of e-bike rides has grown significantly between 2019 and 2023, albeit from a relatively low base (see Table 3-3). The assistance provided by the battery lets the user cover longer distances making trips that were only viable for seasoned cyclists more accessible to a wide range of people. The availability of adapted cycles for different abilities further opens-up the cycling market.

Table 3-3: Split between rides undertaken on standard bikes and those undertaken on e-bikes 2019-2023 (Strava Metro)

	Standard bike rides		E-bike rides	
	Number	Percentage	Number	Percentage
2019	161,770	99.0%	1,588	1.0%
2020	287,762	97.6%	7,140	2.4%
2021	227,693	95.9%	9,817	4.1%
2022	183,308	94.1%	11,587	5.9%
2023	159,855	91.5%	14,805	8.5%
<i>Percentage change</i>	-1.2%	-	+832.3%	-

**Key Point:** In recent years, there has been a growth in the use of electric bikes which enable travel over longer distances for a wider range of users.

**Active Travel Collisions**

3.6.22 Data on road traffic collisions which includes information on the number of collisions involving pedestrians and cyclists is published by the DfT on an annual basis. This data is collated from STATS19 data<sup>40</sup> and **relates only to collisions which have been reported and involve a personal injury**. The data is relational in that for each collision there is a single collision

<sup>40</sup> see <https://www.gov.uk/government/publications/stats19-forms-and-guidance>

record, followed by a variable number of vehicle records and a variable number of casualty records. Each collision is classified into one of three severity ratings (fatal, serious, or slight).

3.6.23 Figure 3-29 shows the location and severity of the personal injury collisions in which at least one of the casualties was either a pedestrian or a cyclist between 2013 and 2022. In total, there were 114 collisions falling into this category over the period. The majority of the collisions were slight (n=67, 59%), with 38 serious (33%)

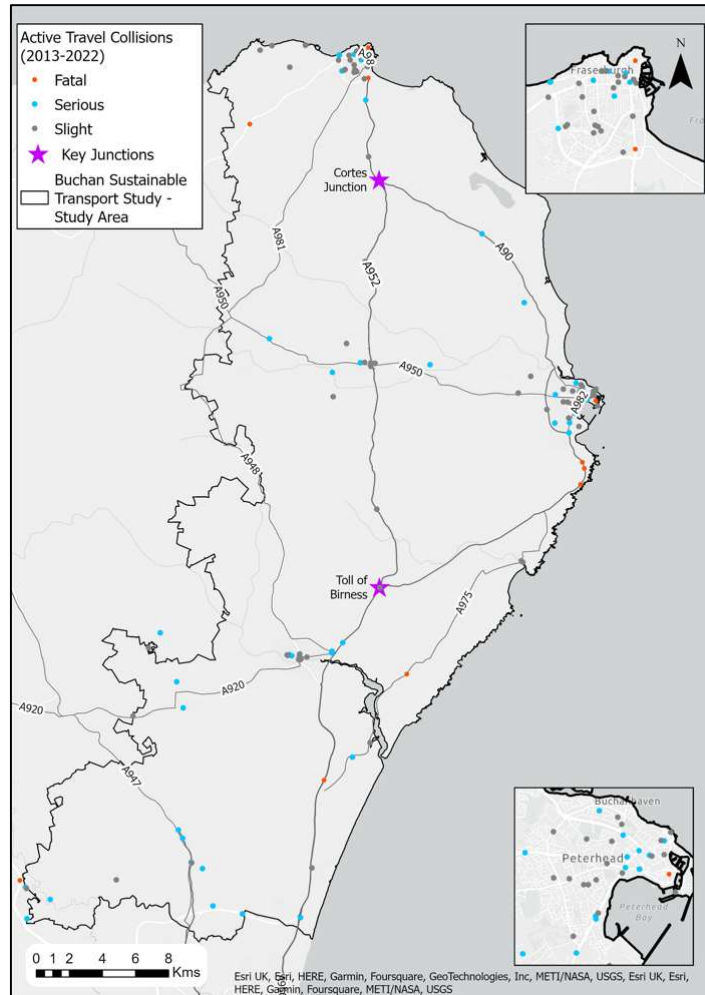


Figure 3-29: Location and severity of collisions involving pedestrians or cyclists between 2013 and 2022

and nine (8%) fatal. Reflecting pedestrian and cycle activity, the majority of the recorded collisions are concentrated in the key population centres of Peterhead and Fraserburgh. There is a cluster of fatal collisions involving active travel users on the A90 near Boddam Castle just south of Peterhead. Two of these involved pedestrians and one involved a cyclist.

**Key Point:** As would be expected given the nature of the A90 / A952 and pedestrian and cycle activity, personal injury collisions involving pedestrians and cyclists are generally concentrated within the key population centres of Peterhead and Fraserburgh.

## Public Transport

### Bus Routes

- 3.6.24 There are seven bus services operating along the A90 and / or A952 corridors. All seven are operated by Stagecoach under the 'Buchan Express' banner and are operated on a commercial basis. The routes are shown graphically in Figure 3-30. As shown, in addition to running along the A90 and A952, several services which use the A90 and A952 also route along the A975 via Cruden Bay and the A981 via Strichen to serve the communities in these areas.
- 3.6.25 Table 3-4 shows the weekday frequency of each service which operates on the A90 / A952 corridors by direction. By way of a summary, Table 3-5 shows the combined frequency by direction for end-to-end journeys between the origins and destinations listed.

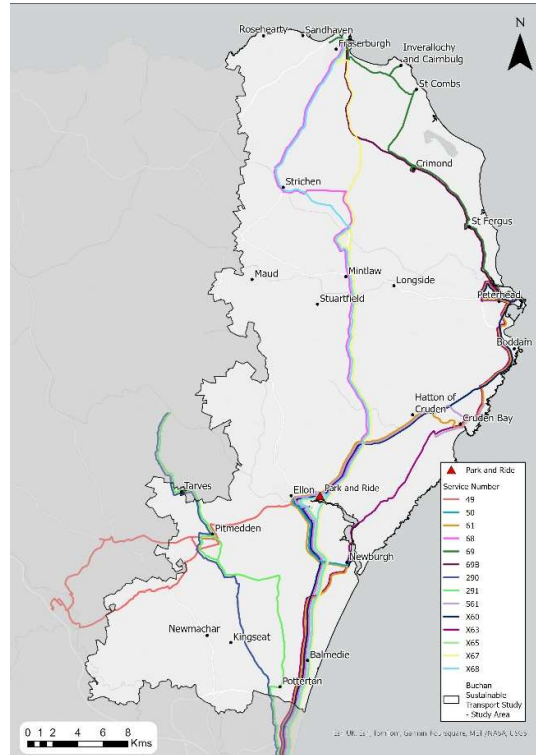


Figure 3-30: Bus routes operating on the A90 and A952 within the study area

Table 3-4: Weekday Frequency of bus routes operating on the A90 and A952 corridors (as of January 2024)

Service	Route	Number of services				Total per day
		07:00-10:00	10:00-16:00	16:00-19:00	19:00-24:00	
Service x60	Aberdeen – Ellon/Newburgh - Peterhead	3	7	5	-	15
	Peterhead – Ellon/Newburgh – Aberdeen	3	6	2	-	11
Service 61	Aberdeen – Ellon/Newburgh – Peterhead	1	-	1	4	6
	Peterhead – Ellon/Newburgh – Aberdeen	-	-	2	2	4
Service S61	Ellon - Cruden Bay	-	1	-	-	1
	Cruden Bay – Ellon	1	-	-	-	1
Service x63	Aberdeen – Ellon/Newburgh - Peterhead	2	6	2	1	11

Service	Route	Number of services				Total per day
		07:00-10:00	10:00-16:00	16:00-19:00	19:00-24:00	
	Peterhead – Ellon/Newburgh – Aberdeen	3	6	2	-	11
Service x67	Aberdeen – Ellon – Fraserburgh	1	2	3	2	8
	Fraserburgh – Ellon – Aberdeen	3	1	2	-	6
Service 68 / x68	Aberdeen - Ellon – Fraserburgh	2	6	3	3	14
	Fraserburgh – Ellon – Aberdeen	2	6	2	2	12
Service x69 / 69 / 69B	Fraserburgh - Peterhead	6	13	7	-	26
	Peterhead – Fraserburgh	1	-	3	6	10

Table 3-5: Combined weekday frequency of bus services operating between the origins and destinations shown

Route	07:00-10:00	10:00-16:00	16:00-19:00	19:00-24:00	Total per day
Aberdeen - Peterhead	6	13	6	5	30
Peterhead - Aberdeen	6	12	4	2	24
Aberdeen - Fraserburgh	3	8	6	5	22
Fraserburgh - Aberdeen	5	7	4	2	18
Fraserburgh - Peterhead	6	13	7	0	26
Peterhead - Fraserburgh	1	0	3	6	10

3.6.26 Service S61 provides one return trip between Ellon Academy and Cruden Bay during both pick-up and drop-off times of the school.

3.6.27 In addition to the above services, Aberdeenshire Council run the A2B dial-a-bus service. A2B is a minibus service that can be used by anyone if there is no other suitable bus service in the area. If there is alternative public transport, A2B services are provided for older and disabled residents only. There are several A2B services operating in the study area. Details of these are summarised in Table 3-6.

Table 3-6: A2B dial-a-ride services operating within the study area

Service	Area of operation	Days of operations	Fare
<b>Central Buchan A2B</b>	Auchnagatt, Fetterangus, Maud, Mintlaw, New Deer, New Leeds, New Pitsligo, Old Deer, Strichen and Stuartfield	Monday to Friday 07:30-18:30 / Saturday 08:00-18:30.	Chargeable service – fare similar to local bus services
<b>Ellon A2B</b>	Collieston, Ellon, Methlick and Ythanbank	Mon, Tues, Wed and Fri 09:30-14:30 (Ellon town service)	Free

Service	Area of operation	Days of operations	Fare
		Thurs, 10:00-12:20 (Collieston – Ellon)	
Ellon A2B	Collieston, Ellon, Methlick and Ythanbank	Thurs, 11:00-13:50 (Ellon – Methlick)	Free
Fraserburgh A2B	Fraserburgh, Rosehearty and Sandhaven	Monday - Friday 09:15 - 14:40	Free
Peterhead A2B	Boddam, Cruden Bay and Hatton	Monday - Thursday 09:30 - 14:30 / Friday 13:00 - 14:30pm	Free

### Bus Service Connectivity Analysis

3.6.28 To provide an overview of the bus network, including both connectivity to the network itself, as well as the connectivity provided by the services, detailed spatial analysis has been undertaken. This analysis considered:

- the extent to which there is convenient access to bus stops in the study area
- the frequency of services
- the level of provision during the evening
- the availability of direct connections to Aberdeen

3.6.29 The analysis was undertaken at full-postcode level and used the public transport network from October 2023. Undertaking the analysis at full postcodes level provides enhanced granularity, with each postcode representing a handful of households. Summing the associated number of households contained within each postcode which meet different criteria has enabled a detailed understanding of connectivity to the bus network and services across the study area.

#### Convenient access to a bus stop

3.6.30 In order to assess the level of access to bus stops across the study area and identify areas where bus stop provision is limited, an analysis of the walk distances to the nearest bus stop was undertaken at the postcode level. Walk distances were established using postcode centroids and a representation of the street and path networks in the study area. Drawing on the Scottish Government’s Urban Rural six-fold classification<sup>41</sup>, postcodes were then defined as having ‘convenient access to a bus stop’ where they met the following criteria:

- Postcodes located in a ‘large urban area’ or a ‘other urban area’ which were within 400m of a bus stop (in line with national guidance on the maximum desirable walking distance to a stop)
- Postcodes located in an ‘accessible small towns’ or a ‘rural small town’ which were within 600m of a bus stop
- Postcodes located in an ‘accessible rural area’ or a ‘remote rural area’ which were within 800m of a bus stop

<sup>41</sup> See [2. Overview - Scottish Government Urban Rural Classification 2020 - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/urban-rural-classification-2020/pages/2-overview.aspx)

3.6.31 The location of the postcodes with and without convenient access to a bus stop according to the above definition is shown in Figure 3-31 and the proportion of households without access is shown in Table 3-7.

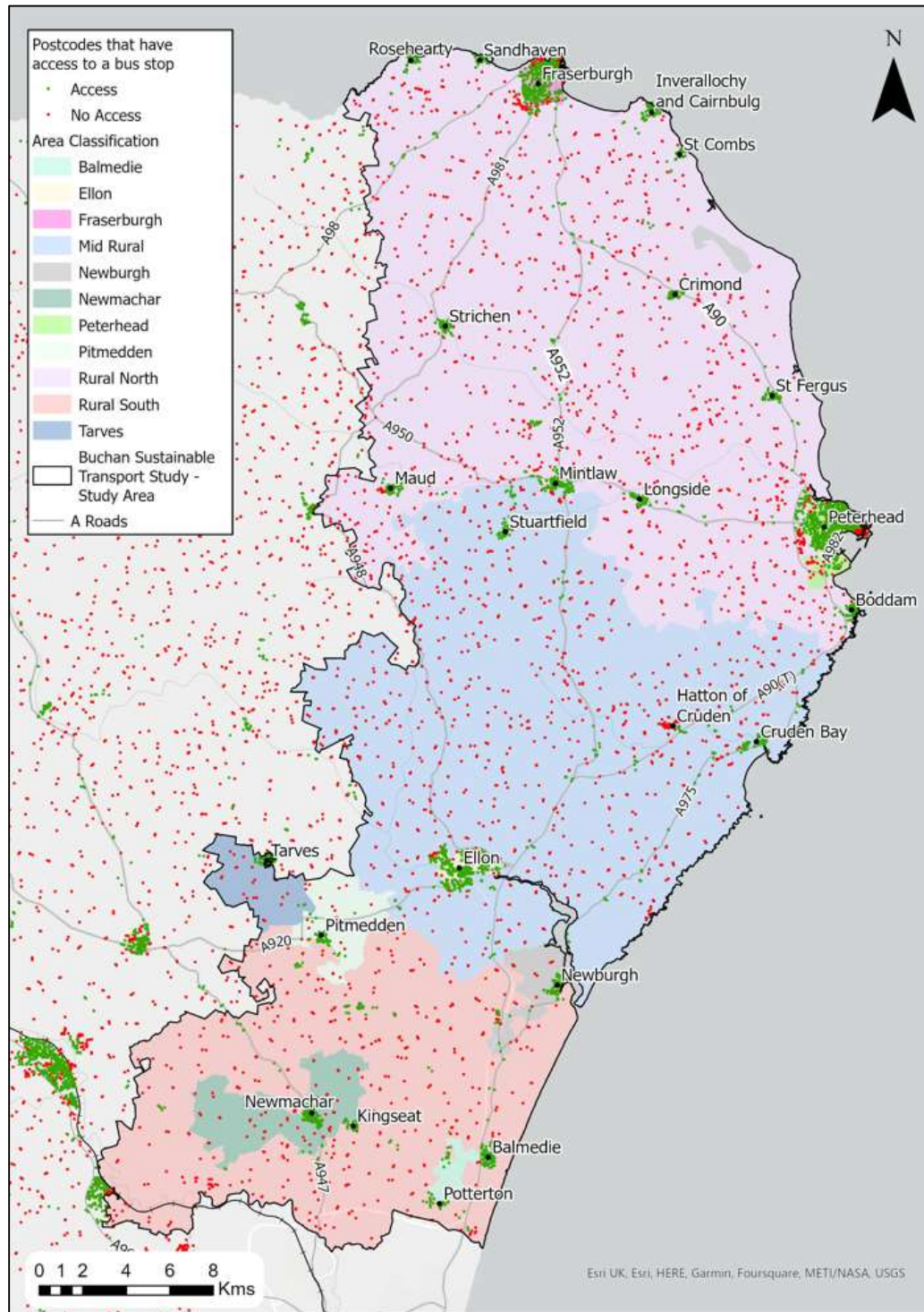


Figure 3-31: Postcodes with or without convenient access (as defined above) to a bus stop

Table 3-7: Number and Percentage of households in each location with convenient access (as defined above) to a bus stop

Area	No of households without convenient access to a bus stop	% households without convenient access to a bus stop
Ellon	550	12%
Fraserburgh	653	11%
Mid Rural	2,027	52%
Peterhead	863	10%
Rural North	2,824	28%
Rural South	1,595	52%
Study Area	6,917	21%
Rest of Aberdeenshire	28,518	36%
Aberdeenshire	32,920	27%

- 3.6.32 As may be expected, access to bus stops is better in the more populated areas of the study area, with Ellon, Fraserburgh and Peterhead all recording figures of less than 12% without convenient access to a bus stop. The figures for these towns are roughly equivalent to the figures for Inverurie and Portlethen (9% respectively) but lower than Stonehaven (19%) and Westhill (27%).
- 3.6.33 In contrast to the main towns in the study area, the Mid-rural area has a much higher ‘non access’ figure at 52%. Overall, the analysis indicates that **21% of households in the study area (6,917 households) do not have convenient access to a bus stop**, compared to 36% of households in the rest of Aberdeenshire. The lower figure in the study area is likely attributable to the presence of the larger towns of Peterhead, Fraserburgh, and Ellon.

**Key Point:** In terms of convenient access to a bus stop, the study area as a whole performs better than the rest of Aberdeenshire. However, while the proportion of households without convenient access to a bus stop is relatively low in the main towns, there are higher rates in more rural locations. People in these areas may therefore struggle to access bus services. This is likely to be particularly the case for those from certain equality groups such as those with mobility issues and those in younger age categories for whom the long walk to the nearest stop is likely to be a particular deterrent.

Weekday service frequency

- 3.6.34 Service frequency often determines whether somebody deems the bus to be a viable option for their trip. To help visualise and quantify bus frequency across the study area Figure 3-32 shows the cumulative number of buses (all services) that serve each bus stop between 0500 and 2359 on a typical weekday, with red indicating relatively low frequency and green indicating relatively high frequency bus stops.

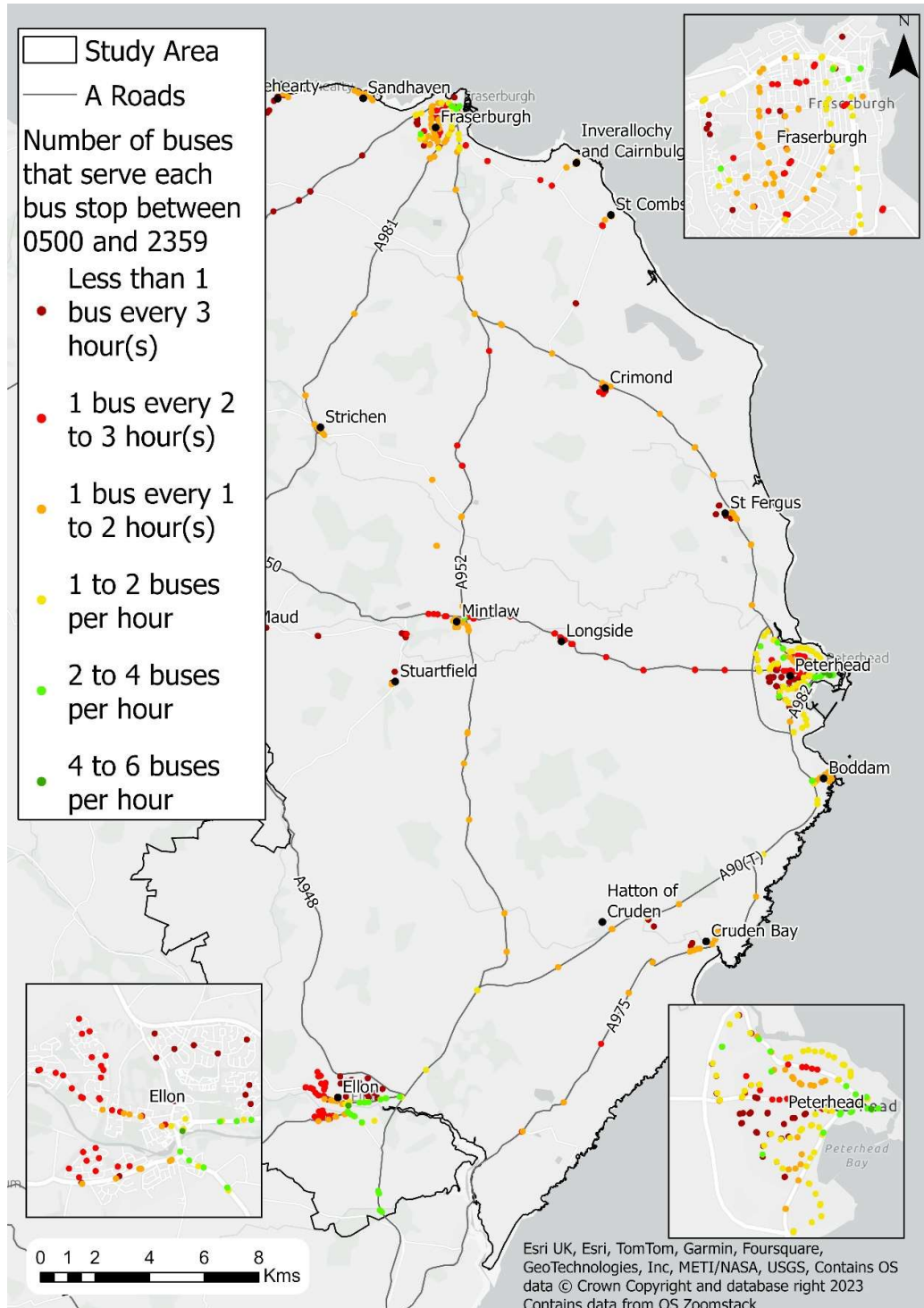


Figure 3-32: Frequency of bus services by stop - Weekday 0500-2359

3.6.35 Key points from this map are:

- Service frequency is higher in Peterhead and Fraserburgh and on the main route corridors with lower frequency on less major routes and in more rural locations

- Many of the bus stops in Ellon are infrequently served by buses, with the stops in the north and west of the town particularly poorly served. This means a high proportion of residents in Ellon must travel beyond their immediate bus stop to access more frequent services

**Key Point:** Many of the bus stops in the study area are infrequently served by buses. This is particularly the case in the rural areas but is also the case in the main towns, with a large proportion of bus stops in Ellon particularly poorly served. Residents in areas where stops are only served infrequently must travel further to access more frequent services. This can act as a barrier to bus use, particularly for more vulnerable users, including those with mobility issues / young children, young people wishing to travel independently, and other groups who may experience greater personal security fears when using public transport.

#### Operating hours

- 3.6.36 The operating hours of a bus service are a key determinant of use. Where operating hours are short, it can limit the potential for use, with particular problems for those trying to access e.g. out of hours employment and / or leisure opportunities during the evening.
- 3.6.37 To examine the operating hours of bus services, a review of the timing of last bus at each bus stop in the study area was undertaken. To help visualise the limits in terms of operating hours, Figure 3-33 shows the time period the last bus serves each bus stop in the study area, with green dots representing stops where the last bus runs after 19:00 and red dots representing stops where the last bus runs prior to 19:00.

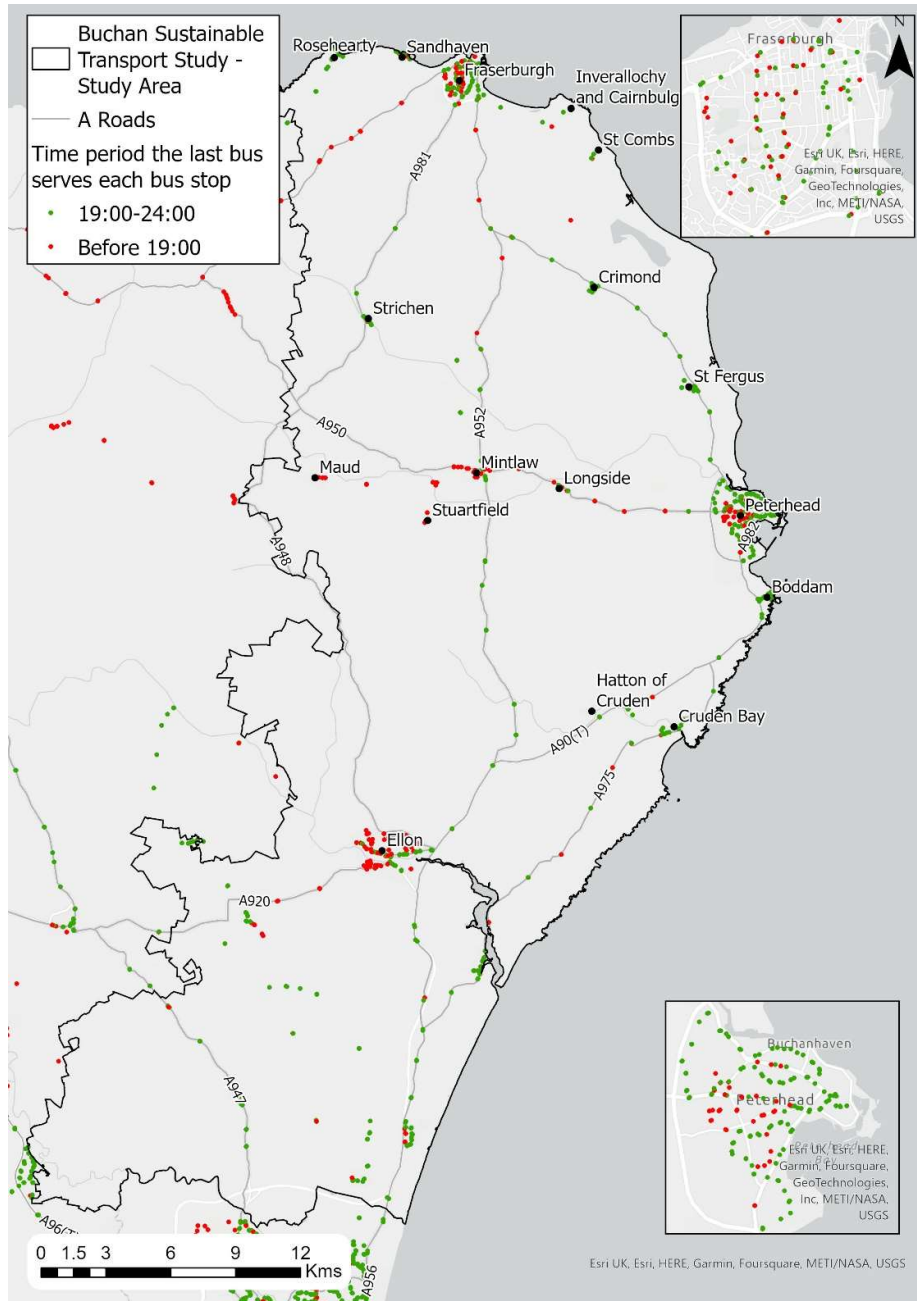


Figure 3-33: Last Bus Service for each Bus Stop within the Study Area

Table 3-8: Proportion of bus stops in each town at which the last service is before and after 1900

	Proportion of bus stops at which last bus service is:	
	before 1900	after 1900
Fraserburgh	39%	61%
Peterhead	24%	76%
Ellon	74%	26%

3.6.38 Key points from this analysis are as follows:

- The bus stops with bus services which run later in the evening are those served by the buses which run along the A90(N) and A952 corridors, including those which divert from the A90(N) / A952 to the A975 / A981
- The bus services which route along the A950 end prior to 1900
- In the town centres, while in Fraserburgh and Peterhead, the majority of stops are served by buses which run after 1900, in Ellon nearly three-quarters of bus stops are served by bus services which end prior to 1900. As shown in the map, in Ellon, there is an evident geographical split with the stops on the main route into and out of the town served later in the evening and the stops to the west of the town served by services for which the last bus is prior to 19:00

**Key Point:** Several areas in the study area are served by bus services which end prior to 1900. These include stops on the A950 between Mintlaw and Peterhead and a high proportion within Ellon. Residents in these areas must travel further to access bus stops served by later services. This can act as a barrier to bus use, particularly for more vulnerable users, including those with mobility issues / young children, young people wishing to travel independently, and other groups who may experience greater personal security fears when using public transport.

Direct bus connections to Aberdeen City

- 3.6.39 Aberdeen City is a major hub for education, healthcare, retail, and social and leisure opportunities for those living and working in the study area.
- 3.6.40 When making public transport trips, the requirement to interchange can be a significant barrier to use. This is because the need to interchange adds to overall journey times, can add to costs, and introduces uncertainty in making connections. The need to interchange can also be a particular barrier for more vulnerable users, including those with mobility issues / young children, young people wishing to travel independently, and other groups who may experience greater personal security fears when using public transport.
- 3.6.41 Figure 3-34 shows the number of direct bus connections to Aberdeen City Centre in the study area, with the width of the blue line indicating the number of direct services.

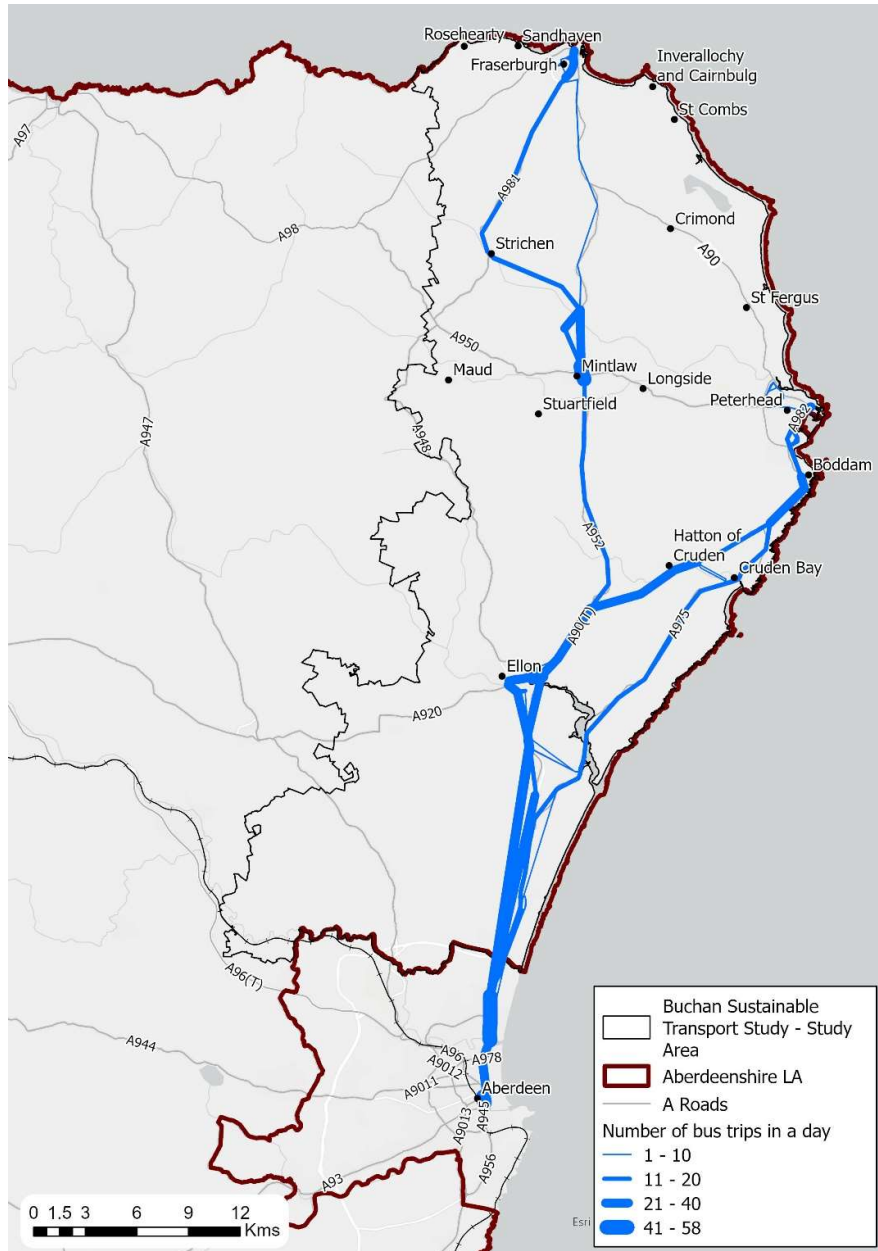


Figure 3-34: Number of direct bus services to Aberdeen City Centre – Weekday 0500-2359

3.6.42 As shown, the frequency of direct connections to Aberdeen City Centre are highest from Ellon south. Direct connections are also available from Peterhead and Fraserburgh and the towns served by bus routes on the A981 and A975. Beyond these locations, however, it is necessary to interchange for onward connections to the city. This includes St Fergus and Crimond on the A90 between Peterhead and Fraserburgh for which there is no direct service to Aberdeen.

**Key Point:** There is no direct service to Aberdeen City for areas beyond the main bus corridors, including St Fergus and Crimond on the A90(N) between Peterhead and Fraserburgh.

### Public transport journey times

3.6.43 Table 3-9 shows the difference between public transport and car journey times between selected settlements within the study area and destinations within Aberdeen City.

3.6.44 Journey time differences have been graded and coloured as follows:

Very good	Good	Reasonable	Poor	Very poor	Extremely poor
<0 mins	0 – 30 mins	31 – 45 mins	46 – 60 mins	61 – 90 mins	91+ mins

3.6.45 For comparison purposes, the table also includes journey time differences between public transport and car from each of the settlements in Aberdeenshire which have a rail station (i.e., Huntly, Inch, Inverurie, Kintore, Laurencekirk, Portlethen, and Stonehaven) to the same set of destinations in Aberdeenshire.

3.6.46 The main purpose of this analysis is to demonstrate how well public transport journey times compare to car from a single origin to a single destination. The reader should not draw comparisons between multiple origins and destinations because travel distances (and hence public transport and car journey times) will be different.

Table 3-9: Journey time difference between car and public transport (public transport – car) (Source: Google API<sup>42</sup>)

Study Area / Non-Study Area	From	To					
		Aberdeen University, Foresterhill Campus	Aberdeen University, King's College Campus	Robert Gordon University	Aberdeen Royal Infirmary	Aberdeen International Airport	Aberdeen Rail Station
Study Area	Boddam	65	40	62	64	92	40
	Crimond	79	62	81	79	107	64
	Cruden Bay	56	28	56	52	82	32
	Ellon	49	26	53	47	78	27
	Fraserburgh	76	50	76	70	99	51
	Hatton of Cruden	62	38	65	60	90	38
	Inverallochy and Cairnbulg	133	106	130	125	155	106
	Longside	71	60	76	61	106	60
	Maud	72	67	93	63	82	58
	Mintlaw	62	37	60	55	83	37
	Peterhead	67	42	69	68	96	44
	Rosehearty	111	84	109	104	132	83
	Sandhaven	106	78	102	100	126	77
	St Combs	142	115	143	136	164	117
	St Fergus	85	61	88	85	112	62
	Strichen	64	36	60	65	82	36
Stuartfield	76	48	73	68	96	50	
Non-Study Area	Huntly	27	48	73	21	49	7
	Insch	32	24	42	28	51	-3
	Inverurie	25	35	48	20	45	7
	Kintore	21	32	53	24	36	8

<sup>42</sup> Public transport and car journey times taken from Google API. Google API is similar to looking at the route on Google maps but provides more detail and multiple requests. Times were extracted for a 'neutral' weekday (Wednesday, 7 April 2024). For bus, this has used timetables as per Google Maps at that time. For car, this will be estimated drive times, including typical traffic levels. The data was extracted for the AM period (7AM to 10AM) in 30-minute intervals and the median taken.

Study Area / Non-Study Area	From	To					
		Aberdeen University, Foresterhill Campus	Aberdeen University, King's College Campus	Robert Gordon University	Aberdeen Royal Infirmary	Aberdeen International Airport	Aberdeen Rail Station
	Laurencekirk	40	28	58	41	72	11
	Portlethen	35	25	45	36	66	7
	Stonehaven	28	15	45	26	58	-1

3.6.47 Key points from this analysis are as follows:

- Public transport journey times are consistently longer than car journey times
- In the study area, the journey time differences between public transport and car are highest for those origins which are not on the main bus route corridors, and which are located further away from Aberdeen (i.e. Inverallochy, Rosehearty, Sandhaven and St Combs)
- In terms of destinations, the journey time differences are generally highest for those destinations located beyond Aberdeen City Centre for which bus interchange is required (e.g. to Dyce Airport or to Robert Gordon University)
- In comparison to those settlements with a railway station elsewhere in Aberdeenshire, the journey time differences between public transport and car in the study area are much higher (denoted by the red, dark red and black colours)

**Key Point:** Public transport journey times from the study area are consistently longer than journey times by car, with public transport particularly uncompetitive when making trips beyond Aberdeen City Centre because of the need to interchange. The long journey times by public transport in comparison to car are likely to be a major deterrent to public transport use amongst some residents in the study area.

#### Bus journey time variability

3.6.48 Stagecoach Bluebird provided Automatic Vehicle Location (AVL) data for three weeks from 14th November 2022 for the following services:

- Service 61: Ellon to Peterhead (via Cruden Bay)
- Service 69: Peterhead to Crimond
- Service X60: Ellon to Peterhead (A90)
- Service X63: Longhaven to Peterhead
- Service X67: Ellon to Fraserburgh
- Service X68: Ellon to Mintlaw

3.6.49 This data was filtered to focus on weekday services which:

- departed between 07:00 and 19:00
- used the A90 corridor between Ellon and Fraserburgh or alternatively the A952 between the Toll of Birness and Rathen.

3.6.50 A summary of the analysis is included in Appendix E.

3.6.51 It is noted that there are challenges associated with quantifying journey time variability for bus due to the nature of bus operations. Buses run to a timetable, which means that some variability can be predicted and managed by timetabling longer journey times; however, the longer journey time is the trade-off for this reduction in variability. Where longer journey times are timetabled to reduce variability, buses may wait at certain stops to ensure they are not running ahead of schedule. Acknowledging this trade-off, the decision-making of operators affects whether variability is observed as longer timetabled journey times throughout the day, variability in the timetabled journey times across the day, or differences between timetabled

and observed journey times. This can make it difficult to interpret bus journey time variability data.

3.6.52 Overall, while it is difficult to draw firm conclusions given the above issues, the data broadly suggests that there are higher levels of variability during the AM and PM peak periods.

During preparation of this study, there has been increasing concerns raised around the quality of bus service provision between the study area and Aberdeen, with the reported challenges recently exemplified in a headline article from The Press & Journal, published in March 2024, which included:

### Has the new X69 bus improved journeys between Peterhead and Fraserburgh? I find out

- Last-minute cancellations with no additional information to passengers, often leading to people missing appointments or having to use other modes;
- Increasing service cancellations due to technical issues impacting vehicles;
- Limited accessible seating making bus use a challenge for those with limited mobility;
- Buses arriving either early or late, making it difficult to plan a journey;
- Not all buses can be tracked on the mobile application;
- Issues with buses not having card readers, or card readers that do not work.
- Many services stop in the early evening, making it difficult for people to socialise in the evening particularly from surrounding villages, for employed people to commute home by bus, or for visitors to spend a day in the north east; and
- Bus station closing times are unsuitable, leaving people standing out in the elements while waiting for a bus.

**Ellon Park and Ride**

3.6.53 Ellon Park and Ride (P&R) is situated close to the A90 at Balmacassie to the north east of Ellon. **All services between Fraserburgh and Aberdeen and Peterhead and Aberdeen stop at Ellon P&R.** There are also bus services from Ellon P&R to Inverurie, Oldmeldrum and New Pitsligo. The table below shows the number of bus services operating during the morning weekday peak (0700-1000) between Ellon P&R and Aberdeen City Centre, Peterhead, and Fraserburgh.

Table 3-10: Number of Bus Services departing Ellon P&R for Aberdeen City Centre, Peterhead, and Fraserburgh between 07:00 and 10:00, Monday to Friday

Services departing Ellon P&R for:	Service	0700 - 0800	0800 - 0900	0900 - 1000	Total
Aberdeen City Centre	x60	1	1	1	3
	x67	1	1	1	3

Services departing Ellon P&R for:	Service	0700 - 0800	0800 - 0900	0900 - 1000	Total
	x68	1	1	1	3
	x65	1	2	1	4
	<b>Total</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>13</b>
Peterhead	x60	0	1	2	3
	61	1	1	0	2
	<b>Total</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>5</b>
Fraserburgh	x67	1	0	0	1
	x68	0	0	1	1
	<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>

3.6.54 As shown, between 4-5 buses depart Ellon P&R for Aberdeen City Centre each hour in the morning peak, with 1-2 per hour to Peterhead and less than 1 per hour to Fraserburgh.

3.6.55 Ellon P&R was extended from 250 to 376 spaces in 2021. Of the 376 total spaces, there are four electric vehicles (EV) spaces and 19 disabled spaces. In addition, in 2022, two additional bus stances were provided with feedback from the engagement suggesting that this led to a reduction in operational delays at the site.

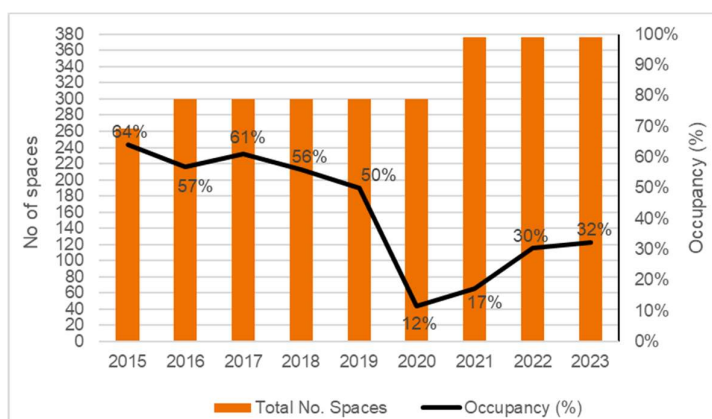


Figure 3-35: Car Park Spaces and Occupancy Levels at Ellon Park and Ride

3.6.56 Car park occupancy surveys have been undertaken annually at the site since 2015<sup>43</sup>. (Figure 3-35).

3.6.57 The data suggests that there is plentiful capacity to meet demand at the site, with an occupancy rate of just 32% recorded in 2023, with the total number of users recorded broadly equivalent to 2019 levels (approx. 120).

3.6.58 Face-to-face interviews with users of the site were also completed as part of the same Nestrans study in October 2019. A summary of the findings from these is included in Appendix F. Overall, the data suggested that the site was predominately most often used for travelling to work and leisure / shopping purposes, with around 75% of users travelling to the site by car.

**Key Point:** Ellon P&R is a popular interchange which is served by buses to Aberdeen, Peterhead, and Fraserburgh as well as more local routes. Available data suggests the site has sufficient capacity to meet demand.

<sup>43</sup> Annual spot count surveys at P&R sites in Aberdeen and Aberdeenshire on behalf of Nestrans.

### Bus Fares

- 3.6.59 There are various bus ticket options available to people wishing to travel by bus within and from the study area to locations beyond the study area. For travel on Stagecoach services only, Stagecoach offer Single and Return tickets as well as DayRider tickets, with the latter allowing unlimited travel on Stagecoach services in defined zones.
- 3.6.60 If travel on bus services operated by another operator beyond Stagecoach is required, a multi-operator GrassHOPPER ticket is also available. This would be needed for most journeys extending beyond Aberdeen City Centre as First Bus rather than Stagecoach operate the majority of services within the Aberdeen City boundary. Details of each of these options is set out below along with a summary table which specifies the cheapest option when making an end-to-end journey on each of the above-named bus services which operate in the study area.

### Travel on Stagecoach Services

- 3.6.61 In addition to standard Adult Single and Return tickets, Stagecoach offer a range of DayRider tickets which allow unlimited travel in one day on all Stagecoach services within the chosen ticket zone. The DayRider zones in the study area are shown in Figure 3-36 and the associated costs of the DayRider tickets which cover each zone are set out in Table 3-11.
- 3.6.62 The Banffshire and Buchan Zone encompasses the whole of the study area, extending from Ellon north to Peterhead and Fraserburgh as well as west to Turriff, Banff and Macduff but does not include areas south of Ellon / Aberdeen City.
- 3.6.63 The Bluebird Explorer DayRider ticket allows travel on all Stagecoach services across all zones, including travel to, from and within Aberdeen City. This ticket could be used for journeys into Aberdeen City Centre via the bus services operating in the study area and any onwards trips in the zones shown in the below figure via Stagecoach services. However, as noted above, FirstBus rather than Stagecoach operate the majority of services in the Aberdeen City boundary and therefore this option would not be applicable for all journeys in the areas shown.

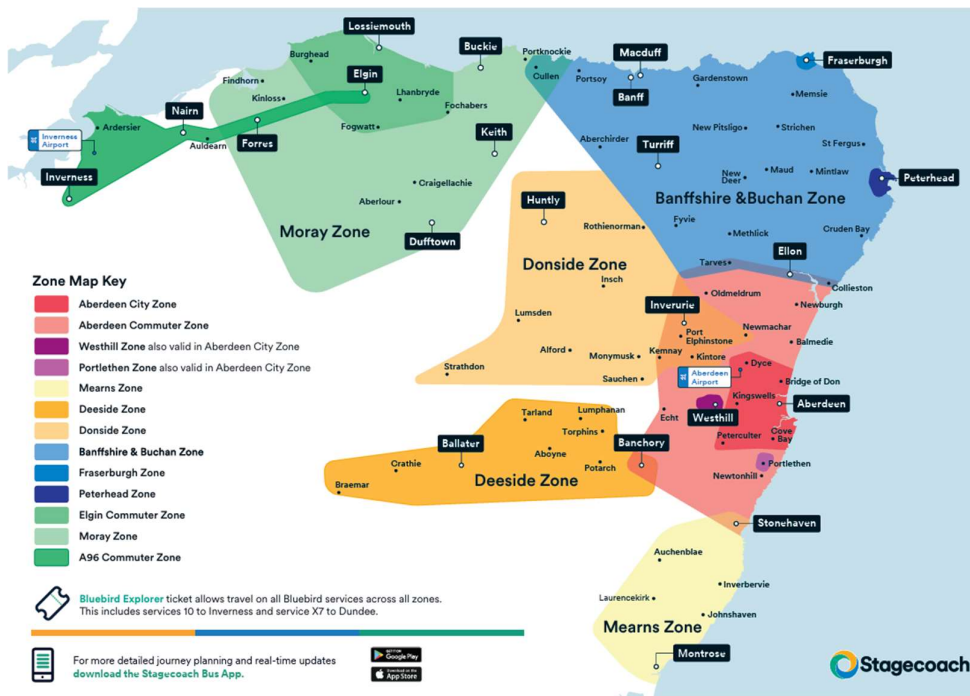


Figure 3-36: Stagecoach DayRider Zones

Table 3-11: DayRider Ticket zones in the study area and associated costs

Zone	Adult Ticket Price
Peterhead (internal)	£4.30
Fraserburgh (internal)	£4.30
Aberdeen Commuter Day Rider	£8.60
Banffshire and Buchan Zone	£11.00
Bluebird Explorer	£17.20

Onward travel on non-Stagecoach services

3.6.64 Where journeys require travel on bus services operated by another operator other than Stagecoach, two options are available:

- Purchasing separate tickets for Stagecoach and the other operator
- Purchasing a GrassHOPPER ticket which allows travel across multiple bus operators

3.6.65 Each of these are discussed below.

Separate Tickets for each operator

3.6.66 There are several operators who operate services in Aberdeen City. The majority of services are operated by First Bus which has a network stretching to Dyce and Peterculter. The price of a single ticket starts from £1.95, a return ('Two-Trip 24hr') ticket starts from £4.70 whilst a day ticket ('FirstDay') which allows unlimited travel for the whole day on the First Bus network in Aberdeen is £5.10.

Multi-operator  
 GrassHOPPER Tickets

3.6.67 First Bus, Stagecoach and six local bus companies have combined efforts to create the '**Grasshopper**' ticket designed to make bus travel between Aberdeenshire and Aberdeen City more convenient. This is a multi-operator pass that is split into three zones as shown in Figure 3-37.

3.6.68 A Zone B pass allows travel between Ellon and Aberdeen and a Zone C pass allows travel across all zones. Day and week passes are available as detailed in the table below.

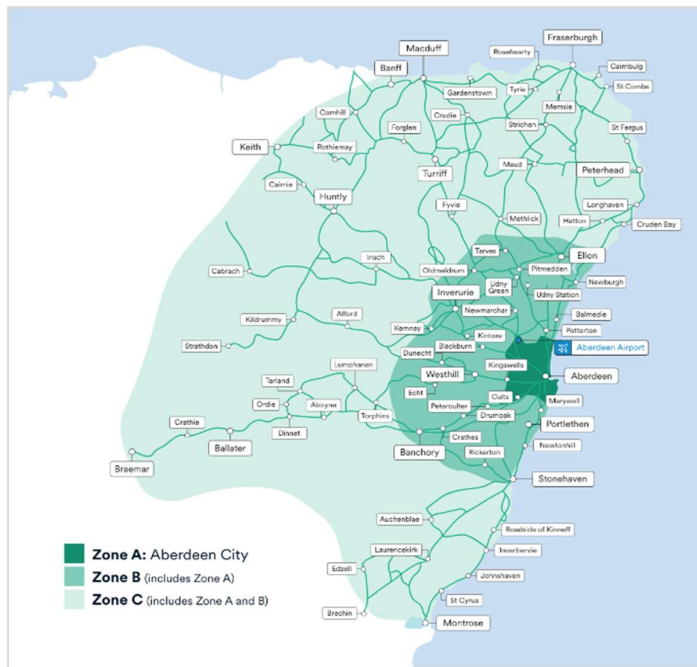


Figure 3-37: Grasshopper Zones (Source: grasshopperpass.com)

Table 3-12: Cost of Adult Day and Week Relevant Grasshopper tickets by Zone<sup>44</sup>

	Period	Cost
Zone B	Day Pass	£9.60
	Week Pass	£32.00
Zone C	Day Pass	£18.50
	Week Pass	£50.00

- 3.6.69 The table below shows the cost of Stagecoach Adult single and Return tickets on the bus routes in the study area, along with the cost of the relevant Stagecoach DayRider Ticket in each case. The table also shows the cost of onward travel beyond Stagecoach services via i) the purchase of the Stagecoach DayRider ticket AND the First Bus 'First Day' ticket and ii) the relevant GrassHopper Ticket in each case.
- 3.6.70 The costs shown in orange represent the cheapest option when travelling between the origins and destinations shown. For example, when travelling between Aberdeen and Fraserburgh, the Bluebird Explorer DayRider Ticket represents the best value for money as this is cheaper than the Adult return ticket between these locations.
- 3.6.71 The costs shown in grey represent the cheapest option when travelling between the origins and destinations shown AND making onward trips beyond Stagecoach services. As noted above, given that First Bus operate the majority of services in Aberdeen City, the grey options would be required for the majority of trips which require interchange at Aberdeen City Centre for onward travel elsewhere in Aberdeen.

Table 3-13: Bus fares when travelling between key settlements in the corridor and onward to Aberdeen

Route	Stagecoach services only			Onward travel beyond Stagecoach services	
	Adult Single Ticket Price	Adult Return Ticket Price	Relevant Stagecoach Day Rider Ticket Cost	Relevant Stagecoach Day Rider Ticket Cost PLUS First Bus 'FirstDay' Ticket Cost	GrassHOPPER Ticket
Fraserburgh - Peterhead	£7.30	£13.90	£11.00	£16.10	£18.50
Fraserburgh - Ellon	£9.00	£17.10	£11.00	£16.10	£18.50
Fraserburgh - Aberdeen	£12.70	£24.20	£17.20	£22.30	£18.50
Peterhead - Ellon	£7.30	£13.90	£11.00	£16.10	£18.50
Peterhead - Aberdeen	£9.80	£18.70	£17.20	£22.30	£18.50
Ellon - Aberdeen	£6.00	£11.40	£8.60	£22.30	£9.60

- 3.6.72 The above paragraphs highlight the **complexity of the bus ticketing options** available in the area. Whilst this complexity may well benefit regular bus users in that they may find an

<sup>44</sup> [Zones - Grasshopperpass](#)

attractive ticket option for their purposes, less frequent user may be confused by the range of tickets and end up paying more than they need to, or indeed may be deterred from bus travel.

- 3.6.73 In comparison to bus ticket prices in other areas of Scotland, the above costs appear to be relatively high. For example, Borders Buses offer a Borderless 24-hour (unlimited) ticket which enables unlimited travel across the entire Borders network, including the Scottish Borders, Carlisle, Berwick, Lothian, and Edinburgh, for £10.15. Similarly, East Coast Buses offer a CountyPlus Day ticket which allows unlimited travel in one day across the East Coast Bus network for £8.50. The latter network extends from Edinburgh to Dunbar which is approximately 30 miles and broadly equivalent to the distance between Peterhead and Aberdeen City Centre. As a comparison, a return rail ticket from Laurencekirk to Aberdeen (a distance broadly equivalent to Peterhead to Aberdeen) is £15.60 and a return from Huntly to Aberdeen (a distance which is broadly equivalent to Fraserburgh) is £16.10<sup>45</sup>. Rail therefore provides both a quicker and a cheaper journey from equivalent towns.
- 3.6.74 Dissatisfaction with the cost of bus travel was identified as one of the key issues within the public survey undertaken to inform this study, with 57% (n=142) of bus users who travel to Aberdeen for whom the cost of bus travel was applicable (i.e. removing concessionary fares) stating that they were dissatisfied with this aspect and 80% of respondents who don't use the bus as much as they'd like (again for whom the cost of bus travel is applicable, i.e. removing concessionary fares) identifying the cost of travel as a reason for them not using the bus. The results of the public survey and wider engagement activities are discussed further in Chapter 44.

**Key Point:** The cost of bus travel from the study area to Aberdeen is relatively expensive when compared to the cost of some broadly equivalent journeys elsewhere in the Central Belt of Scotland, with equivalent rail journeys both quicker and cheaper. This high cost is likely to deter some users from travelling by bus and / or from making the journey at all, with those without access to a private vehicle more likely to fall into the latter category because of the lack of a ready alternative means of transport.

#### Concessions

- 3.6.75 Those aged 60 and over and / or those with a disability can apply for the National Entitlement Card (NEC) which enables free travel on bus services across Scotland. In addition, as part of the Young Persons' (under 22s) Free Bus Travel (YFPBT) Scheme introduced in January 2022, all young people and children aged 5-21 years can also apply for a NEC providing free bus travel.
- 3.6.76 The One Year Evaluation of the YFPBT Scheme<sup>46</sup> identified a wide range of benefits, including improved access to education and social and leisure opportunities for young people. However, the evaluation also noted that some young people were missing out on these benefits due to a lack of local bus services or issues with the service provided, such as infrequent, time limited or unreliable services; unsuitable routes; and / or long journey times, with these problems particularly acute for those living in villages and rural areas where services are generally more limited. This was identified as an equality issue with some young people seeing greater benefits through the scheme than others as a result. Similar issues would also apply to the over 60s NEC.
- 3.6.77 The study area for this project is largely rural in nature with the primary bus routes focused on the key strategic links and more limited provision in rural areas. The results of the public survey undertaken to inform this study identified a number of barriers to bus service use, all of which are identified in the above YFPBT Evaluation. The most frequently cited barriers are

<sup>45</sup> Fares relate to off-peak tickets, which at the time of writing were valid all day as part of a ScotRail trial

<sup>46</sup> See [Opening up opportunities | Transport Scotland](#)

listed below, with the percentages shown in brackets equating to the proportion of respondents in each case who listed this aspect as a barrier:

- Amongst those who do not use the bus to travel to Aberdeen:
  - the length of time it takes to travel by bus (85%)
  - the frequency of services (79%)
  - bus services being late (77%)
- Amongst those who did not use local bus services:
  - bus service frequency (85%)
  - the availability / number of routes near where I live (81%)
  - the destinations of bus routes near where I live (i.e. bus services going where I want to go) (80%)

**Key Point:** A range of barriers to bus use were identified by respondents to the public survey. These barriers could result in equality issues where they result in people living in the study area who are entitled to free bus travel being prevented from accessing bus services.

## Rail

### Passenger Rail

- 3.6.78 As discussed above, there are no railway stations within the study area with the nearest stations being Dyce, Aberdeen, Kintore or Inverurie. This means travel by road (car, bus, or active travel) is the only option.
- 3.6.79 There are no direct bus connections from the study area to Dyce or Inverurie. Services 61 (Peterhead - Ellon - Aberdeen) and 68 (Fraserburgh – Ellon - Aberdeen) terminate at Aberdeen Bus Station in Union Square which is next to Aberdeen Railway Station.
- 3.6.80 When purchasing rail tickets to Aberdeen, a RailBus ticket (which enables use of the train and bus to get to a specific place) can be purchased for onward travel by bus to Peterhead or Fraserburgh. However, no other locations in the study area are included in the scheme and tickets must be purchased at the station or over the telephone<sup>47</sup>. These tickets are not widely used.

**Key Point:** The bus services from Peterhead and Fraserburgh to Aberdeen terminate at Aberdeen Bus Station, which is adjacent to the Railway Station, thereby minimising interchange requirements. Through ticketing options are however fairly limited.

### Rail Freight

- 3.6.81 There are no rail freight facilities within the study area, with the nearest located in Aberdeen at Raith's Farm, Dyce, or to the south of Aberdeen Station at Craiginches.
- 3.6.82 It should be noted that, currently there are a number of infrastructure constraints with the rail network to Aberdeen which constrain the rail freight market to / from North East Scotland. These include:

<sup>47</sup> See <https://www.scotrail.co.uk/offers/travel-passes/rail-and-bus>

- **Limited number of daily freight paths** on the Aberdeen to Central Belt and Aberdeen to Inverness routes which makes planning a flexible, round-trip difficult
- A **constrained loading gauge** of WS8 which restricts the use of larger more commonly used wagons
- **Restrictions on the length of freight trains** which reduces the volumes which can be transported

3.6.83 It is understood, however, that these constraints will be addressed through a combination of the 2026 Central Belt to Aberdeen Enhancements Project and the proposed 2030 electrification of the Aberdeen to Central Belt line. There is therefore the potential for the rail freight market to and from Aberdeen to grow.

### Public Transport Connectivity

3.6.84 This section considers the level of public transport connectivity in the study area and across the rest of Aberdeenshire to provide comparative context.

#### Public Transport Travel Times to Aberdeen City Centre

3.6.85 Figure 3-38 shows the fastest public transport travel times between Aberdeenshire postcodes and Aberdeen City Centre during an AM weekday and Table 3-14 shows the number and percentage of households within the study area which are able to travel to Aberdeen City Centre within defined public transport journey times, during an AM weekday.

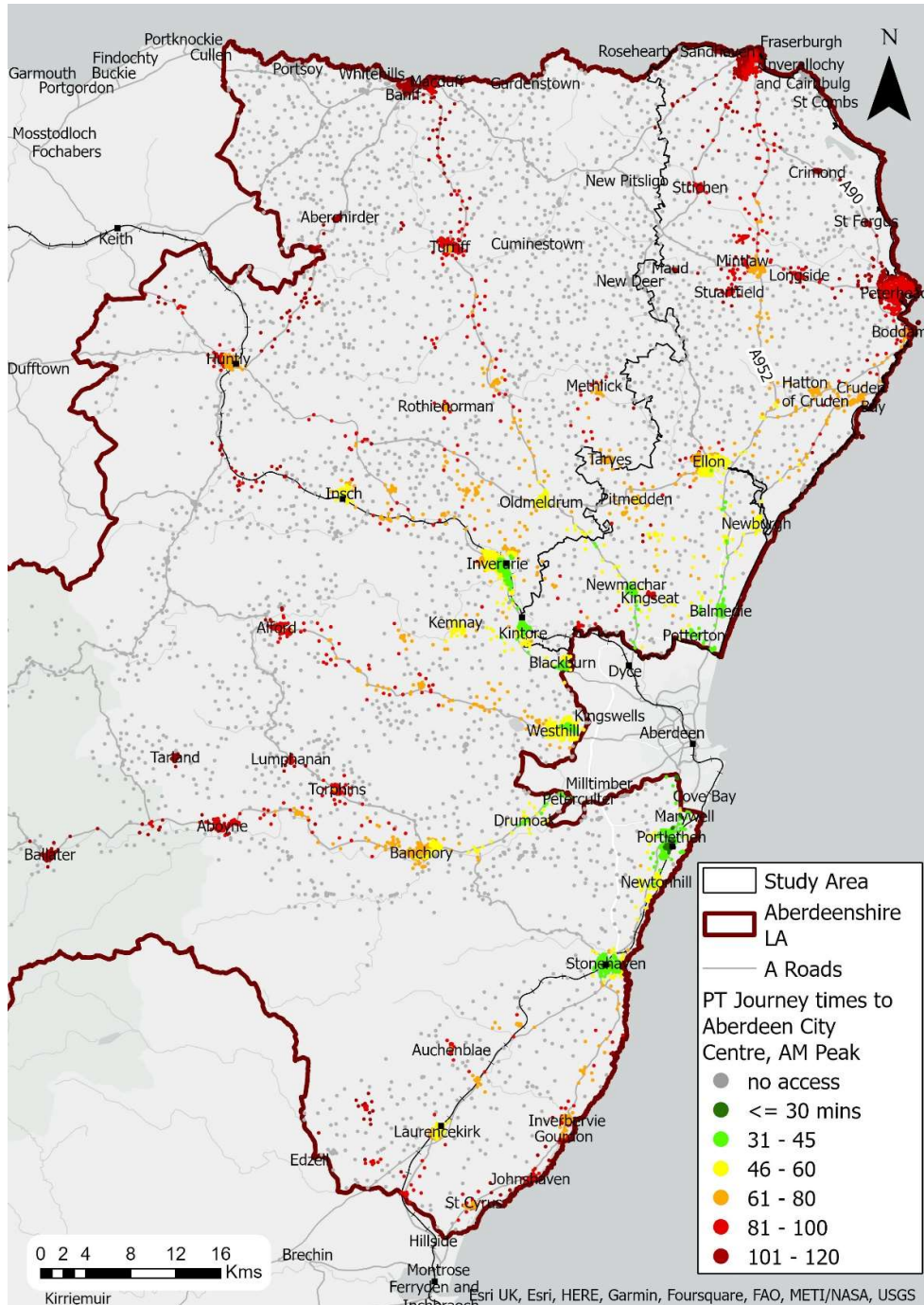


Figure 3-38: Public transport journey times from Aberdeenshire to Aberdeen City Centre, AM

Table 3-14: Number of households which can travel to Aberdeen City Centre by public transport journey time

Public Transport Journey Times (minutes)	Number of Households in the Study Area	% of Households in the Study Area
no access	5,956	14.7%
≤ 30	0	0.0%
31 – 45	2,970	7.4%

Public Transport Journey Times (minutes)	Number of Households in the Study Area	% of Households in the Study Area
46 – 60	4,571	11.3%
61 – 80	5,953	14.7%
81 - 100	13,679	33.9%
101 - 120	7,268	18.0%
	40,397	100%

3.6.86 Around two-thirds of households in the study area are more than an hour’s public transport journey time away from Aberdeen City Centre. It can be seen that only the Ellon area sees journey times of less than one hour. The urban areas of Peterhead and Fraserburgh see journey time of between 81 and 120 minutes. Note that in Scotland in 2019, 91% of commuting trips were less than 60 minutes and 97% were less than 90 minutes, so these longer journey times are a major deterrent to commuting to/from Aberdeen.<sup>48</sup>

#### Hansen Connectivity Measures

3.6.87 ‘Hansen’ connectivity measures have been developed to quantify the relative connectivity of all datazones across Aberdeenshire to:

- employment
- health (based on hospital inpatients)
- tertiary education (based on student numbers at Aberdeen’s universities and the North East College)

3.6.88 Graphics showing the outputs from the analysis are set out under the relevant headings below. In the analysis, a decay function is used such that e.g., a given number of jobs at a site which can be accessed in short travel time is ‘valued’ more highly than the same number of jobs at a site which has a longer travel time. The graphics show all the Aberdeenshire datazones in deciles showing with the colours indicating the best (green) and the worst (red) connectivity to the destination type in question.

#### Employment

3.6.89 Figure 3-39 to Figure 3-41 show Hansen connectivity to all employment in Aberdeen and Aberdeenshire; high value employment in Aberdeen and Aberdeenshire; and all employment in Aberdeen City.

<sup>48</sup> DfT Table TSGB0110b, derived from Labour Force Survey

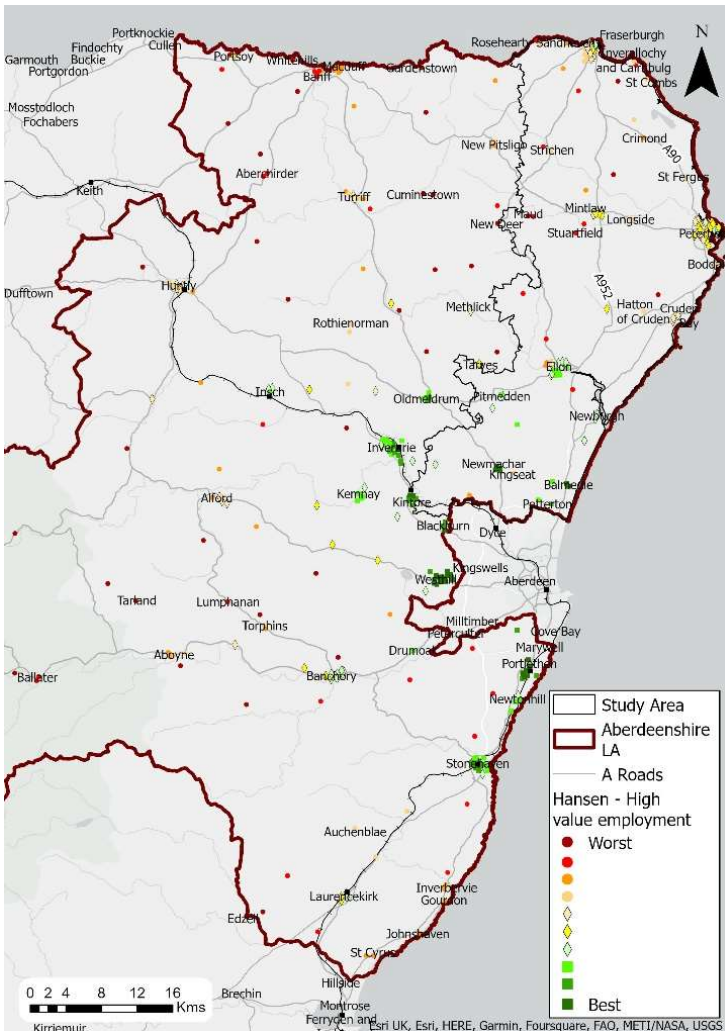


Figure 3-39: Hansen connectivity to high value employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM

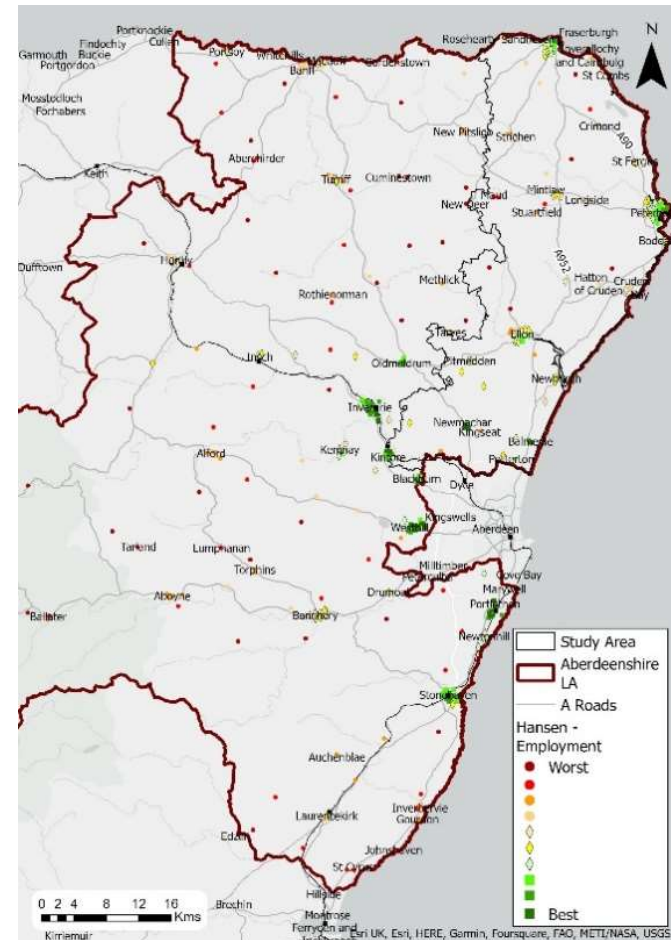


Figure 3-40: Hansen connectivity to total employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM



3.6.90 Key points from the above employment analysis are as follows:

- In terms of general connectivity to all jobs in Aberdeen and Aberdeenshire, many parts of the study area have middling access to jobs, with the presence of a substantial number of jobs in Peterhead and Fraserburgh offsetting the long journey times by public transport to Aberdeen.
- When connectivity to higher paying jobs in Aberdeen and Aberdeenshire is considered, the study area fares less well, reflecting the low proportion of jobs in Fraserburgh and Peterhead in the higher paying sectors.
- When connectivity to all jobs in Aberdeen is considered, Peterhead and Fraserburgh have some of the worst access in Aberdeenshire, along with Banff and Macduff (which are much smaller settlements). For comparison purposes, Peterhead has far lower levels of connectivity to jobs in Aberdeen than Laurencekirk despite being a similar distance from Aberdeen (approximately 20 miles).

#### Education and Health

3.6.91 Figure 3-42 and Figure 3-43 show Hansen access to tertiary education<sup>49</sup> and hospitals<sup>50</sup> in Aberdeen and Aberdeenshire local authorities. Key points from this analysis are as follows:

- Connectivity to education is favourable in the study area, particularly in Peterhead and Fraserburgh. However, this analysis includes the North East Scotland College (NESCol) sites in Fraserburgh and Peterhead. If only university level education was considered, the study area (excluding Ellon) would see much poorer levels of public transport connectivity.
- Connectivity to hospitals is also favourable, with relatively high connectivity in Peterhead and middling levels in Fraserburgh. Again, the local hospitals (Peterhead Community Hospital and Fraserburgh Hospital) are included in this analysis. These hospitals provide some services.<sup>51</sup> However, travel to larger facilities such as Aberdeen Hospital would be required for services not provided at the local hospitals, with overnight stays in Aberdeen also necessitating travel for visitors.<sup>52</sup> Overnight closures of the minor injuries units in Peterhead and Fraserburgh are reportedly being considered, to reduce costs as part of budget cuts for the region's health board, potentially requiring patients to travel to Aberdeen for access to minor injury units between 7pm and 7am.<sup>53</sup> If only the larger hospitals providing a wider range of services are considered, connectivity to health services in the study area would look less favourable. Public transport journey times to the ARI from Fraserburgh and Peterhead are double those by car.

***"It's worth noting, regardless of the type of transport, appointments at ARI for people living in and around Peterhead/Fraserburgh will often be necessary. The local hospitals are community hospitals, which means they won't provide a full range of acute facilities." – Deputy Head of Communications, NHS Grampian***

<sup>49</sup>Analysis considered: NE Scotland College (Aberdeen Altens Campus, Aberdeen City Campus, Fraserburgh Campus, Scottish Maritime Academy in Peterhead); Robert Gordon University (Garthdee Campus); Scotland's Rural College (SRUC Aberdeen); University of Aberdeen (Foresterhill Campus and King's College Campus)

<sup>50</sup>Analysis considered: Aberdeen Community Health and Care Village, Aberdeen Maternity Hospital, ARI, Aboyne Hospital, Chalmers Hospital, City Hospital, Elmwood, Fraserburgh Hospital, Inverurie Hospital, Jubilee Hospital, Kincardine Community Hospital, Peterhead Community Hospital, Rehabilitation Hospital, Roxburghe House, Royal Aberdeen Children's Hospital, Royal Cornhill Hospital, Turriff Cottage Hospital, Woodend General Hospital

<sup>51</sup> [https://www.nhsgrampian.org/hospital-hub/fraserburgh-hospital/?pContentID=3210&p\\_applic=CCC#more\\_information](https://www.nhsgrampian.org/hospital-hub/fraserburgh-hospital/?pContentID=3210&p_applic=CCC#more_information) and [https://www.nhsgrampian.org/hospital-hub/peterhead-hospital#more\\_information](https://www.nhsgrampian.org/hospital-hub/peterhead-hospital#more_information)

<sup>52</sup> More information on the services available at Peterhead and Fraserburgh Hospitals is available at [Peterhead Hospital \(nhsgrampian.org\)](https://www.nhsgrampian.org/hospital-hub/fraserburgh-hospital#services) and <https://www.nhsgrampian.org/hospital-hub/fraserburgh-hospital#services>

<sup>53</sup> <https://www.pressandjournal.co.uk/fp/news/aberdeen-aberdeenshire/6402250/peterhead-fraserburgh-huntly-minor-injury-units-aberdeenshire/>

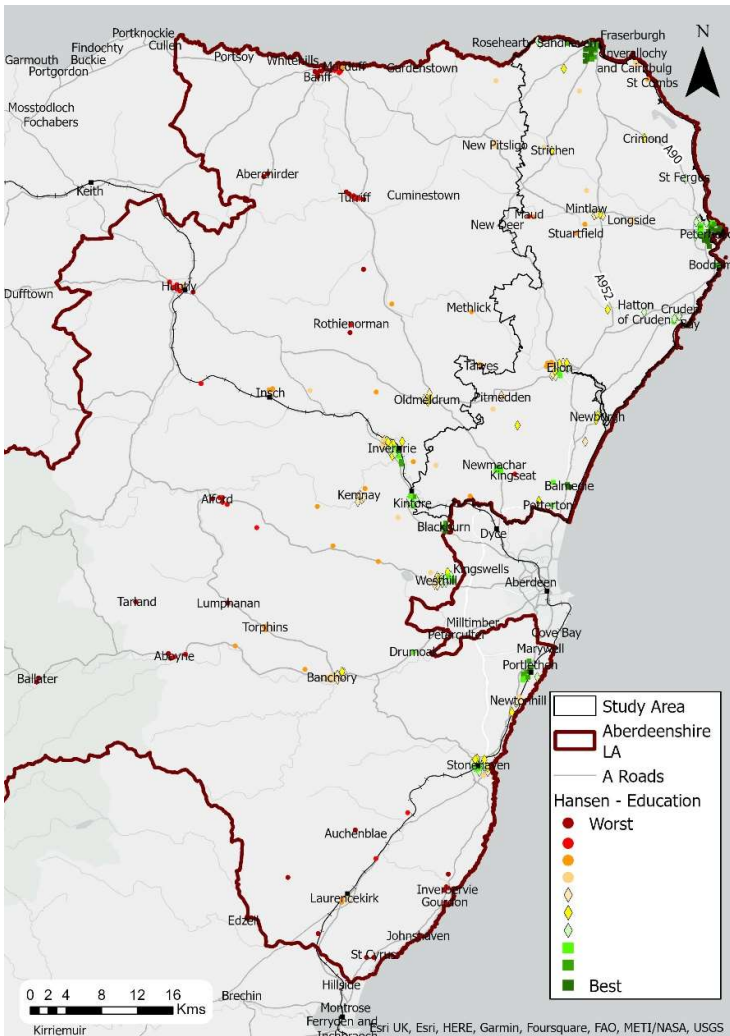


Figure 3-42: Hansen connectivity to tertiary education in Aberdeenshire and Aberdeen Local Authorities, weekday AM

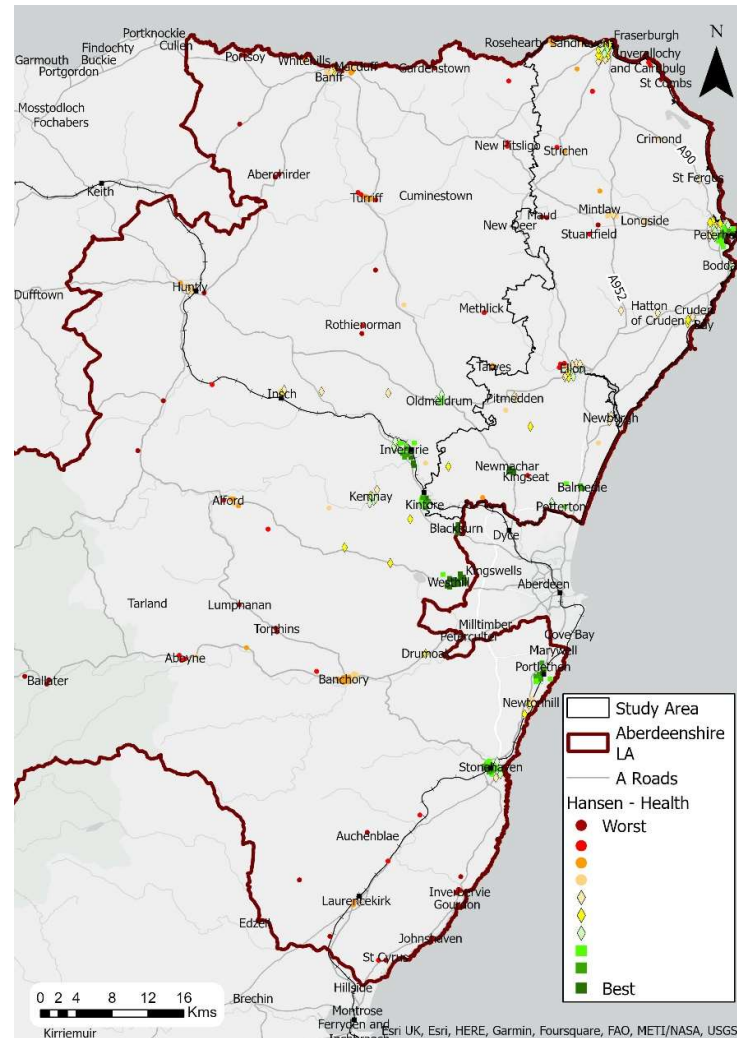


Figure 3-43: Hansen connectivity to health in Aberdeenshire and Aberdeen Local Authorities, weekday AM

### Connectivity and Deprivation Audit Tool

- 3.6.92 As discussed in Chapters 2 and 3, Peterhead and Fraserburgh have relatively high levels of deprivation relative to other areas of Aberdeenshire and are identified as 'Regeneration Priority Areas' within the Aberdeenshire LDP. To understand the relationship between transport connectivity and deprivation in the study area in more detail, Stantec's Connectivity and Deprivation Audit Tool (CDAT) has been applied at the study area and wider Aberdeenshire level.
- 3.6.93 CDAT identifies areas which:
- Are **classed as 'deprived'** from one or more socio-economic perspectives (e.g., high unemployment, poor further / higher educational attainment)
  - Suffer from **poor public transport connectivity** (relative to the rest of the study area) to the 'source' of their deprivation (e.g., jobs, further / higher education opportunities)
- 3.6.94 The tool therefore enables the identification of areas **where poor public transport connectivity may be a contributory factor to deprivation.**
- 3.6.95 In order to ensure only areas with similar traits are compared, each origin in the study area is classified into one of the Scottish Government's six-fold Urban Rural classification category (large urban area, other urban area, accessible small towns, rural small town, accessible rural area or remote rural area).
- 3.6.96 The origins in each Urban Rural category are then sorted into one of three tiers based upon a combination of their deprivation and public transport connectivity. The tiers are defined as follows:
- **Tier 1:** areas with the least deprivation and public transport connectivity problems
  - **Tier 2:** areas where there is a potential correlation between deprivation and public transport connectivity, and which are classed as being 'at risk'
  - **Tier 3:** areas with the highest correlation between deprivation and poor public transport connectivity suggesting a causal relationship exists
- 3.6.97 The analysis undertaken examined levels of deprivation in terms of, and connectivity to employment, tertiary education, and hospitals.
- 3.6.98 The figures below show the results of the CDAT analysis when considering all employment in Aberdeen and Aberdeenshire; high value employment in Aberdeen and Aberdeenshire; and all employment in Aberdeen City and illustrates the proportion of the population in the study area and the rest of Aberdeenshire which fall in each tier for each of the above employment analyses.

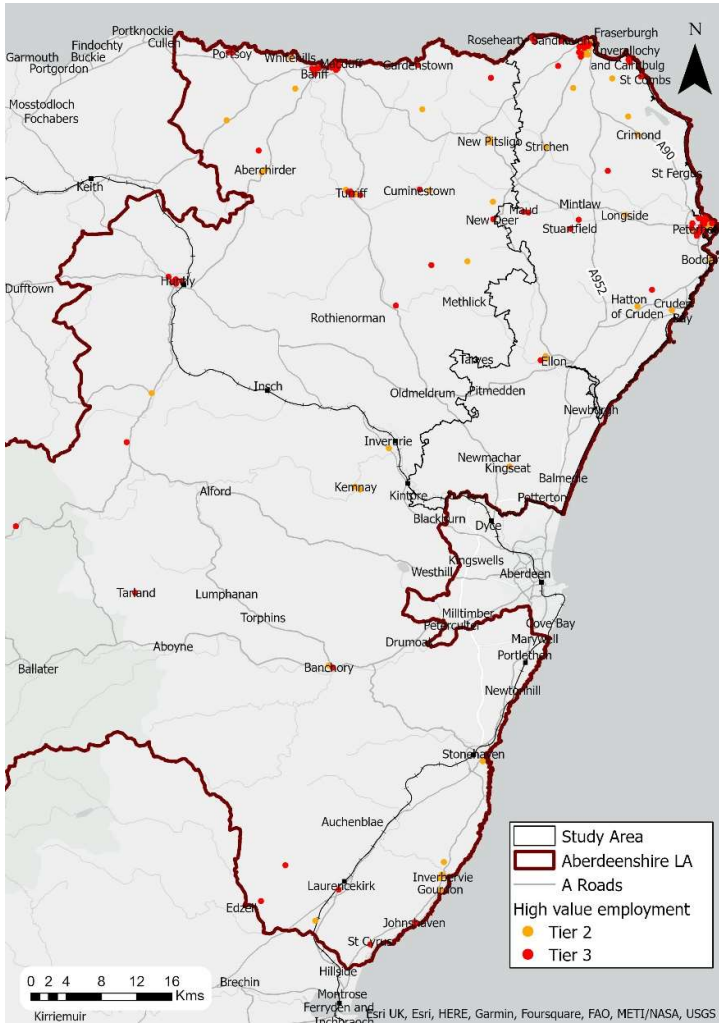


Figure 3-45: CDAT high value employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM

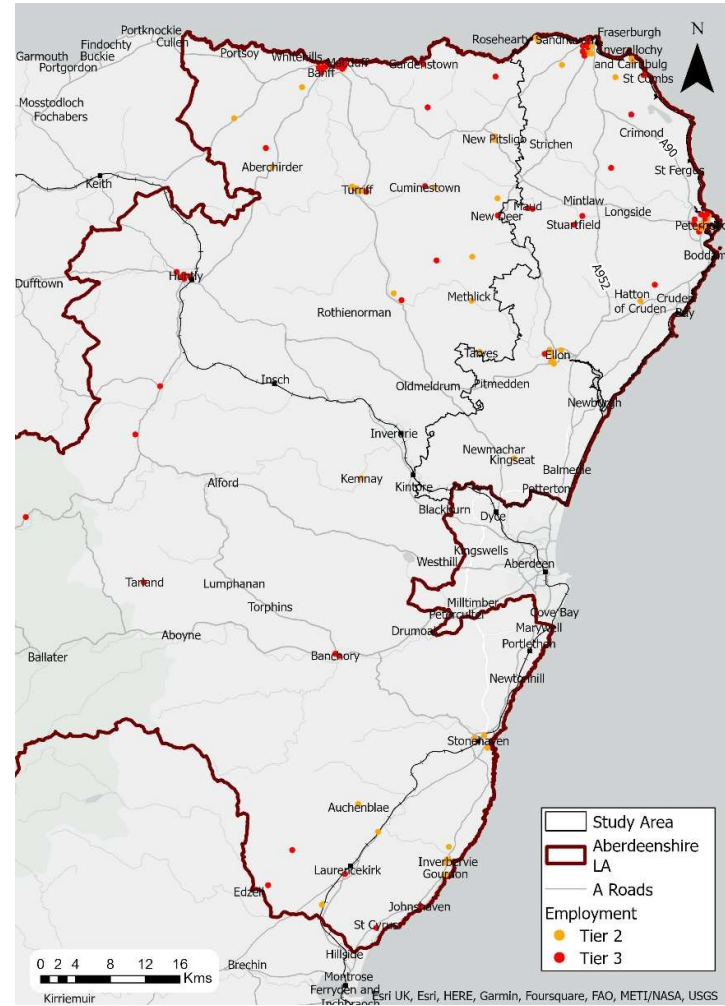


Figure 3-44: CDAT employment in Aberdeenshire and Aberdeen Local Authorities, weekday AM

Initial Appraisal: Case for Change Report  
Buchan Sustainable Transport Study

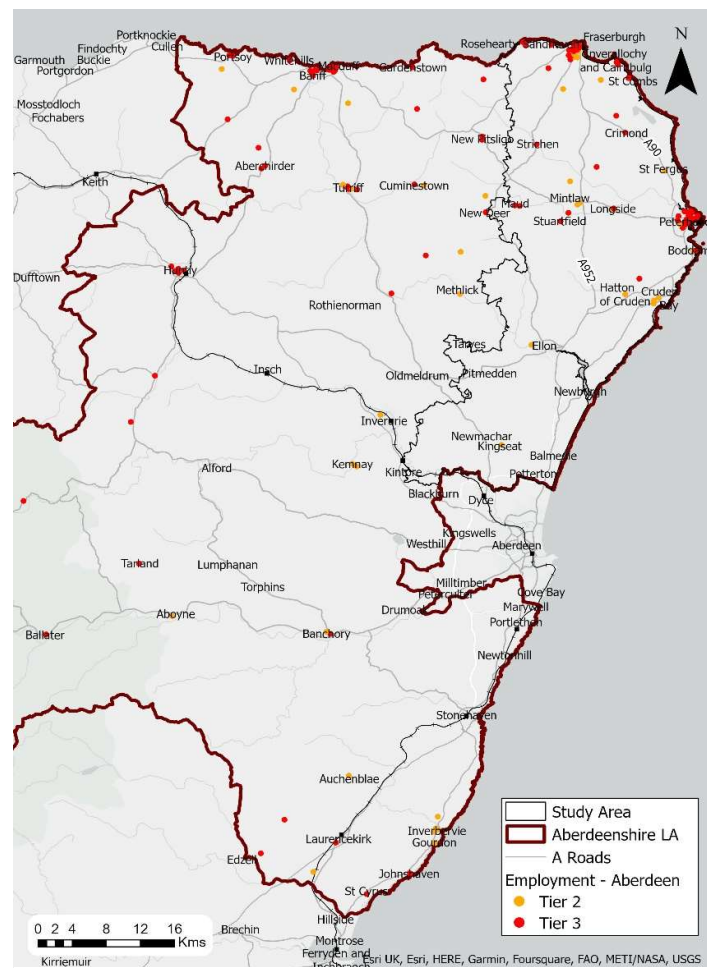


Figure 3-46: CDAT total employment in Aberdeen Local Authority, weekday AM

3.6.99 Key points from the above CDAT employment analysis are as follows:

- Across all three analyses (connectivity to all jobs in Aberdeen and Aberdeenshire, higher paying jobs in Aberdeen and Aberdeenshire, and all jobs in Aberdeen) the study area performs poorly with a high proportion of areas falling into Tier 3 locations
- While the above Hansen analysis indicated middling access to all jobs in Aberdeen and Aberdeenshire, CDAT places a large proportion of Peterhead and Fraserburgh in Tier 3 for this analysis. This is because when compared to other locations in the same urban-rural category, large parts of Peterhead and Fraserburgh perform poorly on this measure, with the results that the CDAT result is poor (i.e. there is relatively poor connectivity to jobs (compared to other locations in the same urban-rural category) and high levels of employment deprivation in these locations)
- As with the Hansen analysis, the study area performs worse again if only higher paying jobs in Aberdeen and Aberdeenshire or jobs in Aberdeen are considered, with progressively more areas falling into Tier 3 in each case
- As shown in the above table, in comparison to the rest of Aberdeenshire, the study area has a higher level of Tier 3 locations across all measures and performs particularly poorly when only employment in Aberdeen is considered, with 48% of the study area population in Tier 3 locations in this instance compared to just 18% of the population in the rest of Aberdeenshire

**Key Point:** A large proportion of the population in the study area reside in areas where there is a strong correlation between poor public transport connectivity to employment and employment deprivation, suggesting that poor public transport connectivity to employment may be contributing to employment deprivation in these areas. This is important as by extension, it could be argued that improving transport connectivity in these areas may help contribute to a reduction in deprivation.

#### Education and Health

3.6.100 Figure 3-47 and Figure 3-48 shows the results of the CDAT analysis for education and health and Table 3-15 shows the proportion of the population in the study area and Aberdeenshire which fall in each Tier for the education and health analyses.

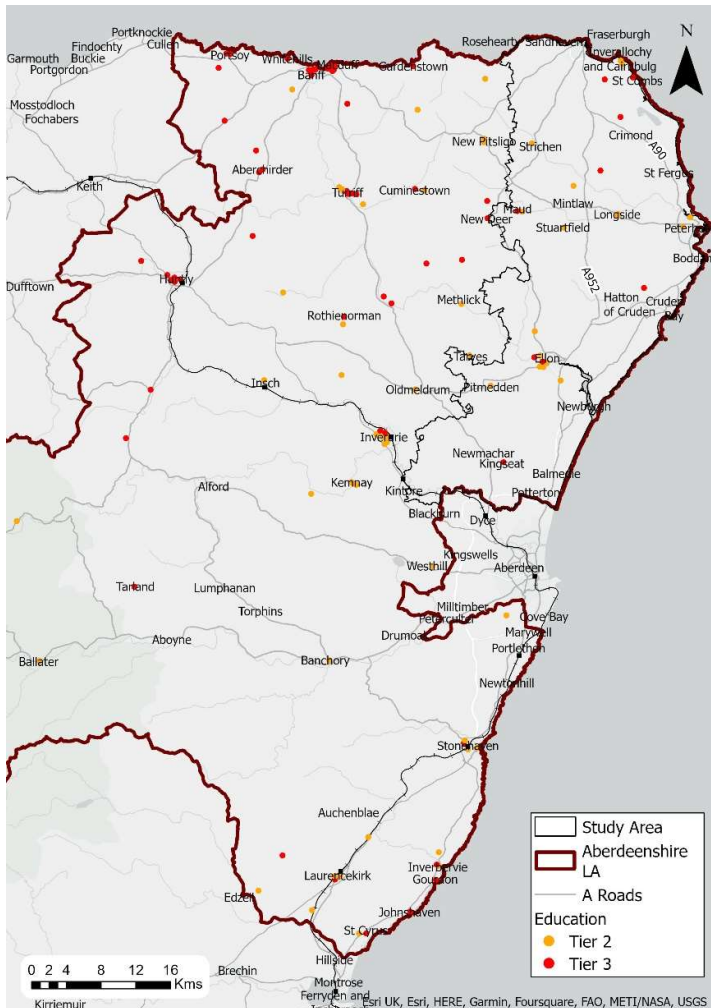


Figure 3-48: CDAT education in Aberdeenshire and Aberdeen Local Authorities, AM

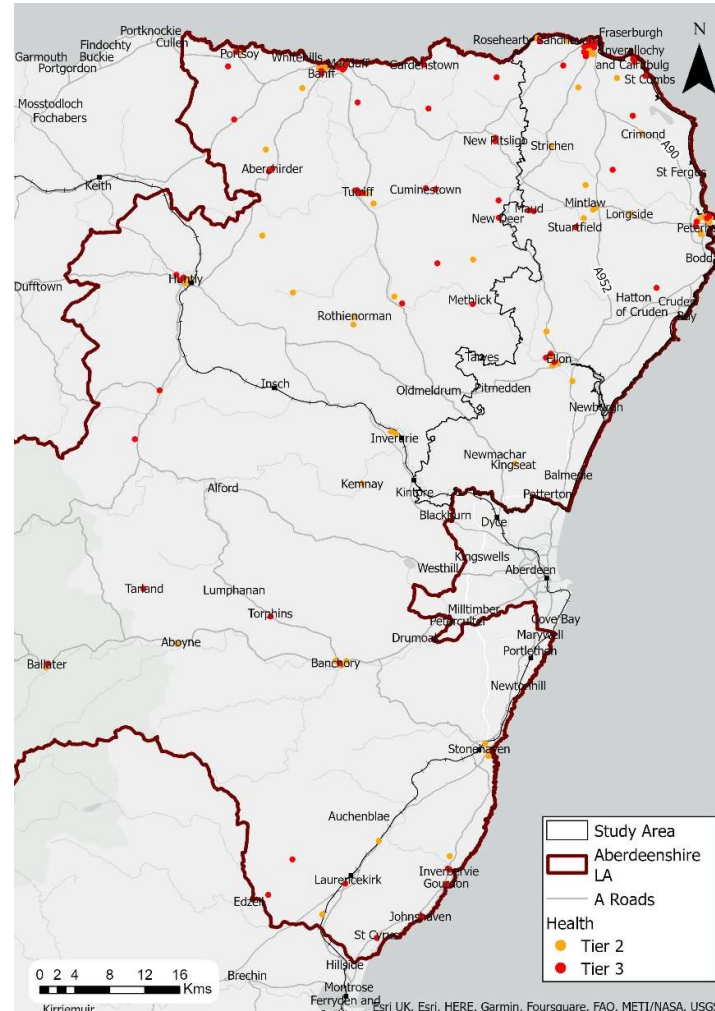


Figure 3-47: CDAT health in Aberdeenshire and Aberdeen Local Authorities, AM

Table 3-15: Proportion of population which fall in each Tier for the Study area and the remainder of Aberdeenshire – Education & Health

Tiers	Education in Aberdeenshire and Aberdeen		Health in Aberdeenshire and Aberdeen	
	Study area	Remainder of Aberdeenshire	Study area	Remainder of Aberdeenshire
1	77%	63%	44%	70%
2	16%	17%	27%	12%
3	7%	20%	29%	17%

3.6.101 Key points from this analysis are as follows:

- As with the Hansen analyses, in terms of education, the study area performs relatively well due to the North East Scotland College (NESCol) sites in Fraserburgh and Peterhead. If only university level education was considered, the study area (with the exception of Ellon) would likely exhibit a higher number of Tier 3 locations
- In terms of health, there are concentrations of Tier 3 locations in Peterhead and Fraserburgh. This suggests that even considering the community hospitals in these locations, the areas perform less well than other similar sized areas in terms of connectivity to health services and therefore the CDAT result is poor (i.e. there is relatively poor connectivity to health services (compared to other locations in the same urban-rural category) and high levels of health-related deprivation in these locations)

**Key Point:** The results suggest that poor public transport connectivity to health services in the study area may in some locations be contributing to poor health outcomes.

## Road Transport

3.6.102 The road network in the study area is shown in Figure 3-49.

3.6.103 The A90(N) is a trunk road and provides the key strategic link between Aberdeen, Ellon, and Peterhead while the A952 which is non-trunk provides a more direct north-south route to Fraserburgh.

3.6.104 There are several key junctions on the A90(N) / A952 corridors, including:

- **Toll of Birness** – a fork junction between the A90 and the A952. Priority is given to the A90 through the junction, with a slip lane for left turning northbound traffic onto the A952 also having priority over right turners from the A90. All other movements are provided by a pair of tightly curved slip roads in the apex of the junction, with southbound traffic on the A952 having to turn right onto the A90

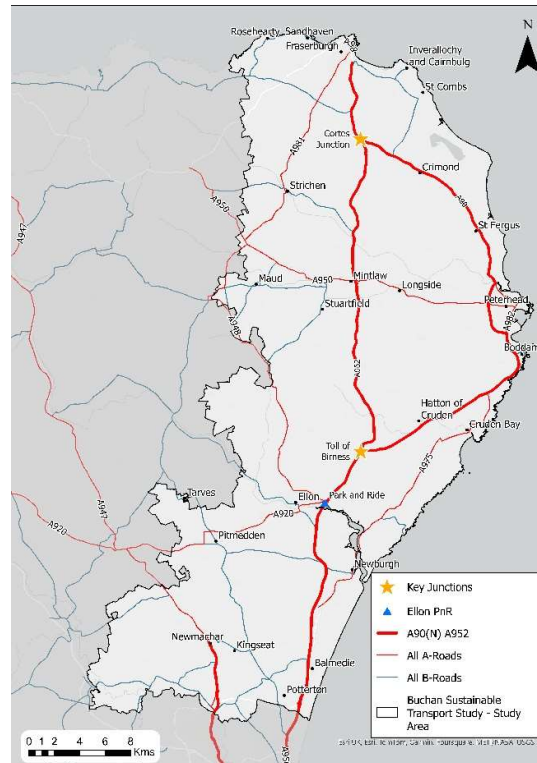


Figure 3-49: Key Road Network within the Study Area

- **Cortes Junction** – a fork junction between the A90 and the A952 south of Fraserburgh. Priority is given to north-south A90 / A952 traffic. There is a slip lane for southbound A90 traffic continuing via a left turn onto the A90 to Peterhead. Those travelling westbound on the A90 must wait at the Cortes priority junction and turn right or left respectively to join the A90 northbound to Fraserburgh or the A952 southbound to Mintlaw. Within the immediate vicinity of the junction there are also several accesses to nearby properties and immediately south of the junction on the A90, there is also another priority junction with a minor road heading east to Inverallochy on the coast
- **B9005 / A90 roundabout south of Ellon and A948 / A90 roundabout north of Ellon** – there are two roundabout junctions connecting Ellon to the A90. Ellon Park and Ride is situated to the west of the A948/ A90 to the north of the town

3.6.105 There have been significant improvements to the road network immediately south of the study area, with the delivery of the Aberdeen Western Peripheral Route (AWPR) and the Balmedie to Tipperty (AWPR/B-T) dualling in 2019. The latter involved the delivery of 9km of new dual carriageway to replace the single carriageway between Balmedie and Bridgend, together with 3km of improvements to the existing dual carriageway. The delivery of the AWPR has reduced traffic volumes and improved journey times significantly for journeys north to south through the city. Following the delivery of AWPR/B-T, the A90 is now dual carriageway up to the B9005 / A90 roundabout south of Ellon and single carriageway north of this junction.

3.6.106 Beyond the key strategic routes, the road network is more limited. Key major links include:

- **A975 via Cruden Bay** - this route forms a loop off the A90 between Aberdeen and Peterhead, passing through Cruden Bay and Newburgh. The road provides a slower more scenic coastal alternative to the A90 trunk road
- **A950 between Mintlaw and Peterhead** – the A950 provides the key east-west connection linking Mintlaw (A952) with Peterhead

- **A948 and B9005** – provide connections from Ellon to the A90 north and south respectively

3.6.107 Beyond the A90 and A952, there are **few alternative routes between the key settlements and, where connections do exist, they are indirect and of a lower standard**. This can cause issues when there is a problem on the A90(N) / A952 corridors, with resultant increases in journey times. During the engagement undertaken with businesses in the area, one transport provider noted that, given the indirect nature of alternative connections, it is often better to remain on the strategic network when incidents arise. Where vehicles do divert away from the strategic links, issues with **road maintenance can also arise** – this is particularly the case with respect to larger vehicles.

**Traffic Counts**

3.6.108 The Department for Transport (DfT) provide data on traffic on the road network in Scotland. The data is taken from automatic counters and manual counts or is estimated based on counts from previous years at the locations specified. The estimated counts are therefore less accurate, and a note of caution should be taken when interpreting these results.

Traffic Counts – All Traffic

3.6.109 Figure 3-50 shows the Average Annual Daily Traffic (AADT) flows at each count location in the study area and Aberdeenshire more broadly in 2022. Actual count data and estimated counts are shown separately.

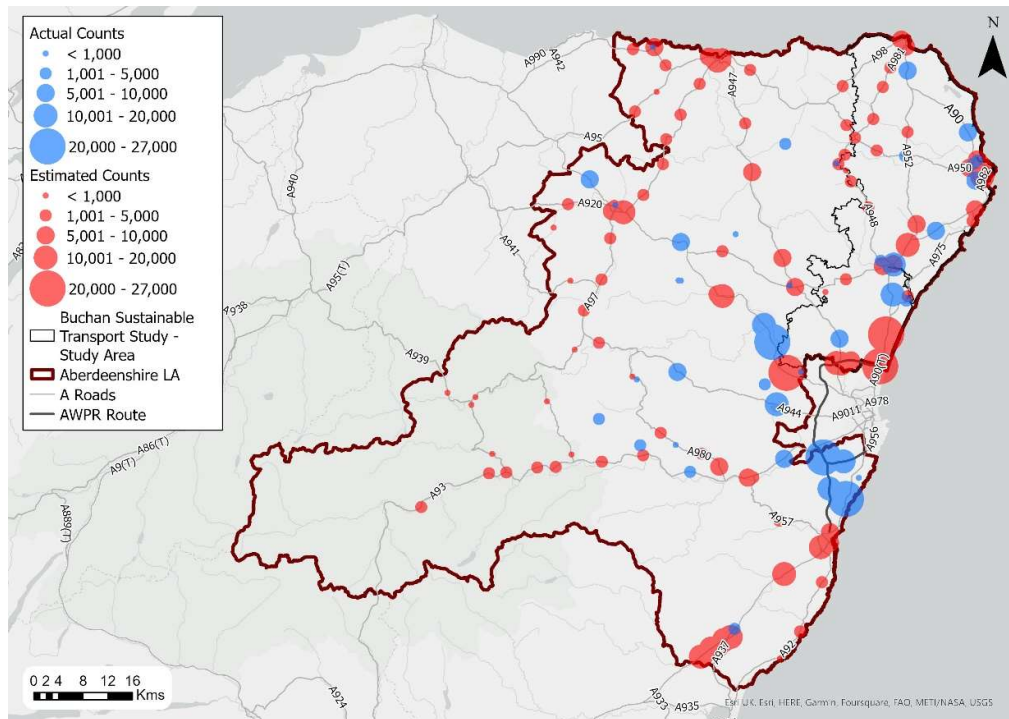


Figure 3-50: Department for Transport Count Locations and AADT Flows (2022)

3.6.110 The data indicates that, within the study area, the largest flows are on the A90 south of the Toll of Birness. The estimated flow on the A90 south of the Toll of Birness is around 12,500 vehicles, with 14,340 vehicles recorded at the Ellon roundabouts.

3.6.111 The A90 between Fraserburgh and Cortes junction has 7,024 vehicles, while the section between Cortes junction and Peterhead has 5,758 vehicles. There are two count locations on

the A90 between Toll of Birness and Peterhead, the counter which is located close to Hatton of Cruden shows a volume of 7,143 vehicles, while the volume increases to around 8,900 further east towards Peterhead.

3.6.112 There is an estimation of 4,536 vehicles on the A952, between Cortes junction and Mintlaw, and higher vehicle numbers (5,157) further south on this link, between Mintlaw and Toll of Birness junction. On this basis, traffic south of Toll of Birness splits approximately 60 / 40 in favour of the A90.

3.6.113 The data suggests that vehicle volumes on the A90(N) / A952 are higher than those in comparative locations (in terms of distance from Aberdeen) on other strategic routes into Aberdeen City. For example:

- Volumes on the A96 between Inverurie and Insch, are 10,370, which are lower than those on the A90(N) south of the Toll of Birness by 2,170 vehicles approximately
- While vehicle volumes on the A90 south of Stonehaven are high with estimations between 16,700 and 18,160, this number decreases to around 12,000 at Stonehaven
- Vehicle volumes on the A93 range from 1,300 in the west to 4,500 towards the Aberdeen local authority boundary, lower than those on the A90
- The A947, which links Banff to Aberdeen, has estimated vehicle volumes of around 5,400 between Turriff and Oldmeldrum

Traffic Counts – Heavy Goods Vehicles

3.6.114 The Transport Scotland permanent count sites provide data on vehicle classes which has been used to calculate HGV proportions of AADT flows. These are shown in Figure 3-51 for Aberdeenshire and in Figure 3-52 for the study area.

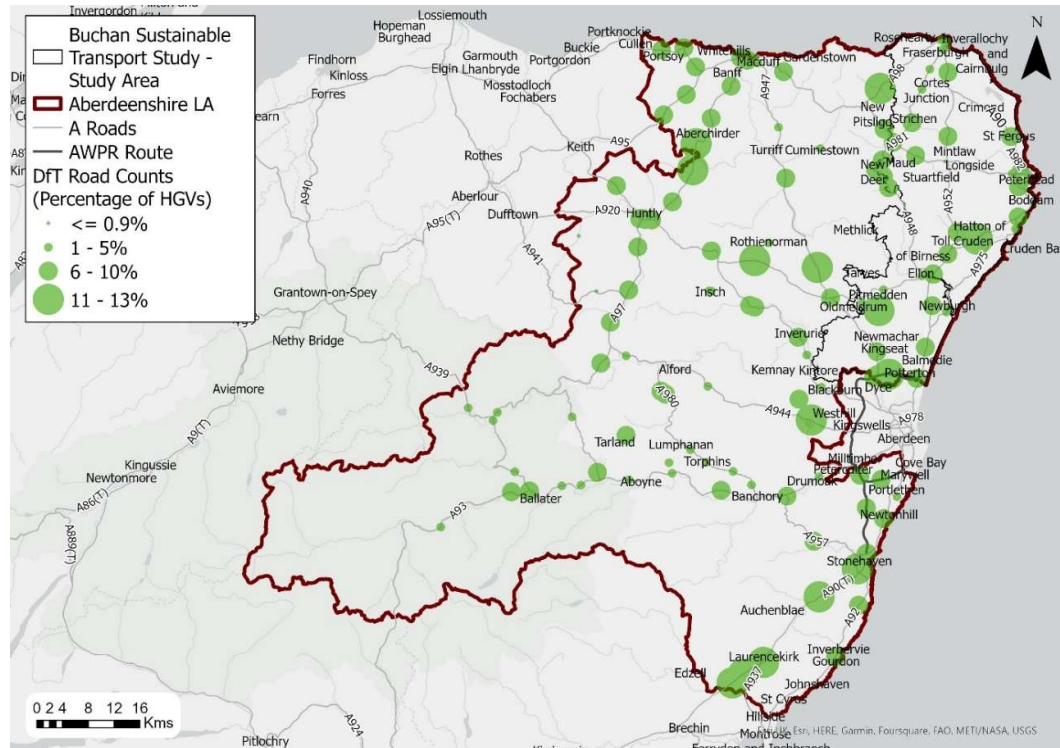


Figure 3-51: HGV Percentage of Total AADT flows in Aberdeenshire

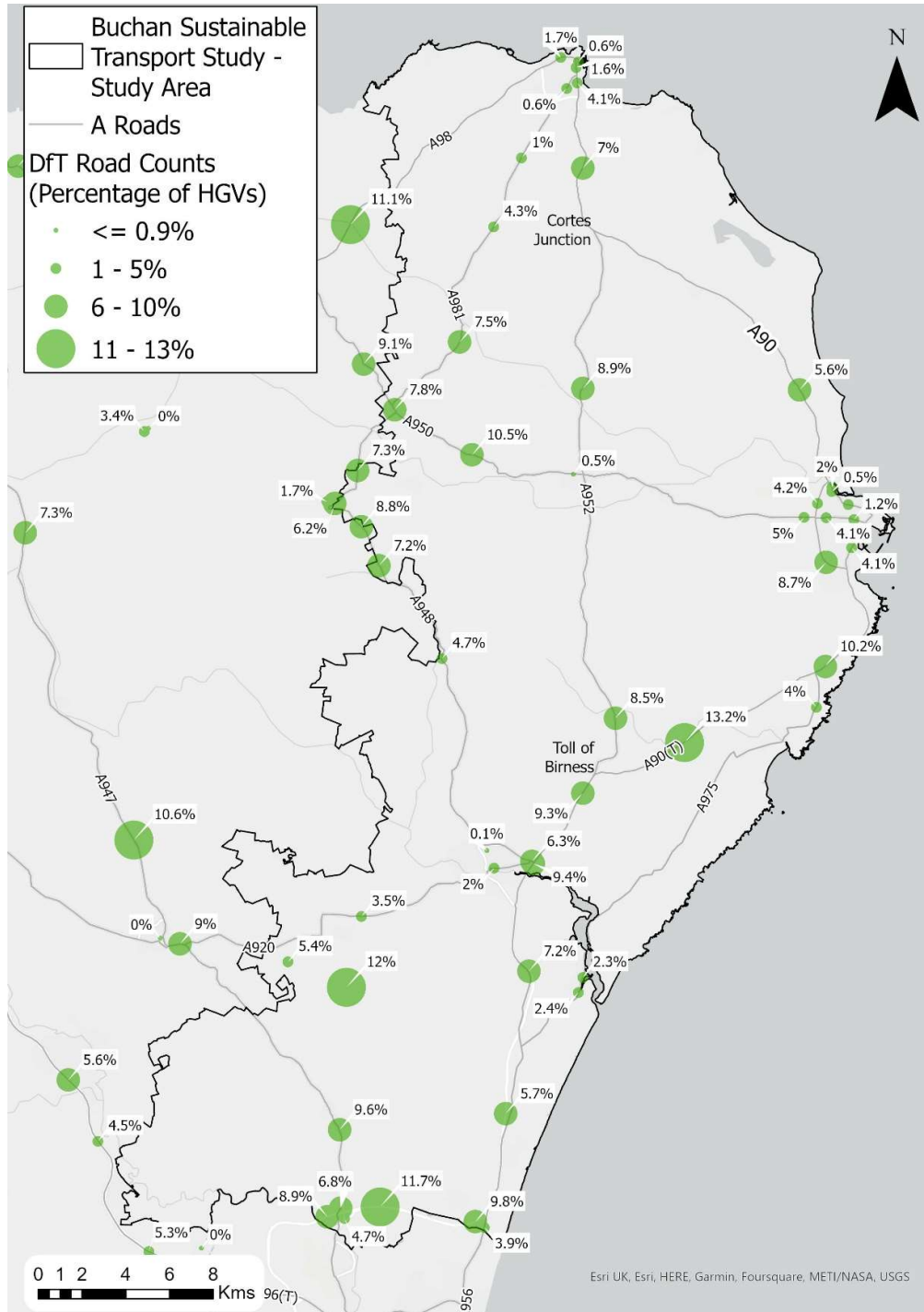


Figure 3-52: HGV Percentage of Total AADT flows in the study area

3.6.115 The proportion of HGVs on the A90 between the Toll of Birness and Peterhead (13.2%) is the joint highest in Aberdeenshire, matching that of several count sites on the A90 south of Stonehaven.

3.6.116 HGV flows south of the Toll of Birness are higher (1,346 HGVs) than the HGV flows on the A90 between Toll of Birness and Peterhead, (949 and 909 respectively at each count location). However, due to higher overall traffic flows A90 south of the Toll of Birness junction,

(14,340 vehicles) than on the A90 between Toll of Birness and Peterhead (7,143 vehicles), the HGV proportion is higher in the latter location (9.4% versus 13.2%).

3.6.117 The proportion of HGVs is lower on the A90 between Peterhead and the Cortes junction (5.6%) and from the Cortes junction north to Fraserburgh (7%) suggesting a large number of HGVs start or end their journeys at Peterhead.

3.6.118 On the A952, HGVs account for 8.9% of AADT flows south of Cortes junction and 8.5% north of the Toll of Birness. HGV proportions on this route are therefore lower than that on the A90 between the Toll of Birness and Peterhead but higher than that on the A90 between Peterhead and Fraserburgh. These vehicles have to pass directly through the settlement of Mintlaw.

#### Long-term Trend in Traffic Levels

3.6.119 An assessment of the DfT traffic data was undertaken to determine whether it was possible to establish a longer-term trend in both total traffic and HGV volumes on the A90 / A952. However, the time-series count data is limited.

3.6.120 The count site at Cruden Bay, between the Toll of Birness and Peterhead has the longest time-series of data available, running from 1992 to 2023. This shows that overall traffic levels on this link steadily increased up to 7,889 in 2019, before falling by 1,891 during the COVID-19 pandemic and thereafter increasing, returning closer to pre-pandemic levels in 2023 (7,173).

3.6.121 HGV volumes at Cruden Bay count site were 650 on average with minor fluctuations of  $\pm 50$  HGVs from 1992 to 2014. In 2015, the volume increased sharply by 245 HGVs, reaching the number of 917 HGVs, and thereafter this number is following an almost flat trend of  $\pm 50$  up to 2023. In contrast to general traffic, the COVID-19 pandemic is not apparent in the HGV count data at this location.

#### **Traffic Daily Profile**

##### Daily Profile - All Traffic

3.6.122 Figure 3-53 shows the locations of Transport Scotland's permanent count sites.



Figure 3-53: Count locations

3.6.123 Figure 3-54 and Figure 3-55 show the daily profile of traffic (northbound and southbound respectively) recorded at each of Transport Scotland’s count sites in the study area.

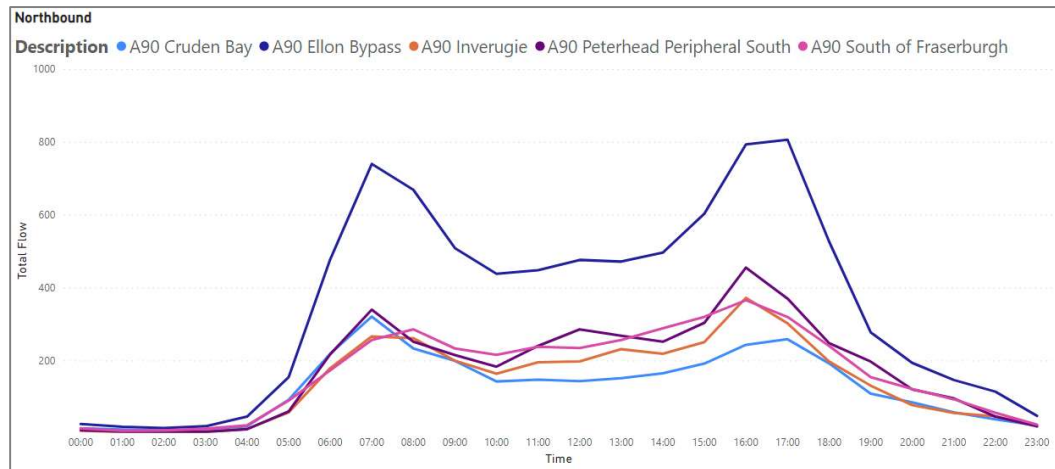


Figure 3-54: A90 Daily - All Vehicles - Northbound, 2023

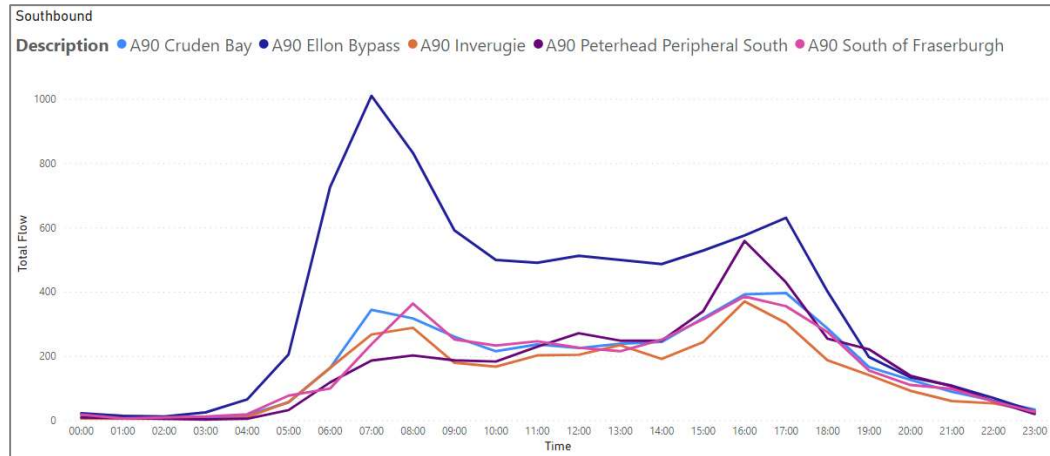


Figure 3-55: A90 Daily Profile - All Vehicles - Southbound, 2023

3.6.124 The daily profile for all vehicles shows that northbound traffic peaks between 0700-0800 in the morning and between 1600-1700 in the evening on the A90 Ellon Bypass (south of Toll of Birness) with the volumes in the PM peak slightly higher. Northbound traffic at the other count sites exhibits a similar pattern, albeit with lower traffic volumes.

3.6.125 The southbound traffic peak is at 0700 with the largest flow on the A90 Ellon Bypass (south of Toll of Birness). The other count sites show the PM peak (1600-1700) is larger than the AM peak (0700-0800) heading southbound.

Daily Profile – Heavy Goods Vehicles

3.6.126 Figure 3-56 and Figure 3-57 show the daily profile of HGV traffic (northbound and southbound respectively) recorded at each of the Transport Scotland count sites in the study area.

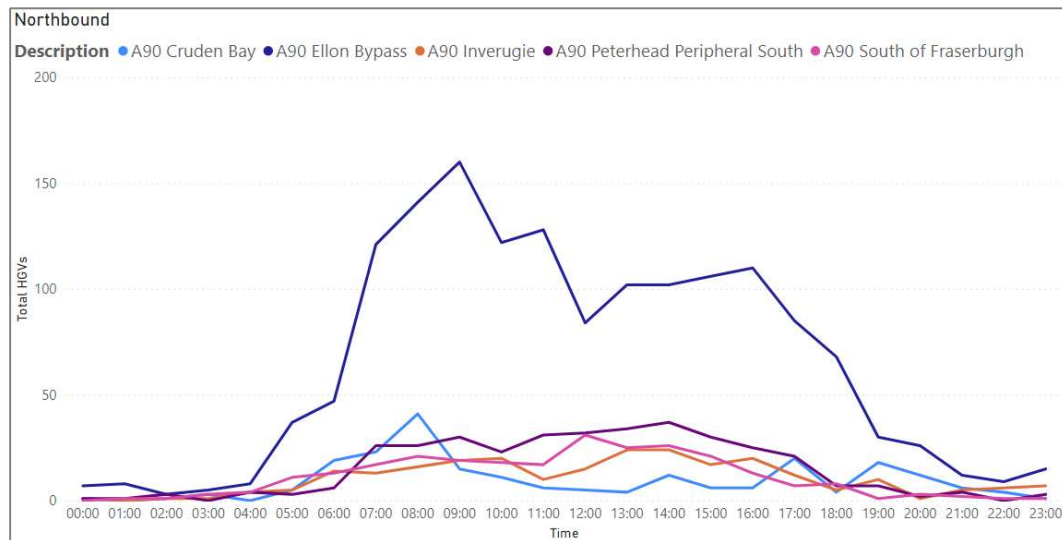


Figure 3-56: A90 Daily Profile – HGVs - Northbound, 2023

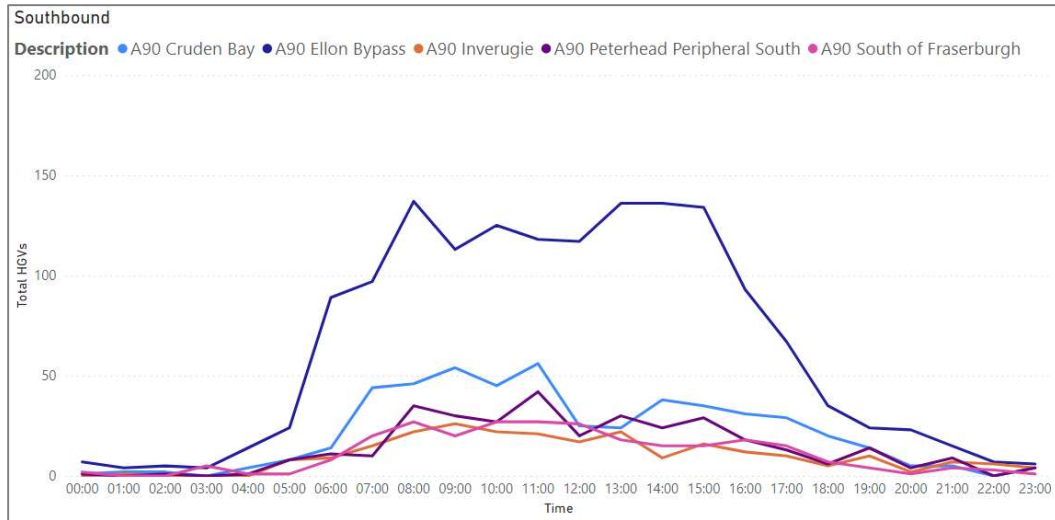


Figure 3-57: A90 Daily Profile – HGVs - Southbound, 2023

3.6.127 Northbound HGV flows are highest on the A90 Ellon Bypass between 0700 and 1600 with little flow outside of this period. On the A90 Ellon Bypass, there are higher HGV volumes during the AM peak, with volumes at 1600 around two thirds of those at 0900. The A90 Cruden Bay site exhibits AM and PM peaks (at 0800 and 1700) while flows at all other sites are more consistent across the day.

3.6.128 Southbound HGV flows show a similar pattern to the northbound flows. Again, the highest flows are on the A90 Ellon Bypass. However, there is more consistency across the day (between 0800 and 1600) with the AM and PM peaks of a similar volume. Southbound flows at all other sites are marginally higher in the morning, with flows declining into the afternoon. Total volumes are similar between northbound and southbound flows.

3.6.129 The HGV proportions at A90 Ellon Bypass are higher compared to the other count locations, in both directions. The highest HGV percentages are about 36%, between 0100 and 0500, in the southbound direction, while the northbound direction has more HGVs (85 to 120 HGVs or 25%) between 1000 and 1500.

3.6.130 HGV traffic on Cruden Bay comes second in HGV proportions after the A90 Ellon Bypass. The peak is between 0100 and 0200 with 40% HGVs in the northbound direction and 35% between 1900 and 2000 in the southbound direction.

3.6.131 The rest of the count locations present a similar pattern of HGV traffic across the day in both directions, with higher HGV percentages of around 10-25% between 0800 and 1100, following then a downward trend until 2200.

**Key Point:** Traffic volumes and HGV proportions are highest around the A90 Ellon Bypass with HGV proportions of 17% of the AADT. Hourly profiles indicate that the majority of HGV movements between 7am-5pm with constant HGV movements each hour during this period.

### Journey Times Reliability

3.6.132 In order to assess journey time reliability in the study area, INRIX journey time data (which is on license from Transport Scotland<sup>54</sup>) covering the period January - June 2023 was reviewed along the A90 (Fraserburgh-Peterhead-Ellon) and A952 (north of Cortes to south of Toll of

<sup>54</sup> <https://inrix.com/products/speed/>, with permission from Transport Scotland

Birness) corridors within the project area. Table 3-16 shows journey time reliability in minutes, comparing the 5<sup>th</sup> (fastest) and 95<sup>th</sup> (slowest) percentile travel times.

Table 3-16: Journey time variability (in minutes) along A90 / A952 within the project area

Section	Direction	Metric	Monday, Friday				Tuesday, Wednesday, Thursday				Saturday, Sunday			
			0700-0900	1100-1600	1600-1900	2000-2300	0700-0900	1100-1600	1600-1900	2000-2300	0700-0900	1100-1600	1600-1900	2000-2300
A90	Northbound	5th (fastest)	43	43	40	39	43	43	41	38	39	40	38	38
		95th (slowest)	49	49	48	47	51	49	50	47	44	44	42	43
		<b>slowest-fastest (mins)</b>	<b>5.6</b>	<b>5.8</b>	<b>7.9</b>	<b>8.6</b>	<b>7.2</b>	<b>6.2</b>	<b>8.7</b>	<b>8.9</b>	<b>5.1</b>	<b>4.1</b>	<b>4.2</b>	<b>4.8</b>
	Southbound	5th (fastest)	42	43	39	38	43	43	40	39	37	39	38	38
		95th (slowest)	49	49	48	47	53	50	47	47	43	44	43	43
		<b>slowest-fastest (mins)</b>	<b>7.1</b>	<b>6.6</b>	<b>8.4</b>	<b>8.2</b>	<b>9.8</b>	<b>6.4</b>	<b>7.2</b>	<b>8.4</b>	<b>5.7</b>	<b>5.1</b>	<b>5.2</b>	<b>4.9</b>
A952	Northbound	5th (fastest)	21	21	20	18	21	21	20	19	19	19	19	19
		95th (slowest)	24	24	23	21	25	24	23	21	21	22	22	21
		<b>slowest-fastest (mins)</b>	<b>3.5</b>	<b>2.9</b>	<b>3.7</b>	<b>2.5</b>	<b>4.0</b>	<b>2.8</b>	<b>3.5</b>	<b>2.2</b>	<b>2.4</b>	<b>2.3</b>	<b>2.6</b>	<b>2.0</b>
	Southbound	5th (fastest)	21	21	20	19	21	21	20	19	18	19	19	18
		95th (slowest)	25	24	23	21	26	25	24	21	21	22	21	20
		<b>slowest-fastest (mins)</b>	<b>3.7</b>	<b>3.1</b>	<b>3.7</b>	<b>1.9</b>	<b>4.9</b>	<b>3.4</b>	<b>3.7</b>	<b>2.0</b>	<b>3.3</b>	<b>2.4</b>	<b>2.2</b>	<b>1.8</b>

3.6.133 On average, the greatest variability between January and June of 2023 was observed during the middle of the week – on Tuesdays, Wednesdays, and Thursdays. The difference in travel time between the 5<sup>th</sup> and 95<sup>th</sup> percentile was less apparent on Mondays and Fridays, and the lowest over the weekend. These values are reflective of commuter patterns following the Covid-19 pandemic. ‘Working from home’ was common practice during the pandemic, with many still choosing to do so on Mondays and Fridays. It is therefore expected traffic congestion is worst in the middle of the week when more people are travelling to and from work. Variability is notably lower during the weekends, as can be expected without commuter traffic.

3.6.134 The slowest travel times on the A90 were similar in either direction on Mondays and Fridays, as well as over the weekend. However, in the middle of the week from Tuesday to Thursday, there was a more distinct difference in journey time depending on whether traffic was southbound or northbound. During the AM peak and over the day, average travel time was two minutes slower in the southbound direction than in the northbound direction. This aligns with people travelling into Aberdeen City for work and / or education from the study area. In contrast, northbound traffic experienced a three-minute delay during the PM peak, as commuters travelled back home. The southbound morning peak on Tuesdays, Wednesdays, and Thursdays experienced the worst traffic congestion within the study area, with a difference of ten minutes between the 5<sup>th</sup> and 95<sup>th</sup> percentile travel time.

3.6.135 Generally, weekday traffic congestion appears worst between Ellon South and Ellon North on the A90 (a section including two roundabouts), with its proximity to Aberdeen City. Journey time variability on the A952 was not as significant compared to the A90, however congestion also appears to be worst towards Aberdeen city, between Ellon North and Mintlaw. Figure 3-58 below shows the traffic profiles across the middle of the week between Ellon South and Ellon North. Where there are large differences between the 5<sup>th</sup> and 95<sup>th</sup> percentile trendlines, journey times are variable, and the route is congested. As shown, these are most prominent during the AM and PM peaks. The journey time variability on the remaining sections within the project area can be found in Appendix G

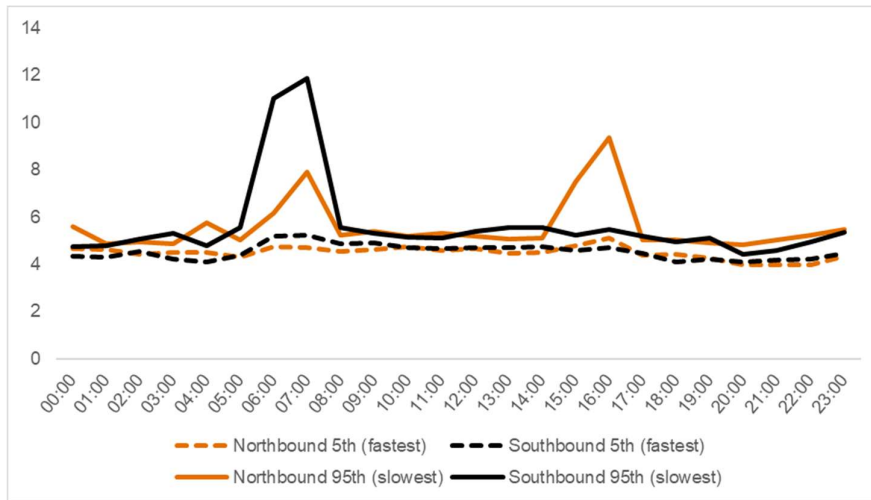


Figure 3-58: Journey Time Variability on the A90 – south Ellon to North Ellon

3.6.136 INRIX data revealed the following junctions on the A90 experiencing comparatively high traffic congestion on Tuesdays, Wednesdays, and Thursdays:

- A90 / A948 / Lintmill Brae roundabout (between Ellon North and Ellon South) in both southbound (07:00, morning peak) and northbound (16:00, evening peak) directions
- Invernettie roundabout (south of Peterhead) in the southbound direction (16:00, evening peak)

**Key Point:** Journey time variability within the study area is worst on the A90, closest to Aberdeen City. Here the network is not performing well during the peak periods. The data indicates that southbound traffic is affected more than those travelling northbound.

**Platooning**

3.6.137 Platooning is the emergence of convoys of vehicles travelling together due to the lack of opportunities to overtake, which can lead to driver frustration and hazardous overtaking manoeuvres. To help understand the nature and frequency of platoons on the A90(N) / A952, a review of Automatic Traffic Count (ATC) data collected in March 2023 has been undertaken. The key point from the assessment is provided below, with details, including limitations and assumptions, included in Appendix H

**Key Point:** Platooning was found to be more prevalent between **Peterhead and Toll of Birness** and **South of Fraserburgh (northbound)**, both in terms of the average number of platoons per hour and the proportion of traffic travelling in platoons. Based on available data, the impact of slow-moving vehicles was more pronounced at **A90 North of Toll of Birness (southbound)** contributing to almost one third (31%) of platoons with five or more vehicles and at **A90 South of Toll of Birness (northbound)** with slow moving

vehicles contributing to 29% of platoons with five or more vehicles. This is also reflected in larger speed differentials compared with free-flowing traffic.

### Road Traffic Collisions

3.6.138 Annual data on road traffic collisions is published by the Department for Transport. This data is collated from STATS19 data<sup>55</sup> and **relates only to collisions which have been reported and involve a personal injury**. The data is relational in that for each collision there is a single collision record, followed by a variable number of vehicle records and a variable number of casualty records. Each collision is classified into one of three severity ratings (fatal, serious, or slight). Table 3-17 shows the number of collisions which occurred between 2013 and 2022 on the A952 and the section of the A90(N) which falls within the study area and the proportion of these which were classified as fatal, serious, or slight. For comparison purposes, equivalent figures for single carriageway A-roads in the rest of Aberdeenshire and Scotland as a whole are also provided.

Table 3-17: Number of collisions and severity classification on the A90 / A952 and single carriageway A-roads elsewhere in Aberdeenshire and Scotland as a whole

Collision Severity	A90(N) / A952 Corridors		Rest of Aberdeenshire		Scotland	
	Collisions	Proportion	Collisions	Proportion	Collisions	Proportion
Fatal	18	8.7%	46	6.4%	713	5.7%
Serious	64	31.1%	258	35.8%	3,606	28.6%
Slight	124	60.2%	416	57.8%	8,273	65.7%
<b>Total</b>	<b>206</b>	<b>100%</b>	<b>720</b>	<b>100%</b>	<b>12,592</b>	<b>100%</b>

3.6.139 The data indicates that there is a higher proportion of fatal collisions on the A90(N) / A952 corridors than on other single carriageway A-roads in Aberdeenshire and in Scotland more generally, with 8.7% of collisions on the A90(N) / A952 classified as fatal compared to 6.9% on single carriageway A-roads in the rest of Aberdeenshire and 5.7% on single carriageway A-roads elsewhere in Scotland.

**Key Point:** A comparison of the severity of collisions on the A90(N)/A952 suggests that where collisions occur, they are more likely to be fatal than on similar roads in Aberdeenshire and Scotland.

3.6.140 Figure 3-59 shows the location of fatal and serious collisions recorded in the study area during the period 2013-2022.

<sup>55</sup> see <https://www.gov.uk/government/publications/stats19-forms-and-guidance>

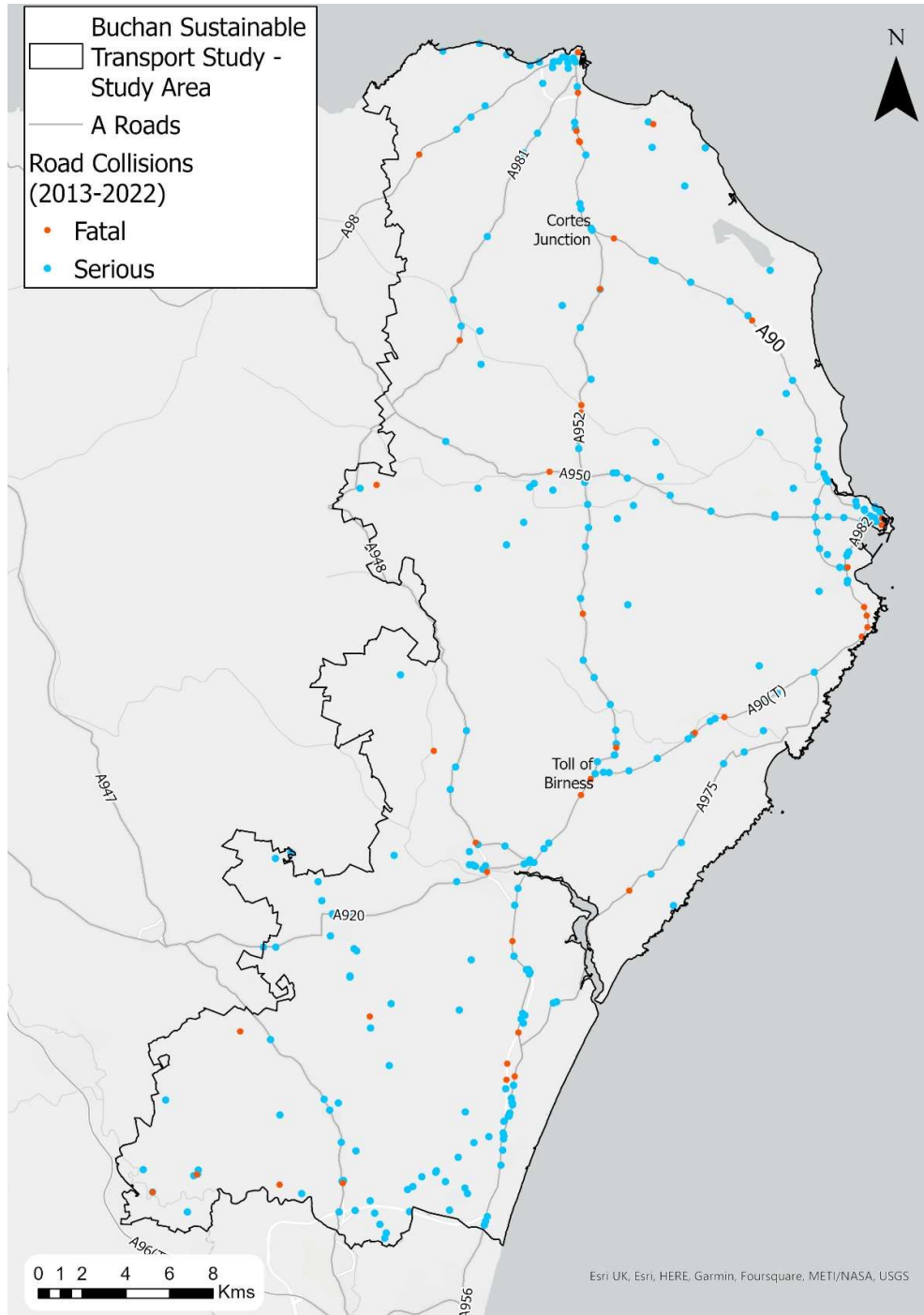


Figure 3-59: Fatal and Serious Road Traffic Collisions recorded in the study area during the period 2013- 2023

3.6.141 In the engagement undertaken to inform this appraisal, safety at both the Toll of Birness and Cortes junctions was raised as a key issue. The sections below provide a summary of the available information on the collisions at each junction during the period 2013-2022. Recognising that a junction can contribute to collisions some distance from the junction itself and in order to ensure consistency in approach, the analysis considers all the recorded collisions which occurred within a 1km radius of each junction.

Toll of Birness Junction - Collision Analysis

3.6.142 Figure 3-60 shows the collisions recorded within a 1km radius of the Toll of Birness junction between 2013 and 2022 broken down by severity and Figure 3-61 shows the location of these collisions.

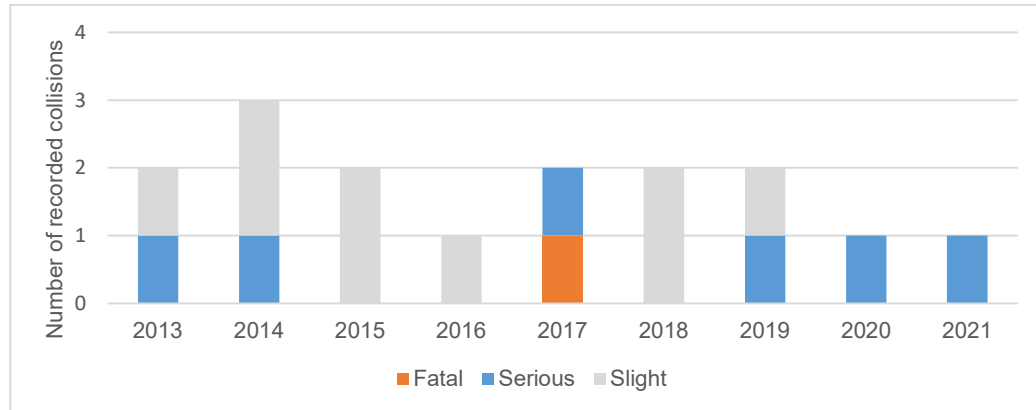


Figure 3-60: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Toll of Birness junction between 2013- 2023

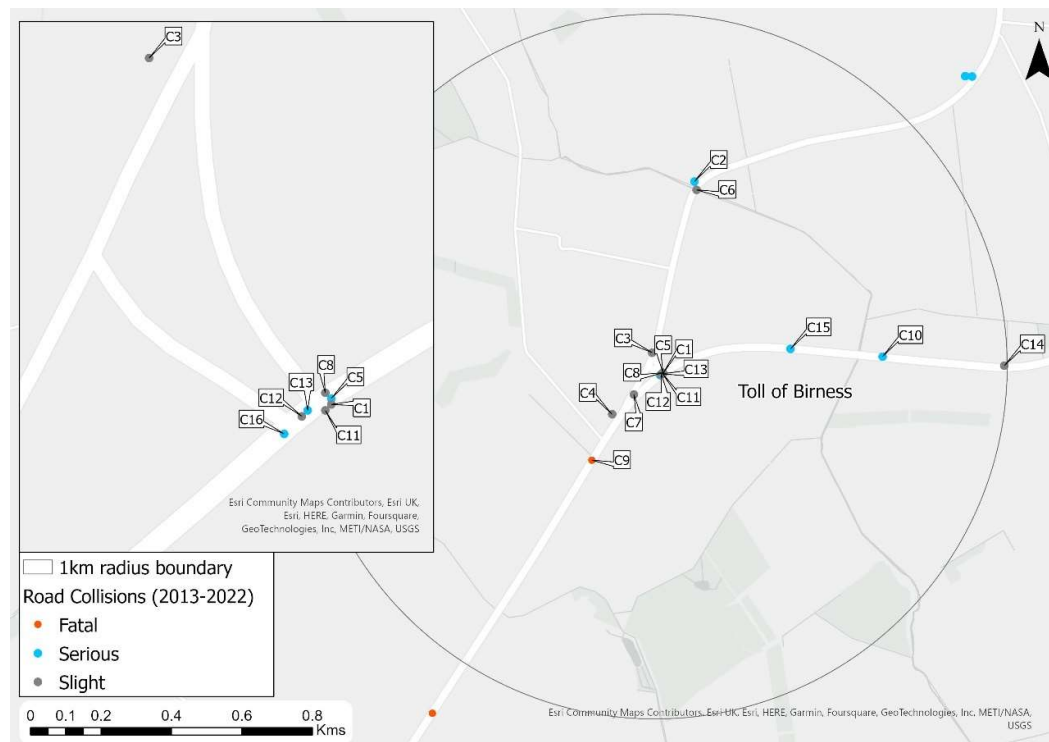


Figure 3-61: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Toll of Birness junction between 2013- 2023

3.6.143 In total, there were 16 personal injury collisions recorded during this period. As shown in the figure above, there was one fatal in 2017, six serious collisions, and nine slight collisions. A review of the information available on these collisions indicates the following:

- Eight of the collisions were recorded as being at a junction, with seven recorded as being at a T or staggered junction (C1, C3, C5, C8, C1, C13, and C16) and one recorded as

'other junction' (C12). The data suggests that all of these involved two or more vehicles where at least one vehicle was turning right, and one vehicle was going ahead. Of these, one occurred during darkness when it was raining (C13, serious 2019), one occurred during daylight when it was snowing (C1, slight, 2013), and all the others took place during daylight hours in fine weather

- The remaining eight collisions were recorded as 'not at the junction or within 20m of the junction'. Of these:
- Two (C2 and C6) occurred on the A952 approach to the junction. Both of these occurred on the left-hand bend during fine weather in daylight hours and involved one vehicle
- Three (C4 and C9) occurred on the A90 south of the junction. Both these collisions occurred during fine weather in daylight hours. C4 involved one vehicle and C9 involved two vehicles. C9 is the only fatal collision to have occurred within a 1km radius of the junction between 2013 and 2022
- C7 (slight, 2015) occurred between the A90 south of the junction and the A952 and involved a cyclist going straight ahead and a goods vehicle which was changing lanes and occurred during fine weather in daylight hours
- Three (C10, C14, and C15) occurred on the A90 north of the junction:
- C10 (serious - 2017) occurred during darkness and involved three vehicles, two of which were travelling straight ahead at the left-hand bend, and one was travelling straight ahead at the left-hand bend
- C14 (slight - 2019) occurred during darkness with fog or mist and involved one vehicle
- C15 (serious -2020) involved three vehicles and an overtaking manoeuvre. The collision occurred during fine weather in daylight hours

**Key Point:** There is a concentration of collisions at the Toll of Birness junction which involve right turning vehicles and vehicles which are travelling straight ahead. There are also collisions within the immediate vicinity of the junction, some of which occurred at curves in the road.

Cortes Junction – Collision Analysis

3.6.144 Figure 3-62 shows the collisions recorded within a 1km radius of the Cortes junction between 2013 and 2022 broken down by severity and Figure 3-63 shows the location of these collisions.

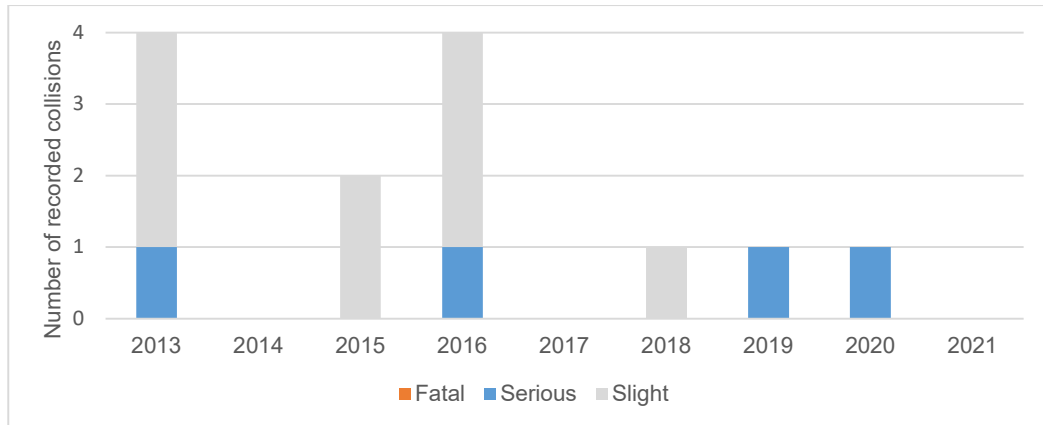


Figure 3-62: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Cortes junction between 2013- 2023



Figure 3-63: Fatal and Serious Road Traffic Collisions recorded within a 1km radius of the Cortes junction between 2013- 2023

3.6.145 In total, there were 13 collisions recorded during this period. Of these, four were serious and nine were slight; there were no fatal collisions recorded within 1km of the junction during this time period. A review of the information available on these collisions indicates the following:

- Five of the collisions (C7, C8, C10, C12, and C13) were recorded as ‘T or staggered junction’. The data suggests that all of these involved at least two vehicles, with at least one vehicle turning right and one vehicle travelling straight ahead. All of these occurred in fine weather, with three occurring in the daylight (C7, C8, C12) and two occurring in darkness (C10 and C13)
- Four of the collisions (C2, C4, C5 and C9) were recorded as ‘not at the junction or within 20m of the junction’ and three (C1, C3, and C11) were recorded as ‘other junction’. Of these:
  - Three (C2, C4, and C11) occurred within the vicinity of the properties to the immediate north west of the junction from which there is a direct access onto the A90; vehicles exiting these properties travelling north must make a right turn onto the A90
  - C5 (slight, 2015) occurred on the A952 to the south of Cortes junction. The collision involved one vehicle going straight ahead and took place during darkness
  - C9 (slight, 2016) occurred on the A90 to the east of the Cortes junction. The collision involved two vehicles and an overtaking manoeuvre and occurred during fine weather and daylight hours
  - C1 (slight, 2013) occurred near the junction between the A952 and the minor road junction to the south of the Cortes junction and involved two vehicles with one turning right and the other overtaking them

- C3 (slight, 2013) occurred near the junction between the A90 and Spillarsford Cottages, Lonmay to the east of the Cortes junction and involved one vehicle going ahead at the right-hand bend
- C6 (slight, 2015) was recorded as ‘slip road’ and involved one vehicle going ahead in daylight hours and fine weather

**Key Point:** As with the Toll of Birness junction, there are a concentration of collisions at the junction which involve right turning vehicles and vehicles which are travelling straight ahead. There are also collisions within the immediate vicinity of the junction near to other minor roads and / or curves in the road.

### Alternative Fuels and Available Infrastructure

#### Electric Vehicle Charging

3.6.146 ChargePlace Scotland is Scotland’s national EV charging network. This company is owned and developed by the Scottish Government<sup>56</sup>.

3.6.147 Aberdeenshire has in total **98** ChargePlace Scotland EV chargers<sup>57</sup>, which accounts for **4%** of the total number of ChargePlace Scotland EV chargers in Scotland. The comparison to neighbouring local authorities is shown in Table 3-18 below.

Table 3-18: EV Charger Comparison

Local Authority	Chargers per 1,000 Population
Aberdeen City	0.32
Angus	0.55
Highland	0.80
Moray	0.42
Study Area	0.24
Rest of Aberdeenshire	0.41
Aberdeenshire	0.37
Scotland	0.48

3.6.148 Of the total 98 chargers in Aberdeenshire, only 17 are located within the study area. ZapMap has been used to identify the location of the privately owned and operated chargers which make up the remainder of the EV network<sup>58</sup>. In addition to the ChargePlace Scotland owned chargers are seven privately owned EV charging devices. The location of these is illustrated in Figure 3-64 below.

3.6.149 From this **29%** of the chargers in the study area are privately owned, with the remaining **71%** being owned by ChargePlace Scotland.

<sup>56</sup> Source: [About us – Charge Place Scotland](#)

<sup>57</sup> Source: [Network Performance – Charge Place Scotland](#)

<sup>58</sup> Source: [Map of electric charging points for electric cars UK: Zapmap \(zap-map.com\)](#)

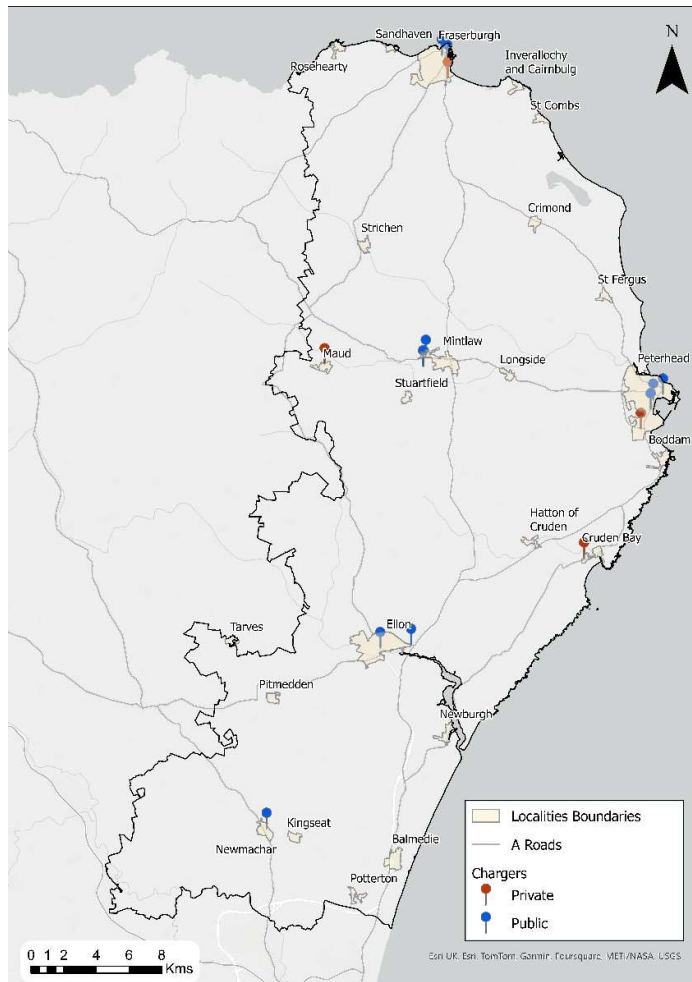


Figure 3-64: Location of EV Chargers

3.6.150 There are no EV chargers located at either Fraserburgh Harbour or Peterhead Port. However, there are six devices at Aberdeen Harbour, specifically at the NorthLink Ferry Terminal and Blaikie's Quay.

#### Hydrogen Fuel

3.6.151 Aberdeen City was the first city to introduce hydrogen powered double decker buses to their First Bus and Stagecoach services. These were initially introduced in 2015, when 10 buses were added, six to Stagecoach and the remaining four to First Bus. Alongside this, a state-of-the-art hydrogen refuelling station which produces the hydrogen on site. Following the success of the hydrogen buses, a further 15 double deckers were added in 2021 being the first hydrogen double deckers in operation in the world<sup>59</sup>.

3.6.152 The fuelling site is located at the Kittybrewster Council Depot and has three electrolyzers to produce the hydrogen from water. This hydrogen is then compressed and stored.<sup>60</sup> There is a second fuelling site located on Langdykes Road which can refuel buses, vans, and cars. It also has the capability to charge electric vehicles as there are four EV chargers.

<sup>59</sup> Source: [Aberdeen's Hydrogen Buses - Aberdeen City Council - Citizen Space](#)

<sup>60</sup> Source: [aberdeen-bus-case-study-website.pdf \(ballard.com\)](#)

- 3.6.153 Due to the continued success of the hydrogen vehicles in operation in Aberdeen, the Council has granted planning permission for a new hydrogen plant which could re-fuel 25 buses a day. This is a joint venture with BP to produce the gas which is going to be powered by a new solar farm, which will be located on the site of the former Ness landfill site on Harness Road.<sup>61</sup>
- 3.6.154 The aim is for this new hub to scale up the production of hydrogen for freight, marine and rail transport from 2024. There is also the opportunity to export products given the growing demand.<sup>62</sup>
- 3.6.155 In terms of hydrogen re-fuelling sites, there are no facilities currently available at Fraserburgh Harbour, Peterhead Port or Aberdeen Harbour.

### Car-pooling and car-sharing

- 3.6.156 Car-pooling and car sharing are forms of shared mobility. They can be defined as follows:
- **Car-pooling** - ride sharing where people with similar travel requirements share one vehicle rather than make separate trips. Can be informal or organised via an organisation such as an employer or coordinated via an online platform or app via a dedicated car-pooling organisation
  - **Car-sharing** – car clubs where people share access to a vehicle, rather than sharing a journey with someone. Customers typically access vehicles by joining a car sharing organisation that provides a fleet of vehicles in the local area. Vehicles can then be booked online or via a smartphone app. The operator provides fuel, parking and maintenance with users paying a fee each time they use the vehicle
- 3.6.157 Aberdeenshire Council fund a free online service for anyone interested in car-pooling in Aberdeenshire<sup>63</sup>. While there are car-sharing / car clubs in Aberdeen, there are no formal car clubs operating in Aberdeenshire.

## Identifying Future Year Problems

### Overview

- 3.6.158 In addition to current transport problems, it is important to consider changes that may impact the future. The identification of future year problems has focussed on the assessing the performance of the study area transport network in the future taking into account committed development and infrastructure measures and resulting forecasts of travel demand and population and employment trends.
- 3.6.159 The two principal tools used in this process were the Aberdeen Sub-Area Model (ASAM19) and the Transport Economic and Land Use Model of Scotland (TELMoS). Two model scenarios have been used:
- 2019 Baseline representing 2019 traffic and travel conditions
  - 2030 and 2045 “With” and “Without” Policy scenarios reflecting the delivery of committed development proposals and a range of transport infrastructure and policy assumptions<sup>64</sup>

<sup>61</sup> Source: [Plans for new Aberdeen hydrogen plant which can fill 25 buses a day approved - Aberdeen Live](#)

<sup>62</sup> Source: [Hydrogen: how it's decarbonising heavy duty transport \(sdi.co.uk\)](#)

<sup>63</sup> See <https://www.aberdeenshire.gov.uk/roads-and-travel/transportation/commuting/car-share-scheme/>

<sup>64</sup> The Specification of ASAM19 Forecasting Scenarios Note (SYSTRA, September 2022) describes the transport interventions, transport policy, travel demand input assumptions and parameter adjustments that inform the ASAM19 forecast year scenarios.

3.6.160 The “With” and “Without” Policy scenarios aim to represent recent Scottish transport policy and emerging changes in travel behaviours following the COVID-19 pandemic.

“Without Policy” Scenario (High Motorised Transport Scenario)

3.6.161 The “Without Policy” scenario represents a more typical transport forecast where traffic levels are set to increase over time, as population generally increases over time. This scenario includes an increase in remote working between 2019 and 2025, which tends to off-set growth in commuting trips. The without policy forecast also reflects a reduction in business trip rates (of -33%), reflecting more workers using teleconferencing as an alternative to travelling to business meetings.

“With Policy” Scenario (Low Motorised Transport Scenario)

3.6.162 The “With Policy” scenario represents the aspirational commitment by Scottish Government to reduce car kilometres nationally by 20% by 2030<sup>65</sup>. This target is modelled through a combination of:

- doubling car vehicle operating costs in 2030 to 2045
- larger reduction in business trip rates (-66%)
- higher rates of home working
- lower levels of car availability

3.6.163 It is worth noting that findings from a recent study<sup>66</sup> into reducing car kilometres and carbon emissions options for the Nestrans region found that *“there is no plausible scenario whereby the 20% car kilometre reduction target can be met by measures within the control of Nestrans and its regional partners. Action outwith the current control and funding ability of regional partners is therefore required if the car-km and carbon targets are to be achieved.”*

**ASAM19 Model Analysis Summary**

3.6.164 This section provides a summary of forecast traffic volumes and road and public transport journey times obtained from the ASAM19 model covering a selection of locations and routes across the study area.

Traffic Volume Forecasts

Annual Average Daily Traffic (AADT) volumes are presented in Table 3-19 to Table 3-22 for the 2019 Baseline and each forecast policy scenario.

---

<sup>65</sup> [View Update to the Climate Change Plan, 2018-2032](#)

<sup>66</sup> [View Report Executive Summary](#)

Table 3-19: 2030 AADT, Without Policy Scenario

Road	Location	Direction	Baseline	Forecast	Change	% Change
A90	South of Toll of Birness	NB	7007	7977	970	13.8%
		SB	7165	8093	928	12.9%
		<b>Total</b>	<b>14172</b>	<b>16070</b>	<b>1898</b>	<b>13.4%</b>
A90	East of Toll of Birness	EB	4432	5043	612	13.8%
		WB	4690	5270	579	12.4%
		<b>Total</b>	<b>9122</b>	<b>10313</b>	<b>1191</b>	<b>13.1%</b>
A90	South of Invenettie Roundabout	NB	5832	6315	484	8.3%
		SB	5969	6473	505	8.5%
		<b>Total</b>	<b>11800</b>	<b>12789</b>	<b>988</b>	<b>8.4%</b>
A90	South of A90/A952 Cortes Junction	NB	2721	2926	205	7.5%
		SB	2389	2623	234	9.8%
		<b>Total</b>	<b>5110</b>	<b>5548</b>	<b>439</b>	<b>8.6%</b>
A90	North of A90/A952 Cortes Junction	NB	4480	4883	402	9.0%
		SB	4024	4425	401	10.0%
		<b>Total</b>	<b>8505</b>	<b>9308</b>	<b>803</b>	<b>9.4%</b>
A90	Kirktown Brae	NB	3759	4064	305	8.1%
		SB	3320	3631	311	9.4%
		<b>Total</b>	<b>7079</b>	<b>7695</b>	<b>616</b>	<b>8.7%</b>
A952	North of Toll of Birness	NB	2567	2924	357	13.9%
		SB	2463	2813	350	14.2%
		<b>Total</b>	<b>5030</b>	<b>5736</b>	<b>707</b>	<b>14.0%</b>
A952	South of Mintlaw Roundabout	NB	2678	3059	381	14.2%
		SB	2594	2963	369	14.2%
		<b>Total</b>	<b>5272</b>	<b>6022</b>	<b>749</b>	<b>14.2%</b>
A952	North of Mintlaw Roundabout	NB	3262	3582	320	9.8%
		SB	3124	3442	318	10.2%
		<b>Total</b>	<b>6386</b>	<b>7023</b>	<b>637</b>	<b>10.0%</b>
A952	South of A90/A952 Junction	NB	2427	2727	300	12.4%
		SB	2300	2590	290	12.6%
		<b>Total</b>	<b>4727</b>	<b>5317</b>	<b>590</b>	<b>12.5%</b>

Table 3-20: 2030 AADT, With Policy Scenario

Road	Location	Direction	Baseline	Forecast	Change	% Change
A90	South of Toll of Birness	NB	7007	5468	-1540	-22.0%
		SB	7165	5350	-1815	-25.3%
		<b>Total</b>	<b>14172</b>	<b>10817</b>	<b>-3355</b>	<b>-23.7%</b>
A90	East of Toll of Birness	EB	4432	3537	-894	-20.2%
		WB	4690	3631	-1059	-22.6%
		<b>Total</b>	<b>9122</b>	<b>7169</b>	<b>-1954</b>	<b>-21.4%</b>
A90	South of Invenettie Roundabout	NB	5832	4906	-925	-15.9%
		SB	5969	4873	-1095	-18.4%
		<b>Total</b>	<b>11800</b>	<b>9779</b>	<b>-2021</b>	<b>-17.1%</b>
A90	South of A90/A952 Cortes Junction	NB	2721	2202	-519	-19.1%
		SB	2389	1889	-500	-20.9%
		<b>Total</b>	<b>5110</b>	<b>4091</b>	<b>-1018</b>	<b>-19.9%</b>
A90	North of A90/A952 Cortes Junction	NB	4480	3597	-883	-19.7%
		SB	4024	3071	-953	-23.7%
		<b>Total</b>	<b>8505</b>	<b>6668</b>	<b>-1837</b>	<b>-21.6%</b>
A90	Kirktown Brae	NB	3759	3038	-721	-19.2%
		SB	3320	2533	-787	-23.7%
		<b>Total</b>	<b>7079</b>	<b>5571</b>	<b>-1508</b>	<b>-21.3%</b>
A952	North of Toll of Birness	NB	2567	1908	-659	-25.7%
		SB	2463	1720	-742	-30.1%
		<b>Total</b>	<b>5030</b>	<b>3628</b>	<b>-1401</b>	<b>-27.9%</b>
A952	South of Mintlaw Roundabout	NB	2678	1994	-685	-25.6%
		SB	2594	1808	-786	-30.3%
		<b>Total</b>	<b>5272</b>	<b>3802</b>	<b>-1471</b>	<b>-27.9%</b>
A952	North of Mintlaw Roundabout	NB	3262	2569	-693	-21.2%
		SB	3124	2381	-743	-23.8%
		<b>Total</b>	<b>6386</b>	<b>4951</b>	<b>-1435</b>	<b>-22.5%</b>
A952	South of A90/A952 Junction	NB	2427	1888	-539	-22.2%
		SB	2300	1677	-623	-27.1%
		<b>Total</b>	<b>4727</b>	<b>3565</b>	<b>-1162</b>	<b>-24.6%</b>

Table 3-21: 2045 AADT, Without Policy Scenario

Road	Location	Direction	Baseline	Forecast	Change	% Change
A90	South of Toll of Birness	NB	7007	10586	3579	51.1%
		SB	7165	10817	3652	51.0%
		<b>Total</b>	<b>14172</b>	<b>21402</b>	<b>7230</b>	<b>51.0%</b>
A90	East of Toll of Birness	EB	4432	6522	2090	47.2%
		WB	4690	6988	2298	49.0%
		<b>Total</b>	<b>9122</b>	<b>13510</b>	<b>4388</b>	<b>48.1%</b>
A90	South of Invenettie Roundabout	NB	5832	7571	1740	29.8%
		SB	5969	7881	1912	32.0%
		<b>Total</b>	<b>11800</b>	<b>15452</b>	<b>3652</b>	<b>30.9%</b>
A90	South of A90/A952 Cortes Junction	NB	2721	3496	775	28.5%
		SB	2389	3206	818	34.2%
		<b>Total</b>	<b>5110</b>	<b>6703</b>	<b>1593</b>	<b>31.2%</b>
A90	North of A90/A952 Cortes Junction	NB	4480	6221	1741	38.9%
		SB	4024	5799	1774	44.1%
		<b>Total</b>	<b>8505</b>	<b>12020</b>	<b>3515</b>	<b>41.3%</b>
A90	Kirktown Brae	NB	3759	5175	1416	37.7%
		SB	3320	4820	1500	45.2%
		<b>Total</b>	<b>7079</b>	<b>9995</b>	<b>2916</b>	<b>41.2%</b>
A952	North of Toll of Birness	NB	2567	4045	1478	57.6%
		SB	2463	3852	1389	56.4%
		<b>Total</b>	<b>5030</b>	<b>7897</b>	<b>2867</b>	<b>57.0%</b>
A952	South of Mintlaw Roundabout	NB	2678	4238	1559	58.2%
		SB	2594	4047	1453	56.0%
		<b>Total</b>	<b>5272</b>	<b>8285</b>	<b>3012</b>	<b>57.1%</b>
A952	North of Mintlaw Roundabout	NB	3262	4638	1376	42.2%
		SB	3124	4504	1380	44.2%
		<b>Total</b>	<b>6386</b>	<b>9142</b>	<b>2756</b>	<b>43.1%</b>
A952	South of A90/A952 Junction	NB	2427	3773	1346	55.5%
		SB	2300	3665	1364	59.3%
		<b>Total</b>	<b>4727</b>	<b>7437</b>	<b>2710</b>	<b>57.3%</b>

Table 3-22: 2045 AADT, With Policy Scenario

Road	Location	Direction	Baseline	Forecast	Change	% Change
A90	South of Toll of Birness	NB	7007	8512	1505	21.5%
		SB	7165	8866	1701	23.7%
		<b>Total</b>	<b>14172</b>	<b>17378</b>	<b>3206</b>	<b>22.6%</b>
A90	East of Toll of Birness	EB	4432	5042	611	13.8%
		WB	4690	5195	505	10.8%
		<b>Total</b>	<b>9122</b>	<b>10237</b>	<b>1115</b>	<b>12.2%</b>
A90	South of Invenettie Roundabout	NB	5832	5660	-172	-2.9%
		SB	5969	5741	-228	-3.8%
		<b>Total</b>	<b>11800</b>	<b>11401</b>	<b>-399</b>	<b>-3.4%</b>
A90	South of A90/A952 Cortes Junction	NB	2721	2757	36	1.3%
		SB	2389	2585	197	8.2%
		<b>Total</b>	<b>5110</b>	<b>5342</b>	<b>233</b>	<b>4.6%</b>
A90	North of A90/A952 Cortes Junction	NB	4480	4992	512	11.4%
		SB	4024	4938	914	22.7%
		<b>Total</b>	<b>8505</b>	<b>9930</b>	<b>1426</b>	<b>16.8%</b>
A90	Kirktown Brae	NB	3759	4112	353	9.4%
		SB	3320	4044	723	21.8%
		<b>Total</b>	<b>7079</b>	<b>8155</b>	<b>1077</b>	<b>15.2%</b>
A952	North of Toll of Birness	NB	2567	3502	935	36.4%
		SB	2463	3680	1217	49.4%
		<b>Total</b>	<b>5030</b>	<b>7182</b>	<b>2152</b>	<b>42.8%</b>
A952	South of Mintlaw Roundabout	NB	2678	3601	923	34.4%
		SB	2594	3810	1216	46.9%
		<b>Total</b>	<b>5272</b>	<b>7411</b>	<b>2138</b>	<b>40.6%</b>
A952	North of Mintlaw Roundabout	NB	3262	3873	611	18.7%
		SB	3124	3997	873	27.9%
		<b>Total</b>	<b>6386</b>	<b>7870</b>	<b>1484</b>	<b>23.2%</b>
A952	South of A90/A952 Junction	NB	2427	3165	737	30.4%
		SB	2300	3291	991	43.1%
		<b>Total</b>	<b>4727</b>	<b>6455</b>	<b>1728</b>	<b>36.6%</b>

3.6.165 Figure 3-65 shows the combined 2-way AADT for Cars, Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) for each forecast scenario.

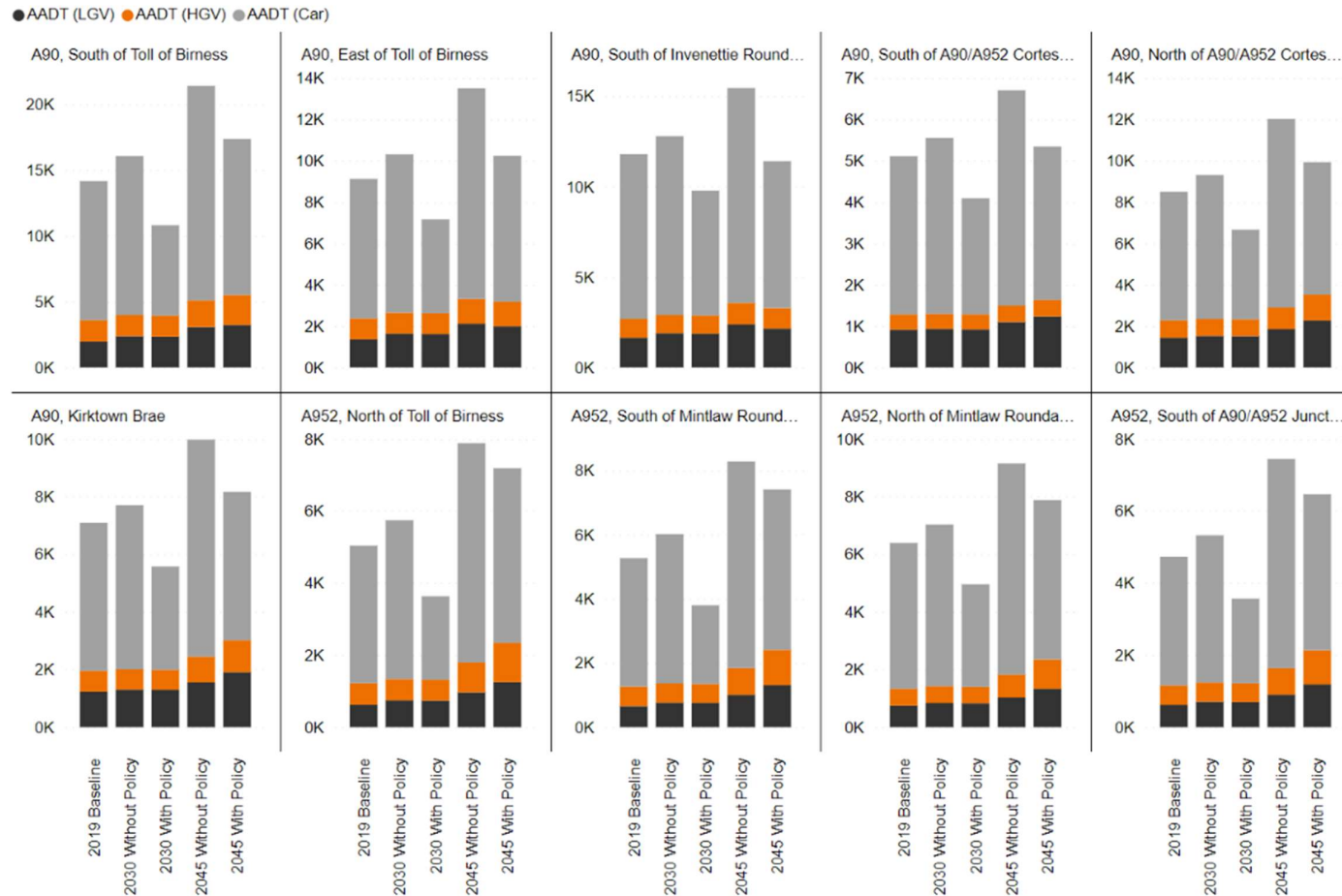


Figure 3-65: Combined 2-way AADT for Cars, LGVs and HGVs

**Key Point:** Traffic volumes are forecast to increase significantly in the “Without Policy” scenario on the A90 around Toll of Birness and Cortes Junction, and on the A952 between Toll of Birness and Cortes Junction, with up to 55% growth by 2045. Despite traffic volumes forecast to decrease in the “With Policy” scenario by 2030, traffic volumes are forecast to increase by 2045, most notably on the A952 north of Toll of Birness and south of Mintlaw roundabout, with up to 40% growth, which, in part, is driven by a forecast increase in goods vehicle traffic.

Road Journey Time Forecasts

3.6.166 The 2019 Baseline and 2030 and 2045 forecast road journey times for the average weekday AM Peak hour, Inter-Peak hour and PM Peak hour for selected routes under each policy scenario are presented in Table 3-23 to Table 3-26. Changes in journey times also shown.

Table 3-23: 2019 Baseline and 2030 Road Journey Times (in minutes), Without Policy

Route Group	Period Name RouteName	AM				IP				PM			
		Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change
Route 1	1a: Fraserburgh to Cortes Junction via A90	4.65	4.67	0.02	0.4%	4.63	4.65	0.02	0.4%	4.67	4.67	0.00	0.0%
	1b: Cortes Junction to North Road Peterhead via A90	12.05	12.05	0.00	0.0%	11.98	12.00	0.02	0.1%	12.05	12.07	0.02	0.1%
	1c: North Road Peterhead to A982 Peterhead via A90	4.42	4.42	0.00	0.0%	4.40	4.40	0.00	0.0%	4.42	4.43	0.02	0.4%
	1d: A982 Peterhead to Toll of Birness via A90	12.85	12.95	0.10	0.8%	12.57	12.70	0.13	1.1%	12.90	12.98	0.08	0.6%
	1e: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	6.17	0.18	3.1%	5.33	5.47	0.13	2.5%	5.45	5.53	0.08	1.5%
	<b>Total</b>	<b>39.95</b>	<b>40.25</b>	<b>0.30</b>	<b>0.8%</b>	<b>38.92</b>	<b>39.22</b>	<b>0.30</b>	<b>0.8%</b>	<b>39.48</b>	<b>39.68</b>	<b>0.20</b>	<b>0.5%</b>
Route 2	2a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.50	0.08	1.5%	5.27	5.38	0.12	2.2%	6.23	6.48	0.25	4.0%
	2b: Toll of Birness to A982 Peterhead via A90	12.82	12.88	0.07	0.5%	12.53	12.60	0.07	0.5%	13.13	13.27	0.13	1.0%
	2c: A982 Peterhead to North Road Peterhead via A90	4.17	4.18	0.02	0.4%	4.13	4.17	0.03	0.8%	4.20	4.23	0.03	0.8%
	2d: North Road Peterhead to Cortes Junction via A90	12.07	12.07	0.00	0.0%	12.02	12.05	0.03	0.3%	12.13	12.13	0.00	0.0%
	2e: Cortes Junction to Fraserburgh via A90	4.77	4.78	0.02	0.3%	4.70	4.72	0.02	0.4%	4.75	4.82	0.07	1.4%
	<b>Total</b>	<b>39.23</b>	<b>39.42</b>	<b>0.18</b>	<b>0.5%</b>	<b>38.65</b>	<b>38.92</b>	<b>0.27</b>	<b>0.7%</b>	<b>40.45</b>	<b>40.93</b>	<b>0.48</b>	<b>1.2%</b>
Route 3	3a: Fraserburgh to Cortes Junction via A90	4.65	4.67	0.02	0.4%	4.63	4.65	0.02	0.4%	4.67	4.67	0.00	0.0%
	3b: Cortes Junction to Mintlaw via A952	8.85	8.85	0.00	0.0%	8.68	8.75	0.07	0.8%	8.80	8.83	0.03	0.4%
	3c: Mintlaw to Toll of Birness via A952	11.00	11.08	0.08	0.8%	10.77	10.82	0.05	0.5%	10.83	10.90	0.07	0.6%
	3d: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	6.17	0.18	3.1%	5.33	5.47	0.13	2.5%	5.45	5.53	0.08	1.5%
	<b>Total</b>	<b>30.48</b>	<b>30.77</b>	<b>0.28</b>	<b>0.9%</b>	<b>29.42</b>	<b>29.68</b>	<b>0.27</b>	<b>0.9%</b>	<b>29.75</b>	<b>29.93</b>	<b>0.18</b>	<b>0.6%</b>
Route 4	4a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.50	0.08	1.5%	5.27	5.38	0.12	2.2%	6.23	6.48	0.25	4.0%
	4b: Toll of Birness to Mintlaw via A952	10.67	10.68	0.02	0.2%	10.65	10.67	0.02	0.2%	10.82	10.90	0.08	0.8%
	4c: Mintlaw to Cortes Junction via A952	8.90	8.92	0.02	0.2%	8.75	8.82	0.07	0.8%	8.92	8.97	0.05	0.6%
	4e: Cortes Junction to Fraserburgh via A90	4.77	4.78	0.02	0.3%	4.70	4.72	0.02	0.4%	4.75	4.82	0.07	1.4%
	<b>Total</b>	<b>29.75</b>	<b>29.88</b>	<b>0.13</b>	<b>0.4%</b>	<b>29.37</b>	<b>29.58</b>	<b>0.22</b>	<b>0.7%</b>	<b>30.72</b>	<b>31.17</b>	<b>0.45</b>	<b>1.5%</b>
Route 5	5: Fraserburgh to Ellon via New Deer	39.75	39.70	-0.05	-0.1%	39.43	39.38	-0.05	-0.1%	40.27	39.78	-0.48	-1.2%
	<b>Total</b>	<b>39.75</b>	<b>39.70</b>	<b>-0.05</b>	<b>-0.1%</b>	<b>39.43</b>	<b>39.38</b>	<b>-0.05</b>	<b>-0.1%</b>	<b>40.27</b>	<b>39.78</b>	<b>-0.48</b>	<b>-1.2%</b>
Route 6	6: Ellon to Fraserburgh via New Deer	39.87	39.82	-0.05	-0.1%	39.58	39.57	-0.02	-0.0%	40.07	40.02	-0.05	-0.1%
	<b>Total</b>	<b>39.87</b>	<b>39.82</b>	<b>-0.05</b>	<b>-0.1%</b>	<b>39.58</b>	<b>39.57</b>	<b>-0.02</b>	<b>-0.0%</b>	<b>40.07</b>	<b>40.02</b>	<b>-0.05</b>	<b>-0.1%</b>

Table 3-24: 2019 Baseline and 2030 Road Journey Times (in minutes), With Policy

Route Group	Period Name RouteName	AM				IP				PM			
		Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change
Route 1	1a: Fraserburgh to Cortes Junction via A90	4.65	4.62	-0.03	-0.7%	4.63	4.60	-0.03	-0.7%	4.67	4.65	-0.02	-0.4%
	1b: Cortes Junction to North Road Peterhead via A90	12.05	12.00	-0.05	-0.4%	11.98	11.93	-0.05	-0.4%	12.05	11.98	-0.07	-0.6%
	1c: North Road Peterhead to A982 Peterhead via A90	4.42	4.42	0.00	0.0%	4.40	4.37	-0.03	-0.8%	4.42	4.40	-0.02	-0.4%
	1d: A982 Peterhead to Toll of Birness via A90	12.85	12.55	-0.30	-2.3%	12.57	12.52	-0.05	-0.4%	12.90	12.58	-0.32	-2.5%
	1e: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	5.55	-0.43	-7.2%	5.33	5.18	-0.15	-2.8%	5.45	5.23	-0.22	-4.0%
	<b>Total</b>	<b>39.95</b>	<b>39.13</b>	<b>-0.82</b>	<b>-2.0%</b>	<b>38.92</b>	<b>38.60</b>	<b>-0.32</b>	<b>-0.8%</b>	<b>39.48</b>	<b>38.85</b>	<b>-0.63</b>	<b>-1.6%</b>
Route 2	2a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.27	-0.15	-2.8%	5.27	5.17	-0.10	-1.9%	6.23	5.68	-0.55	-8.8%
	2b: Toll of Birness to A982 Peterhead via A90	12.82	12.60	-0.22	-1.7%	12.53	12.52	-0.02	-0.1%	13.13	12.75	-0.38	-2.9%
	2c: A982 Peterhead to North Road Peterhead via A90	4.17	4.17	0.00	0.0%	4.13	4.13	0.00	0.0%	4.20	4.20	0.00	0.0%
	2d: North Road Peterhead to Cortes Junction via A90	12.07	12.03	-0.03	-0.3%	12.02	11.93	-0.08	-0.7%	12.13	12.05	-0.08	-0.7%
	2e: Cortes Junction to Fraserburgh via A90	4.77	4.72	-0.05	-1.0%	4.70	4.68	-0.02	-0.4%	4.75	4.72	-0.03	-0.7%
	<b>Total</b>	<b>39.23</b>	<b>38.78</b>	<b>-0.45</b>	<b>-1.1%</b>	<b>38.65</b>	<b>38.43</b>	<b>-0.22</b>	<b>-0.6%</b>	<b>40.45</b>	<b>39.40</b>	<b>-1.05</b>	<b>-2.6%</b>
Route 3	3a: Fraserburgh to Cortes Junction via A90	4.65	4.62	-0.03	-0.7%	4.63	4.60	-0.03	-0.7%	4.67	4.65	-0.02	-0.4%
	3b: Cortes Junction to Mintlaw via A952	8.85	8.68	-0.17	-1.9%	8.68	8.67	-0.02	-0.2%	8.80	8.68	-0.12	-1.3%
	3c: Mintlaw to Toll of Birness via A952	11.00	10.80	-0.20	-1.8%	10.77	10.73	-0.03	-0.3%	10.83	10.77	-0.07	-0.6%
	3d: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	5.55	-0.43	-7.2%	5.33	5.18	-0.15	-2.8%	5.45	5.23	-0.22	-4.0%
	<b>Total</b>	<b>30.48</b>	<b>29.65</b>	<b>-0.83</b>	<b>-2.7%</b>	<b>29.42</b>	<b>29.18</b>	<b>-0.23</b>	<b>-0.8%</b>	<b>29.75</b>	<b>29.33</b>	<b>-0.42</b>	<b>-1.4%</b>
Route 4	4a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.27	-0.15	-2.8%	5.27	5.17	-0.10	-1.9%	6.23	5.68	-0.55	-8.8%
	4b: Toll of Birness to Mintlaw via A952	10.67	10.65	-0.02	-0.2%	10.65	10.63	-0.02	-0.2%	10.82	10.72	-0.10	-0.9%
	4c: Mintlaw to Cortes Junction via A952	8.90	8.87	-0.03	-0.4%	8.75	8.73	-0.02	-0.2%	8.92	8.92	0.00	0.0%
	4e: Cortes Junction to Fraserburgh via A90	4.77	4.72	-0.05	-1.0%	4.70	4.68	-0.02	-0.4%	4.75	4.72	-0.03	-0.7%
	<b>Total</b>	<b>29.75</b>	<b>29.50</b>	<b>-0.25</b>	<b>-0.8%</b>	<b>29.37</b>	<b>29.22</b>	<b>-0.15</b>	<b>-0.5%</b>	<b>30.72</b>	<b>30.03</b>	<b>-0.68</b>	<b>-2.2%</b>
Route 5	5: Fraserburgh to Ellon via New Deer	39.75	39.55	-0.20	-0.5%	39.43	39.30	-0.13	-0.3%	40.27	39.70	-0.57	-1.4%
	<b>Total</b>	<b>39.75</b>	<b>39.55</b>	<b>-0.20</b>	<b>-0.5%</b>	<b>39.43</b>	<b>39.30</b>	<b>-0.13</b>	<b>-0.3%</b>	<b>40.27</b>	<b>39.70</b>	<b>-0.57</b>	<b>-1.4%</b>
Route 6	6: Ellon to Fraserburgh via New Deer	39.87	39.70	-0.17	-0.4%	39.58	39.50	-0.08	-0.2%	40.07	39.78	-0.28	-0.7%
	<b>Total</b>	<b>39.87</b>	<b>39.70</b>	<b>-0.17</b>	<b>-0.4%</b>	<b>39.58</b>	<b>39.50</b>	<b>-0.08</b>	<b>-0.2%</b>	<b>40.07</b>	<b>39.78</b>	<b>-0.28</b>	<b>-0.7%</b>

Table 3-25: 2019 Baseline and 2045 Road Journey Times (in minutes), Without Policy

Route Group	Period Name RouteName	AM				IP				PM			
		Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change
Route 1	1a: Fraserburgh to Cortes Junction via A90	4.65	4.68	0.03	0.7%	4.63	4.68	0.05	1.1%	4.67	4.82	0.15	3.2%
	1b: Cortes Junction to North Road Peterhead via A90	12.05	12.08	0.03	0.3%	11.98	12.05	0.07	0.6%	12.05	12.12	0.07	0.6%
	1c: North Road Peterhead to A982 Peterhead via A90	4.42	4.52	0.10	2.3%	4.40	4.42	0.02	0.4%	4.42	4.47	0.05	1.1%
	1d: A982 Peterhead to Toll of Birness via A90	12.85	13.62	0.77	6.0%	12.57	13.12	0.55	4.4%	12.90	13.30	0.40	3.1%
	1e: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	6.78	0.80	13.4%	5.33	5.95	0.62	11.6%	5.45	5.95	0.50	9.2%
	<b>Total</b>	<b>39.95</b>	<b>41.68</b>	<b>1.73</b>	<b>4.3%</b>	<b>38.92</b>	<b>40.22</b>	<b>1.30</b>	<b>3.3%</b>	<b>39.48</b>	<b>40.65</b>	<b>1.17</b>	<b>3.0%</b>
Route 2	2a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.82	0.40	7.4%	5.27	5.82	0.55	10.4%	6.23	7.27	1.03	16.6%
	2b: Toll of Birness to A982 Peterhead via A90	12.82	13.22	0.40	3.1%	12.53	12.92	0.38	3.1%	13.13	13.77	0.63	4.8%
	2c: A982 Peterhead to North Road Peterhead via A90	4.17	4.23	0.07	1.6%	4.13	4.20	0.07	1.6%	4.20	4.30	0.10	2.4%
	2d: North Road Peterhead to Cortes Junction via A90	12.07	12.08	0.02	0.1%	12.02	12.05	0.03	0.3%	12.13	12.20	0.07	0.5%
	2e: Cortes Junction to Fraserburgh via A90	4.77	4.97	0.20	4.2%	4.70	4.73	0.03	0.7%	4.75	4.97	0.22	4.6%
	<b>Total</b>	<b>39.23</b>	<b>40.32</b>	<b>1.08</b>	<b>2.8%</b>	<b>38.65</b>	<b>39.72</b>	<b>1.07</b>	<b>2.8%</b>	<b>40.45</b>	<b>42.50</b>	<b>2.05</b>	<b>5.1%</b>
Route 3	3a: Fraserburgh to Cortes Junction via A90	4.65	4.68	0.03	0.7%	4.63	4.68	0.05	1.1%	4.67	4.82	0.15	3.2%
	3b: Cortes Junction to Mintlaw via A952	8.85	8.85	0.00	0.0%	8.88	8.85	0.17	1.9%	8.80	8.85	0.05	0.6%
	3c: Mintlaw to Toll of Birness via A952	11.00	14.57	3.57	32.4%	10.77	11.12	0.35	3.3%	10.83	11.47	0.63	5.8%
	3d: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	6.78	0.80	13.4%	5.33	5.95	0.62	11.6%	5.45	5.95	0.50	9.2%
		<b>Total</b>	<b>30.48</b>	<b>34.88</b>	<b>4.40</b>	<b>14.4%</b>	<b>29.42</b>	<b>30.60</b>	<b>1.18</b>	<b>4.0%</b>	<b>29.75</b>	<b>31.08</b>	<b>1.33</b>
Route 4	4a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.82	0.40	7.4%	5.27	5.82	0.55	10.4%	6.23	7.27	1.03	16.6%
	4b: Toll of Birness to Mintlaw via A952	10.67	10.75	0.08	0.8%	10.65	10.75	0.10	0.9%	10.82	11.12	0.30	2.8%
	4c: Mintlaw to Cortes Junction via A952	8.90	8.92	0.02	0.2%	8.75	8.92	0.17	1.9%	8.92	9.08	0.17	1.9%
	4e: Cortes Junction to Fraserburgh via A90	4.77	4.97	0.20	4.2%	4.70	4.73	0.03	0.7%	4.75	4.97	0.22	4.6%
		<b>Total</b>	<b>29.75</b>	<b>30.45</b>	<b>0.70</b>	<b>2.4%</b>	<b>29.37</b>	<b>30.22</b>	<b>0.85</b>	<b>2.9%</b>	<b>30.72</b>	<b>32.43</b>	<b>1.72</b>
Route 5	5: Fraserburgh to Ellon via New Deer	39.75	40.12	0.37	0.9%	39.43	39.52	0.08	0.2%	40.27	40.17	-0.10	-0.2%
	<b>Total</b>	<b>39.75</b>	<b>40.12</b>	<b>0.37</b>	<b>0.9%</b>	<b>39.43</b>	<b>39.52</b>	<b>0.08</b>	<b>0.2%</b>	<b>40.27</b>	<b>40.17</b>	<b>-0.10</b>	<b>-0.2%</b>
Route 6	6: Ellon to Fraserburgh via New Deer	39.87	39.90	0.03	0.1%	39.58	39.67	0.08	0.2%	40.07	40.43	0.37	0.9%
	<b>Total</b>	<b>39.87</b>	<b>39.90</b>	<b>0.03</b>	<b>0.1%</b>	<b>39.58</b>	<b>39.67</b>	<b>0.08</b>	<b>0.2%</b>	<b>40.07</b>	<b>40.43</b>	<b>0.37</b>	<b>0.9%</b>

Table 3-26: 2019 Baseline and 2045 Road Journey Times (in minutes), With Policy

Route Group	Period Name RouteName	AM				IP				PM			
		Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change	Baseline	Forecast	Change	% Change
Route 1	1a: Fraserburgh to Cortes Junction via A90	4.65	4.67	0.02	0.4%	4.63	4.67	0.03	0.7%	4.67	4.67	0.00	0.0%
	1b: Cortes Junction to North Road Peterhead via A90	12.05	12.03	-0.02	-0.1%	11.98	11.97	-0.02	-0.1%	12.05	12.05	0.00	0.0%
	1c: North Road Peterhead to A982 Peterhead via A90	4.42	4.42	0.00	0.0%	4.40	4.40	0.00	0.0%	4.42	4.42	0.00	0.0%
	1d: A982 Peterhead to Toll of Birness via A90	12.85	12.88	0.03	0.3%	12.57	12.65	0.08	0.7%	12.90	12.88	-0.02	-0.1%
	1e: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	6.27	0.28	4.7%	5.33	5.62	0.28	5.3%	5.45	5.67	0.22	4.0%
	<b>Total</b>	<b>39.95</b>	<b>40.27</b>	<b>0.32</b>	<b>0.8%</b>	<b>38.92</b>	<b>39.30</b>	<b>0.38</b>	<b>1.0%</b>	<b>39.48</b>	<b>39.68</b>	<b>0.20</b>	<b>0.5%</b>
Route 2	2a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.58	0.17	3.1%	5.27	5.52	0.25	4.7%	6.23	6.57	0.33	5.3%
	2b: Toll of Birness to A982 Peterhead via A90	12.82	12.80	-0.02	-0.1%	12.53	12.58	0.05	0.4%	13.13	13.12	-0.02	-0.1%
	2c: A982 Peterhead to North Road Peterhead via A90	4.17	4.17	0.00	0.0%	4.13	4.15	0.02	0.4%	4.20	4.20	0.00	0.0%
	2d: North Road Peterhead to Cortes Junction via A90	12.07	12.07	0.00	0.0%	12.02	11.98	-0.03	-0.3%	12.13	12.07	-0.07	-0.5%
	2e: Cortes Junction to Fraserburgh via A90	4.77	4.82	0.05	1.0%	4.70	4.72	0.02	0.4%	4.75	4.77	0.02	0.4%
	<b>Total</b>	<b>39.23</b>	<b>39.43</b>	<b>0.20</b>	<b>0.5%</b>	<b>38.65</b>	<b>38.95</b>	<b>0.30</b>	<b>0.8%</b>	<b>40.45</b>	<b>40.72</b>	<b>0.27</b>	<b>0.7%</b>
Route 3	3a: Fraserburgh to Cortes Junction via A90	4.65	4.67	0.02	0.4%	4.63	4.67	0.03	0.7%	4.67	4.67	0.00	0.0%
	3b: Cortes Junction to Mintlaw via A952	8.85	8.85	0.00	0.0%	8.88	8.85	0.17	1.9%	8.80	8.85	0.05	0.6%
	3c: Mintlaw to Toll of Birness via A952	11.00	11.35	0.35	3.2%	10.77	10.93	0.17	1.5%	10.83	10.98	0.15	1.4%
	3d: Toll of Birness to Ellon B9005 Roundabout via A90	5.98	6.27	0.28	4.7%	5.33	5.62	0.28	5.3%	5.45	5.67	0.22	4.0%
		<b>Total</b>	<b>30.48</b>	<b>31.13</b>	<b>0.65</b>	<b>2.1%</b>	<b>29.42</b>	<b>30.07</b>	<b>0.65</b>	<b>2.2%</b>	<b>29.75</b>	<b>30.17</b>	<b>0.42</b>
Route 4	4a: Ellon B9005 Roundabout to Toll of Birness via A90	5.42	5.58	0.17	3.1%	5.27	5.52	0.25	4.7%	6.23	6.57	0.33	5.3%
	4b: Toll of Birness to Mintlaw via A952	10.67	10.72	0.05	0.5%	10.65	10.72	0.07	0.6%	10.82	10.97	0.15	1.4%
	4c: Mintlaw to Cortes Junction via A952	8.90	8.92	0.02	0.2%	8.75	8.92	0.17	1.9%	8.92	9.00	0.08	0.9%
	4e: Cortes Junction to Fraserburgh via A90	4.77	4.82	0.05	1.0%	4.70	4.72	0.02	0.4%	4.75	4.77	0.02	0.4%
		<b>Total</b>	<b>29.75</b>	<b>30.03</b>	<b>0.28</b>	<b>1.0%</b>	<b>29.37</b>	<b>29.87</b>	<b>0.50</b>	<b>1.7%</b>	<b>30.72</b>	<b>31.30</b>	<b>0.58</b>
Route 5	5: Fraserburgh to Ellon via New Deer	39.75	39.70	-0.05	-0.1%	39.43	39.38	-0.05	-0.1%	40.27	39.77	-0.50	-1.2%
	<b>Total</b>	<b>39.75</b>	<b>39.70</b>	<b>-0.05</b>	<b>-0.1%</b>	<b>39.43</b>	<b>39.38</b>	<b>-0.05</b>	<b>-0.1%</b>	<b>40.27</b>	<b>39.77</b>	<b>-0.50</b>	<b>-1.2%</b>
Route 6	6: Ellon to Fraserburgh via New Deer	39.87	39.73	-0.13	-0.3%	39.58	39.55	-0.03	-0.1%	40.07	40.03	-0.03	-0.1%
	<b>Total</b>	<b>39.87</b>	<b>39.73</b>	<b>-0.13</b>	<b>-0.3%</b>	<b>39.58</b>	<b>39.55</b>	<b>-0.03</b>	<b>-0.1%</b>	<b>40.07</b>	<b>40.03</b>	<b>-0.03</b>	<b>-0.1%</b>

**Key Point:** The largest increase in road journey times of four and half minutes is forecast to occur on the A952 southbound between Mintlaw and Toll of Birness in the AM Peak hour under the 2045 "Without Policy" scenario. Journey times on all other routes under each policy scenario show no real material change, in most cases with changes less than one minute.

Public Transport Journey Time Forecasts

3.6.167 The 2019 Baseline and 2030 and 2045 forecast public transport (PT) journey times between selected origins and destinations for the average weekday AM Peak hour under each policy scenario are presented in Table 3-27 to Table 3-30. Changes in journey times also shown.

Initial Appraisal: Case for Change Report  
Buchan Sustainable Transport Study

Table 3-27: AM Peak Hour, 2019 Baseline and 2030 PT Journey Times (in minutes), Without Policy

2019 Baseline					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	92	66	62
Peterhead	68		78	45	101
Fraserburgh	89	80		56	120
Mintlaw	60	50	58		91
Aberdeen	59	111	125	98	

2030 Without Policy					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	92	66	62
Peterhead	68		78	45	101
Fraserburgh	90	80		56	120
Mintlaw	60	50	58		91
Aberdeen	58	110	124	97	

Change in PT Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		0	0	0	-1
Peterhead	0		0	0	0
Fraserburgh	0	0		0	0
Mintlaw	0	0	0		0
Aberdeen	-1	0	-1	-1	

% Change in Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		0%	0%	0%	-1%
Peterhead	0%		0%	0%	-0%
Fraserburgh	0%	0%		0%	-0%
Mintlaw	0%	0%	-0%		-0%
Aberdeen	-1%	-0%	-1%	-1%	

Table 3-28: AM Peak Hour, 2019 Baseline and 2030 PT Journey Times (in minutes), With Policy

2019 Baseline					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	92	66	62
Peterhead	68		78	45	101
Fraserburgh	89	80		56	120
Mintlaw	60	50	58		91
Aberdeen	59	111	125	98	

2030 With Policy					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	92	65	61
Peterhead	67		78	45	99
Fraserburgh	89	80		56	118
Mintlaw	60	50	58		89
Aberdeen	58	109	123	97	

Change in PT Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		0	0	0	-2
Peterhead	-1		0	0	-2
Fraserburgh	-1	0		0	-2
Mintlaw	-1	0	0		-2
Aberdeen	-1	-1	-1	-1	

% Change in Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		-1%	-0%	-0%	-3%
Peterhead	-1%		-0%	-0%	-2%
Fraserburgh	-1%	-0%		-0%	-2%
Mintlaw	-1%	-0%	-0%		-3%
Aberdeen	-2%	-1%	-1%	-1%	

Table 3-29: AM Peak Hour, 2019 Baseline and 2045 PT Journey Times (in minutes), Without Policy

2019 Baseline					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	92	66	62
Peterhead	68		78	45	101
Fraserburgh	89	80		56	120
Mintlaw	60	50	58		91
Aberdeen	59	111	125	98	

2045 Without Policy					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		79	93	66	63
Peterhead	69		78	45	103
Fraserburgh	94	80		56	125
Mintlaw	64	50	59		96
Aberdeen	58	111	125	98	

Change in PT Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		1	1	1	1
Peterhead	1		0	0	2
Fraserburgh	4	0		0	5
Mintlaw	4	0	0		5
Aberdeen	0	0	0	0	

% Change in Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		1%	1%	1%	1%
Peterhead	2%		0%	0%	2%
Fraserburgh	5%	0%		0%	5%
Mintlaw	7%	0%	0%		6%
Aberdeen	-1%	0%	0%	0%	

Table 3-30: AM Peak Hour, 2019 Baseline and 2045 PT Journey Times (in minutes), With Policy

2019 Baseline					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	92	66	62
Peterhead	68		78	45	101
Fraserburgh	89	80		56	120
Mintlaw	60	50	58		91
Aberdeen	59	111	125	98	

2045 With Policy					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		78	93	66	62
Peterhead	68		78	45	101
Fraserburgh	90	80		56	120
Mintlaw	61	50	58		91
Aberdeen	58	110	124	97	

Change in PT Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		0	0	0	-1
Peterhead	0		0	0	0
Fraserburgh	1	0		0	0
Mintlaw	1	0	0		0
Aberdeen	-1	-1	-1	-1	

% Change in Time					
Zone Name	Ellon	Peterhead	Fraserburgh	Mintlaw	Aberdeen
Ellon		0%	0%	0%	-1%
Peterhead	0%		-0%	-0%	-0%
Fraserburgh	1%	-0%		0%	0%
Mintlaw	1%	-0%	-0%		0%
Aberdeen	-1%	-1%	-1%	-1%	

**Key Point:** Changes in AM Peak hour public transport journey times are relatively small between the 2019 Baseline and the 2030 “With” and “Without” Policy scenarios, decreasing by one to two minutes. Similarly, changes in public transport journey times by 2045 under the “With Policy” scenario are also relatively small (less than one minute). However, in the 2045 “Without Policy” scenario, public transport journey times are forecast to increase by up to five minutes between Fraserburgh/Mintlaw, Ellon and Aberdeen in the AM Peak hour, which is reflective of traffic volumes on the A952 corridor southbound.

## 4 Stakeholder and Public Engagement

### 4.1 Overview

- 4.1.1 This chapter provides a summary of the stakeholder and public engagement undertaken to inform the study. The engagement consisted of the following elements:
- Elected Representatives Seminar
  - Group and one-to-one stakeholder meetings
  - Resident and Business surveys
  - Stakeholder Drop-in Session
- 4.1.2 As noted in Chapter 1, given the significant overlap between this study and the A90(N) / A952 study, the engagement activities were delivered jointly and / or outputs were shared across the two studies.
- 4.1.3 Further information on the approach and the key findings from the engagement activities is provided below.

### 4.2 Elected Representatives Seminar

- 4.2.1 A joint presentation on the A90(N) / A952 study and the BSTS study to elected members was held on 11<sup>th</sup> December 2023. The presentation provided a background to the studies and the emerging findings from the data analysis and engagement undertaken, and input from the Elected Members was welcomed. One to one meetings were undertaken for those unable to attend.
- 4.2.2 A range of comments were provided, including:
- Long journey times from the study area to Aberdeen by public transport
  - A high incidence of collisions (and other incidents) on the network, the resultant delays (in part due to the limited road network in the study area) and the consequential impact of these on industry
  - The need to consider the impact of major developments in the region, including the future investment plans at Peterhead Port and Fraserburgh Harbour as well as housing development to support industry and the travel demand these will generate
  - The need to consider how transport investment can support regeneration and development within Peterhead and Fraserburgh
  - The inequalities which arise in rural areas of the study area due to bus services being more limited – this was particularly referenced in relation to access to education and the limits of the Under 22 free bus travel where bus services are unavailable or limited
  - The need for public transport provision for those without access to a vehicle

### 4.3 Stakeholder Meetings

- A.1.1 Several stakeholder / stakeholder groups were invited to individual one-to-one or group meetings via Microsoft Teams to discuss the projects. The stakeholders included key businesses based within the study areas, including Fraserburgh Harbour and Peterhead Port; representatives from Aberdeenshire Council; bus operators; Transport Scotland; Scotland's Railway; and educational establishments in the study area. A full list of the stakeholders

involved along with the broad topic areas covered in each meeting is included in Appendix I .  
The sections below summarise the key themes emerging from these discussions.

## Problems

### Bus

- 4.3.1 Aberdeenshire Council noted that the bus services on the main corridors are commercially operated and therefore the Council has limited influence on these. While there are some supported services, it was explained that funding for bus services has been reduced in recent years and this has led to some communities being less well served by bus than they previously were.
- 4.3.2 The general challenges of providing bus services off the main corridors due to the level of rurality of the study area were highlighted. While there is the A2B dial-a-bus service, it was recognised that provision is more limited in more rural locations. Comments were also made about the propensity to use car, particularly amongst larger families who have moved out of the city due to the demands of family life, the propensity to 'trip chain,' and the greater convenience provided.
- 4.3.3 Comments were also made about the suitability of the bus vehicles used on the main corridors for those with accessibility need, with the Buchan coach-style services, which only have two accessible seats downstairs felt to discourage some users with mobility issues from using the service.
- 4.3.4 As the primary bus operator within the study area, Stagecoach identified the primary transport problems as:
- i) delays around Ellon during peak periods
  - ii) delays at the Toll of Birness junction both during peak periods but also more generally, with the unpredictability of delays at this location noted
- 4.3.5 Both of these issues are discussed further in the section below. While beyond the study area, Stagecoach also noted that traffic volumes getting in and out of Aberdeen has a significant impact on end-to-end bus journey times.
- 4.3.6 The length of bus journeys to Aberdeen was identified as a problem, with one consultee also noting the additional time required for any journeys beyond Aberdeen City Centre due to the requirement to interchange.
- 4.3.7 Overall, Stagecoach emphasised that journey times on the bus routes between the key settlements and Aberdeen are felt to be as short as they can be within the bounds of what is currently possible. This is because, there is a need to balance the end-to-end journey time with the need to serve the communities on the routes, with more stops resulting in higher coverage but longer journey times. It was also noted that vehicles are also restricted to a maximum of 50mph.
- 4.3.8 The University of Aberdeen noted that the largest student populations outside of Aberdeen are those based in the northern corridors (Peterhead, Fraserburgh and Huntly especially) and students from this area (and indeed other locations beyond Aberdeen) travel by bus because it is free for under 22s. It was noted that transport is not a regularly noted barrier to recruitment of students from the Buchan region, with overcoming the 'stigma' of university and emphasising to potential students that University is open and available to everyone seen as the greater challenge.

### Other Road-based Transport

4.3.9 A range of problems with respect to road transport were identified by consultees, including:

- Delays around Ellon during peak periods
- Traffic related delays and disruptions at the Toll of Birness and Cortes junctions
- Poor network resilience

4.3.10 As noted above, these issues are also applicable to bus travel. A range of impacts associated with the above were also identified. Further information on the problems as well their associated impacts is provided below.

#### Delays around Ellon during peak periods

4.3.11 A large number of consultees noted that there are delays around Ellon during peak periods. This was identified as being a particular an issue when travelling southbound in the AM peak and northbound in the PM peak, with the issues more prevalent in the AM southbound. One consultee also noted that the issues can be exacerbated by poor weather.

4.3.12 There was general agreement amongst stakeholders that the issue has worsened following the opening of the AWPR and the Balmedie and Tipperty improvements, with the 'bottleneck' on the network having effectively moved north to the point at which the carriageway reduces to a single lane.

#### Traffic related delays and disruptions at the Toll of Birness and Cortes junctions

4.3.13 Safety issues and delays at the Toll of Birness were cited by a number of the business stakeholders as being a problem on the network. Another noted that collisions at the point are a frequent occurrence, "*with issues almost daily.*" While consultees were aware of similar problems at the Cortes junction, the Toll of Birness was more frequently referenced.

4.3.14 Both the Toll of Birness and the Cortes junctions are identified as locations for further review in the August 2023 Draft Moving Cursor Programme (MCP) Annual Road Safety Report produced by Amey (the Operating Trunk Road Authority for the North East) for Transport Scotland. This document reviews the performance of the trunk road network based on safety statistics and requests / information from key stakeholders and it is understood that the inclusion of both junctions was requested by Aberdeenshire Council.

4.3.15 Following previous concerns about the junctions, Vehicle Activated Signs (VAS) were installed at the Toll of Birness junction in 2022 and at four locations on the A90 between the Toll and Birness and Cortes Junction in 2023. Police Scotland are also continuing to undertake occasional speed surveys on A90. Under the MCP, following an intervention such as a VAS, the site is monitored for three years post implementation, with no further action taken during this period (unless a specific increase in the number of collisions is recorded) in order to allow time for the impact of the intervention which had been implemented to be determined. Given a VAS was installed in 2022, under the MCP, a review would ordinarily not be required until 2025. However, due to Aberdeenshire Council's request both locations have been included for further review.

#### Unpredictable journey times

4.3.16 Several consultees notes that there is a level of unpredictability with delays on the network which can make scheduling challenging. This was referenced specifically in relation to delays at the Toll of Birness junction by Stagecoach and more generally across the network by several business consultees.

Poor network resilience

- 4.3.17 Several consultees identified network resilience as a problem, noting that when there are collisions or incidents, due to the limited coverage of the road network, delays can be significant. As one consultee summarised:

*“collisions have a disproportionate effect on the regularity of journey times due to the lack of resilience in the network....”*

- 4.3.18 For example, it was noted by one business that re-routing via the coastal route can add around 35-45 minutes of additional travel time while another business noted that it can often be better to remain on the A90 and wait for the incident to be resolved rather than taking an alternative much longer route.
- 4.3.19 Several of the problems raised by stakeholders above were also raised by pupils of Fraserburgh, Mintlaw and Peterhead Academies and a summary is provided below. Full details are included in Appendix J.
- 4.3.20 Bus services were generally perceived poorly amongst the pupils, with concerns raised regarding availability and reliability of services, safety when travelling on buses (particularly later at night), comfort on board buses and a lack of real-time bus information. It was considered that rail would offer significantly improved reliability of travel relative to bus services and pupils were in favour of a potential new rail line between Dyce and Peterhead / Fraserburgh. The challenges associated with driving, including the restrictions posed by the Aberdeen Low Emission Zone and bus lanes within the city, were also cited as reasons for rail being an attractive journey choice if it was available. Students also felt that the road network requires improvement, with junctions at Toll of Birness and Cortes highlighted as being particular problems.

**Problem Impacts**

- 4.3.21 A range of impacts of the above problems on the road network were also identified, including:
- Loss of value when transporting time-critical fish stocks
  - Knock on impacts associated with trans-shipment by vessel
  - Development sites in the region being constrained by problems on the road network
- 4.3.22 Each of these is discussed further below.

Loss of value when transporting time-critical fish stocks

- 4.3.23 A significant volume of the fish catches at Peterhead Port and Fraserburgh Harbour is time critical and needs to reach ferries departing from Dover, the same day as the fish is landed, to reach the European market.
- 4.3.24 According to Peterhead Port, while the majority of the pelagic fish catch at Peterhead is frozen and either transported by road or vessel, around 20-25% (30,000 tonnes) and all white fish and shellfish (50,000-60,000 tonnes) is exported by road. Around 50% of the white fish and shellfish is processed in Peterhead, Aberdeen or Fraserburgh. The unprocessed fish is transported to Billingsgate in London and locations in Europe. There is a very tight supply chain for the latter; produce leaves Peterhead between 13:00 and 14:00 in the afternoon to be sold on the continent the next morning. Any delays on the road network can result in a loss of value of the produce given the short shelf life. It was noted by Peterhead Port that a day's delay in getting fish to continental Europe is equivalent to an approximate 15% reduction in value.

Knock-on impacts associated with trans-shipment

- 4.3.25 Where material is being trans-shipped via vessels, delays can mean that ships are unable to sail, with a knock-on impact on the offshore asset. It was noted by one stakeholder, however, that this is an infrequent occurrence (2-3 times per year), and it is difficult to quantify the cost as it is absorbed by the operators.

Development constrained by problems on the road network

- 4.3.26 Aberdeenshire Council and Transport Scotland highlighted that the problems on the road network are acting to constrain development in some locations.
- 4.3.27 It was noted that there is a calculated infrastructure capacity of 200 houses across all the allocated sites (notwithstanding the permissions already in place or awaiting legal agreements) within Mintlaw until such a time as the Toll of Birness Junction has been upgraded. The developer has entered into a Section 75 agreement with Aberdeenshire Council around contributions towards a scheme, acknowledging that without additional contributions, there is currently insufficient funds in total to implement the improvements.
- 4.3.28 Transport Scotland will not support additional development at Mintlaw until a mechanism for the delivery of the improvements is in place. It is understood that Aberdeenshire Council is developing Supplementary Guidance on the issue.
- 4.3.29 There is also a large-scale development allowance outside Ellon (approx. 960 units), which has the potential to contribute to the peak time delays at the Ellon junctions.
- 4.3.30 Consultees from Aberdeenshire noted future uncertainty, with various industries also impacting traffic in the region and the wider policy context, including NTS2, and the extent to which sustainable transport solutions (e.g., promoting local living / reducing the need to travel) should be considered.
- 4.3.31 One consultee noted that while these sites are predominantly housing, they are also important to the wider economic transition as they will provide the homes for those employed in the region.

## Opportunities

### Support for new and emerging Industries

- 4.3.32 As discussed above, the North East is in a period of transition from oil and gas to net zero and there is an opportunity for transport investment to support various growth areas, including CCUS, hydrogen, and offshore renewables as well as decommissioning. Each of these potential growth areas are discussed further below.

Carbon Capture and Storage (CCS)

- 4.3.1 As discussed in Chapters 2 and 3, funding was announced by the UK Government in July 2023 for the Acorn Project, which will enable CCS at St Fergus, north of Peterhead.
- 4.3.1 In terms of transport requirements, it is understood that in the initial stages of the project, CO<sub>2</sub> will be transported i) by pipeline direct to St Fergus and ii) via ship to Peterhead with onward transport by pipeline to St Fergus. As such, there would be limited need for additional road infrastructure in the medium term. Over the longer-term, however, there may be potential for transporting liquified CO<sub>2</sub> by road and / or rail.
- 4.3.2 While in the medium term, there may be a more limited role for landside transport during the day-to-day operation of the site, several stakeholders noted that there would be potential construction impacts with significant demand for construction workers during project delivery

which would add traffic to the network. Indeed, it is noted that there have been several discussions around workers villages being established south of Peterhead due to there being insufficient resource in the building sector amongst the current population to support strategic development in the area.

#### Hydrogen

- 4.3.1 Hydrogen and clean fuels have also been identified as a potential growth area for the North East. Related to the CCS plans at St Fergus, Acorn Hydrogen also plans to turn North Sea natural gas into clean-burning hydrogen adjacent to the St Fergus gas terminal. More broadly, it was noted that the manufacture of clean fuels requires access to cheap energy, and this is available in the region due to the large number of offshore wind farms giving the area a level of competitive advantage.
- 4.3.2 Peterhead Port explained that several companies are examining the potential of hydrogen manufacture in and around Peterhead, with the potential for this to lead to the manufacturing of e-ethanol, ammonia, and / or potentially sustainable aviation fuel. While it is anticipated that much of this would likely be exported from the port via ship, it was noted that there would also likely be local uses which could potentially be transported landside by either road or rail. However, there is a large degree of uncertainty as the industry is at an early stage of development.

#### Offshore renewables

- 4.3.3 Off-shore renewables is a growing market for the region, with both Peterhead Port and Fraserburgh Harbour identifying this as a potential growth area. In terms of transport, there are two key aspects to this: i) construction and ii) operation and maintenance once the turbines are installed.
- 4.3.4 The extent to which a port is used for renewables will depend on a variety of factors, including where the wind farms are located; the location of the manufacturing site; where the material is fabricated; and how material is transported to / from the windfarm sites.
- 4.3.5 In the construction phase, the location of the manufacturing site and where the material is fabricated is important, with equipment sometimes transported by road or vessel and fabricated at the port and sometimes shipped in prefabricated and floated into position. One consultee noted that while fabrication takes place in the UK, currently the supply chain for renewables generally comes from outside the UK as the UK manufacturing base is more limited.
- 4.3.6 Peterhead Port noted that the majority of components currently come in and go out by vessel, meaning that requirements for landside transport are relatively limited. However, it was also noted that during construction phase, there is also a need for construction workers, with associated transport impacts.
- 4.3.7 In terms of maintenance, one consultee noted that observation and maintenance hubs are in their infancy with most sites serviced from larger hubs in Europe, including in Denmark. However, the location from which the turbines are maintained will depend on a range of factors including where wind farms are located and the ease with which parts can be delivered to the maintenance hub, with there being potential for smaller hubs to develop closer to where the turbines are located.
- 4.3.8 It was noted, however, that in contrast to the oil and gas industry for which (at least in its current form) there is a need to continually support the day-to-day needs of offshore platforms, maintenance trips are less frequent (with one consultee noting that trips to the oil and gas platform can be undertaken every 3-4 days compared to once a month for turbine maintenance). The day-to-day need for landside transport for renewables is therefore less than that of the current oil and gas market.

### Decommissioning

- 4.3.9 Decommissioning is the process of cleaning, dismantling, and removing redundant infrastructure, such as platforms and pipelines at the end of their operational life. Given that a large number of fields on the UK Continental Shelf (CS) are entering maturity, decommissioning activities will become increasingly important over coming years, with the sector offering significant potential for growth.
- 4.3.10 Peterhead Port noted that currently decommissioning material is brought in by vessel to the Port, is cleaned on the quayside or in Aberdeen and is taken out by road, with around 60,000 tonnes of decommissioned steel transported through the Port in 2022. Material could also be transported out by vessel in the future if there are sufficient volumes.
- 4.3.11 Another stakeholder noted that material is transported to various destinations in the UK and across Europe and where it is taken and how it is transported depends on a range of factors.

### **Tourism**

- 4.3.12 In addition to the energy market, Visit Aberdeenshire highlighted several opportunities for transport investment to help support growth in the tourism market in the region.
- 4.3.13 It was noted that research into travel tolerance time suggests that the additional hour to travel to the study area is likely to limit the pool of people who are willing to travel to the region. As such, it was felt that if journey times could be reduced, there would be a new market of people who could potentially travel to the study area. This was felt to be particularly important in the case of facilitating day trips from Aberdeen to destinations into Aberdeenshire.
- 4.3.14 Visit Aberdeenshire also highlighted the potential of rail to grow the tourism market, with visitors generally finding rail easier to understand and more convenient. It was also noted that there are aspirations to create a full coastal path around Aberdeenshire and that rail services in proximity could encourage use of such a facility as it would facilitate logistical considerations (e.g. completing a section and then returning to the starting point via train).
- 4.3.15 It was also noted that active travel is an important focus for Visit Aberdeenshire with aspirations to position the North East as an attractive location for Adventure Tourism e.g. cycling in the Cairngorms, trips on the Formartine and Buchan Way and surfing on the Buchan Coast. Enhancements to active travel provision could therefore help support this market.

### **Opportunities to take advantage of Rail Freight**

- 4.3.16 Energy sector representatives from Project Acorn and NECUS identified rail as playing a potential role in the movement of Non-Pipeline Transport (NPT) of carbon dioxide (CO<sub>2</sub>) from Scottish emitters to Peterhead / St Fergus. Although the focus in this sector has been on the largest emitters using the pipeline from the Central Belt to Peterhead / St Fergus, it was recognised that not all CO<sub>2</sub> would be able to move by pipeline and there would be a role for surface transport where shipping is not a viable option – rail could provide a viable option for this market segment.
- 4.3.17 At this stage there is significant uncertainty in assessing the addressable market size for the movement of Non-Pipeline Transport CO<sub>2</sub>. However, it is likely that carbon capture, transport and storage would provide the largest demand sector for mode shift to rail, along with alternative fuels production.
- 4.3.18 Freight operators also raised that this sector could provide an enabler for movement by rail for other smaller but no less important sectors such as agricultural bulks, retail, and food manufacturing, including, but not exclusively, frozen, and canned fish, ice cream, beer, and inbound retail supermarket volumes. Freight operators also raised that there could be an opportunity for some movement of offshore materials by rail between Aberdeen and Peterhead.

- 4.3.19 Critical to the development of a zero-carbon infrastructure for the movement of goods is the provision of a network of appropriately sized and located freight terminals. This would require allocated land in the next Local Development Plan along with adjacent land allocations for related manufacturing and warehousing facilities. This is important to help make the potential for rail freight attractive as possible for businesses based in the North East of Scotland, allowing businesses to make the transition to net zero carbon operations and to compete without being disadvantaged relative to their competitors in more centrally located areas of the United Kingdom.
- 4.3.20 Key findings from discussions with freight stakeholders is included in Appendix L.

### Constraints

- 4.3.21 The following constraints were identified by consultees:
- The alignment of the former Buchan Railway is now the Formartine and Buchan active travel route and should any options which emerge from this study utilise this route, alternative active travel provision would need to be provided alongside the current route
  - There are allocated sites within the Aberdeenshire LDP which may act as a constraint on some of the potential options which emerge from this study and will need to be considered during the subsequent option identification and development process

## 4.4 Resident and Business Survey

- 4.4.1 Two online surveys were developed; one aimed at residents of the study area, and one aimed at businesses / organisations. The surveys were live between 30<sup>th</sup> November and 21<sup>st</sup> December 2023 and were publicised via Aberdeenshire Council and the AGCC's social media pages, the AGCC' Daily Bulletin<sup>67</sup>, and local newspapers.
- 4.4.2 In total, 769 people responded to the resident survey and 36 businesses responded to the business survey. The sections below provide a summary of the key findings from the public surveys. A detailed breakdown of responses is included in Appendix M.

### Resident Survey – Key Findings

#### Profile of survey response

- Over half of respondents to the resident survey came from the three largest settlements Peterhead (23%), Fraserburgh (21%) and Ellon (11%) with smaller numbers from the other locations in the study area
- There was a fairly even split between males (48%, n=362) and females (49%, n=372), with a small proportion choosing not to say (3%, n=22)
- Most respondents were aged between 35-64, with smaller proportions above and below these brackets. The response was broadly in keeping with the age distribution within the study area albeit there were fewer responses from the over 75 and the 16-24 age brackets
- Around half (56%, n=416) of respondents were in full-time employment with a further 18% (n=136) in part-time employment. A total of 17% (n=128) were retired. While the employment breakdown at the level of the study area is not available, the sample is broadly in keeping with the breakdown for Aberdeenshire as a whole
- In total, 26% (n=198) of respondents indicated that they held a National Entitlement Card (NEC) which entitled them to free bus travel. This is lower than that recorded via a survey

<sup>67</sup> The Daily Bulletin is an email sent to all AGCC members daily

of bus users across Aberdeenshire in 2020<sup>68</sup>. However, the latter was specifically focuses on bus users and therefore a higher proportion for this survey may be envisaged

#### Walking, Wheeling, and Cycling

- In terms of walking and wheeling, the highest levels of dissatisfaction were with 'the degree to which walking routes are accessible for users with a disability (e.g. quality of the surface, width, presence of dropped kerbs etc)' and the 'feeling of safety when walking (i.e. traffic intimidation / fear of road collisions)'
- In the open text responses, several comments were made about traffic intimidation and poor levels of accessibility as well as poor lighting and maintenance issues
- Just over 30% of respondents indicated that they cycle in the study area, with around 40% of these indicating that they had cycled in the last week
- Cycling for leisure / sport participation was the most popular reason for cycling (accounting for 36%, n=141 of responses) with far smaller numbers commuting to work by bike (8% of responses)
- Cyclists were most dissatisfied with the 'degree of segregation from traffic' and the 'feeling of safety when cycling (i.e. traffic intimidation / fear of road collisions)
- Around a quarter of non-cyclists (26%, n=136) indicated that there were things which could be done to encourage them to cycle, with '*segregation from traffic*' the most frequently cited improvement amongst this group

#### Bus

- Around 16% of respondents use the bus to Aberdeen at least once a week and around 13% who use local buses services at least once a week
- For both travel to Aberdeen and local bus travel, the highest level of dissatisfaction was with the punctuality of bus services (i.e. services being late). There were also high levels of dissatisfaction with buses being cancelled (52% for Aberdeen and 53% for local buses) and the length of time it takes to travel by bus (53% for Aberdeen and 45% for local buses)
- 75% stated that there were aspects of the service to Aberdeen which prevented them using it more frequently while 54% stated that there were aspects of the local bus service which prevented them using it more frequently
- The main factor which prevented people using the bus to Aberdeen was the **length of time it takes** (85%). This was followed by frequency (79%); bus being late (77%), cost (71%), and the bus being cancelled (72%). The main factor which prevented people from using the local bus services was frequency (85%), followed by availability / number of routes (81%); the destinations of routes (80%); the length of time it takes (77%); and cost (72%)
- While cost was not the most important factor, it is worth noting that those for whom cost is not applicable (i.e. concessionary card holders) are removed, the percentages are higher (80% identify it as a factor for trips to Aberdeen and 81% identify it as a factor for local trips)
- The biggest impact of people not being able to use the bus as much as they would like was **people using their car more often**. This was accounted for 29% of responses in terms of travel to Aberdeen and 33% with respect to local bus travel. Other impacts

<sup>68</sup> See [aberdeenshirecouncilbussurvey.pdf](#)

included, needing to own a second vehicle, not being able to take part in leisure activities, and attendance at health appointments being more difficult

#### Rail

- As would be expected given the lack of rail station in the study area, use of rail services is irregular with just 4% using rail services weekly
- The most frequently cited impact of there being no railway station in the study area was people using their car more often than they would like, with this impact accounting for nearly a quarter of responses received. Other impacts identified including not being able to visit family and friends as often as they would like and using the bus more frequently than respondents would like
- In total, 68% of respondents indicated that they would use rail at least weekly if a railway station was closer to their home, with over a quarter stating they would use rail services at least 4-5 times a week

#### Road

- 30% of respondents indicated that they had driven to Aberdeen at least 4-5 days a week over the last month. This compares with just 4% making this trip at this level of frequency by bus
- The quality of the road surfaces achieved the highest level of dissatisfaction with respect to driving trips, with 57% stating they were dissatisfied with this aspect when travelling to Aberdeen and 58% stating they were dissatisfied with this aspect when travelling to other locations
- There were also high levels of dissatisfaction with, for driving trips to Aberdeen: rail-based park and ride options (47% dissatisfied) and the cost of travel (45% dissatisfied) and, for driving trips to other locations: overtaking opportunities (42% dissatisfied), rail-based park and ride options (41% dissatisfied) and the cost of travel (41% dissatisfied)
- Interestingly, road journey times and the reliability of journey times achieved the highest levels of satisfaction, with 60% and 59% respectively satisfied with these aspects when travelling to Aberdeen and 58% and 56% respectively satisfied with these aspects when travelling elsewhere. Albeit, in each case, a reasonable proportion were dissatisfied (21% and 20% dissatisfied for trips to Aberdeen and 15% respectively for trips elsewhere)

### **Business Survey – Key Findings**

#### Profile of survey respondents

- There were 36 responses to the businesses / organisation survey
- The majority of these were based in Aberdeen and Peterhead with smaller numbers from Fraserburgh and elsewhere in the study area
- The businesses were from a range of sectors, including professional, scientific, and technical; agriculture, forestry, and fishing; manufacturing; construction; retail; and accommodation and food services
- The sample included a range of sizes in terms of employee numbers, ranging from sole traders (of which there were three) up to the largest business surveyed which employed more than 500 staff

#### General problems with current location

- Businesses were asked what they felt were the key weaknesses of their current location. The most frequently cited weakness was *'problems with transport to / from the site make it difficult for staff to get to work at this location'* which accounted for 12% of all responses. This was followed by *'limited skills / qualifications in the local labour market'* (11% of responses)

#### Transport of goods / supplies

- Nearly 70% of those surveyed said that the physical movement of supplies / goods was important to their business / organisation, with HGVs and LGVs the dominant means of transport used
- Just over a third (36%) indicated that they used their own vehicles to transport their products
- Amongst this group, 79% were dissatisfied with safety (i.e. the risk of collisions) when transporting products by road; 64% were dissatisfied with the reliability of road journey times; and 63% were dissatisfied with the length of time it takes to transport products by road – far higher proportions than seen from the public

#### Transport problems and staff recruitment / retention

- Over 65% of businesses indicated that transport problems impact their ability to attract and / or retain staff, with 36% stating that it has a large impact and 31% stating it has a small impact
- The cost of travel was the contributing factor to the above identified by the most respondents with 61% (n=14) indicating that cost was a major factor and 30% (n=7) noting it was a minor factor. This was followed by safety concerns when travelling (i.e. risk of collisions); bus service frequency; and the length of time it takes to travel by bus
- The absence of a train service from Aberdeen was the fifth most frequently cited contributing factor with 64% identifying this as a major factor (the largest of any aspect) and 18% as a minor factor

#### Transport problems and ability of customers to access site

- 89% of respondents indicated that it was important for customers to access their site and amongst these, 70% indicated that transport problems impact this
- The absence of a train service from Aberdeen was the contributing factor to the above identified by the most respondents with 44% (n=7) indicating that this was a major factor and 25% (n=4) noting it was a minor factor. This was followed by the cost of travel, the range of locations served by bus, and safety concerns when travelling (i.e. the risk of collisions)

## **4.5 Stakeholder Drop in Session**

- 4.5.1 A joint Stakeholder Drop-in session for this A90 / A952 Appraisal and the BST study was held between 12:30 and 19:30 on 23<sup>rd</sup> January 2024 at the Palace Hotel in Peterhead. The event took place between 12:30-19:30 with presentations and a Q&A opportunity at 13:00 and 18:30.
- 4.5.2 The primary aim of the Stakeholder Drop-in event was to update stakeholders on project progress and gather feedback. Information boards were displayed summarising the analysis

- undertaken to date, including a summary of the problems identified, the emerging TPOs, and next steps. A presentation on the material with a Q&A was also held at 13:00 and 18:30.
- 4.5.3 While the event was targeted at stakeholder organisations and businesses, with approximately 25 of the latter attending, promotion of the event by elected members led to public awareness via social media and therefore the event was also attended by members of the public (circa 25).
- 4.5.4 The feedback received on the problems and emerging TPOs was positive, with agreement that the problems identified adequately captured the key issues. Attendees also provided comments on the potential options for improvement. Given the focus of this report, this feedback is not discussed at length here but will be included in the Preliminary Appraisal Report.

## 5 Summary of Problems and Opportunities

### 5.1 Introduction

5.1.1 The identification of Problems, Opportunities and Constraints within the transport and land-use system forms the starting point for any STAG study. These terms are defined within the STAG Guidance as follows:

- **Problems:** undesirable or harmful circumstances with the transport system
- **Opportunities:** where a change to the transport system may lead to a positive outcome
- **Constraints:** circumstances which may impact on the delivery of the potential interventions or option generation and development

5.1.2 This chapter summarises the Problems, Opportunities and Constraints identified through the above data analysis and stakeholder and public engagement activities.

### 5.2 Problems

5.2.1 This section provides a summary of the primary problems identified which form the basis for the TPOs.

#### Safety

5.2.2 Analysis of collision data indicates that there is a **higher proportion of fatal collisions on the A90(N) / A952 corridors than on other single carriageway A-roads in Aberdeenshire and in Scotland more generally**, with 8.7% of collisions on the A90(N) / A952 classified as fatal compared to 6.9% on single carriageway A-roads in the rest of Aberdeenshire and 5.7% on single carriageway A-roads elsewhere in Scotland. This suggests that where collisions occur, they are more likely to be fatal than on similar roads in Aberdeenshire and Scotland.

5.2.3 In the public survey, while a majority (48%) of respondents indicated they were satisfied with 'the feeling of safety during [their] trip', a large proportion (32%) indicated they were dissatisfied with this aspect. A range of comments on safety were also made within the open text responses, with the Toll of Birness junction specifically identified as an area of concern.

5.2.4 Within the public survey, there was also a high level of dissatisfaction with aspects of road travel which may contribute to safety issues on the network including the quality of the road surface (57% dissatisfied) and the number of overtaking opportunities (43% dissatisfied) with several comments noting these as contributing factors.

5.2.5 The analysis of traffic data indicates that there are high proportions of HGVs particularly on the A90 between the Toll of Birness and Peterhead where the HGV proportion (13.2%) is the joint highest in Aberdeenshire, matching that of several count sites on the A90 south of Stonehaven. The analysis also identified evidence of platooning in the study area whereby convoys of vehicles travel together due to the lack of opportunities to overtake. Where there are high proportions of platoons, there is the potential for driver frustration and hazardous overtaking manoeuvres. In line with HGV proportions, platooning levels were more prevalent between Peterhead and the Toll of Birness with the impact of slower moving vehicles more pronounced on the A90 North of Toll of Birness (southbound).

5.2.6 While sample sizes are relatively small, in the business survey, nearly 80% (n=15) of respondents indicated they were dissatisfied with 'safety concerns (i.e. risk of collisions)' when transporting products by road. In addition, 50% of businesses who indicated they experience problems attracting / retaining staff 38% (n=6) of business who indicated that transport

problems impact access to their site for customers identified 'safety concerns when travelling (i.e. risk of collisions) as a major contributing factor.

5.2.7 Safety issues were also identified within the stakeholder one-to-ones, with the Toll of Birness again specifically cited as a problem. Several consultees noted that safety issues (as well as other incidents) on the network contribute to delays and that there is a level of unpredictability associated with these delays which can make scheduling challenging. This was referenced specifically in relation to delays at the Toll of Birness junction by Stagecoach and more generally across the network by several business consultees, with impacts including a loss of value when transporting time critical products and knock on impacts associated with trans-shipment by vessel.

5.2.8 In the engagement, several consultees also identified **network resilience** as a problem, noting that when there are collisions or incidents, due to the limited coverage of the road network, delays can be significant. As one consultee summarised:

"collisions have a disproportionate effect on the regularity of journey times due to the lack of resilience in the network...."

### Journey Time Reliability

5.2.9 The issue of routine journey time reliability was also identified as a problem. Analysis of INRIX journey time data suggests that the highest levels of variability are associated with southbound travel on the A90 during the morning peak on Tuesdays, Wednesdays, and Thursdays, with 95th percentile journey times up to 23% (10 minutes) longer than the 5% percentile. This aligns with people travelling into Aberdeen City for work and / or education from the study area.

5.2.1 **Particular issues were identified via the data at Ellon north roundabout and Ellon south roundabout during the AM and PM peaks.** This area was also identified as the most problematic in terms of traffic volumes and delay during the stakeholder engagement. There was general agreement amongst stakeholders for example that the issue has worsened following the opening of the AWPR and the Balmedie and Tipperty improvements, with several comments that the 'bottleneck' on the network having effectively moved north to the point at which the carriageway reduces to a single lane.

5.2.2 In the public survey, while a majority (59%) of respondents indicated they were satisfied with the 'reliability of journey times' when travelling to Aberdeen, a large proportion (21%) indicated they were dissatisfied with this aspect.

5.2.3 In addition, while the samples are relatively small, in the business survey, 64% (n=12) of respondents indicated they were dissatisfied with 'the reliability of journey times' when transporting products by road. Also, 45% (n=10) of businesses who indicated they experience problems attracting / retaining staff identified journey time reliability when travelling by road as a major contributing factor to this.

### Long Journey Times

5.2.4 Long journey times are the main barrier to greater bus use for travelling to / from Aberdeen with 85% of those surveyed who said they would like to use the bus to Aberdeen more identifying the **length of time it takes to travel by bus** as the main factor preventing them travelling more frequently.

5.2.5 Data from the survey also suggests that the biggest impact of people not being able to use the bus as much as they would like is **higher car use**. This was borne out in the survey frequency data with 30% of respondents indicating that they had driven to Aberdeen at least 4-5 days a week over the last month compared to just 4% making this trip at this level of frequency by bus.

- 5.2.6 In addition to higher car use, the survey also identified evidence of people missing out on opportunities / activities (e.g. being unable to take part in leisure activities / attend health appointments easily) because of not using the bus as much as they would like. This is a particular issue amongst those without access to a vehicle and for whom public transport is therefore the only option, with available data indicating that car availability levels in the study area are lower than elsewhere in Aberdeenshire.
- 5.2.7 The data also suggests that towns with a shorter public transport travel time to Aberdeen associated with rail links see higher levels of commuting to Aberdeen by public transport and reduced car use. For example:
- The average public transport mode share of those commuting to Aberdeen for the five settlements in Aberdeenshire with the shorter journey times associated with rail services was **15.2%** with car use at **76.2%**
  - The average public transport mode share of those commuting to Aberdeen for the other settlements with the longer journey times associated with bus services was **11.3%** with car use at **79.9%**
- 5.2.8 This suggest that the longer journey times associated with bus rather than rail connections is (i) a deterrent to people commuting to Aberdeen by rail and (ii) a contributor to higher levels of car use.
- 5.2.9 While the samples are relatively small, long journey times were also identified as an issue in the business survey, with 63% (n=11) of respondents indicating they were dissatisfied with the length of time it takes to transport products by road. Also, amongst those businesses who indicated they experience problems attracting / retaining staff, 64% (n=14) identified the absence of train services from Aberdeen as a major contributing factor and 57% (n=13) identified the length of time it takes to travel by bus as a major contributing factor.

### Other problems

- 5.2.10 Beyond the above a range of other problems were identified through the data analysis and stakeholder engagement, including:
- A lack of segregated active travel provision
  - High cost of travel, including by bus and a difficulty interpreting appropriate ticketing, particularly for infrequent users
  - Limited provision for those with accessibility needs due to the bus vehicles used
  - Limited bus network coverage and service frequency in more rural parts of the study area
- 5.2.11 Where relevant, these will be considered in the wider options appraisal under the appropriate STAG criteria.

## 5.3 Opportunities

- 5.3.1 A range of **opportunities for transport to support the long-term plan set out in the RES 2035 and the transition from oil and gas to net zero** were identified. These include support for various identified potential growth areas, including CCUS, hydrogen, offshore renewables, and decommissioning as well as continuing for support existing long-established industries such as food and drink and tourism.
- 5.3.2 As noted in Chapter 2, funding was announced by the UK Government in July 2023 for the Acorn Project, which will enable **CCS at St Fergus**, north of Peterhead. Adjacent to the St Fergus gas terminal, Acorn Hydrogen also plan to turn North Sea natural gas into clean-

burning hydrogen. While it is understood that there will be a limited need for investment in landside transport infrastructure to support the industrial operation of this facility in the short term, this may change over the longer-term. In addition, the construction of this project will lead to a demand for construction workers with a resultant increase in travel demand to / from Buchan during the construction phase. Once operational, there is also the potential for significant job opportunities, with resultant impacts on the transport network. There is therefore an opportunity for transport investment to support this strategic area of growth.

5.3.3 Beyond St Fergus, there is also an opportunity for **transport investment to support the delivery of other growth sectors and strategic development sites**, including opportunities associated with the North East Investment Zone. In addition, there is an existing issue whereby problems on the road network are currently acting to constrain a number of development sites across the study area, including at Mintlaw and Ellon. While these sites are predominantly housing, it is important to recognise that the delivery of sufficient housing is also important to the wider economic transition of the region in order to provide suitable accommodation for the workforce needed to support industrial growth.

5.3.4 As well as supporting new and emerging industries, there is potential for transport investment to support existing and long-established industry including the food and drink sector. Both Peterhead Port and Fraserburgh Harbour are vital for both the regions and Scotland's fishing industry, with Peterhead the UK's largest fishing port and Europe's biggest white fish port and Fraserburgh Harbour the largest producer of Shellfish in the UK. The fishing sector is a key industry in both towns, with fish landings and sales representing the central cog in a large industry which includes fish processing, adding value, refrigeration and storage, and logistics and transportation with large proportions in each town employed in the sector.

5.3.5 There is also a potential opportunity for transport to play a role in supporting the **regeneration of Peterhead and Fraserburgh**. The data analysis undertaken indicates that Fraserburgh and Peterhead are the most deprived areas in Aberdeenshire with both towns identified as 'Regeneration Priority Areas' within the Aberdeenshire LDP. The towns perform less well on a number of indicators, with higher rates of unemployment, a lower proportion of higher paying jobs, and a lower mean household income compared to elsewhere in Aberdeenshire. The Hansen connectivity analysis undertaken demonstrates that both Peterhead and Fraserburgh have some of the worse public transport access to higher paying jobs and jobs in Aberdeen of any location in Aberdeenshire. Critically, the CDAT analysis also indicates that there is a strong correlation between this poor public transport connectivity and the high levels of multiple deprivation, suggesting that poor public transport connectivity may be contributing to some of the deprivation in these communities.

## 5.4 Constraints

5.4.1 The constraints identified include:

- There are allocated sites within the Aberdeenshire LDP which may act as a constraint on some of the potential options which emerge from this study and will need to be considered during the subsequent option identification and development process
- The alignment of the former Buchan Railway is now the Formartine and Buchan active travel route. Should the options which emerge from this study utilise this route, alternative active travel provision would need to be provided alongside the current route
- There are a range of environmental designations in the study area which would need to be taken account of during the option identification and development process

## 5.5 Risk and Uncertainty

5.5.1 This Case for Change is at least partly premised on the opportunities identified above coming forward. This includes:

- the development of CCS at St Fergus
  - the potential growth of other emerging industries, including hydrogen, offshore renewables, and decommissioning as well as existing long-established industries such as food and drink and tourism
  - the scale and type of development associated with the North East Investment Zone
- 5.5.2 There are a range of uncertainties as to both the trajectories of the above opportunities and the type of transport demand associated with each. If the identified opportunities do not develop, the Case for Change as set out in this document would be undermined.

## 6 Transport Planning Objectives

### 6.1 Overview

6.1.1 This chapter sets out the TPOs for the study. These have been developed based upon the evidence gathered in the previous chapters. It includes:

- an overview of the approach taken in developing the TPOs, including the rationale for their form and content
- separate sections for each TPO, covering:
  - a short summary of the problems / opportunities from which the TPO emanates
  - a logic map setting out how achieving the TPO will result in wider societal benefits
  - a summary of the data which will be used to measure its success

### 6.2 Approach

6.2.1 In line with the requirements of STAG, the TPOs have been developed with SMART principles in mind. STAG defines a SMART objective as one which is:

- **Specific** – it says in precise terms what is sought and where
- **Measurable** – it sets out the metrics that will be used as an indicator of success
- **Achievable** – there is general agreement that the objective set can be reached
- **Realistic** – the objective is a sensible indicator or proxy for the change which is sought
- **Timed bound** – the objective will be associated with an agreed timeframe

6.2.2 To ensure the TPOs meet the above requirements, particularly with respect to the extent to which they are both measurable and realistic, they have largely been expressed in relation to aspects of transport. However, achieving the TPOs is of course not an end in its own right but rather is a means to achieve positive wider societal impacts.

6.2.3 To help convey this, a separate 'logic map' has been developed for each TPO. These logic maps set out the main ways in which it is anticipated that achieving the TPOs would bring about wider societal impacts for the study area, the wider north-east and Scotland as a whole.

6.2.4 Broadly, the societal impacts can be divided into two 'strands': i) short-medium term impacts and ii) medium-long term impacts (see Figure 6-1). These are discussed in more detail in the following sections.

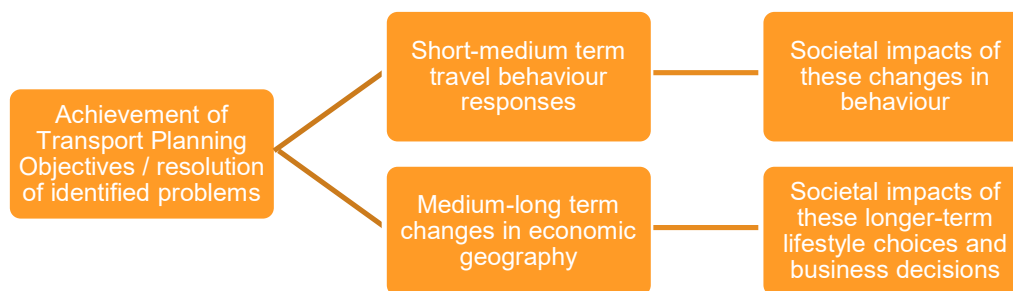


Figure 6-1: Overview of logic mapping approach

6.2.5 For the short-medium terms responses, the logic maps take the broad form shown in Figure 6-2. This shows that as changes in transport supply side come into effect, people respond and make different life and travel choices. These responses in turn have a range of wider impacts on society.

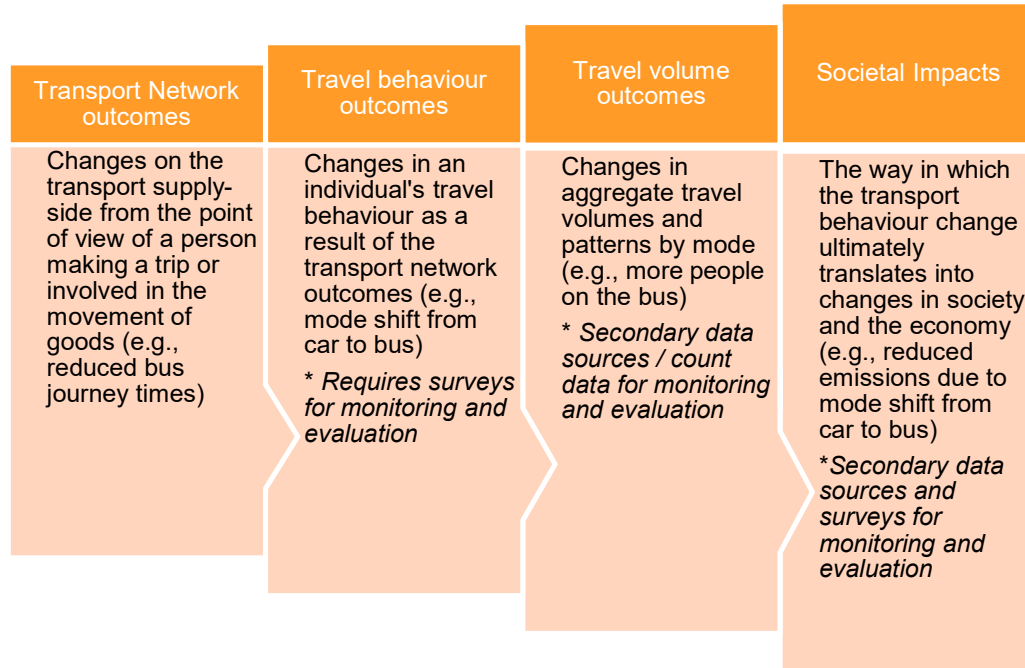


Figure 6-2: Short-medium term responses

6.2.6 In the medium to longer-term, supply side changes on the transport network will affect where people choose to live and work, and where and how businesses / public service providers choose to locate and operate.

### 6.3 Transport Planning Objectives

6.3.1 Having established the above logic, this section sets out the TPOs for the Study. Reflecting the problems and opportunities identified, the TPOs have been developed across four themes as follows:

- Safety
- Journey time variability
- Labour markets
- Just Transition / Net Zero

## Safety

**Proposed TPO1: Reduce the number of people killed or seriously injured on the A90/A952 during the period 2014-19 (12 and 59 respectively) by 75% by the period 2037-2041**

- 6.3.2 Analysis of road traffic collision data on the A90 / A952 identified a higher proportion of fatalities on these routes compared to other rural single carriageway routes in the rest of Aberdeenshire and elsewhere in Scotland.
- 6.3.3 As discussed in Section 2.2, the Scottish Government has set out ambitious plans in terms of road safety with the Road Safety Framework to 2030 establishing a long-term goal of zero fatalities and serious injuries in road transport by 2050 along with Interim Targets by 2030 (based on a 2014-2018 baseline) as follows:
- 50% reduction in people killed
  - 50% reduction in people seriously injured
- 6.3.4 Given that the A90 / A952 is starting from a position where the proportion of fatal and serious casualties is higher, a more stringent 60% target is proposed for the period 2026-2030 along with a longer-term target of a 75% reduction by 2037-41.
- 6.3.5 As discussed above, while this TPO is expressed in terms of transport, achieving the TPO would result in wider societal impacts. As outlined in Figure 6-3 although improvements in safety are unlikely to have a material impact on total travel volumes, there would be associated reductions in hospital admissions and stress and anxiety for those travelling on the routes.

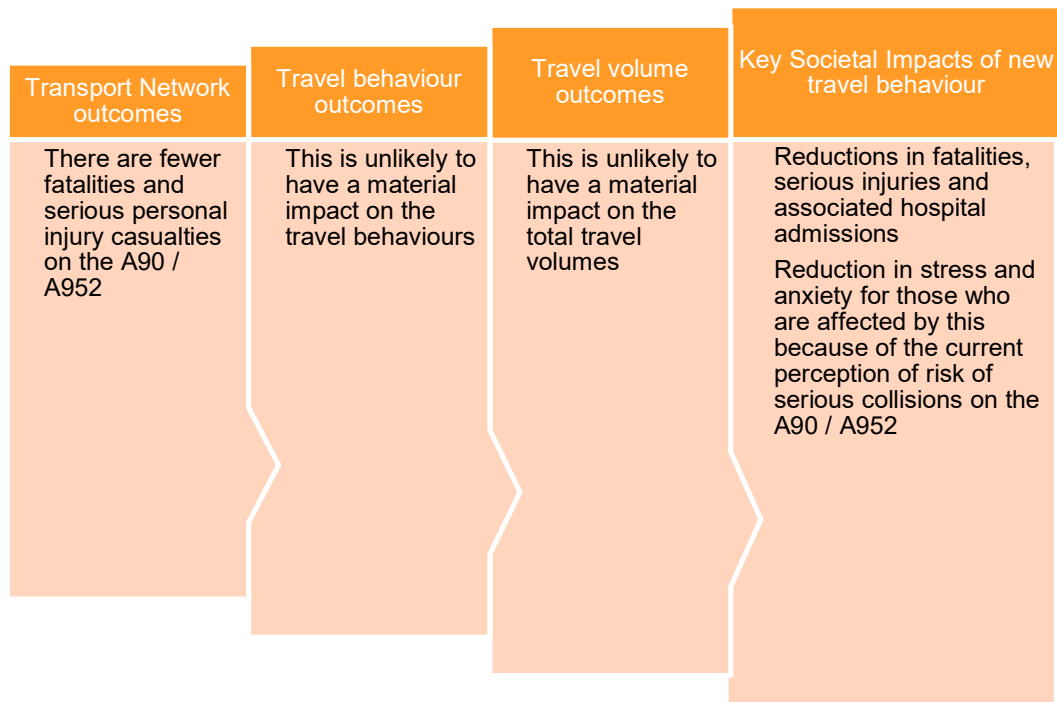


Figure 6-3: Logic Map showing the societal impacts of achieving the Safety Transport Planning Objective

6.3.6 The success of this TPO will be measured using STATS19 data. The impacts would be monitored and evaluated in the medium term as a considerable time series of data is required for trends in casualty data to be seen.

### Journey Time Variability

**Proposed TPO2: Reduce weekday AM and PM peak road-based journey time variation to the level seen in the inter-peak across the A90 and A952 from Fraserburgh to south of the Ellon south roundabout by 2037**

6.3.7 Analysis of INRIX data indicates significant variability in journey times along the corridors, with 95th percentile journey times up to 23% (10 minutes) longer than 5% percentile journey times when travelling southbound on the A90 during the morning peak.

6.3.8 When roads and junctions are operating closer to capacity, day-to-day variations in traffic volumes can lead to significantly longer journey times, and result in both people and businesses having to 'allocate' longer timeframes to make a trip which affects productivity. Collisions and other incidents on the network exacerbate this issue.

6.3.9 The data indicates that journey times are most variable at Ellon north roundabout (weekday AM southbound and PM northbound) and the Toll of Birness (weekday southbound from the A952). These times align with people travelling into and out of Aberdeen City for work and / or education.

6.3.10 The TPO therefore aims to reduce the weekday AM and PM peak road-based journey time variation to the level seen in the inter-peak. As shown in Figure 6-4, achieving this TPO would result in a range of wider societal impacts, including improved business productivity.

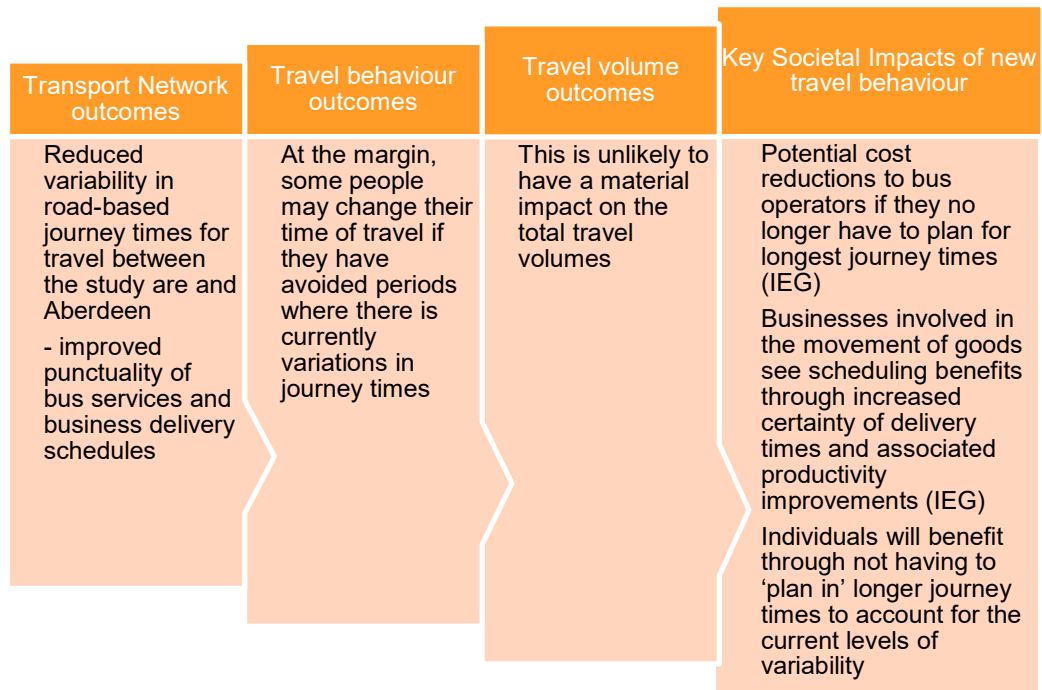


Figure 6-4: Logic Map showing the societal impacts of achieving the journey time variability Transport Planning Objective

6.3.11 This TPO will be measured using the % difference between the 5th and 95th percentile journey times as reported by INRIX whereby the peak is defined as the average of 0700-0900 and 1600-1900 and the interpeak is defined as 1100-1600. Data will be reported separately

for Monday-Friday and Tuesday-Wednesday-Thursday. It is noted that the winter 2023 baseline values are 19% for the peaks and 15% for interpeak.

- 6.3.12 The impacts will be monitored and evaluated in the short term (1-3 years) as it is expected that businesses would respond quickly to any changes which arise.

### Labour Markets

**Proposed TPO3: Increase the labour force who can access Peterhead and Fraserburgh town centres within 75 minutes by at least 65% by 2037**

- 6.3.13 For Fraserburgh and Peterhead to prosper as a location for investment and hence employment, both towns need a supply of skilled labour, which needs to be able to travel sustainably to and from the towns. Long journey times by public transport from, and via Aberdeen are a deterrent to people taking up employment in Peterhead and Fraserburgh – this was evidenced in the public survey.
- 6.3.14 Evidence of travel times affecting recruitment also emerged from the Business Survey which asked if companies had difficulty attracting staff:
- Over 65% of businesses indicated that transport problems impact their ability to attract and / or retain staff
  - Of these, 42% indicated problems with transport to / from the site was a factor
  - 83% identified 'the length of time it takes to travel by bus' as either a major or minor factor affecting staff recruitment / retention
- 6.3.15 Also, the working age population in Peterhead and Fraserburgh has been declining in recent years. This is leading to a tighter labour market and hence an increased need to better connect people to jobs.
- 6.3.16 At present, around 26,000 and 24,000 Aberdeen and Aberdeenshire working age adults can reach Peterhead and Fraserburgh town centres respectively within 75 minutes by public transport for a 09:00 start, with an average between the two towns of 25,000. The equivalent figure for 90 minutes is 41,000.
- 6.3.17 If the logic whereby we want to expand the 75-minute labour market catchment of the two towns to today's 90-minute catchment is applied, this would imply a labour market increase of 65% in the longer-term.

**Proposed TPO4: Increase the average number of job opportunities available to Peterhead and Fraserburgh residents within 75 minutes by at least 40% by 2037**

- 6.3.18 For Fraserburgh and Peterhead's residents to prosper, there is also a need to improve access to employment opportunities (particularly in higher paying sectors) for those living in the towns (or potentially moving to the area), and for this access to be provided by sustainable modes.

At present, on average a resident of Peterhead and Fraserburgh can reach around 17,000 and 14,500 jobs respectively within 75 minutes by public transport for a 09:00 start, with an average between the two towns of around 16,000. The equivalent figure for 90 minutes is around 22,000.

- 6.3.19 Applying the same logic as above whereby we want to expand the 75-minute job market catchment of the two towns to today's 90-minute catchment, this would imply a job market increase of 40% in the longer-term.
- 6.3.20 From a transport perspective, the means of achieving TPO 3 and TPO 4 will be via reduced public transport journey times. The logic map setting out how this change in transport supply will result in wider societal benefits is shown in Figure 6-5.

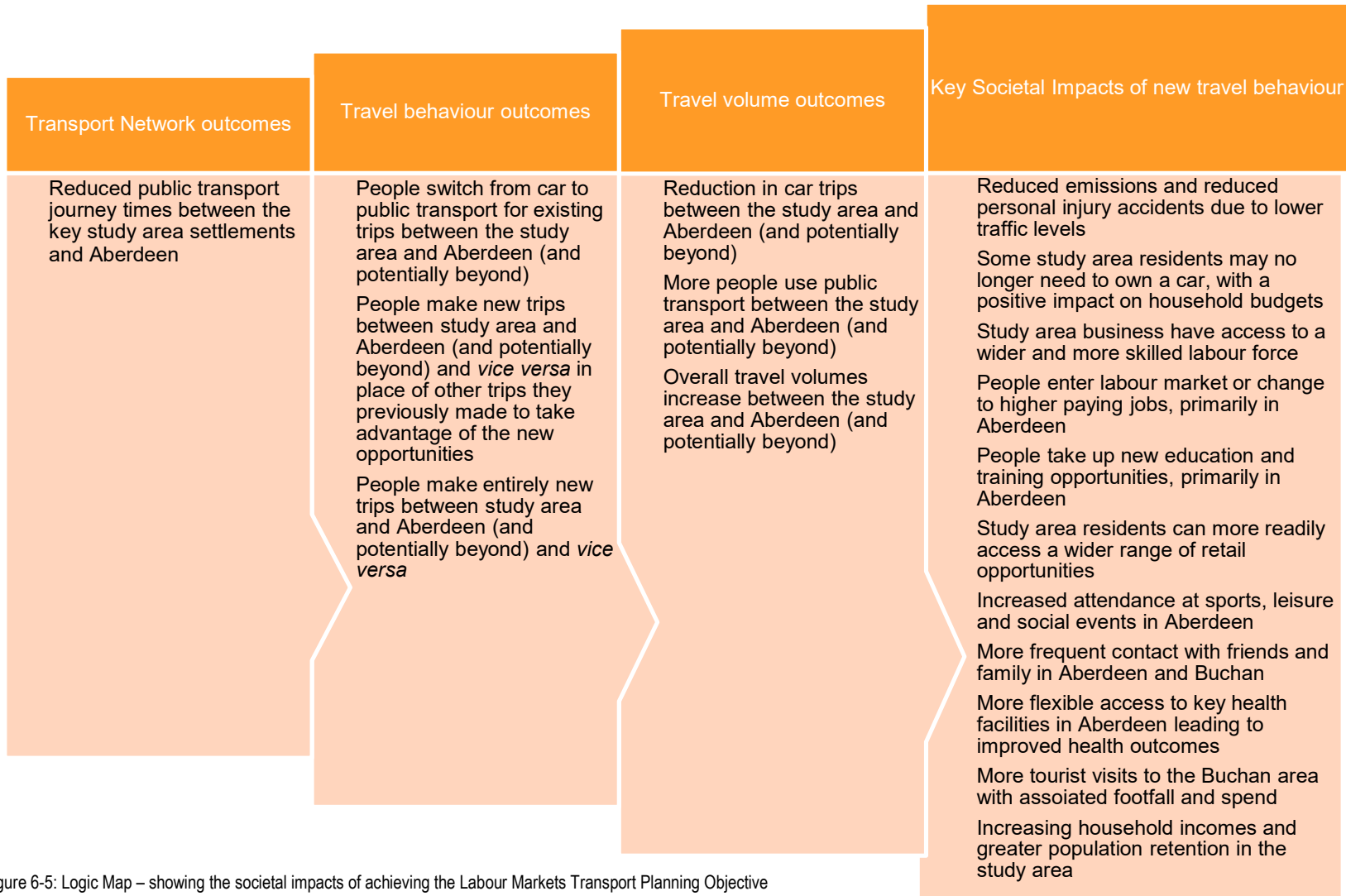


Figure 6-5: Logic Map – showing the societal impacts of achieving the Labour Markets Transport Planning Objective

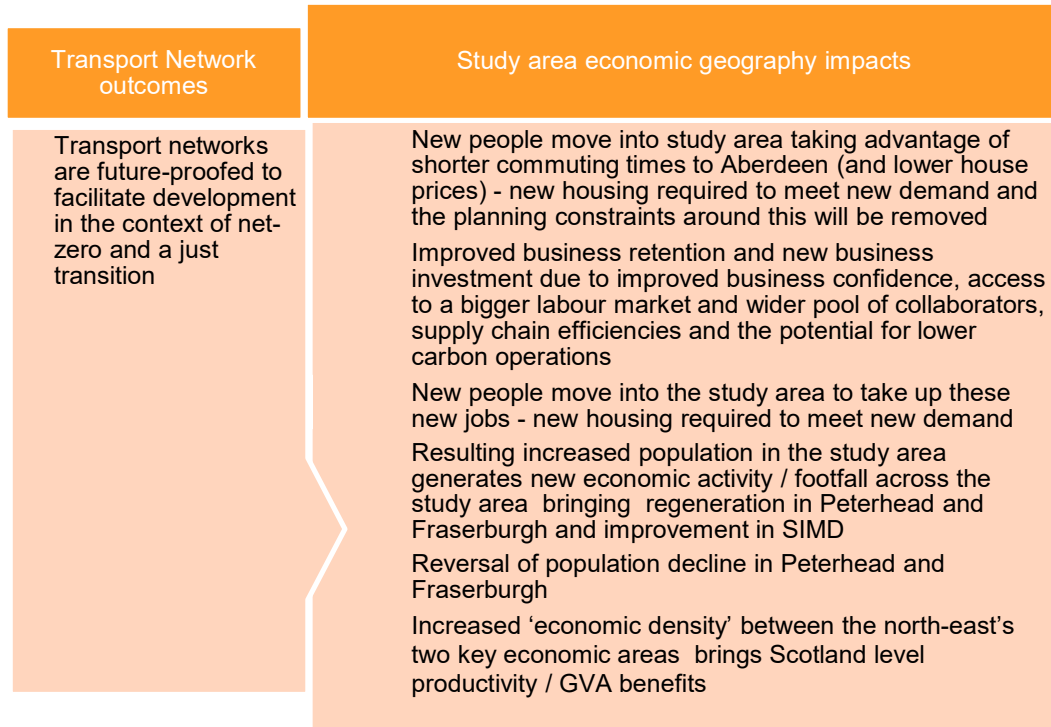
- 6.3.21 As shown, reducing public transport journey times, and achieving the labour market TPOs would have a range of wider outcomes and impacts. A key short-term impact is that many study area residents will be able to access Aberdeen more readily, widening the range of employment, education and training, healthcare, and social and leisure opportunities available to them – with positive impacts on reducing inequalities, inclusive economic growth and health and wellbeing.
- 6.3.22 Businesses in Fraserburgh and Peterhead will also be able to access a wider and more skilled labour force. If the change in journey times was sufficiently large, there could also be a range of structural impacts similar to those identified in Figure 6-6.

The labour market TPOs will be measured via catchment-based analysis using connectivity software. The impacts of this TPO will be monitored and evaluated in the medium term.

### Just Transition / Net Zero

**Proposed TPO5: The study area's transport networks should enable a sustainable and just transition away from oil and gas for current industries, and support key strategic industrial and other developments in new sectors**

- 6.3.23 Rather than transport problems, this TPO is focused on maximising the wide range of opportunities identified within the study area. As outlined in the previous chapters, the study area is in the midst of a transition from oil and gas to renewable energy as Scotland moves to meet its net zero aspirations and a range of growth sectors have been identified, including CCUS, hydrogen, offshore renewables, and decommissioning as well as continuing for support existing long-established industries such as food and drink and tourism.
- 6.3.24 There are also specific opportunities associated with the Acorn Project, a potentially nationally important development which will enable CCS at St Fergus, north of Peterhead as well as potential growth areas associated with the North East Investment Zone. There is also an opportunity to support the economic transition in the study area through the delivery of suitable housing development to provide suitable accommodation for the workforce needed to support industrial growth.
- 6.3.25 In addition, Fraserburgh and Peterhead are the most deprived areas in Aberdeenshire with both towns identified as 'Regeneration Priority Areas' within the Aberdeenshire LDP. Given this, it is essential that the transition away from oil and gas is a *just transition* which positively and equitably benefits these communities in terms of jobs and opportunities.
- 6.3.26 As shown in Figure 6-6, the achievement of this TPO has the potential to result in a range of longer-term structural impacts on the pattern of economic activity across the study area.



6.3.27 Figure 6-6: Medium-long-term structural impacts on study

## 7 Next Steps

- 7.1.1 This Initial Appraisal: Case for Change report has set the context for the appraisal of multi-modal transport options for the Buchan Sustainable Transport Study.
- 7.1.2 Having due regard to STAG methodology, it has identified the key transport problems, opportunities, and constraints within the study area, which have formed the basis for objective setting.

### 7.2 Preliminary Options Appraisal

The purpose of the Preliminary Options Appraisal will be to undertake an initial, qualitative appraisal of the recommended options generated at the outset of this stage. This will include an assessment of:

- The likely impacts of the options against the TPOs
  - The likely impacts of the options against the STAG criteria, i.e., Environment; Climate Change; Health, Safety and Wellbeing; Economy; and Equality and Accessibility
  - The alignment of options with established policy directives
  - Feasibility, affordability, and likely public acceptability of the options
- 7.2.1 In addition, the study will generate high-level benefit to cost ratios (BCRs) for any rail options that emerge. An economic value for money assessment will be undertaken of the rail options only, which differs from an overall value for money assessment, which would be required in a Detailed Options Appraisal and cover all modes, such that only the quantified and monetised impacts of the rail options are included.

## **Appendix A Housing Land Audit and Employment Land Register Sites**

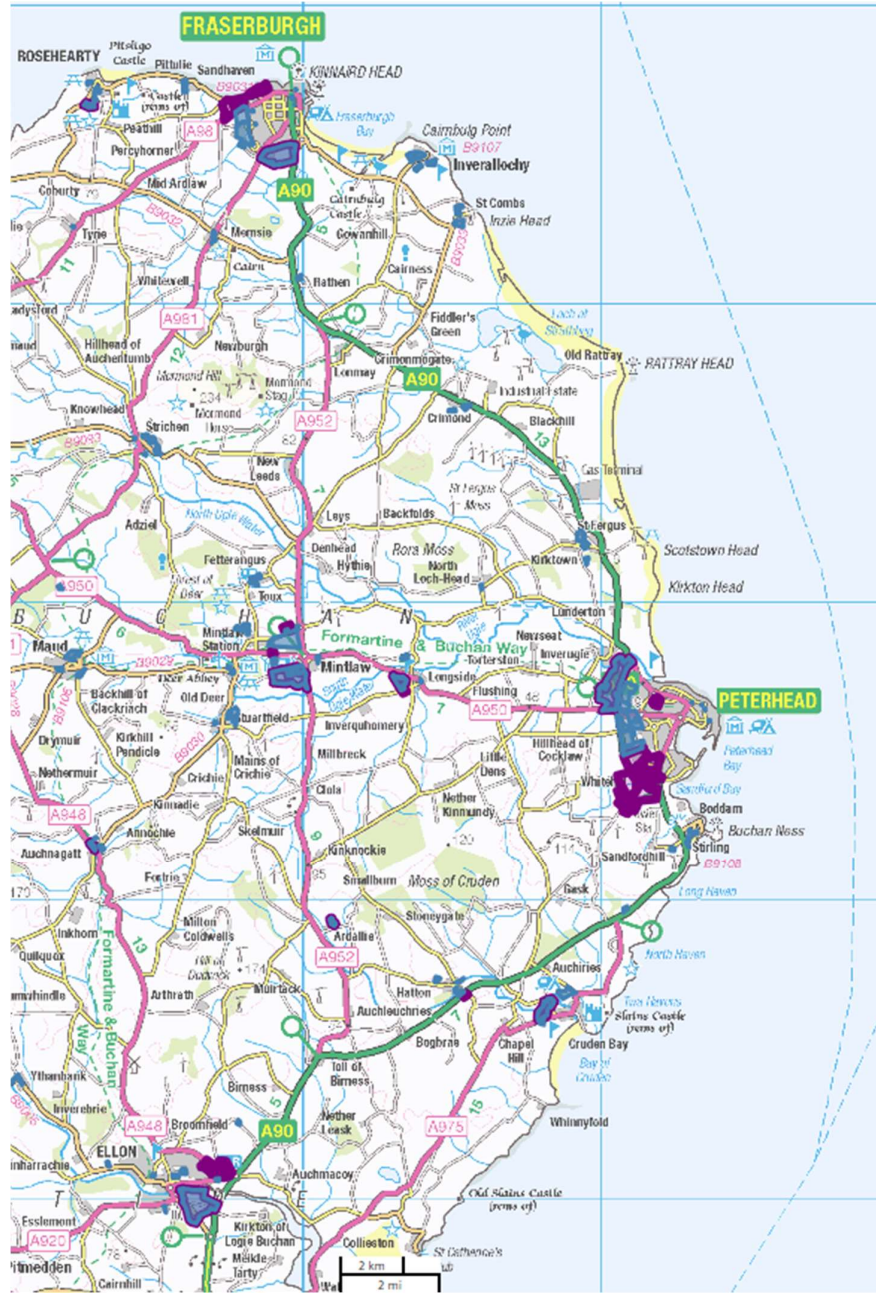


Figure A-1: Employment Land Register 2021 and Housing land Audit 2023 sites within the Study Area<sup>69</sup>

<sup>69</sup> Aberdeenshire Council, <https://gis.aberdeenshire.gov.uk/maps/>

## **Appendix B    Geographic extent of Study Area Sub Areas**

B.1.1 For the purpose of reporting selected socio-economic datasets, the study area has been divided into five sub-areas, namely: Peterhead; Fraserburgh; Ellon; Mid Rural, and Rural North. The geographic extent of these areas is shown in the figure below.

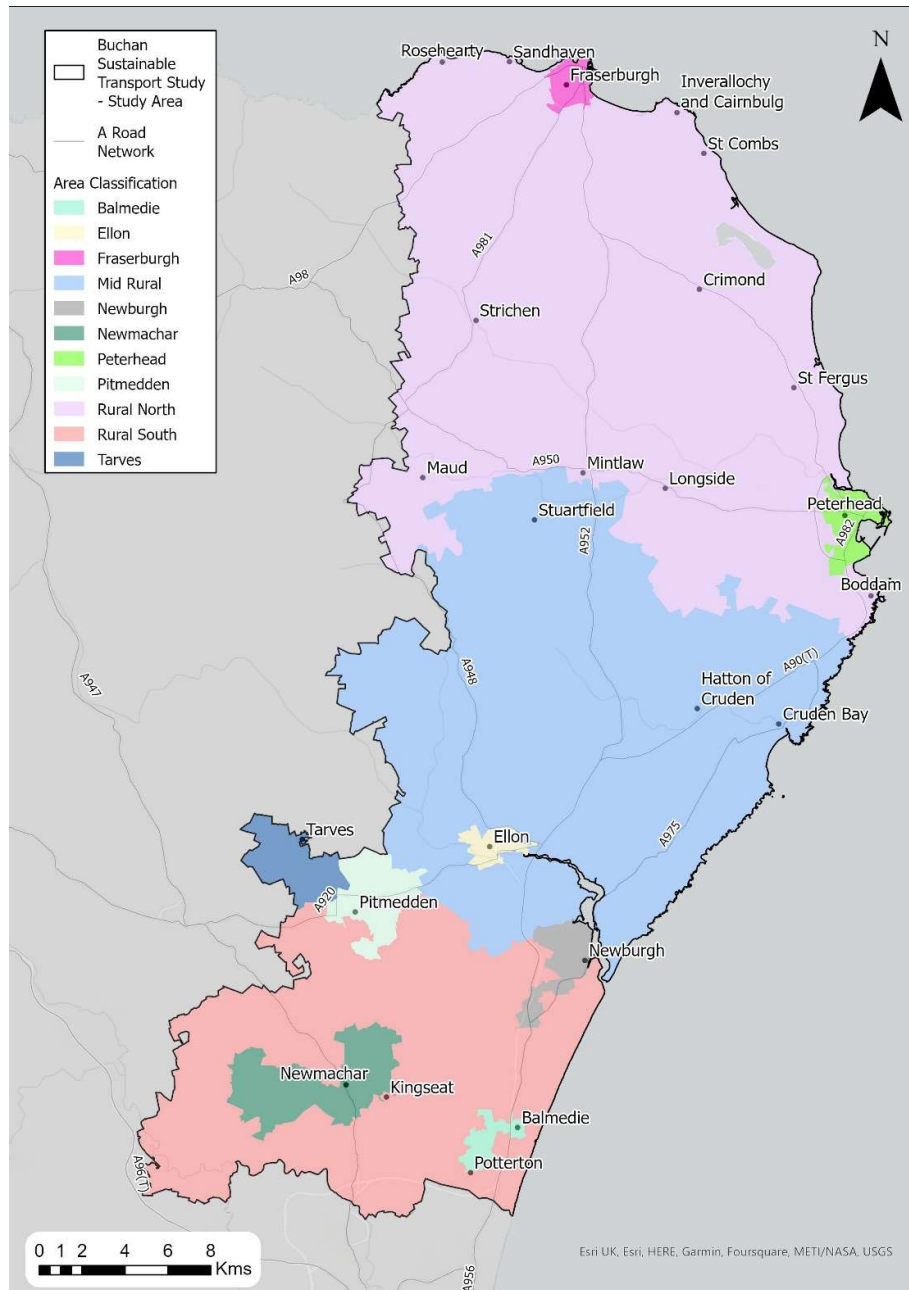
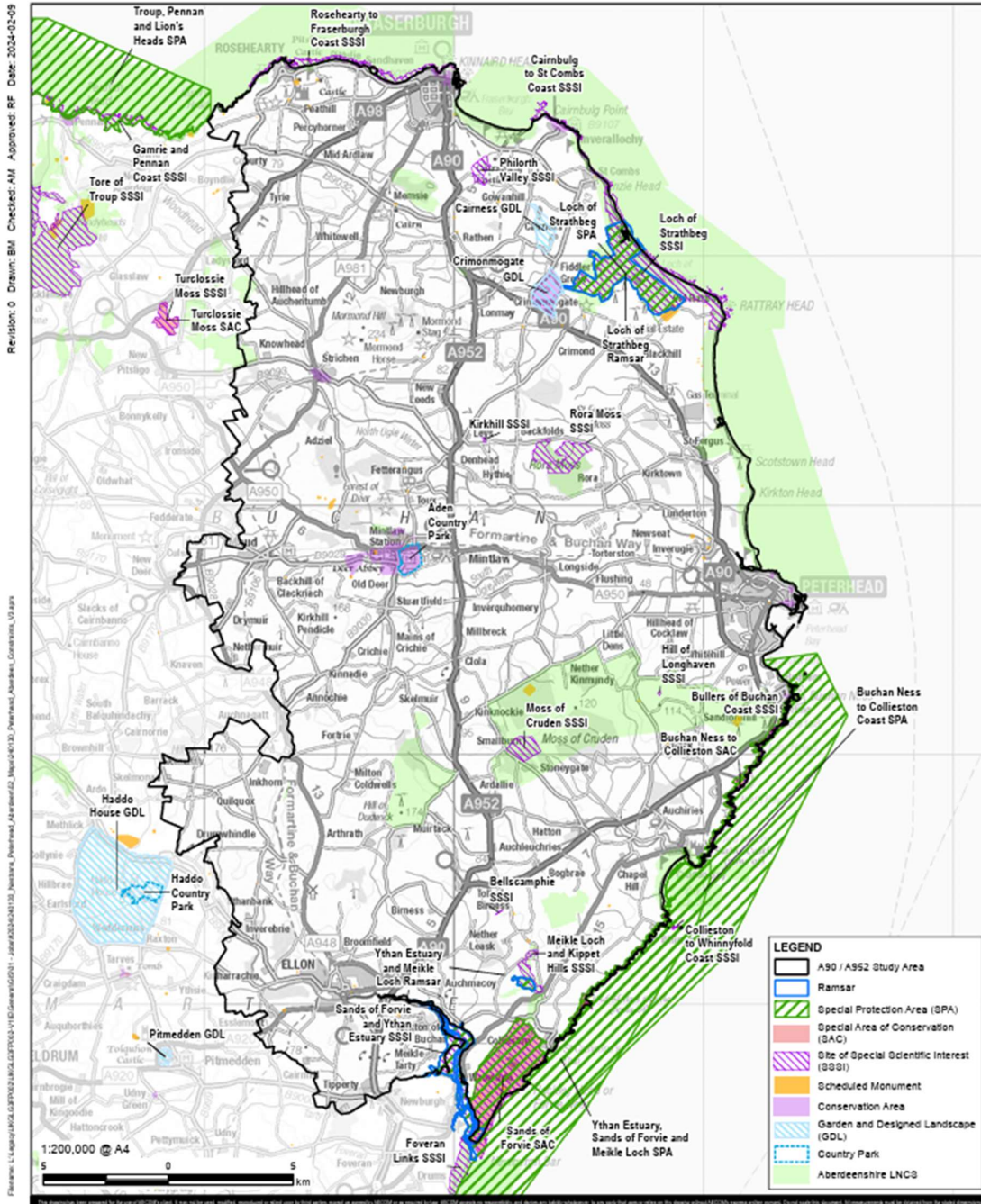


Figure B-1: Geographic extent of Study Area sub areas used in the reporting of selected socio-economic datasets

## **Appendix C   Environmental Constraints Mapping**



**CLIENT**  
 Nestrans

**PROJECT**  
 A90/A952 STAG Study

**PROJECT NUMBER**  
 60716023

**ISSUE PURPOSE**  
 DRAFT

**FIGURE TITLE**  
 Environmental Constraints

**FIGURE NUMBER**  
 Figure 1

**NOTES**  
 Reproduced from Ordnance Survey digital map data © Crown copyright 2023. All rights reserved. Licence number 0100031673  
 Contains public sector information licensed under the Open Government Licence v3.0.

**CONSULTANT**  
 AECOM Limited  
 177 Bothwell Street  
 Glasgow G2 7ER  
 www.aecom.com



## **Appendix D    Recreational Routes**

D.1.1 In addition to NCN1 and the Formartine and Buchan Way, Aberdeenshire Council also promote a number of recreational routes within the Study Area. These are shown in Figure D-1. Of these, the Aberdeenshire Coastal Path is the longest route. This is a waymarked path running along the Aberdeenshire coast from North Water Bridge in the south to Cullen in the north-west. The route forms part of the North Sea Trail, a series of long-distance paths linking 26 regions in Norway, Sweden, Denmark, Germany, the Netherlands, and the UK.

D.1.2 In the Study Area the route is almost continuous (as can be seen in Figure D-1), except for one section between Winnyford and Collieston, however, the surface of the path varies greatly along the length with sections of un-surfaced paths and beach walks.

D.1.3 There are also a number of recreational routes within the Study Area. These routes are intended to cater for all ages and abilities and generally follow quiet roads as well as sections of the Formartine and Buchan Way.

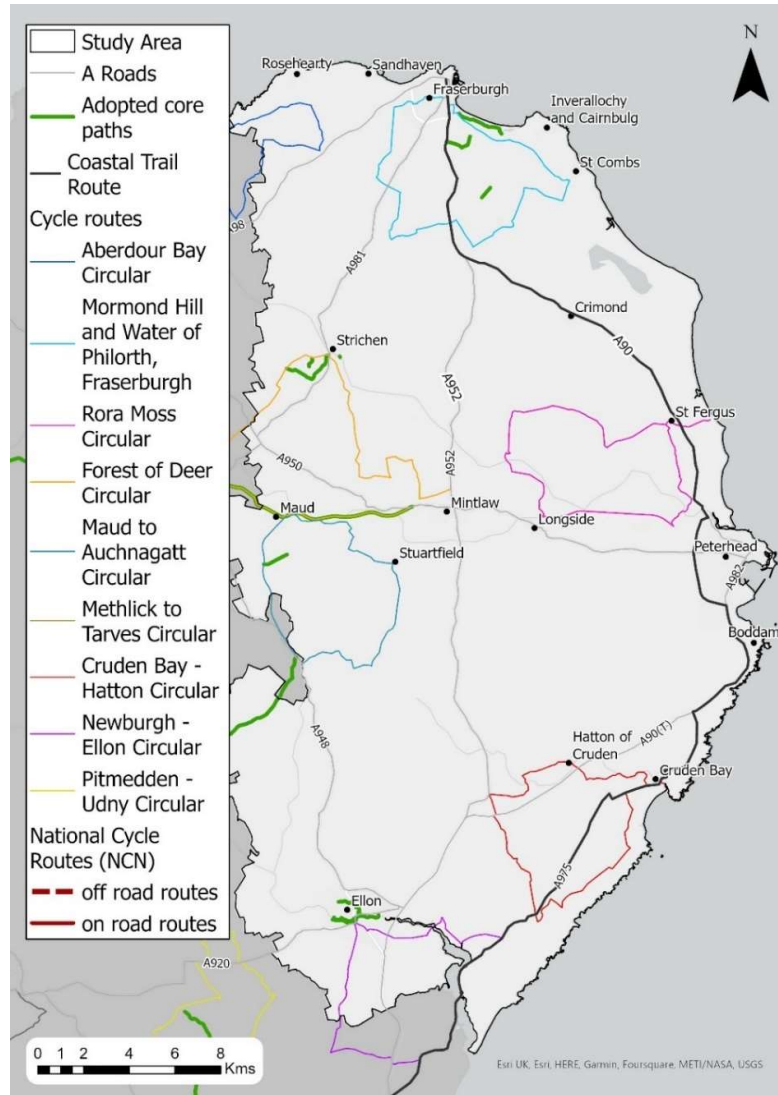


Figure D-1: Recreational Active Travel Routes within the Study Area

## Appendix E Bus Journey Time Variability

E.1.1 Bus journey time variability has been determined from Automated Vehicle Location (AVL) data for the following weekday bus services<sup>70</sup> departing between 7am and 7pm:

Table E-1: Selected Bus Services

Service	Route	Start Point	End Point
61	Ellon to Peterhead	Ellon Logie Road	Windmill Street, Peterhead
	Peterhead to Ellon	Windmill Street, Peterhead	Ellon Logie Road
69	Peterhead to Crimond	Back Street, Peterhead	Upper Broadsheds, Crimond
	Crimond to Peterhead	Upper Broadsheds, Crimond	Community Centre, Peterhead
X60	Ellon to Peterhead	Ellon Logie Road	Windmill Street, Peterhead
	Peterhead to Ellon	Windmill Street, Peterhead	Ellon Logie Road
X63	Longhaven to Peterhead	Post Office, Longhaven	Windmill Street, Peterhead
	Peterhead to Longhaven	Windmill Street, Peterhead	Post Office, Longhaven
X67	Ellon to Fraserburgh	Ellon Logie Road	Bus Station, Fraserburgh
	Fraserburgh to Ellon	Bus Station, Fraserburgh	Ellon Logie Road
X68	Ellon to Mintlaw	Ellon Logie Road	Nether Aden Rd, Mintlaw
	Mintlaw to Ellon	Nether Aden Rd, Mintlaw	Ellon Logie Road

E.1.2 The box and whisker plots below show the dispersion of bus journey times during the AM (7am-11am), IP (11am-4pm) and PM (4pm-7pm) periods for each bus service.

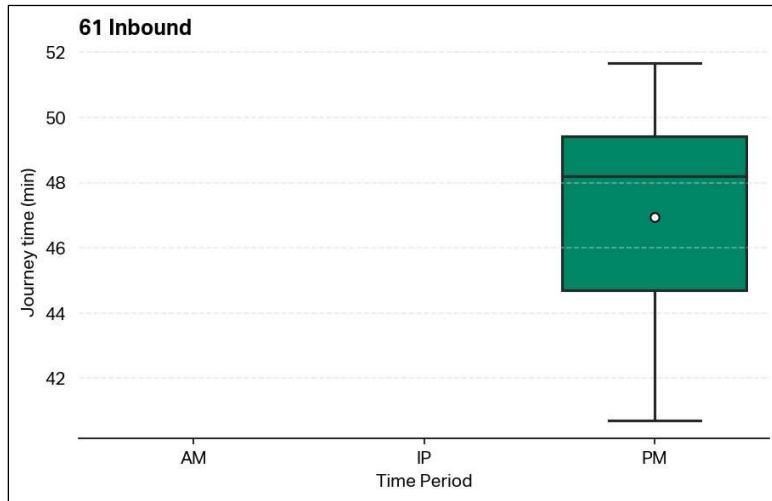
E.1.3 The interquartile range is shown, with the bottom and top of the whiskers showing the minimum and maximum journey times and the bottom and top of the green box indicating the range within which 50% of journey times fall. The median journey time (black line), the average journey time (white dot), the whiskers and the outliers<sup>71</sup> (black diamond marker) are also shown.

E.1.4 The box plots are supplemented with tables showing average journey time, standard deviation, and Coefficient of Variation. The standard deviation is a measure of how dispersed journey times are relative to the mean journey time, and the Coefficient of Variation shows the extent of the variability in the journey times compared with the average journey time to allow a comparison between routes and times of day. A coefficient of zero (or 0%) would indicate no variation in journey times and a coefficient of 1 (or 100%) would indicate a high level of variation in journey times.

<sup>70</sup> Weekdays taken from a 3-week period from 14<sup>th</sup> November to 2<sup>nd</sup> December 2022

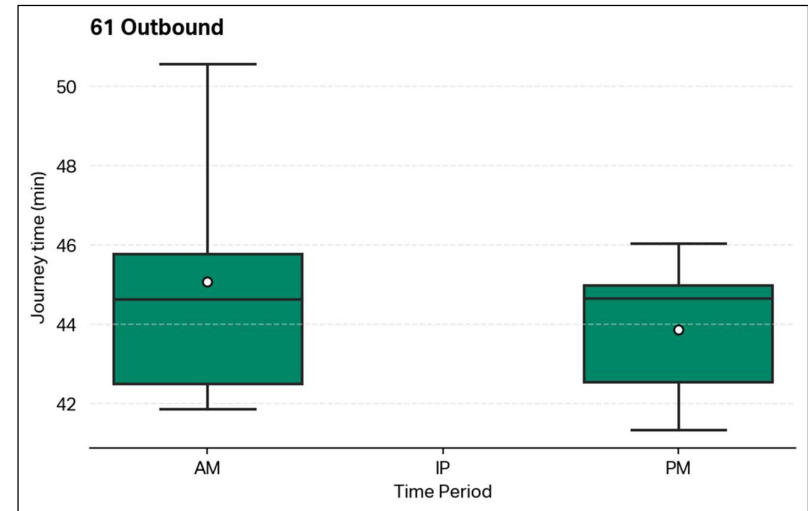
<sup>71</sup> Defined as points outside the whiskers

**Service 61: Ellon to Peterhead (via Cruden Bay)**



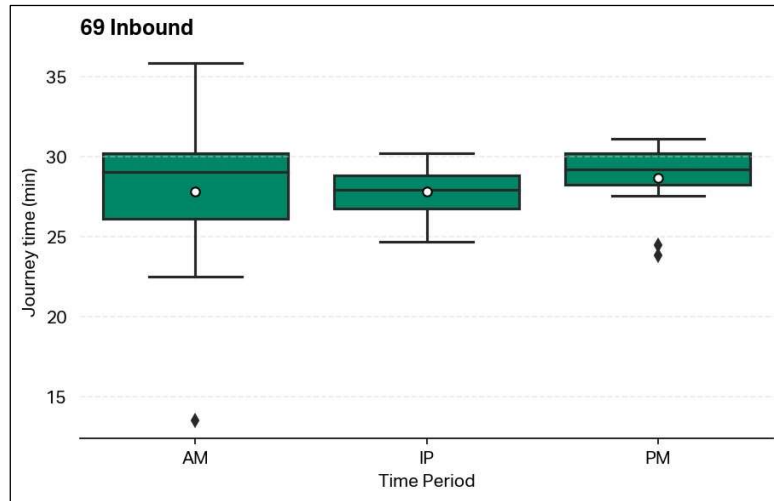
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM			
IP			
PM	46.9	3.4	7%

**Service 61: Peterhead to Ellon (via Cruden Bay)**



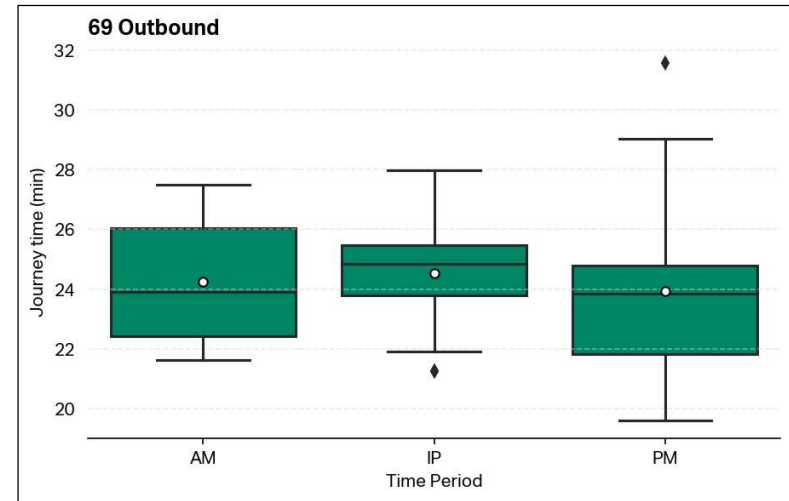
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	45.1	3.5	8%
IP			
PM	43.9	1.7	4%

### Service 69: Peterhead to Crimond



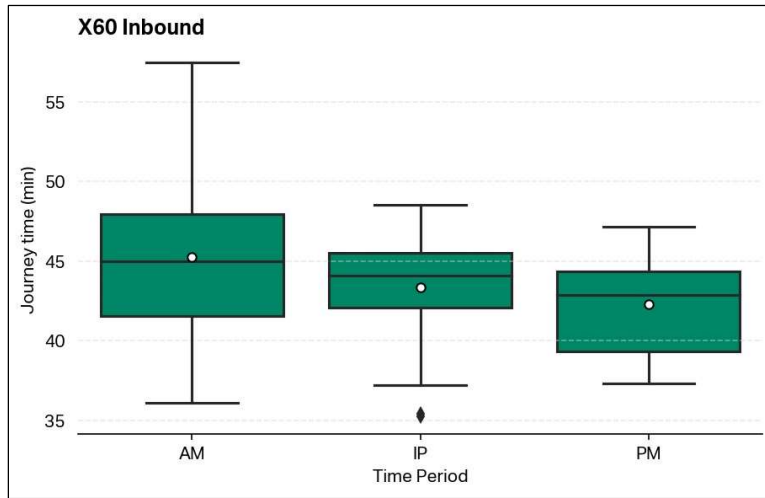
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	27.8	4.9	18%
IP	27.8	1.4	5%
PM	28.6	2.3	8%

### Service 69: Crimond to Peterhead



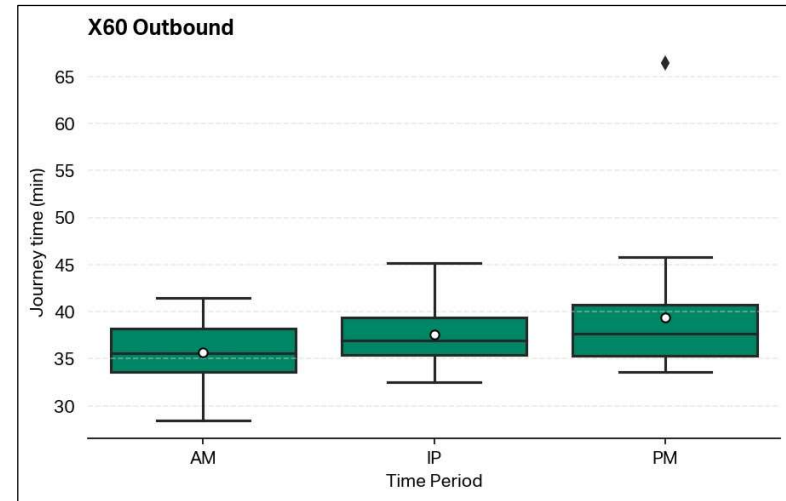
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	24.3	2.0	8%
IP	24.5	1.8	7%
PM	23.9	3.2	13%

### Service X60: Ellon to Peterhead



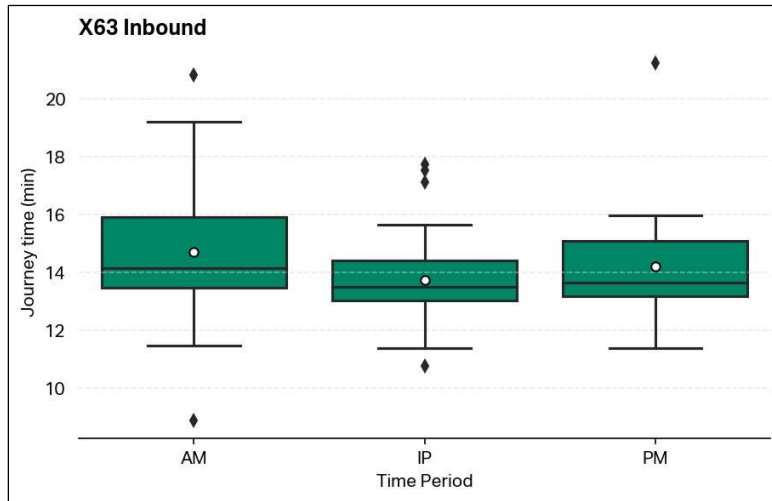
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	45.3	5.0	11%
IP	43.3	3.2	7%
PM	42.3	3.4	8%

### Service X60: Peterhead to Ellon



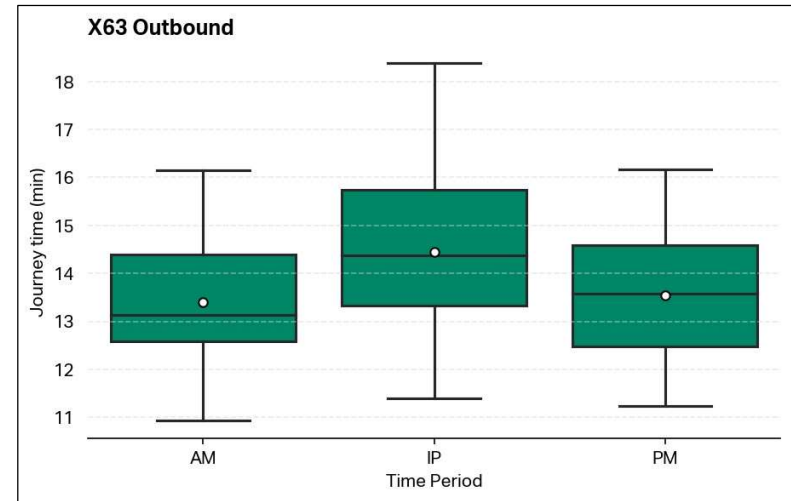
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	35.7	3.0	8%
IP	37.6	3.1	8%
PM	39.4	7.2	18%

### Service X63: Longhaven to Peterhead



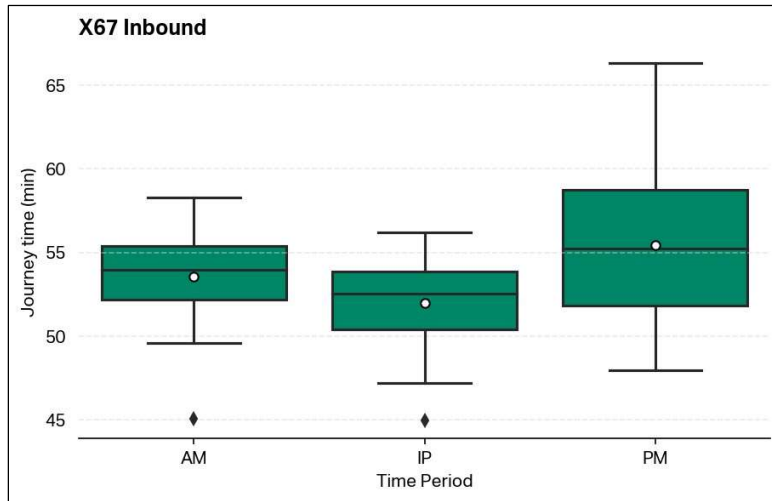
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	14.7	2.4	16%
IP	13.7	1.6	12%
PM	14.2	2.4	17%

### Service X63: Peterhead to Longhaven



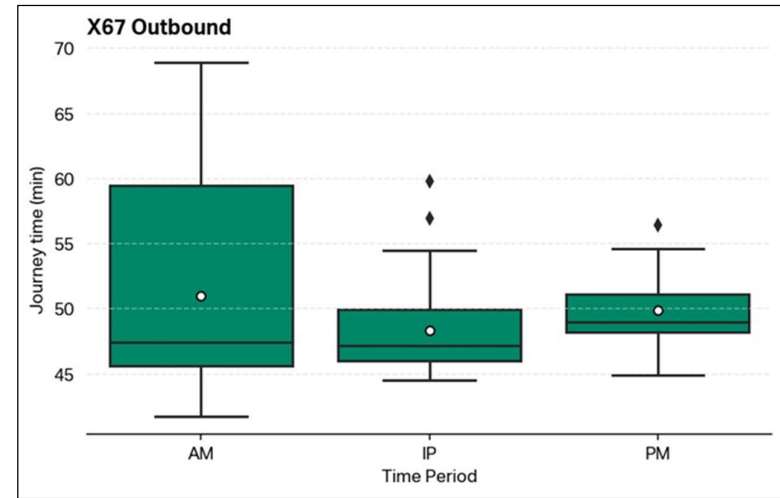
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	13.4	1.4	10%
IP	14.5	1.7	12%
PM	13.5	1.4	10%

### Service X67: Ellon to Fraserburgh



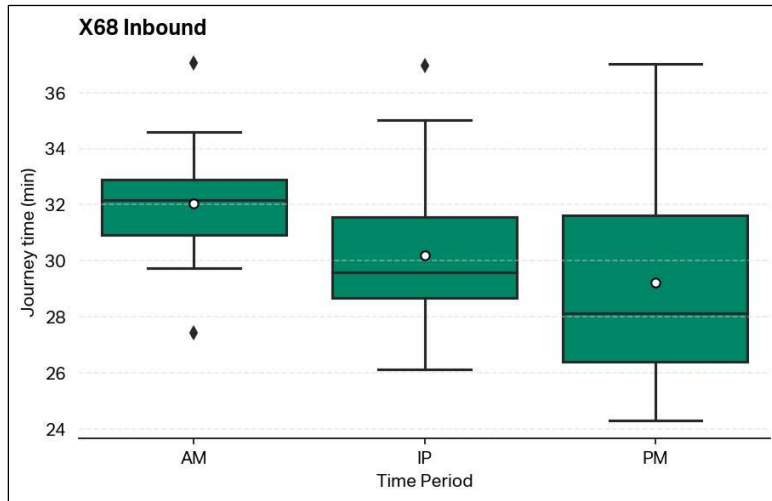
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	53.5	3.0	6%
IP	52.0	2.6	5%
PM	55.5	5.2	9%

### Service X67: Fraserburgh to Ellon



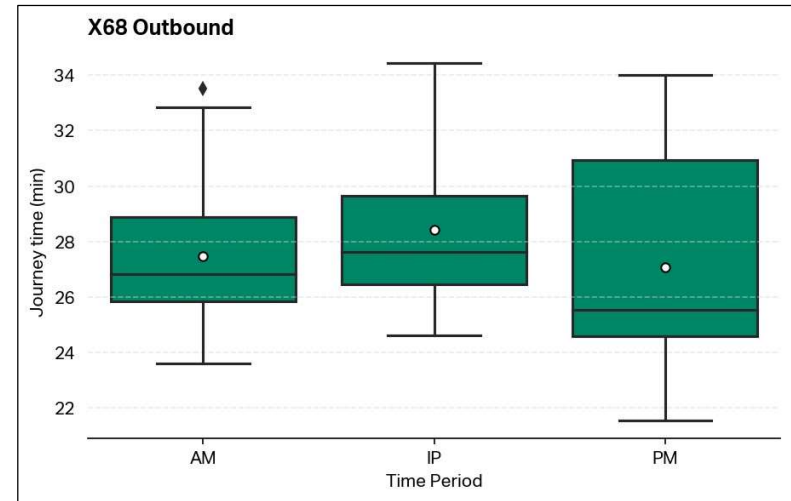
Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	51.0	7.5	15%
IP	48.4	3.8	8%
PM	49.9	3.1	6%

**Service X68: Ellon to Mintlaw**



Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	32.1	2.0	6%
IP	30.2	2.4	8%
PM	29.2	3.5	12%

**Service X68: Mintlaw to Ellon**



Time Period	Average Time (mins)	Standard Deviation	Coefficient of Variation
AM	27.5	2.7	10%
IP	28.4	2.8	10%
PM	27.1	4.0	15%

## **Appendix F    Ellon Park and Ride Survey**

F.1.1 An accumulation car park survey at, and face-to-face interviews with users of, Ellon P&R were undertaken in October 2019 between 07:00 and 14:00 on behalf of Nestrans.

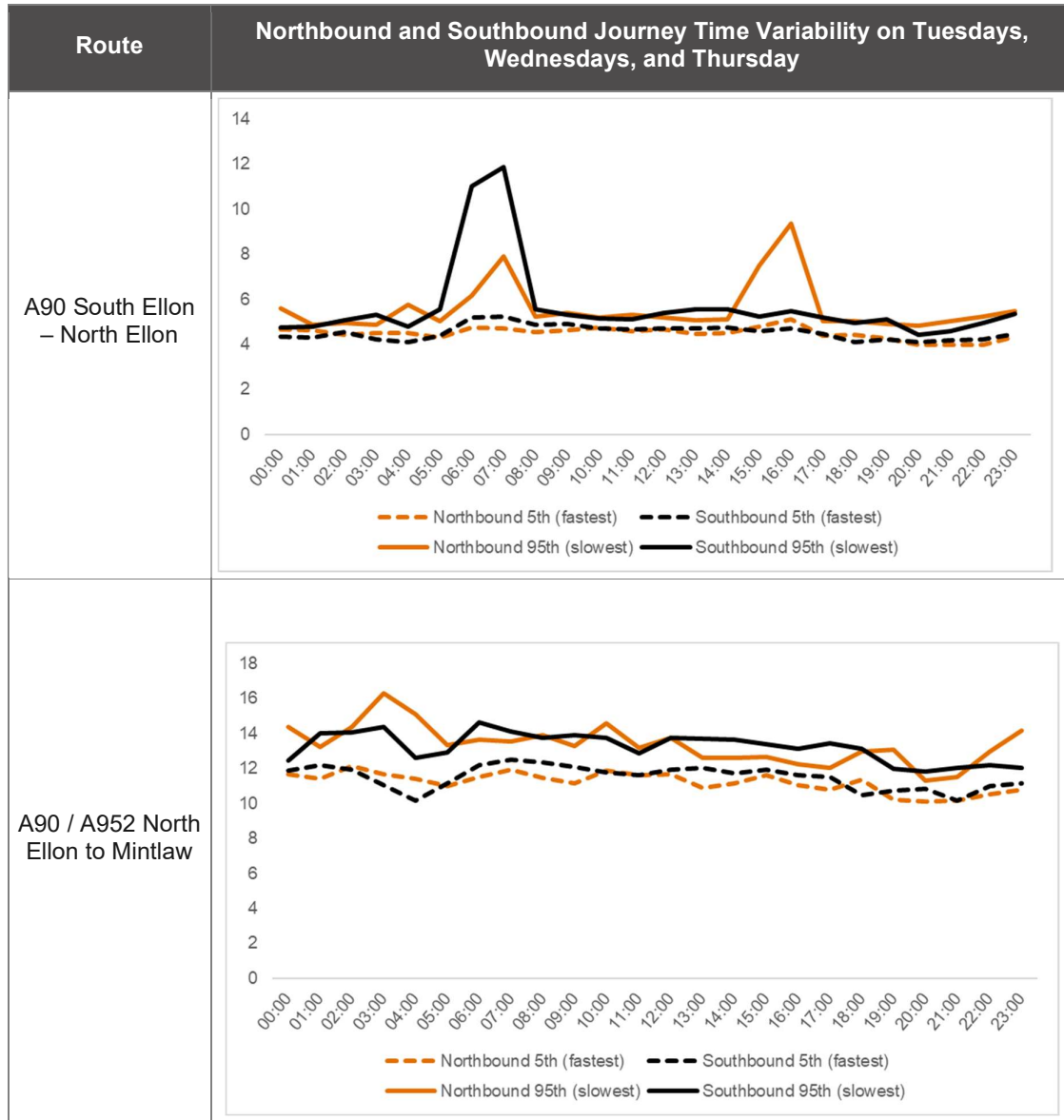
F.1.2 The questionnaire consisted of eight questions as follows:

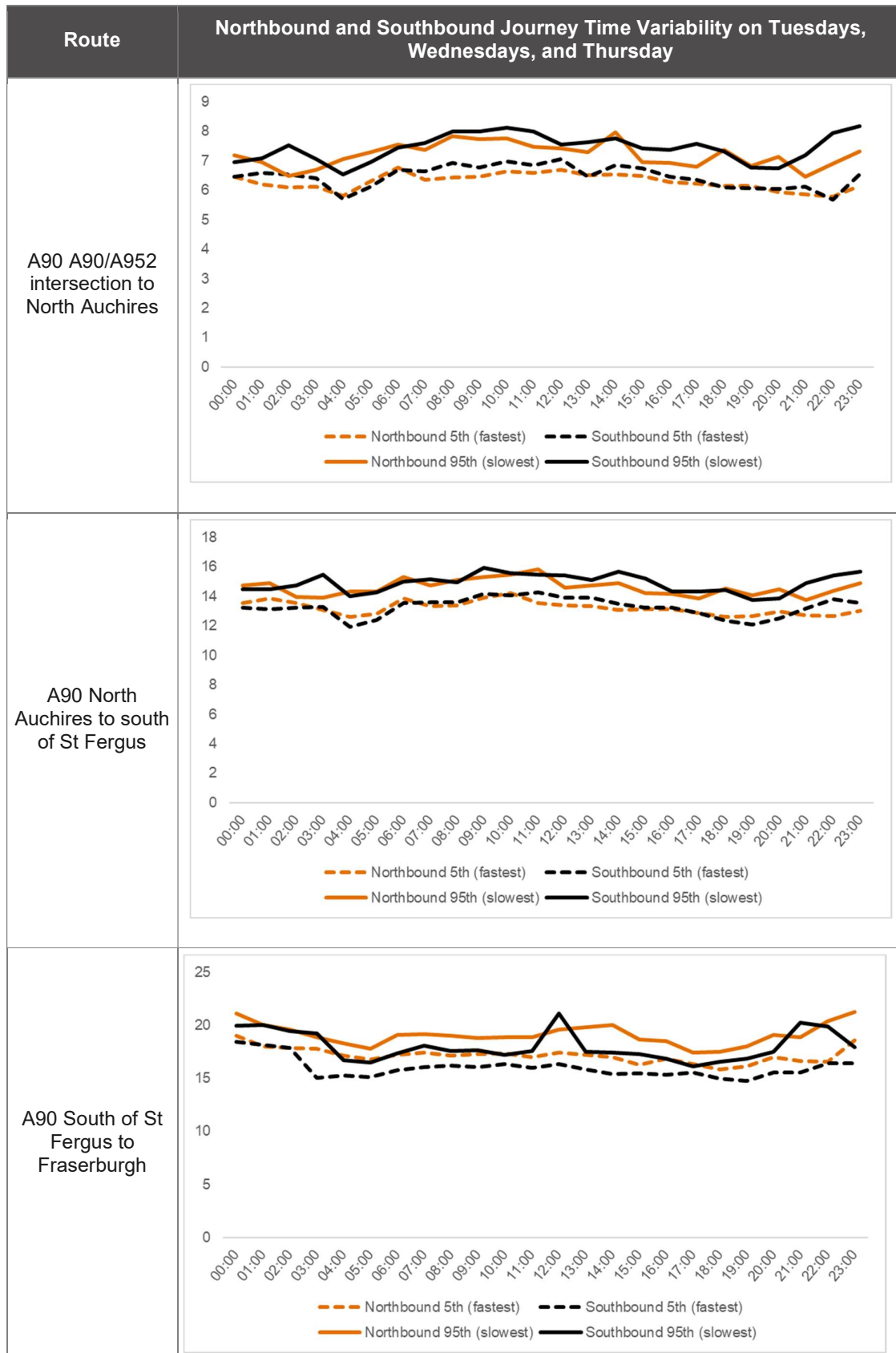
- Why are you travelling today?
- Where have you just come from?
- Where did you start this journey?
- How did you get to the Park & Ride site?
- What is your destination?
- Where will you finish this journey?
- What method do you intend to use to get there from the bus stop/station?
- Do you have a National Entitlement Card (free bus travel)?

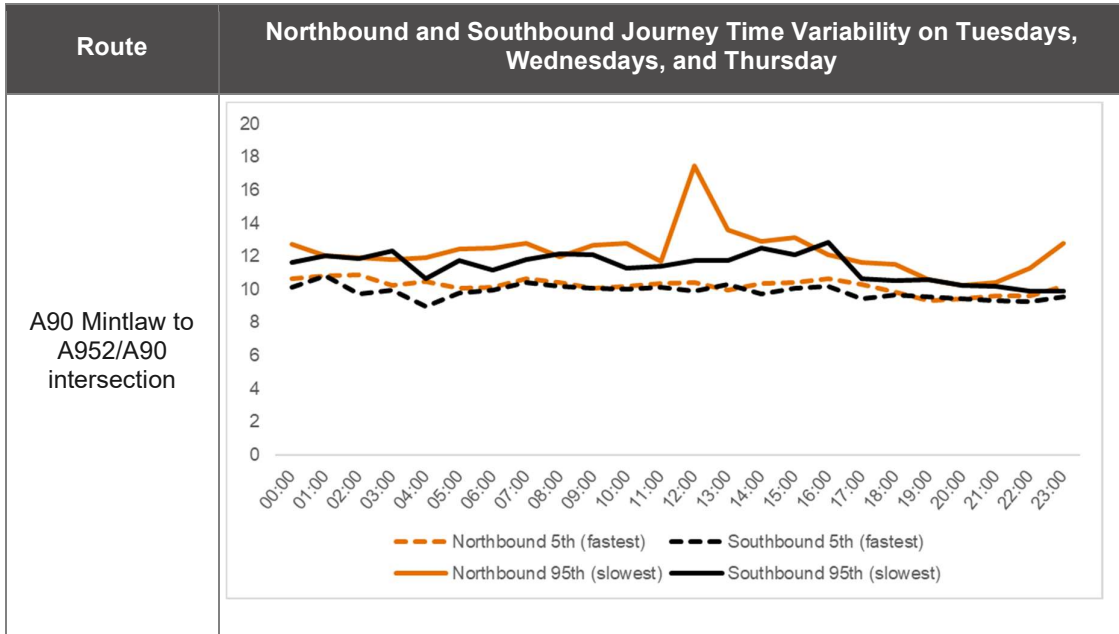
F.1.3 In total, 91 responses were received. Key findings included:

- 42% (n=38) of respondents stated that they were using the P&R to travel for leisure / shopping, while another 42% (n=38) stated that they were travelling for work. Other responses included business (1%, n=1) and education (13%, n=12), as well as holiday (2%, n=2).
- 94% (n=75) of respondents had begun their journeys to the P&R from their homes and another 3% (n=2) started at their normal workplaces. The remaining 4% (n=3) of respondents said they had just come from a shop / leisure attraction.
- 68% (n=54) of respondents travelled to the P&R by car (single occupancy) and 6% (n=5) were passengers who were dropped off in cars. 13% (n=10) were dropped off by taxi and the remaining respondents travelled by bus (9%, n=7) and active travel (4%, n=3).
- 39% (n=31) of respondents said their destination was their normal workplace while 1% (n=1) stated that it was another workplace. 38% (n=30) stated their destination was a shop, leisure attraction or appointment and 11% (n=9) were going to school, college, or university. 3% (n=2) were going home from the P&R and other destinations included the airport (8%, n=6)
- 84% (n=66) of respondents intended on walking or cycling to their final destinations one they got off the bus from the P&R site, with 15% (n=12) stating that they would take another bus.
- 45% (n=37) of respondents had a NEC for free bus travel

## Appendix G Journey Time Variability







## Appendix H Platoon Analysis

H.1.1 The platoon analysis has been carried out on nine of 13 ATC sites, shown in Figure H-1. The four other sites have been considered to be too close to junctions and therefore not suitable for this analysis.



Figure H-1: ATC site locations

- H.1.2 The length distribution is shown in terms of the number of platoons and the number of vehicles in each platoon length category in Figures H-2 and H-3, respectively. The figures show the proportion of all vehicles travelling in a platoon that are travelling in a platoon of a certain length (e.g. Platoon Length (2) over the sum of Platoon greater than 2 and so on).

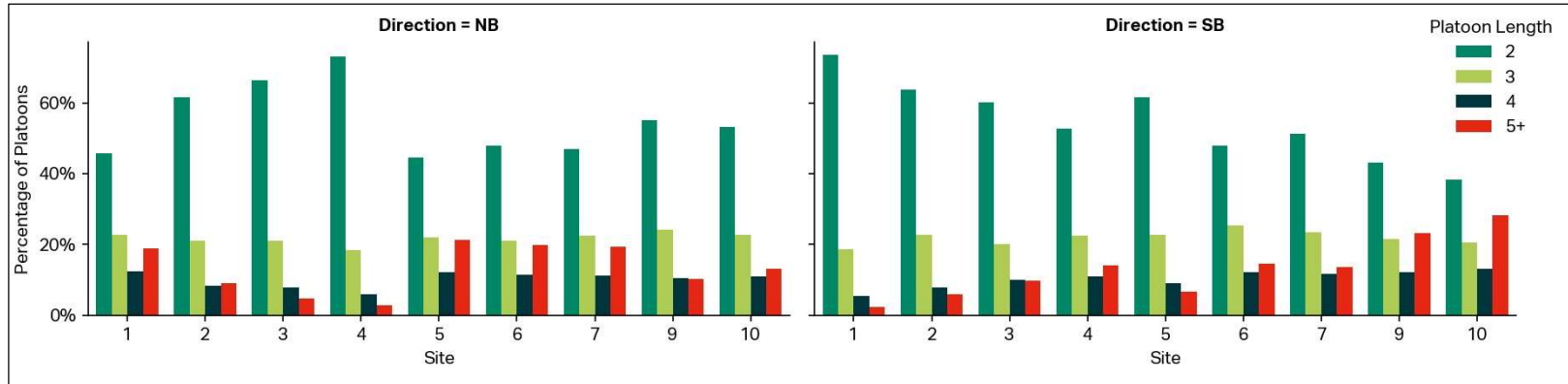


Figure H-2: Platoon Length Distribution, Percentage of Platoons in Platoon Length Category, Northbound and Southbound directions

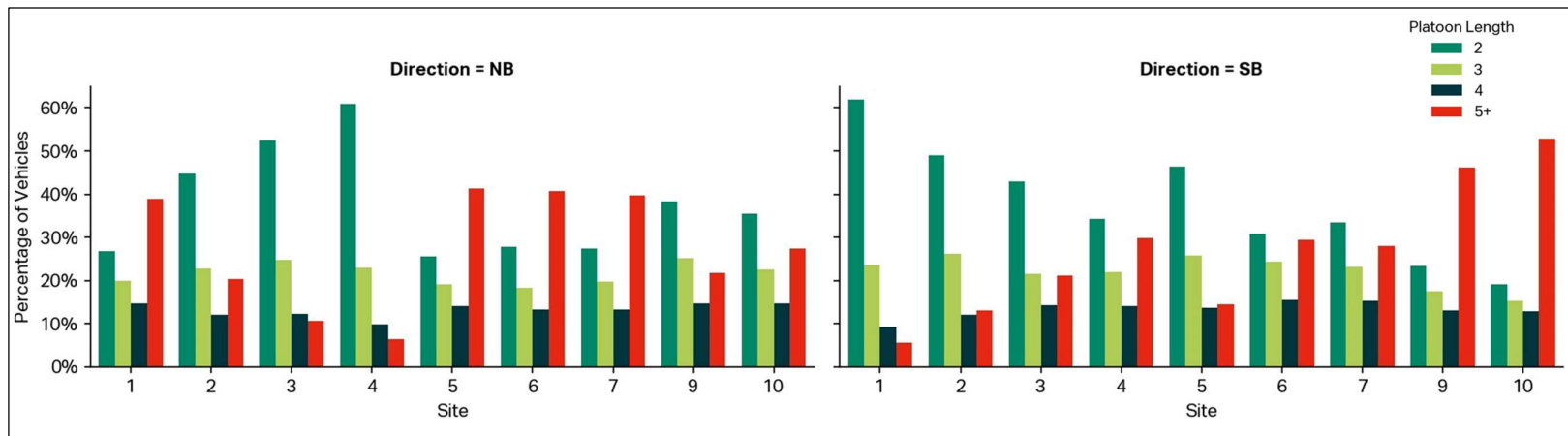


Figure H-3: Platoon Length Distribution, Percentage of Vehicles in Platoon Length Category, Northbound and Southbound directions

H.1.3 Figure H-4 shows the influence of slow-moving vehicles on platoon length.

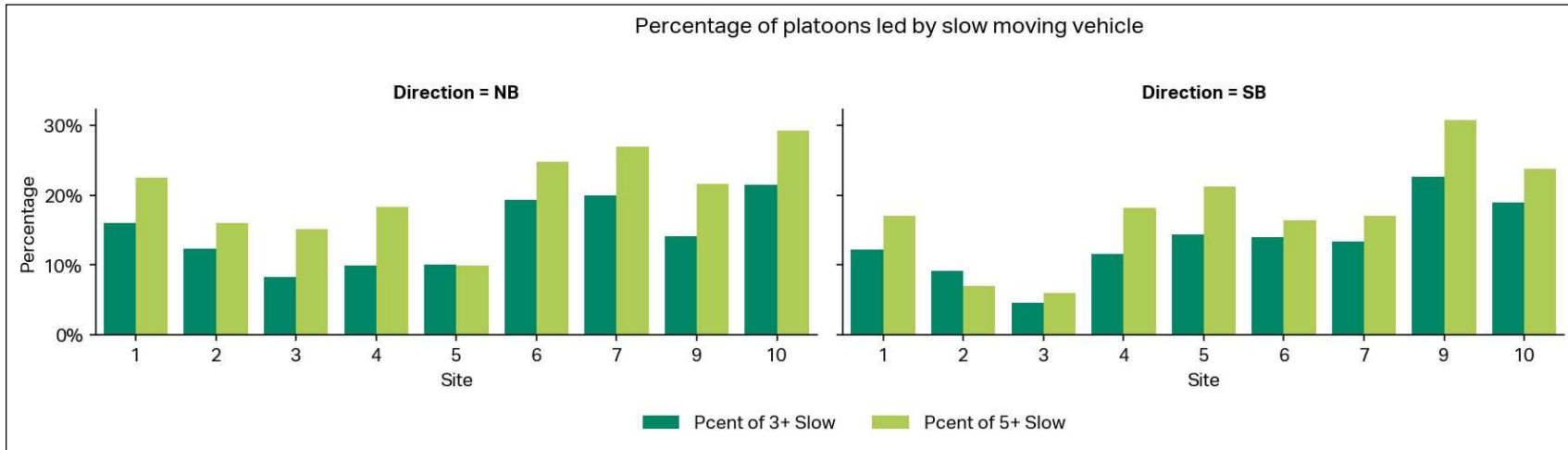


Figure H-4: Percentage of Platoon Led by Slow Moving Vehicles

- H.1.4 Except for Site 2 (A90 South of Crimond) in the southbound direction and Site 5 (A90 south of Peterhead) in the northbound direction, the percentage of platoons led by slow moving vehicles was higher for platoons consisting of five or more vehicles (denoted by light green bars) than for platoons with three or more vehicles (denoted by the dark green bars). Between 5% and 23% of platoons consisting of three or more vehicles were led by slow moving vehicles, while the proportion for platoons consisting of five or more vehicles varied between 6% and 31% depending on site and direction.
- H.1.5 Site 9 (A90 North of Toll of Birness) and Site 10 (A90 South of Toll of Birness) in both directions show the highest proportion of platoons with a slow-moving leader.

H.1.6 The analysis presented in Table H-1 and Table H-2 is focused on platoons that are made up of three or more vehicles (Table H-1) and five or more vehicles (Table H-2). It is likely that these longer platoons have had a greater influence on the reported lack of safe overtaking opportunities and driver frustration in the area.

Table H-1: Summary of Key Statistics, Platoons with 3 or More Vehicles

Time Period 24 hrs							
Site	Section	Direction	Avg. No. of Platoons per hour (3+)	% of All Vehicles in Platoon (3+)	Avg. Speed of Platoon Leader (mph) (3+)	Speed Difference (mph) (3+) Compared with Free-Flowing Traffic	% Platoons Led by a Slow-Moving Vehicle (3+)
1	A90 South of Fraserburgh	NB	19	52%	52.2	-5.4	16%
		SB	8	16%	50.4	-3.5	12%
2	A90 South of Crimond	NB	7	28%	47.3	-4.3	12%
		SB	7	23%	50.4	-2.4	9%
3	A952 North Street Mintlaw	NB	10	22%	36.8	-3.3	8%
		SB	12	31%	34.4	-2.7	5%
4	A90 North of Peterhead	NB	7	16%	30.3	-2.7	10%
		SB	14	40%	30.5	-2.9	12%
5	A90 South of Peterhead	NB	33	56%	40.5	-4.0	10%
		SB	23	31%	41.1	-4.3	14%
6	A90 North of Longhaven	NB	21	49%	45.4	-5.0	19%
		SB	25	50%	44.8	-3.8	14%
7	A90 South of Hatton	NB	20	50%	49.3	-3.9	20%
		SB	19	43%	49.3	-3.9	13%
9	A90 North of Toll of Birness	NB	19	40%	55.7	-4.1	14%
		SB	21	55%	51.9	-5.8	23%
10	A90 South of Toll of Birness	NB	33	42%	52.1	-5.7	21%
		SB	39	65%	46.7	-1.6	19%

Table H-2: Summary of Key Statistics, Platoons with 5 or More Vehicles

Time Period 24 hrs								
Site	Section	Direction	Avg. No. of Platoons per hour (5+)	% of All Vehicles in Platoon (5+)	Max Platoon size	Avg. Speed of Platoon Leader (mph) (5+)	Speed Difference (mph) (5+) Compared with Free-Flowing Traffic	% Platoons Led by a Slow-Moving Vehicle (5+)
1	A90 South of Fraserburgh	NB	7	28%	24	49.9	-7.6	23%
		SB	1	2%	11	48.6	-5.4	17%
2	A90 South of Crimond	NB	2	10%	16	46.8	-4.8	16%
		SB	1	6%	12	49.7	-3.1	7%
3	A952 North Street Mintlaw	NB	1	5%	13	35.7	-4.3	15%
		SB	3	12%	14	34.0	-3.1	6%
4	A90 North of Peterhead	NB	1	3%	10	29.6	-3.5	18%
		SB	4	18%	18	29.4	-4.0	18%
5	A90 South of Peterhead	NB	13	31%	21	39.6	-5.0	10%
		SB	4	8%	15	39.7	-5.7	21%

Time Period 24 hrs								
Site	Section	Direction	Avg. No. of Platoons per hour (5+)	% of All Vehicles in Platoon (5+)	Max Platoon size	Avg. Speed of Platoon Leader (mph) (5+)	Speed Difference (mph) (5+) Compared with Free-Flowing Traffic	% Platoons Led by a Slow-Moving Vehicle (5+)
6	A90 North of Longhaven	NB	8	27%	25	44.0	-6.4	25%
		SB	7	21%	24	43.3	-5.3	16%
7	A90 South of Hatton	NB	7	27%	22	47.8	-5.4	27%
		SB	5	18%	18	47.4	-5.7	17%
9	A90 North of Toll of Birness	NB	4	14%	15	53.4	-6.3	22%
		SB	9	33%	34	49.6	-8.1	31%
10	A90 South of Toll of Birness	NB	9	18%	20	50.2	-7.6	29%
		SB	18	42%	33	46.1	-2.3	24%

## Limitations and Assumptions

### Site context

- H.1.7 The ATC data sample includes the information required to undertake the platoon analysis i.e. time stamp to the nearest second, speed and vehicle class but they are not usually chosen with platooning in mind. To further evidence if there are constraints on overtaking opportunities caused by site constraints e.g. road bends and forward visibility, an engineering analysis of individual site locations would be required.
- H.1.8 Conclusions drawn from ATC surveys regarding platooning are uncertain. The analysis undertaken using the ATC data is limited to providing an indication that there could be a problem but on its own does not provide unequivocal evidence because:
- It can be difficult to distinguish platoons from busy roads.
  - ATC data is 'point' data and therefore provides no indication of the level of overtaking that has taken place. Alternative survey methods such as Automatic Number Plate Recognition (ANPR) surveys would be required to track individual vehicles and measure overtaking.

### Time periods

- H.1.9 The results are presented over 24 hours. Peak periods have not been reported because a high percentage of vehicles moving in a platoon during peak periods is more likely to indicate a busy road than platooning.

### Slow moving vehicles

- H.1.10 Driver frustration research has shown that speed differential is a key metric when measuring frustration and the adverse impact of platooning. However, there is a body of work (through the evaluation of the 50mph speed limit for large HGVs) that shows that the speed differential between many HGVs and general traffic is actually relatively small on single carriageway roads. The definition of slow-moving classes has therefore been based on average speeds by vehicle type. Two axle rigid HGVs were not classed as slow-moving as the analysis showed no negative speed differential compared with LGVs.

## **Appendix I     Stakeholder Meetings**

I.1.1 Several stakeholder / stakeholder groups were invited to individual one-to-one or group meetings via Microsoft Teams to discuss the projects. A full list of the stakeholders involved is included in the table below along with a summary of the topics explored in each meeting.

Type	Organisation	Topics explored
Business	ASCO	<ul style="list-style-type: none"> <li>Background to business and activities undertaken in the study area</li> <li>How supplies and products are currently transported, and problems experienced</li> <li>Future plans and degree to which current transport provision is supporting / hindering growth</li> </ul>
	Brewdog	
	NECCUS	
	Peterhead Port	
	Peterson Global	
	Russell's Logistics	
	CILT Rail Freight Forum	
	Storegga	
	Thistle Seafoods	
	Mackies	
	International Fish Cannery	
	P&J Live	
Aberdeen Football Club		
Transport Operators	Fraserburgh Harbour	<ul style="list-style-type: none"> <li>the activities undertaken at the harbour / port and aspirations for the future</li> <li>where and how produce is transferred to / from the harbour / port</li> </ul>
	Peterhead Port	<ul style="list-style-type: none"> <li>transport problems and the impact of these on harbour / port activities, future plans, and the regeneration priorities for the area</li> </ul>
	Stagecoach	<ul style="list-style-type: none"> <li>recent changes in service provision</li> <li>transport problems and the impact of these problems on bus operations</li> </ul>
Government Agency	Aberdeenshire Council planning and transport teams	<ul style="list-style-type: none"> <li>transport problems and the impact of these problems on development, business needs, and the economic vitality of the area</li> </ul>
	Amey (Infrastructure Delivery Partner)	<ul style="list-style-type: none"> <li>the road safety review process and relevant sites identified in 2023 Road Safety Report</li> <li>Future plans with respect to safety on the corridors</li> </ul>
	Scottish Ambulance Service	<ul style="list-style-type: none"> <li>transport problems and the impact of these problems on operations</li> </ul>

Type	Organisation	Topics explored
	Transport Scotland	<ul style="list-style-type: none"> <li>transport problems and the impact of these on development</li> <li>development applications in the study area</li> </ul>
Education establishments	Mintlaw, Fraserburgh and Peterhead Academies	<ul style="list-style-type: none"> <li>whether current public transport provision impacts on what students are planning to do after school and, particularly, their higher/further education choices</li> </ul>
	North East Scotland College (Nescol)	
	Robert Gordon University	<ul style="list-style-type: none"> <li>travel patterns of students and staff attending the establishment</li> <li>transport problems and the impact of these problems</li> <li>extent to which transport problems impact access to education</li> </ul>
	University of Aberdeen	
Tourism	Visit Aberdeenshire	<ul style="list-style-type: none"> <li>visitor numbers and aspirations for the area</li> <li>transport problems and the impact of these problems</li> </ul>

## Appendix J Schools Engagement Findings

Stakeholder	Key Findings
<b>Fraserburgh Academy Pupils</b>	<ul style="list-style-type: none"> <li>For those travelling to Aberdeen for university, a rail link would be beneficial; as this would save having to take the car back every week (bus was said not to be reliable).</li> <li>Another pupil moving to Aberdeen stated that although a lot of people in their group of friends can drive, the LEZ will make it more difficult to drive in the city centre with a diesel car. It was also noted that the bus lanes in Aberdeen are a disincentive to driving.</li> <li>Some pupils live outside Fraserburgh e.g. in Rosehearty so driving is important, but it is expensive to do so, especially when considering the cost of insurance.</li> <li>Some noted the cost of rail could be a barrier to using it.</li> <li>Noted that only Stagecoach cover this area – lack of competition leads to issues with service provision.</li> <li>Several issues with junctions – the Cortes junction is badly lit – dualling from Mintlaw would be beneficial.</li> <li>Toll of Birness is also difficult to navigate – when turning off the A90, the road is poorly lit, and it can be difficult to see clearly in bad weather.</li> </ul>
<b>Mintlaw Academy Pupils</b>	<ul style="list-style-type: none"> <li>One pupil will be staying in Aberdeen and will be working in the city in the summer. Transport is the big issue to consider – lives in Stuartfield, which only has one bus a day.</li> <li>Another pupil stated they would be going to Edinburgh to go to university and that local transport has played a role in this decision-making. It would be more appealing to study in Aberdeen if it was easier to get to it from the Buchan region.</li> <li>Buses were said to be unreliable especially after changes to the timetable – rail is perceived to be more reliable.</li> <li>Another pupil noted that they do not like driving into Aberdeen, so would travel by rail if it was an option (noted that the bus service has issues).</li> <li>Learning to drive is expensive – rail would be cheaper than having to pay for fuel etc.</li> <li>Being in a village can increase feelings of peripherality – traditional rail lines previously covered these areas such as Maud, etc.</li> <li>Accessibility to Mintlaw in general considered to be a problem, particularly from surrounding areas (short links, and quality of multi-modal links) – back roads are poorly maintained (potholes) and are also not conducive to or safe for cycling.</li> <li>Toll of Birness to Mintlaw road is of poor quality.</li> </ul>
<b>Peterhead Academy Pupils</b>	<ul style="list-style-type: none"> <li>One pupil lives in Cruden Bay – a longer term option for rail could be attractive but noted that driving is currently easier than taking the bus because of reliability concerns.</li> <li>One pupil stated that they would be going to Aberdeen University next year but would stay at home (in Boddam) if the buses offer reliability of journey. Rail would be preferable as journey times would be shorter.</li> <li>Concerns expressed regarding comfort of buses – e.g. cleanliness.</li> <li>Safety perceptions – car perceived to be a safer mode of travel than bus for some e.g. there are concerns about travelling by bus later at night and particular concerns about travelling alone.</li> <li>Real-time bus information is lacking and sometimes you have to “stand and hope for the best” when waiting for the bus.</li> <li>Weather affects resilience of service; some pupils were aware of people struggling to reach university due to bus reliability.</li> <li>Overtaking lanes could lead to a speeding problem – merging can also be dangerous.</li> </ul>

## Appendix K Key Stakeholder Findings

Stakeholder	Key Findings
Aberdeen Football Club	<ul style="list-style-type: none"> <li>Aberdeen Football Club (AFC) is a strong advocate for improving transport links to and from the Buchan area. Improved transport connectivity to the Buchan area would make Pittodrie Stadium significantly more accessible to a large fanbase located in Peterhead and Fraserburgh.</li> <li>AFC is working with Positive Planet to develop a sustainability strategy and transport will be an important part of that. The Club has recently formed partnerships with First Bus and Stagecoach to provide deals for supporters travelling by bus on matchdays, including free bus travel on First Bus services for those within the Aberdeen City boundary and discounted travel on Stagecoach services for further afield origins (such as Peterhead and Fraserburgh). The overall objective is to increase public transport use, both for travel on matchdays and in the everyday lives of supporters.</li> <li>It was noted that existing public transport provision is a barrier for fans and staff accessing Pittodrie sustainably, particularly for night games.</li> <li>It is considered that fans travelling from the Buchan area on matchdays could use a new rail service to Dyce where they could connect to a shuttle bus that takes fans directly to the stadium. Fans could also travel directly into the city centre and connect with free First Bus travel there in line with AFC's partnership agreement for matchdays.</li> <li>It was noted that the provision of a rail service from the Buchan area could also provide benefits for supporters travelling to away games south of Aberdeen as this would allow them to travel by train for the majority of the journey. This would have a positive impact on reducing private car use for away trips, particularly for significant games at Hampden.</li> </ul>
P&J Live	<ul style="list-style-type: none"> <li>It was noted that P&amp;J Live as the pre-eminent venue in the Northeast of Scotland is not as accessible to areas on the study corridor (e.g., Ellon, Peterhead, Fraserburgh) as it should be. For residents wishing to attend any event, and particularly evening entertainment events, the public transport network does not facilitate easy access to the site. Persons travelling to the site often want to attend events, socialise, and drink alcohol. Costs of private transport or overnight stays in local hotels can often make attendance costs prohibitive.</li> <li>At large events, P&amp;J Live has made efforts to provide buses to meet travel demand to areas within the study corridor but it was noted that this is not the most operationally or environmentally sustainable solution.</li> <li>It was noted that P&amp;J Live would be supportive of the introduction of a rail link from the Buchan region to Dyce, particularly as the venue is within walking distance (15-20 mins) of Dyce station. It is considered that the introduction of a rail link would open use of the venue to a wider catchment of people in the region.</li> <li>Though Council-owned, P&amp;J Live has an independent commercial operator. P&amp;J Live is a unique venue supporting a wide range of clients from local businesses to international associations and high-profile entertainment shows. There are benefits for attendees at events too, because better connectivity to conferences etc. raises their profile and expands their network.</li> <li>The venue is located outside the city centre, and it is considered that rail links to the study corridor will provide additional options for activities to venue attendees from outside the Northeast of Scotland. Tourist attractions and other local destinations within the corridor could benefit from increased accessibility to visitors wishing to sample their local wares and industries.</li> <li>The project would support the entertainment side of P&amp;J Live's business to a greater extent than the conferencing/exhibition side of the business, but conferences would also benefit from enhanced transport links.</li> </ul>
Visit Aberdeenshire	<ul style="list-style-type: none"> <li>Visit Aberdeenshire represents both Aberdeen City and Aberdeenshire. Visit Aberdeenshire's remit is primarily to promote the region and drive demand to visit the region and to support businesses to grow to meet that demand. This includes the work of the Aberdeen Convention Bureau who work with P&amp;J Live and the Universities to secure valuable conventions for the city region.</li> </ul>

Stakeholder	Key Findings
	<ul style="list-style-type: none"> <li>• There is a lack of robust data at a regional level regarding where visitors are coming from however VisitAberdeenshire has recently switched to a supply-led model which harvests a range of data points including visitor attractions, hotel bookings and self-catering accommodation (e.g. Airbnb). This gives an idea of volume of value broken down by entertainment and food, but it does not provide the reason for travelling. Tourism is primarily domestic, including people from all over the UK and intra-Aberdeenshire movements.</li> <li>• One of the biggest challenges for visitors is navigating the 'final mile' – in more remote locations, it is more difficult to move around, and the public transport options can be limited. This would help to make the case for public transport improvements.</li> <li>• It was noted that Aberdeen suffers from the perception that it is located far away and is difficult to get to. This perception is therefore exaggerated when considering more rural locations within Aberdeenshire. Visit Aberdeenshire has conducted research into travel tolerance time. The extra hour to travel to the Buchan region is likely to limit the pool of people who are willing to travel and therefore if journey times can be reduced, there is a new market of people who could potentially travel there.</li> <li>• The above is particularly important in the case of potentially facilitating day trips from Aberdeen to destinations into Aberdeenshire; if it is not simple and easy to get to and from a destination in a day without a car, then visitors are less likely to do it. It was suggested that this is where train has an advantage over bus as it is generally easier to understand to visitors.</li> <li>• The popularity of Peterhead Prison Museum was emphasised, and it was noted that there may be capacity for this to be scaled up in future (subject to the ambition of the museum itself)</li> <li>• Speed and convenience are considered to be the key factors in decision making around mode choice for visitors, with sustainable travel a lower priority, though it was recognised that perceptions could be different in the future.</li> <li>• Active travel is an important focus for Visit Aberdeenshire – there is an aspiration to position the North East as an attractive location for Adventure Tourism e.g. cycling in the Cairngorms, trips on the Deeside Way/F&amp;B Way and surfing on the Buchan Coast.</li> <li>• It is understood that cruise tourism in Peterhead is minimal and generally quite contained. Cruise tourism in Aberdeen is growing since the opening of Aberdeen South Harbour. Generally, around 40% of passengers will travel on an organised excursion; 40% will arrange their own activities and 20% will remain on the cruise ship. This will vary according to the type of cruise, and passenger profile.</li> <li>• Congestion on the road network is not really viewed as an issue of concern or a barrier to tourism development in the region, especially compared to west coast / Highland and Island destinations. The Aberdeen Western Peripheral Route (AWPR) has opened up the north of the region for visitors as it can now be accessed without having to navigate the city centre.</li> <li>• Tourism trends have been on an upward trajectory in recent years. 15% growth in visitor numbers compared to 2019.</li> <li>• In terms of the potential for reintroducing rail services in the region, it was noted that rail services could help to overcome issues with the 'final mile.' There are aspirations to create a full coastal path around Aberdeenshire and it was noted as an example that rail services in proximity could encourage use of such a facility as it would facilitate logistical considerations (e.g. completing a section and then returning to the starting point via train).</li> </ul>
<p>University of Aberdeen</p>	<ul style="list-style-type: none"> <li>• The University of Aberdeen has a sustainable travel plan and carries out a travel survey amongst staff and students every 2 years. The most recent travel survey was undertaken in early 2023 covering how many people are travelling, what days and times they are travelling and partial postcodes.</li> <li>• Travel patterns have changed as a result of the pandemic, and it is now likely that those who live a greater distance away are more likely to work from home. There has been an increase in car travel following the pandemic amongst staff as people got out of the habit of using public transport. Amongst students, trends</li> </ul>

Stakeholder	Key Findings
	<p>indicate a reduction in active travel use and an increase in public transport use, likely attributable to free bus travel for under 22s.</p> <ul style="list-style-type: none"> <li>• The opening of rail stations at Laurencekirk and Kintore has resulted in benefits for both commuting travel and business travel. Stations have had less of an impact in terms of student travel as around 70-80% live locally to the Campus and those that do travel from outwith Aberdeen tend to use the bus because it is free for under 22s. The largest student populations not living in Aberdeen are from the northern corridors (Peterhead, Fraserburgh and Huntly especially). Those living in the south are more commonly split between students travelling to Aberdeen for University and those travelling to Dundee.</li> <li>• Where further comments are provided as part of the University's travel survey, they tend to be focussed on the arrival point rather than issues on the journey, but it was noted that traffic management issues at the University have generally eased since the pandemic.</li> <li>• Transport is not a regularly noted barrier to recruitment of students from the Buchan region. A more significant barrier is overcoming the stigma of university and emphasising to potential students that University is open and available to everyone.</li> <li>• In recent times there have been changes to bus services on the A90 corridor to the north of Aberdeen, which has presented a barrier to several communities along the route, including Blackdog, Balmedie and Foveran. Whereas all bus services previously stopped on the A90 for communities along the corridor, some communities are now only served by one bus an hour for travel into the University.</li> <li>• Productivity is a key benefit of travelling by public transport (for university staff and more widely), particularly given more flexible working patterns that have become the norm since the pandemic. This means that people can start work during their commute and leave their work location early in order to continue working on their journey home. It was noted that the potential for productive commuting is greater by rail than it is by bus.</li> <li>• In terms of long-term rail potential in the region, it was suggested that anyone accessing the University via rail from the Buchan region would require travelling to Aberdeen Station and then travel by bus to the campus; there is the potential that students under 22 would opt to use bus for their whole journey given their access to free bus travel. A new station at Kittybrewster would be a preferred location for university travel as this would be well positioned for both the Old Aberdeen and Foresterhill campuses, however it was recognised that this was not part of the current plans.</li> <li>• Concerns were noted with regards to any potential loss of an active travel corridor and leisure space if a rail line was introduced along the alignment of the Formartine &amp; Buchan Way. It was noted that the working assumption is that any removal of active travel infrastructure would be restored alongside the rail line.</li> <li>• On the whole, Aberdeen University are supportive of options that provide environmentally sustainable travel options for staff and students, and would therefore be supportive of the proposals to reintroduce rail to the Buchan region, although recognised that, in the current day and age, it will be important for the scheme to show its financial sustainability.</li> </ul>
<p>NESCol</p>	<ul style="list-style-type: none"> <li>• NESCol are a multi-campus college, with it noted that nearly 40% of school leavers in the North East continue onto the college. There has been significant demand for courses at the college, particularly those based at the Fraserburgh campus. Students that travel to the Fraserburgh campus predominantly come from areas to the north west of Aberdeenshire, very few travel from Aberdeen City or Inverurie.</li> <li>• While initially thoughts of a reintroduced railway to the Peterhead and Fraserburgh regions could lead to concerns around a potential 'drift' in the student population towards Aberdeen, NESCol recognised that it could bring considerable benefits in terms of inbound students, access to training opportunities (noting the significant economic development opportunities planned in the study area with CCUS and ScotWind etc.) as well as the wider economic benefits associated with inclusive economic development and regeneration of towns in north Aberdeenshire.</li> </ul>

Stakeholder	Key Findings
	<ul style="list-style-type: none"> <li>• The key transport problem experienced by both students and staff is the poor reliability and availability of public transport services to and from Fraserburgh and Peterhead to Aberdeen City. Parking around the Gallowgate campus is limited and is expensive. Campus parking is reserved for staff only; however, it is regularly at capacity forcing staff to pay for parking at nearby car parks. The car park at Fraserburgh campus is often full, indicating that a high percentage of staff and students drive to the campus because of a limited public transport offering.</li> <li>• Staff are required to move between the different campuses; however, the current public transport service does not support reliable or efficient movement between campuses. The college does own vehicles which can be hired out by staff to travel between campuses. An improved sustainable transport offering, particularly rail, would aid staffing issues at certain campuses through improved staff transfer between campuses. Furthermore, it was agreed that the use of public transport would increase the productivity of staff during travel times.</li> <li>• NESCol provide a funded bus for students to use when travelling to the Altens and Fraserburgh campuses. Providing this bus service was to ensure that the college was accessible and inclusive to all. Students are charged for use of the bus unless they have receipt of a bursary and meet the conditions required for travel expenses.</li> <li>• A new railway between Aberdeen and Peterhead / Fraserburgh would be expected to provide civil engineering opportunities for students to be involved in whilst studying and after college when seeking a job. NESCol provide many courses which directly feed into the types of work that would be required to construct a railway.</li> <li>• NESCol would also be supportive of a scheme given the significant economic opportunities that it could release to the benefit of the whole of the North East region. For example, it could increase the fish processing capabilities, ensuring this work and the residual economic gain stays within the region.</li> <li>• A new railway would have benefits on regeneration areas in the north of Aberdeenshire. NESCol also recognised the value of decentralisation and considered that a new railway could potentially support this.</li> </ul>

## Appendix L Freight Stakeholders Findings

Stakeholder	Key Findings
<p><b>Russell's Logistics</b></p>	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• Most commodity is retail/fast moving consumer goods with exposure to temperature-controlled goods. They are some exposure to the construction sector and none in the fish sector.</li> <li>• Most of these currently go from Glasgow direct and avoid the Aberdeen City region.</li> <li>• Backloads are taken back down from Perthshire predominately, with minimal collections made in the Aberdeen area. As with all hauliers securing additional major flows are helpful to reduce empty running arising from the trade imbalance in the area.</li> <li>• Used to have a well-used rail terminal in Aberdeen right opposite the docks which was redeveloped to make way for Union Square Shopping Mall – losing a strategically located terminal.</li> <li>• All freight that Russell's currently move into the study area is transported via road from the Central Belt (noting there is no current intermodal rail freight service).</li> <li>• Russell's is currently working with a Freight Operating Company in order to potentially move products by rail freight into the Craiginches South rail freight terminal. This is a continuing challenge due to gauge restrictions; ideally required gauge clearance suitable for refrigerated transport 45ft, 2ft wide containers in order to move ambient goods (2.55M wide to move temperature-controlled goods). Gauge enhancements need to be unlocked (Minimum W9A gauge – but it is the slightly wider width to accommodate refrigerated units that is the key). The walls of the container are slightly thicker from the required insulation.</li> </ul> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• The key issue identified was heading north out of the Aberdeen area, especially on the A90, due to congestion after the end of the dual carriageway.</li> <li>• A lack of road charging is an issue when considering the adoption of alternatively fuelled vehicles (Electric and Hydrogen).</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• It was suggested to be unlikely for Russell's alone to generate enough goods that would allow it to sustain the running of a rail freight service into the study area</li> <li>• Believe it would be feasible to run a daily service in the future (20 loads per train) into Aberdeen and serve beyond there by road</li> <li>• A potential freight terminal at Ellon would be ideal if acting as a feeder terminal into Aberdeen</li> <li>• In terms of thoughts on potential freight terminal location in Peterhead, it was suggested that if it were possible, it may be best going direct into Peterhead Port, as any southbound business would likely be generated from the port itself.</li> <li>• Most northbound business travelling into the study area by Russell's would be expected to be retail-based goods.</li> </ul>

Stakeholder	Key Findings
	<ul style="list-style-type: none"> <li>• There were concerns about potentially locating a freight terminal outside of Peterhead unless there was supporting storage/warehouses where freight could also be stored;</li> <li>• It was felt that it would be extremely challenging, from a commercial viability perspective (i.e. significant capital outlay for minimal gain), to provide a service from any prospective freight terminal at Fraserburgh. The potential location identified to the south of Fraserburgh would be too far from the port itself, meaning there would be a need to road haul anyway, in which case hauliers would be just as inclined to travel to a rail freight terminal further south e.g. at Peterhead.</li> </ul>
<b>CILT Rail Freight Forum</b>	<ul style="list-style-type: none"> <li>• As a Professional Institute Body (Membership organisation), the CILT Rail Freight Forum do not hold any information on current or potential freight flows to and from the study area.</li> <li>• Other than Carbon Capture Storage (CCS) and hydrogen, it would likely be challenging for other markets to be able to sustain a rail link in their own right. A more likely option would be to transport freight by rail into an existing terminal, and then use electric trucks for the final few miles to and/or from the end destination.</li> <li>• If CCS/Hydrogen is viable by rail, other commodities could work on the back of this.</li> <li>• It was noted that the study area and proposed terminal at Ellon is not too far to Dyce (Raith's Farm) so there could be the potential to truck goods from Ellon to Dyce and thereafter by rail. Dyce would need improved facilities e.g. lift facilities to facilitate rail freight, otherwise freight would have to be taken to Craiginches South to be moved by rail.</li> <li>• It was suggested that it may be viable to move hydrogen/CCS by rail freight to Ellon/further north, but this would likely have an impact on rail freight timings/slots between the Central Belt and Aberdeen</li> <li>• A joint freight/passenger railhead at Ellon would negate the need for road traffic to have to go all the way from Fraserburgh to Aberdeen, in the event that the rail line did not go further than Ellon. This traffic would therefore not need to travel all the way down to Aberdeen.</li> <li>• In terms of potential options for a freight terminal in Peterhead, the potential location south of the town was viewed to offer the greatest potential. This could also offer potential for a passenger station, whereas other options such as in the centre of Peterhead, were not thought to be as feasible.</li> <li>• Noting that it is likely that hydrogen tanks can be moved as intermodal freight, it was questioned whether there would be merit in building a rail spur to St Fergus when it could be trucked from a Peterhead terminal. If St Fergus continued to be served by truck, it would be likely that the northern Peterhead options would have the most merit as a railhead for freight. It was suggested that trucks to and from St Fergus could be electric or hydrogen to reduce environmental impact. To merit a rail spur for freight to St Fergus, at least three trains a day would likely be required.</li> </ul>
<b>Brewdog</b>	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• All brewing and packaging are based in Ellon. Finished goods are not stored on site, with all finished products being transported to the Central Belt (EuroCentral / Mossend).</li> <li>• In terms of freight volumes leaving Ellon, the brewery produces about a truck an hour over the 24-hour cycle per day, 5 days a week, heading south, with around eight backloads going back north (beer goes down and then</li> </ul>

Stakeholder	Key Findings
	<p>packaging comes up as backload). The number of trucks travelling into France each week is into the double-digits.'</p> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• There are no significant key road issues that have been reported concerning flows to and from the study area.</li> <li>• The construction of the Aberdeen Western Peripheral Route (AWPR) has significantly improved journeys around the Aberdeen area.</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• Brewdog is very interested in the potential of moving their goods by rail and have a strong desire to use sustainable modes where possible, although there are currently a number of limiting factors to rail freight, with scheduling being key.</li> <li>• It was questioned how a freight depot could operate, with it being noted that there could be several options e.g. a terminal could be run by a third party and open to other customers as well as Brewdog itself.</li> <li>• Ultimately the decision to move more traffic by rail would come down to costs, utilisation etc.</li> <li>• It was noted that Brewdog currently move a considerable amount of goods through the Tesco train operated via Russells from the Central Belt. At present, Brewdog do not have the scale of goods that would support the running of freight trains straight to England, although could potentially have in the future.</li> <li>• 2025 Q1 will be looking at whole network again. Depending on this review and the transport priorities that are discussed and decided upon, the case for building rail may be more prominent.</li> </ul>
ASCO	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• At present ASCO is a significant player in the logistics and materials management markets. Oil fuel goods includes fuel, water, tubular goods and under deck cargo required for drilling.</li> <li>• All goods travelling into the Peterhead area are moved by road primarily and then shipped to offshore areas.</li> <li>• ASCO also receive inbound cargo which comes back to Peterhead before being distributed to places like Aberdeen, Montrose, and Inverness. They also handle some international freight that will come into Aberdeen and then moves into Inverness. This comes in either by vessel or air and is sent back by similar methods.</li> <li>• They also deal with waste that comes in from offshore (treat liquid waste themselves or pass onto a third-party contractor within Peterhead or the local area), which is transported by road.</li> <li>• ASCO also handle bulk cargo in Peterhead which then leaves by road.</li> </ul> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• There have been significant improvements south of Ellon following the opening of the Aberdeen Western Peripheral Route.</li> <li>• Travelling north of Ellon, the single lane means roadworks can cause delays at peak periods.</li> <li>• A key issue throughout the region is that there are very few alternative routes</li> </ul>

Stakeholder	Key Findings
	<ul style="list-style-type: none"> <li>• Another issue is unpredictability. There can be many unexplainable buildups of traffic and it can be difficult to predict when issues will occur.</li> <li>• Between Ellon and the Aberdeen Western Peripheral Route there is more predictable disruption during commutable hours.</li> <li>• At the Toll of Birness incidents are fairly frequent and this is a key incident blackspot.</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• Expressed no interest in Ellon or Fraserburgh as a railhead for freight.</li> <li>• When looking at free port status – did some work looking at what sort of work could be attracted to the area. There may be potential for rail to assist with this future work, but it is difficult to say until it is known what this future work looks like.</li> <li>• Previously, ASCO had not considered rail as being a viable option for transporting goods to the North East. To date, their focus has been on decarbonisation of the road network (hydrogen and electric) rather than rail.</li> <li>• The preferred location for any potential future railhead for freight would be into the port, and close to the ASCO base. Port options would be the only options of interest; other potential Peterhead options are not of interest. Noted that if ASCO have to transport goods even a short distance by road then it believes that they may as well go the full way.</li> <li>• There may be potential for a proportion of road transport to be moved by rail should the railway be reopened, but at this stage ASCO would not be able to provide an accurate forecast of what volumes could potentially be moved by rail. Bulk cargoes from Peterhead to Aberdeen and beyond (e.g. bulk liquids and methanol), as well as waste were identified as potentially suitable loads for rail freight.</li> <li>• As an overall summary, ASCO indicated that it would use a terminal in Peterhead if it was constructed but currently would not be in a position to provide flows or numbers that can be used to support forecasting around potential freight train numbers that could operate etc.</li> </ul>
<p><b>Peterson Global</b></p>	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• Aberdeen is the centre of marine operations, but movements also take place between Aberdeen and Peterhead. Approximately three HGVs per day currently.</li> <li>• Using the road to transport movement between Aberdeen and Peterhead reduces the number of vessel journeys required. However, the carbon produced by the road movements and extra travel time on the road are disadvantages.</li> <li>• With regards to inbound flows, most truck movement comes from within a 40-mile radius of Aberdeen, with Peterson’s having 19 different warehouses in the Aberdeen area.</li> </ul> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• There are no significant key issues to report on the road network between Aberdeen and Peterhead</li> <li>• The Aberdeen Western Peripheral Route is a good addition and there are no issues with bridge heights.</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• In, general there is a need to consider how close railheads are to ports</li> </ul>

Stakeholder	Key Findings
	<ul style="list-style-type: none"> <li>• Waterloo Quay is leased by Peterson and would be of most interest as opposed to Craiginches and Raiths Farm</li> <li>• Peterson's indicated that it could potentially offer options for a 'consolidation point' for vendors</li> <li>• It was noted that Waterloo Quay is currently in a potential Low Emission Zone (LEZ) which also makes it attractive from a rail freight perspective.</li> <li>• It was believed that any interest in rail freight is most likely to just be in the Aberdeen area</li> <li>• In terms of the alignment options for a new rail freight head serving Peterhead, it was suggested that alignments that go into the port would be most useful.</li> <li>• Time restrictions are an important consideration. Given pathing issues, having only 30 minutes loading time can cause an issue, although because the Buchan rail options would be at the end of the line, this may not be as big an issue.</li> <li>• Peterson's highlighted that it provides a service to various business sectors. As they are not involved in the building of ports and infrastructure, they would not be 'driving' what happens from a rail freight perspective and, for example, what and where freight terminals should be built.</li> </ul>
Storegga	<p><b>Operations:</b></p> <ul style="list-style-type: none"> <li>• In accordance with government targets, as a Track 2 Cluster, Acorn plans to start operations by 2030, with initial CO2 from industrial emissions transported via pipeline to the offshore Acorn store.</li> <li>• There is the potential to transport up to 90% of Scotland's industrial emissions through a pipeline network, although, some of the connections would require new pipelines to make the connections to the main trunkline from the Central Belt to the North-East.</li> </ul> <p><b>Local impacts during construction phases:</b></p> <ul style="list-style-type: none"> <li>• Acorn Transport and Storage System is looking to start construction in the St. Fergus and Peterhead area in the period that could run from the mid-2020s. This will lead to an increased number of people and loads traveling on the existing road network.                         <ul style="list-style-type: none"> <li>- The exact numbers or size of workers/logistics are unknown but for scale, a high-level estimate of between 300-1000 workers may be required to support Acorn projects throughout this timeline.</li> <li>- Other projects are also being progressed around the same time in the same area of St. Fergus e.g., St. Fergus area emitters / Scottish Hydro Electric Transmission (SHET Substation) / BBES projects. These may potentially cause impacts on the existing road networks when key infrastructure is being implemented.</li> </ul> </li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• From a Non-Pipeline Transport ('NPT') perspective, the view of the stakeholder representative is that rail would be preferred over road to reduce the number of vehicle movements. This would be subject to an emitter being able to connect to a rail hub at the emission source location. Storegga is aware that about 1.8Mt pa of the CO2 of the total above is adjacent to a rail route which, if a connection can be put in place, will assist with increasing the viability of rail.</li> <li>• Given that the CO2 transported by road or rail would most likely be in liquid form, it is logical that the CO2 could be offloaded at either Peterhead</li> </ul>

Stakeholder	Key Findings
	<p>(associated with the shipped liquid CO2 offloading facility at a proposed redevelopment of the port) or St Fergus (location of the Acorn onshore facility that connects directly to the offshore store) to avoid re-gasification costs prior to onward pipeline transportation.</p> <ul style="list-style-type: none"> <li>• At a high level, rail is considered a better option than road</li> <li>• There is some concern about high levels of HGV movements into Peterhead, therefore St Fergus would be the better location for road transport (if relevant)</li> <li>• Rail was viewed as important overall to supporting the decarbonisation of the North East. As a result of Acorn, they could foresee a future where there will be significant amount of traffic moved by rail, but also some trucks.</li> <li>• There is also the potential for rail transportation of smaller more dispersed loads (e.g. Speyside) depending on the amounts that are to be transported</li> <li>• In terms of views on potential locations for the rail freight terminal at Peterhead, it was considered that an alignment close to the port would be the preferred one as it will be closest to port operations</li> <li>• For St Fergus, ideally any future rail freight terminal would be located on its own site to not have two processing locations.</li> <li>• In summary, Storegga expressed keenness to continue discussions as proposals emerge in the future, as it is very interested in the potential for rail to address the sustainable transport of the non-pipeline market from CO2 emitters.</li> </ul>
NECCUS	<ul style="list-style-type: none"> <li>• In terms of potential options for the transport of freight, NECCUS main focus would be a future site at St Fergus to avoid the need for road flows (little/less focus on any of the rail options that might avoid St Fergus).</li> <li>• A rail line into St Fergus would be supported and useful for those organisations that NECCUS represent</li> <li>• If a rail line was to terminate in Peterhead, it may be possible to transport CO2 from Peterhead to St Fergus by pipeline, although it was noted that there could be a technical issue about mixing CO2 from different sources.</li> <li>• There will likely be a combination of transport forms using pipeline, road, and rail to transport goods to and from the St Fergus site.</li> <li>• In the future, NECCUS would expect Peterhead Port is likely to have an increase in activity as the port diversifies such as in the clean energy and wind sectors. This will come with increased infrastructure needs such as the transport of construction materials during the building phase as well as movements during the operational phases.</li> <li>• Reference was made to the Scottish Net Zero Roadmap Report – on part of the CO2 movement that is not addressed by pipeline and shipping – further study not commenced yet but recognise role that rail could play.</li> </ul>
Port of Peterhead	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• 30,000 tonnes per annum of blue whiting lands at Peterhead. Most of the blue whiting comes into the port and is trucked for processing in Aberdeen.</li> <li>• 100,000 tonnes per annum of herring and mackerel lands at Peterhead. This is pumped to the processing factories in Peterhead where it is processed, frozen and exported by road. Much of this goes down to Grangemouth and is then accumulated into bigger shipments to former soviet countries or the Far East.</li> <li>• 50,000 to 60,000 tonnes per annum of white fish and shellfish lands at Peterhead. About half of that leaves Peterhead without being processed.</li> </ul>

Stakeholder	Key Findings
	<p>The rest is processed in either Peterhead, Fraserburgh or Aberdeen before being sent on for distribution.</p> <ul style="list-style-type: none"> <li>• Regarding the unprocessed fish some of this is sent to Billingsgate in London and some to Europe.</li> <li>• The company operates a tight supply chain. Flows leave Peterhead 1pm or 2pm in the afternoon to be sold the following morning on the continent</li> <li>• ASCO handle more than 90% of Oil and Gas equipment through port. Subsea/decommissioning is an exception to that; much of that comes in by boat and out by boat, and only a small amount is transported by road.</li> <li>• There are 130,000 tonnes per annum of oil and gas related bulks that are dealt with at Peterhead Port. This includes both dry bulks and some liquid bulks – traditionally in and out of the port and from suppliers in the Aberdeen region.</li> <li>• Deck cargo (equipment, service, stores) generates around 350,000 tonnes per annum. Half of this is transport in by road and the other half by ship. The majority of this is transported in from the Aberdeen region.</li> <li>• 50,000 tonnes of commercial goods are also handled at the port per annum e.g. agricultural grains etc.</li> </ul> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• The Aberdeen Western Peripheral Route (AWPR) creates greater certainty for journeys</li> <li>• A key issue is snow and ice on the road during the winter months</li> <li>• One hotspot is the single carriageway around Ellon which is often congested in both rush hours.</li> <li>• Further north of Ellon any issues are primarily accident or weather related.</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• It was suggested that for the majority of current trade that travels through the Port, rail would be unlikely to be a consideration other than frozen fish, which can be planned well in advance and goes out in large batches.</li> <li>• Timings related to rail would not work well for the transport of fresh fish, albeit it was noted that there were historical flows of this product.</li> <li>• Clean fuels and Carbon Capture, Usage and Storage (CCUS) are more likely to be interested in alternative transport (e.g. rail) going forward.</li> <li>• For the transport of clean fuels, it is unlikely that Peterhead would ship out clean hydrogen as they do not have the space required for storage. Hydrogen would be a feed stock for e-ethanol, ammonia, or sustainable aviation fuel. Methanol would be another option as a feed stock.</li> <li>• Rail as a strategic offer may be a benefit to those that are interested in the above key fuels.</li> <li>• There remains a lot of uncertainty as to which clean fuel option will be most suitable for shipping out, but each follow a similar manufacturing process are more movable than hydrogen and therefore have more potential to be handled at the port.</li> <li>• Peterhead Port authority struggle to see the existing trade at the port using rail a great deal, with a key issue being a lack of land.</li> <li>• In terms of potential routes for a rail freight line, the Port Authority were unsure where a terminal would be built for the alignment that goes into the</li> </ul>

Stakeholder	Key Findings
	<p>port itself. For the potential alignment around the Port, while it may be possible to reclaim some land, this would be extremely costly. Building a terminal at the port would also be constrained by space limitations.</p> <ul style="list-style-type: none"> <li>• A terminal to the south of Peterhead would potentially fit in better as many of the clean fuel enquiries are to the south and east of Peterhead.</li> <li>• It was also noted that there are plans for large-scale housing north and south of the A95; that would require consideration if planning for a terminal to the west of ASDA.</li> <li>• Any proposed terminal south of Morrisons would have lots of movements potentially through this site</li> <li>• Overall, western rail route probably preferred as this aligns with proposed land uses and fuel production.</li> </ul>
<p><b>Fraserburgh Harbour</b></p>	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• The port handles significant amounts of fish and shellfish. If this is not processed in Fraserburgh, it typically travels south by lorry. Journey time is highly critical for these loads given that they are time-sensitive industries.</li> <li>• From Fraserburgh, the fish typically travels down to the Central belt and onward.</li> <li>• Some seafood landing in Peterhead is transported to Fraserburgh for processing.</li> </ul> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• The A952 has been reported as being a significant challenge for companies using the port</li> <li>• Access to the harbour from the A952 / Sudan Road is difficult and the port has been looking to widen the road access as a result</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• Fraserburgh handles time sensitive industries with very tight deadlines</li> <li>• Based on the current potential option for a railhead at Fraserburgh, there would still be a road alignment between port and terminal for potential Fraserburgh site</li> <li>• It is not just harbour that matters when looking at rail, industrial estates need to be considered as well</li> <li>• With new businesses, these are being asked to have warehouses on outside of Fraserburgh on development land.</li> <li>• Most of the products from the harbour likely to go to processors and then onto a train.</li> <li>• There is significant concern about having a rail terminal at Peterhead and not Fraserburgh. Would have a big impact and be detrimental to Fraserburgh.</li> </ul>
<p><b>Thistle Seafoods</b></p>	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• For internal stock transfer of chilled products, production occurs at Boddam and is then moved to Uddingston before dispatched to customer National Distribution Centres. Per week, this accounts for around 28 vehicle movements</li> </ul>

Stakeholder	Key Findings
	<ul style="list-style-type: none"> <li>• For raw materials, there are around 20 vehicle movements per week between Boddam and other sites in North East Scotland which are used as external warehouses</li> <li>• For frozen goods, there are around nine vehicles per week between Boddam and National Distribution Centres for supermarkets in central England.</li> </ul> <p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• Recent issues include a single carriageway all down to Aberdeen from Boddam and then a contraflow section for around 12 miles which has caused journey time reliability problems.</li> <li>• There have been significant delays reported past Coatbridge.</li> <li>• Once down to Uddingston (near Glasgow) the roads can get heavily congested due to densely populated housing and industrial areas.</li> <li>• Dualling the route from Boddam south access point to the dual carriageway South of Ellon would give the best initial supply chain benefit.</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• At the central belt end, consideration needs to be given to the link between any terminal and Uddingston.</li> <li>• The longer any trains can be the greater the benefit.</li> <li>• There is potential for Thistle Seafoods to use a suitably located terminal on the south / west side at Peterhead.</li> <li>• From experience, it would be best to stay away from Peterhead town centre itself. This is due to noise and residents' considerations.</li> <li>• Regarding the potential rail alignments around Peterhead, there is a need to know what the access would be, particularly around areas that are known to experience significant congestion.</li> <li>• Potential options to the west of Peterhead were cited as preferable in terms of access or if space is constrained around the port area</li> <li>• For Fraserburgh, Thistle Seafoods would not be interested but this would be an ideal location for a terminal based on experience as it is away from urban areas.</li> </ul>
Mackies	<p><b>Flows:</b></p> <ul style="list-style-type: none"> <li>• Two tankers of cream are delivered per week from the North of England</li> <li>• Five lorries a day incoming with general consumables mostly from central belt</li> <li>• There are infrequent lorry loads with commodities like milk powder and sugar</li> <li>• Outbound, most product is stored in Boroughbridge. Around three lorry loads per day each with 26 pallets, 4 days a week</li> <li>• Six loads of ice cream a week outbound to central Scotland which go straight into regional distribution centres, for example Livingston.</li> <li>• There are also some international exports. These leave from Boroughbridge (to go to Felixstowe 3 a month) and Bells Hall in central Scotland (going to Grangemouth once a month). The main markets are Korea and Taiwan.</li> <li>• For the chocolate production, there is one lorry every 2 weeks going to the central belt</li> </ul>

Stakeholder	Key Findings
	<p><b>Road comments and issues:</b></p> <ul style="list-style-type: none"> <li>• There are very limited facilities for drivers in and around the central belt</li> <li>• In 2023, the A90 Dundee to Aberdeen shut on four different occasions due to issues such as flooding. If that route is blocked, the whole system gets disrupted.</li> <li>• Getting out of central belt can be very slow, including leaving Glasgow on the motorways.</li> <li>• The Aberdeen Western Peripheral Route has helped journey time reliability.</li> <li>• As Mackie's is based on a farm, there are issues such as potholes being filled in and snow clearance / gritting on local routes impacting on HGV movements and staff movements to / from the site which employs circa 100 people plus contractors</li> <li>• There are issues with getting goods in and out during the winter periods</li> <li>• There are very few lorry parks outside of Edinburgh and Glasgow. If lorries turn up early, it can be difficult to have somewhere that they can be sent to wait and spend a night if needed</li> </ul> <p><b>Rail:</b></p> <ul style="list-style-type: none"> <li>• Rail has not been thought about particularly within Mackie's due to the location</li> <li>• Ellon or Aberdeen would be the preferred locations if rail was to happen, but this would be reliant on whether the cost, opportunity and time could match the performance of their current road operations</li> <li>• The Ellon site location is closest, but they had no particular comments on the precise site.</li> </ul>

## Appendix M Public Survey Findings

### M.1 Resident Survey

#### Response Received

M.1.1 A total of 769 people responded to the resident survey. The location of respondents is shown in Figure M-1.

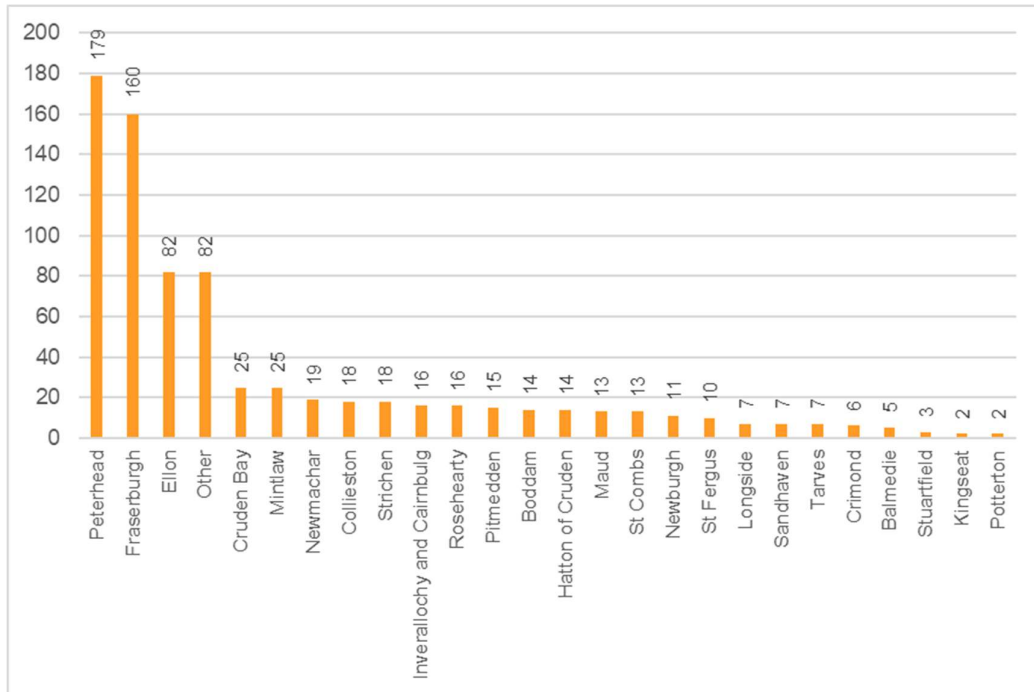


Figure M-1: Resident Survey response by location

M.1.2 Key findings in terms of the sample profile were as follows:

- There was a fairly even split between males (48%, n=362) and females (49%, n=372), with a small proportion choosing not to say (3%, n=22).
- Most respondents were aged between 35-64, with smaller proportions above and below these brackets. The response was broadly in keeping with the age distribution within the study area albeit there were fewer responses from the over 75 and the 16-24 age brackets (see Figure M-2).
- Around half (56%, n=416) of respondents were in full-time employment with a further 18% (n=136) in part-time employment. A total of 17% (n=128) were retired. While data at the level of the study area is not available, the sample is broadly in keeping with the employment breakdown for Aberdeenshire as a whole (see Figure M-3)
- In total, 26% (n=198) of respondents indicated that they held a National Entitlement Card (NEC) which entitled them to free bus travel
- Just under a quarter of respondents (23%, n=174) indicated they had an illness or health condition which affects their mobility

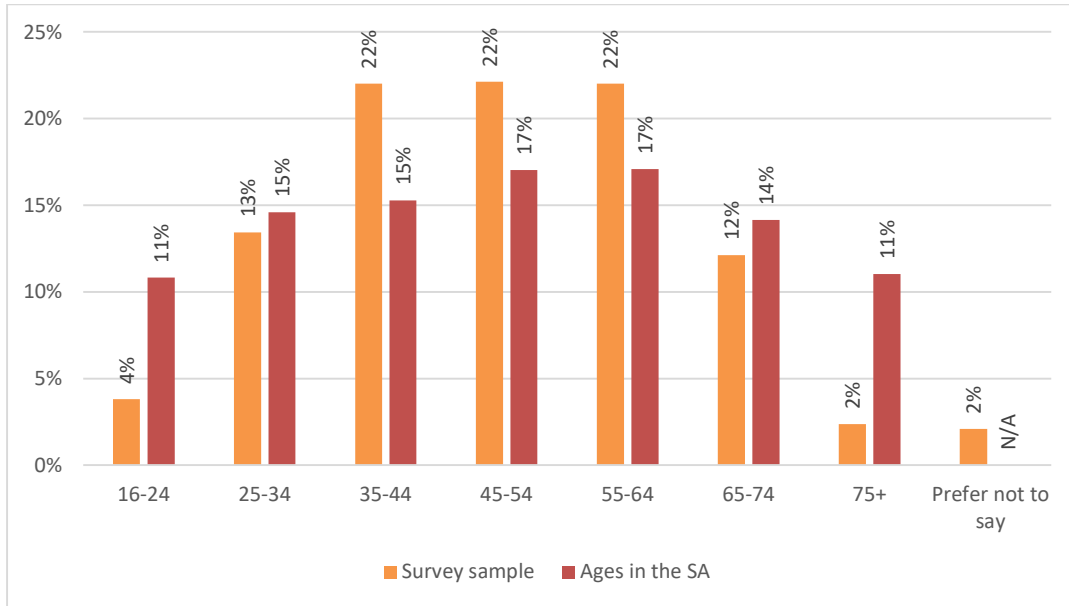


Figure M-2: Which of the following age bands do you fall into?

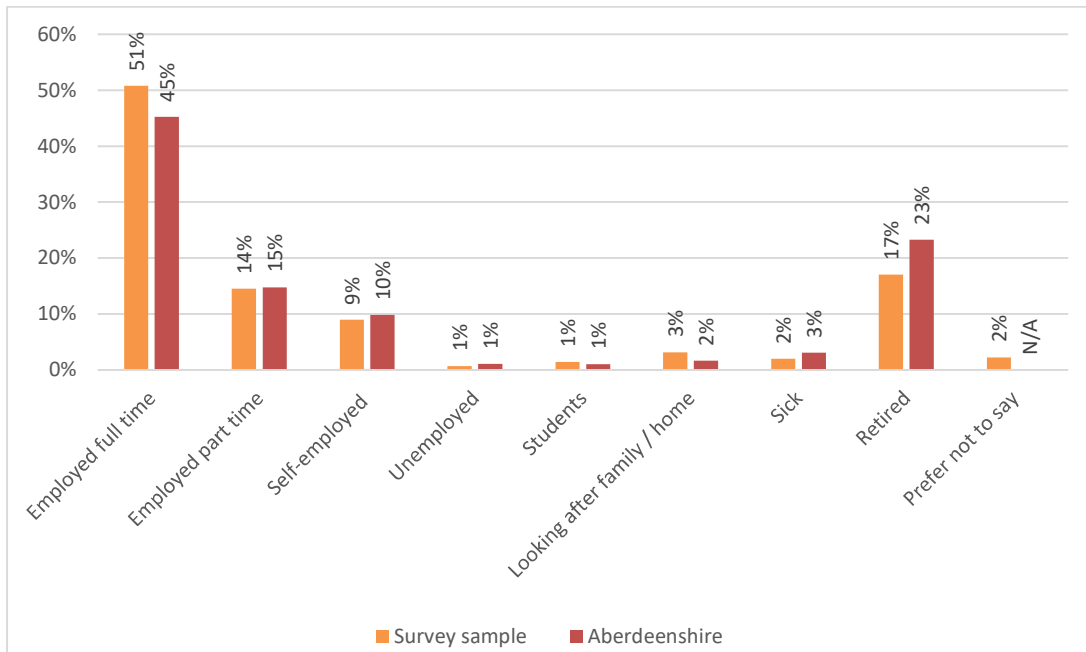


Figure M-3: What is your current employment status?<sup>72</sup>

<sup>72</sup> Aberdeenshire data taken from Annual Population Survey, Oct 2022 to Sept 2023

## Walking / Wheeling

M.1.3 Figure M-4 illustrates the frequency of walking / wheeling trips over the period of a week.

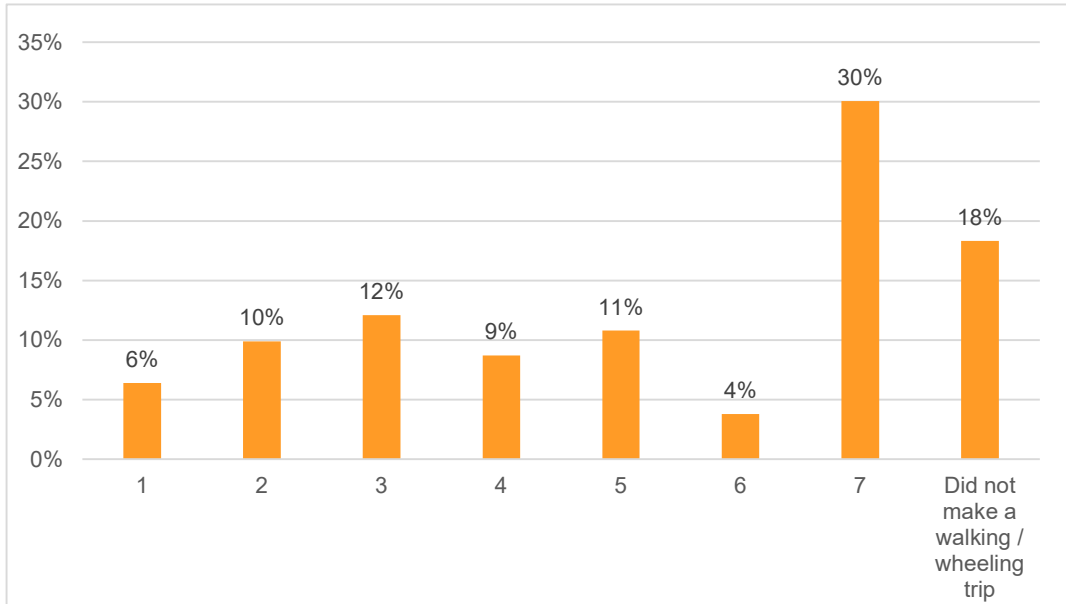


Figure M-4: In the last seven days, on how many days did you make a walking / wheeling trip of greater than a ¼ mile?

M.1.4 Of the total 769 respondents, nearly 20% had not made a walking / wheeling trip of more than ¼ of a mile in the last seven days, 16% had made a walking / wheeling trip on 1 or 2 days out of the last seven, 36% had made a walking / wheeling trip on 3 to 5 days of the last seven, and 34% had made a walking / wheeling trip of this nature on 6 days of the last seven or every day.

M.1.1 The Scottish Household Survey (SHS) collects information on the frequency of walking trips. This is split by trips made as a form of transport and trips made for pleasure. The results for Aberdeenshire are shown in the table below alongside the results from the survey sample for comparison purposes.

Table M-1: Proportion of respondents who made walking trips in the last seven days as recorded via the survey sample and the 2021 Scottish Household Survey for Aberdeenshire<sup>73</sup>

Number of days during the last seven days	Survey Sample	Aberdeenshire Scottish Household Survey – Walking trips for the purpose of transport	Aberdeenshire Scottish Household Survey – walking trips for pleasure
0	20%	38%	25%
1-2	16%	26%	17%
3-5	36%	24%	29%
6-7	34%	11%	29%

M.1.2 Overall, the results from the survey suggest a higher level of walking / wheeling trips than those recorded via the SHS.

<sup>73</sup> <https://www.transport.gov.scot/our-approach/statistics/#42764>

M.1.3 Figure M-5 Shows the level of satisfaction with a range of aspects of walking / wheeling.

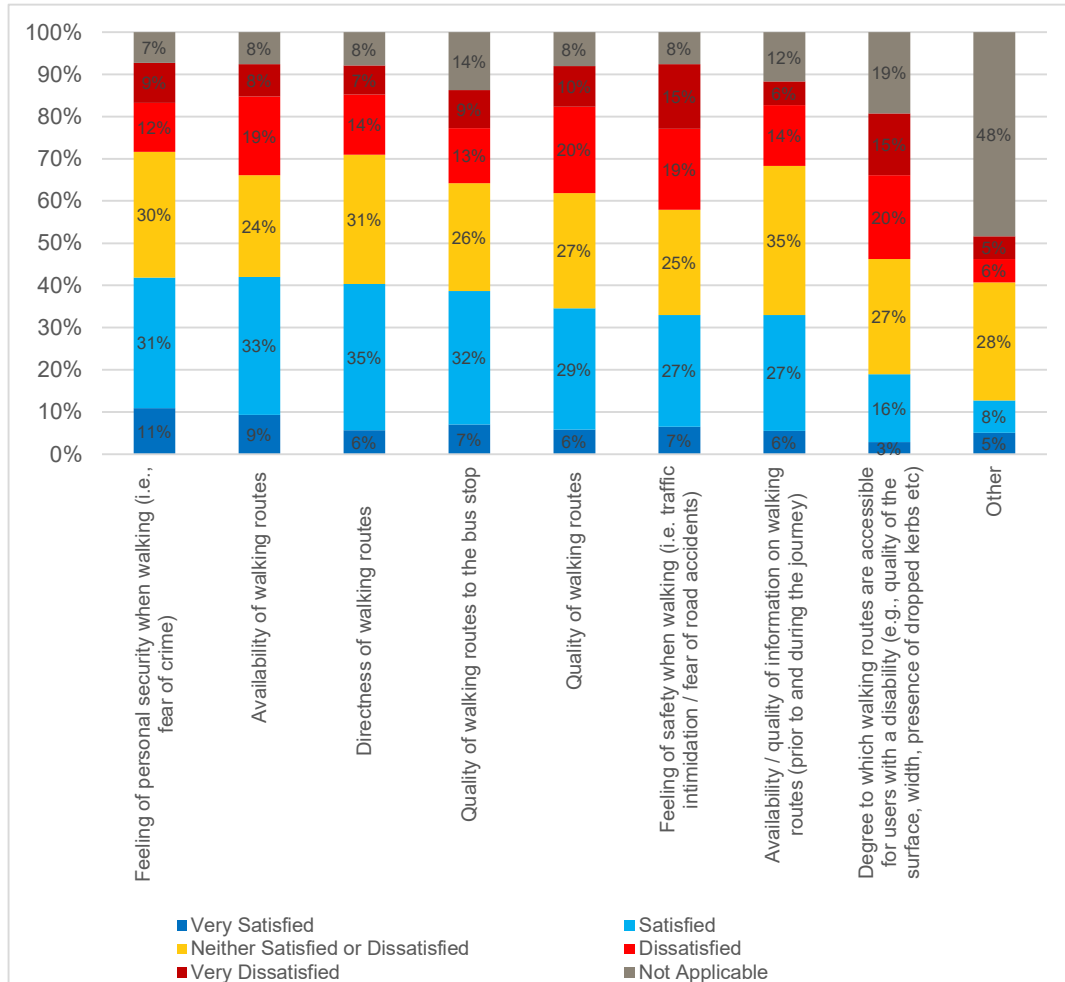


Figure M-5: When walking / wheeling, in general how satisfied are you with the following?

M.1.4 The highest level of dissatisfaction was with the degree of which walking routes are accessible for users with a disability, with 35% (n=266) of respondents indicating they were dissatisfied with this aspect. It is worth noting that 19% of respondents selected non applicable for this aspect and therefore, if only those for whom this aspect is applicable are considered, the proportions are higher again.

M.1.5 The feeling of safety when walking (i.e., fear of road accidents) had the second highest level of dissatisfaction with 34% indicating they were dissatisfied with this aspect.

M.1.6 Within the open text responses, several comments were made about the accessibility and safety of walking routes, with a number of respondents highlighting intimidation associated with high traffic levels.

M.1.7 Accessibility of walking routes:

- "Pavements can be too sloped to wheel a wheelchair comfortably especially across dropped kerbs"
- "Outdated barriers at end of formatting way, locked gates etc make cycling or buggy pushing very awkward."

M.1.8 Traffic intimidation:

- “The roads are shrinking in width, so every route is becoming increasingly narrower, to pass oncoming traffic is now more and more dangerous.”
- “Far too many large wagons on the roads within the village so making it dangerous to get to suitable off road walking routes.”
- “Not enough safe crossing areas for pedestrians with the increased local traffic in the local area. Lots of walking areas are too close to moving traffic and the health risks that poses with car fumes”

M.1.9 A number of comments were also made about the security of walking routes and the lack of lighting in some locations:

- “The lighting in some routes is not great and therefore I don’t always feel safe when walking in winter when it is dark mornings and dark early at night.”
- “Lighting could be better. We now have small pools of light. Streetlights used to be lower and light a wider area. Now they are higher up and only cover a small section directly in front of them, not good for feeling save as all areas now very dark as a result.”

M.1.10 Maintenance issues were also highlighted by several respondents:

- “Pavements are either uneven, some are sloped, and some have holes. A lot have weeds along kerbside which blocks drains and water lying on pavement.”
- “A lot of the pavements and roads are in poor condition. Bad surfaces on the pavements and potholes in the roads.”

## Cycling

M.1.11 Just over 30% of respondents (32%, n=243) indicated that they cycle in the study area compared to 68% (n= 526) who do not.

M.1.12 Of those who do not cycle (n=526) just over a quarter (26%, n=136) stated that there were things which could be done to encourage them to cycle. The results are presented in Figure M-6

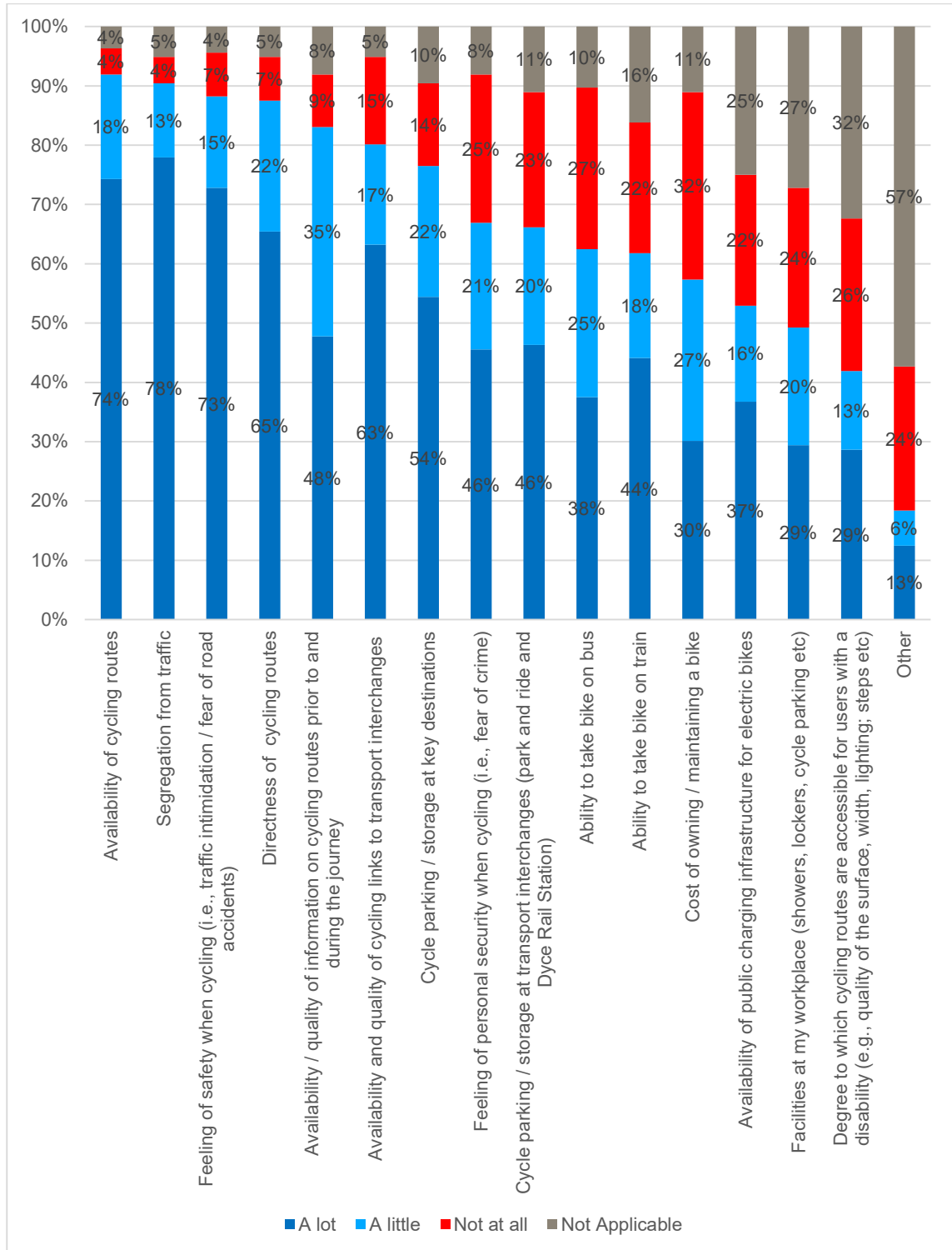


Figure M-6: Please indicate the extent to which the following factors encourage you to cycle?

M.1.13 The factors which would most encourage people to cycle were the availability of cycle routes and segregation from traffic. This was followed by the feeling of safety when cycling (i.e. traffic intimidation / fear of road accidents) (88%, n=120).

M.1.14 Those who stated that they cycle in the study area (n=243) were then asked how many days in the past week they cycled. Figure M-7 shows that 63% (n=154) did not make a cycling trip, while 37% (n=89) made a cycling trip at least one day in the past week.

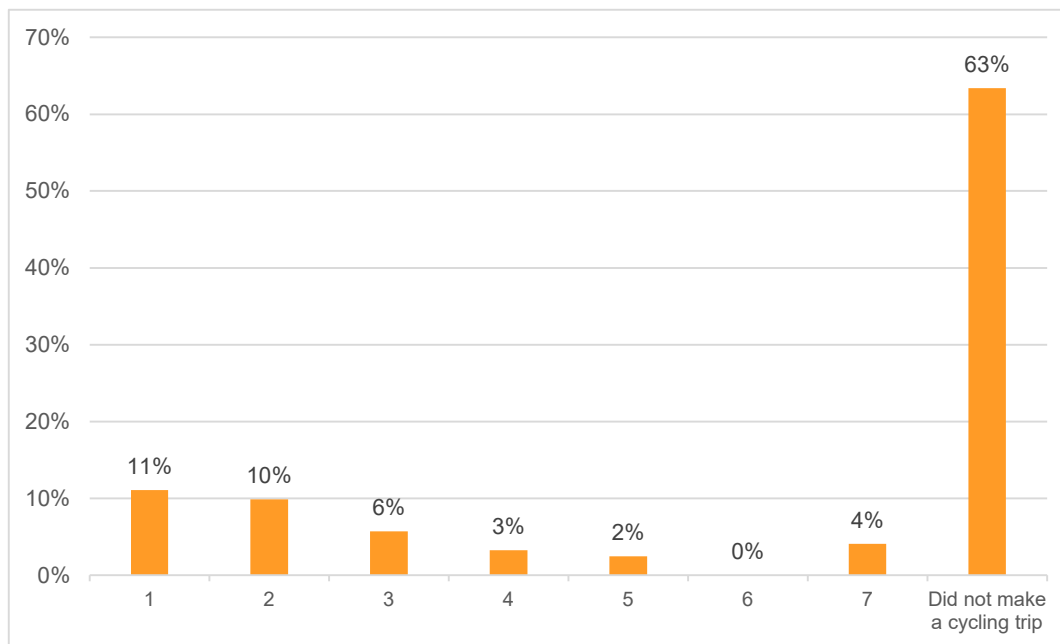


Figure M-7: In the last seven days, on how many days did you make a cycling trip?

M.1.15 Respondents were then asked why they typically made these trips, with respondents able to select multiple reasons.

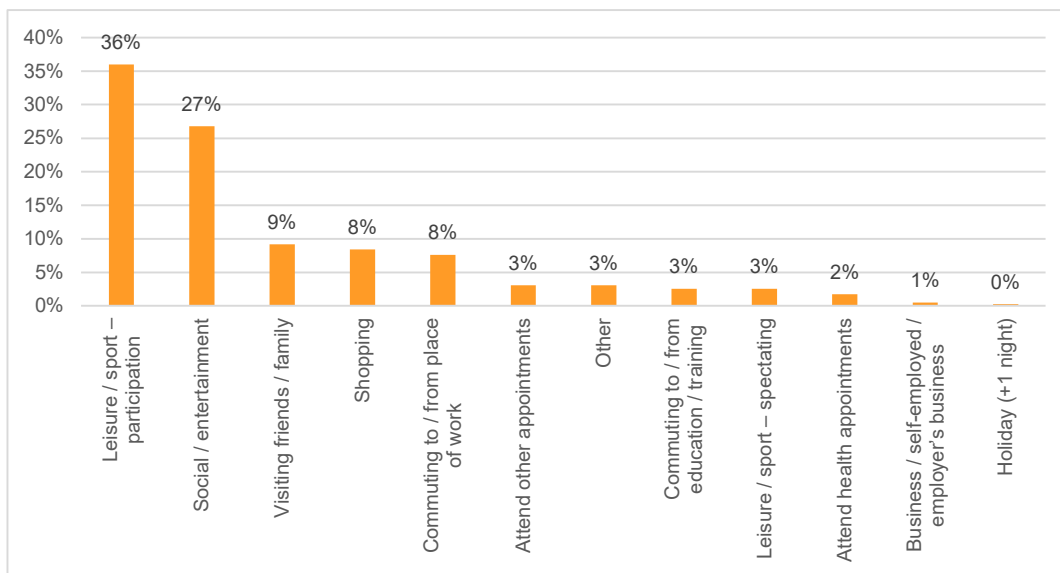


Figure M-8: Why do you typically make cycling trips?

M.1.16 As shown in the figure above, the most common reason for making cycling trips was leisure / sport – participation (36%, n=141), followed by cycling for social / entertainment purposes with far smaller proportions cycling for the purpose of going somewhere e.g. cycling to work or education or shopping.

M.1.17 The SHS also collects information on the frequency of cycling trips. As with walking trips, this is split by trips made as a form of transport and trips made for pleasure. The results are only available at the Scottish level. These are shown in the table below alongside the results from the survey sample for comparison purposes. It is noted that because the question on travel purpose allowed multiple responses, it is not possible to split the survey sample data between trips made for transport and trips made for pleasure.

Table M-2: Proportion of respondents who made cycling trips in the last seven days as recorded via the survey sample and the 2021 Scottish Household Survey for Scotland<sup>74</sup>

Number of days during the last seven days	Survey Sample	Scottish Household Survey – Scotland results – cycling trips <u>for the purpose of transport</u>	Scottish Household Survey – Scotland results – cycling trips <u>for pleasure</u>
0	88.4%	93.1%	91.4%
1-2	6.6%	3.5%	5.7%
3-5	3.6%	2.7%	2.2%
6-7	1.3%	0.7%	0.7%

M.1.18 Overall, the results from the survey suggest a higher level of cycling trips than those recorded via the SHS for Scotland as a whole.

M.1.19 Finally, the respondents were asked when cycling, in general how satisfied they were with a range of aspects. This is illustrated in Figure M-9.

<sup>74</sup> <https://www.transport.gov.scot/our-approach/statistics/#42764>

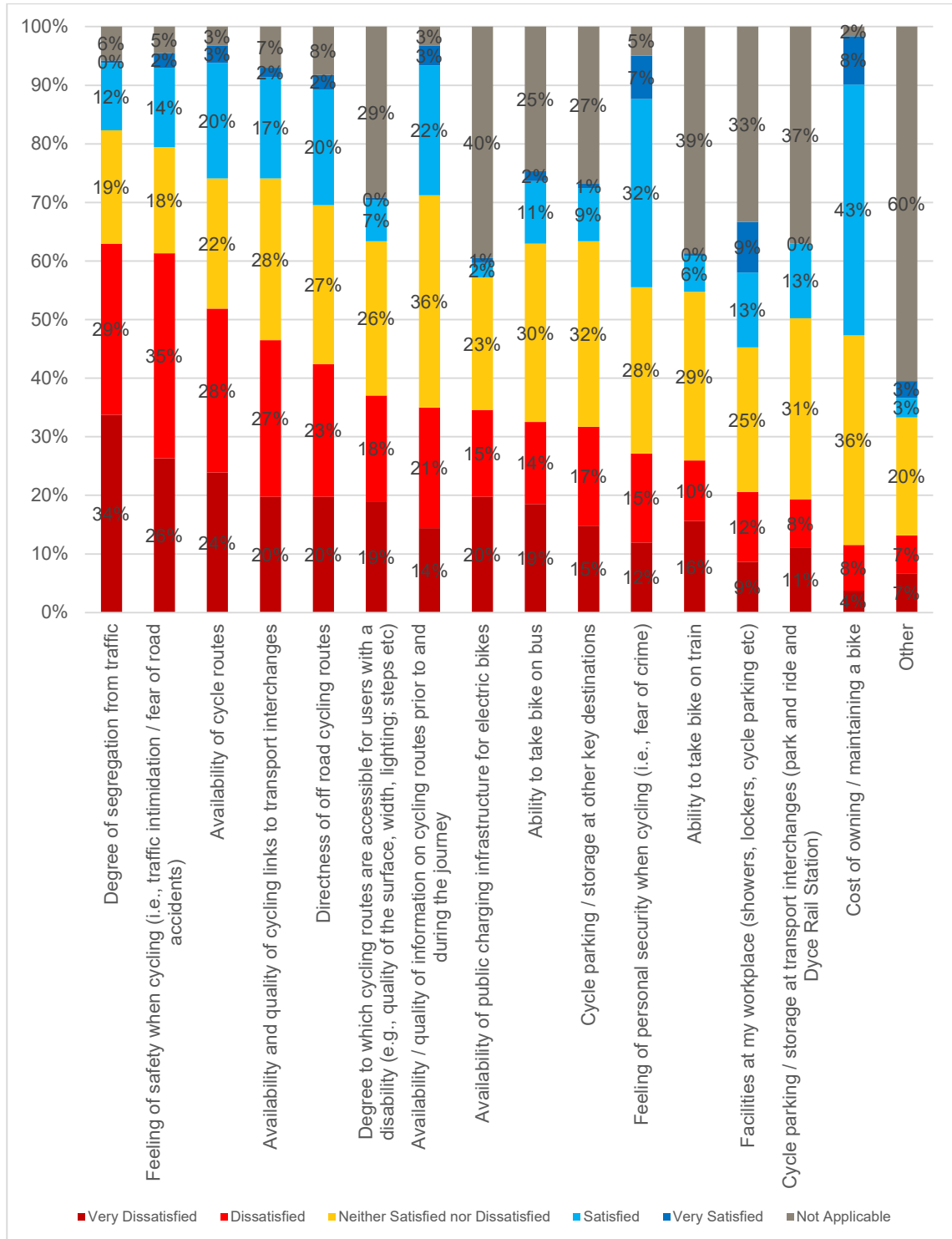


Figure M-9: When cycling, in general how satisfied are you with the following?

M.1.20 The highest levels of dissatisfaction were with the degree of segregation from traffic as a (63%, n=153 dissatisfied), followed by the feeling of safety when cycling (i.e. traffic intimidation / fear of road accidents) (61%, n=149 dissatisfied).

- M.1.21 It is worth nothing that while 37% indicated they were dissatisfied with the accessibility of the routes, when the non-applicable figures are removed the percentage is higher (52%, n=90).
- M.1.22 A number of comments on the above issues were made within the open text responses, with respondents highlighting the lack of dedicated routes / segregation from traffic and feeling unsafe when using the road:
- “I feel that there are no dedicated cycle routes in the areas. You are either sharing with pedestrians or with vehicles. Both carry risks. Lots of countries find ways to segregate users. As a nation we should be looking to facilitate and promote these methods.”
  - “There is no segregation of cyclists from cars anywhere in Fraserburgh and I have personally been subjected to aggressive driving and abuse from motorists as well as experiencing several near misses which has put me off cycling in the local area in and around Fraserburgh.”
- M.1.23 A number of respondents specifically noted the lack of connections to neighbouring towns and / or Aberdeen and the need to interact with traffic:
- “The roads are not safe for cyclists. There are safe cycling paths, but these do not connect further than neighbouring villages. You would find it difficult to cycle safely to Aberdeen (if you felt that you wanted to).”
  - “Very little safe areas to cycle between towns or villages that are not on small narrow roads with cars travelling fast. I do not cycle at all since moving here despite having an electric bike as its too scary and tricky to get about.”
  - “...you really only see brave souls risking the A90 or Peterhead bypass as it is too intimidating sharing space on these local stretches of road”.
- M.1.24 A number of comments were also specifically made about the lack of connections to the Formartine and Buchan Way:
- “Other than the “old railway line” cycling routes in this area are on country roads are non-existent, having to cycle on country roads to get to these routes, very few drivers consider the cyclist.”
  - “There really is only one. The old railway bed. Dangerous to cycle to the access points”
- M.1.25 Several comments were also made about the condition of the Formartine and Buchan Way:
- “The immediately available cycling route in my area is the Formartine and Buchan Way. Depending on the time of year the cycling conditions on this route can varying greatly with extensive flooding observed in certain areas – work could be done to improve this and the surface to make this more suitable for a broader spectrum of cyclists i.e. Disabled cyclists, road bikes, electric bikes etc. – currently only suitable for mountain style bikes.”
  - “The Buchan line is the main cycle path, and its condition has deteriorated greatly in the last few years. It is so bad that I have stopped using it as it is dangerous.”

## Bus Travel

### Frequency of bus travel

- M.1.26 The figure below shows the frequency of travel by bus to Aberdeen and the frequency of local bus travel.

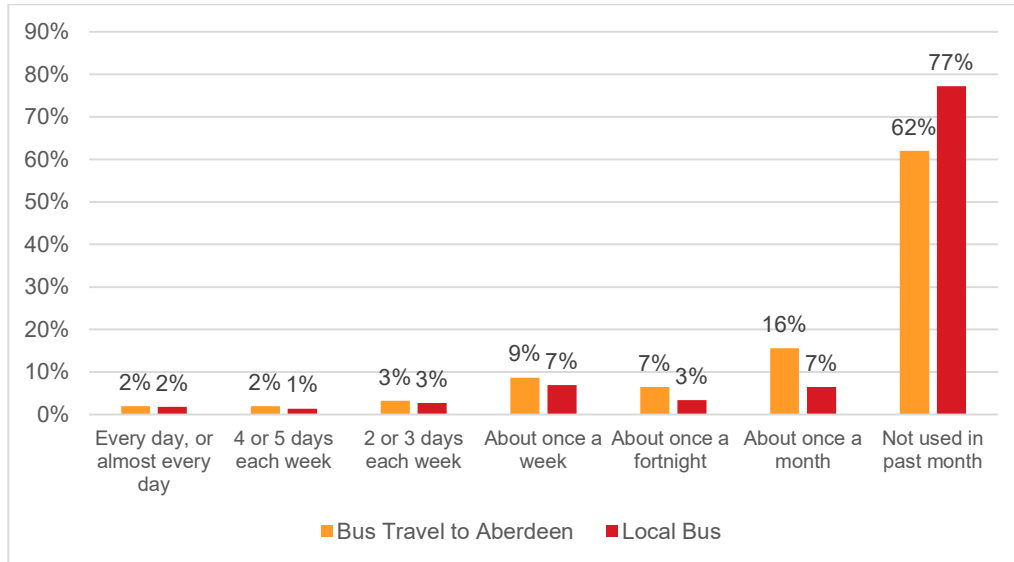


Figure M-10: How often have you travelled by bus to Aberdeen in the previous month?

M.1.27 As shown use of the bus to travel to Aberdeen is more frequent than travel by local bus, with 77% (n=594) of respondents stating they have not used local buses in the last month compared to 62% (n=477) of respondents who have not used the bus to Aberdeen over the same time period.

M.1.28 Only around 16% of respondents indicated that they use the bus to Aberdeen on a weekly basis, with the majority of these using the service about once a week. This is perhaps unsurprising given the relatively long journey times by bus which would make daily commuting challenging.

M.1.29 In comparison, 13% of respondents indicated that they used local buses on a weekly basis, with most of these using the service once a week.

M.1.30 The SHS collects information on public transport use. This indicates that 85% of respondents from Aberdeenshire in 2021 had not used local bus services in the previous month, with 5% using local services on a weekly basis<sup>75</sup>. The proportions above are therefore higher than those recorded via the SHS, although it is noted the sample sizes for the latter are small.

**Destinations travelled by local bus**

M.1.31 The figure below shows the range of destinations to which those who use local bus services indicated they travelled by local bus. It is noted that respondents were able to select multiple answers.

<sup>75</sup> <https://www.transport.gov.scot/our-approach/statistics/#42764>

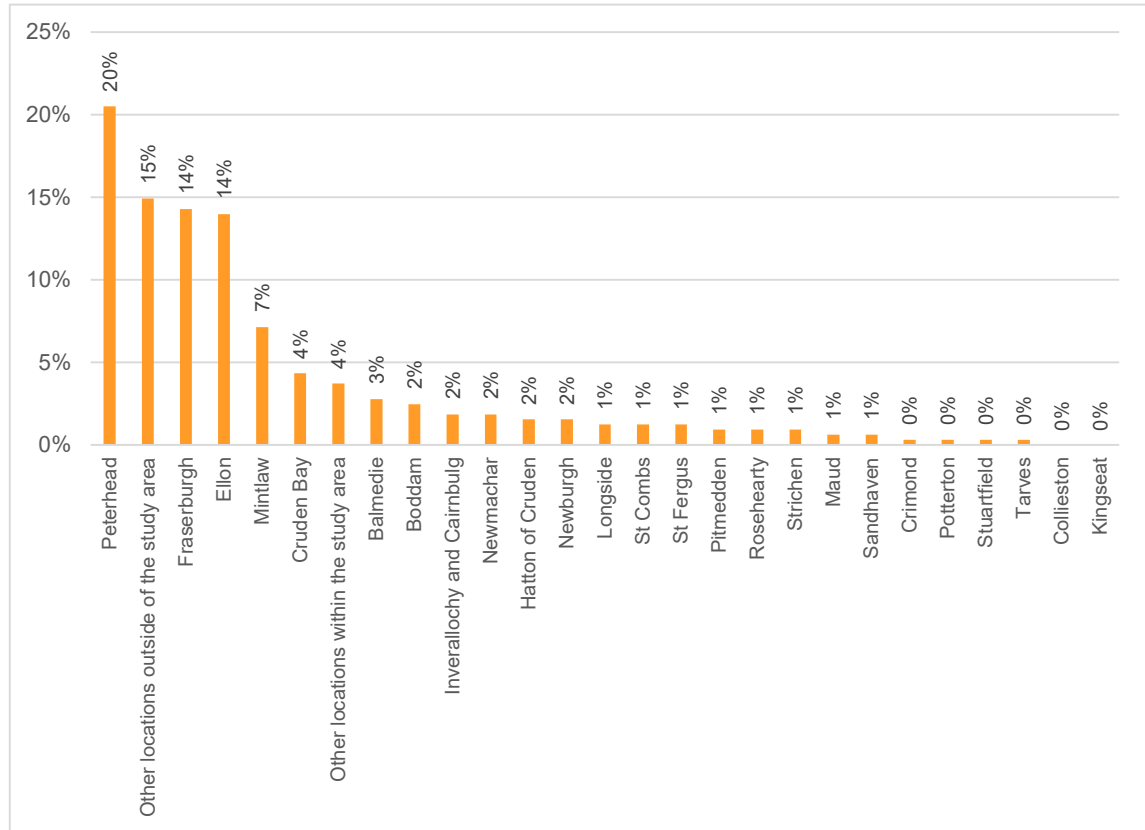


Figure M-11: Where have you travelled to by local bus in the previous month?

M.1.32 The most common destination is Peterhead. This aligns with the location of respondents, with around 20% of respondents to the survey based in Peterhead. Around 15% travel by bus to Fraserburgh with 20% of the sample indicating that they live in the town. A similar proportion travel by bus to Ellon (14%, n=46). However, just 10% of the sample reside in Ellon, suggesting that people from elsewhere in the study area are travelling to Ellon.

**Reasons for using local buses / the bus to Aberdeen**

M.1.33 The figure below shows the reasons respondents used the bus for both travel to Aberdeen and local trips. It is noted that respondents were able to select multiple responses.

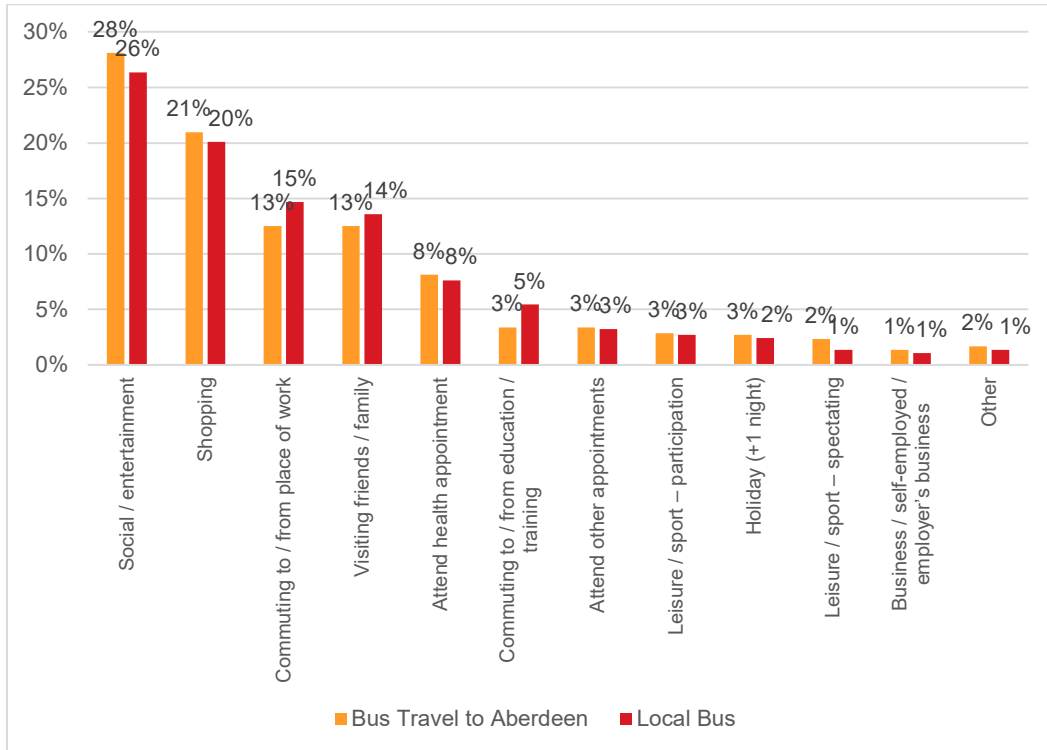


Figure M-12: Why did you make these bus trips to Aberdeen local bus trips in the last month?

**Why did you make these bus trips in the last month?**

M.1.34 There is a similar breakdown in terms of reasons for use for local bus services and the bus to Aberdeen, with the majority of respondents in each case indicating that they use the services for social / entertainment and shopping.

**Satisfaction with bus travel**

M.1.1 The figures below show levels of satisfaction with bus travel to Aberdeen and local bus travel respectively.

Initial Appraisal: Case for Change Report  
Buchan Sustainable Transport Study

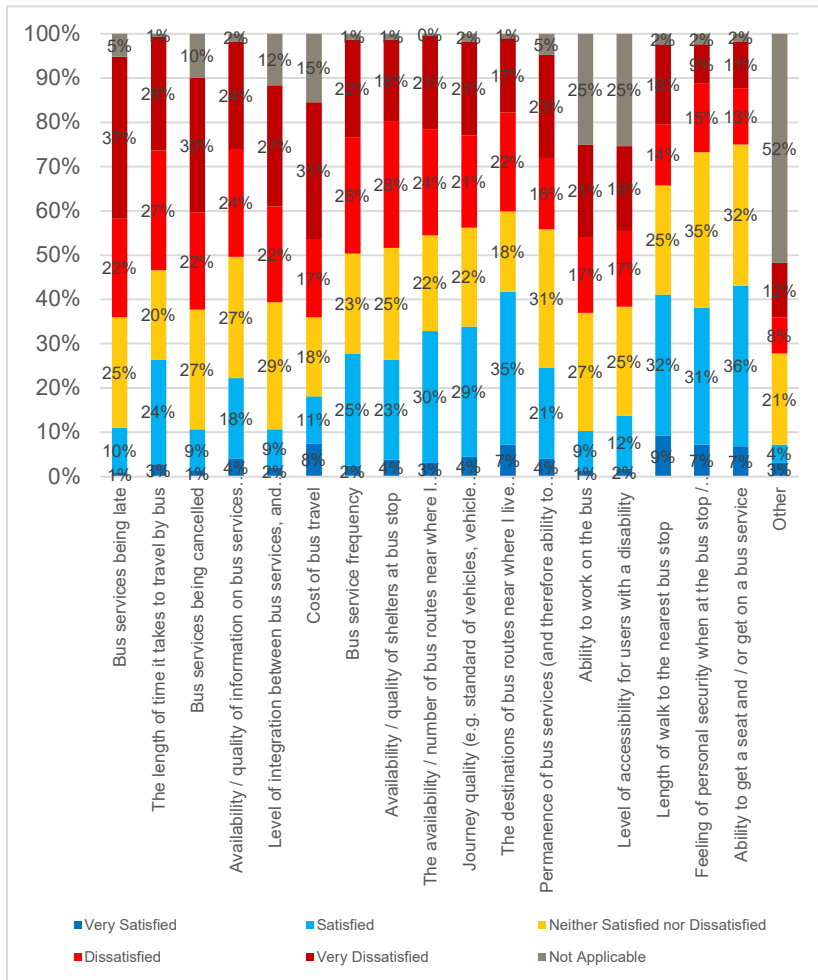


Figure M-14: When travelling by **bus to Aberdeen**, in general how satisfied are you with the following?

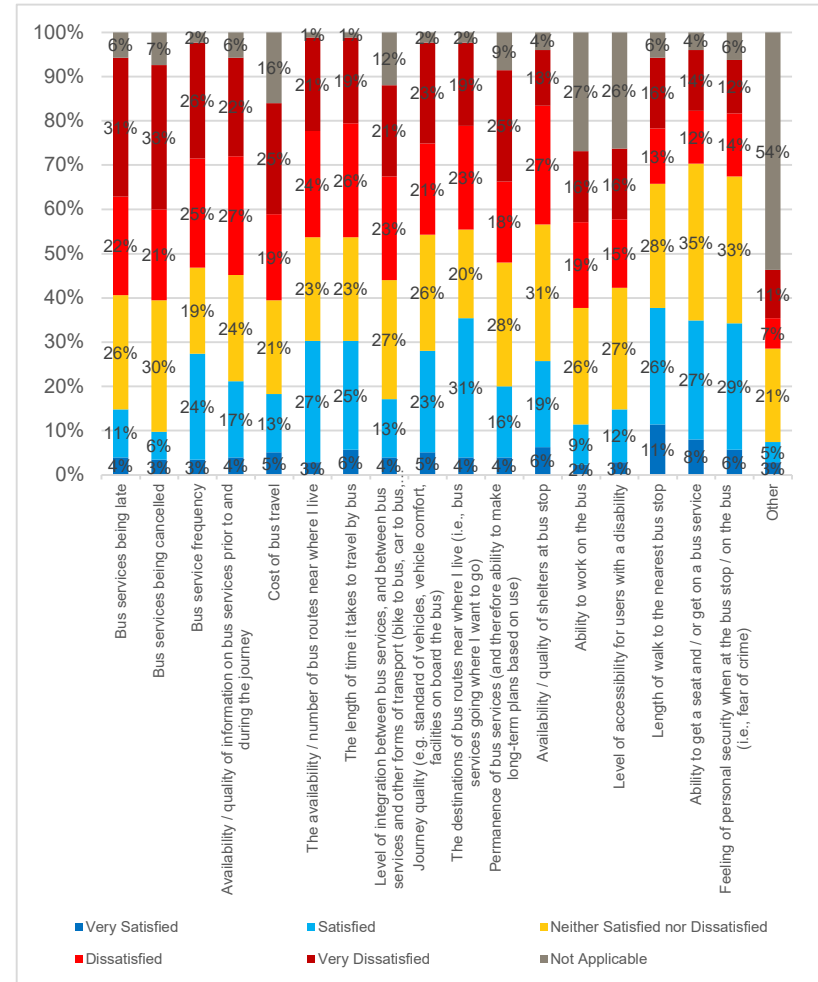


Figure M-13: When travelling **local bus**, in general how satisfied are you with the following?

- M.1.2 The aspects which had the highest levels of **dissatisfaction** were similar for travel to Aberdeen and local bus travel. In both cases, the highest level of dissatisfaction was with the **punctuality of bus services** (i.e. services being late). There were also high levels of dissatisfaction with **buses being cancelled** (52% for Aberdeen and 53% for local buses) and the **length of time it takes to travel by bus** (53% for Aberdeen and 45% for local buses).
- M.1.3 For travel to Aberdeen, the level of integration and cost of travel were also amongst the top five issues identified (49% dissatisfied respectively), while for local bus services, in addition to the above aspects, service frequency and the availability of information also featured in the top five issues (51% and 49% dissatisfied respectively).
- M.1.4 It is worth noting that, with regards to cost, when the non-applicable responses are removed (i.e. those who have a concessionary card), 57% were dissatisfied with the cost of travel to Aberdeen and 53% were dissatisfied with the cost of local bus services. Similarly, with respect to accessibility, when the non-applicable responses are removed, 49% were dissatisfied with the accessibility of the service to Aberdeen and 43% were dissatisfied with the accessibility of local services.
- M.1.5 In terms of **satisfaction**, there were relatively high levels of satisfaction with the ability to get a seat and / or get on a bus service, the destinations of bus routes near where I live, and the length of walk to the nearest stop. These aspects may reflect the relatively high proportion of responses from the main towns in the study area.

#### **Factors which prevent more frequent use**

- M.1.6 All respondents were asked whether there were things about the bus service to Aberdeen / local services which prevented them using the bus as much as they would like.
- M.1.7 In total, three-quarters of respondents (75%, n=577) stated that there were aspects of the service to Aberdeen which prevented them using it more frequently while 54% (n=415) stated that there were aspects of the local bus service which prevented them using it more frequently.
- M.1.8 Respondents were then asked about which factors prevented them from travelling bus, The results for travel to Aberdeen and local bus services respectively are shown in the figures below.

Initial Appraisal: Case for Change Report  
Buchan Sustainable Transport Study

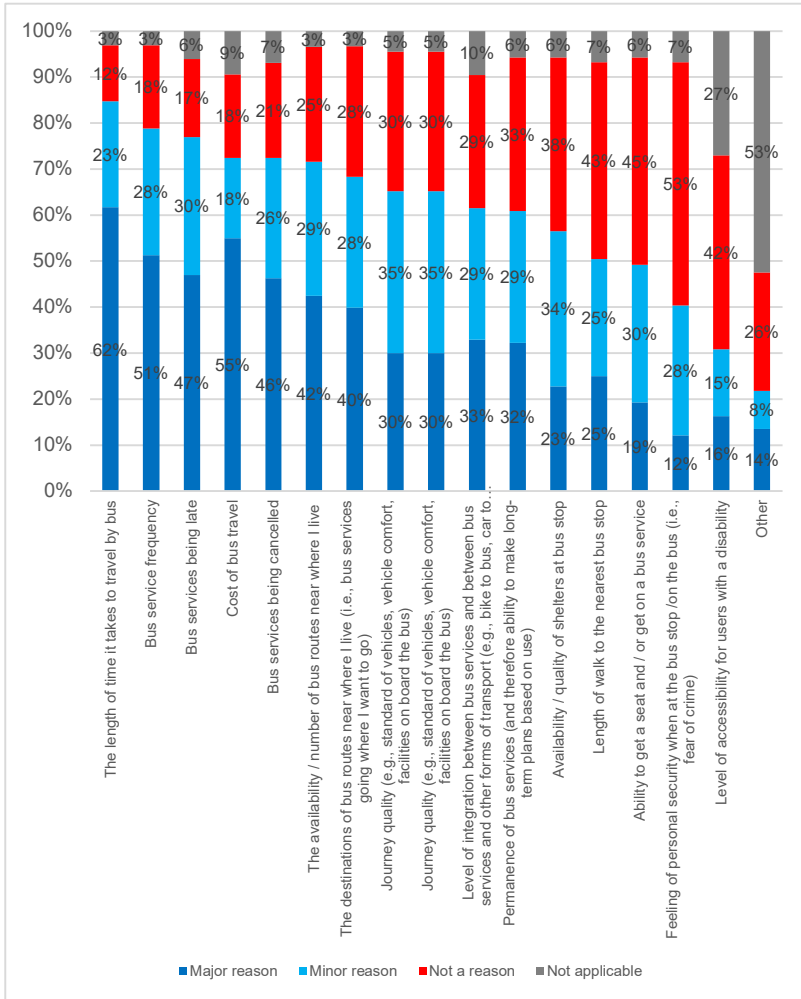


Figure M-16: Please indicate the extent to which the following factors stop you from using the bus to travel to Aberdeen more often?

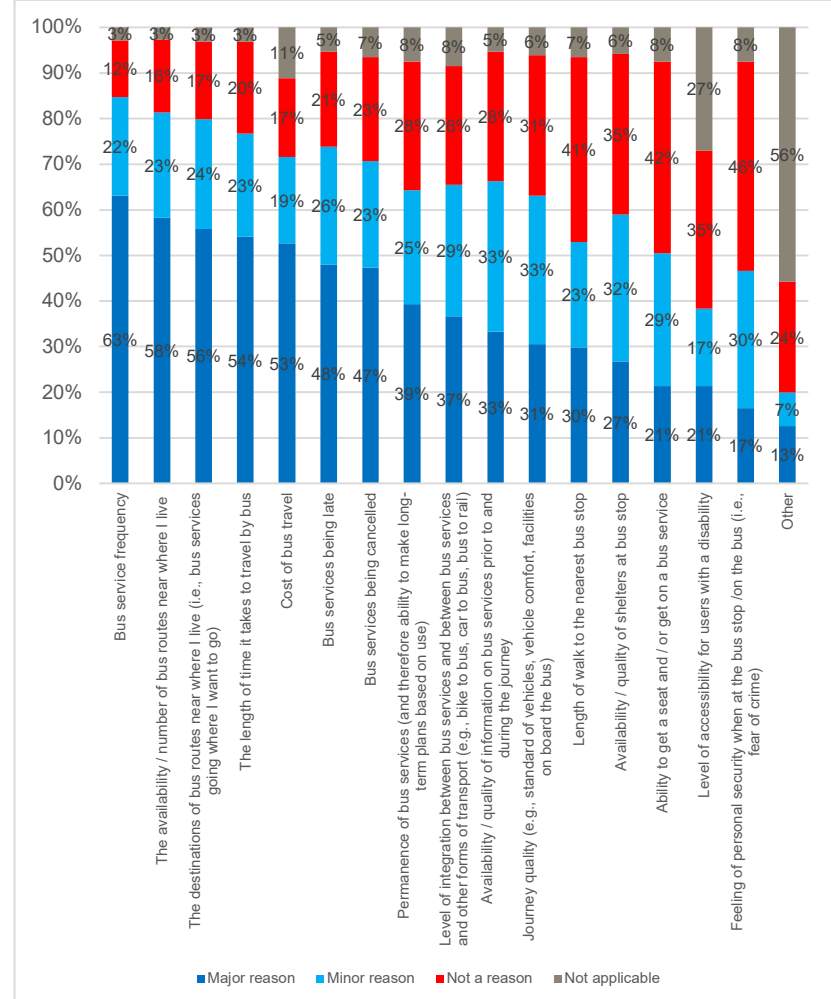


Figure M-15: Please indicate the extent to which the following factors stop you from using the bus more often / as much as you would like?

M.1.9 The main factors which prevent people using the bus to Aberdeen were:

- Length of time (85%)
- Frequency (79%)
- Bus being late (77%)
- Cost (71%)
- Bus being cancelled (72%)

M.1.10 The main factors which prevent people from using the local bus services were:

- Frequency (85%)
- Availability / number of routes (81%)
- Destinations of routes (80%)
- Length of time (77%)
- Cost (72%)

M.1.11 The length of time it takes to travel by bus is therefore more of a deterrent for trips to Aberdeen than local services.

M.1.12 It should be noted that while cost was not the most important factors, if those for whom cost is not applicable (i.e. concessionary card holders) are removed, the percentages are higher (80% identify it as a factor for trips to Aberdeen and 81% identify it as a factor for local trips). Similarly, when those who selected non-applicable for 'level of accessibility for users with a disability' are removed the percentage selecting this as a factor is higher (42% for services to Aberdeen and 52% for local services).

#### **Impact of not using the bus**

M.1.13 Those who said there were aspects of the bus service which prevented them using it as much as they would like were then asked how they are affected by this. The results are shown in the figure below. It is noted that respondents were able to select multiple responses.

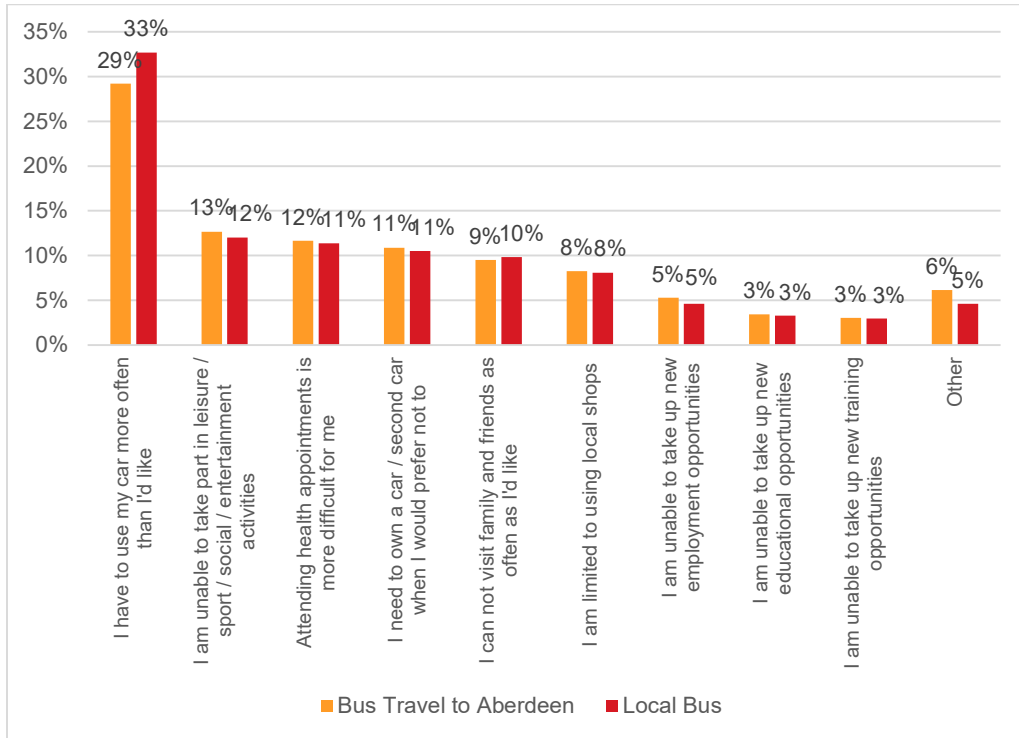


Figure M-17: How are you affected by not using the bus more often / as much as you would like?

M.1.14 The main consequence of not being able to use the bus more often were similar for travel to Aberdeen and local bus services. The biggest impact in both cases is people **using their car more often than they would like**. This accounted for 29%(n=376) of responses in terms of travel to Aberdeen and 33% (n=299) with respect to local bus travel. Other impacts included, needing to own a second vehicle, not being able to take part in leisure activities, and attendance at health appointments being more difficult.

**Open Text Responses – Bus**

M.1.15 The issues identified with bus travel via the survey were also highlighted within the open text responses. Several respondents highlighted issues with the reliability / punctuality of services to Aberdeen, with a number of these noting that, as a result of these issues, the service is not sufficiently reliable to access e.g. work, hospital appointments, or connecting services where there is a need to reach the destination by a specific time:

- “Buses are rarely on time, frequently breaking down. They are definitely not reliable for getting to an appointment on time and its always unclear why buses are late – no explanation given. Bus station in Aberdeen is a shambles, you never know which bus stance the bus to Fraserburgh will leave from and digital boards are not up to date.”
- “The bus service is unreliable and makes attending work difficult. The buses are hourly. I cannot risk the bus not turning up so must catch the earlier bus to ensure I can get to work or health appointments on time.”
- “The bus service is no longer reliable to run as per timetable thus making it difficult to plan journeys where we have connections to catch another bus or train. Each week there are busses not turning up or are running late ...lack of info when the busses are late or cancelled is also an issue.”

M.1.16 Respondents also made comments about the length of time it takes to travel by bus to Aberdeen:

- “67/67 bus service to Aberdeen, too many stops and takes too long to get to final destination. Can take almost 3hrs sometimes even though it only takes 1hr by car”.
- “Bus takes far too long – at least one hour to Aberdeen just isn’t practical when you add in the walk to the bus stop and then add in traffic jams and road closures due to road traffic collisions or bus cancellations at the last minute making them too unreliable.”
- “Buses from Fraserburgh to Aberdeen can take almost 2 hours due to multiple stops through the route and stops within Aberdeen City. Routes 67 and 68 used to alternate every half an hour but I understand services have been reduced to just a 68 service which makes more stops than the 67 did. More express services based on a strict Fraserburgh-Mintlaw-Ellon Park and Ride- Union Square route (stopping only in Aberdeen City for people to alight on way into city) especially at peak demands would make a huge difference.
- “AWPR complete but still takes 90 minutes to get to Aberdeen. Too many services have been removed so bus travel is no longer an option.”

M.1.17 The cost of bus travel to Aberdeen was also highlighted, particularly in comparison to the perceived cost of car travel:

- “Cost of bus travel is also increasing – last I heard a return to Aberdeen was £24?! You would never spend £24 in fuel in a car in an 80-mile round trip”.
- “They are not cost effective when it works out cheaper and more time efficient to drive.”
- “If my husband and I were to travel to Aberdeen by bus, which is 45 mins away by car, it would cost us around £40 return. We are much cheaper paying fuel and parking in Union Square, one of the most expensive car parks, than we are to travel by bus.”

7.2.2 A number of comments were made about the accessibility of bus services to Aberdeen in the open text responses to the survey, including:

- “Using the Aberdeen bus. I need to use a mobility walker, but I cannot take on bus. Also, as there are only two seats’ downstairs and if two people are seated, I cannot climb the stairs so I would have to wait for next bus which means I would miss an appointment.”

7.2.3 There were also several comments about the use of ‘town services’ when making the long-distance journey to Aberdeen:

- “Standard of buses can often be poor with ‘town service’ buses deployed to undertake some of the busiest runs between Fraserburgh and Aberdeen (many of these buses regularly breaking down). Given passengers from places such as Peterhead, Fraserburgh and Banff are travelling the longest distances into Aberdeen, they should be allocated the most comfortable transport.”
- “Town Service buses used for this long journey instead of the usual coaches.”

M.1.18 Comments were also made about the lack of services to Dyce and the airport and the need to travel into Aberdeen and interchange:

- “There are no links from the main towns in the area directly to the airport in Aberdeen. This increases the use of private cars as it is not viable to be taking the bus into the centre of Aberdeen then out to the airport.”

- “No buses direct to Dyce or Inverurie from Ellon – journey time via Aberdeen is 4-5 times longer than going direct by car”

M.1.19 In terms of local services, a number of comments were made on the lack of weekend services / services which support shift work:

- “No busses run on the weekends, I had to quit my job as I couldn’t get in early mornings but there is one for the weekdays at the same time.”
- “I would like to travel to Peterhead to go to the cinema, but the buses are infrequent and take a long route through all the little towns in between. There should be more express buses from Fraserburgh to Peterhead, at least at the weekend for leisure travel.”

“Only two buses per day from my local stop (only to Ellon) and then not at weekends. They only serve commuter times and being a shift worker, it means using my car.”

## Rail

### Frequency of use

M.1.20 **Figure M-18** shows the frequency of rail use by respondents in the last month.

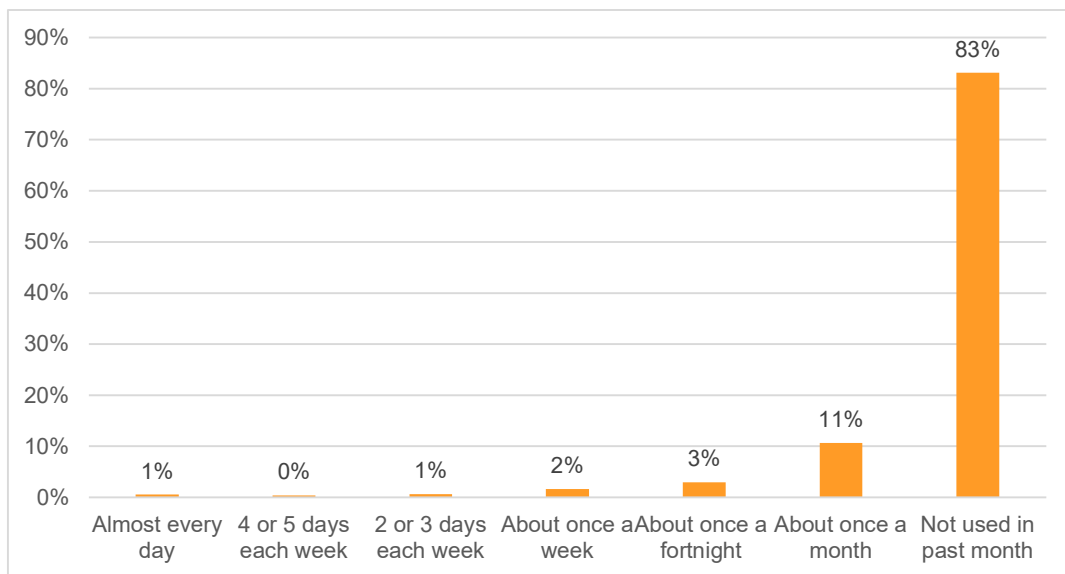


Figure M-18: How often have you used rail services in the previous month?

M.1.21 As would be expected given the lack of rail station in the study area, most respondents do not use rail services on a monthly basis with 83% (n=639) not using the train in the past month. Amongst those who do use rail services, issue is irregular with just 4% using the services weekly.

M.1.22 Those who noted that they used the train once a month or more (n=130) were then asked why they made these trips. (see Figure M-19).

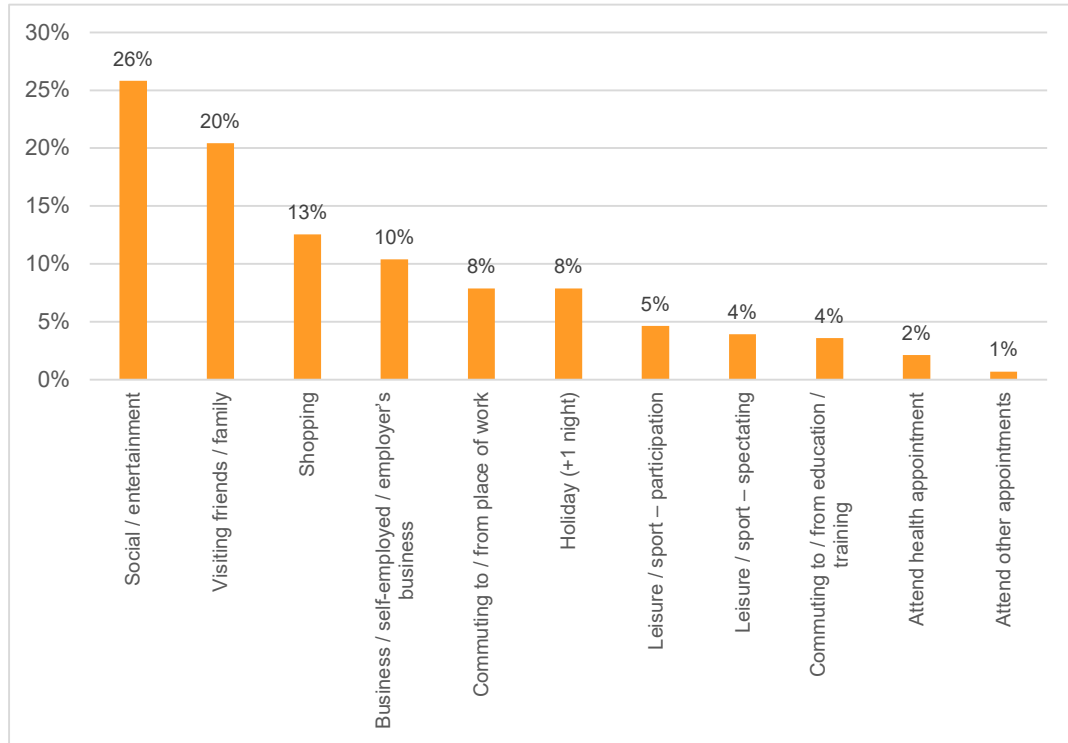


Figure M-19: For what purpose did you make these journeys?

M.1.23 Figure M-19 shows that people mainly use the train for social / entertainment purposes, followed by visiting friends / family, and shopping. Overall, just 8% use rail for commuting.

M.1.24 Over 75% of those who had travelling by rail in the last month, travelled from Aberdeen, with 14% (n=18) using Dyce Railway Station, 5% (n=6) using Inverurie Railway Station and 2% (n=3) respectively using Kintore and Stonehaven. Driving to the station was the most popular mode of transport to access rail with just over half of respondents selecting this option (52%, n=67) and a further 9% (n=12) travelling as a passenger in a car or van. A total of 28% (n=36) uses the bus, 7% (n=9) walked and 4% (n=5) got a taxi. Edinburgh was the most popular destination when travelling by rail with just over 40% (42%, n=55) selecting this option, followed by Glasgow (19%, n=25).

M.1.25 Respondents to the survey were then asked how the lack of railway stations in the study area affects them. The results are shown below in Figure M-20. It is noted that respondents were able to select multiple responses.

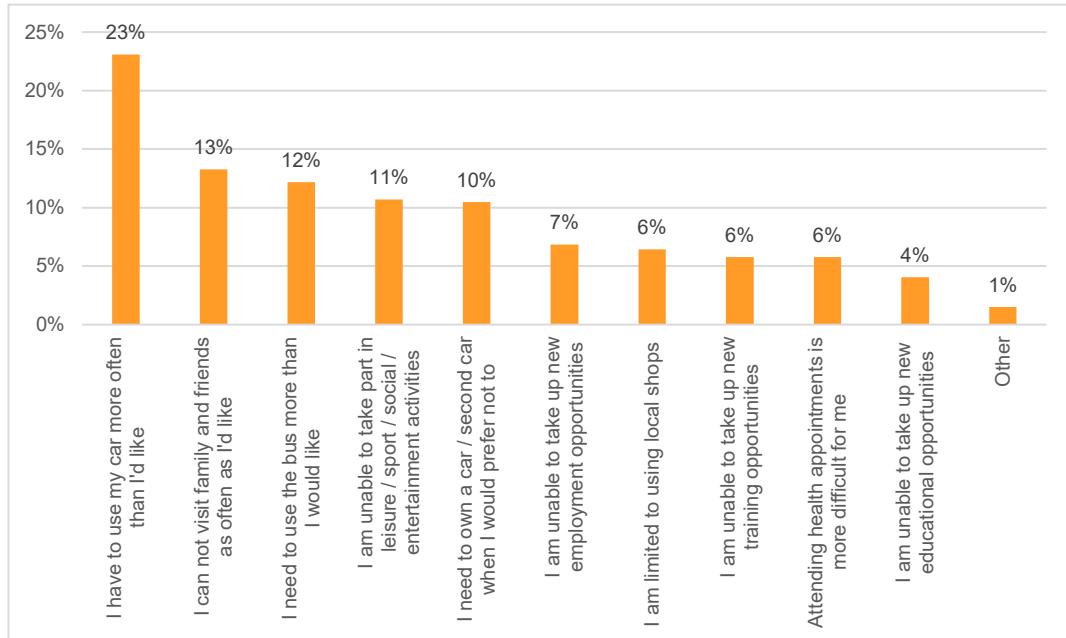


Figure M-20: There are currently no railway stations in the study area – how does this affect you?

M.1.26 The most common impact was that the public have to **use their car more than they would like** (23%, n=108) followed by they cannot visit family and friends as often as they would like (13%, n=62) and then they need to use the bus more than they would like (12%, n=57).

M.1.27 Respondents were also asked how often they would use rail if there was a railway station close to their home. As shown below, 68% of respondents stated that they would use rail at least weekly in this scenario.

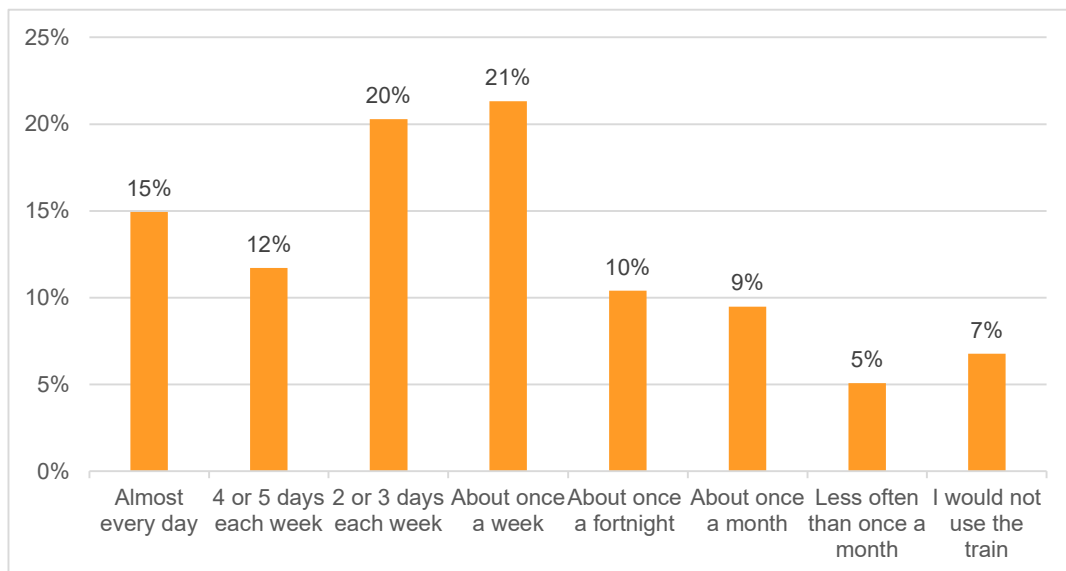


Figure M-21: If there was a railway station closer to your home, how often do you think you would use the train?

### Open Text Responses – Rail

M.1.28 A range of comments were made on rail in the open text responses, with many emphasising the positive benefits rail could provide, including reduced car travel, quicker journey times, safer journeys, and the ability for people to work while they commute:

- “Train to Fraserburgh and Peterhead areas would be great as this would reduce the number of vehicles on the road and would cut down journey times and would be cheaper than the bus.”
- “Reinstate rail services in the North East as connectivity is poor and all residents of working age require a car.”
- “A railway would be fantastic! The Aberdeen to Fraserburgh road is a nightmare at peak times. An absolute rat race. A railway service would significantly reduce the amount of traffic and people could work on route. Also, we always need to use a car to travel south as we need to get to Aberdeen first.”
- “[rail] would encourage travel to other areas and take cars off the road which would reduce wear and tear/maintenance required for the roads and help the environment/climate change.”
- “This would cause less road traffic accidents in our area. Train would be fantastic I would use it for commuting to work.”
- “In view of the climate problems I’m surprised that rail links are not a major consideration to reduce traffic on the roads.”
- “There is no rail travel in the area. Which is likely the cause of many road vehicle-based accidents. With the lack of rail transport all haulage and goods vehicles use the road. These usually travel at 40/50mph (often slower). There is little opportunity for overtaking and often lines of lorry’s so no option for safe overtaking. People get frustrated and do overtake often resulting in an accident.”
- “[with rail], I would be able to commute/travel to and from Aberdeen in roughly the time it would take to drive so would encourage me to use my car less. My partner who works in Peterhead would be able to drive locally and then take the train to work every day saving time in traffic and also being more environmentally friendly in travel choices. Leisure travel would be more convenient when versus the bus and it would also mean we were able to access the wider rail network more easily for long distance journeys using public transport. The options currently are either. Car to Ellon, Bus to Aberdeen then Train further afield or Car to Inverurie then onto the rail network. If there was a station in Ellon serving both Peterhead to the North and Aberdeen/further afield there would be no debate for us in changing our habits for commuting, social travelling and for longer distance journeys.”
- “A train to Aberdeen from Fraserburgh would be so much easier and quicker and safer than driving or taking the bus.”

## Driving

M.1.29 In total, 92% (n=710) had access to a vehicle for personal use and 8% (n=59) did not.

### Frequency

M.1.30 The figure below shows the frequency of driving over the last month to both Aberdeen and other locations amongst those with access to a vehicle.

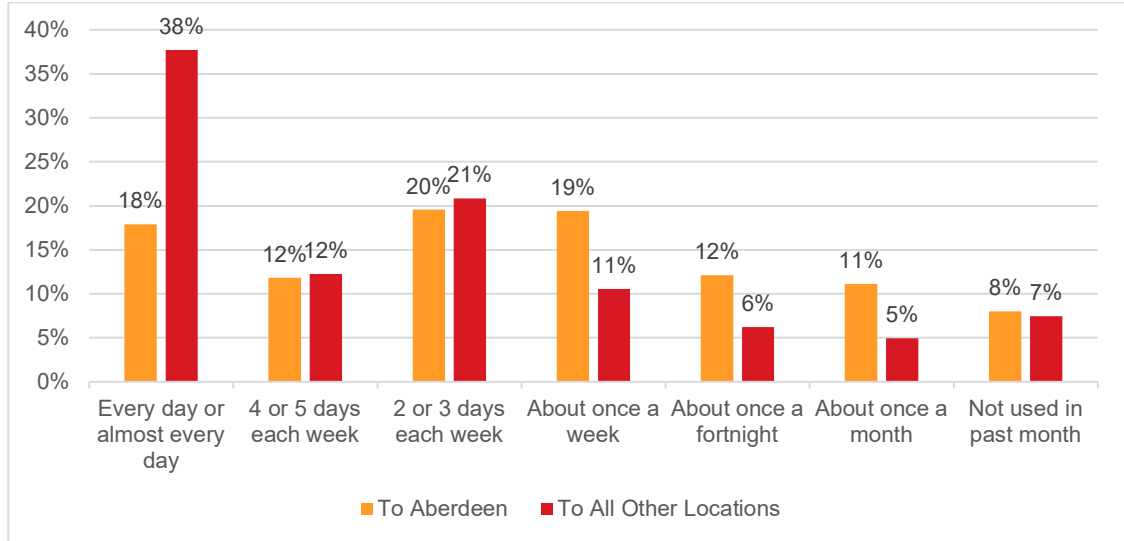


Figure M-22: In the previous month, how often have you used a car or van (as a driver) to travel?

M.1.31 In total, 30% of respondents indicated that they had driven to Aberdeen at least 4-5 days a week over the last month. This compares with just 4% making this trip at this level of frequency by bus.

**Journey Purpose**

M.1.32 Those who stated they made journeys to Aberdeen (n=653) in the last month were then asked why they made these trips. A range of different reasons were included within the survey and the public were able to select all that apply to them.

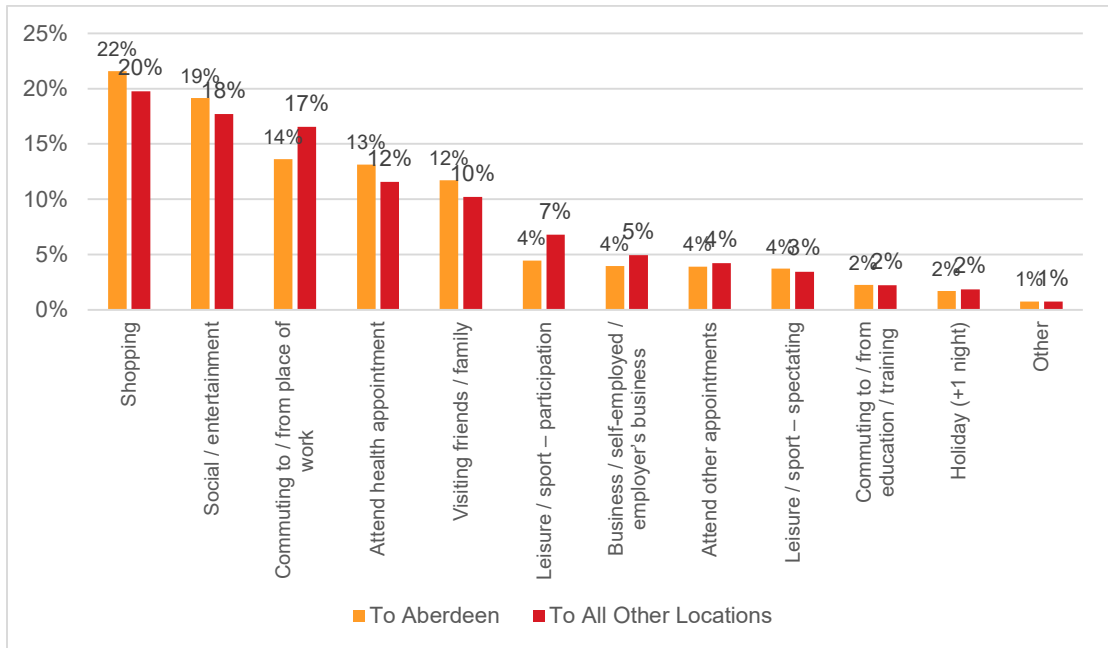


Figure M-23: Why did you make these car / van trips in the last month?

M.1.33 The foremost commonly cited reason for the trips made was shopping (22%, n=431) followed by social / entertainment reasons.

### Destinations

M.1.34 Respondents were asked to indicate where they drive to other than Aberdeen. As shown in the figure below, the most popular destination was Peterhead (12%, n=430) followed by Ellon (11%, n=389), Fraserburgh (10%, n=372) and Mintlaw (10%, n=367) which are the four largest settlements within the study area. The remaining locations all received 4% or less of responses indicating they are less popular destinations for the public to travel to.

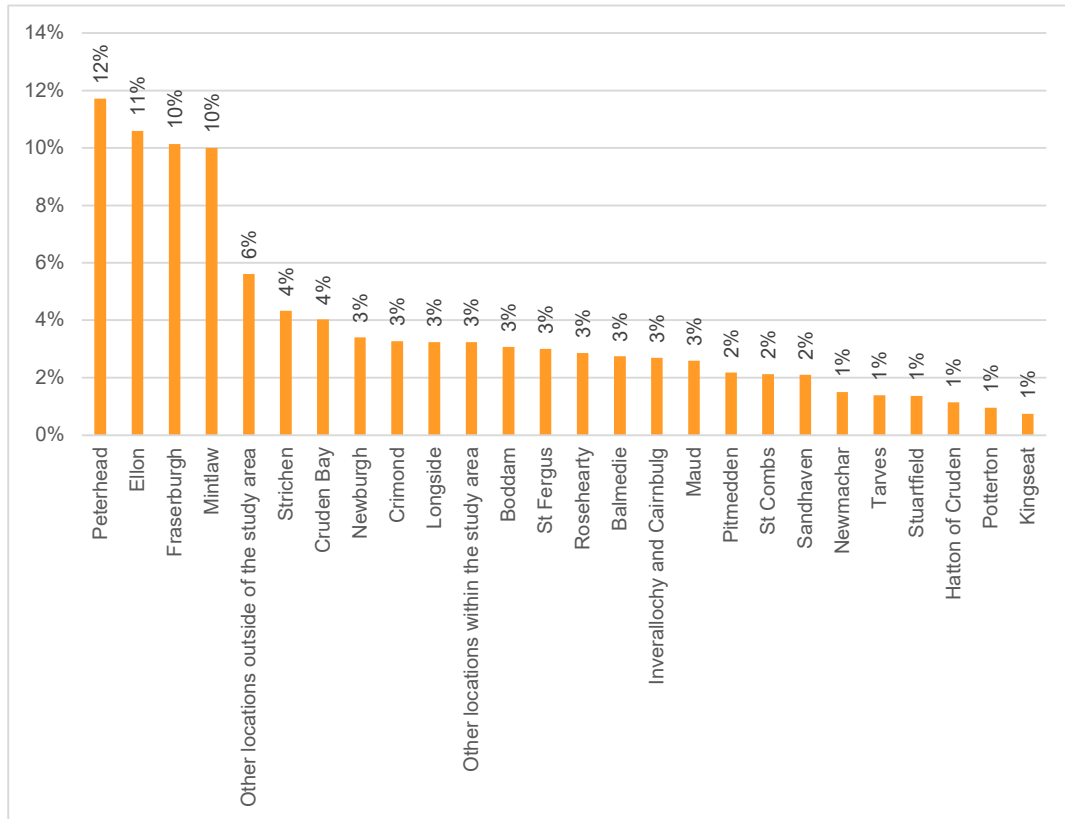


Figure M-24: Where have you travelled to in the last month by car?

### Satisfaction

M.1.35 Respondents were then asked how satisfied they are with a range of different aspects of driving both to Aberdeen and for other trips. The results are shown in Figure M-25 and Figure M-26.

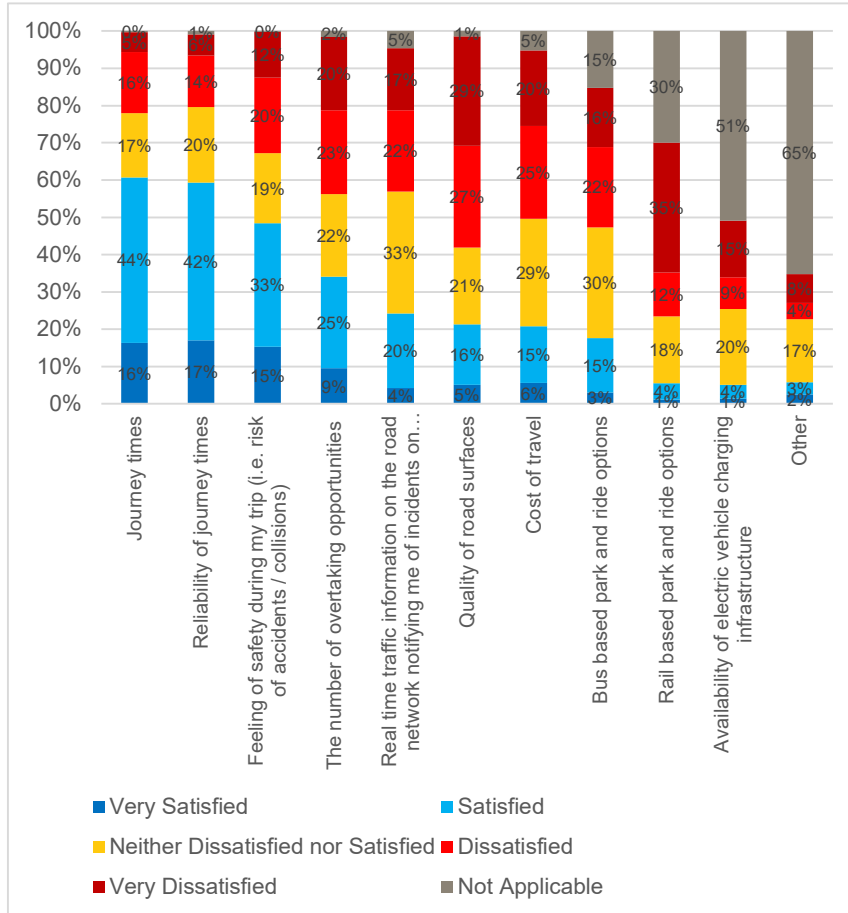


Figure M-25: When travelling by car to Aberdeen, in general how satisfied are you with the following?

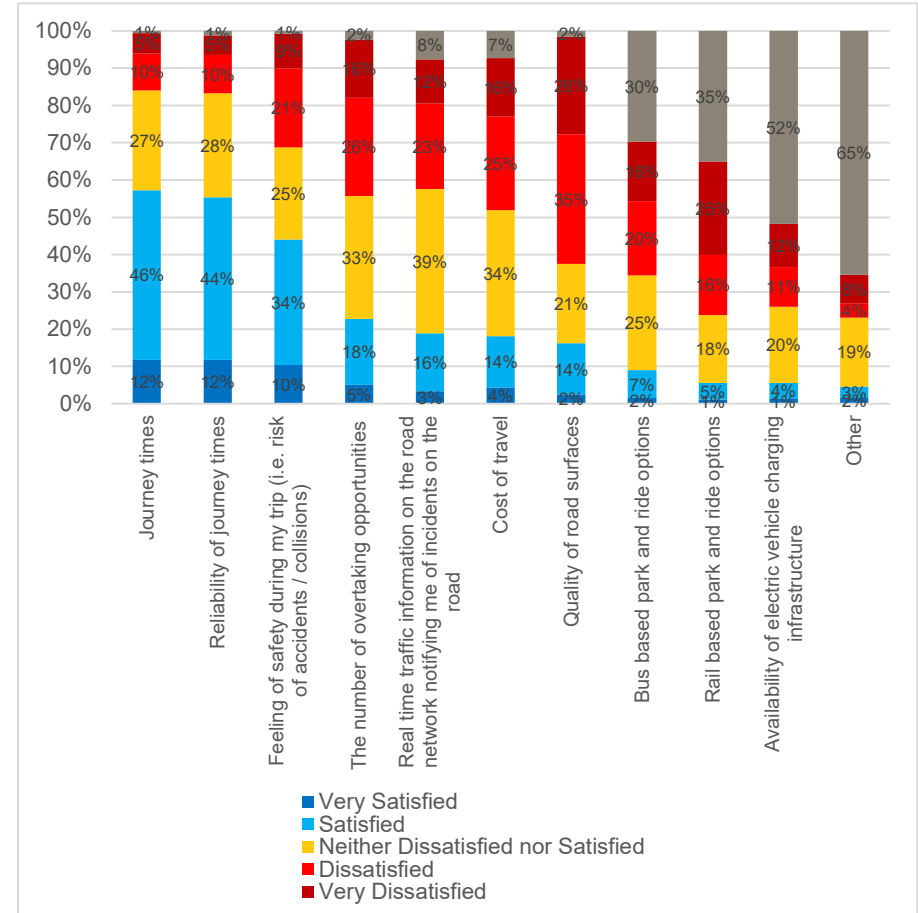


Figure M-26: When travelling by car to locations other than Aberdeen, in general how satisfied are you with the following?

M.1.36 The aspects of driving with which people were most dissatisfied were similar for trip to Aberdeen and other locations. In both cases, the aspect with the highest level of dissatisfaction was the quality of the road surfaces with 57% stating they were dissatisfied with this aspect when travelling to Aberdeen and 58% stating they were dissatisfied with this aspect when travelling to other locations.

M.1.37 There were also high levels of dissatisfaction with:

- For driving trips to Aberdeen - rail based park and ride options (47%, n=305) and the cost of travel (45%, n=295)
- For driving trips to other locations - overtaking opportunities (42%, n=276), rail-based park and ride options (41%, n=271) and the cost of travel (41%, n=271)

M.1.38 Interestingly, there was a reasonable high level of satisfaction with road journey times and journey time reliability, with 60% (n=396) and 59% (n=388) respectively satisfied with these aspects when travelling to Aberdeen and 58% (n=376) and 56% (n=364) respectively satisfied with these aspects when travelling elsewhere. Albeit, in each case, a reasonable proportion were dissatisfied (21% and 20% dissatisfied for trips to Aberdeen and 15% respectively for trips elsewhere)

M.1.39 There was also a higher proportion satisfied with the feeling of safety during their trip (i.e. risk of accidents / collisions) than dissatisfied with 48% (n=316) satisfied with this aspect with respect to Aberdeen and 44% (n=289) satisfied with this aspect more generally.

#### **Open Text Responses – Driving**

M.1.40 The issues identified via the survey were also identified in the open text responses, with respondents identifying safety issues, poor road surfaces, and lengthy diversions.

- “The volume of traffic on the A90 from Ellon to Peterhead and Fraserburgh (including the A952) far exceeds what the routes are capable of handling safely. This results in fast erosion of the road surfaces quality and dangerous driving at times due to the lack of safe overtaking options. There have been far too many collisions on the many routes north of Ellon which the road surface quality and lack of overtaking opportunities have contributed to.”
- “The A90 is a key transport artery in the North East. If any portion of it closes for whatever reason the surrounding road network cannot cope / is not developed enough to cope and causes chaos for drivers with lengthy diversions showing how frail the road network actually is. Toll of Birness is also a disgrace. How a junction which supports a town of 17 thousand people in one direction and 13 thousand in another direction (never mind all the settlements in between) has not been upgraded is shocking. The A90 supports such a large hinterland of a population”.
- “Overtaking is inherently dangerous and what leads to accidents is the fact that the streams of traffic both ways are so constant that there is very little in the way of overtaking opportunities, so people start to take risks.”
- “The AWPR has gone some way to easing the congestion of the A90 North but the quality and condition of the roads north and south are horrendous (potholes, drainage)”.

M.1.41 Several respondents also suggested potential improvements to the road network including, improving the Toll of Birness and Cortes junctions, overtaking lanes, speed limits, and providing dual carriageways:

- “The whole road between both Fraserburgh and Peterhead and Aberdeen could be dual carriageways and made a lot safer to drive on. Both the Cortes junction and Toll of

Birness junction have serious accidents at them almost weekly partly due to driver error but mostly due to the road layout just not being fit for purpose anymore and needing brought into a more modern driving road”.

- “Things could drastically improve if crawler lanes (as seen on the A96) were installed on the A952 to allow safe overtaking of slow lorries. The traffic volume and twisting nature of the A952 make overtaking particularly dangerous and difficult and lorries seem reluctant to pull in to allow traffic past. A particular issue on this road, given the fishing industry and Gray & Adams plant meaning there is a high level of slow goods traffic on the A952 most weekdays. Toll of Birness is incredibly dangerous southbound in poor weather - if a roundabout or traffic lights are not an option, could a 40mph limit covering the junction area of the A90 be a good interim solution to improve safety?”

## M.2 Business Survey

### Survey Response

M.2.1 In total, 36 businesses / organisations responded to the survey. The majority of these were based in Aberdeen and Peterhead with smaller numbers from Fraserburgh and elsewhere in the study area (see Figure M-27).

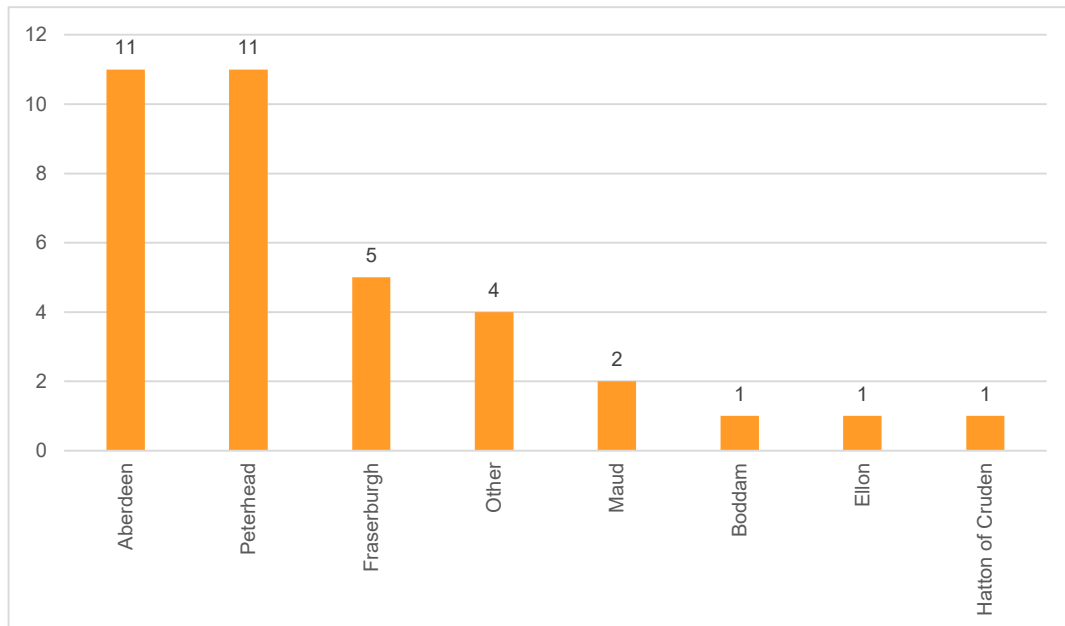


Figure M-27: Where is your business located?

M.2.2 The majority of the businesses who responded had been based at their current location for more than 10 years (58%, n=21) and a further 20% (n=7) based there for 6-10 years and the remaining 8% (n=22) based there for 5 years or less. The businesses were from a range of sectors as shown in the figure below.

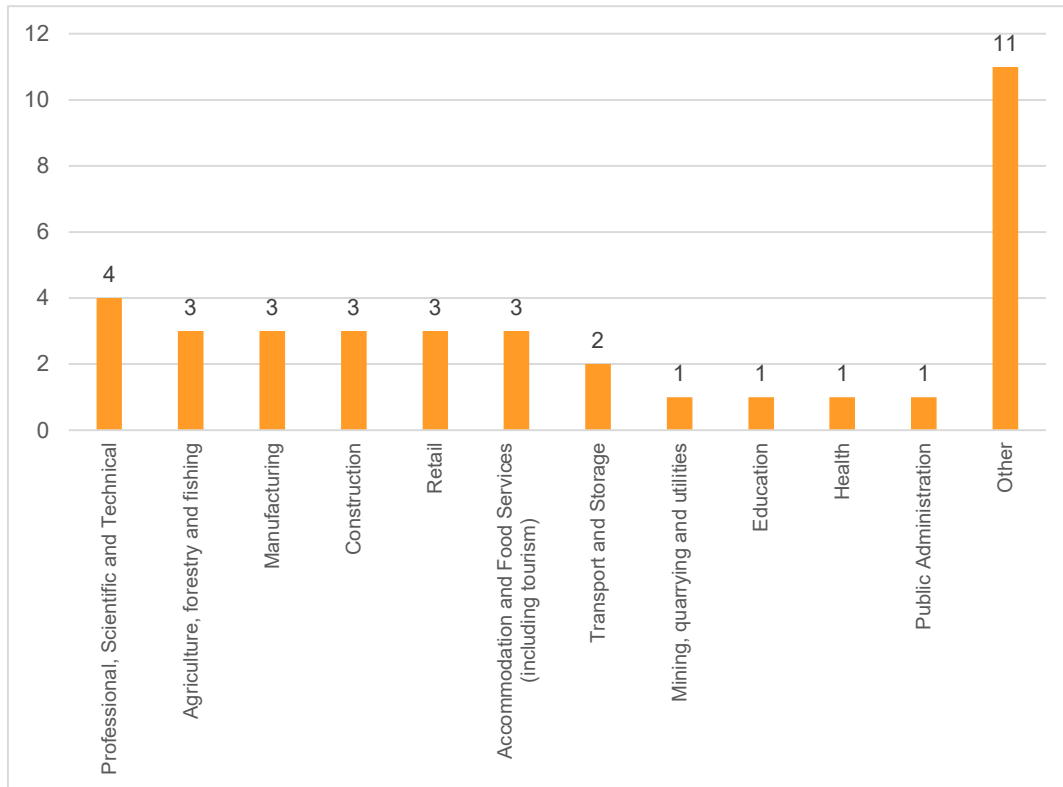


Figure M-28: How long have you operated from this location?

M.2.3 11 businesses / organisations selected 'other' and provided further details as follows: oil and gas (3), engineering (2), energy (1), entertainment (1), property maintenance (1), leisure (1), plant and vehicle hire (1), driving instructor (1).

### Employees

M.2.4 There was a range of sizes in term of employee numbers within the business sample. Overall, on average businesses employed 36 full time staff and 18 part time staff, with numbers ranging from sole traders (of which there were three) up to the largest business surveyed which employed more than 500 staff.

M.2.5 Around 30% of the sample employed seasonal staff and 46% had employees based in other locations.

## Freight and Goods

### Importance of transporting supplies / goods

M.2.6 As shown in the figure below, the physical movement of supplies / goods was important to over 69% (n=22) of the businesses / organisations surveyed.

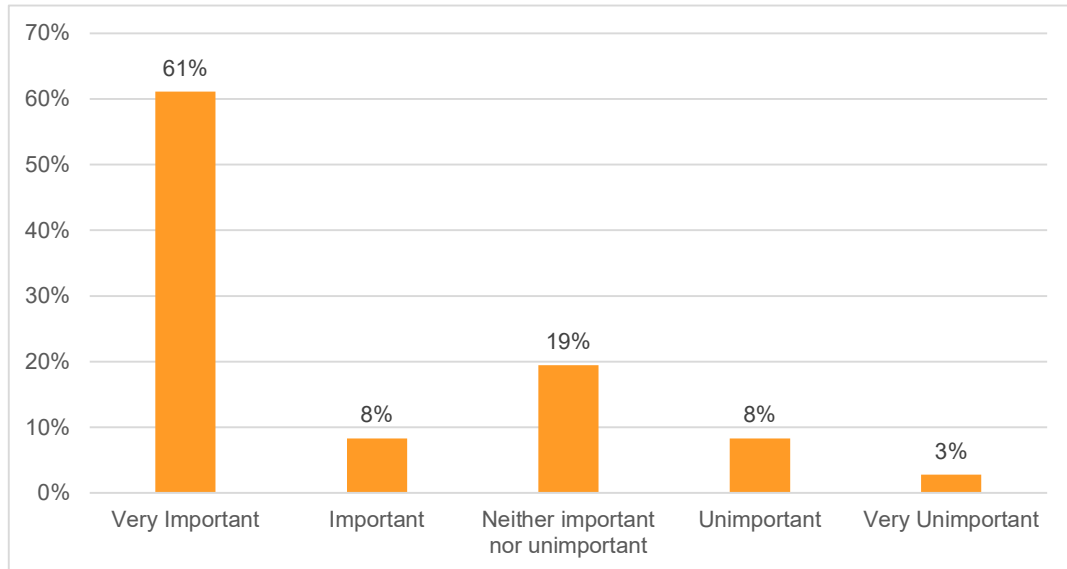


Figure M-29: How important to your business / organisation is the physical movement of supplies / goods?

### Mode used to transport supplies and products

M.2.7 Those who noted that the physical movement of goods was important to them (n=25) were then asked about their principle means of moving both supplies to and products from their business / organisation. The results are shown in the figures below.

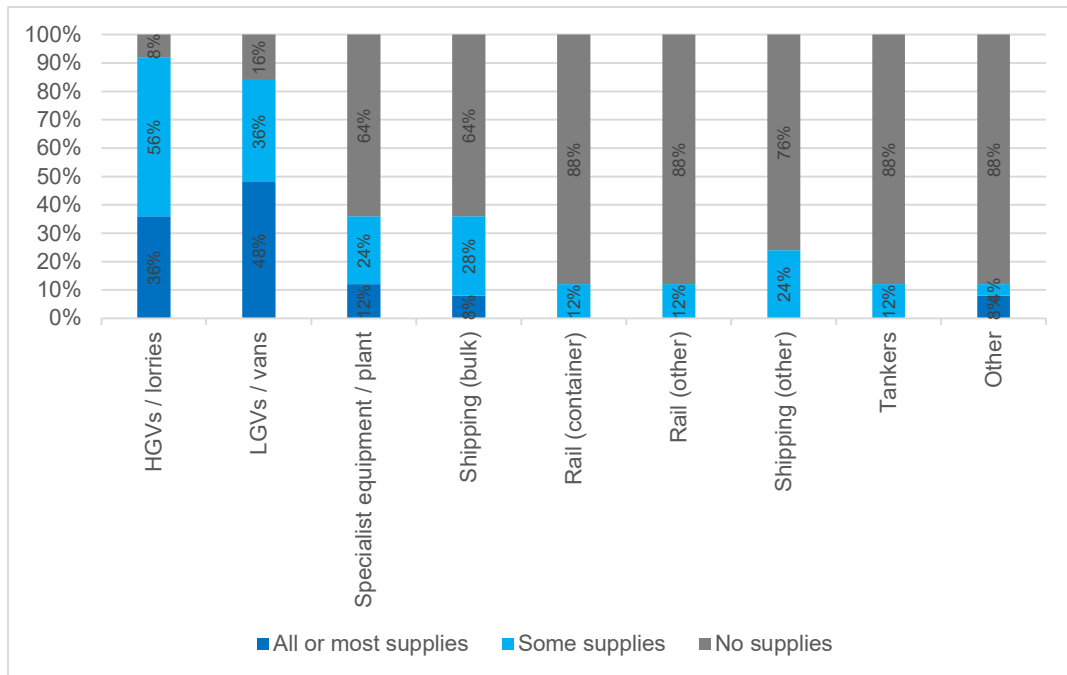


Figure M-30: What is your principle means of moving supplies to your business / organisation at this location?

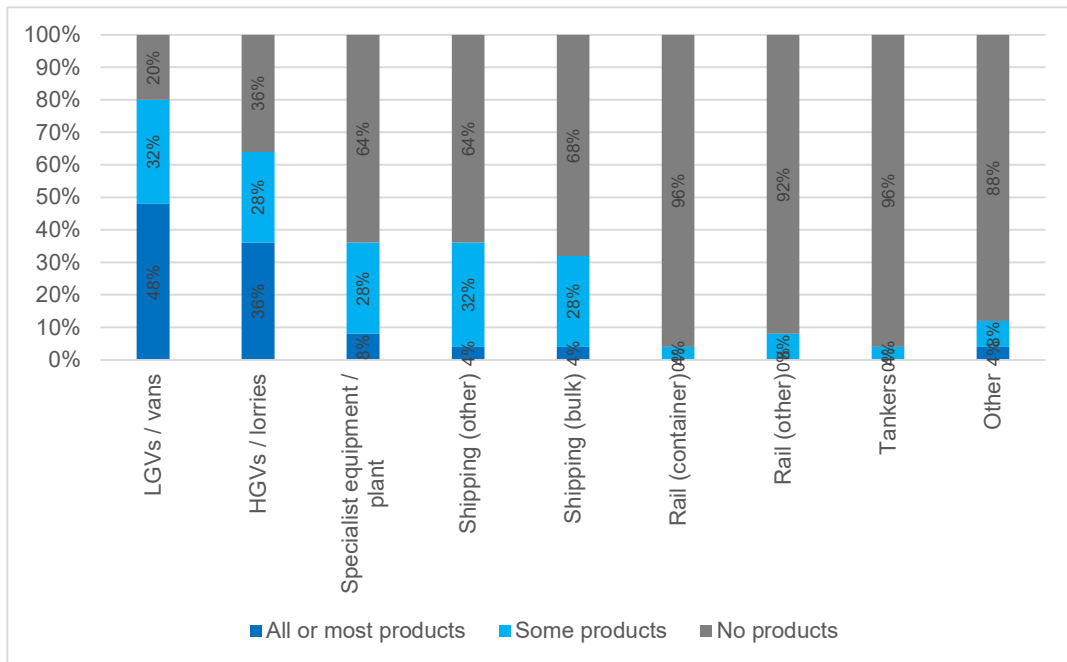


Figure M-31: What is your principle means of moving products from your business / organisation at this location?

M.2.8 As shown, HGVs and LGVs were the dominant means of transferring both supplies and products, with these modes particularly dominant with respect to supplies.

M.2.9 In total, just over one third (36%, n=9) of businesses indicated that they used their own vehicles to transport their products with 24% (n=6) employing an external haulage firm. The remaining 40% (n=10) used a mix of their own vehicles and an external haulage firm. The

haulage firms used included Killoh, Robert Burns, CDS, O'Toole, Caledonia Logistics, Streamline.

**Satisfaction with transporting products by road**

M.2.10 The businesses who indicated they transported their products using their own vehicles (n=19) were asked about their satisfaction with road transport. The results are shown in the figure below.

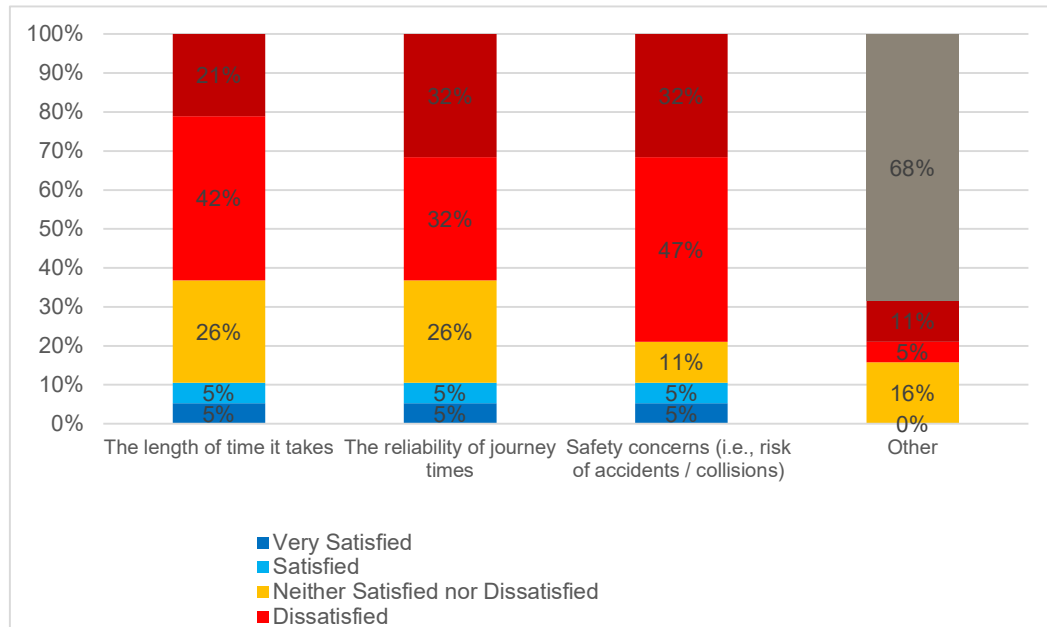


Figure M-32: When transporting your products by road, do you move your products in your own vehicles or use a freight haulage firm?

M.2.11 The highest levels of dissatisfaction were with safety concerns for which 79% (15) were dissatisfied. This was followed by the length of time it takes (63% dissatisfied) and the reliability of journey times (64% dissatisfied).

M.2.12 Beyond these, other issues which were identified by respondents included poor road surfaces and slow-moving traffic (such as tractors).

### About Your Workforce

M.2.13 The figures below show the area of residence of those working at the businesses who responded, and the main mode used by employees to get to work.

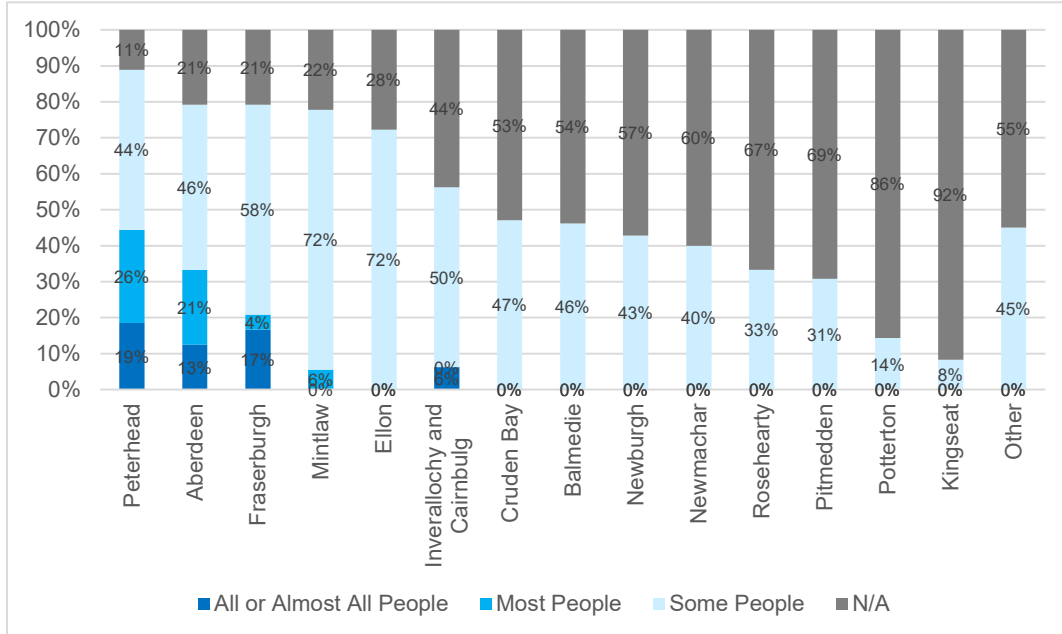


Figure M-33: Please provide an outline of where your employees live. Please tick one option per row for the relevant locations. Include any contractors at your site

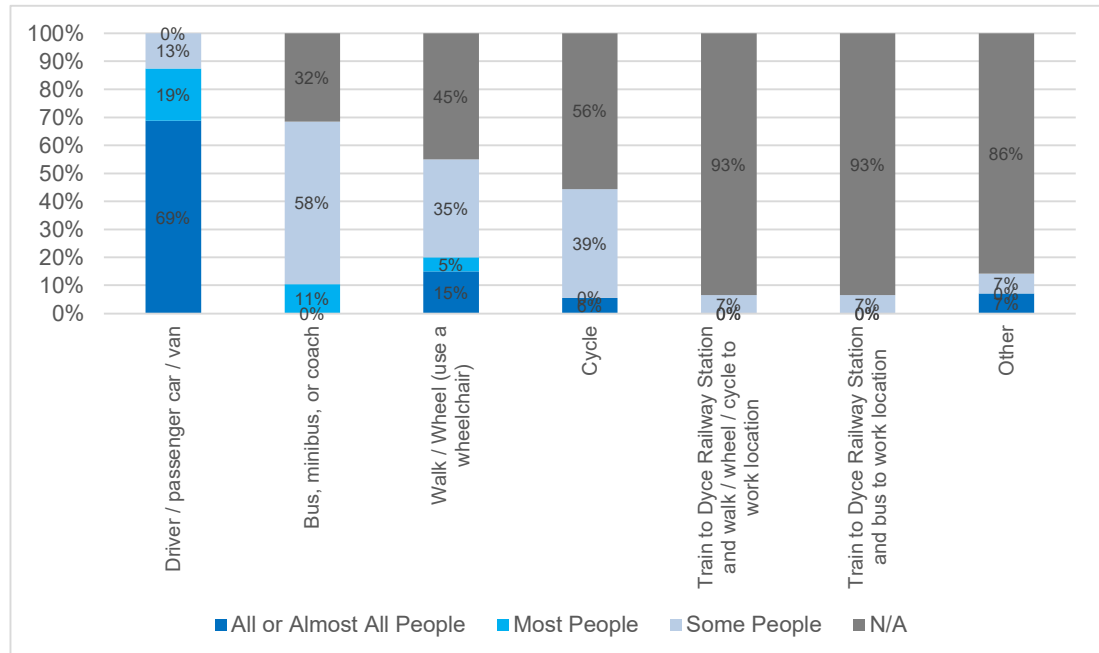


Figure M-34: What is the main mode of travel used by your employees to get to work in general?

M.2.14 Most staff lived in Peterhead or Aberdeen reflecting the location of the businesses surveyed. Car travel was the dominant mode of travel, with just over two-thirds (69%, n=22) of businesses noting that all or almost all their employees travel to work by car with an additional

19% (n=6) indicating that most people travel by car. In comparison, just two businesses (11%) indicated that most of their employees travel to work by bus.

#### Impact of transport problems on attracting / retaining staff

M.2.15 The businesses were then asked whether transport problems at their site affect attracting and / or retaining staff at their location. In total, over 65% of businesses (67%, n=24) indicated that transport problems impact attracting and / or retaining staff, with 36% stating that it has a large impact and 31% stating it has a small impact.

M.2.16 Those who indicated that there are transport problems (n=25) were then asked why they think these difficulties arise. The results are shown in the figure below. Respondents were able to select multiple responses.

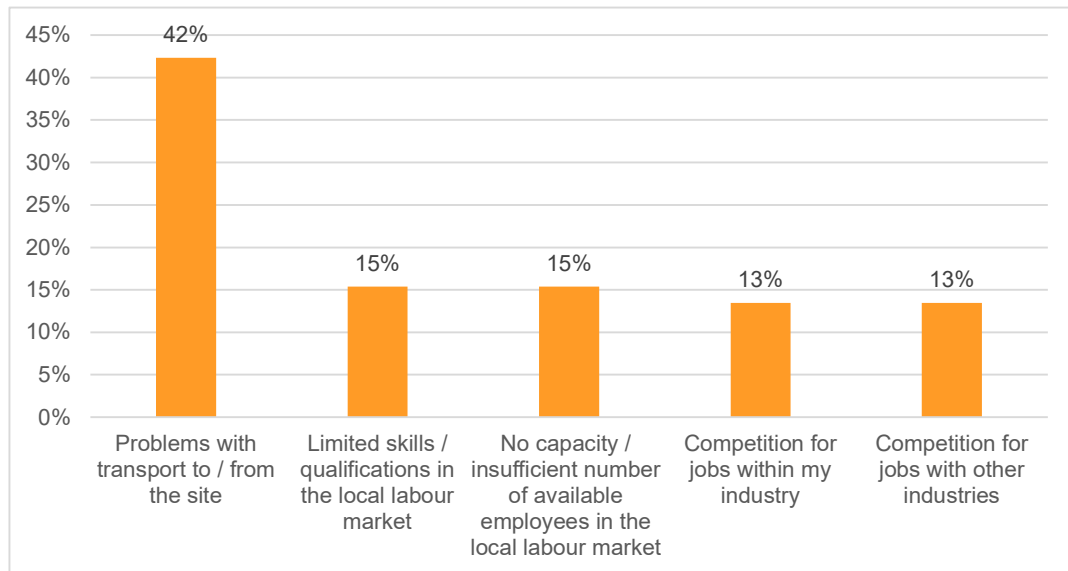


Figure M-35: Why do you think these difficulties (with attracting and / or retaining staff) arise?

M.2.17 A total of 42% (n=22) of businesses noted that the main issue is problems with transport to / from the site. Both limited skills / qualifications in the local labour market and no capacity / insufficient number of available employees in the local labour market account for 15% (n=8) of the total number of responses each. Both the competition for jobs within their industry and with other industries is noted as an issue by 13% (n=7) of businesses / organisations.

M.2.18 Those who stated that their transport problems affect their ability to attract / retain staff were asked to indicate the extent to which a range of issues contribute to these transport problems (Figure M-36).

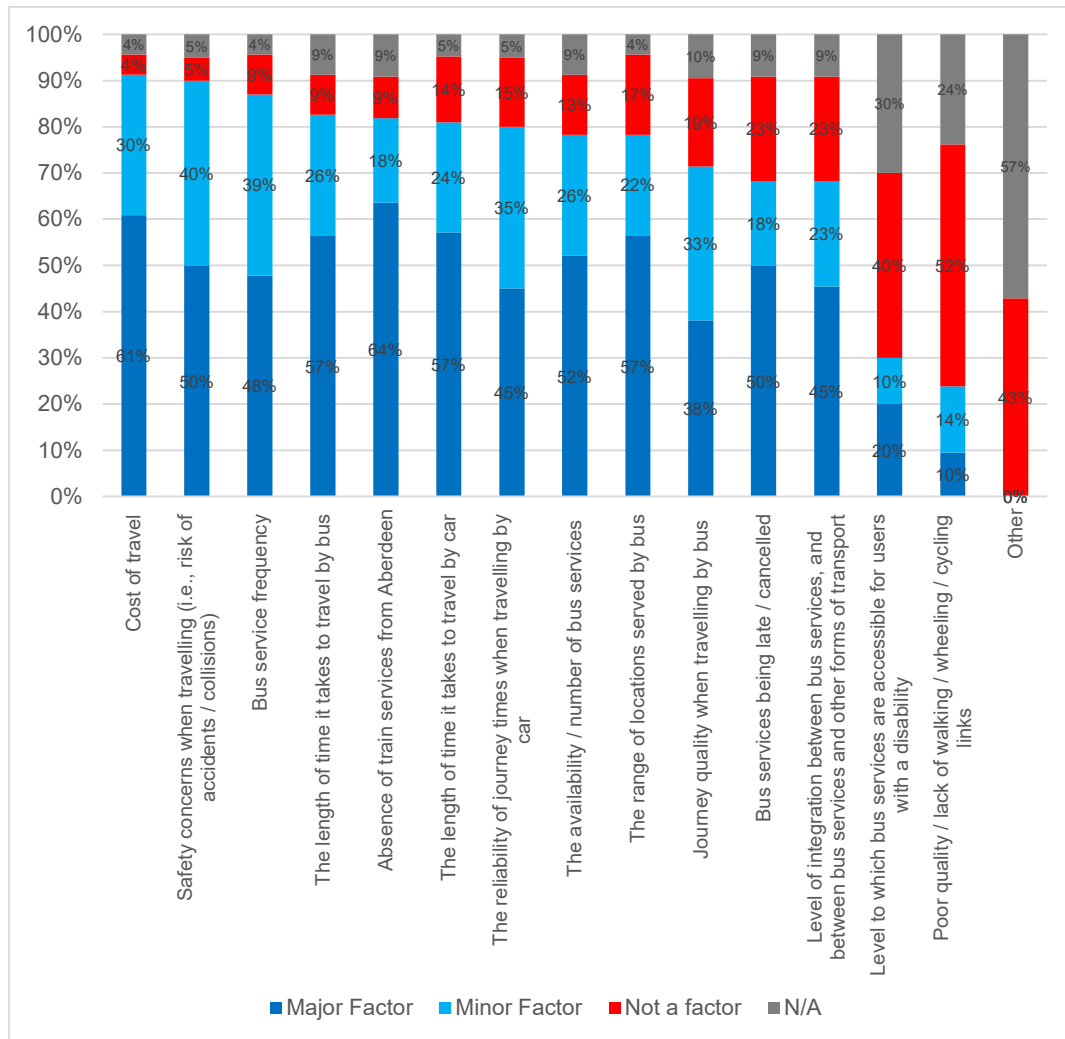


Figure M-36: If you indicated that problems with transport to / from the site affects your ability to attract and / or retain staff, please indicate the extent to which the following contribute to this?

M.2.19 The cost of travel was identified as being a factor by the most respondents with 61% (n=14) indicating that cost was a major factor and 30% (n=7) noting it was a minor factor. This was followed by safety concerns, bus service frequency, and the length of time it takes to travel by bus.

M.2.20 The absence of a train service from Aberdeen was the fifth most frequently cited factor with 64% identifying this as a major factor (the largest of any aspect) and 18% as a minor factor.

## About Your Customers

M.2.21 The figure below shows how businesses indicated they engage with their customers.

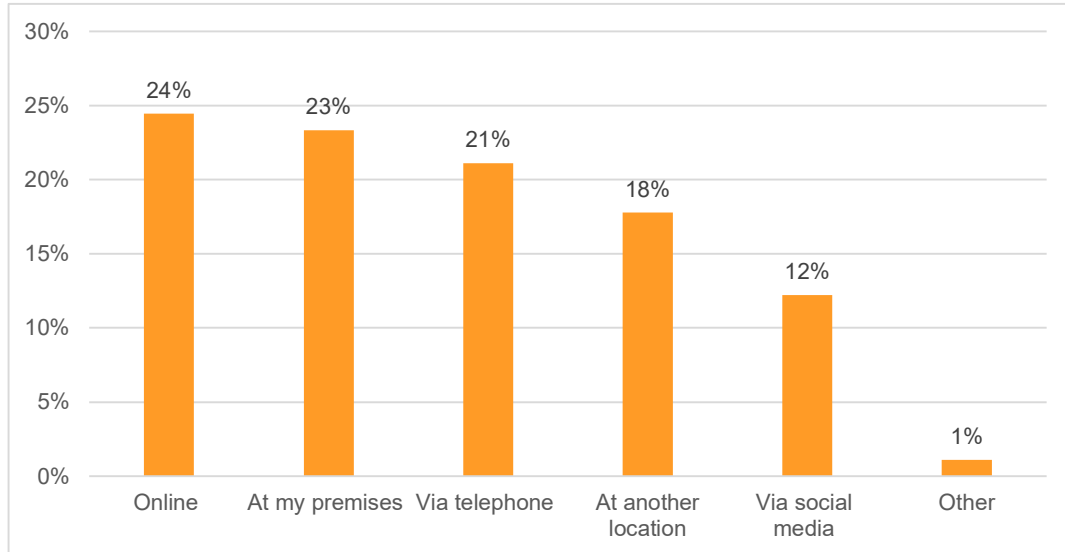


Figure M-37: How do you primarily engage with your customers or users of the services you provide

M.2.22 Around a quarter (24%, n=22) of businesses / organisations indicated that they engage online with a further 12% engaging via social media. A similar proportion (23%, n=21) interact with their customers at their premises, 21% (n=19) via the telephone and 18% (n=16) at another location.

M.2.23 The businesses / organisations were then asked how important it is for customers to access their premises. The results are shown in Figure M-38

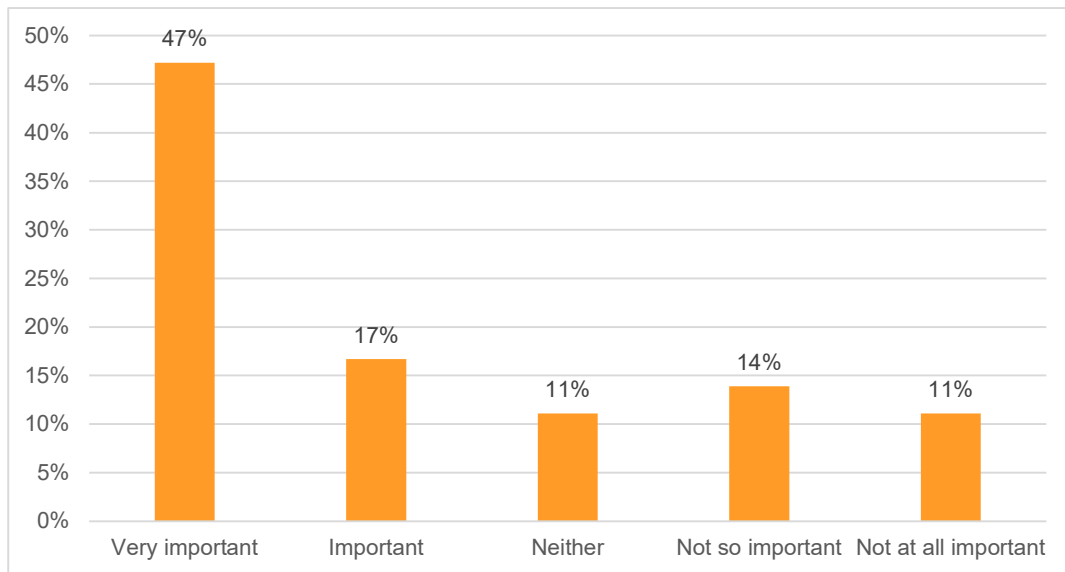


Figure M-38: How important is it for customers to be able to access your premises?

M.2.24 Around half (47%, n=17) noted that it is very important for customers to access their premises with an additional 17% (n=6) stating that it is important.

M.2.25 Those who indicated that it was important for customers to access their premises (n=23) were then asked if there are transport problems which impact this. Around 70% indicated that transport problems do impact the ability of customers to access their site, with one quarter (26%, n=6) noting that these problems impact customers access a lot and 44% (n=10) indicating they impact customers a little.

M.2.26 Those who indicated that there are transport problems which impact access to their site for customers (n=16) were then asked about the extent to which a range of factors contribute to these problems. The results are shown in the figure below.

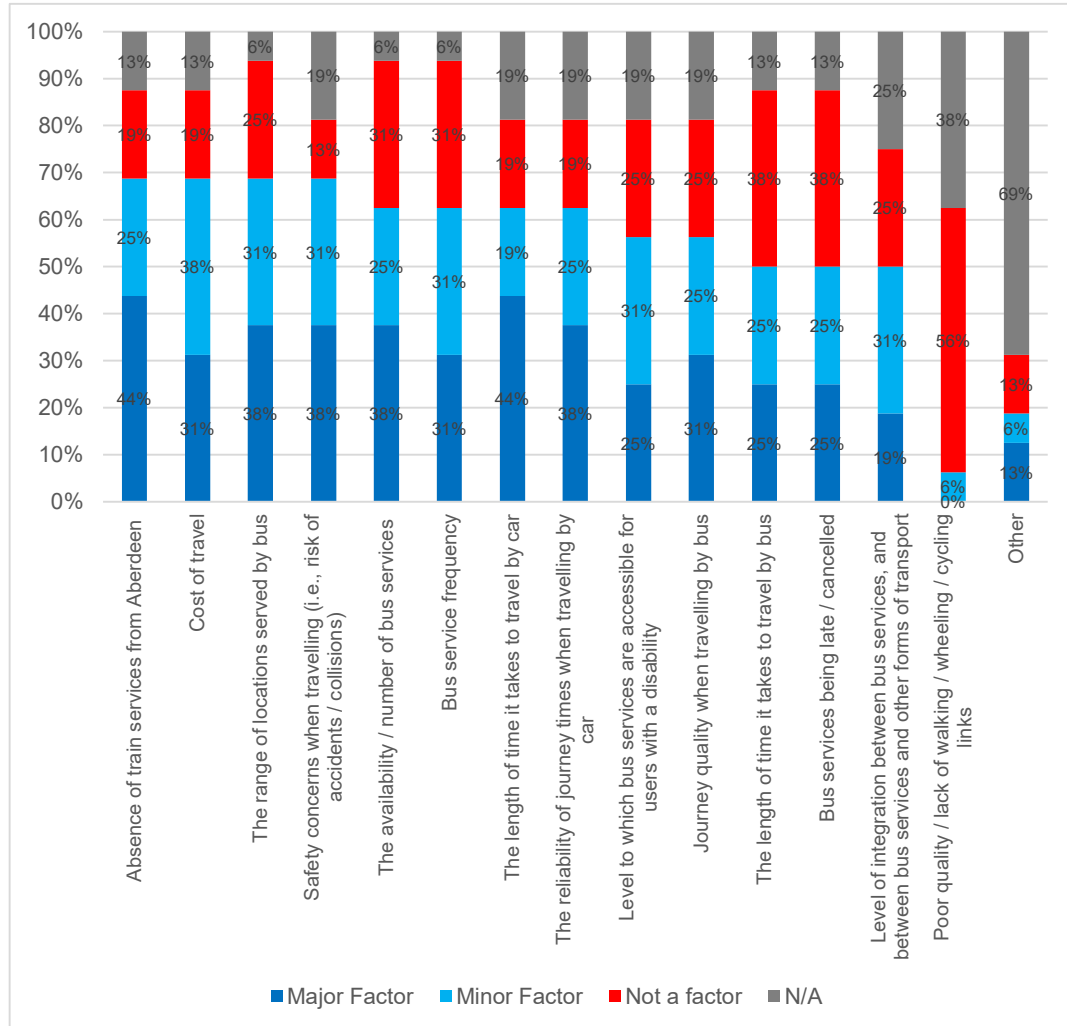


Figure M-39: You indicated that problems with transport to / from the site affect your customers' ability to access your business premises, please indicate the extent to which the following contribute.

M.2.27 Both the absence of a train service from Aberdeen and the length of time to travel by car are the biggest issue with 44% (n=7) of businesses indicating this is a major factor and 25% (n=4) indicating this was a minor factor. This was followed by the cost of travel, the range of locations served by bus, and safety concerns when travelling.

## About Your Location

### Problems with current location

M.2.28 The businesses / organisations were then asked about the location of their site more specifically. Firstly, they were asked about any key weaknesses of their current location. They were able to select all the weaknesses which apply to their location.

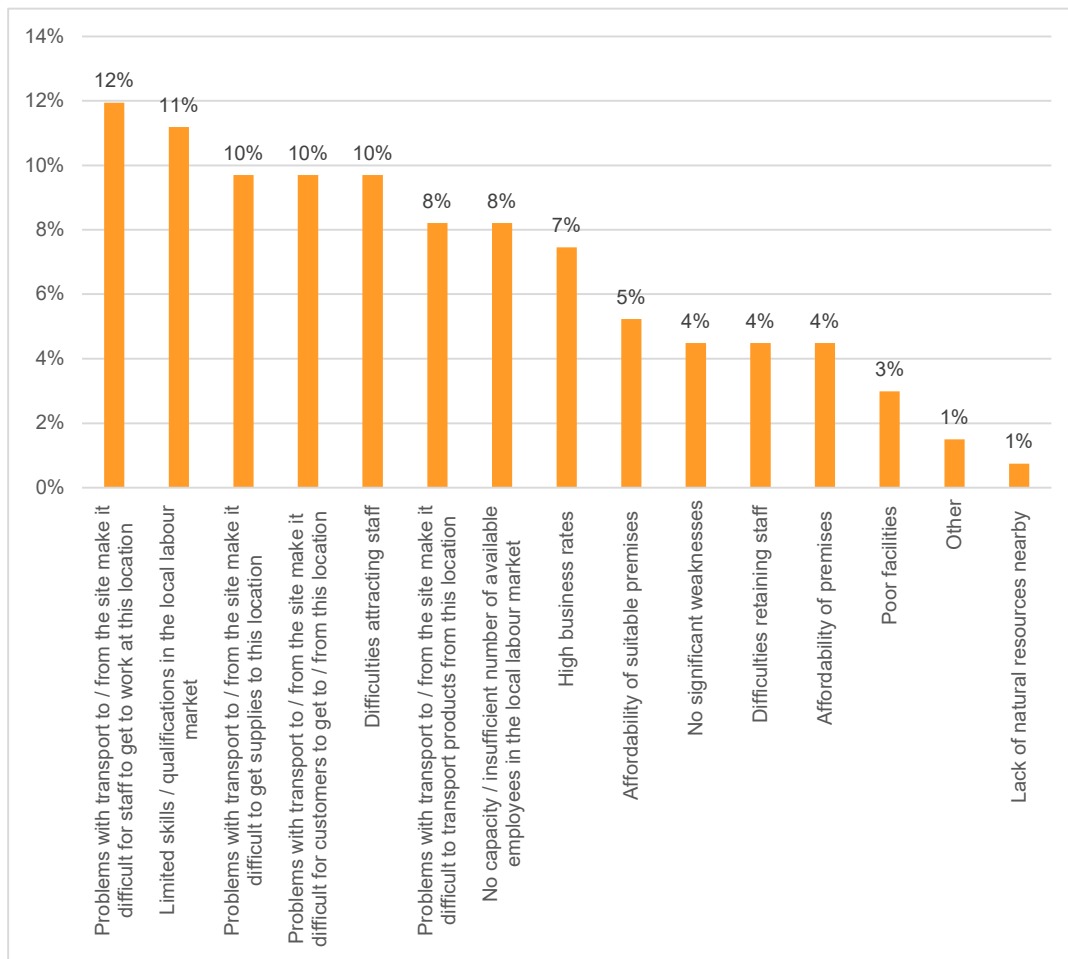


Figure M-40: What do you feel are the key weaknesses of your current location in terms of the operation of your business / organisation?

M.2.29 A total of 12% (n=16) of businesses noted that problems with transport to / from the site make it difficult for staff to get to work at this location. This was followed by 11% (n=15) who stated that the limited skills / qualifications in the local labour market was a weakness of their location.

M.2.30 Only two businesses added other reasons which were not listed and these were the poor road conditions, in terms of noise, pollution and poor driving conditions, and the lack of rail freight.

### Impact of problems on business operations and investment decisions

M.2.31 All the businesses were then asked to what extent the above problems affect i) the day-to-day operation of their business and ii) investment decisions. One third (33%, n=12) noted that

these weaknesses affect their day-to-day operation a lot with a further 50% (n=18) stating that it affects day-to-day operations a little. A total of 39% (n=14) businesses noted that the above issues affect their investment decisions a lot, while 31% (n=11) stated it affects them a little.

M.2.32 In terms of the operation of their business, respondents noted a range of impacts, including a lack of competitiveness, high carbon outputs, difficulties attracting / retaining staff.

- “If anything happens on the Aberdeen to Peterhead road there are major delays in supplies getting to site and product getting to customers. Staff are delayed arriving or leaving work.”
- “Customers reluctant to visit site which leads to less work awarded. Potential new staff reluctant to travel each day on the roads if not from local area”.
- “Busses indirect, infrequent and takes too long. Distances to travel by foot or bike too great. Car access takes too long due to poor roads. This causes the company to be uncompetitive, higher carbon footprint and ability to attract talent.”
- “We would like to have more HGV drivers as well as suitably skilled workshop management. Lack of suitable transport from outlying areas impacts our ability to recruit.”

M.2.33 In terms of investment decisions, respondents noted how transport problems, and particularly difficulties associated with attracting staff, meant that they do not plan to invest at their current location:

- “I am not keen to invest further time or money in our offices in Banff, Fraserburgh and Peterhead at it is difficult to attract staff in these areas.”
- “People do not want to drive to work due to safety issues and traffic congestion, therefore we do not want to make further investment to grow the business at the location we are currently at.”

7.2.4 Businesses also suggested potential options for improvement, including investment in the road network and providing a rail link:

- “The road needs to be a dual carriageway from Ellon to Peterhead and from Ellon to Fraserburgh. There is an extremely high volume of traffic on the road and lorries being limited in their speed only causes tailbacks and frustrations. By putting in a proper road network this would alleviate the majority of issues that businesses in the area experience. Whether this is attracting staff or being able to get goods to and from site.”
- “For both business and personal a rail link between the NE to Aberdeen would have so much benefit to our business for travelling to from this NE corner.”