

Environmental Impact Assessment (EIA) Report

LT384 Tealing to Westfield Overhead Line (OHL) 400 kV Upgrade

November 2024



VOLUME 4: Appendix 12.1 – Traffic and Movement

1.	Introduction-----	1
2.	Part A - Scoping Correspondence -----	2
3.	Part B – Transport Policy and Guidance-----	5
4.	Part C – Study Area Road Sensitive Receptors-----	9
5.	Part D – AECOM Traffic Surveys, June 2024 -----	12
6.	Part E – Department for Transport and National Traffic Data System Data-----	20
7.	Part F – Baseline Traffic Data -----	29
8.	Part G – Balfour Beatty Construction Traffic Forecasts-----	32
9.	Part H – Fear and Intimidation on and by Road Users Data-----	35
10.	Part I – Road User and Pedestrian Safety Data -----	42
11.	Part J – Road Vehicle Driver and Passenger Delay Data-----	49
12.	Part K – Framework Construction Traffic Management Plan (CTMP)-----	52
13.	Part L – Intra-Development Cumulative Assessment Data -----	55
14.	Part M – Inter-Development Cumulative Assessment Data -----	63

1. INTRODUCTION

1.1.1 Appendix 12.1 contains the supporting information and data used to complete the environmental assessment of traffic and movement for the Proposed Development. It is structured as follows.

- Part A - Scoping Correspondence;
- Part B – Transport Policy and Guidance
- Part C – Study Area Road Sensitive Receptors;
- Part D – AECOM Traffic Surveys, June 2024;
- Part E – Department for Transport and National Traffic Data System Data;
- Part F – Baseline Traffic Data;
- Part G – Balfour Beatty Construction Traffic Forecasts;
- Part H – Fear and Intimidation on and by Road Users Data;
- Part I – Road User and Pedestrian Safety Data;
- Part J – Road Vehicle Driver and Passenger Delay Data;
- Part K – Framework Construction Traffic Management Plan;
- Part L – Intra-Development Cumulative Assessment Data; and
- Part M – Inter-Development Cumulative Assessment Data.

2. PART A - SCOPING CORRESPONDENCE



The Scottish Government
Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Network Rail
Town Planning
151 St Vincent Street
Glasgow
G2 5NW

Martin Henderson
Town Planning Technician

Planning reference: ECU00005168
Case Officer: Jennifer Gessler

E-Mail:
TownPlanningScotland@networkrail.co.uk

Network Rail ref: 209 2024
30/07/2024

Dear Ms Gessler,

**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT)
(SCOTLAND) REGULATIONS 2017
REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 37
APPLICATION FOR TEALING TO WESTFIELD OHL 400KV UPGRADE
(RECONDUCTORING) PROJECT**

Thank you for consulting Network Rail regarding the above development.

We would strongly suggest that reference to the issues below are included in the Scoping Opinion to ensure that potential impacts of both the construction and completed development on the current and future safe and efficient operation of the railway are assessed:

- A Traffic Assessment should be included to assess the effects of construction traffic on existing traffic flows and the public road network. Preferred construction traffic routes should be indicated. This will enable Network Rail to assess the possible impacts where/if the traffic crosses over/under our infrastructure and the suitability of these crossings.
- Details of proposed construction and engineering works in the vicinity of the railway line. Any works over/adjacent to the railway corridor will be subject to further discussion and agreement with Network Rail.

Yours sincerely

Redacted

Martin Henderson
Town Planning Technician

3. PART B – TRANSPORT POLICY AND GUIDANCE

3.1 National Policy

National Transport Strategy NTS2 (2020)

3.1.1 NTS2 sets out an ambitious and compelling vision for Scotland's transport system for the next 20 years. The vision is to have a sustainable, inclusive, safe, and accessible transport system, helping to deliver a healthier, fairer, and more prosperous Scotland for communities, businesses and visitors.

3.1.2 Four priorities support the vision:

- reduce inequality;
- take climate action;
- help deliver inclusive economic growth; and,
- improve health and wellbeing.

Climate Change Plan Update (2020)

3.1.3 The Scottish Government's Climate Change Plan, originally published in 2018, sets out a path to Carbon Neutrality and securing the wider benefits of a greener, fairer, and healthier Scotland. The Plan covers the period of 2018 to 2032.

3.1.4 The Climate Change Plan was updated in 2020 to reflect the impacts of the COVID-19 pandemic and the Government's commitment to a 'green recovery', which captures opportunities of the transition to net zero. The Plan sets new ambitious targets to reduce Scotland's contribution to climate change by 2045 and a commitment to reduce emissions by 75% by 2030.

National Planning Framework 4

3.1.5 The National Planning Framework 4 (NPF4) sets out overarching spatial principles to support the planning and delivery of the three key National Planning Policy areas:

- Sustainable Places;
- Liveable Places; and,
- Productive Places.

3.1.6 NPF4 identifies 'National Spatial Strategy' and states that development proposals of all forms of renewable, low carbon and zero emissions technologies will be supported including replacement transmission infrastructure. Under Policy 11 (Energy), development proposals have to demonstrate how the following impacts are mitigated and addressed:

- impacts on public access, including long distance walking and cycling routes and scenic routes;
- impacts on road traffic and on adjacent trunk roads, including during construction; and,
- cumulative impacts.

Transport Assessment Guidance (2012)

3.1.7 Transport Assessment Guidance (TAG) produced by Transport Scotland in 2012 provides guidance and information for the content, methodology and approach of producing Transport Assessments, Transport Statements and Travel Plans in support of proposed development sites. It details the importance of establishing

the existing transport infrastructure and travel characteristics, as well as the development proposal itself and the measures which will be included to improve infrastructure and services to encourage sustainable travel to the site.

Planning Advice Note (PAN) 75 – Planning for Transport (2005)

3.1.8 Scottish Planning Advice Note (PAN) 75 – Planning for Transport is a planning circular produced by the Scottish Government which provides good practice on planning and transport. This includes guidance on integrating transport, transport modelling, policy development, development management, planning agreements and environmental assessment.

3.1.9 In terms of Transport Assessments/ Statements, it states in Paragraph 41 that “*all planning applications that involve the generation of person trips should provide information which covers the transport implications of the development.*” It identifies that for smaller developments, “*the information on transport implications will enable local authorities to monitor potential cumulative impact.*”

3.2 Regional Policy

3.2.1 The Transport (Scotland) Act 2005 placed a statutory duty on the seven Regional Transport Partnerships (RTPs) in Scotland to produce a Regional Transport Strategy (RTS) for their area. The Proposed Development is partly within Perth and Kinross and Angus Councils, which are within the Tayside and Central Scotland Transport Partnership region (TACTRAN), and Fife Council, which is within the South-East of Scotland Transport Partnership (SESTRAN).

Draft TACTRAN Regional Transport Strategy 2024-2034

3.2.2 The draft TACTRAN Regional Transport Strategy (RTS) is in final draft stage which has been submitted to the Minister for Transport for approval.

3.2.3 The TACTRAN RTS is a plan for identifying strategic transport priorities for the Angus, Dundee City, Perth and Kinross and Stirling Council areas. The RTS identifies four strategic objectives which mirror those in Scotland's National Transport Strategy, which are:

- take climate action;
- improve health and wellbeing;
- reduce inequalities; and,
- help deliver inclusive and sustainable growth.

TACTRAN Regional Transport Strategy Refresh (2015-2036)

3.2.4 The TACTRAN RTS Refresh was approved by the Minister for Transport and Islands in July 2015. The objectives of the RTS are to:

- economy - ensure transport helps to deliver regional prosperity;
- accessibility, equity and social inclusion – to improve accessibility for all, particularly for those suffering from social inclusion;
- environment – to ensure that the transport system contributes to safeguarding the environment and promotes opportunities for improvement;
- health and wellbeing – to promote the health and wellbeing of communities;
- safety and security – to improve the real and perceived safety and security of the transport network; and,

- integration – to improve integration, both within transport and between transport and other policy areas.

SESTRAN 2035

3.2.5 The SESTRAN RTS is a plan for identifying strategic transport priorities for The City of Edinburgh, Clackmannanshire, East Lothian, Falkirk, Fife, Midlothian, the Scottish Borders and West Lothian Council areas. The RTS identifies four strategy objectives:

- transitioning to a sustainable, post-carbon transport system;
- facilitating healthier travel options;
- transforming public transport connectivity across the region; and,
- supporting safe, sustainable and efficient movement of people and freight across the region.

3.3 Local Policy

Perth and Kinross Local Development Plan (2019)

3.3.1 The Perth and Kinross Local Development Plan (LDP) was adopted in November 2019. In terms of energy, the LDP sets out the following relevant objectives:

- improve the long term resilience and robustness of the natural and built environment to climate change;
- protect the natural and built environment, and ensure that new development embraces the principles of sustainable design and construction, energy efficiency and heat decarbonisation; and,
- promote the sustainable development of electricity generation from a diverse range of renewable and low-carbon energy technologies, including the expansion/ repowering of renewable and low-carbon energy generation capacity and heat networks, in accordance with national objectives and targets.

Angus Local Development Plan (2016)

3.3.2 Part 2 of the Angus LDP states that “*All renewable energy production...will require some processing, generating and transmission infrastructure. Such developments can all contribute to generating renewable energy and reducing emissions and will be assessed in accordance with [Policy PV9]*”.

3.3.3 Policy PV9 states that proposals will be supported in principle where “*access for construction and maintenance traffic can be achieved without compromising road safety or causing unacceptable change to the environment and landscape*”.

Fife Local Development Plan (2017)

3.3.4 The Fife Local Development Plan (FIFEplan) was adopted in 2017 and sets out the policies and proposals for the development and use of land across Fife. FIFEplan outlines the strategy of what the plan intends to achieve, policies on how land will be used and developed and proposals for specific towns and villages across Fife.

3.3.5 Policy 3 of FIFEplan highlights the need for infrastructure to be delivered in a sustainable manner and “*where necessary and appropriate as a direct consequence of the development or as a consequence of cumulative impact of development in the area, development proposals must incorporate measures to ensure that they will be served by adequate infrastructure and services.*”

Dundee Local Development Plan (2019)

3.3.6 The Dundee LDP is relevant as, whilst the Proposed Development does not fall within the Dundee City Council area, roads within this will be used by the traffic generated by the Proposed Development.

- 3.3.7 The Dundee LDP outlines the city's land use strategy up until 2029, including policies for housing, economic development, transportation and environmental protection.
- 3.3.8 The LDP notes that energy generating facilities require large quantities of material to be transported to site via road, rail or even sea. It is further noted within Policy 54 of the LDP that no development should 'have no detrimental effect on the capacity or safe functioning of the existing road or rail networks.'

4. PART C – STUDY AREA ROAD SENSITIVE RECEPTORS

IEMA Environmental Assessment of Traffic and Movement - Sensitivity of Receptors

Study Area Roads			IEMA 2023 Sensitive Receptors									Total Score	Average Score	Overall Rating
Road	Between		People at Home (Residential Areas)	People at Work (Employment Areas)	Sensitive and/or Vulnerable Groups	Locations with Concentrations of Vulnerable Users	Retail Areas	Recreational Areas	Tourist Attractions	Collision Clusters and routes with road safety concerns	Junctions and Highway Links at or Over Capacity			
A90 (north)	Emmock Roundabout	A928 Junction	Low 2	Negligible 1	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	Low 2	Low 2	13	1.444	Low
Emmock Road	Emmock Roundabout	Tealing Road Junction	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Low 2	Low 2	Low 2	14	1.556	Low
Zc6 (Tealing Road)	Emmock Road Junction	Cottages Bus Stop (north of Bridgefoot)	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	11	1.222	Low
Zc7 (road north of Bridgefoot)	Junction with Craigmill Road (Bridgefoot)	Junction with Tealing Road	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	11	1.222	Low
U324	Jeanfield		Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	10	1.111	Low
U33 / Zc9 / Zc8	Dronley (through North Dronley and L)	Loop	Low 2	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Low 2	Low 2	Negligible 1	14	1.556	Low
Dronley Burn road	Junction with B954		Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	9	1.000	Negligible
East Adamston	Junction with B954	East Adamston Farm	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	11	1.222	Low
B954	A923 Junction	Dronley Junction	Medium 3	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Low 2	Negligible 1	14	1.556	Low
A923 Coupar Angus Interchange	Coupar Angus Interchange	B954 Junction	High 4	Low 2	Negligible 1	Low 2	Low 2	Low 2	Low 2	Medium 3	Negligible 1	19	2.111	Medium
A923 Piperdam	B954 Junction	Piperdam Drive Junction	Medium 3	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Medium 3	Negligible 1	15	1.667	Low
Bervie Road Murloch	A923 Junction	Murloch	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	10	1.111	Low
Berrylhill Road / Bervie Road	Longforgan Junction	Bervie Road Junction with A90 (Loop)	Medium 3	Low 2	Low 2	Medium 3	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	15	1.667	Low
Main Street / James Forbes Avenue	Longforgan Junction (A90)	Forbes Avenue Junction with Castle	Low 2	Medium 3	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	12	1.333	Low
The Drive Longforgan	Junction with Castle Road		High 4	Medium 3	Low 2	Medium 3	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	17	1.889	Low
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	11	1.222	Low
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	High 4	Medium 3	Medium 3	Medium 3	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	20	2.222	Medium
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	10	1.111	Low
Horn Road	Junction with Errol Station Road	Where road passes under cable line	Low 2	Medium 3	Negligible 1	Negligible 1	Medium 3	Negligible 1	Low 2	Negligible 1	Negligible 1	15	1.667	Low
Errol Station Road	Inchmichael Junction	Errol Station	Medium 3	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	13	1.444	Low
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	Low 2	Medium 3	Low 2	Medium 3	Negligible 1	Negligible 1	Low 2	Negligible 1	Negligible 1	16	1.778	Low
North Muir	Junction with A90	Leetown	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	10	1.111	Low
U155 Glendock Junction	Junction with A90	Where road passes under cable line	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	10	1.111	Low
Ross Road	Junction with A90	Leetown	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	11	1.222	Low
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	High 4	Low 2	Medium 3	Medium 3	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	19	2.111	Medium
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	High 4	Low 2	Medium 3	High 4	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	19	2.111	Medium
Inchyra Road	Junction with Cairnie Road		Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	Low 2	Low 2	Negligible 1	Negligible 1	13	1.444	Low
Kingsway	Forfar Road Crossroads	Coupar Angus Interchange	Medium 3	High 4	Low 2	Low 2	High 4	Low 2	Medium 3	High 4	Medium 3	27	3.000	Medium
A90	Coupar Angus Interchange	Barrhill Junction	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	High 4	Medium 3	15	1.667	Low
M90	Barrhill Junction	Junction with A912	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	High 4	Medium 3	15	1.667	Low

IEMA Environmental Assessment of Traffic and Movement - Sensitivity of Receptors

Study Area Roads			IEMA 2023 Sensitive Receptors									Total Score	Average Score	Overall Rating
Road	Between		People at Home (Residential Areas)	People at Work (Employment Areas)	Sensitive and/or Vulnerable Groups	Locations with Concentrations of Vulnerable Users	Retail Areas	Recreational Areas	Tourist Attractions	Collision Clusters and routes with road safety concerns	Junctions and Highway Links at or Over Capacity			
A912 Bridge of Earn	Junction with M90	Junction with Easter Rhynd Road	High 4	Medium 3	Medium 3	High 4	Low 2	Low 2	Low 2	Medium 3	Low 2	25	2.778	Medium
A912 Aberargie	Junction with M90	Junction with A913 at Aberargie	Negligible 1	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	High 4	Negligible 1	13	1.444	Low
A913	Junction with A912 at Aberargie	Junction with Ferryfield Road	High 4	Medium 3	Medium 3	High 4	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	21	2.333	Medium
Easter Rhynd Road	Junction with A912 (north of Bridge of Earn)		Medium 3	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	12	1.333	Low
Ferryfield Road	Junction with A913	Junction with Garden Centre	Negligible 1	Medium 3	Low 2	Negligible 1	Medium 3	Negligible 1	Medium 3	Negligible 1	Negligible 1	16	1.778	Low
A91	Junction with A912 at Gateside	Junction with B936 at Auchtermuchty	High 4	Low 2	Low 2	Medium 3	Low 2	Low 2	Negligible 1	High 4	Negligible 1	21	2.333	Medium
B936	Junction with A91 at Auchtermuchty	Unclassified road leading west from B936	High 4	Low 2	Medium 3	High 4	Low 2	Low 2	Negligible 1	Negligible 1	Negligible 1	20	2.222	Medium
U093 Lochmill Loch	Junction with B936	Lochmill Loch	Low 2	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	Negligible 1	10	1.111	Low

5. PART D – AECOM TRAFFIC SURVEYS, JUNE 2024

Site No.	Location	Direction	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
1	Unclassified Road, north of Bridgefoot	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1627	259	232	14	0.9	4	0.2	0	0.0	38.7	45.9
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1440	223	206	9	0.6	0	0.0	0	0.0	35.5	42.6
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	3067	482	438	23	0.8	4	0.1	0	0.0	37.2	44.5
2	Unclassified Road, west of Leoch	East	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	550	84	79	1	0.2	1	0.2	0	0.0	34.1	40.4
		West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	506	78	72	0	0.0	0	0.0	0	0.0	31.4	38.0
		East West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1056	162	151	1	0.1	1	0.1	0	0.0	32.8	39.6
3	Unclassified Road west of Dronley	East	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	152	22	22	0	0.0	0	0.0	0	0.0	27.1	32.4

Site No.	Location	Direction	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
		West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	172	26	25	0	0.0	0	0.0	0	0.0	25.7	31.4
		East West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	324	49	46	0	0.0	0	0.0	0	0.0	26.4	32.0
4	B954, north of East Adamson Farm Muirhead (west of Dronley)	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	12861	1929	1837	1432	11.1	244	1.9	81	0.6	52.1	58.7
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	12771	1924	1824	1321	10.3	226	1.8	57	0.4	51.6	58.2
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	25632	3853	3662	2753	10.7	470	1.8	138	0.5	51.8	58.4
5	A923, east of Benvie Road	East	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	16909	2498	2416	3103	18.4	739	4.4	256	1.5	53.8	61.1
		West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	17217	2564	2460	3084	17.9	779	4.5	260	1.5	53.7	61.0
		East West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	34126	5062	4875	6187	18.1	1518	4.4	516	1.5	53.7	61.0

Site No.	Location	Direction	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
6	Benvie Road, north of Fowlis	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1606	244	229	1	0.1	1	0.1	0	0.0	31.6	37.2
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1533	228	219	1	0.1	0	0.0	0	0.0	32.9	38.9
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	3139	471	448	2	0.1	1	0.0	0	0.0	32.3	38.1
7	Berryhill Road, west of Fowlis	East	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	435	68	62	0	0.0	0	0.0	0	0.0	31.9	40.4
		West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	446	65	64	0	0.0	0	0.0	0	0.0	32.0	40.0
		East West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	881	133	126	0	0.0	0	0.0	0	0.0	32.0	40.0
8	Orchard Way, west of A90 / Main Street Roundabout	East	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	4312	701	616	455	10.6	50	1.2	0	0.0	23.7	29.1
		West	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	4331	695	619	248	5.7	25	0.6	1	0.0	23.2	27.8

Site No.	Location	Dir- ection	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
		East West	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	8643	1395	1235	703	8.1	75	0.9	1	0.0	23.5	28.4
9	The Drive, north of The Drive / The Avenue junction	North	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	2131	348	304	2	0.1	1	0.0	0	0.0	18.1	21.6
		South	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	2140	343	306	1	0.0	0	0.0	0	0.0	17.1	20.7
		North South	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	4271	691	610	3	0.1	1	0.0	0	0.0	17.6	21.3
10	Inchture Station Road, south of Inchture	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	4878	611	697	357	7.3	90	1.8	28	0.6	46.3	56.0
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	4799	617	686	469	9.8	108	2.3	35	0.7	48.2	57.8
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	9677	1228	1382	826	8.5	198	2.0	63	0.7	47.2	57.0
11	Errol Station Road, approx. 500m south of	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	6401	809	914	30	0.5	4	0.1	0	0.0	38.4	45.9

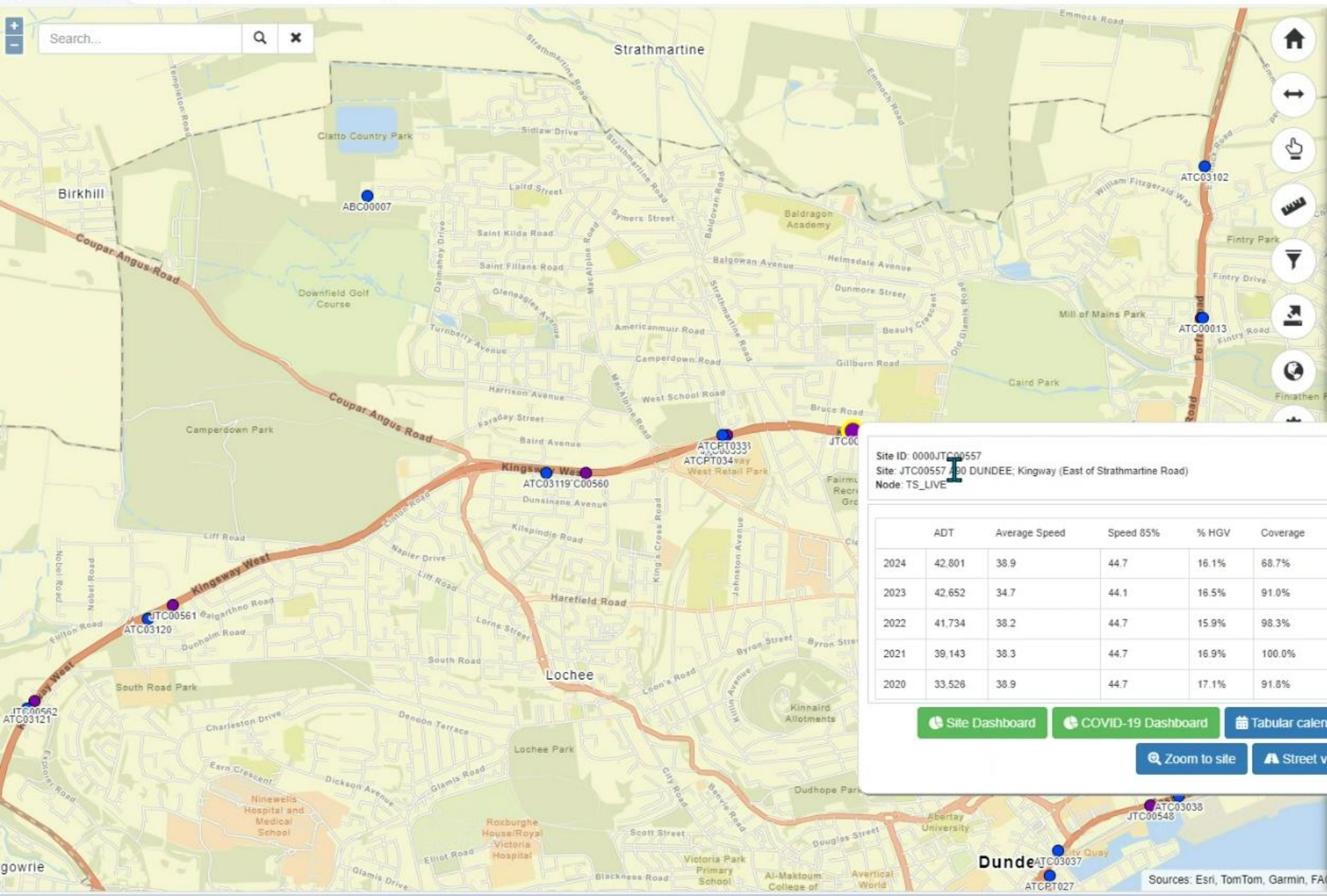
Site No.	Location	Direction	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
	Inchmichael Junction	South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	6497	803	928	64	1.0	9	0.1	0	0.0	40.4	47.2
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	12898	1612	1843	94	0.7	13	0.1	0	0.0	39.4	46.5
12	Unclassified Road between A90 and Errol, approx. 250m south of A90	North	60	Thursday, 20 June 2024	Monday, 24 June 2024	2388	504	478	22	0.9	1	0.0	0	0.0	39.8	47.5
		South	60	Thursday, 20 June 2024	Monday, 24 June 2024	1674	344	335	3	0.2	0	0.0	0	0.0	37.2	44.7
		North South	60	Thursday, 20 June 2024	Monday, 24 June 2024	4062	848	812	25	0.6	1	0.0	0	0.0	38.7	46.6
13	Ross Road, approx. 300m south of A90	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	415	63	59	0	0.0	0	0.0	0	0.0	25.5	32.4
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	435	63	62	0	0.0	0	0.0	0	0.0	24.9	30.8
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	850	126	121	0	0.0	0	0.0	0	0.0	25.2	31.7

Site No.	Location	Direction	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
14	Cairnie Road, approx. 75m south of Cairnie Road / Madoch Road Junctio	North	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	4405	692	629	175	4.0	3	0.1	0	0.0	23.8	27.4
		South	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	4554	720	651	77	1.7	8	0.2	0	0.0	22.3	25.9
		North South	30	Thursday, 20 June 2024	Wednesday, 26 June 2024	8959	1412	1280	252	2.8	11	0.1	0	0.0	23.0	26.7
15	Unclassified Road, approx. 250m west of Madoch Road	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1225	177	175	5	0.4	0	0.0	0	0.0	35.3	44.5
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	1238	178	177	5	0.4	0	0.0	0	0.0	33.2	41.0
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	2463	355	352	10	0.4	0	0.0	0	0.0	34.2	42.9
16	Easter Rhynd Road, west of Hay Farms	East	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	206	37	29	1	0.5	0	0.0	0	0.0	32.9	40.7
		West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	204	36	29	0	0.0	0	0.0	0	0.0	32.6	41.0

Site No.	Location	Dir- ection	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
		East West	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	410	73	59	1	0.2	0	0.0	0	0.0	32.7	40.8
17	A913,between Ferryfield Road and Abernethy, west of Wester Greenside Farm	North	40	Thursday, 20 June 2024	Wednesday, 26 June 2024	13800	2051	1971	3132	22.7	490	3.6	31	0.2	36.6	41.5
		South	40	Thursday, 20 June 2024	Wednesday, 26 June 2024	14251	2109	2036	6396	44.9	1701	11.9	151	1.1	39.7	45.1
		North South	40	Thursday, 20 June 2024	Wednesday, 26 June 2024	28051	4160	4007	9528	34.0	2191	7.8	182	0.6	38.2	43.4
18	B936, approx. 300m north of B936 / Unclassified Road junction	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	2440	370	349	34	1.4	6	0.2	4	0.2	40.6	48.7
		South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	2398	362	343	32	1.3	6	0.3	1	0.0	41.4	49.5
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	4838	732	691	66	1.4	12	0.2	5	0.1	41.0	49.1
19	Unclassified Road, south	North	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	176	28	25	0	0.0	0	0.0	0	0.0	17.8	21.0

Site No.	Location	Dir- ection	Speed Limit - PSL (mph)	Start Date	End Date	Total Vehicles	5 Day Ave.	7 Day Ave.	No. > Speed Limit	% > Speed Limit	No. > ACPO Limit	% > ACPO Limit	No. > DfT Limit	% > DfT Limit	Mean Speed	85%ile Speed
	of Lochmill Loch	South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	188	29	27	0	0.0	0	0.0	0	0.0	19.6	23.3
		North South	60	Thursday, 20 June 2024	Wednesday, 26 June 2024	364	57	52	0	0.0	0	0.0	0	0.0	18.7	22.4

6. PART E – DEPARTMENT FOR TRANSPORT AND NATIONAL TRAFFIC DATA SYSTEM DATA



Multi-node map

Sites

- All
- TS_ACTIVE_TRAVEL (46)
- TS_HISTORIC (1861)
- TS_LIVE (1738)

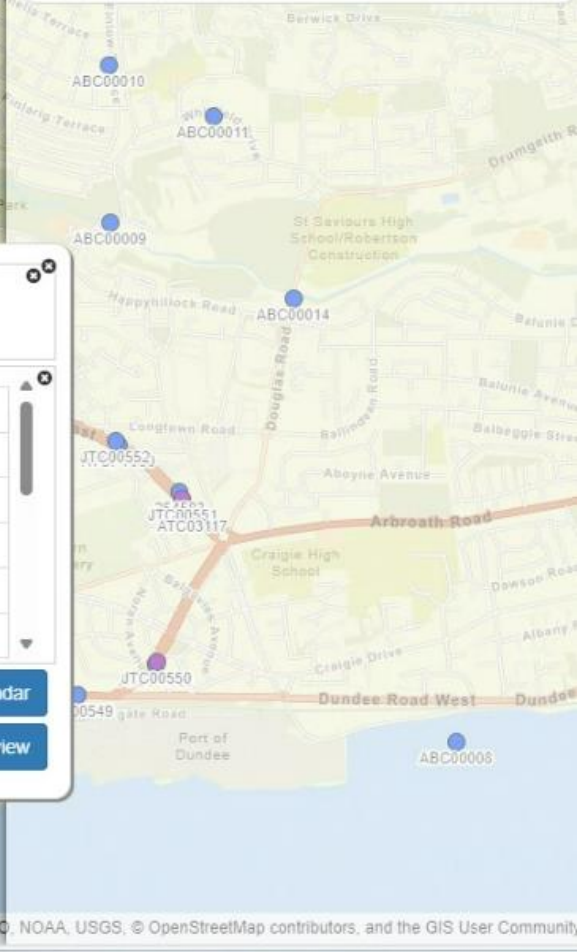
Last map load: 19/09/2024 11:33:17
Map load time: 1s

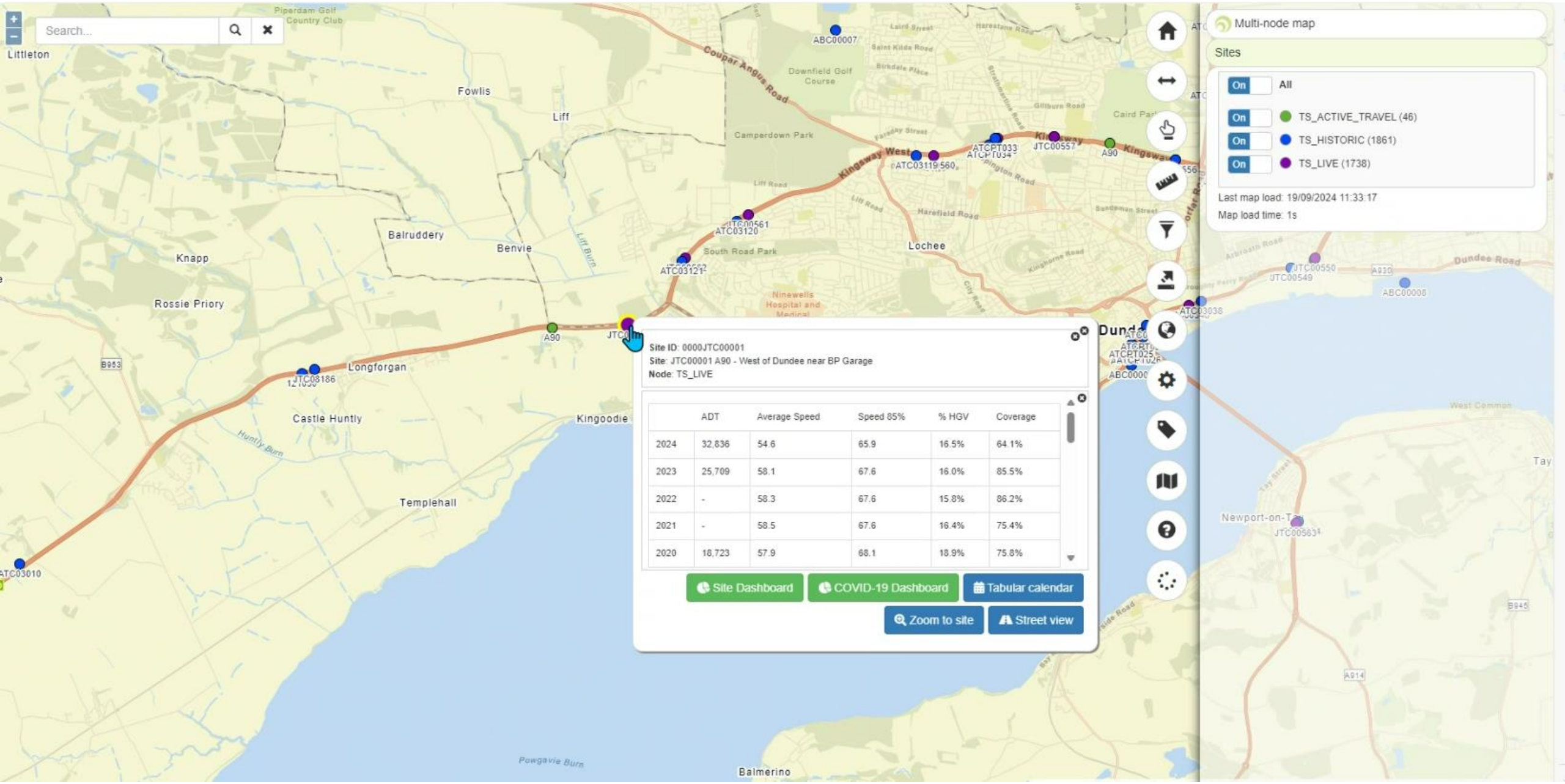
Site ID: 0000JTC00557
Site: JTC00557 TO DUNDEE; Kingsway (East of Strathmartine Road)
Node: TS_LIVE

	ADT	Average Speed	Speed 85%	% HGV	Coverage
2024	42,801	38.9	44.7	16.1%	68.7%
2023	42,652	34.7	44.1	16.5%	91.0%
2022	41,734	38.2	44.7	15.9%	98.3%
2021	39,143	38.3	44.7	16.9%	100.0%
2020	33,526	38.9	44.7	17.1%	91.8%

[Site Dashboard](#)
[COVID-19 Dashboard](#)
[Tabular calendar](#)

[Zoom to site](#)
[Street view](#)





Search...

Multi-node map

Sites

- All
- TS_ACTIVE_TRAVEL (46)
- TS_HISTORIC (1861)
- TS_LIVE (1738)

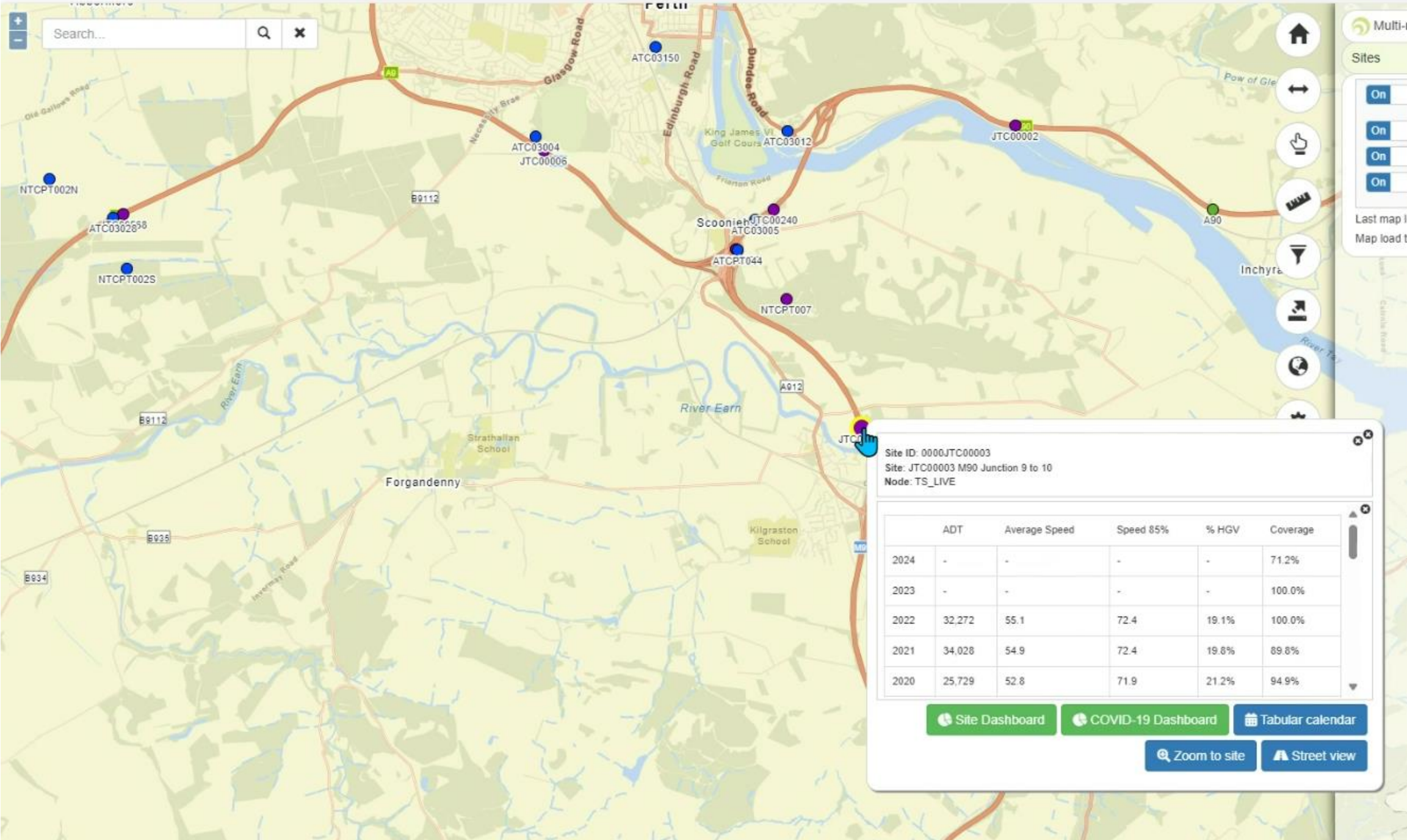
Last map load: 19/09/2024 11:33:17
Map load time: 1s

Site ID: 0000JTC00001
Site: JTC00001 A90 - West of Dundee near BP Garage
Node: TS_LIVE

	ADT	Average Speed	Speed 85%	% HGV	Coverage
2024	32,836	54.6	65.9	16.5%	64.1%
2023	25,709	58.1	67.6	16.0%	85.5%
2022	-	58.3	67.6	15.8%	86.2%
2021	-	58.5	67.6	16.4%	75.4%
2020	16,723	57.9	68.1	18.9%	75.8%

[Site Dashboard](#)
[COVID-19 Dashboard](#)
[Tabular calendar](#)

[Zoom to site](#)
[Street view](#)



Multi-
Sites

On
On
On

Last map l
Map load t

Site ID: 0000JTC00003
Site: JTC00003 M90 Junction 9 to 10
Node: TS_LIVE

	ADT	Average Speed	Speed 85%	% HGV	Coverage
2024	-	-	-	-	71.2%
2023	-	-	-	-	100.0%
2022	32,272	55.1	72.4	19.1%	100.0%
2021	34,028	54.9	72.4	19.8%	89.8%
2020	25,729	52.8	71.9	21.2%	94.9%

Site Dashboard COVID-19 Dashboard Tabular calendar

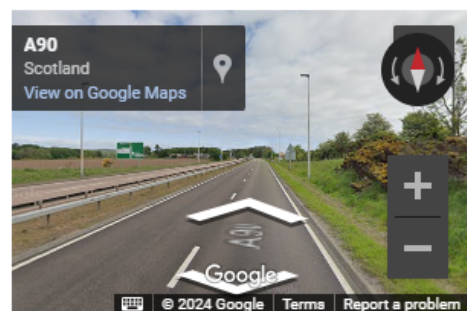
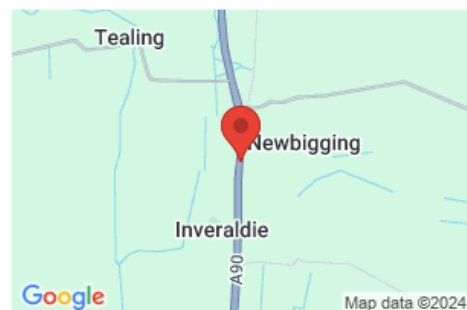
Zoom to site Street view

Site number: 10980

Site details

Region	Scotland
Local authority	Angus
Road name	A90
Road classification	'A' road
Managed by	Transport Scotland
Road type	Major
Start junction	LA boundary
End junction	A928
Link length	5.90km (3.67 miles)
Easting, northing	342000, 737500
Latitude, longitude	56.52593400, -2.94440350

Location



Annual Average daily flow

Year	Count method	Pedal cycles	Two wheeled motor vehicles	Cars and taxis	Buses and coaches	Light goods vehicles	Heavy goods vehicles	All motor vehicles
2023	Automatic counter	0	50	16206	78	4036	3121	23489

Site number: 80374

Site details

Region	Scotland
Local authority	Angus
Road name	A923
Road classification	'A' road
Managed by	Local authority
Road type	Major
Start junction	B954 Newtyle Road
End junction	LA Boundary
Link length	1.80km (1.12 miles)
Easting, northing	335000, 734050
Latitude, longitude	56.49402800, -3.05730560

Location



Annual Average daily flow

Year	Count method	Pedal cycles	Two wheeled motor vehicles	Cars and taxis	Buses and coaches	Light goods vehicles	Heavy goods vehicles	All motor vehicles
2023	Estimated using previous year's AADF on this	17	67	7313	56	1809	260	9505

Site number: 811618

Site details

Region	Scotland
Local authority	Perth & Kinross
Road name	C
Road classification	'C' and Unclassified roads
Managed by	Local authority
Road type	Minor
Start junction	
End junction	
Link length	km (miles)
Easting, northing	320194, 721186
Latitude, longitude	56.37620700, -3.29378390

Location



Annual Average daily flow

Year	Count method	Pedal cycles	Two wheeled motor vehicles	Cars and taxis	Buses and coaches	Light goods vehicles	Heavy goods vehicles	All motor vehicles
2023	Estimated using previous year's AADF on this	19	5	1191	31	226	27	1480

Site number: 10972

Site details

Region	Scotland
Local authority	Perth & Kinross
Road name	A912
Road classification	'A' road
Managed by	Local authority
Road type	Major
Start junction	M90
End junction	A913
Link length	2.80km (1.74 miles)
Easting, northing	314700, 716900
Latitude, longitude	56.33675200, -3.38131940

Location



Annual Average daily flow

Year	Count method	Pedal cycles	Two wheeled motor vehicles	Cars and taxis	Buses and coaches	Light goods vehicles	Heavy goods vehicles	All motor vehicles
2023	Estimated using previous year's AADF on this	5	52	6891	49	1838	806	9636

Site number: 40973

Site details

Region	Scotland
Local authority	Perth & Kinross
Road name	A912
Road classification	'A' road
Managed by	Local authority
Road type	Major
Start junction	M90 jn10
End junction	M90 jn9
Link length	4.80km (2.98 miles)
Easting, northing	311900, 720300
Latitude, longitude	56.36677600, -3.42773450

Location



Annual Average daily flow

Year	Count method	Pedal cycles	Two wheeled motor vehicles	Cars and taxis	Buses and coaches	Light goods vehicles	Heavy goods vehicles	All motor vehicles
2023	Estimated using previous year's AADF on this	52	21	3743	49	691	120	4624

7. PART F – BASELINE TRAFFIC DATA

IEMA Guidelines Environmental Assessment of Traffic & Movement - Traffic Data & Rules

IEMA Guidelines Environmental Assessment of Traffic & Movement - Traffic Data & Rules																							
Study Area Roads			Daily Traffic (24hr)							Development Traffic						Forecast Daily Traffic						IEMA Rules	
Road	Between	Data Source	Surveyed			Baseline		Growth	Average Speed (mph)	Daily			Hourly		Hours	Total (Baseline + Development)			Percentage Increase			IEMA	
			Car / LGV	HGV	Total	Car / LGV	HGV	Total		Car / LGV	HGV	Total	Car / LGV	HGV	Total	Car / LGV	HGV	Total	Car / LGV	HGV	Total		
																							1.013
A90 Dundee	Emmock Roundabout	A928 Junction	DfT Survey	20,368	3,121	23,489	20,639	3,163	23,801	70	49	32	81	5	3	8	20,688	3,195	23,882	0%	1%	0%	No
Emmock Road	Emmock Roundabout	Tealing Road Junction	AECOM Survey	877	28	905	889	28	917	42.9	48	31	79	5	3	8	937	59	996	5%	109%	9%	Yes
Zc6 Tealing Road	Emmock Road Junction	Pink Cottages Bus Stop (North of Bridge)	AECOM Survey	717	17	734	727	17	744	28.4	37	27	64	4	3	6	764	44	808	5%	157%	9%	Yes
Zc7 Bridgefoot	Junction with Craigmill Road (Bridgefoot)	Junction with Tealing Road (Pink Cottage)	AECOM Survey	474	7	481	480	7	487	37.4	37	27	64	4	3	6	517	34	551	8%	381%	13%	Yes
U324 Jeanfield	Junction with ZC7 Bridgefoot	Junction south of Leoch	AECOM Survey	474	7	481	480	7	487	37.4	37	27	64	4	3	6	517	34	551	8%	381%	13%	Yes
U333 / Zc9 / Zc8 Dronley / Leoch		Loop	AECOM Survey	159	3	162	161	3	164	33	48	31	79	5	3	8	209	34	243	30%	1020%	48%	Yes
Dronley Burn road	Junction with B954		AECOM Survey	159	3	162	161	3	164	33	33	29	62	3	3	6	194	32	226	20%	954%	38%	Yes
East Adamston	Junction with B954	East Adamston Farm	AECOM Survey	159	3	162	161	3	164	33	37	27	64	4	3	6	198	30	228	23%	888%	39%	Yes
B954	A923 Junction	Dronley Junction	AECOM Survey	3,803	51	3,854	3,854	52	3,905	51.7	48	31	79	5	3	8	3,902	83	3,984	1%	60%	2%	Yes
A923 Coupar Angus Int	Coupar Angus Interchange	B954 Junction	DfT Survey	9,245	260	9,505	9,368	263	9,631	60	48	31	79	5	3	8	9,416	294	9,710	1%	12%	1%	No
A923 Piperdam	B954 Junction	Piperdam Drive Junction	AECOM Survey	4,986	76	5,062	5,052	77	5,129	53.5	37	27	64	4	3	6	5,089	104	5,193	1%	35%	1%	Yes
Benzie Road Murloch	A923 Junction	Murloch Junction	AECOM Survey	465	6	471	471	6	477	32.1	32	28	60	3	3	6	503	34	537	7%	461%	13%	Yes
Berryhill Road / Benzie	Longforgan Junction (A90)	Benzie Road Junction with A90 (Loop)	AECOM Survey	129	5	134	131	5	136	32.2	48	31	79	5	3	8	179	36	215	37%	612%	58%	Yes
Main Street / James For	Lonforgan Junction roundabout	James Forbes Avenue Junction with Ca	AECOM Survey	1,361	34	1,395	1,379	34	1,414	23.1	48	31	79	5	3	8	1,427	65	1,493	3%	90%	6%	Yes
The Drive Longforgan	Junction with Castle Road		AECOM Survey	685	5	690	694	5	699	17.4	48	31	79	5	3	8	742	36	778	7%	612%	11%	Yes
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	AECOM Survey	685	5	690	694	5	699	17.4	48	31	79	5	3	8	742	36	778	7%	612%	11%	Yes
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	AECOM Survey	1,184	45	1,229	1,200	46	1,245	47.8	37	27	64	4	3	6	1,237	73	1,309	3%	59%	5%	Yes
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	AECOM Survey	1,184	45	1,229	1,200	46	1,245	47.8	37	27	64	4	3	6	1,237	73	1,309	3%	59%	5%	Yes
Horn Road	Junction with Errol Station Road	Where road passes under cable line	AECOM Survey	1,529	84	1,613	1,549	85	1,634	39.8	43	32	75	4	3	8	1,592	117	1,709	3%	38%	5%	Yes
Errol Station Road	Inchmichael Junction	Errol Station	AECOM Survey	1,529	84	1,613	1,549	85	1,634	39.8	43	32	75	4	3	8	1,592	117	1,709	3%	38%	5%	Yes
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	AECOM Survey	821	26	847	832	26	858	39.4	49	32	81	5	3	8	881	58	939	6%	121%	9%	Yes
North Murie	Junction with A90		AECOM Survey	122	4	126	124	4	128	25.5	49	32	81	5	3	8	173	36	209	40%	789%	63%	Yes
U155 Glendoick Junction	Junction with A90		AECOM Survey	821	26	847	832	26	858	39.4	37	27	64	4	3	6	869	53	922	4%	102%	7%	Yes
Ross Road	Junction with A90		AECOM Survey	122	4	126	124	4	128	25.5	32	33	65	3	3	7	156	37	193	26%	814%	51%	Yes
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	Other	1,453	27	1,480	1,472	27	1,500	22.9	50	33	83	5	3	8	1,522	60	1,583	3%	121%	6%	Yes
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	AECOM Survey	1,331	80	1,411	1,349	81	1,430	22.9	37	32	69	4	3	7	1,386	113	1,499	3%	39%	5%	Yes
Inchyra Road	Junction with Cairnie Road		AECOM Survey	353	3	356	358	3	361	34.2	37	32	69	4	3	7	395	35	430	10%	1053%	19%	Yes
Kingsway	Forfar Road Crossroads	Coupar Angus Interchange	Other	35,910	6,891	42,801	36,388	6,983	43,370	44.7	50	33	83	5	3	8	36,438	7,016	43,453	0%	0%	0%	No
A90	Coupar Angus Interchange	Barnhill Junction	Other	27,418	5,418	32,836	27,783	5,490	33,273	54.6	50	33	83	5	3	8	27,833	5,523	33,356	0%	1%	0%	No
M90	Barnhill Junction	Junction with A912	Other	25,882	6,390	32,272	26,226	6,475	32,701	55.1	50	33	83	5	3	8	26,276	6,508	32,784	0%	1%	0%	No

IEMA Guidelines Environmental Assessment of Traffic & Movement - Traffic Data & Rules

IEMA Guidelines Environmental Assessment of Traffic & Movement - Traffic Data & Rules																								
Study Area Roads				Daily Traffic (24hr)						Development Traffic						Forecast Daily Traffic						IEMA Rules		
Road	Between		Data Source	Surveyed			Baseline		Growth	Average Speed (mph)	Daily			Hourly		Hours	Total (Baseline + Development)			Percentage Increase			IEMA	
				Car / LGV	HGV	Total	Car / LGV	HGV	Total		1.013	Car / LGV	HGV	Total	Car / LGV	HGV	Total	Car / LGV	HGV	Total	Car / LGV	HGV		Total
A912 Bridge of Earn	Junction with M90	Junction with Easter Rhynd Road	DfT Survey	4,504	120	4,624	4,564	122	4,685	30	37	27	64	4	3	6	4,601	149	4,749	1%	22%	1%	No	
A912 Aberargie	Junction with M90	Junction with A91 at Gateside	DfT Survey	8,830	806	9,636	8,947	817	9,764	60	48	31	79	5	3	8	8,995	848	9,843	1%	4%	1%	No	
A913	Junction with A912 at Aberargie	Junction with Ferryfield Road	AECOM Survey	4,015	146	4,161	4,068	148	4,216	38.1	42	31	73	4	3	7	4,110	179	4,289	1%	21%	2%	No	
Easter Rhynd Road	Junction with A912 (north of Bridge of Earn)		AECOM Survey	61	11	72	62	11	73	32.7	37	27	64	4	3	6	99	38	137	60%	242%	88%	Yes	
Ferryfield Road	Junction with A913	Junction with Garden Centre	AECOM Survey	821	26	847	832	26	858	39.4	42	31	73	4	3	7	874	57	931	5%	118%	9%	Yes	
A91	Junction with A912 at Gateside	Junction with B936 at Auchtermuchty	DfT Survey	6,411	426	6,837	6,496	432	6,928	60	48	31	79	5	3	8	6,544	463	7,007	1%	7%	1%	No	
B936	Junction with A91 at Auchtermuchty	Unclassified road leading west from B936	AECOM Survey	722	7	729	732	7	739	41.3	48	31	79	5	3	8	780	38	818	7%	437%	11%	Yes	
U093 Lochmill Loch	Junction with B936	Lochmill Loch	AECOM Survey	56	1	57	57	1	58	18.7	48	31	79	5	3	8	105	32	137	85%	3059%	137%	Yes	

8. PART G – BALFOUR BEATTY CONSTRUCTION TRAFFIC FORECASTS

Total vehicle Movement - ASTI TEALING TO Alyth UPGRADE

	HGV - Stone Delivery	Rigid HGV trackway access circuit/EPZ/Working Area	HGV - Beaver Tail/Rigid	HGV Man 4x4	Tractor Movements	Van/Car 3.5T	Concrete Jagger - HGV	HGV HIAB - Concrete prefab (Asset protection)
Bellmouth Construction and security	315	0	252	252	0	1260	0	
General Access	3097	0	0	0	0	2332	0	
Foundations Works	0	120	240	300	0	1800	450	
Steel works Errection works	0	0	600	120	0	1800	0	
Scaffolding works	0	0	33	0	0	33	0	
Wiring Works	0	992	1016	1002	1080	5360	0	
Dismantling works	0	0	0	0	0	0	0	
Removal/Re-instatement	3217	0	600	0	0	1501	0	
Total	6629	1112	2741	1674	1080	14086	450	0

9. PART H – FEAR AND INTIMIDATION ON AND BY ROAD USERS DATA

IEMA Environmental Assessment of Traffic and Movement - Fear and Intimidation

Study Area Roads Existing Traffic										Existing Fear and Intimidation Level				
Road	Between		18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	Degree of Hazard Score	Fear and Intimidation Level				
A90 (north)	Emmock Roundabout	A928 Junction	1,276	3,051	70	1,200-1,800 20	3,000+ 30	40- 30	80	Extreme				
Emmock Road	Emmock Roundabout	Tealing Road Junction	49	28	43	<600 0	<1,000 0	40- 30	30	Moderate				
Z66 (Tealing Road)	Emmock Road Junction	Cottages Bus Stop (North of Bridgefoot)	40	17	28	<600 0	<1,000 0	20-30 10	10	Small				
Zc7 (road north of Bridgefoot)	Junction with Craigmill Road (Bridgefoot)	with Tealing Road (Pink Cottages bus stop)	26	7	37	<600 0	<1,000 0	30-40 20	20	Small				
U324 (Jeanfield)			26	7	37	<600 0	<1,000 0	30-40 20	20	Small				
U333 / Zc9 / Zc8 (Dronley / Leoch)	Loop		9	3	33	<600 0	<1,000 0	30-40 20	20	Small				
Dronley Burn road	Junction with B954		9	3	33	<600 0	<1,000 0	30-40 20	20	Small				
East Adamston	Junction with B954	East Adamston Farm	9	3	33	<600 0	<1,000 0	30-40 20	20	Small				
B954	A923 Junction	Dronley Junction	210	50	52	<600 0	<1,000 0	40- 30	30	Moderate				
A923 Coupar Angus Interchange	Coupar Angus Interchange	B954 Junction	516	254	40	<600 0	<1,000 0	30-40 20	20	Small				
A923 Piperdam	B954 Junction	Piperdam Drive Junction	272	73	54	<600 0	<1,000 0	40- 30	30	Moderate				
Bervie Road Murloch	A923 Junction	Murloch Junction	26	6	32	<600 0	<1,000 0	30-40 20	20	Small				
Berryhill Road / Bervie Road	Longforgan Junction (A90)	Bervie Road Junction with A90 (Loop)	7	5	32	<600 0	<1,000 0	30-40 20	20	Small				
Main Street / James Forbes Avenue	Longforgan Junction roundabout	Forbes Avenue Junction with Castle Road	76	34	23	<600 0	<1,000 0	20-30 10	10	Small				
The Drive Longforgan	Junction with Castle Road	Moncur Farmhouse	38	5	17	<600 0	<1,000 0	<20 0	0	Small				
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	38	5	17	<600 0	<1,000 0	<20 0	0	Small				
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	67	44	48	<600 0	<1,000 0	40- 30	30	Moderate				
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	67	44	48	<600 0	<1,000 0	40- 30	30	Moderate				
Horn Road	Junction with Errol Station Road	Where road passes under cable line	88	79	40	<600 0	<1,000 0	30-40 20	20	Small				
Errol Station Road	Inchmichael Junction	Errol Station	88	79	40	<600 0	<1,000 0	30-40 20	20	Small				
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	46	26	39	<600 0	<1,000 0	30-40 20	20	Small				
North Murie	Junction with A90	Junction with Leetown	7	4	26	<600 0	<1,000 0	20-30 10	10	Small				
U155 Glendock Junction	Junction with A90	Junction with Leetown	46	26	39	<600 0	<1,000 0	30-40 20	20	Small				
Ross Road	Junction with A90	Junction with Leetown	7	4	26	<600 0	<1,000 0	20-30 10	10	Small				
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	70	12	23	<600 0	<1,000 0	20-30 10	10	Small				
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	77	80	23	<600 0	<1,000 0	20-30 10	10	Small				
Inchyra Road	Junction with Cairnie Road	Barnhill Junction	19	3	34	<600 0	<1,000 0	30-40 20	20	Small				
Kingsway	Forfar Road Crossroads	Coupar Angus Interchange	2,325	6,737	45	1,800+ 30	3,000+ 30	40- 30	90	Extreme				
A90	Coupar Angus Interchange	Barnhill Junction	1,783	5,297	55	1,200-1,800 20	3,000+ 30	40- 30	80	Extreme				
M90	Barnhill Junction	Junction with A912	1,753	6,247	55	1,200-1,800 20	3,000+ 30	40- 30	80	Extreme				

IEMA Environmental Assessment of Traffic and Movement - Fear and Intimidation								
Study Area Roads Existing Traffic + Development Traffic				Forecast Fear and Intimidation Level				
Road	18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	Degree of Hazard Score	Fear and Intimidation Level
A90 (north)	1,284	3,083	70	1,200-1,800 20	3,000+ 30	40+ 30	80	Extreme
Emmock Road	57	59	43	<600 0	<1,000 0	40+ 30	30	Moderate
Zc6 (Tealing Road)	47	44	28	<600 0	<1,000 0	20-30 10	10	Small
Zc7 (road north of Bridgefoot)	33	34	37	<600 0	<1,000 0	30-40 20	20	Small
U324 (Jeanfield)	33	34	37	<600 0	<1,000 0	30-40 20	20	Small
U333 / Zc9 / Zc8 (Dronley / Leoch)	17	34	33	<600 0	<1,000 0	30-40 20	20	Small
Dronley Burn road	15	32	33	<600 0	<1,000 0	30-40 20	20	Small
East Adamston	15	30	33	<600 0	<1,000 0	30-40 20	20	Small
B954	218	81	52	<600 0	<1,000 0	40+ 30	30	Moderate
A923 Couper Angus Interchange	524	285	40	<600 0	<1,000 0	30-40 20	20	Small
A923 Piperdam	279	100	54	<600 0	<1,000 0	40+ 30	30	Moderate
Berwie Road Murloch	32	34	32	<600 0	<1,000 0	30-40 20	20	Small
Berryhill Road / Berwie Road	15	36	32	<600 0	<1,000 0	30-40 20	20	Small
Main Street / James Forbes Avenue	84	65	23	<600 0	<1,000 0	20-30 10	10	Small
The Drive Longforan	46	36	17	<600 0	<1,000 0	<20 0	0	Small
U143 Castle Huntly	46	36	17	<600 0	<1,000 0	<20 0	0	Small
Moncur Road	73	71	48	<600 0	<1,000 0	40+ 30	30	Moderate
Inchture Station Road	73	71	48	<600 0	<1,000 0	40+ 30	30	Moderate
Horn Road	95	111	40	<600 0	<1,000 0	30-40 20	20	Small
Errol Station Road	95	111	40	<600 0	<1,000 0	30-40 20	20	Small
U155 Inchcoonans	54	58	39	<600 0	<1,000 0	30-40 20	20	Small
North Murie	15	36	26	<600 0	<1,000 0	20-30 10	10	Small
U155 Glendolck Junction	52	53	39	<600 0	<1,000 0	30-40 20	20	Small
Ross Road	13	37	26	<600 0	<1,000 0	20-30 10	10	Small
C484 St Madoos	78	45	23	<600 0	<1,000 0	20-30 10	10	Small
Cairnie Road	84	112	23	<600 0	<1,000 0	20-30 10	10	Small
Inchyra Road	26	35	34	<600 0	<1,000 0	30-40 20	20	Small
Kingsway	2,333	6,770	45	1,800+ 30	3,000+ 30	40+ 30	90	Extreme
A90	1,792	5,330	55	1,200-1,800 20	3,000+ 30	40+ 30	80	Extreme
M90	1,761	6,280	55	1,200-1,800 20	3,000+ 30	40+ 30	80	Extreme

IEMA Environmental Assessment of Traffic and Movement - Fear and Intimidation Magnitude of Change

Road	Existing Fear and Intimidation Level	Forecast Fear and Intimidation Level	Step Change in Fear and Intimidation Level	Increase in Average Hourly Traffic (All Vehicles)	Increase in Daily HGV Traffic	Condition for Medium Increase in Magnitude of Change	Fear and Intimidation Magnitude of Change
A90 (north)	Extreme	Extreme	0	8	32	FALSE	Negligible
Emmock Road	Moderate	Moderate	0	8	31	FALSE	Negligible
Z6 (Tealing Road)	Small	Small	0	6	27	FALSE	Negligible
Zc7 (road north of Bridgefoot)	Small	Small	0	6	27	FALSE	Negligible
U324 (Jeanfield)	Small	Small	0	6	27	FALSE	Negligible
U333 / Zc9 / Zc8 (Dronley / Leoch)	Small	Small	0	8	31	FALSE	Negligible
Dronley Burn road	Small	Small	0	6	29	FALSE	Negligible
East Adamston	Small	Small	0	6	27	FALSE	Negligible
B954	Moderate	Moderate	0	8	31	FALSE	Negligible
A923 Coupar Angus Interchange	Small	Small	0	8	31	FALSE	Negligible
A923 Piperdam	Moderate	Moderate	0	6	27	FALSE	Negligible
Bervie Road Murlach	Small	Small	0	6	28	FALSE	Negligible
Berryhill Road / Bervie Road	Small	Small	0	8	31	FALSE	Negligible
Main Street / James Forbes Avenue	Small	Small	0	8	31	FALSE	Negligible
The Drive Longforan	Small	Small	0	8	31	FALSE	Negligible
U143 Castle Huntly	Small	Small	0	8	31	FALSE	Negligible
Moncur Road	Moderate	Moderate	0	6	27	FALSE	Negligible
Inchture Station Road	Moderate	Moderate	0	6	27	FALSE	Negligible
Horn Road	Small	Small	0	8	32	FALSE	Negligible
Errol Station Road	Small	Small	0	8	32	FALSE	Negligible
U155 Inchcoonans	Small	Small	0	8	32	FALSE	Negligible
North Murie	Small	Small	0	8	32	FALSE	Negligible
U155 Glendoick Junction	Small	Small	0	6	27	FALSE	Negligible
Ross Road	Small	Small	0	7	33	FALSE	Negligible
C484 St Madoes	Small	Small	0	8	33	FALSE	Negligible
Cairnie Road	Small	Small	0	7	32	FALSE	Negligible
Inchyra Road	Small	Small	0	7	32	FALSE	Negligible
Kingsway	Extreme	Extreme	0	8	33	FALSE	Negligible
A90	Extreme	Extreme	0	8	33	FALSE	Negligible
M90	Extreme	Extreme	0	8	33	FALSE	Negligible

IEMA Environmental Assessment of Traffic and Movement - Fear and Intimidation

Study Area Roads Existing Traffic						Existing Fear and Intimidation Level				
Road	Between		18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	Degree of Hazard Score	Fear and Intimidation Level
A912 Bridge of Earn	Junction with M90	Junction with Easter Rhynd Road	313	146	30	<600 0	<1,000 0	20-30 10	10	Small
A912 Aberargie	Junction with M90	Junction with A91 at Gateside	653	983	60	600-1,200 10	<1,000 0	40+ 30	40	Moderate
A913	Junction with A912 at Aberargie	Junction with Ferryfield Road	226	140	33	<600 0	<1,000 0	30-40 20	20	Small
Easter Rhynd Road	Junction with A912 (north of Bridge of Earn)		4	11	33	<600 0	<1,000 0	30-40 20	20	Small
Ferryfield Road	Junction with A913	Junction with Garden Centre	46	25	38	<600 0	<1,000 0	30-40 20	20	Small
A91	Junction with A912 at Gateside	Junction with B936 at Auchtermuchty	463	519	60	<600 0	<1,000 0	40+ 30	30	Moderate
B936	Junction with A91 at Auchtermuchty	road leading west from B936 towards	40	7	41	<600 0	<1,000 0	40+ 30	30	Moderate
U093 Lochmill Loch	Junction with B936	Lochmill Loch	3	0	19	<600 0	<1,000 0	<20 0	0	Small

IEMA Environmental Assessment of Traffic and Movement - Fear and Intimidation

Study Area Roads Existing Traffic + Development Traffic				Forecast Fear and Intimidation Level				
Road	18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	18-Hour Average Traffic (Vehs / Hour)	Total 18-Hour HGV Traffic	Average Vehicle Speed (mph)	Degree of Hazard Score	Fear and Intimidation Level
A912 Bridge of Earn	320	173	30	<600	<1,000	20-30	10	Small
				0	0	10		
A912 Aberagie	660	1,014	60	600-1,200	1,000-2,000	40+	50	Great
				10	10	30		
A913	233	171	33	<600	<1,000	30-40	20	Small
				0	0	20		
Easter Rhynd Road	10	38	33	<600	<1,000	30-40	20	Small
				0	0	20		
Ferryfield Road	53	56	38	<600	<1,000	30-40	20	Small
				0	0	20		
A91	471	550	60	<600	<1,000	40+	30	Moderate
				0	0	30		
B936	48	38	41	<600	<1,000	40+	30	Moderate
				0	0	30		
U093 Lochmill Loch	11	31	19	<600	<1,000	<20	0	Small
				0	0	0		

IEMA Environmental Assessment of Traffic and Movement - Fear and Intimidation Magnitude of Change

Road	Existing Fear and Intimidation Level	Forecast Fear and Intimidation Level	Step Change in Fear and Intimidation Level	Increase in Average Hourly Traffic (All Vehicles)	Increase in Daily HGV Traffic	Condition for Medium Increase in Magnitude of Change	Fear and Intimidation Magnitude of Change
A912 Bridge of Earn	Small	Small	0	6	27	FALSE	Negligible
A912 Aberagie	Moderate	Great	1	8	31	FALSE	Low
A913	Small	Small	0	7	31	FALSE	Negligible
Easter Rhynd Road	Small	Small	0	6	27	FALSE	Negligible
Ferryfield Road	Small	Small	0	7	31	FALSE	Negligible
A91	Moderate	Moderate	0	8	31	FALSE	Negligible
B936	Moderate	Moderate	0	8	31	FALSE	Negligible
U093 Lochmill Loch	Small	Small	0	8	31	FALSE	Negligible

10. PART I – ROAD USER AND PEDESTRIAN SAFETY DATA

Study Area Roads			Baseline Accident Rates per 1 Million Vehicle Kilometres									Forecast Development Traffic Accidents				
Road	Between	Length of Road (Km)	Baseline Total Vehicles	Baseline Vehicle Km	Recorded Injury Accidents			Recorded Injury Accidents per 1 Million Vehicle Km			Development Total Vehicles	Development Vehicle Km	Forecast Injury Accidents			
					Slight	Serious	Fatal	Slight	Serious	Fatal			Slight	Serious	Fatal	
A90 Dundee	Emmock Roundabout	A920 Junction	7	34,292,949	240,067,589	4	2	0	3.33E-02	8.33E-03	0.00E+00	27,772	194,494	0.01	0.00	0.00
Emmock Road	Emmock Roundabout	Tealing Road Junction	6	1,321,300	7,927,800	3	0	0	3.78E-01	0.00E+00	0.00E+00	886	5,316	0.00	0.00	0.00
Zc6 Tealing Road	Emmock Road Junction	Cottages Bus Stop (North of Bridge	2	1,071,640	2,143,280	0	0	0	0.00E+00	0.00E+00	0.00E+00	708	1,416	0.00	0.00	0.00
Zc7 Bridgefoot	ction with Craigmill Road (Bridgefo	with Tealing Road (Pink Cottages b	3	702,260	2,106,780	0	1	0	0.00E+00	4.74E-01	0.00E+00	708	2,124	0.00	0.00	0.00
U324 Jeanfield			2	702,260	1,123,616	0	0	0	0.00E+00	0.00E+00	0.00E+00	708	1,133	0.00	0.00	0.00
U333 / Zc9 / Zc8 Dronley / Leoch	Loop		7	236,520	1,608,336	2	1	0	1.24E+00	6.21E-01	0.00E+00	874	5,943	0.01	0.00	0.00
Dronley Burn road	Junction with B954		1	236,520	236,520	0	0	0	0.00E+00	0.00E+00	0.00E+00	686	686	0.00	0.00	0.00
East Adamston	Junction with B954	East Adamston Farm	1	236,520	236,520	0	0	0	0.00E+00	0.00E+00	0.00E+00	708	708	0.00	0.00	0.00
B954	A923 Junction	Dronley Junction	2	5,626,840	9,002,944	0	2	0	0.00E+00	2.22E-01	0.00E+00	874	1,398	0.00	0.00	0.00
A923 Couper Angus Interchange	Couper Angus Interchange	B954 Junction	4	13,877,300	48,570,550	6	2	0	1.23E-01	4.11E-02	0.00E+00	874	3,059	0.00	0.00	0.00
A923 Piperdam	B954 Junction	Piperdam Drive Junction	4	7,390,520	29,562,080	2	1	0	6.76E-02	3.38E-02	0.00E+00	708	2,832	0.00	0.00	0.00
Bervie Road Murloch	A923 Junction	Murloch Junction	1	687,660	343,830	0	0	0	0.00E+00	0.00E+00	0.00E+00	664	332	0.00	0.00	0.00
Beryhill Road / Bervie Road	Longforgan Junction (A90)	Bervie Road Junction with A90 (Loop)	11	195,640	2,103,130	0	1	0	0.00E+00	4.75E-01	0.00E+00	874	9,396	0.00	0.00	0.00
Main Street / James Forbes Avenue	Lonforgan Junction roundabout	Forbes Avenue Junction with Castle	1	2,036,700	1,629,360	0	0	0	0.00E+00	0.00E+00	0.00E+00	874	699	0.00	0.00	0.00
The Drive Longforgan	Junction with Castle Road		1	1,007,400	503,700	0	0	0	0.00E+00	0.00E+00	0.00E+00	874	437	0.00	0.00	0.00
U143 Castle Huntly	unction with The Avenue/Castle Roa	Junction with C484	1	1,007,400	805,920	1	0	0	1.24E+00	0.00E+00	0.00E+00	874	699	0.00	0.00	0.00
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	2	1,794,340	2,691,510	0	0	0	0.00E+00	0.00E+00	0.00E+00	708	1,062	0.00	0.00	0.00
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	1	1,794,340	1,794,340	0	0	0	0.00E+00	0.00E+00	0.00E+00	708	708	0.00	0.00	0.00
Horn Road	Junction with Errol Station Road	Where road passes under cable line	3	2,354,980	6,358,446	1	0	0	1.57E-01	0.00E+00	0.00E+00	830	2,241	0.00	0.00	0.00
Errol Station Road	Inchmichael Junction	Errol Station	2	2,354,980	4,709,960	0	0	0	0.00E+00	0.00E+00	0.00E+00	830	1,660	0.00	0.00	0.00
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	1	1,236,620	1,236,620	0	0	0	0.00E+00	0.00E+00	0.00E+00	896	896	0.00	0.00	0.00
North Murie	Junction with A90		1	183,960	183,960	0	0	0	0.00E+00	0.00E+00	0.00E+00	896	896	0.00	0.00	0.00
U155 Glendock Junction	Junction with A90	Where road passes under cable line	1	1,236,620	1,236,620	0	0	0	0.00E+00	0.00E+00	0.00E+00	708	708	0.00	0.00	0.00
Ross Road	Junction with A90	Junction with Leetown	1	183,960	183,960	0	0	0	0.00E+00	0.00E+00	0.00E+00	720	720	0.00	0.00	0.00
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	2	2,160,800	4,753,760	0	0	0	0.00E+00	0.00E+00	0.00E+00	918	2,020	0.00	0.00	0.00
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	1	2,060,060	2,060,060	0	0	0	0.00E+00	0.00E+00	0.00E+00	764	764	0.00	0.00	0.00
Inchrya Road	Junction with Cairnie Road		1	519,760	363,832	0	0	0	0.00E+00	0.00E+00	0.00E+00	764	535	0.00	0.00	0.00
Kingsway	Forfar Road Crossroads	Couper Angus Interchange	4	62,489,460	256,206,786	9	4	4	3.61E-02	2.90E-02	2.90E-02	27,772	112,866	0.00	0.00	0.00
A90	Couper Angus Interchange	Bamhill Junction	39	47,040,560	1,271,100,016	26	12	2	1.89E-02	8.75E-02	1.45E-02	27,772	294,279	0.02	0.01	0.00
M90	Bamhill Junction	Junction with A912	6	47,117,120	268,667,584	4	4	0	3.72E-02	3.72E-02	0.00E+00	27,772	158,300	0.00	0.00	0.00

Study Area Roads Total Forecast Development Accidents	Slight 0.03732132	Serious 0.01930833	Fatal 0.00160303
Forecast Development Traffic Average Accidents per Study Area Road	Slight 0.001	Serious 0.001	Fatal 0.000

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Traffic for Accident Period
A90 Dundee	23,489	365	8,573,485	4	34,293,940
Emmock Road	905	365	330,325	4	1,321,300
Zc6 Tealing Road	734	365	267,910	4	1,071,640
Zc7 Bridgefoot	481	365	175,565	4	702,260
U324 Jeanfield	481	365	175,565	4	702,260
U333 / Zc9 / Zc8 Dronley / Leoch	162	365	59,130	4	236,520
Dronley Burn road	162	365	59,130	4	236,520
East Adamston	162	365	59,130	4	236,520
B954	3,854	365	1,406,710	4	5,626,840
A923 Coupar Angus Interchange	9,505	365	3,469,325	4	13,877,300
A923 Piperdam	5,062	365	1,847,630	4	7,390,520
Benvie Road Murloch	471	365	171,915	4	687,660
Berryhill Road / Benvie Road	134	365	48,910	4	195,640
Main Street / James Forbes Aven	1,395	365	509,175	4	2,036,700
The Drive Longforan	690	365	251,850	4	1,007,400
U143 Castle Huntly	690	365	251,850	4	1,007,400
Moncur Road	1,229	365	448,585	4	1,794,340
Inchtute Station Road	1,229	365	448,585	4	1,794,340
Horn Road	1,613	365	588,745	4	2,354,980
Errol Station Road	1,613	365	588,745	4	2,354,980
U155 Inchcoonans	847	365	309,155	4	1,236,620
North Murie	126	365	45,990	4	183,960
U155 Glendoick Junction	847	365	309,155	4	1,236,620
Ross Road	126	365	45,990	4	183,960
C484 St Madoes	1,480	365	540,200	4	2,160,800
Cairnie Road	1,411	365	515,015	4	2,060,060
Inchyra Road	356	365	129,940	4	519,760
Kingsway	42,801	365	15,622,365	4	62,489,460
A90	32,836	365	11,985,140	4	47,940,560
M90	32,272	365	11,779,280	4	47,117,120

Number of Study Area Roads	30
----------------------------	----

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Development Traffic for Accident Period
A90 Dundee	82	261	21,402	3	27,772
Emmock Road	80	261	20,880	3	886
Zc6 Tealing Road	64	261	16,704	3	708
Zc7 Bridgefoot	64	261	16,704	3	708
U324 Jeanfield	64	261	16,704	3	708
U333 / Zc9 / Zc8 Dronley / Leoc	79	261	20,619	3	874
Dronley Burn road	62	261	16,182	3	686
East Adamston	64	261	16,704	3	708
B954	79	261	20,619	3	874
A923 Coupar Angus Interchang	79	261	20,619	3	874
A923 Piperdam	64	261	16,704	3	708
Benvie Road Murloch	60	261	15,660	3	664
Berryhill Road / Benvie Road	79	261	20,619	3	874
Main Street / James Forbes Ave	79	261	20,619	3	874
The Drive Longforgan	79	261	20,619	3	874
U143 Castle Huntly	79	261	20,619	3	874
Moncur Road	64	261	16,704	3	708
Inchture Station Road	64	261	16,704	3	708
Horn Road	75	261	19,575	3	830
Errol Station Road	75	261	19,575	3	830
U155 Inchcoonans	81	261	21,141	3	896
North Murie	81	261	21,141	3	896
U155 Glendoick Junction	64	261	16,704	3	708
Ross Road	65	261	16,965	3	720
C484 St Madoes	83	261	21,663	3	918
Cairnie Road	69	261	18,009	3	764
Inchyra Road	69	261	18,009	3	764
Kingsway	83	261	21,663	3	27,772
A90	83	261	21,663	3	27,772
M90	83	261	21,663	3	27,772

Vehicle Km Metric
1,000,000

Balfour Beatty (BB) Total LT384 Vehicle Traffic 27,772 vehicle movements

For local roads Balfour Beatty (BB) total LT384 vehicle traffic will be averaged & weighted against forecast daily traffic Development traffic using the road

Total Roads = 38

Strategic Roads = 4

Local Roads = 34

Average Total LT384 Traffic per Local Road = 818 vehicles

Average Daily LT384 Traffic per Road = 74

Study Area Roads			Baseline Accident Rates per 1 Million Vehicle Kilometres									Forecast Development Traffic Accidents				
Road	Between		Length of Road (Km)	Baseline Total Vehicles	Baseline Vehicle Km	Recorded Injury Accidents			Recorded Injury Accidents per 1 Million Vehicle Km			Development Total Vehicles	Development Vehicle Km	Forecast Injury Accidents		
						Slight	Serious	Fatal	Slight	Serious	Fatal			Slight	Serious	Fatal
A912 Bridge of Earn	Junction with M90	Junction with Easter Rhynd Road	2	6,751,040	10,126,560	3	1	0	2.943E-01	9.875E-02	0.000E+00	708	1,062	0.00	0.00	0.00
A912-Aberarge	Junction with M90	Junction with A91 at Gateside	5	14,068,560	20,342,880	2	2	4	2.843E-02	2.843E-02	1.422E-02	874	4,370	0.00	0.00	0.00
A913	Junction with A912 at Aberarge	Junction with Ferryfield Road	5	6,025,040	30,275,200	0	0	0	0.000E+00	0.000E+00	0.000E+00	808	4,040	0.00	0.00	0.00
Easter Rhynd Road	Junction with A912 (north of Bridge of Earn)		5	105,120	525,600	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	3,540	0.00	0.00	0.00
Ferryfield Road	Junction with A913	Junction with Garden Centre	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	808	808	0.00	0.00	0.00
A914	Junction with A912 at Gateside	Junction with B936 at Auchtermuchty	6	9,982,020	63,884,028	2	2	0	2.131E-02	2.131E-02	0.000E+00	874	6,594	0.00	0.00	0.00
B936	Junction with A91 at Auchtermuchty	Leading west from B936 toward	3	1,064,340	3,193,020	0	1	0	0.000E+00	3.132E-01	0.000E+00	874	2,622	0.00	0.00	0.00
U993 Lochmill Loch	Junction with B936	South of Lochmill Loch	2	83,220	166,440	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	1,748	0.00	0.00	0.00
Road 9			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 10			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 11			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 12			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 13			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 14			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 15			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 16			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 17			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 18			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 19			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 20			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 21			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 22			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 23			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 24			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 25			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 26			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 27			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 28			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 29			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!
Road 30			0	0	0				#DIV/0!	#DIV/0!	#DIV/0!	0	0	#DIV/0!	#DIV/0!	#DIV/0!

Study Area Roads Total Forecast Development Accidents	Slight #DIV/0!	Serious #DIV/0!	Fatal #DIV/0!
Forecast Development Traffic Average Accidents per Study Area Road	Slight #DIV/0!	Serious #DIV/0!	Fatal #DIV/0!

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Traffic for Accident Period
A912 Bridge of Earn	4,624	365	1,687,760	4	6,751,040
A912 Aberagie	9,636	365	3,517,140	4	14,068,560
A913	4,161	365	1,518,765	4	6,075,060
Easter Rhynd Road	72	365	26,280	4	105,120
Ferryfield Road	847	365	309,155	4	1,236,620
A91	6,837	365	2,495,505	4	9,982,020
B936	729	365	266,085	4	1,064,340
U093 Lochmill Loch	57	365	20,805	4	83,220

Number of Stdy Area Roads	8
---------------------------	---

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Development Traffic for Accident Period
A912 Bridge of Earn	64	261	16,704	3	708
A912 Aberagie	79	261	20,619	3	874
A913	73	261	19,053	3	808
Easter Rhynd Road	64	261	16,704	3	708
Ferryfield Road	73	261	19,053	3	808
A91	79	261	20,619	3	874
B936	79	261	20,619	3	874
U093 Lochmill Loch	79	261	20,619	3	874
Road 9					
Road 10					
Road 11					
Road 12					
Road 13					
Road 14					
Road 15					
Road 16					
Road 17					

Vehicle Km Metric
1,000,000

Balfour Beatty (BB) Total LT384 Vehicle Traffic 27,772 vehicle movements

For local roads Balfour Beatty (BB) total LT384 vehicle traffic will be averaged & weighted against forecast daily traffic Development traffic using the road

Total Roads = 38

Strategic Roads = 4

Local Roads = 34

Average Total LT384 Traffic per Local Road = 818 vehicles

Average Daily LT384 Traffic per Road = 74

11. PART J – ROAD VEHICLE DRIVER AND PASSENGER DELAY DATA

	Car/LGV	HGV	All Veh	Dev Traffic Even			% HGV	% All Vehs	HGV	All Vehs	Assess
A90 Dundee	20,638	3,163	23,801	50	32	82	1%	0%	N	N	N
Emmock Road	889	28	917	48	32	80	114%	9%	Y	N	Y
Tealing Road	727	17	744	38	28	64	165%	9%	Y	N	Y
Bridgefoot	480	7	487	38	28	64	400%	13%	Y	N	Y
U324 Jeanfield	480	7	487	38	28	64	400%	13%	Y	N	Y
U333 Dronley	161	3	164	48	32	80	1067%	49%	Y	Y	Y
Dronley Burn	161	3	164	34	30	62	1000%	38%	Y	Y	Y
East Adamston	161	3	164	38	28	64	933%	39%	Y	Y	Y
B954	3,853	52	3,905	48	32	80	62%	2%	Y	N	Y
A923 Muirhead	9,368	263	9,631	48	32	80	12%	1%	Y	N	Y
A923 Piperdam	5,052	77	5,129	38	28	64	36%	1%	Y	N	Y
Benvie Road	471	6	477	32	28	60	467%	13%	Y	N	Y
Berryhill Road	131	5	136	48	32	80	640%	59%	Y	N	Y
Main Street	1,380	34	1,414	48	32	80	94%	6%	Y	N	Y
The Drive	694	5	699	48	32	80	640%	11%	Y	N	Y
U143 Castle Huntly	694	5	699	48	32	80	640%	11%	Y	N	Y
Moncur Road	1,199	46	1,245	38	28	64	61%	5%	Y	N	Y
Inchture Station	1,199	46	1,245	38	28	64	61%	5%	Y	N	Y
Horn Road	1,549	85	1,634	44	32	76	38%	5%	Y	N	Y
Errol Station	1,549	85	1,634	44	32	76	38%	5%	Y	N	Y
U155 Inchcoonans	832	26	858	50	32	82	123%	10%	Y	N	Y
North Murie	124	4	128	50	32	82	800%	64%	Y	Y	Y
U155 Glendoick	832	26	858	38	28	64	108%	7%	Y	N	Y
Ross Road	124	4	128	32	34	66	850%	52%	Y	Y	Y
C484 St Madoes	1,473	27	1,500	50	34	84	126%	6%	Y	N	Y
Caimie Road	1,349	81	1,430	38	32	70	40%	5%	Y	N	Y
Inchyra Road	358	3	361	38	32	70	1067%	19%	Y	N	Y
A90 Kingsway	36,387	6,983	43,370	50	34	84	0%	0%	N	N	N
A90	27,783	5,490	33,273	50	34	84	1%	0%	N	N	N
M90	26,226	6,475	32,701	50	34	84	1%	0%	N	N	N
A912 Bridge of Earn	4,563	122	4,685	38	28	64	23%	1%	Y	N	Y
A912 Aberagie	8,947	817	9,764	48	32	80	4%	1%	N	N	N
A913	4,068	148	4,216	42	32	74	22%	2%	N	N	N
Easter Rhynd Road	62	11	73	38	28	64	255%	88%	Y	Y	Y
Ferryfield Road	832	26	858	42	32	74	123%	9%	Y	N	Y
A91	6,496	432	6,928	48	32	80	7%	1%	N	N	N
B936 Burnside	732	7	739	48	32	80	457%	11%	Y	N	Y
U093 Lochmill Loch	57	1	58	48	32	80	3200%	138%	Y	Y	Y

Road	Road Type	Speed Limit (mph)	Road Capacity (Veh/ Hr/ Direction)	Baseline Daily Vehicles		Proposed Development		Daily Road Capacity Utilisation	
				Baseline Daily Vehicles	Daily Road Capacity Utilisation Baseline Traffic	Daily Vehicles	Proposed Development Traffic	Daily Road Capacity Utilisation Proposed Development Traffic	Daily Road Capacity Utilisation Change
A90 Dundee	Rural - Dual 2 Lanes	70	3,400	23,801	29%	82	29%	0.1%	
Emmock Road	Rural - Typical Single 6.0m	60	900	917	4%	80	5%	0.4%	
Tealing Road	Rural - Typical Single 6.0m	60	900	744	3%	64	4%	0.3%	
Bridgefoot	Rural - Poor Single 5.5m	60	800	487	3%	64	3%	0.3%	
U324 Jeanfield	Rural - Poor Single 4.0m	60	140	487	14%	64	16%	1.9%	
U333 Dronley	Rural - Poor Single 5.5m	60	800	164	1%	80	1%	0.4%	
Dronley Burn	Rural - Poor Single 5.5m	60	800	164	1%	62	1%	0.3%	
East Adamston	Rural - Poor Single 4.0m	60	140	164	5%	64	7%	1.9%	
B954	Rural - Typical Single 7.3m	60	1,200	3,905	14%	80	14%	0.3%	
A923 Muirhead	Rural - Good Single 7.3m	60	1,200	9,631	33%	80	34%	0.3%	
A923 Piperdam	Rural - Typical Single 7.3m	60	1,200	5,129	18%	64	18%	0.2%	
Benvie Road	Rural - Poor Single 5.5m	60	800	477	2%	60	3%	0.3%	
Berryhill Road	Rural - Poor Single 5.5m	60	800	136	1%	80	1%	0.4%	
Main Street	Rural - Typical Single 7.3m	60	1,200	1,414	5%	80	5%	0.3%	
The Drive	Rural - Poor Single 4.0m	60	140	699	21%	80	23%	2.4%	
U143 Castle Huntly	Rural - Poor Single 5.5m	60	800	699	4%	80	4%	0.4%	
Moncur Road	Rural - Typical Single 6.0m	60	900	1,245	6%	64	6%	0.3%	
Inchture Station	Urban - Single 7.3m	30	800	1,245	6%	64	7%	0.3%	
Horn Road	Rural - Typical Single 7.3m	60	1,200	1,634	6%	76	6%	0.3%	
Errol Station	Rural - Typical Single 6.0m	60/40	900	1,634	8%	76	8%	0.4%	
U155 Inchcoonans	Rural - Poor Single 5.5m	60	800	858	4%	82	5%	0.4%	
North Murie	Rural - Poor Single 5.5m	60	800	128	1%	82	1%	0.4%	
U155 Glendoick	Rural - Poor Single 4.0m	60	140	858	26%	64	27%	1.9%	
Ross Road	Rural - Poor Single 4.0m	60	140	128	4%	66	6%	2.0%	
C484 St Madoes	Urban - Single 6.0m	30	800	1,500	8%	84	8%	0.4%	
Cairnie Road	Urban - Single 6.0m	30	800	1,430	7%	70	8%	0.4%	
Inchyra Road	Rural - Poor Single 4.0m	60	140	361	11%	70	13%	2.1%	
A90 Kingsway	Urban - Dual 2	40	3,000	43,370	60%	84	60%	0.1%	
A90	Rural - Dual 2 Lanes	70	3,400	33,273	41%	84	41%	0.1%	
M90	Rural - Motorway - D2	70	3,000	32,701	36%	84	36%	0.1%	
A912 Bridge of Earn	Urban - Single 7.3m	30	800	4,685	24%	64	25%	0.3%	
A912 Aberagie	Rural - Typical Single 7.3m	60	1,200	9,764	34%	80	34%	0.3%	
A913	Rural - Typical Single 7.3m	60	1,200	4,216	15%	74	15%	0.3%	
Easter Rhynd Road	Rural - Poor Single 5.5m	60	800	73	0%	64	1%	0.3%	
Ferryfield Road	Rural - Poor Single 4.0m	60	140	858	26%	74	28%	2.2%	
A91	Rural - Typical Single 7.3m	60	1,200	6,928	24%	80	24%	0.3%	
B936 Burnside	Urban - Single 6.0m	30	800	739	4%	80	4%	0.4%	
U093 Lochmill Loch	Rural - Poor Single 4.0m	60	140	58	2%	80	4%	2.4%	

12. PART K – FRAMEWORK CONSTRUCTION TRAFFIC MANAGEMENT PLAN (CTMP)

12.1 Purpose

12.1.1 The purpose of this Framework CTMP is to provide a framework from which a finalised CTMP can be developed post-consent. This framework outlines the measures which could be used during the construction of the Proposed Development to mitigate transport-related impacts. Access to the Proposed Development by HGVs and construction plant vehicles would be planned, managed and executed by the Applicant's appointed contractor to ensure the safety and reliability of deliveries to site, reduce congestion on the local road network and minimise the environmental impact.

12.2 CTMP Development

12.2.1 The opportunity to develop, amend and enhance the finalised CTMP in response to comments received on this framework document and through the planning and consultation process should be recognised.

12.2.2 The CTMP will consider feedback from residents and community groups and be developed in consultation with Fife, Perth and Kinross, and Angus Councils to establish appropriate methods in which the impact of traffic related to the proposed scheme's construction can be minimised.

12.2.3 This document would be updated as necessary with input from the ECU following feedback from their consultation and planning process.

12.3 Hours of Work

12.3.1 Working hours for construction activities related to the Proposed Development would be agreed with the ECU and local authorities, but are anticipated to be those set out in Table A12.1- 1.

Table A12.1- 1 Construction Working Hours

Season	Day	Working hours
Summer (1 st March to 31 st October)	Weekdays (Monday to Friday)	07:00 to 19:00
	Weekends (Saturday to Sunday)	07:00 to 17:00
Winter (1 st November to 28 th February)	Weekdays (Monday to Friday)	07:30 to 17:00 (or as daylight allows)

12.3.2 No construction should be carried out on bank holidays unless in exceptional circumstances.

12.3.3 Any work which is required or intended to take place outside of these hours, except for emergency situations, would be subject to prior agreement or reasonable notice to Fife, Perth and Kinross, and Angus Councils, as relevant.

12.4 Site Access Points

12.4.1 The site access points would be secured by hoarded gates and during working hours would remain under control of an appointed person who would physically control entry to site. Traffic entering or exiting the site would give way to road traffic on the public road network. Vehicles would leave and access the site via the existing site access junctions and site traffic would be managed so that no vehicles would be required to stop on the public road itself when accessing the site.

12.4.2 Construction traffic warning signs will be located and maintained throughout the duration of construction works. These would be situated at agreed locations to warn road users of construction route access junctions, and to warn of construction traffic turning to and from public roads. Away from public roads appropriate warning signs would be located along access tracks used by construction vehicles to identify construction routes to persons exercising their access rights in accordance with the Land Reform (Scotland) Act 2003. The Scottish Outdoor Access Code 2005 stipulates that access rights do not apply to building, civil engineering or demolition sites, and so measures can be put in place to restrict access to the construction site. Restricting public access to, along or across the entire length of the access track to site would be impractical. It is more practical to consider tactical signage warning the public that construction traffic will be present on these routes. Particularly at locations where members of the public exercising their access rights may be more likely to appear, such as obvious paths or routes that join or cross the construction traffic route. Construction vehicle drivers will also be required to behave appropriately should they encounter members of the public exercising access rights. Driving behaviours will be mandated that provide and maintain road safety for all traffic, including the safety of pedestrian and cycle traffic in the environs of construction traffic routes.

12.5 Construction Traffic Routing

12.5.1 It will be a key responsibility of the Applicant or appointed contractor to ensure that each sub-contractor is aware of the route restrictions prior to any works taking place and to enforce the restrictions stated in the Proposed Development's CTMP.

12.5.2 The site gates will be manned and controlled during normal site working hours and any vehicle arriving on site will be guided to the required location for loading or unloading.

12.5.3 The appointed contractor would also be responsible for mitigating, where possible, the cumulative impacts of other construction projects in the area through careful consideration of routing and access timings.

12.5.4 Likely routes that HGV construction traffic will follow will be:

- M90
- A90
- A912
- A913
- A91
- Local roads

12.5.5 It is considered that each of these routes can accommodate the additional construction traffic required for the Proposed Development. Staff will make their own way via a variety of routes depending on their home location but the impact of staff journeys on the local road network is expected to be negligible.

12.6 Deliveries

12.6.1 Due to the scale of the Proposed Development, the number of daily deliveries throughout the construction phases is anticipated to be low and the disruption imposed on other road users would be minimised due to the scheduling of deliveries and material removal.

12.6.2 Construction materials that are delivered will be stored on-site.

12.7 Enforcement

12.7.1 All contractors would be required to adhere to the CTMP. Compliance will be monitored by the Applicant's site representative via spot checks to ensure that vehicles follow the measures set out in the CTMP.

12.8 Speed Limit

12.8.1 The Applicant would ensure that all site traffic abides by local speed limits to maintain the safety of other road users and pedestrians. A speed limit of 5 mph would be established and enforced throughout the duration of construction works to provide a safe environment for site workers and any pedestrians which pass the Proposed Development.

12.8.2 Signage would be in place prior to any works taking place which will advise of any permanent speed limits which are in force and all site workers or haulage sub-contractors would be made aware of the speed requirements as part of their site induction.

12.9 Summary

12.9.1 This section discusses the potential traffic management arrangements during construction and provides an assessment of the impacts on the local area during this period.

12.9.2 The hours of work are expected to be 07:00 – 19:00 7 days a week, with no work taking place on bank holidays.

12.9.3 Access Points would be secured by hoarded gates and during working hours would remain under control of an appointed person who would physically control entry to site. Traffic entering or exiting the site would give way to road traffic on the public road network. No construction vehicles would require to stop on the public road.

12.9.4 It is anticipated that the likely routes of construction traffic would be via the M90, A90, A912, A913, A91 and proposed upgraded access tracks. It shall be the responsibility of the appointed contractor to assess these routes for restrictions and mitigate any cumulative impacts of construction traffic.

12.9.5 The number of deliveries to the site is anticipated to be low with all construction materials to be stored and secured on site.

12.9.6 All traffic will abide by local speed limits with a 5 mph speed limit enforced within sites.

13. PART L – INTRA-DEVELOPMENT CUMULATIVE ASSESSMENT DATA

IEMA Guidelines Environmental Assessment of Traffic & Movement - Traffic Data & Rules

Study Area Roads		Daily Traffic (24hr)							Development Traffic						Forecast Daily Traffic						IEMA Rules		
Road	Between	Data Source	Surveyed			Baseline		Growth 1.013	Average Speed (mph)	Daily			Hourly			Hours 10	Total (Baseline + Development)			Percentage Increase			IEMA
			Car / LGV	HGV	Total	Car / LGV	HGV	Total		Car / LGV	HGV	Total	Car / LGV	HGV	Total		Car / LGV	HGV	Total	Car / LGV	HGV	Total	
A90 Dundee	Emmock Roundabout	A928 Junction	DT Survey	20,368	3,121	23,489	20,639	3,163	23,801	70	316	182	500	32	18	50	20,957	3,345	24,301	2%	6%	2%	No
Emmock Road	Emmock Roundabout	Tealing Road Junction	AECOM Survey	877	28	905	889	28	917	42.9	317	181	498	32	18	50	1,206	209	1,415	36%	638%	54%	Yes
Zc6 Tealing Road	Emmock Road Junction	Pink Cottages Bus Stop (North of Bridge)	AECOM Survey	717	17	734	727	17	744	28.4	37	27	64	4	3	6	784	44	828	5%	157%	9%	Yes
Zc7 Bridgefoot	Junction with Craigmill Road (Bridgefoot)	Junction with Tealing Road / Pink Cotta	AECOM Survey	474	7	481	480	7	487	37.4	37	27	64	4	3	6	517	34	551	8%	381%	13%	Yes
U324 Jeanfield	Junction with ZC7 Bridgefoot	Junction south of Leoch	AECOM Survey	474	7	481	480	7	487	37.4	37	27	64	4	3	6	517	34	551	8%	381%	13%	Yes
U333 / Zc9 / Zc8 Dronley / Leoch	Loop	Loop	AECOM Survey	159	3	162	161	3	164	33	48	31	79	5	3	8	209	34	243	30%	1020%	48%	Yes
Dronley Burn road	Junction with B954		AECOM Survey	159	3	162	161	3	164	33	33	29	62	3	3	6	194	32	226	20%	954%	38%	Yes
East Adamston	Junction with B954	East Adamston Farm	AECOM Survey	159	3	162	161	3	164	33	37	27	64	4	3	6	198	30	228	23%	888%	39%	Yes
B954	A923 Junction	Dronley Junction	AECOM Survey	3,803	51	3,854	3,854	52	3,906	51.7	48	31	79	5	3	8	3,902	83	3,984	1%	60%	2%	Yes
A923 Coupar Angus Int	Coupar Angus Interchange	B954 Junction	DT Survey	9,245	260	9,505	9,368	263	9,631	60	48	31	79	5	3	8	9,416	294	9,710	1%	12%	1%	Yes
A923 Piperdam	B954 Junction	Piperdam Drive Junction	AECOM Survey	4,986	76	5,062	5,052	77	5,129	53.5	37	27	64	4	3	6	5,089	104	5,193	1%	35%	1%	Yes
Benwie Road Murloch	B923 Junction	Murloch Junction	AECOM Survey	465	6	471	471	6	477	32.1	32	28	60	3	3	6	503	34	537	7%	461%	13%	Yes
Berryhill Road / Benwie	Longforgan Junction (A90)	Benwie Road Junction with A90 (Loop)	AECOM Survey	129	5	134	131	5	136	32.2	48	31	79	5	3	8	179	36	215	37%	612%	58%	Yes
Main Street / James Fr	Longforgan Junction roundabout	James Forbes Avenue Junction with C	AECOM Survey	1,361	34	1,395	1,379	34	1,414	23.1	48	31	79	5	3	8	1,427	65	1,493	3%	90%	6%	Yes
The Drive Longforgan	Junction with Castle Road		AECOM Survey	685	5	690	694	5	699	17.4	48	31	79	5	3	8	742	36	778	7%	612%	11%	Yes
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	AECOM Survey	685	5	690	694	5	699	17.4	48	31	79	5	3	8	742	36	778	7%	612%	11%	Yes
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	AECOM Survey	1,184	45	1,229	1,200	46	1,245	47.8	37	27	64	4	3	6	1,237	73	1,309	3%	59%	5%	Yes
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	AECOM Survey	1,184	45	1,229	1,200	46	1,245	47.8	37	27	64	4	3	6	1,237	73	1,309	3%	59%	5%	Yes
Horn Road	Junction with Enrol Station Road	Where road passes under cable line	AECOM Survey	1,529	84	1,613	1,549	85	1,634	39.8	43	32	75	4	3	8	1,592	117	1,709	3%	38%	5%	Yes
Enrol Station Road	Inchmichael Junction	Enrol Station	AECOM Survey	1,529	84	1,613	1,549	85	1,634	39.8	43	32	75	4	3	8	1,592	117	1,709	3%	38%	5%	Yes
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	AECOM Survey	821	26	847	832	26	858	39.4	49	32	81	5	3	8	861	58	939	6%	121%	9%	Yes
North Marie	Junction with A90		AECOM Survey	122	4	126	124	4	128	25.5	49	32	81	5	3	8	173	36	209	40%	789%	63%	Yes
U155 Glendock Junction	Junction with A90		AECOM Survey	821	26	847	832	26	858	39.4	49	32	81	5	3	8	869	53	922	4%	102%	7%	Yes
Ross Road	Junction with A90		AECOM Survey	122	4	126	124	4	128	25.5	32	33	65	3	3	7	156	37	193	26%	814%	51%	Yes
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	Other	1,453	27	1,480	1,472	27	1,500	22.9	50	33	83	5	3	8	1,522	60	1,583	3%	121%	6%	Yes
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	AECOM Survey	1,331	80	1,411	1,349	81	1,430	22.9	37	32	69	4	3	7	1,386	113	1,499	3%	39%	5%	Yes
Inchrya Road	Junction with Cairnie Road		AECOM Survey	353	3	356	358	3	361	34.2	37	32	69	4	3	7	395	35	430	10%	1053%	19%	Yes
Kingway	Forfar Road Crossroads	Coupar Angus Interchange	Other	35,910	6,891	42,801	36,368	6,963	43,370	44.7	319	183	502	32	18	50	36,707	7,166	43,872	1%	3%	1%	No
A90	Coupar Angus Interchange	Barnhill Junction	Other	27,418	5,418	32,836	27,783	5,490	33,273	54.6	319	183	502	32	18	50	28,102	5,673	33,775	1%	3%	2%	No
M90	Barnhill Junction	Junction with A912	Other	25,882	6,390	32,272	26,226	6,475	32,701	55.1	319	183	502	32	18	50	26,545	6,658	33,203	1%	3%	2%	No

Sig of effect

		Sen	MoC	Severance	NM Amenity	NM delay	Ve delay	MoC	Sig	Safety					Fear				
										Slight	Ser	Fatal	MoC	Sig	Step Change	MoC	Sig		
A90 Dundee																			
Emmock Road	54%	Low	Low	Negligible	Negligible	Negligible	2.3%	Negligible	Negligible	0.04	0.00	0.00	High		0	Negligible			
Zc6 Tealing Road	9%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.01	0.00	0.00	Low		0	Negligible		Negligible	
Zc7 Bridgefoot	13%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
U324 Jeanfield	13%	Low	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
U333 / Zc9 / Zc8 Dronley / Le	48%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Dronley Burn road	38%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.01	0.00	0.00	Low		0	Negligible		Negligible	
East Adamston	39%	Negligible	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
B954	2%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
A923 Coupar Angus Intercha	1%	Medium	Low	Minor	Minor	Minor	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
A923 Piperdam	1%	Low	Low	Negligible	Negligible	Negligible	0.2%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Benvie Road Murloch	13%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Berryhill Road / Benvie Road	58%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Main Street / James Forbes A	6%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
The Drive Longforan	11%	Low	Low	Negligible	Negligible	Negligible	2.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
U143 Castle Huntty	11%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Moncur Road	5%	Medium	Low	Minor	Minor	Minor	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Inchture Station Road	5%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Hom Road	5%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Errol Station Road	5%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
U155 Inchcoonans	9%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
North Murie	63%	Low	Medium	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
U155 Glendoick Junction	7%	Low	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Ross Road	51%	Low	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
C484 St Madoes	6%	Medium	Low	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Cairnie Road	5%	Medium	Low	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Inchyra Road	19%	Low	Low	Negligible	Negligible	Negligible	2.1%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Kingsway										0.02	0.00	0.00	Low		0	Negligible			
A90										0.09	0.04	0.01	High		0	Negligible			
M90										0.00	0.00	0.00	Negligible		0	Negligible			
A912 Bridge of Earn	1%	Medium	Low	Minor	Minor	Minor	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
A912 Aberargie	1%									0.00	0.00	0.00	Negligible		0	Negligible			
A913	2%									0.00	0.00	0.00	Negligible		0	Negligible			
Easter Rhynd Road	88%	Low	High	Moderate	Moderate	Moderate	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
Ferryfield Road	9%	Low	Low	Negligible	Negligible	Negligible	2.2%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
A91	1%									0.00	0.00	0.00	Negligible		0	Negligible			
B936 Burnside	11%	Medium	Low	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	
U093 Lochmill Loch	137%	Low	High	Moderate	Moderate	Moderate	2.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible		0	Negligible		Negligible	

Study Area Roads			Baseline Accident Rates per 1 Million Vehicle Kilometres									Forecast Development Traffic Accidents				
Road	Between	Length of Road (km)	Baseline Total Vehicles	Baseline Vehicle Km	Recorded Injury Accidents			Recorded Injury Accidents per 1 Million Vehicle Km			Development Total Vehicles	Development Vehicle Km	Forecast Injury Accidents			
					Slight	Serious	Fatal	Slight	Serious	Fatal			Slight	Serious	Fatal	
A90 Dundee	Emmock Roundabout	A929 Junction	2	34,293,949	240,067,589	4	2	0	2.333E-02	8.331E-03	0.000E+00	469,344	1,186,390	0.04	0.03	0.00
Emmock Road	Emmock Roundabout	Tealing Road Junction	6	1,321,300	7,927,800	3	0	0	3.784E-01	0.000E+00	0.000E+00	5,515	33,092	0.01	0.00	0.00
Zc8 Tealing Road	Emmock Road Junction	Cottages Bus Stop (North of Bridge)	2	1,071,640	2,143,280	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	1,416	0.00	0.00	0.00
Zc7 Bridgefoot	Junction with Craigmill Road (Bridgefoot)	with Tealing Road (Pink Cottages b	3	702,260	2,106,780	0	1	0	0.000E+00	4.747E-01	0.000E+00	708	2,124	0.00	0.00	0.00
U324 Jeanfield			2	702,260	1,123,616	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	1,133	0.00	0.00	0.00
U333 / Zc9 / Zc8 Dronley / Leoch	Loop		7	236,520	1,608,336	2	1	0	1.244E+00	6.218E-01	0.000E+00	874	5,943	0.01	0.00	0.00
Dronley Burn road	Junction with B954		1	236,520	236,520	0	0	0	0.000E+00	0.000E+00	0.000E+00	686	686	0.00	0.00	0.00
East Adamston	Junction with B954	East Adamston Farm	1	236,520	236,520	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	708	0.00	0.00	0.00
B954	A923 Junction	Dronley Junction	2	5,626,840	9,002,944	0	2	0	0.000E+00	2.221E-01	0.000E+00	874	1,398	0.00	0.00	0.00
A923 Coupar Angus Interchange	Coupar Angus Interchange	B954 Junction	4	13,877,300	48,570,550	6	2	0	1.235E-01	4.118E-02	0.000E+00	874	3,059	0.00	0.00	0.00
A923 Pipersdam	B954 Junction	Pipersdam Drive Junction	4	7,390,520	29,562,080	2	1	0	6.765E-02	3.383E-02	0.000E+00	708	2,832	0.00	0.00	0.00
Bervie Road Murloch	A923 Junction	Murloch Junction	1	687,660	343,830	0	0	0	0.000E+00	0.000E+00	0.000E+00	664	332	0.00	0.00	0.00
Berryhill Road / Bervie Road	Longforgan Junction (A90)	Bervie Road Junction with A90 (Loop)	11	195,640	2,103,130	0	1	0	0.000E+00	4.755E-01	0.000E+00	874	9,396	0.00	0.00	0.00
Main Street / James Forbes Avenue	Longforgan Junction roundabout	Forbes Avenue Junction with Castle	1	2,036,700	1,629,360	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	699	0.00	0.00	0.00
The Drive Longforgan	Junction with Castle Road		1	1,007,400	503,700	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	437	0.00	0.00	0.00
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	1	1,007,400	805,920	1	0	0	1.241E+00	0.000E+00	0.000E+00	874	699	0.00	0.00	0.00
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	2	1,794,340	2,691,510	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	1,062	0.00	0.00	0.00
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	1	1,794,340	1,794,340	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	708	0.00	0.00	0.00
Horn Road	Junction with Errol Station Road	Where road passes under cable line	3	2,354,980	6,358,446	1	0	0	1.573E-01	0.000E+00	0.000E+00	830	2,241	0.00	0.00	0.00
Errol Station Road	Inchmichael Junction	Errol Station	2	2,354,980	4,709,960	0	0	0	0.000E+00	0.000E+00	0.000E+00	830	1,660	0.00	0.00	0.00
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	896	896	0.00	0.00	0.00
North Murie	Junction with A90		1	183,960	183,960	0	0	0	0.000E+00	0.000E+00	0.000E+00	896	896	0.00	0.00	0.00
U155 Glendoick Junction	Junction with A90	Where road passes under cable line	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	708	0.00	0.00	0.00
Ross Road	Junction with A90	Junction with Leetown	1	183,960	183,960	0	0	0	0.000E+00	0.000E+00	0.000E+00	720	720	0.00	0.00	0.00
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	2	2,160,800	4,753,760	0	0	0	0.000E+00	0.000E+00	0.000E+00	918	2,020	0.00	0.00	0.00
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	1	2,060,060	2,060,060	0	0	0	0.000E+00	0.000E+00	0.000E+00	764	764	0.00	0.00	0.00
Inchyra Road	Junction with Cairnie Road		1	519,760	363,832	0	0	0	0.000E+00	0.000E+00	0.000E+00	764	535	0.00	0.00	0.00
Kingsway	Forfar Road Crossroads	Coupar Angus Interchange	4	42,489,460	264,206,286	4	1	1	2.613E-02	2.903E-03	2.903E-03	167,970	688,470	0.02	0.00	0.00
A90	Coupar Angus Interchange	Bannhill Junction	20	47,940,560	1,371,100,016	26	12	2	1.896E-02	8.752E-03	1.489E-03	167,970	4,802,954	0.09	0.04	0.01
M99	Bannhill Junction	Junction with A912	6	42,117,320	268,567,584	1	1	0	3.723E-03	3.723E-03	0.000E+00	167,970	957,431	0.00	0.00	0.00

Study Area Roads Total Forecast Development Accidents	Slight	Serious	Fatal
	0.18005964	0.06787671	0.00969542
Forecast Development Traffic Average Accidents per Study Area Road	Slight	Serious	Fatal
	0.006	0.002	0.000

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Development Traffic for Accident Period
A90 Dundee	82	261	21,402	3	169,341
Emmock Road	80	261	20,880	3	5,515
Zc6 Tealing Road	64	261	16,704	3	708
Zc7 Bridgefoot	64	261	16,704	3	708
U324 Jeanfield	64	261	16,704	3	708
U333 / Zc9 / Zc8 Dronley / Leoch	79	261	20,619	3	874
Dronley Burn road	62	261	16,182	3	686
East Adamston	64	261	16,704	3	708
B954	79	261	20,619	3	874
A923 Coupar Angus Interchange	79	261	20,619	3	874
A923 Piperdam	64	261	16,704	3	708
Benvie Road Murloch	60	261	15,660	3	664
Berryhill Road / Benvie Road	79	261	20,619	3	874
Main Street / James Forbes Aven	79	261	20,619	3	874
The Drive Longforgan	79	261	20,619	3	874
U143 Castle Huntly	79	261	20,619	3	874
Moncur Road	64	261	16,704	3	708
Inchture Station Road	64	261	16,704	3	708
Horn Road	75	261	19,575	3	830
Errol Station Road	75	261	19,575	3	830
U155 Inchcoonans	81	261	21,141	3	896
North Murie	81	261	21,141	3	896
U155 Glendoick Junction	64	261	16,704	3	708
Ross Road	65	261	16,965	3	720
C484 St Madoes	83	261	21,663	3	918
Cairnie Road	69	261	18,009	3	764
Inchyra Road	69	261	18,009	3	764
Kingsway	83	261	21,663	3	167,970
A90	83	261	21,663	3	167,970
M90	83	261	21,663	3	167,970

Vehicle Km Metric
1,000,000

	Intra Daily	Proposed Dev / Intra Dev Ratio	Proposed Dev Total Traffic	Intra-Dev Total Traffic
A90 Dundee	500	6.1	27772	169,341
Emmock Road	498	6.2	886	5,515
Zc6 Tealing Road	64	1.0	708	708
Zc7 Bridgefoot	64	1.0	708	708
U324 Jeanfield	64	1.0	708	708
U333 / Zc9 / Zc8 Dronley / Leoch	79	1.0	874	874
Dronley Burn road	62	1.0	686	686
East Adamston	64	1.0	708	708
B954	79	1.0	874	874
A923 Coupar Angus Interchange	79	1.0	874	874
A923 Piperdam	64	1.0	708	708
Benvie Road Murloch	60	1.0	664	664
Berryhill Road / Benvie Road	79	1.0	874	874
Main Street / James Forbes Aven	79	1.0	874	874
The Drive Longforgan	79	1.0	874	874
U143 Castle Huntly	79	1.0	874	874
Moncur Road	64	1.0	708	708
Inchture Station Road	64	1.0	708	708
Horn Road	75	1.0	830	830
Errol Station Road	75	1.0	830	830
U155 Inchcoonans	81	1.0	896	896
North Murie	81	1.0	896	896
U155 Glendoick Junction	64	1.0	708	708
Ross Road	65	1.0	720	720
C484 St Madoes	83	1.0	918	918
Cairnie Road	69	1.0	764	764
Inchyra Road	69	1.0	764	764
Kingsway	502	6.0	27772	167,970
A90	502	6.0	27772	167,970
M90	502	6.0	27772	167,970

Study Area Roads			Baseline Accident Rates per 1 Million Vehicle Kilometres									Forecast Development Traffic Accidents				
Road	Between		Length of Road (Km)	Baseline Total Vehicles	Baseline Vehicle Km	Recorded Injury Accidents			Recorded Injury Accidents per 1 Million Vehicle Km			Development Total Vehicles	Development Vehicle Km	Forecast Injury Accidents		
						Slight	Serious	Fatal	Slight	Serious	Fatal			Slight	Serious	Fatal
A912 Bridge of Eam	Junction with M90	Junction with Easter Rhynd Road	2	6,751,040	10,126,560	3	1	0	2.963E-01	9.875E-02	0.000E+00	708	1,062	0.00	0.00	0.00
A912 Abernigie	Junction with M90	Junction with A91 at Gateside	5	14,049,560	70,342,800	2	2	1	2.843E-02	2.843E-02	1.422E-02	874	4,370	0.00	0.00	0.00
A913	Junction with A912 at Abernigie	Junction with Ferryfield Road	5	6,075,060	30,375,300	0	0	0	0.000E+00	0.000E+00	0.000E+00	808	4,040	0.00	0.00	0.00
Easter Rhynd Road	Junction with A912 (north of Bridge of Eam)		5	105,120	525,600	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	3,540	0.00	0.00	0.00
Ferryfield Road	Junction with A913	Junction with Garden Centre	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	808	808	0.00	0.00	0.00
A91	Junction with A912 at Gateside	Junction with B936 at Auchtermuchty	6	4,982,020	69,884,928	2	2	0	2.131E-02	2.131E-02	0.000E+00	874	5,594	0.00	0.00	0.00
B936	Junction with A91 at Auchtermuchty	road leading west from B936 towards	3	1,064,340	3,193,020	0	1	0	0.000E+00	3.132E-01	0.000E+00	874	2,622	0.00	0.00	0.00
U993 Lochmill Loch	Junction with B936	South of Lochmill Loch	2	83,220	166,440	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	1,748	0.00	0.00	0.00

Study Area Roads Total Forecast Development Accidents	Slight #DIV/0!	Serious #DIV/0!	Fatal #DIV/0!
---	-------------------	--------------------	------------------

Forecast Development Traffic Average Accidents per Study Area Road	Slight #DIV/0!	Serious #DIV/0!	Fatal #DIV/0!
--	-------------------	--------------------	------------------

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Development Traffic for Accident Period
A912 Bridge of Earn	64	261	16,704	3	708
A912 Aberagie	79	261	20,619	3	874
A913	73	261	19,053	3	808
Easter Rhynd Road	64	261	16,704	3	708
Ferryfield Road	73	261	19,053	3	808
A91	79	261	20,619	3	874
B936	79	261	20,619	3	874
U093 Lochmill Loch	79	261	20,619	3	874

Vehicle Km Metric
1,000,000

	Intra Daily	Proposed Dev / Intra Dev Ratio	Proposed Dev Total Traffic	Intra-Dev Total Traffic
A912 Bridge of Earn	64	1.0	708	708
A912 Aberagie	79	1.0	874	874
A913	73	1.0	808	808
Easter Rhynd Road	64	1.0	708	708
Ferryfield Road	73	1.0	808	808
A91	79	1.0	874	874
B936	79	1.0	874	874
U093 Lochmill Loch	79	1.0	874	874

14. PART M – INTER-DEVELOPMENT CUMULATIVE ASSESSMENT DATA

IEMA Guidelines Environmental Assessment of Traffic & Movement - Traffic Data & Rules

Study Area Roads		Daily Traffic (24hr)							Development Traffic						Forecast Daily Traffic						IEMA Rules		
Road	Between	Data Source	Surveyed			Baseline		Growth 1.013	Average Speed (mph)	Daily			Hourly			Hours 10	Total (Baseline + Development)			Percentage Increase			IEMA
			Car / LGV	HGV	Total	Car / LGV	HGV	Total		Car / LGV	HGV	Total	Car / LGV	HGV	Total		Car / LGV	HGV	Total	Car / LGV	HGV	Total	
A90 Dundee	Emmock/Roundabout	A90 Junction	99-999	9-124	99-999	99-999	9-169	99-999	79	994	444	4-229	99	44	449	94-459	9-277	99-999	4%	9-99	9%	No	
Emmock Road	Emmock Roundabout	Tealing Road Junction	AECOM Survey	877	28	905	889	28	917	42.9	477	265	742	48	27	74	1,356	293	1,659	54%	934%	81%	Yes
Zc6 Tealing Road	Emmock Road Junction	Pink Cottages Bus Stop (North of Bridge)	AECOM Survey	717	17	734	727	17	744	28.4	37	27	64	4	3	6	794	44	838	5%	157%	9%	Yes
Zc7 Bridgefoot	Junction with Craigmill Road (Bridgefoot)	Junction with Tealing Road / Pink Cottage	AECOM Survey	474	7	481	480	7	487	37.4	37	27	64	4	3	6	517	34	551	8%	381%	13%	Yes
U324 Jeanfield	Junction with ZC7 Bridgefoot	Junction south of Leoch	AECOM Survey	474	7	481	480	7	487	37.4	37	27	64	4	3	6	517	34	551	8%	381%	13%	Yes
U333 / Zc9 / Zc8 Dronley / Leoch	Loop	Loop	AECOM Survey	159	3	162	161	3	164	33	48	31	79	5	3	8	209	34	243	30%	1020%	48%	Yes
Dronley Burn road	Junction with B954		AECOM Survey	159	3	162	161	3	164	33	33	29	62	3	3	6	194	32	226	20%	954%	38%	Yes
East Adamston	Junction with B954	East Adamston Farm	AECOM Survey	159	3	162	161	3	164	33	37	27	64	4	3	6	198	30	228	23%	888%	39%	Yes
B954	A923 Junction	Dronley Junction	AECOM Survey	3,803	51	3,854	3,854	52	3,906	51.7	48	31	79	5	3	8	3,902	83	3,984	1%	60%	2%	Yes
A923 Coupar Angus Int	Coupar Angus Interchange	B954 Junction	DTI Survey	9,245	260	9,505	9,368	263	9,631	60	88	43	131	9	4	13	9,456	306	9,762	1%	16%	1%	Yes
A923 Pipersdam	B954 Junction	Pipersdam Drive Junction	AECOM Survey	4,986	76	5,062	5,052	77	5,129	53.5	37	27	64	4	3	6	5,089	104	5,193	1%	35%	1%	Yes
Bervie Road Murloch	A923 Junction	Murloch Junction	AECOM Survey	465	6	471	471	6	477	32.1	32	28	60	3	3	6	503	34	537	7%	461%	13%	Yes
Berryhill Road / Bervie	Longforgan Junction (A90)	Bervie Road Junction with A90 (Loop)	AECOM Survey	129	5	134	131	5	136	32.2	48	31	79	5	3	8	179	36	215	37%	612%	58%	Yes
Main Street / James For	Longforgan Junction roundabout	James Forbes Avenue Junction with C	AECOM Survey	1,361	34	1,395	1,379	34	1,414	23.1	48	31	79	5	3	8	1,427	65	1,493	3%	90%	6%	Yes
The Drive Longforgan	Junction with Castle Road		AECOM Survey	685	5	690	694	5	699	17.4	48	31	79	5	3	8	742	36	778	7%	612%	11%	Yes
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	AECOM Survey	685	5	690	694	5	699	17.4	48	31	79	5	3	8	742	36	778	7%	612%	11%	Yes
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	AECOM Survey	1,184	45	1,229	1,200	46	1,245	47.8	37	27	64	4	3	6	1,237	73	1,309	3%	59%	5%	Yes
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	AECOM Survey	1,184	45	1,229	1,200	46	1,245	47.8	37	27	64	4	3	6	1,237	73	1,309	3%	59%	5%	Yes
Horn Road	Junction with Enrol Station Road	Where road passes under cable line	AECOM Survey	1,529	84	1,613	1,549	85	1,634	39.8	43	32	75	4	3	8	1,592	117	1,709	3%	38%	5%	Yes
Enrol Station Road	Inchmichael Junction	Enrol Station	AECOM Survey	1,529	84	1,613	1,549	85	1,634	39.8	43	32	75	4	3	8	1,592	117	1,709	3%	38%	5%	Yes
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	AECOM Survey	821	26	847	832	26	858	39.4	49	32	81	5	3	8	861	58	939	6%	121%	9%	Yes
North Marie	Junction with A90		AECOM Survey	122	4	126	124	4	128	25.5	49	32	81	5	3	8	173	36	209	40%	789%	63%	Yes
U155 Glendock Junction	Junction with A90		AECOM Survey	821	26	847	832	26	858	39.4	49	32	81	5	3	8	869	53	922	4%	102%	7%	Yes
Ross Road	Junction with A90		AECOM Survey	122	4	126	124	4	128	25.5	32	33	65	3	3	7	156	37	193	26%	814%	51%	Yes
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	Other	1,453	27	1,480	1,472	27	1,500	22.9	50	33	83	5	3	8	1,522	60	1,583	3%	121%	6%	Yes
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	AECOM Survey	1,331	80	1,411	1,349	81	1,430	22.9	37	32	69	4	3	7	1,386	113	1,499	3%	39%	5%	Yes
Inchrya Road	Junction with Cairnie Road		AECOM Survey	353	3	356	358	3	361	34.2	37	32	69	4	3	7	395	35	430	10%	1053%	19%	Yes
Highway	Forfar-Rose-Crossroads	Coupar-Angus-Interchange	Other	95-949	6-994	92-994	96-996	6-999	93-979	44.7	955	427	4-292	96	49	149	97-249	7-419	44-662	2%	9%	9%	No
M99	Coupar-Angus-Interchange	Berryhill Junction	Other	95-949	6-994	92-994	96-996	6-999	93-979	44.7	955	427	4-292	96	49	149	97-249	7-419	44-662	2%	9%	9%	No
M99	Berryhill Junction	Junction with A9012	Other	95-992	6-999	92-992	96-996	6-995	92-994	55.1	944	452	4-299	94	45	149	97-492	6-992	94-964	9%	7%	4%	No

	Vehs	Sen	Sig of effect				Ve delay	MoC	Sig	Safety					Fear		
			MoC	Severance	NM Amenity	NM delay				Slight	Ser	Fatal	MoC	Sig	Step Change	MoC	Sig
A90 Dundee	5%	Low							0.10	0.02	0.00	High			0	Negligible	
Emmock Road	81%	Low	Low	Negligible	Negligible	Negligible	3.4%	Negligible	Negligible	0.02	0.00	0.00	Low	Negligible	0	Negligible	Negligible
Zc6 Tealing Road	9%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Zc7 Bridgefoot	13%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
U324 Jeanfield	13%	Low	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
U333 / Zc9 / Zc8 Dronley / Leoch	48%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.01	0.00	0.00	Low	Negligible	0	Negligible	Negligible
Dronley Burn road	38%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
East Adamston	39%	Negligible	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
B954	2%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
A923 Coupar Angus Interchange	1%	Medium	Low	Minor	Minor	Minor	0.5%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
A923 Piperdam	1%	Low	Low	Negligible	Negligible	Negligible	0.2%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Benvie Road Murloch	13%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Berryhill Road / Benvie Road	58%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Main Street / James Forbes Avenue	6%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
The Drive Longforan	11%	Low	Low	Negligible	Negligible	Negligible	2.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
U143 Castle Huntly	11%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Moncur Road	5%	Medium	Low	Minor	Minor	Minor	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Inchture Station Road	5%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Hom Road	5%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Errol Station Road	5%	Low	Low	Negligible	Negligible	Negligible	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
U155 Inchcoonans	9%	Low	Low	Negligible	Negligible	Negligible	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
North Murie	63%	Low	Medium	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
U155 Glendoick Junction	7%	Low	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Ross Road	51%	Low	Low	Negligible	Negligible	Negligible	1.9%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
C484 St Madoes	6%	Medium	Low	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Cairnie Road	5%	Medium	Low	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Inchyra Road	19%	Low	Low	Negligible	Negligible	Negligible	2.1%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Kingsway	3%	Medium					1.0%			0.06	0.01	0.01	Low		0	Negligible	
A90	4%	Low					1.6%			0.23	0.11	0.02	High		0	Negligible	
M90	4%	Low					1.5%			0.01	0.01	0.00	Negligible		0	Negligible	
A912 Bridge of Earn	1%	Medium	Low	Minor	Minor	Minor	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
A912 Aberargie	2%	Low					0.6%			0.00	0.00	0.00	Negligible		±	Negligible	
A913	4%	Medium	Low	Minor	Minor	Minor	0.5%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Easter Rhynd Road	88%	Low	High	Moderate	Moderate	Moderate	0.3%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
Ferryfield Road	9%	Low	Low	Negligible	Negligible	Negligible	2.2%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
A91	1%	Medium					0.3%			0.00	0.00	0.00	Negligible		0	Negligible	
B936 Burnside	11%	Medium	Low	Minor	Minor	Minor	0.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible
U093 Lochmill Loch	137%	Low	High	Moderate	Moderate	Moderate	2.4%	Negligible	Negligible	0.00	0.00	0.00	Negligible	Negligible	0	Negligible	Negligible

Study Area Roads			Baseline Accident Rates per 1 Million Vehicle Kilometres									Forecast Development Traffic Accidents				
Road	Between	Length of Road (Km)	Baseline Total Vehicles	Baseline Vehicle Km	Recorded Injury Accidents			Recorded Injury Accidents per 1 Million Vehicle Km			Development Total Vehicles	Development Vehicle Km	Forecast Injury Accidents			
					Slight	Serious	Fatal	Slight	Serious	Fatal			Slight	Serious	Fatal	
A90 Dundee	Emmock Roundabout	A928 Junction	7	34,293,940	240,067,580	8	2	0	3.333E-02	8.331E-03	0.000E+00	415,903	2,911,318	0.1	0.0	0.0
Emmock Road	Emmock Roundabout	Tealing Road Junction	6	1,321,300	7,927,800	3	0	0	3.784E-01	0.000E+00	0.000E+00	8,218	49,306	0.0	0.0	0.0
Zc6 Tealing Road	Emmock Road Junction	Cottages Bus Stop (North of Bridge)	2	1,071,640	2,143,280	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	1,416	0.0	0.0	0.0
Zc7 Bridgefoot	Junction with Craigmill Road (Bridgefoot)	with Tealing Road (Pink Cottages b	3	702,260	2,106,780	0	1	0	0.000E+00	4.747E-01	0.000E+00	708	2,124	0.0	0.0	0.0
U324 Jeanfield			2	702,260	1,123,616	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	1,133	0.0	0.0	0.0
U333 / Zc9 / Zc8 Dronley / Leoch	Loop		7	236,520	1,608,336	2	1	0	1.244E-00	6.218E-01	0.000E+00	874	5,943	0.0	0.0	0.0
Dronley Burn road	Junction with B954		1	236,520	236,520	0	0	0	0.000E+00	0.000E+00	0.000E+00	686	686	0.0	0.0	0.0
East Adamston	Junction with B954	East Adamston Farm	1	236,520	236,520	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	708	0.0	0.0	0.0
B954	A923 Junction	Dronley Junction	2	5,626,840	9,002,944	0	2	0	0.000E+00	2.221E-01	0.000E+00	874	1,398	0.0	0.0	0.0
A923 Coupar Angus Interchange	Coupar Angus Interchange	B954 Junction	4	13,877,300	48,570,550	6	2	0	1.235E-01	4.118E-02	0.000E+00	1,449	5,073	0.0	0.0	0.0
A923 Piperdam	B954 Junction	Piperdam Drive Junction	4	7,390,520	29,562,080	2	1	0	6.765E-02	3.383E-02	0.000E+00	708	2,832	0.0	0.0	0.0
Bervie Road Murloch	A923 Junction	Murloch Junction	1	687,660	343,830	0	0	0	0.000E+00	0.000E+00	0.000E+00	664	332	0.0	0.0	0.0
Berryhill Road / Bervie Road	Longforgan Junction (A90)	Bervie Road Junction with A90 (Loop)	11	195,640	2,103,130	0	1	0	0.000E+00	4.755E-01	0.000E+00	874	9,396	0.0	0.0	0.0
Main Street / James Forbes Avenue	Longforgan Junction roundabout	Forbes Avenue Junction with Castle	1	2,036,700	1,629,360	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	699	0.0	0.0	0.0
The Drive Longforgan	Junction with Castle Road		1	1,007,400	503,700	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	437	0.0	0.0	0.0
U143 Castle Huntly	Junction with The Avenue/Castle Road	Junction with C484	1	1,007,400	805,920	1	0	0	1.241E+00	0.000E+00	0.000E+00	874	699	0.0	0.0	0.0
Moncur Road	Inchture Junction (A90)	Moncur Farmhouse	2	1,794,340	2,691,510	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	1,062	0.0	0.0	0.0
Inchture Station Road	Inchture Junction (A90)	Where road passes under cable line	1	1,794,340	1,794,340	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	708	0.0	0.0	0.0
Horn Road	Junction with Errol Station Road	Where road passes under cable line	3	2,354,980	6,358,446	1	0	0	1.573E-01	0.000E+00	0.000E+00	830	2,241	0.0	0.0	0.0
Errol Station Road	Inchmichael Junction	Errol Station	2	2,354,980	4,709,960	0	0	0	0.000E+00	0.000E+00	0.000E+00	830	1,660	0.0	0.0	0.0
U155 Inchcoonans	Junction with A90	Inchcoonans Equestrian Centre	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	896	896	0.0	0.0	0.0
North Murie	Junction with A90		1	183,960	183,960	0	0	0	0.000E+00	0.000E+00	0.000E+00	896	896	0.0	0.0	0.0
U155 Glendoick Junction	Junction with A90	Where road passes under cable line	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	708	0.0	0.0	0.0
Ross Road	Junction with A90	Junction with Leetown	1	183,960	183,960	0	0	0	0.000E+00	0.000E+00	0.000E+00	720	720	0.0	0.0	0.0
C484 St Madoes	Junction with A90 at St Madoes	Junction with Leetown	2	2,160,800	4,753,760	0	0	0	0.000E+00	0.000E+00	0.000E+00	918	2,020	0.0	0.0	0.0
Cairnie Road	Junction in St Madoes (C484)	Where cable route crosses overhead	1	2,060,060	2,060,060	0	0	0	0.000E+00	0.000E+00	0.000E+00	764	764	0.0	0.0	0.0
Inchyra Road	Junction with Cairnie Road		1	519,760	363,832	0	0	0	0.000E+00	0.000E+00	0.000E+00	764	535	0.0	0.0	0.0
Kingsway	Forfar Road Crossroads	Coupar Angus Interchange	4	62,489,460	256,206,786	9	1	1	3.513E-02	3.903E-03	3.903E-03	428,960	1,758,737	0.1	0.0	0.0
A90	Coupar Angus Interchange	Barnhill Junction	29	47,940,560	1,371,100,016	26	12	2	1.896E-02	8.752E-03	1.459E-03	428,960	12,268,264	0.2	0.1	0.0
M90	Barnhill Junction	Junction with A912	6	47,117,120	268,567,584	1	1	0	3.723E-03	3.723E-03	0.000E+00	456,063	2,599,560	0.0	0.0	0.0

Study Area Roads Total Forecast Development Accidents	Slight	Serious	Fatal
	0.42920913	0.15795821	0.02476003

Forecast Development Traffic Average Accidents per Study Area Road	Slight	Serious	Fatal
	0.014	0.005	0.001

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Development Traffic for Accident Period
A90 Dundee	1,228	261	320,508	3	415,903
Emmock Road	742	261	193,662	3	8,218
Zc6 Tealing Road	64	261	16,704	3	708
Zc7 Bridgefoot	64	261	16,704	3	708
U324 Jeanfield	64	261	16,704	3	708
U333 / Zc9 / Zc8 Dronley / Leoc	79	261	20,619	3	874
Dronley Burn road	62	261	16,182	3	686
East Adamston	64	261	16,704	3	708
B954	79	261	20,619	3	874
A923 Coupar Angus Interchange	131	261	34,191	3	1,449
A923 Piperdam	64	261	16,704	3	708
Benvie Road Murloch	60	261	15,660	3	664
Berryhill Road / Benvie Road	79	261	20,619	3	874
Main Street / James Forbes Av	79	261	20,619	3	874
The Drive Longforgan	79	261	20,619	3	874
U143 Castle Huntly	79	261	20,619	3	874
Moncur Road	64	261	16,704	3	708
Inchture Station Road	64	261	16,704	3	708
Horn Road	75	261	19,575	3	830
Errol Station Road	75	261	19,575	3	830
U155 Inchcoonans	81	261	21,141	3	896
North Murie	81	261	21,141	3	896
U155 Glendoick Junction	64	261	16,704	3	708
Ross Road	65	261	16,965	3	720
C484 St Madoes	83	261	21,663	3	918
Cairnie Road	69	261	18,009	3	764
Inchyra Road	69	261	18,009	3	764
Kingsway	1,282	261	334,602	3	428,960
A90	1,282	261	334,602	3	428,960
M90	1,363	261	355,743	3	456,063

Vehicle Km Metric

1,000,000

	Inter Daily	Inter Dev / Proposed Dev Ratio	Proposed Dev Total Traffic	Intra-Dev Total Traffic
A90 Dundee	500	15.0	27,772	415,903
Emmock Road	498	9.3	886	8,218
Zc6 Tealing Road	64	1.0	708	708
Zc7 Bridgefoot	64	1.0	708	708
U324 Jeanfield	64	1.0	708	708
U333 / Zc9 / Zc8 Dronley / Leoc	79	1.0	874	874
Dronley Burn road	62	1.0	686	686
East Adamston	64	1.0	708	708
B954	79	1.0	874	874
A923 Coupar Angus Interchange	79	1.7	874	1,449
A923 Piperdam	64	1.0	708	708
Benvie Road Murloch	60	1.0	664	664
Berryhill Road / Benvie Road	79	1.0	874	874
Main Street / James Forbes Av	79	1.0	874	874
The Drive Longforgan	79	1.0	874	874
U143 Castle Huntly	79	1.0	874	874
Moncur Road	64	1.0	708	708
Inchture Station Road	64	1.0	708	708
Horn Road	75	1.0	830	830
Errol Station Road	75	1.0	830	830
U155 Inchcoonans	81	1.0	896	896
North Murie	81	1.0	896	896
U155 Glendoick Junction	64	1.0	708	708
Ross Road	65	1.0	720	720
C484 St Madoes	83	1.0	918	918
Cairnie Road	69	1.0	764	764
Inchyra Road	69	1.0	764	764
Kingsway	502	15.4	27,772	428,960
A90	502	15.4	27,772	428,960
M90	502	16.4	27,772	456,063

Study Area Roads			Baseline Accident Rates per 1 Million Vehicle Kilometres									Forecast Development Traffic Accidents				
Road	Between		Length of Road (Km)	Baseline Total Vehicles	Baseline Vehicle Km	Recorded Injury Accidents			Recorded Injury Accidents per 1 Million Vehicle Km			Development Total Vehicles	Development Vehicle Km	Forecast Injury Accidents		
						Slight	Serious	Fatal	Slight	Serious	Fatal			Slight	Serious	Fatal
A912 Bridge of Eam	Junction with M90	Junction with Easter Rhynd Road	2	6,751,040	10,126,560	3	1	0	2.963E-01	9.875E-02	0.000E+00	708	1,062	0.0	0.0	0.0
A912 Abarogie	Junction with M90	Junction with A91 at Gateside	5	14,068,560	70,342,800	2	2	1	2.843E-02	2.843E-02	1.422E-02	1,770	8,851	0.0	0.0	0.0
A913	Junction with A912 at Abarogie	Junction with Ferryfield Road	5	6,075,060	30,375,300	0	0	0	0.000E+00	0.000E+00	0.000E+00	1,705	8,523	0.0	0.0	0.0
Easter Rhynd Road	Junction with A912 (north of Bridge of Eam)		5	105,120	525,600	0	0	0	0.000E+00	0.000E+00	0.000E+00	708	3,540	0.0	0.0	0.0
Ferryfield Road	Junction with A913	Junction with Garden Centre	1	1,236,620	1,236,620	0	0	0	0.000E+00	0.000E+00	0.000E+00	808	808	0.0	0.0	0.0
A91	Junction with A912 at Gateside	Junction with B936 at Auchtermuchty	6	9,982,020	63,884,928	2	2	0	3.131E-02	3.131E-02	0.000E+00	874	5,594	0.0	0.0	0.0
B936	Junction with A91 at Auchtermuchty	road leading west from B936 towards	3	1,064,340	3,193,020	0	1	0	0.000E+00	3.132E-01	0.000E+00	874	2,622	0.0	0.0	0.0
U093 Lochmill Loch	Junction with B936	South of Lochmill Loch	2	83,220	166,440	0	0	0	0.000E+00	0.000E+00	0.000E+00	874	1,748	0.0	0.0	0.0

Road	Average Daily Traffic	Days Per Year	Traffic per Annum	Recorded Accident Period (Years)	Total Development Traffic for Accident Period
A912 Bridge of Earn	64	261	16,704	3	708
A912 Aberagie	160	261	41,760	3	1,770
A913	154	261	40,194	3	1,705
Easter Rhynd Road	64	261	16,704	3	708
Ferryfield Road	73	261	19,053	3	808
A91	79	261	20,619	3	874
B936	79	261	20,619	3	874
U093 Lochmill Loch	79	261	20,619	3	874

Vehicle Km Metric

1,000,000

	Inter Daily	Inter Dev / Proposed Dev Ratio	Proposed Dev Total Traffic	Inter-Dev Total Traffic
A912 Bridge of Earn	64	1.0	708	708
A912 Aberagie	160	2.0	874	1,770
A913	154	2.1	808	1,705
Easter Rhynd Road	64	1.0	708	708
Ferryfield Road	73	1.0	808	808
A91	79	1.0	874	874
B936	79	1.0	874	874
U093 Lochmill Loch	79	1.0	874	874

Road	Road Type	Speed Limit (mph)	Road Capacity (Veh/ Hr/ Direction)	Baseline Daily Vehicles	Daily Road Capacity Utilisation Baseline Traffic	Proposed Development Daily Vehicles	Daily Road Capacity Utilisation Proposed Development Traffic	Daily Road Capacity Utilisation Change
A90 Dundee	Rural - Dual 2 Lanes	70	3,400	23,801	29%	1228	31%	1.5%
Emmock Road	Rural - Typical Single 6.0m	60	900	917	4%	742	8%	3.4%
Tealing Road	Rural - Typical Single 6.0m	60	900	744	3%	64	4%	0.3%
Bridgefoot	Rural - Poor Single 5.5m	60	800	487	3%	64	3%	0.3%
U324 Jeanfield	Rural - Poor Single 4.0m	60	140	487	14%	64	16%	1.9%
U333 Dronley	Rural - Poor Single 5.5m	60	800	164	1%	79	1%	0.4%
Dronley Burn	Rural - Poor Single 5.5m	60	800	164	1%	62	1%	0.3%
East Adamston	Rural - Poor Single 4.0m	60	140	164	5%	64	7%	1.9%
B954	Rural - Typical Single 7.3m	60	1,200	3,905	14%	79	14%	0.3%
A923 Muirhead	Rural - Good Single 7.3m	60	1,200	9,631	33%	131	34%	0.5%
A923 Piperdam	Rural - Typical Single 7.3m	60	1,200	5,129	18%	64	18%	0.2%
Benvie Road	Rural - Poor Single 5.5m	60	800	477	2%	60	3%	0.3%
Berryhill Road	Rural - Poor Single 5.5m	60	800	136	1%	79	1%	0.4%
Main Street	Rural - Typical Single 7.3m	60	1,200	1,414	5%	79	5%	0.3%
The Drive	Rural - Poor Single 4.0m	60	140	699	21%	79	23%	2.4%
U143 Castle Huntly	Rural - Poor Single 5.5m	60	800	699	4%	79	4%	0.4%
Moncur Road	Rural - Typical Single 6.0m	60	900	1,245	6%	64	6%	0.3%
Inchture Station	Urban - Single 7.3m	30	800	1,245	6%	64	7%	0.3%
Horn Road	Rural - Typical Single 7.3m	60	1,200	1,634	6%	75	6%	0.3%
Errol Station	Rural - Typical Single 6.0m	60/40	900	1,634	8%	75	8%	0.3%
U155 Inchcoonans	Rural - Poor Single 5.5m	60	800	858	4%	81	5%	0.4%
North Murie	Rural - Poor Single 5.5m	60	800	128	1%	81	1%	0.4%
U155 Glendoick	Rural - Poor Single 4.0m	60	140	858	26%	64	27%	1.9%
Ross Road	Rural - Poor Single 4.0m	60	140	128	4%	65	6%	1.9%
C484 St Madoes	Urban - Single 6.0m	30	800	1,500	8%	83	8%	0.4%
Cairnie Road	Urban - Single 6.0m	30	800	1,430	7%	69	8%	0.4%
Inchyra Road	Rural - Poor Single 4.0m	60	140	361	11%	69	13%	2.1%
A90 Kingsway	Urban - Dual 2	40	3,000	43,370	60%	1282	62%	1.8%
A90	Rural - Dual 2 Lanes	70	3,400	33,273	41%	1282	42%	1.6%
M90	Rural - Motorway - D2	70	3,000	32,701	36%	1363	37%	1.5%
A912 Bridge of Earn	Urban - Single 7.3m	30	800	4,685	24%	64	25%	0.3%
A912 Aberagie	Rural - Typical Single 7.3m	60	1,200	9,764	34%	160	34%	0.6%
A913	Rural - Typical Single 7.3m	60	1,200	4,216	15%	154	15%	0.5%
Easter Rhynd Road	Rural - Poor Single 5.5m	60	800	73	0%	64	1%	0.3%
Ferryfield Road	Rural - Poor Single 4.0m	60	140	858	26%	73	28%	2.2%
A91	Rural - Typical Single 7.3m	60	1,200	6,928	24%	79	24%	0.3%
B936 Burnside	Urban - Single 6.0m	30	800	739	4%	79	4%	0.4%
U093 Lochmill Loch	Rural - Poor Single 4.0m	60	140	58	2%	79	4%	2.4%

35.4%